

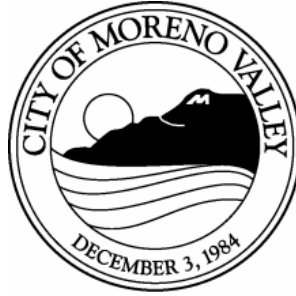
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**PLANNING COMMISSIONERS**

JEFFREY BARNES  
Chair

PATRICIA KORZEC  
Vice-Chair

RAY L. BAKER  
Commissioner



JEFFREY SIMS  
Commissioner

ALVIN DEJOHNETTE  
Commissioner

JOANN STEPHAN  
Commissioner

ROBERT HARRIS  
Commissioner

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# PLANNING COMMISSION

## Regular Meeting

### Agenda

Thursday, January 24, 2019 at 7:00 PM  
City Hall Council Chamber – 14177 Frederick Street

#### CALL TO ORDER

#### ROLL CALL

#### PLEDGE OF ALLEGIANCE

#### APPROVAL OF AGENDA

#### CONSENT CALENDAR

*All matters listed under Consent Calendar are considered to be routine and all will be enacted by one roll call vote. There will be no discussion of these items unless Members of the Planning Commission request specific items be removed from the Consent Calendar for separate action.*

#### 1. APPROVAL OF MINUTES

Planning Commission – Regular Meeting – January 10, 2019 7:00 PM

#### PUBLIC COMMENTS PROCEDURE

*Any person wishing to address the Commission on any matter, either under the Public Comments section of the Agenda or scheduled items or public hearings, must fill out a "Request to Speak" form available at the door. The completed form must be submitted to the Secretary prior to the Agenda item being called by the Chairperson. In speaking to the Commission, member of the public may be limited to three minutes per person, except for the applicant for entitlement. The Commission may establish an overall time limit for comments on a particular Agenda item. Members of the public must direct their questions to the Chairperson of the Commission and not to other members of the Commission, the applicant, the Staff, or the audience.*

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*Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, in compliance with the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Guy Pegan, ADA Coordinator, at 951.413.3120 at least 72 hours before the meeting. The 72-hour notification will enable the City to make reasonable arrangements to ensure accessibility to this meeting.*

## **NON-PUBLIC HEARING ITEMS**

1. Case: PEN19-0010  
Applicant: Moreno Valley Unified School District (MVUSD)  
Representative: John S. Nichols, MVUSD  
Location: Northeast corner of Nason St and Bay Ave  
Case Planner: Claudia Manrique  
Council District: 2  
Proposal: Request from the Moreno Valley Unified School District for land use verification of a potential new elementary school site and that it conforms to the Moreno Valley General Plan.

## **PUBLIC HEARING ITEMS**

1. Case: PEN18-0119 – General Plan Amendment  
PEN18-0120 – Specific Plan Amendment  
PEN18-0121 – Change of Zone  
PEN18-0107 – Plot Plan for a 112 unit apartment project  
PEN18-0090 – Tentative Parcel Map 37514  
Applicant: Continental East Fund III, LLC  
Owner: Continental East Fund III, LLC  
Representative: Continental East Fund III, LLC  
Location: Northeast corner of Lasselle St. and Krameria Ave.  
Case Planner: Jeff Bradshaw  
Council District: 4  
Proposal: The applicant, Continental East Fund III, LLC, is seeking approval of the Continental East Phase II Apartment project, which would modify the previously approved Continental Villages project by subdividing the approximately 19 acre site into three parcels and establish land use designations for development of 112 multi-family dwelling units and a future neighborhood commercial development.



**OTHER COMMISSION BUSINESS**

**STAFF COMMENTS**

**PLANNING COMMISSIONER COMMENTS**

**ADJOURNMENT**

Planning Commission Regular Meeting, February 14, 2019 at 7:00 P.M., City of Moreno Valley, City Hall Council Chambers, 14177 Frederick Street, Moreno Valley, CA 92553.

**OFFICIAL MINUTES OF THE  
PLANNING COMMISSION  
OF THE CITY OF MORENO VALLEY**

**REGULAR MEETING – 7:00 PM  
January 10, 2019**

**CALL TO ORDER**

This Regular meeting of the Planning Commission of the City of Moreno Valley was called to order at 7:02 p.m., by Chair Barnes in the Council Chambers located at 14177 Frederick Street.

**ROLL CALL**

|                      |                  |              |         |
|----------------------|------------------|--------------|---------|
| Planning Commission: | Jeffrey Barnes   | Chair        | Present |
|                      | Patricia Korzec  | Vice-Chair   | Present |
|                      | Robert Harris    | Commissioner | Present |
|                      | JoAnn Stephan    | Commissioner | Present |
|                      | Jeffrey Sims     | Commissioner | Present |
|                      | Ray L. Baker     | Commissioner | Present |
|                      | Alvin DeJohnette | Commissioner | Present |

**PLEDGE OF ALLEGIANCE**

Chair Barnes led the Pledge of Allegiance.

**APPROVAL OF AGENDA**

Motion made by Commissioner Baker and seconded by Commissioner Sims.

Vote: 7-0  
Ayes: Vice-Chair Korzec, Commissioners Harris, Stephan, Sims, Baker, Chair Barnes and Commissioner DeJohnette  
Action: **Approved**

**STAFF PRESENT**

|                  |                               |
|------------------|-------------------------------|
| Paul Early       | City Attorney                 |
| Patty Nevins     | Planning Official             |
| Chris Ormsby     | Senior Planner                |
| Jeff Bradshaw    | Associate Planner             |
| Eric Lewis       | City Traffic Engineer         |
| Michael Lloyd    | Assistance City Engineer      |
| Guy Pegan        | Associate Engineer            |
| Adria Reinertson | Fire Marshal                  |
| Ashley Aparicio  | Planning Commission Secretary |

Minutes Acceptance: Minutes of Jan 10, 2019 7:00 PM (APPROVAL OF MINUTES)

## CONSENT CALENDAR

### APPROVAL OF MINUTES

Planning Commission - Regular Meeting - December 13, 2018 7:00 PM

Motion made by Commissioner Sims and seconded by Commissioner Baker.

Vote: 7-0

Ayes: Vice-Chair Korzec, Commissioners Harris, Stephan, Sims, Baker, Chair Barnes and Commissioner DeJohnette

Action: **Approved**

### PUBLIC COMMENTS PROCEDURE

Rafael Brugueras

1. Happy New Year. It has already started well with all seven of you here. It is a good beginning and hopes that 2019 will show that the City of Moreno Valley will continue the work that we had done in 2018 and carry into 2019. We do not need to stop with the progress that we have done over these several few years.
2. With the holidays there are new stores and shops for people to shop at, new restaurants for dinners and lunches, especially all over Day Street. Through this process, you can see the corner of Day Street and how it is almost done. This lot used to be empty. You can see how the vote continues to help our region. We aren't done, we are progressing and people are looking to your seven voices for our City.
3. Continue the work, work with our staff, and our staff will continue to work with our developers, and the city will finally be done one day before we move on.
4. Thanked them for being here and stated it is a good sign to have them all here today.

### NON-PUBLIC HEARING ITEMS

No Items for Discussion

### PUBLIC HEARING ITEMS

1. CONDITIONAL USE PERMIT FOR MORENO VALLEY SKILLED NURSING FACILITY, COMPRISED OF THREE ONE-STORY BUILDINGS TOTALING 68,750 SQUARE FEET WITH 116 BEDS ON A 4.55-ACRE SITE (Report of: Planning Commission)

A. Staff recommends that the Planning Commission APPROVE Resolution No.2019-01, and thereby:

1. CERTIFY that the Mitigated Negative Declaration prepared for Conditional Use Permit PEN18-0082 on file with the Community Development Department, incorporated herein by this reference, has been completed in compliance with the California Environmental Quality Act, that the Planning Commission reviewed and considered the information contained in the Mitigated Negative Declaration and that the document reflects the City's independent judgment and analysis; attached hereto as Exhibit A; and
2. APPROVE the Mitigation Monitoring Program prepared for Conditional Use Permit PEN18-0082, attached hereto as Exhibit B.

B. Staff recommends that the Planning Commission APPROVE Resolution No. 2019-02, and thereby:

1. APPROVE Conditional Use Permit PEN18-0082 based on the findings contained in this resolution, and subject to the conditions of approval included as Exhibit A.

**Public Hearing Opened:** 7:25 p.m.

Public Comments

Rafael Brugueras supports the item.

**Public Hearing Closed:** 7:28 p.m.

Motion made by Commissioner Baker and seconded by Commissioner DeJohnette to approve Resolution Nos. 2019-01 and 2019-02.

Vote: 7-0

Ayes: Vice-Chair Korzec, Commissioners Harris, Stephan, Sims, Baker, Chair Barnes and Commissioner DeJohnette

Action: **Approved**

## **OTHER COMMISSION BUSINESS**

No Items for Discussion

## **STAFF COMMENTS**

Patty Nevins, City Planning Official, announced the upcoming Community Workshop for the Nason Street Corridor Study and invited everyone to attend this Saturday from 10:00 a.m. to 12:00 p.m. to gather the public's feedback on design alternatives for the study area, which is located at the northwest corner of Alessandro and Nason.

## PLANNING COMMISSIONER COMMENTS

Commissioner Sims stated that near the project that was approved today there was a project about a year and a half ago townhomes or single family and asked whether that project ever moved past entitlements.

Chris Ormsby, the Senior Planner, stated that to staff's knowledge the project is not moving ahead at this time but there have been periodic discussions about the project at that location.

Commissioner Sims also asked about the approved project on the south side of Alessandro, the big apartment complex, and what became of that?

Chris Ormsby, the Senior Planner, stated that the item is moving ahead and was recently resubmitted. They went with a different buyer who has purchased the property since it was processed and some minor changes have been made but it should not require further review by the Planning Commission and is moving ahead.

Commissioner Sims stated that it will be a great addition to that shopping center and the surrounding area, and wished everyone Happy New Year.

Chair Barnes wished everyone a happy New Year.

## ADJOURNMENT

There being no further business to come before the Planning Commission, Chairman Barnes adjourned the meeting at 7:36 PM.

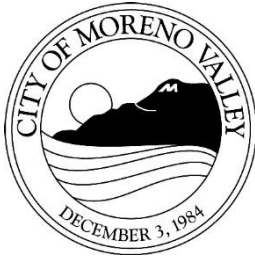
Submitted by:

Approved by:

\_\_\_\_\_  
Ashley Aparicio  
Planning Commission Secretary

\_\_\_\_\_  
Jeffrey Barnes  
Chair

Minutes Acceptance: Minutes of Jan 10, 2019 7:00 PM (APPROVAL OF MINUTES)



## PLANNING COMMISSION

### STAFF REPORT

Meeting Date: January 24, 2019

REQUEST FROM THE MORENO VALLEY UNIFIED SCHOOL DISTRICT FOR LAND USE VERIFICATION OF A POTENTIAL NEW ELEMENTARY SCHOOL SITE AND THAT IT CONFORMS TO THE MORENO VALLEY GENERAL PLAN.

Case: PEN19-0010

Applicant: Moreno Valley Unified School District (MVUSD)

Representative: John S. Nichols, MVUSD

Location: Northeast corner of Nason St and Bay Ave

Case Planner: Claudia Manrique

Council District: 2

Proposal: Request from the Moreno Valley Unified School District for land use verification of a potential new elementary school site and that it conforms to the Moreno Valley General Plan.

#### **SUMMARY**

The Moreno Valley Unified School District (“District”) has notified the City of Moreno Valley Planning Commission of its proposal to purchase real property at the northeast corner of Nason Street and Bay Avenue for a new elementary school site. The District is requesting verification that the proposed land use conforms to the Moreno Valley General Plan.

#### **Background**

On December 18, 2018, the City of Moreno Valley Planning Commission received a letter from the District (Attachment 1) notifying the City of the District’s proposal to

purchase real property at the northeast corner of Nason Street and Bay Avenue (Assessor's Parcel Number (APN) 488-190-034) for a new elementary school site. The letter was sent in accordance with the requirements of Government Code section 65402(c) (Attachment 2), which states that a local agency, such as the District, may not acquire real property for public purposes in a city, if the city has adopted a general plan and such general plan, or part thereof, is applicable to the proposed acquisition, until the location, purpose, and extent of such acquisition has been submitted to and reported upon by the planning agency having jurisdiction, as to the conformity with the adopted general plan, or part thereof, within 40 days after the matter was submitted to the planning agency.

The failure of a planning agency to report within 40 days after the matter has been submitted to it will be conclusively deemed a finding that the proposed acquisition does conform to the adopted general plan, or part thereof. If a planning agency disapproves of the location, purpose or extent of an acquisition, that disapproval may be overruled by Moreno Valley Unified School District.

Additionally, the District's letter cites Public Resources Code 21151.2 (Attachment 3), which provides that the governing board of the a school district, before acquiring title to property for an addition to a present school site, must give the planning commission having jurisdiction notice in writing of the proposed acquisition. The planning commission must investigate the proposed site and within 30 days after the receipt of the notice submit to the governing board a written report of the investigation and its recommendations concerning acquisition of the site. The governing board may not acquire title of the property until the report of the planning commission has been received.

## **ANALYSIS**

The subject property is approximately 8.97 acres of land with an existing single-family residence located in the northwest corner of the site (Attachment 4). The property is zoned Residential 3 (R3). The property to the north, south and east is zoned Residential 3 (R3) with Public (P) zoned parcels directly across Nason Street to the west (Attachment 5).

The letter indicates that the new elementary school would accommodate an approximately 70,000 square foot facility for 800-850 K-5<sup>th</sup> grade students. The conceptual site plan provided by the school district (Attachment 6) also shows a parking lot, bus lane, basketball courts and reserved space for future expansion.

### **Moreno Valley General Plan Consistency**

Based on a detailed review of the General Plan, there are no General Plan policies that would preclude a school from locating on land designated as Residential 3 (R3), or within any other General Plan land use category. The General Plan established the Public/Quasi-Public (P) land use category to provide property for civic, cultural and

public utility uses, including, but not limited to schools, libraries, fire stations, museums, and government offices. The Municipal Code, which implements the General Plan, allows the consideration of private schools through the conditional use permit process. The City currently has at least one school not within the Public (P) zoning. Sunnymead Elementary is located at the southeast corner of Heacock Street and Dracaena Avenue is within the Village Specific Plan (SP 204) and zoned both Village Residential (VR) and Village Office Residential (VOR).

The proposed project would not be inconsistent with the primary purpose of this property designated as Residential 3 (R3). The primary purpose of the Residential 3 (R3) is to provide a transition between rural and urban density development areas. As noted above, property to the north, south and east of the subject property is zoned Residential 3 (R3) with Public (P) zoned parcels directly across Nason Street to the west. There is no neighboring rural zoning districts to provide for transitioning. The closest rural zoning (Residential 2) is approximately 800 feet to the north across Cottonwood Avenue.

The subject property is located along two street frontages, including Nason Street, and does not provide for a transition between rural and urban areas. The project location on a street corner with readily available pedestrian access is consistent with General Plan Objective 5.12, which is to “promote efficient circulation planning for all school sites that will maximize pedestrian safety, and minimize traffic congestion and neighborhood impacts.

As discussed above, the Planning Commission must report on whether the District’s proposed real property acquisition conforms with the Moreno Valley General Plan within 40 days after the matter has been submitted to it (i.e., by or before January 26, 2019). If the Planning Commission fails to report on the proposed acquisition within the 40-day period, it is conclusively deemed a finding by the Commission that the proposed acquisition **does** conform to the Moreno Valley General Plan, or parts thereof.

## **CONCLUSION**

Based on the above analysis, the indicated use of the property that is proposed for acquisition will conform to the General Plan.

## **STAFF RECOMMENDATIONS**

Staff recommends that the Planning Commission consider the location, purpose, and extent of a proposed real property acquisition by the Moreno Valley Unified School District (“District”) and make a determination as to the conformity of the proposed acquisition with the Moreno Valley General Plan.



Prepared by:  
Claudia Manrique  
Associate Planner

Approved by:  
Patty Nevins  
Planning Official

## **ATTACHMENTS**

1. MVUSD Letter
2. Government Code Section 65402
3. Public Resources Code (PRC) Section 21151.2
4. Aerial Photograph
5. General Plan Land Use Map
6. Conceptual Site Plan



**Board of Education**  
*Jesús M. Holguín, President*  
*Cleveland Johnson, Vice President*  
*Marsha Locke, Ed.D., Clerk*  
*Susan Smith*

**Superintendent of Schools**  
*Martimrex Kedziora, Ed.D.*

## Moreno Valley Unified School District

25634 Alessandro Boulevard  
 Moreno Valley, California 92553  
 951-571-7500  
 www.mvusd.net

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*The mission of Moreno Valley Unified School District is to ensure all students graduate high school prepared to successfully enter into higher education and/or pursue a viable career path.*

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December 18, 2018

**RECEIVED**

**DEC 18 2018**

**CITY OF MORENO VALLEY**  
 Planning Division

City of Moreno Valley Planning Commission  
 Mr. Jeffrey Barnes  
 14177 Frederick Street  
 Moreno Valley, CA 92552

Re: Proposed acquisition of a new school site

Mr. Jeffrey Barnes,

The Moreno Valley Unified School District is undertaking preliminary assessment on a potential elementary school site at the Northeast corner of Nason Street and Bay Avenue, in the City of Moreno Valley. The site is approximately 8.97 acres in size, and has intended access for busses, staff, and visitors from Bay Avenue.

We plan on building a +/-70,000 facility in a partial two story configuration (see attached Exhibit 1 diagram), that will accommodate 800-850, K-5<sup>th</sup> grade students. Pursuant to Public Resources Code Section 21151.2., we would like to bring this matter to the attention of the City Planning Commission to investigate and make recommendations concerning acquisition of the site.

We are particularly interested in the commission's support of the new elementary school in respect to conformity with the City's adopted general plan.

In order to meet our timeline for project development, and in conformance with Government Code Section 65402, we respectfully request a response from the commission within 40 days of the date of this letter.

Sincerely,

Samer Alzubaidi, Director of Facilities  
 Moreno Valley Unified School District

Cc: John Nichols

rm

Attachment: MVUSD Letter [Revision 1] (3385 : Request from the Moreno Valley Unified School District for land use verification of a potential

**State of California****GOVERNMENT CODE****Section 65402**

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65402. (a) If a general plan or part thereof has been adopted, no real property shall be acquired by dedication or otherwise for street, square, park or other public purposes, and no real property shall be disposed of, no street shall be vacated or abandoned, and no public building or structure shall be constructed or authorized, if the adopted general plan or part thereof applies thereto, until the location, purpose and extent of such acquisition or disposition, such street vacation or abandonment, or such public building or structure have been submitted to and reported upon by the planning agency as to conformity with said adopted general plan or part thereof. The planning agency shall render its report as to conformity with said adopted general plan or part thereof within forty (40) days after the matter was submitted to it, or such longer period of time as may be designated by the legislative body.

If the legislative body so provides, by ordinance or resolution, the provisions of this subdivision shall not apply to: (1) the disposition of the remainder of a larger parcel which was acquired and used in part for street purposes; (2) acquisitions, dispositions, or abandonments for street widening; or (3) alignment projects, provided such dispositions for street purposes, acquisitions, dispositions, or abandonments for street widening, or alignment projects are of a minor nature.

(b) A county shall not acquire real property for any of the purposes specified in paragraph (a), nor dispose of any real property, nor construct or authorize a public building or structure, in another county or within the corporate limits of a city, if such city or other county has adopted a general plan or part thereof and such general plan or part thereof is applicable thereto, and a city shall not acquire real property for any of the purposes specified in paragraph (a), nor dispose of any real property, nor construct or authorize a public building or structure, in another city or in unincorporated territory, if such other city or the county in which such unincorporated territory is situated has adopted a general plan or part thereof and such general plan or part thereof is applicable thereto, until the location, purpose and extent of such acquisition, disposition, or such public building or structure have been submitted to and reported upon by the planning agency having jurisdiction, as to conformity with said adopted general plan or part thereof. Failure of the planning agency to report within forty (40) days after the matter has been submitted to it shall be conclusively deemed a finding that the proposed acquisition, disposition, or public building or structure is in conformity with said adopted general plan or part thereof. The provisions of this paragraph (b) shall not apply to acquisition or abandonment for street widening or alignment projects of a minor nature if the legislative body having the real property within its boundaries so provides by ordinance or resolution.

(c) A local agency shall not acquire real property for any of the purposes specified in paragraph (a) nor dispose of any real property, nor construct or authorize a public building or structure, in any county or city, if such county or city has adopted a general plan or part thereof and such general plan or part thereof is applicable thereto, until the location, purpose and extent of such acquisition, disposition, or such public building or structure have been submitted to and reported upon by the planning agency having jurisdiction, as to conformity with said adopted general plan or part thereof. Failure of the planning agency to report within forty (40) days after the matter has been submitted to it shall be conclusively deemed a finding that the proposed acquisition, disposition, or public building or structure is in conformity with said adopted general plan or part thereof. If the planning agency disapproves the location, purpose or extent of such acquisition, disposition, or the public building or structure, the disapproval may be overruled by the local agency.

Local agency as used in this paragraph (c) means an agency of the state for the local performance of governmental or proprietary functions within limited boundaries. Local agency does not include the state, or county, or a city.

(Amended by Stats. 1974, Ch. 700.)

**State of California****PUBLIC RESOURCES CODE****Section 21151.2**

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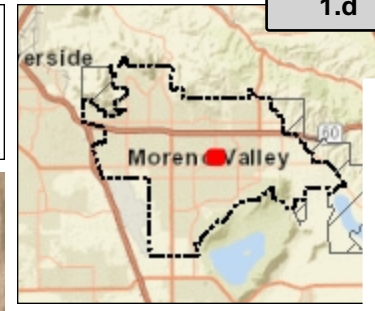
21151.2. To promote the safety of pupils and comprehensive community planning the governing board of each school district before acquiring title to property for a new school site or for an addition to a present school site, shall give the planning commission having jurisdiction notice in writing of the proposed acquisition. The planning commission shall investigate the proposed site and within 30 days after receipt of the notice shall submit to the governing board a written report of the investigation and its recommendations concerning acquisition of the site.

The governing board shall not acquire title to the property until the report of the planning commission has been received. If the report does not favor the acquisition of the property for a school site, or for an addition to a present school site, the governing board of the school district shall not acquire title to the property until 30 days after the commission's report is received.

(Added by Stats. 1987, Ch. 1452, Sec. 533.)

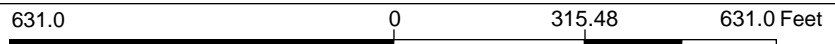


# Proposed School Site



### Legend

- Public Facilities
  - Public Facilities
  - ★ Fire Stations
- Parcels
- ⊞ City Boundary
- ▨ Sphere of Influence

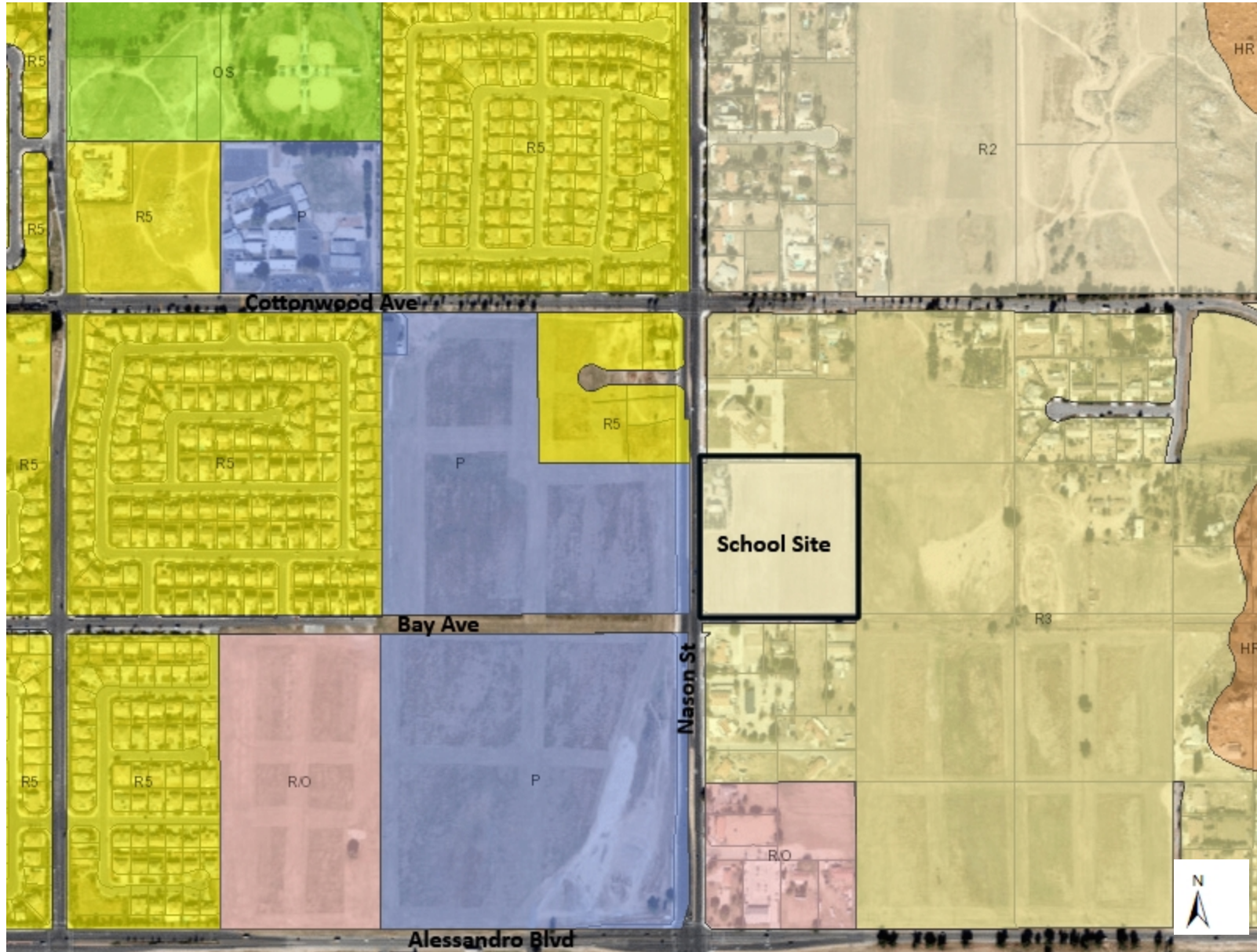


*DISCLAIMER: The information shown on this map was compiled from the City of Moreno Valley GIS and Riverside County GIS. The land base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and City of Moreno Valley will not be held responsible for any claims, losses or damages resulting from the use of this map.*

### Notes



# General Plan Land Use Map



## Legend

### Land Use

- Residential: Max. 1 du/ac
- Mixed Use
- Residential: Max. 2 du/ac
- Rural Residential: Max 2.5 du/ac
- Residential: Max. 3 du/ac
- Residential: Max. 5 du/ac
- Residential: Max. 5 or 15 du/ac
- Residential: Max. 10 du/ac
- Residential: Max. 15 du/ac
- Residential: Max. 20 du/ac
- Residential: Max. 30 du/ac
- Hillside Residential
- Planned Residential
- Residential/Office
- Office
- Commercial
- Business Park/Light Industrial
- Open Space
- Public Facilities
- Floodplain
- Parcels

## Notes

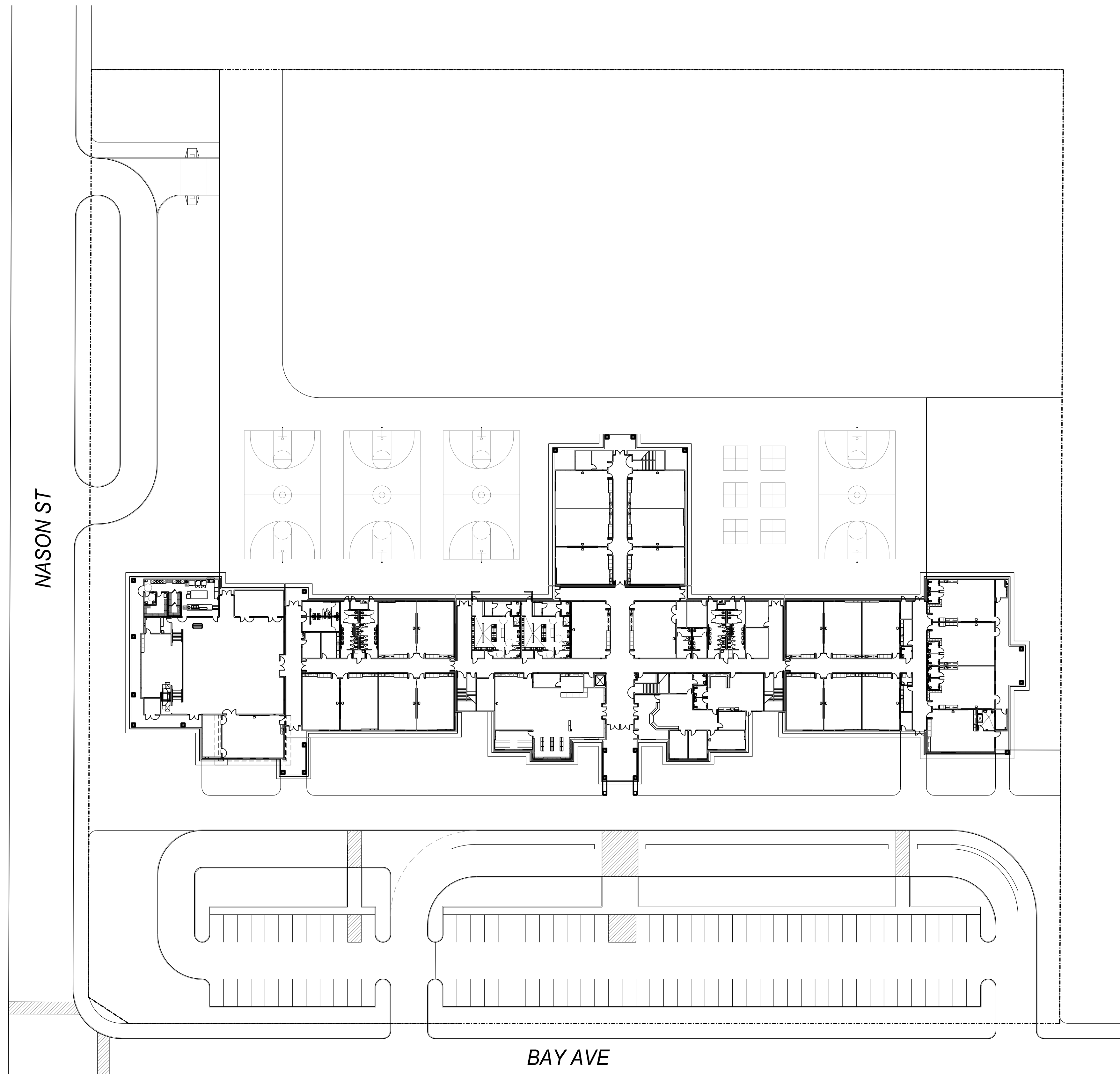
1,261.9      0      630.96      1,261.9 Feet

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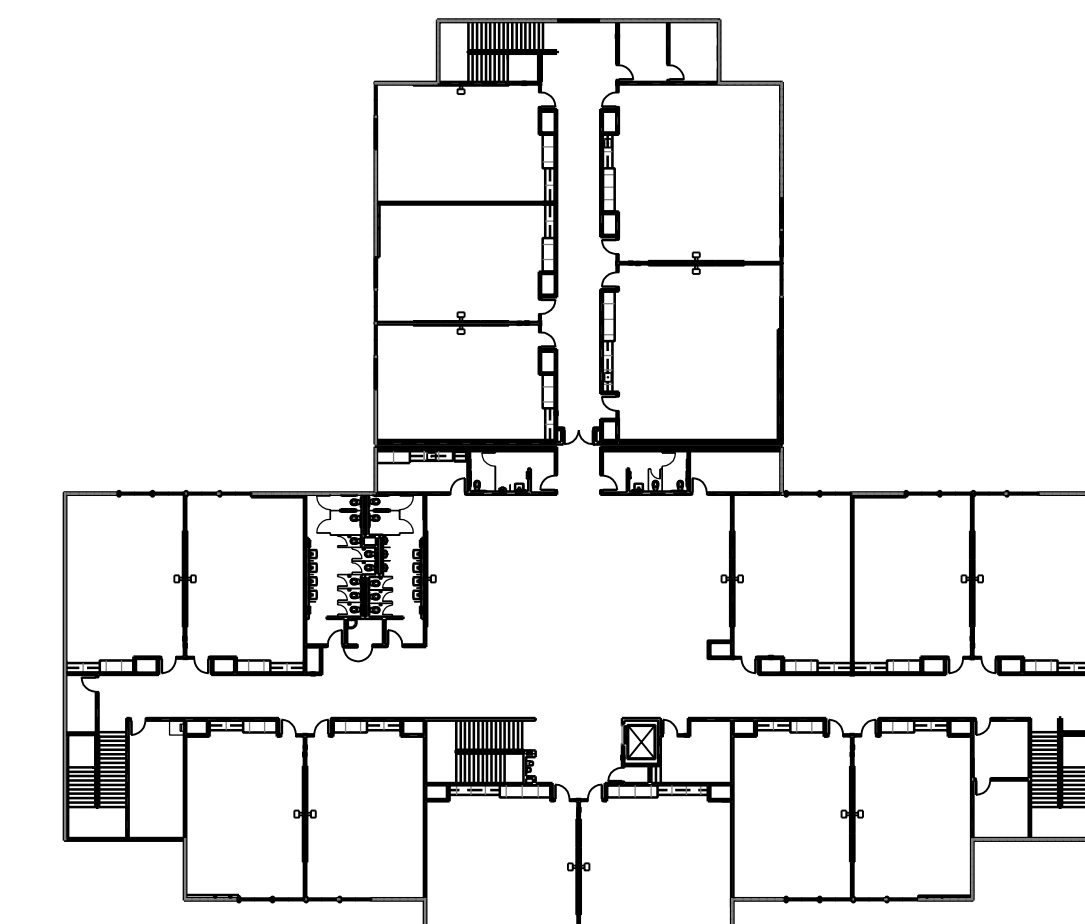
**PROPOSED ELEMENTARY SCHOOL  
AT NASON ST & BAY AVE**  
MORENO VALLEY UNIFIED SCHOOL DISTRICT

**SCHEME 1 - BASED ON DEL SOL ACADEMY (K-8)**

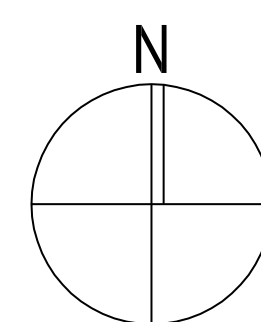
- + PROJECT CLIENT: JURUPA UNIFIED SCHOOL DISTRICT
- + PROJECT COST: \$32,500,000
- + PROJECT COMPLETED: AUGUST 2018
- + PROJECT SQUARE FOOTAGE: 73,000 SF
- + PROJECT CLASSROOM COUNT: 40 CR
- + PROJECT STUDENT OCCUPANCY: 1,000 STUDENTS (AT 25 PER ROOM)



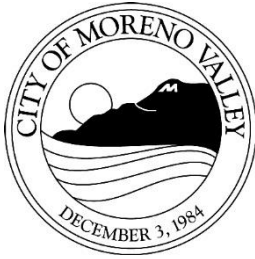
**SITE PLAN / FLOOR 1**



**FLOOR 2**







## PLANNING COMMISSION

### STAFF REPORT

Meeting Date: January 24, 2019

THE PROPOSAL INCLUDES A GENERAL PLAN AMENDMENT, SPECIFIC PLAN AMENDMENT, CHANGE OF ZONE, A PLOT PLAN FOR 112 RESIDENTIAL UNITS, AND A TENTATIVE PARCEL MAP 37514 ON 11.63 ACRES, LOCATED AT THE NORTHEAST CORNER OF KRAMERIA AVENUE AND LASSELLE STREET

Case: PEN18-0119 – General Plan Amendment  
 PEN18-0120 – Specific Plan Amendment  
 PEN18-0121 – Change of Zone  
 PEN18-0107 – Plot Plan for a 112 unit apartment project  
 PEN18-0090 – Tentative Parcel Map 37514

Applicant: Continental East Fund III, LLC

Owner: Continental East Fund III, LLC

Representative: Continental East Fund III, LLC

Location: Northeast corner of Lasselle St. and Krameria Ave.

Case Planner: Jeff Bradshaw

Council District: 4

Proposal: The applicant, Continental East Fund III, LLC, is seeking approval of the Continental East Phase II Apartment project, which would modify the previously approved Continental Villages project by subdividing the approximately 19 acre site into three parcels and establish land use designations for development of 112 multi-family dwelling units and a future neighborhood commercial development.

### SUMMARY

The applicant, Continental East Fund III, LLC, is seeking approval of the Continental East Phase II project, which would modify the previously approved Continental Villages project by subdividing the approximately 19 acre site into three parcels and establish land use designations for development of 112 multi-family dwelling units and a future neighborhood commercial development.

This proposal requires approval of a General Plan Amendment, Zone Change, Specific Plan Amendment, Plot Plan, Parcel Map and certification of an Addendum pursuant to the California Environmental Quality Act.

## **PROJECT DESCRIPTION**

### **Background**

The applicant, Continental East Fund III, LLC, received Planning Commission approval for the Continental Villages project on November 29, 2012. That approval was for development of three residential product types (36 detached single-family homes, 56 clustered courtyard homes, and a 125 unit multiple family apartment project) for a total of 217 dwelling units on a 19.4 acre project area.

Phase I, a 125 unit apartment project, is currently under construction on a site of approximately 7.2 acres. The approvals for the balance of the site remain valid through approved extension of time applications.

### **Project**

The applicant, Continental East Fund III, LLC, is seeking approval of the Continental East Phase II project. This proposal would modify the previously approved Continental Villages project by subdividing the approximately 19 acre site into three parcels; establishing land use designations for development of Medium High Density Residential and a future neighborhood commercial development; and replacing the previously approved detached dwelling units with a 112 unit apartment project.

### **Tentative Parcel Map**

Tentative Parcel Map 37514 would subdivide the approximately 19-acre project area into three parcels.

Parcel 1 is approximately 7.2 acres in area and is currently under construction for 125 multifamily dwelling units (Phase I of the Continental East apartment project).

Parcel 2 is approximately 2.84 acres and would be the site for a future Neighborhood Commercial center, subject to approval of related applications for a General Plan Amendment, Specific Plan Amendment and Zone Change.

Parcel 3 is approximately 8.80 acres in area and would be the site for development of 112 multiple family dwelling units as Phase II of the Continental East apartment project. Development of this site with apartments is subject to approval of related applications for a General Plan Amendment, Specific Plan Amendment, Zone Change and Plot Plan.

### General Plan Amendment

The project site is located within Planning Area 21 of the Moreno Valley Ranch Specific Plan (SP 193) which was approved on August 13, 1985. The General Plan land use designations for the project site under the original Specific Plan were Commercial and High Density Residential.

In 2001, the City of Moreno Valley approved Amendment No. 6 to Specific Plan 193, which modified the land use designation from Commercial to High Density Residential for the entire site.

The General Plan designation for the site is currently R20, allowing for a maximum of 20 dwelling units per acre. The proposed General Plan Amendment would change the land use designation on an approximately 2.8 acre parcel located at the corner of Lasselle Street and Krameria Avenue from R20 to Commercial. The balance of the project site would remain designated R20.

### Specific Plan Amendment

The proposed Specific Plan Amendment would result in the following modifications to the Moreno Valley Ranch Specific Plan (SP 193):

- Change the Specific Plan land use designation for 2.8 acres at the corner of Lasselle Street and Krameria Avenue from High Density Residential to Neighborhood Commercial;
- Change the Specific Plan land use designation for 8.8 acres (Phase II) to Medium High Density Residential in the Specific Plan 193, which is less intense than the existing designation of High Density residential.

### Zone Change

The project site is currently zoned SP 193 H (High Density Residential) with a build out density requirement of 17-20 dwelling units per acre.

The proposed Zone Change would change the zoning district on an approximately 2.8 acre parcel located at the corner of Lasselle Street and Krameria Avenue from R20 to Neighborhood Commercial. The balance of the project site would change to Medium High Density Residential (MHR) with a build out density requirement of 13-17 dwelling units per acre.

### Plot Plan

Plot Plan PEN18-0107 will establish a multiple family development that will include 96 apartment units in six two-story buildings, and 16 units in eight two-story duplex-style buildings.

The duplexes are designed with a single-family appearance, and are located along the Krameria Avenue frontage to provide compatibility with the existing single-family homes across the street.

The project includes common passive recreation areas throughout the project, basins for water quality treatment, and a 3,836 square foot recreation building, which includes a fitness room, offices, a community room and a pool.

### **Site**

The project is located at the northeast corner of Lasselle Street and Krameria Avenue within Planning Area 21 of the Moreno Valley Ranch Specific Plan and contains a significant slope and cross fall, and unique pie shaped boundary.

The 7.2-acre parcel (Parcel 1) located in the western portion of the original 19.4 acre project area near the intersection of Lasselle Street and Cahuilla Drive, has been graded and is currently under construction. Building foundations have been poured and vertical construction has begun on a 125-unit apartment complex.

The remaining 11.64-acre project site (Parcels 2 and 3) has been rough graded twice from previous projects, before the property was obtained by the current project applicant. Several Best Management Practices (BMPs) to control soil erosion and runoff have been installed and are operational. Most notably, an improved detention basin was previously constructed in the southwestern portion of the Project site to capture runoff from the adjacent Lasselle Elementary School storm drain system. Additional BMPs include sandbags, silt fencing, and straw waddle. The Project site is entirely fenced.

### **Surrounding Area**

The project site is bounded by Lasselle Street along its western property line and Krameria along its eastern and southern property line. Beyond the contiguous streets, land uses surrounding the project site are primarily single-family residences in the Low and Medium-low Density Residential zones. Moreno Valley Community College is located directly north of Cahuilla Drive. Lasselle Elementary School is located northeast of the Project site and contiguous to the project site on two sides.

Overall, the proposed multifamily residential development is compatible with objectives outlined in the City's General Plan as well as with existing and planned land uses in the project area.

### **Access/Parking**

The main entrance to the development is proposed along Lasselle Street via a driveway onto Street A, which aligns with Colt Way. This is a shared driveway with the apartment project that is currently under construction. Secondary principal access drives are also planned at two locations on Krameria Avenue. All entrances to the residential project will be gated.

The proposed residential project as designed provides a total of 235 parking spaces including 32 carports with solar panels, 203 open parking spaces for residents and guests, and six accessible parking spaces. Required parking for the project totals 218 spaces. The project as designed satisfies all parking requirements of the City's Municipal Code including ADA accessible parking. Requirements for alternative fuel vehicle parking (aka EVCS) will be addressed subsequently through building plan check, which is typical prior to issuance of building permits.

The driveways and interior drive aisles within the site have been reviewed and approved by the Fire Prevention Bureau for fire truck access. The site design has been evaluated to ensure for adequate truck maneuvering for delivery trucks and trash pick-up.

### **Design/Landscaping**

The proposed architectural styles are consistent with the design guidelines of the Moreno Valley Ranch Specific Plan with all buildings designed in the Spanish Colonial or Monterey Spanish styles.

The design of the proposed plot plan conforms to all development standards of the Medium High Density Residential (MHR) zone as required within the Moreno Valley Ranch Specific plan and the City's Municipal Code.

The walls and fences for this project will be consistent with the provisions for walls and fences within the Moreno Valley Ranch Specific Plan. Decorative wrought iron or tubular steel fences with stucco treated pilasters are required for any perimeter fences/walls in the front or street side setback areas or areas visible from the public right-of-way. Decorative block is required for all retaining walls.

The project has been designed to meet required landscaped standards and objectives set forth in the City's Municipal Code Chapter 9.17 and the Landscape Guidelines of the Moreno Valley Ranch Specific Plan. The landscape elements of the project include the landscape setback areas along Lasselle Street and Krameria Avenue, parking lot landscape, street trees and landscape treatments around the perimeter of the site, buildings and outdoor recreation areas.

### **REVIEW PROCESS**

In accordance with established procedures the project application materials were circulated for review by all appropriate City Departments and Divisions, as well as applicable outside agencies/entities (e.g. Utilities, ALUC, Tribes). In accordance with

Municipal Code regulation the project was also reviewed through the Project Review Staff Committee (PRSC), in June, July and November 2018. Throughout this plan review process, comments and proposed conditions of approval regarding the project were provided in writing to the applicant. The City staff worked closely with the applicant with regard to working out details pertaining to project site and street improvements.

## **ENVIRONMENTAL**

The project site is located within Planning Area 21 of the Moreno Valley Ranch Specific Plan. In 1985, the City certified Environmental Impact Report No. 190 for the Moreno Valley Ranch Specific Plan No. 193 (SCH No. 84050907).

On November 5, 2012, the Continental Villages project was approved which permitted 217 dwelling units on 19.4 acres. The Negative Declaration tiered off the prior environmental documentation for the project.

The City has determined that the revisions proposed as part of the modified project are minor, would not result in any new or more significant environmental impacts, and thus qualifies for an Addendum.

Carlson Strategic land Solutions prepared an Initial Study and Addendum for the project in compliance with California Environmental Quality Act (CEQA) Guidelines and coordinated the preparation of technical studies as part of the analysis.

Studies prepared for this project included a traffic study, an air quality study/greenhouse gas analysis, a traffic study, a cultural resource assessment, a preliminary hydrology study, a geotechnical study, a general biological assessment and MSHCP consistency determination, a Phase I Environmental Assessment, a noise study, a burrowing owl study, and a Preliminary Water Quality Management Plan.

The Initial Study examined the potential of the proposed project to have an impact on the environment. Project impacts will remain less than significant with the implementation of standard conditions of approval and project design features for air quality, cultural resources, geotechnical, noise and traffic.

A Mitigation Monitoring Program was prepared for this project as an update to ensure implementation of the mitigation measures identified in the original Moreno Ranch Specific Plan Environmental Impact Report (see Attachment 4).

## **NOTIFICATION**

The public hearing notice for this project was published in the local newspaper on January 11, 2019. Public notices were sent to all property owners of record within 300 feet of the project site on January 10, 2019. The public hearing notice for this project was posted on the project site on January 11, 2019.

As of the date of report preparation, staff has received no phone calls or correspondence in response to the noticing for this project.

### **REVIEW AGENCY COMMENTS**

Staff has coordinated with outside agencies and where applicable, conditions of approval have been included to address concerns from the responding agencies. Only one tribe requested consultation under SB18. The conditions of approval requested by the Soboba Tribal Band have been incorporated, and tribal consultation was closed. The Airport Land Use Commission reviewed the project, and had no comments as the project is outside of the airport influence area.

### **STAFF RECOMMENDATION**

- A. Staff recommends that the Planning Commission **APPROVE** Resolution No. 2019-03, and thereby **RECOMMEND** that the City Council:
1. **CERTIFY** the Addendum prepared for General Plan Amendment PEN18-0119, Specific Plan Amendment PEN18-0120, Zone Change PEN18-0121, Parcel Map PEN18-0090 and Plot Plan PEN18-0107 on file with the Community Development Department, incorporated herein by this reference, has been completed in compliance with the California Environmental Quality Act, that the Planning Commission reviewed and considered the information contained in the Addendum and that the document reflects the City's independent judgment and analysis; attached hereto as Exhibit A; and
  2. **APPROVE** the Mitigation Monitoring Program prepared for Parcel Map PEN18-0090 and Plot Plan PEN18-0107, attached hereto as Exhibit B.
- B. Staff recommends that the Planning Commission **APPROVE** Resolution No. 2019-04, and thereby **RECOMMEND** that the City Council:
1. **APPROVE** General Plan Amendment application PEN18-0119 based on the findings contained in this resolution, and as shown on the attachment included as Exhibit A.
- C. Staff recommends that the Planning Commission **APPROVE** Resolution No. 2019-05, and thereby **RECOMMEND** that the City Council:
1. **APPROVE** Specific Plan Amendment application PEN18-0120 based on the findings contained in this resolution, and as shown on the attachment included as Exhibit A.
- D. Staff recommends that the Planning Commission **APPROVE** Resolution No. 2019-06, and thereby **RECOMMEND** that the City Council:

1. **APPROVE** Zone Change application PEN18-0121 based on the findings contained in this resolution, and as shown on the attachment included as Exhibit A.
- E. Staff recommends that the Planning Commission **APPROVE** Resolution No. 2019-07, and thereby **RECOMMEND** that the City Council:
1. **APPROVE** Plot Plan application PEN18-0107 based on the findings contained in this resolution, and subject to the conditions of approval included as Exhibit A.
- F. Staff recommends that the Planning Commission **APPROVE** Resolution No. 2019-08, and thereby **RECOMMEND** that the City Council:
1. **APPROVE** Parcel Map application PEN18-0090 based on the findings contained in this resolution, and subject to the conditions of approval included as Exhibit A.

Prepared by:  
Jeffrey Bradshaw  
Associate Planner

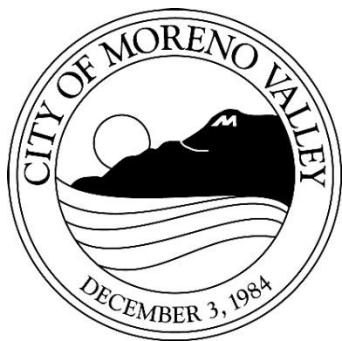
Approved by:  
Patty Nevins  
Planning Official

## **ATTACHMENTS**

1. Public Hearing Notice
2. Radius Map
3. Resolution 2019-03 - Addendum and MMRP
4. Exhibit A to Resolution 2019-03 - Addendum
5. Exhibit B to Resolution 2019-03 - Mitigation Monitoring and Reporting Program
6. Resolution 2019-04 - General Plan Amendment
7. Exhibit A to Ordinance 2019-04
8. Resolution 2019-05 - Specific Plan Amendment
9. Exhibit A to Resolution 2019-05 - Specific Plan Amendment
10. Resolution 2019-06 - Zone Change
11. Exhibit A to Ordinance 2019-06
12. Resolution 2019-07 - Plot Plan
13. Exhibit A to Resolution 2019-07 - Conditions of Approval
14. Resolution 2019-08 - Parcel Map
15. Exhibit A to Resolution 2019-08 - Conditions of Approval rev
16. Project Site Plan
17. Tentative Parcel Map 37514
18. Project Plans - Apartments
19. Project Plans - Duplexes



20. Project Plans - Recreation Building
21. Air Quality Report (Nov 2018)
22. Biological Technical Report (Nov 2018)
23. MSHCP Consistency Determination (Nov 2018)
24. Cultural Resources Report (July 2018)
25. Preliminary Geotechnical Evaluation (March 2018)
26. Greenhouse Gas Report (Nov 2018)
27. Phase I Environmental Site Assessment (March 2018)
28. Noise Assessment (Nov 2018)
29. Traffic Assessment (Nov 2018)
30. Traffic Assessment Appendices



# Notice of PUBLIC HEARING

This may affect your property. Please read.

Notice is hereby given that a Public Hearing will be held by the Planning Commission of the City of Moreno Valley on the following item(s):

**PROJECT:**

- PEN18-0119 – General Plan Amendment
- PEN18-0120 – Specific Plan Amendment
- PEN18-0121 – Change of Zone
- PEN18-0107 – Plot Plan for a 112 unit apartment project
- PEN18-0090 – Tentative Parcel Map 37514

**APPLICANT/OWNER:** Continental East Fund III, LLC

**REPRESENTATIVE:** Andrew Spousta

**LOCATION:** Northeast corner of Lasselle Street and Krameria Avenue

**PROPOSAL:** The Project Applicant proposes to modify the previous development approvals to the 11.64-acre site by: 1) Amending the land use designation for 2.84 acres (Parcel 2) from High Density Residential to Neighborhood Commercial; and 2) Amending the land use designation for 8.80 acres (Parcel 3) from High Density Residential to Medium Density Residential to construct multi-family housing. This proposal requires a General Plan Amendment, Zone Change, Specific Plan Amendment, Plot Plan, Parcel Map and environmental documentation pursuant to CEQA.

**ENVIRONMENTAL DETERMINATION:** An Addendum has been prepared pursuant to California Environmental Quality Act (CEQA) Guidelines. The findings made in the Addendum are consistent with the findings made in the Initial Study and previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report.

**COUNCIL DISTRICT:** 4

Any person interested in any listed proposal can contact the Community Development Department, Planning Division, at 14177 Frederick St., Moreno Valley, California, during normal business hours (7:30 a.m. to 5:30 p.m., Monday through Thursday and Fridays from 7:30 a.m. to 4:30 p.m.), or may telephone (951) 413-3206 for further information. The associated documents will be available for public inspection at the above address.

In the case of Public Hearing items, any person may also appear and be heard in support of or opposition to the project or recommendation of adoption of the Environmental Determination at the time of the Hearing.

*Upon request and in compliance with the Americans with Disabilities Act of 1990, any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Guy Pegan, ADA Coordinator, at 951.413.3120 at least 48 hours before the meeting. The 48-hour notification will enable the City to make reasonable arrangements to ensure accessibility to this meeting.*

The Planning Commission, at the Hearing or during deliberations could approve changes or alternatives to the proposal.

If you challenge any of these items in court, you may be limited to raising only those items you or someone else raised at the Public Hearing described in this notice, or in written correspondence delivered to the Planning Commission at, or prior to, the Public Hearing.



**LOCATION** N ↑

## PLANNING COMMISSION HEARING

City Council Chamber, City Hall  
14177 Frederick Street  
Moreno Valley, Calif. 92553

**DATE AND TIME:** January 24, 2019 at 7 PM

**CONTACT PLANNER:** Jeff Bradshaw

**PHONE:** (951) 413-3224

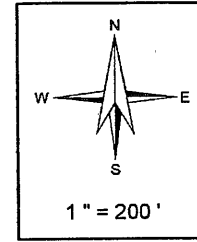
THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCEL MAY NOT COMPLY WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.

POR: PROTRACTED SEC. 28 T.3S.,R.3W  
CITY OF MORENO VALLEY

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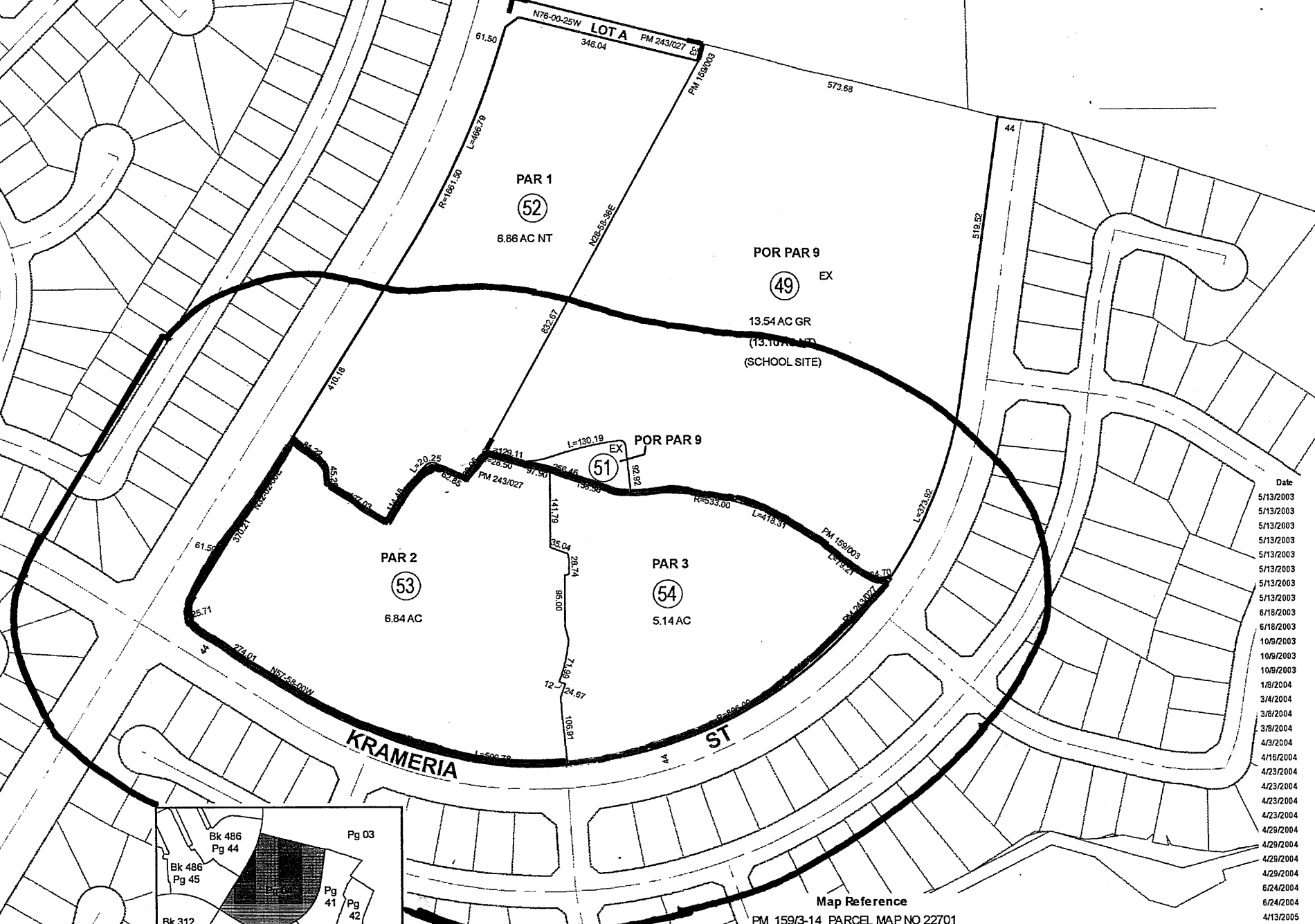
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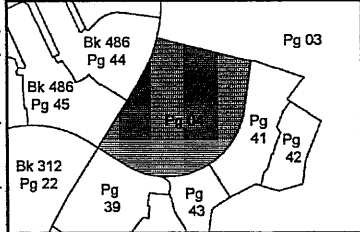


**Legend**

- Lot Lines
- Right-Of-Way
- - - Old Lot Lines
- - - Reference R.O.W
- - - Other Easements
- • • Lessee Area
- Subdivision Tie Mark



| Date       | Old Number | New Number |
|------------|------------|------------|
| 5/13/2003  | 7          | 16,17      |
| 5/13/2003  | 8          | 18,19      |
| 5/13/2003  | 14         | 20,21      |
| 5/13/2003  | 11         | 22,23      |
| 5/13/2003  | 12         | 24,25      |
| 5/13/2003  | 6,16       | 26         |
| 5/13/2003  | 5,9,18,23  | 27         |
| 5/13/2003  | 10,25      | 28         |
| 6/18/2003  | 13,22      | 29         |
| 6/18/2003  | 15,24      | 30         |
| 10/6/2003  | 1,3,4      | 31         |
| 10/9/2003  | 31         | 32,33      |
| 10/9/2003  | 32         | PG.39,40   |
| 1/8/2004   | 33         | 34-35      |
| 3/4/2004   | 35         | 36-37      |
| 3/8/2004   | 34,36      | 38         |
| 3/8/2004   | 38         | PG.43      |
| 4/3/2004   | 1          | PGS.45-47  |
| 4/16/2004  | 17,29      | 39         |
| 4/23/2004  | 39,26      | 40         |
| 4/23/2004  | 19,27      | 41         |
| 4/23/2004  | 30         | 42-44      |
| 4/23/2004  | 40         | 45-46      |
| 4/29/2004  | 28,44      | 47         |
| 4/29/2004  | 47         | PG.48      |
| 4/29/2004  | 41         | PG.48-51   |
| 4/29/2004  | 46         | PG.50-51   |
| 6/24/2004  | 43         | PG.3       |
| 6/24/2004  | 42,45      | PG.52      |
| 4/13/2005  | 2          | 48-49      |
| 11/8/2006  | 48         | 50,51      |
| 11/22/2017 | 50         | 52-54      |



Map Reference  
PM 159/3-14 PARCEL MAP NO 22701  
PM 243/27-29 PARCEL MAP NO 36468

Dec 2017

ASSESSOR'S MAP BK308 PG.04  
Riverside County, Calif.

B Diaz

Attachment: Radius Map (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of Zone, a Plot Plan)

PLANNING COMMISSION RESOLUTION NO. 2019-03

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY RECOMMENDING THAT THE CITY COUNCIL CERTIFY THE ADDENDUM PREPARED AND APPROVE THE MITIGATION MONITORING AND REPORTING PROGRAM PREPARED FOR THE CONTINENTAL EAST PHASE II PROJECT LOCATED AT THE NORTHEAST CORNER OF LASSELLE STREET AND KRAMERIA AVENUE

WHEREAS, the applicant, Continental East Fund III, LLC, filed applications for the Continental East Phase II Project ("Project"), which proposes to amend the original Continental Villages residential project. Current applications include Expanded Initial Study application, PEN19-0009, General Plan Amendment application PEN18-0119, Specific Plan Amendment application PEN18-0120, Zone Change application PEN18-0121, Tentative Parcel Map 37514 (PEN18-0090) and Plot Plan application PEN18-0107. The Project shall not be approved unless the Addendum (PEN19-0009) is certified and approved; and

WHEREAS, the applications for the Project have been evaluated in accordance with established City of Moreno Valley (City) procedures, and with consideration of the General Plan and other applicable regulations; and

WHEREAS, the Project is located at the northeast corner of Lasselle Street and Krameria Avenue within Planning Area 21 of the Moreno Valley Ranch Specific Plan; and

WHEREAS, an Environmental Impact Report was originally adopted for the Moreno Valley Ranch Specific Plan (SP 193) on August 13, 1985; and

WHEREAS, a Negative Declaration was adopted by the Planning Commission on November 29, 2012, for the original Continental Villages residential project; and

WHEREAS, an Initial Study, supporting technical studies, and Addendum to the previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report were prepared, consistent with the California Environmental Quality Act (CEQA); and

WHEREAS, the City, in conducting its own independent analysis of the Addendum, determined that there is substantial evidence that demonstrates the Project with design features and compliance with previously adopted mitigation measures would not result in any significant environmental impacts; and

WHEREAS, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared in accordance with CEQA Guidelines, and is designed to ensure compliance with the identified mitigation measures outlined in the Moreno Valley Ranch Specific Plan Environmental Impact Report through Project implementation; and



WHEREAS, The City of Moreno Valley, Community Development Department, located at 14177 Frederick Street, Moreno Valley, California 92552 is the custodian of documents and other materials that constitute the record of proceedings upon which the decision to certify the Addendum is based; and

WHEREAS, the Planning Commission of the City of Moreno Valley considered the Project, including all environmental documentation, at a public hearing held on January 24, 2019; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred; and

WHEREAS, the Planning Commission considered the Addendum prepared for the Project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Addendum including all supporting technical evidence, it was determined that the project impacts are expected to remain less than significant with implementation of project design features and compliance with mitigation measures outlined in the Moreno Valley Ranch Specific Plan Environmental Impact Report, and therefore, certification of an Addendum is an appropriate action for the Project.

NOW, THEREFORE, THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, DOES HEREBY RESOLVE AS FOLLOWS:

A. This Planning Commission specifically finds that all of the facts set forth above in this Resolution are true and correct.

B. Based upon substantial evidence presented to this Planning Commission during the above-referenced meeting on January 24, 2019, including written and oral staff reports, and the record from the public hearing, this Planning Commission finds as follows:

1. Independent Judgment and Analysis - City staff coordinated the preparation of the Addendum/Initial Study and related technical studies with Carlson Strategic Land Solutions for the Continental East Phase II project. The Addendum/Initial Study has been completed along with the Mitigation Monitoring and Reporting Program (MMRP) to ensure compliance with all mitigation through project implementation. All environmental documents that comprise the Addendum, including all technical studies, were independently reviewed by the City. On the basis of the whole record, there is no substantial evidence that the Project as designed, conditioned and mitigated, will have a significant effect on the environment. The Addendum was prepared and completed in accordance with the CEQA Guidelines reflects the independent judgment and analysis of the City.

BE IT FURTHER RESOLVED that the Planning Commission HEREBY APPROVES Resolution No. 2019-03 and recommends that the City Council:

1. CERTIFY that the Addendum to a previously adopted Negative Declaration and the Moreno Valley Ranch Specific Plan Environmental Impact Report prepared for Plot Plan PEN18-0107 on file with the Community Development Department, incorporated herein by this reference, has been completed in compliance with the California Environmental Quality Act, that the Planning Commission reviewed and considered the information contained in the Addendum and that the document reflects the City’s independent judgment and analysis; attached hereto as Exhibit A and
2. APPROVES the Mitigation Monitoring Program prepared for Plot Plan PEN18-0107, attached hereto as Exhibit B.

APPROVED AND ADOPTED this 24<sup>th</sup> day of January, 2019.

AYES:  
NOES:  
ABSTAIN:

\_\_\_\_\_  
Jeffrey Barnes  
Chair, Planning Commission

ATTEST:

\_\_\_\_\_  
Patty Nevins, Planning Official  
Secretary to the Planning Commission

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

Exhibit A and Exhibit B

Attachment: Resolution 2019-03 - Addendum and MMRP [Revision 3] (3376 : The proposal includes a General Plan Amendment, Specific Plan

***Moreno Valley Ranch Specific Plan No. 193  
Amendment No. 10***

***DRAFT ENVIRONMENTAL IMPACT REPORT  
ADDENDUM***

***Prepared for:  
City of Moreno Valley  
14177 Frederick St.  
Moreno Valley, California 92553***

***Prepared by:  
Carlson Strategic Land Solutions, Inc.  
27134A Paseo Espada, Suite 323  
San Juan Capistrano, California 92675***

***January 2019***

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## APPENDICES

Appendix A: Air Quality Assessment

Appendix B: Biological Technical Report

Appendix C: Cultural Resources Report

Appendix D: Preliminary Geotechnical Evaluation

Appendix E: Greenhouse Gas Assessment

Appendix F: Phase I Environmental Site Assessment

Appendix G: Hydrology and Hydraulic Report

Appendix H: Preliminary Water Quality Management Plan

Appendix I: Noise Assessment

Appendix J: Traffic Assessment

## SECTION 1.0 INTRODUCTION

### 1.1 Background

In 1985, the Moreno Valley City Council adopted Specific Plan 193 and EIR 190, creating the Moreno Valley Ranch Specific Plan. Specific Plan 193 was initially approved for 12,703 residential units encompassing 3,959 acres. During the intervening years Specific Plan 193 has been amended 9 times, as summarized below.

Amendment 1 (1987) added the Moreno Valley campus of the Riverside Community College to the Specific Plan 193. The addition of the college campus rearranged land uses in other Planning Areas resulting in a net reduction of 8 dwelling units.

Amendment 2 (1987) incorporated the 27-hole golf course into the Specific Plan. The effect of that change was a reduction of 642 residential units.

Amendment No. 3 (1988) changed land use designations in Planning Areas 18, 19, and 23, resulting in an increase in public parkland by 1.3 acres and a reduction in dwelling units by approximately 54 single family dwellings.

Amendment No. 4 (1990) changed land uses among Planning Areas, most notably resulting in the construction of a 10-acre sports complex in Planning Area 4. The other land uses changes resulted in an increased in the maximum number of residential development units by approximately 137 dwelling units.

Amendment No. 5 (1998) amended the Specific Plan to modify eight planning areas of the Specific Plan generally modifying residential categories that allow for higher density to Medium Low Residential (4-8 dwelling units per acre) and Medium Residential (8-13 dwelling units per acre). The approval decreased the potential build-out within these Planning Areas of the Specific Plan by 1,160 dwelling units.

Amendment No. 6 (2001) modified uses in fourteen Planning Areas on 227 acres, resulting in a 1,221 dwelling unit reduction.

Amendment No. 7 modified the Specific Plan to allow for a maximum of 176 additional dwelling units.

Amendment No. 8 modified the Specific Plan to allow for condominiums, increasing the number of dwelling units by 135.

Amendment No. 9 (2018) amended land use designations, including the conversion of nine holes of the golf course known as the Lakes 9 to passive park and open space. Amendment No. 9 added 439 dwelling units.

The prior nine Specific Plan Amendments reduced the total number of permitted dwelling units within the Moreno Valley Ranch Specific Plan from 12,703 to approximately 10,505<sup>1</sup> dwelling units.

The Project Site is located in Planning Areas 21 and 21A of the Moreno Valley Ranch Specific Plan, which have been previously amended by Specific Plan Amendment Nos. 1 and 6.

Specific Plan 193 originally designated Planning Area 21 (50 acres) for Medium Low density residential. Assuming 6 dwelling units per acre, Planning Area 21 could accommodate approximately 300 dwelling units.

In 1987, the City of Moreno Valley approved Amendment No. 1 to Specific Plan 193 to permit the Riverside Community College campus within Planning Area 22 and a portion of Planning Area 21. Amendment No. 1 reconfigured the Planning Area boundaries, leaving Planning Area 21 (15 acres) designated as Commercial and created Planning Area 21A (18 acres) designated as High Density Residential (333 dwelling units).

In 2001, the City of Moreno Valley approved Amendment No. 6 to Specific Plan 193, which amended the land use designations for Planning Areas 21 and 21A. Specific Plan Amendment No. 6 eliminated the Commercial designation and designated both Planning Areas as High Density Residential (32.19 acres).

In 2004, approximately 13.35 acres of Planning Areas 21 and 21A became an elementary school. The Lasselie Elementary School is primarily situated in Planning Area 21A, but a portion crosses into Planning Area 21, leaving the remaining 18.84 acres designed High Density Residential.

In 2012, the City of Moreno Valley approved a subdivision on the remaining 18.84 acres (PA 11-0026) to build three types of residential products for a total of 216 dwelling units. Conditional Use Permit (CUP) PA11-0027 provided for 36 detached single family and 55 cluster residential units. A CUP was required because the housing was less than the minimum density established for the property's land use and zoning designations. Plot Plan PA11-0025 provided for a 125-unit multi-family apartment project with a recreation building on approximately 7.20 acres. A variance was also approved to allow for parking to encroach into street side setbacks given the site's unique constraints.

While the City approved a CUP and Plot Plan, an Amendment to Specific Plan 193 was not approved. Therefore, the underlying zoning for the 18.84 acres remains High Density Residential as established in Specific Plan Amendment No. 6.

As a result of the City's action in 2012, approximately 7.20 acres of the Planning Area is currently being constructed with 125 apartments. The remaining 11.64 acres is subject to the current planning application and referred to as the Project site, as well as the Modified Project.

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<sup>1</sup> Specific Plan Amendment No. 9 concluded the prior nine Specific Plan Amendments result in 10,439 dwelling units permitted within the Specific Plan area. The difference between 10,505 and 10,439 is due to several planning areas that permit a range of densities that could alter the total number of permitted dwelling units.

The following table summarizes the progression of land use designations over the 11.64-acre Project site from original Specific Plan through Specific Plan Amendment No. 6.

**Table 1. History of Land Use Designations**

| Land Use                       | Original SP 193      | SPA #1                          | SPA #6          |
|--------------------------------|----------------------|---------------------------------|-----------------|
| Medium Low Density Residential | 11.64 acres (69 dus) | -                               | -               |
| High Density Residential       | -                    | 7.07 acres (130 du)             | 11.64 (215 dus) |
| Commercial                     | -                    | 4.57 acres<br>(119,442 sq. ft.) | -               |
| Total                          | 11.64 acres          | 11.64 acres                     | 11.64 acres     |

## 1.2 Location and Surrounding Land Uses

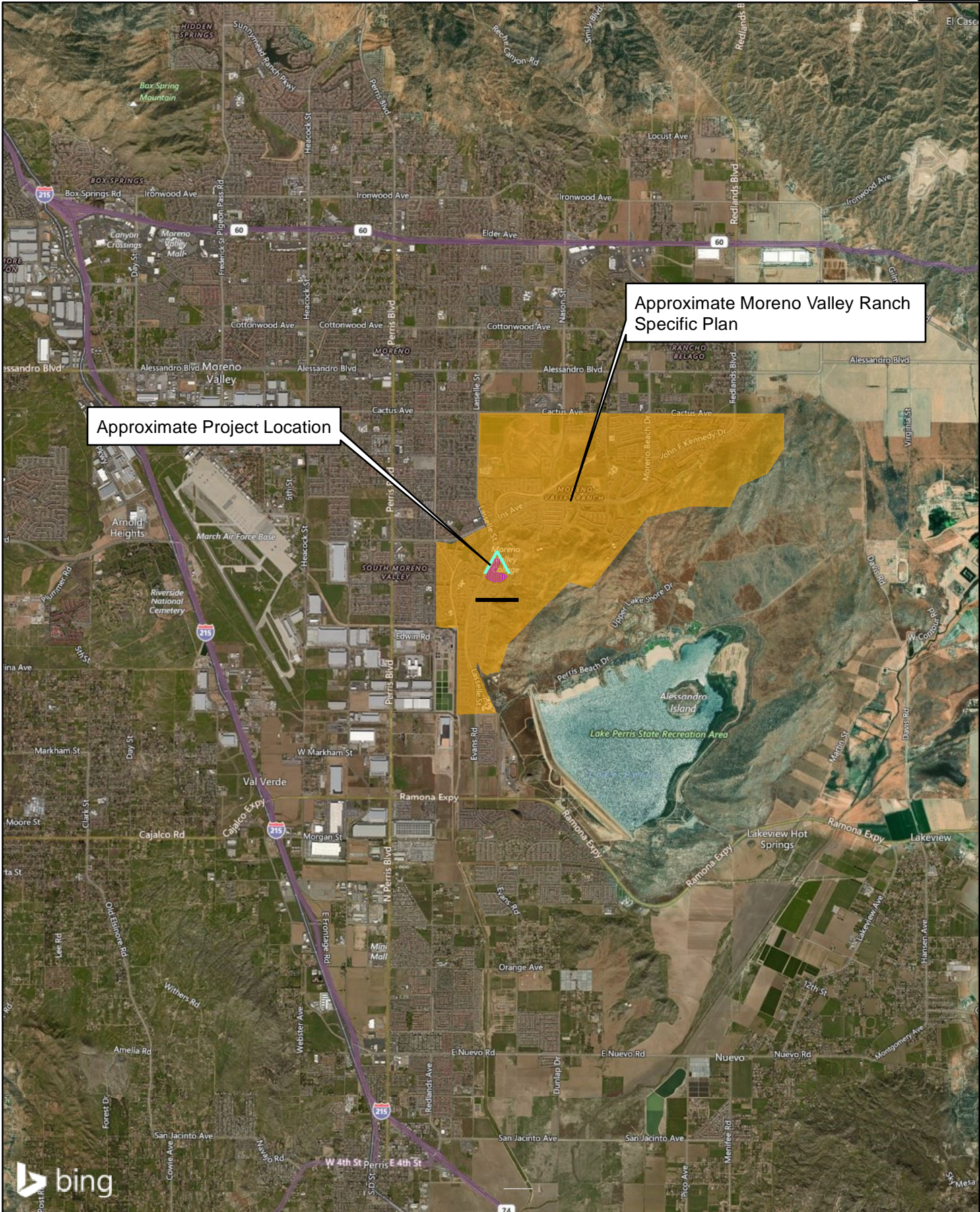
The 3,959-acre Moreno Valley Ranch is located in the southern portion of the Moreno Valley, east of March Air Force Base and south of State Route 60. The southern boundary of the Moreno Valley Ranch Specific Plan is also the northern boundary of the Lake Perris State Recreational Area. (Figure 1)

The Project site is more specifically bound on the west by Lasselle Street, on the north by Cahuilla Drive, and on the south by Krameria Avenue. (Figure 2)

Beyond the contiguous streets, land uses surrounding the Project site are primarily single-family residences in the Low and Medium-low Density Residential zones. Moreno Valley Community College is located directly north of Cahuilla Drive. Lasselle Elementary School is located northeast of the Project site and contiguous to the Project site on two sides.

The Project site assessor parcel number's (APN) are 308-040-053 and 308-040-054. The Project site is located in Riverside County, and within the United States Geological Survey (USGS) 7.5-Minute Topographic Map *Sunnymead* Quadrangle. The Project site is located within the boundaries of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).





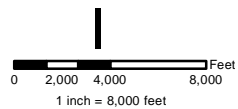
Approximate Project Location

Approximate Moreno Valley Ranch Specific Plan



GIS Prepared By:  
Carlson SLS

Created: November 19, 2018




Data Sources: Bing Maps

**Moreno Valley Ranch EIR #190  
Addendum No. 2  
Regional and Project Location**

Attachment: Exhibit A to Resolution 2019-03 - Addendum (3376) : The proposal includes a General Plan Amendment, Specific Plan A amendment,



**Legend**

 Project Boundary



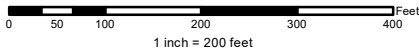
Attachment: Exhibit A to Resolution 2019-03 - Addendum (3376 : The proposal includes a General Plan



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GIS Prepared By:  
Carlson SLS

Created: March 12, 2018



Data Source: Bing Map  
Anderson Consting Engineers, Inc (03/XX/2018)

Moreno Valley Ranch EIR #190  
Addendum No. 2  
Aerial of Project Site



### 1.3 Project Site Existing Conditions

The 7.20-acre parcel (Parcel 1) located in the western portion of the original 18.84 acres, near the intersection of Lasselle Street and Cahuilla Drive, has been graded and is currently under construction. Building foundations have been poured and vertical construction has begun on a 125-unit apartment complex.

The remaining 11.64-acre Project site (Parcels 2 and 3) has been rough graded twice from previous projects, before the property was obtained by the current project Applicant. Several Best Management Practices (BMPs) to control soil erosion and runoff have been installed and are operational. Most notably, an improved detention basin, was previously constructed in the southwestern portion of the Project site to capture runoff from the adjacent Lasselle Elementary School storm drain system. Additional BMPs include sandbags, silt fencing, and straw waddle. The Project site is entirely fenced.

#### *Other Conditions*

The Project site also contains a significant slope and cross fall, and unique pie shaped boundary. The future Water Quality Management Practices for the Project site play a key role in the design process. While underground infiltration basins were approved on Parcel 1, the Project site does not provide sufficient percolation rates to rely on percolation as a water quality solution. Therefore, surface treatment is the only viable option which requires a substantial area of the Project site.

Previously referenced Figures 1 and 2 provide a visual depiction of the project location and existing conditions.

### 1.4 Modified Project

The Applicant proposes to modify the previous development approvals to 1) Revert the approved land use on 2.84 acres (Parcel 2) from High Density Residential back to Neighborhood Commercial; and 2) Construct multi-family housing on 8.80 acres (Parcel 3), at a lower density than the existing zoning requirements allow. This proposal requires a General Plan Amendment, Zone Change, Specific Plan Amendment, Tentative Parcel Map, Plot Plan, and environmental documentation pursuant to CEQA. The following describes the Modified Project through the requested discretionary actions:

#### General Plan Amendment

The Project site currently has a General Plan land use designation of “R-20 Residential: Max 20 du/ac.” The proposed General Plan Amendment would revert the land use designation on Parcel 2, a 2.84-acre parcel located at the corner of Lasselle Street and Krameria Avenue, from R-20 to Neighborhood Commercial, consistent with the commercial land use designation specified in Specific Plan Amendment No. 1. Additionally, the proposal includes a change of the land use designation on Parcel 3, 8.80 acres, from R-20 to R-15 Residential: Max 15 du/ac to accommodate lower density residential housing.

### Zone Change

The Project site currently has a zoning designation of “Multi-family.” The proposed Zone Change would amend the City’s Zoning Map to change the zoning designation on Parcel 2, a 2.84-acre parcel located at the corner of Lasselle Street and Krameria Avenue, from Multi-family to Neighborhood Commercial. Parcel 3, a 8.80-acre parcel, would remain zoned Multi-family, however the Specific Plan would designate Parcel 3 for a maximum of 15 du/ac. Additionally, the Zoning Map would be amended to include reference to Specific Plan 193 over the entire Tentative Parcel Map area.

### Specific Plan Amendment

The proposed Specific Plan Amendment would make the following changes to the Moreno Valley Ranch Specific Plan No. 193.

- Revert the currently approved land use on Parcel 2, 2.84 acres, at the corner of Lasselle Street and Krameria Avenue, from High Density Residential back to Neighborhood Commercial as designated by Specific Plan Amendment No. 1.
- Change the designation of High Density Residential on Parcel 3, 8.80 acers, to Medium-High Density, to accommodate lower density residential housing more consistent with the surrounding land uses.
- The development standards for the multi-family land use shall be consistent with the R-15 zoning standards, except where modified per Specific Plan No. 193. Additionally, the SPA shall include a provision in the multi-family development standards that building separations of 15 feet shall be permitted for buildings two-stories and less, and buildings with 8 or less units in each building.
- The development standards for the Neighborhood Commercial land use shall be consistent with the Neighborhood Commercial zoning standards.
- Parcel 3, 8.80 acres, is the area subject to the proposed General Plan Amendment, Zone Change, Specific Plan Amendment, and Plot Plan, to reduce the density from R-20 to R-15 for the construction of multi-family residential apartments.

### Tentative Parcel Map

Tentative Parcel Map (TPM) No. 37514 includes the 11.64-acre project site (Parcels 2 and 3) and the 7.20-acre (Parcel 1), which is currently under construction with apartments. The TPM would subdivide the approximately 18.84-acre area into three parcels.

- Parcel 1, approximately 7.20 acres, is the area currently under construction. This parcel is included in the Tentative Parcel Map in order to slightly adjust the boundary between Parcel 1 and Parcel 2.



- Parcel 2, approximately 2.84 acres, is the area subject to the proposed General Plan Amendment, Zone Change, and Specific Plan Amendment, to change the land use from High Density Residential to Neighborhood Commercial.
- Parcel 3, approximately 8.80 acres, is the area subject to the proposed General Plan Amendment, Zone Change, Specific Plan Amendment, and Plot Plan, to reduce the density from R-20 to R-15 for the construction of multi-family residential apartments.

TPM No. 37514 also includes Street A, which is aligned between Parcels 1, 2, and 3. Street A connects to Krameria Avenue directly across from Colt Way. Street A connects to Lasselle Street between Parcels 1 and 2, north of Krameria Avenue.

The approval of TPM No. 37514 would supersede the prior approval of Tentative Tract Map No. 36401.

### Plot Plan

A Plot Plan is required for the multi-family development and for the neighborhood commercial development proposed for the Project site. However, at this time, the Applicant is only seeking approval of a Plot Plan for the multi-family development. An application for a Plot Plan for the neighborhood commercial development will be submitted separately at a later date.

The proposed Plot Plan pertains to the construction of 112 multi-family dwelling units on 8.8 acres, shown as Parcel 3 on TPM No. 37514. Access to the multi-family units on Parcel 3 would occur from the newly planned Street A, across from Colt Way, and a connection to the existing service road servicing Lasselle Elementary School across from Quarter Horse Road. All access points the multi-family development would be gated, with Knox Box equipment fitted for first responder access.

The multi-family development includes 96 apartment units provided in six, 16-unit buildings. Each building is approximately 16,148 square feet and will be similar in layout to the product on Parcel 1. The remaining 16 apartment units are provided in lower density 8 duplex-style (2-unit) apartment buildings, with each building measuring approximately 4,448 square feet. All buildings proposed are two story structures.

Parking for the 96 apartment units will be provided by surface parking, covered by carports and solar panels. A total of 203 surface parking spaces are provided, which exceeds the 186 parking spaces required by code. The duplex apartment buildings provide 2 enclosed garage spaces for each unit, totaling 32 spaces.

The apartment complex also includes a Recreation Center (3,836 square feet), which includes a fitness room, offices, and a community room.

### Grading Plan

Total earthwork is estimated to be approximately 50,000 cubic yards (CYs) for Parcel 2 (neighborhood commercial), Parcel 3 (multi-family residential), and Street A. All rough grading earthwork will be balanced on site, with no mass import or export. The site will be left slightly low

to accommodate spoils from foundations, utility trenches, and Street A. However, the last phase of residential construction may require the export of up to approximately 3,000 CYs of dirt, depending on soil parameters.

### Infrastructure Improvements

Storm runoff from the Project site will be collected and routed through bioretention basins to treat the initial runoff and detain peak storm flows. Existing runoff from the Lasselle Elementary School storm drain will continued to be captured, but not treated. Porous pavers will also be used to treat the runoff emanating from the Project's Street A.

A reclaimed water line from Eastern Municipal Water District will be constructed in Cahuilla Drive, adjacent to Parcel 1. Connection to a future water line in Cahuilla Drive will be constructed to bring domestic water to the Project site. Additional utility connections for sewer, domestic water, reclaimed water, and storm drain will be made to existing facilities in Lasselle Street and Krameria Avenue.

## **1.5 Prior Environmental Documentation**

In 1985, the City certified Environmental Impact Report No. 190 for the Moreno Valley Ranch Specific Plan No. 193 (SCH No. 84050907). On November 25, 1986, the City adopted Resolution No. 86-163 certifying Addendum No. 1 to EIR 190 in conjunction with the adoption of Amendment No. 1 to Specific Plan 193.

Amendment No. 6 to Specific Plan 193, which pertains to the Project site, was found consistent with EIR 190 and Addendum No. 1 to EIR 190.

On November 5, 2012, the City adopted a Negative Declaration for PA11-0025 – Plot Plan, PA11-0026 – Tentative Tract Map No. 36401, PA11-0027 – Conditional Use Permit, PA12-114 – Variance, which permitted 216 dwelling units on 19.4 acres. The Negative Declaration was tiered off EIR 190 Addendum No. 1, relying on the technical studies presented in the prior EIR.

The City has determined, for reasons specified below, that the revisions proposed as part of the Modified Project are minor, would not result in any new or more significant environmental impacts, and thus qualify for an Addendum. The prior environmental documentation is collectively referred to as “prior CEQA documents.”

## **1.6 Basis for an Addendum**

Prior to approval of subsequent actions that constitute a “project” under CEQA, such as amendments to the Specific Plan, the City is required to determine whether the environmental effects of such actions are within the scope of prior environmental analysis, or whether additional environmental analysis is required. That decision is influenced by whether the subsequent actions result in new significant impacts or increase the severity of previously identified significant impacts.

The City has evaluated the potential environmental impacts of the proposed Modified Project against the criteria set forth in CEQA Guidelines §§ 15162, 15163, and 15164. The City, acting as the Lead Agency, has determined that none of the conditions specified in those CEQA Guidelines sections apply and that an Addendum to EIR No. 190 (SCH No. 84050907) and EIR No. 190 Addendum No. 1, and the 2012 Negative Declaration are appropriate for the proposed Specific Plan 193 Amendment No. 10 and related entitlements, and fully complies with CEQA, as described in the *CEQA Guidelines*.

Under CEQA, the lead agency, or a responsible agency, shall prepare an addendum to a previously-certified EIR if some changes or additions are necessary to the prior EIR, but none of the conditions calling for preparation of a subsequent or supplemental EIR have occurred (CEQA Guidelines §§15162, 15163, 15164). Once an EIR has been certified, a supplement or subsequent EIR is only required when the lead agency or responsible agency determines that one of the following conditions has been met:

- (1) Substantial changes are proposed in the project, or substantial changes occur with respect to the circumstances under which the project is undertaken, which require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects [*CEQA Guidelines* §15162(a)(1)&(2)];
- (2) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:
  - a) The project will have one or more significant effects not discussed in the previous EIR;
  - b) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
  - c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
  - d) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative [*CEQA Guidelines* §15162(a)(3)].

Pursuant to *CEQA Guidelines* §15164, the lead agency shall prepare an addendum to a previously certified EIR “if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred [*CEQA Guidelines* §15164(a)].” Furthermore, an addendum to an adopted negative declaration may be prepared if “only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred [*CEQA Guidelines* §15164(b)].”

The Modified Project consists of a reversion to land use designations approved for the Project site by Specific Plan Amendment No. 1 and Specific Plan Amendment No. 6. Specific Plan Amendment No. 1 permitted 4.57 acres of Commercial on the Project site, which would permit up to 119,442 square feet of development. The Modified Project proposes 21,000 square feet of commercial development on 2.84 acres. Both Specific Plan Amendment Nos. 1 and 6 permitted High Density Residential, up to 130 dwelling units, on the remaining 8.8 acres. The Modified Project proposes 112 Medium High Density Residential on the remaining 8.8 acres, which constitutes a lower intensity land use.

CEQA Guidelines Appendix G includes issue areas that can generally be categorized as physical issues (such as biological resources, cultural resources, geology and soils, hazards and hazardous materials, etc.) and operational issues (such as air quality, greenhouse gas, noise, traffic, etc.). The physical issues potentially affecting the Project site were analyzed in the original EIR, Addendum No. 1 and the Negative Declaration approved in 2012. Neither the physical boundaries nor conditions have changed from those prior reports. Additional technical studies have been prepared and document that no new or more intense significant impacts would occur. The operational issues were also analyzed in all three prior CEQA documents. Addendum No. 1 to EIR 190 analyzed a much more intense project (130 dwelling units and up to 119,442 square feet of commercial) than what is proposed. The Negative Declaration then analyzed a less intensive project than what is proposed with no commercial and lower density residential. The proposed Project fits in between the two studies. Intensive development has always been contemplated and analyzed on the Project site. The proposed Project represents a reversion back to the originally contemplated and analyzed land uses, which represents a minor change in proposed development. New technical studies have been prepared for all operational issue areas, which have confirmed that all impacts for the Modified Project would be less than significant; therefore, no new or more intense significant impacts have been identified. Therefore, none of the conditions specified in CEQA Guidelines §15162 occur and an Addendum to the prior CEQA documents is appropriate.

An addendum does not need to be circulated for public review, but rather can be attached to the prior EIRs (*CEQA Guidelines* §15164(c)). Prior to initiating the Modified Project, the City will consider this Addendum together with the prior CEQA documents and will make a decision regarding the Modified Project [*CEQA Guidelines* §15164(d)].

## 1.7 Prior Mitigation Measures and Conditions of Approval

In accordance with *CEQA Guidelines* §§15162 through 15164, the City has determined the changes associated with the Modified Project are minor and no new mitigation measures are required, as documented in detail in Section 2.0 below. The prior CEQA documents included mitigation measures and conditions of approval affecting development of the Modified Project site. Many of the measures listed below no longer apply to the Modified Project site. Those measures that no longer apply have been screened back in a grey font. The measures listed below in black font remain applicable to the Modified Project.

**Table 2: Mitigation Monitoring and Reporting Checklist**

| <b>Aesthetics</b>  |  |
|--------------------|--|
| EIR #190 pg. 173   | The applicant intends that the proposed development complement the natural character of the area. Grading will be minimized to maintain the natural topographic profile, where possible, and manufactured slopes will be contoured so that they conform to the natural shape of the land. No significant recontouring is proposed. Also, approximately 1500 acres of hillsides will re-main in their natural state, minimizing not only aesthetic impacts but biological, archaeological and landform impacts as well.   |
| EIR #190 pg. 173   | As noted under Impacts Aesthetics, Visual Analysis, the overall design concepts allowed by the utilization of this large scale Specific Plan are intended to mitigate aesthetic and visual impacts. It is anticipated that landscaping will be utilized, as required, to shield views of the Sunnymead RWRf. EMWD has also offered the use of a 25' strip of land on their property for landscaping which could be used to increase the amount and depth of landscaping to ultimately be provided.   |
| <b>Air Quality</b> |  |
| EIR #190 pg. 116   | The quantity of particulate matter emitted during the grading and construction phase of the project may be reduced through watering graded surfaces and planting groundcover as dust palliatives.  |
| EIR #190 pg. 116   | Modes of transportation other than the automobile (bicycles, pedestrian, equestrian, etc.) should be encouraged as a strategy in reducing pollution from mobile sources. The proposed network of pedestrian trails providing access to residential, commercial, recreational and industrial areas should assist to reduce residents' reliance on the automobile. These routes should be widely publicized.   |
| EIR #190 pg. 116   | Additionally, the design of efficient and direct traffic flow patterns on the project site can help reduce the quantity of air pollutants generated, by minimizing the places in the roadway system where automobiles would be idling unnecessarily Extension of public transit routes to serve the property would also assist in this regard.   |
| EIR #190 pg. 117   | The SCAQMD's Regional Air Quality Strategy proposes measures to reduce' pollutants from mobile sources. These include: 1) expansion of ride-sharing efforts; 2) expansion of transit systems; 3) encouragement of increased bicycle travel; 4) improvements in traffic flows; 5) encouragement of pedestrian travel; 6) expansion of interurban bus and rail systems and 7) freeway ramp metering. These tactics are noted above.  |
| EIR #190 pg. 117   | Reduction of stationary source air pollution emissions may be achieved by incorporating energy-saving devices and additional insulation into the proposed homes as discussed in Section IV.A.7, Energy Conservation.   |
| EIR #190 pg. 117   | The Environmental Hazards and Resources Element of the Comprehensive. General Plan sets forth Land Use Standards - Air Quality Impact Mitigations, stating that major development proposals which may create a significant new source of air pollutant emissions must contribute to the mitigation of adverse air quality impacts. Air quality mitigation measures to reduce automobile use include the following: <ul style="list-style-type: none"> <li>- Bicycle facilities, such as bike lanes, racks and lockers</li> <li>- Transit facilities such as benches, shelters and turnouts</li> <li>- Park and Ride facilities</li> <li>- Energy efficient buildings</li> <li>- Solar access orientation of structures</li> <li>- Solar heated and cooled structures and swimming pools</li> </ul> |
| COA 58             | The project shall conform to the requirements specified in Title 24 as well as solar water heating requirements of Condition #77.  |



| <b>Biological Resources</b> |  |
|-----------------------------|--|
| EIR #190 pg. 90             | The Moreno Valley Specific Plan preserves approximately 1500 acres of natural open space, encompassing essentially all existing coastal sage scrub on-site. The natural open space area also includes those areas on-site which are reported to serve as concentrated roosting habitat for birds of prey. Approximately 60 acres of the suitable habitat for Stephen's kangaroo rat is also planned to be preserved. The preservation of this area as open space partially alleviates the significant adverse impacts discussed in the preceding section.  |
| EIR #190 pg. 90             | The topography of project site is such that the hills in the southern and eastern portion act as a buffer between the proposed urban development and the San Jacinto Wildlife Area. Also, as shown on Figure IV-10, Land Use Plan, only Very Low Density (0-2 units/acre) is planned in the eastern portion of the site, thereby severely reducing the amount of urban development adjacent to the Wildlife Area. Also, the phasing plan designates the eastern areas as the final development phases. Considering a twenty-year build-out, any impacts to the San Jacinto Wildlife area will be considerably delayed.   |
| EIR #190 pg. 91             | The following measures are recommended by the Biological Consultant to minimize project impacts: <ul style="list-style-type: none"> <li>• Access to the natural open space area should be limited to designated trails</li> <li>• Revegetation of cut and fill slopes, and other graded areas should be accomplished with plant palettes containing predominantly native species. Steeper slopes should be revegetated with genera or species of native perennial grasses including Stipa sp., Poa sp. and others.</li> <li>• Possibly in conjunction with fuel modification zones, dense brush should be cleared from lower, more gentle slopes of hillsides to re-place bird of prey foraging habitat lost.</li> </ul>   |
| COA 70                      | In accordance with natural open space condition #72, below, NOS Area B, as shown on the land use map, Exhibit C, Amended No. 1 Land Use Plan, which area has been identified as potential Stephens Kangaroo Rat Habitat, shall be offered for dedication to the California Department of Fish and Game or such other agency as is identified in the above referenced condition #72.<br><br>Prior to any development within a Phase identified as containing suitable Stephens Kangaroo Rat Habitat, a trapping and relocation program, approved by the California Department of Fish and Game, shall be conducted to determine the presence of this species, and specimens as collected through this trapping program shall be relocated in accordance with Fish and Game direction. |
| COA 71                      | All project related lighting shall be hooded or otherwise directed in a manner which will prevent or reduce direct lighting and glare on the adjacent hillsides.   |
| COA 72                      | 1685 acres of natural open space as shown on the Land Use Plan, Exhibit C - Amended No. 1 Land Use Plan, shall be excluded from development except for two proposed water reservoir sites required by the Eastern Municipal Water District. These natural open space areas are shown on the referenced Exhibit as NOS Areas A, B, and C and the specific condition related to each area as noted below. These areas shall be protected against any construction activity occurring as a consequence of adjacent development.<br><br><u>Area A</u><br>Dedication Timing: Prior to the development within any development phase as shown on Phasing Exhibit D 7/25/85 Revision the NOS area within this phase shall be offered for dedication to those agencies listed below.          |

|  |  |
|--|--|
|  | <p>Area A shall be offered for dedication to the California Department of Parks and Recreation. If this agency does not accept the property as offered, it shall then be offered to each of the agencies listed below in the order noted:</p> <ol style="list-style-type: none"> <li>1. The California Department of Fish and Game.</li> <li>2. The City of Moreno Valley</li> <li>3. Such other public or private entity as may be approved by the City Council of the City of Moreno Valley.</li> </ol> <p><u>Area B</u><br/>The developer shall deed Area B to the California State Department of Fish and Game or California Department of Parks and Recreation or other appropriate agency as approved by the City Council in conjunction with San Geronio chapter of the Sierra Club.</p> <p>The deed transaction shall be completed by December 31, 1986. During the interim time period (January 1, 1986) - December 31, 1986) the area shall be leased to the Department of Fish and Game for use and management by that agency.</p> <p><u>Area C</u><br/>Area C shall remain undeveloped and in a natural state. The area shall be owned and managed by the Riverside Community College District. Title to this area shall be transferred from the developer to the District prior to any development within Phase II as shown on the Phasing Plan - Exhibit D 7/25/85 Revision.</p> |
|--|--|

**Cultural, Historical Resources**

|                         |   |
|-------------------------|---|
| <p>EIR #190 pg. 99</p>  | <p><u>Alternate 1 - Preservation and Surface Documentation</u></p> <p>A. Preserve and protect the four significant sites located at the base of the Mount Russell Hills by:</p> <ol style="list-style-type: none"> <li>1. Donating the entire Mount Russell Hills and lower flanks to the Perris Reservoir State Park to be annexed within the Park System and, therefore protected by their rangers, or</li> <li>2. Fence off the four site areas and deed the land to the San Bernardino Museum Association on either a long term or renewable lease basis. The Museum Association would then be responsible for this protection, or</li> <li>3. A combination of 1 and 2 above.</li> </ol>   |
| <p>EIR #190 pg. 100</p> | <p>B. Surface documentation is necessary on two additional occupation sites, the 21 processing sites, the one historic site and the 20 isolated milling slicks.</p> <p><u>Alternative 2 - Surface Documentation, Protective Filling, Rock Art Fencing</u><br/>Because of the large acreage covered by these sites, Alternative 2 is costlier than Alternative 1.</p> <p>A. Surface documentation of the four significant sites located at the base of the Mount Russell Hills, including:</p> <ol style="list-style-type: none"> <li>1. Locating all sites on blueline</li> <li>2. Photographing, measuring and drawing of all surface features, and</li> <li>3. Collecting all surface artifacts</li> </ol> <p>B. Protective Filling and Rock Art. Fencing of the four significant sites is also necessary, due to the presence of sub-surface deposits at occupations sites. In order to eliminate natural surface erosion and subsequent exposure, it is necessary to cover these sites with sterile fill. For rock art sites, in addition to covering all flat areas with 3 to 5 feet to sterile fill, a 6-foot high cyclone fence should be constructed, with a metal roof attached from the edge of fence to the boulder with rock art. Finally, a bulletproof clear plastic shield should be attached to protect the art, or shrubbery should be planted to obscure visibility of the rock art panels.</p> |

|  |  |
|--|--|
| EIR #190 pg. 101                             | <p>C. Surface documentation is, again, necessary on the two additional occupation sites, the 21 processing sites, the one historic site and the 20 isolated milling slicks.</p> <p><b>Cultural Resources - Direct Impact Mitigations</b><br/> Necessary procedures to mitigate the direct impacts of construction on any site include:</p> <ol style="list-style-type: none"> <li>1. Surface documentation as described for "Indirect Impact Mitigations.</li> <li>2. In the area (s) of direct impact, a series of 1x2 meter excavation units must be dug by hand to gain a scientifically controlled sample of areas to be destroyed. This sampling could be from a 1%-5% sample of the processing sites, and includes processing through screen mesh, C14 dating, laboratory processing and analysis, and report preparation.</li> <li>3. Any area (s) containing archaeological sites must be monitored during the grading process; The monitor will be empowered to temporarily halt, divert or redirect the mechanical- equipment to document any feature(s) uncovered.</li> </ol>   |
| EIR #190 pg. 102                             | <p><u>Paleontological Resources</u><br/> For deep excavations (over 10 feet), a paleontologist should evaluate the subsurface material and determine its potential for containing fossils. If it has a moderate possibility of containing such remains then the following mitigations for the alluvial deposits are recommended.</p> <ol style="list-style-type: none"> <li>1. A qualified paleontologist should be present at pre-grade meeting to consult with the grading and excavation contractor and should be present during earthmoving.</li> <li>2. The paleontologist should be empowered to temporarily direct, divert or halt grading to allow for the recovery of fossil remains.</li> <li>3. Remains collected from the subject property, with the owner's permission, should be deposited in an institution such as the San Bernardino County Museum, which has an ongoing paleontological programs and collectors from this area.</li> </ol>   |
| Addendum 1 pg. IV-1                          | All natural open space areas will be owned and managed by public agencies.   |
| COA 75                                       | <p>Prior to grading operations in any area containing an identified archaeological site, an archaeological recovery program or other mitigation as recommended by the project archaeologist shall be completed.</p> <p>Caretaker Facilities shall be required at the approximate locations indicated below subject to the following terms and conditions:</p> <p>The developer shall provide trailer pad and utilities to the two proposed caretaker quarters located near Riv-11 and Riv-419/421. The developer shall extend utilities and construct trailer pads in conjunction with nearby development.</p> <p>The facilities for Riv-11 would be made available prior to occupancy of any units in Planning areas 5 or 6; and for Riv-419/421 prior to occupancy of any units in any units in Planning Area 74, 80, or 81. If it is determined by the Department of Fish and Game, or Department of Parks and Recreation, whichever agency is managing NOS-B, that this area is in need of additional protection, the developer will provide a pad and utilities for caretaker facilities, or protective fencing, as required by the appropriate agency.</p> |
| <b>Geology, Seismicity, Soil Agriculture</b> |  |
| EIR #190 pg. 55                              | Prior to site planning, seismic refraction surveys should be conducted in those areas to obtain reasonable approximations of the depths to boundaries of rippable, marginally rippable and non-rippable rock.  |
| EIR #190 pg. 55                              | Slope stability constraints on the proposed development are expected to be minimal. Some precautions, such as providing green belt areas or building setbacks, below natural slopes may  |



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|                                      | be necessary to ensure protection from the hazard of rockfall. Cut slopes less than 20 feet in height in non-highly jointed weathered bed-rock are expected to be grossly stable against deep-seated failure. The project as currently designed avoids development where boulder rolling is expected to occur.   |
| EIR #190 pg. 55                      | Cut slopes in alluvium should be no more than 30 feet in height. All artificial slopes will require measures to minimize surficial degradation.  |
| EIR #190 pg. 55                      | To provide for surficial stability, and to prevent piecemeal sloughing, cut slopes in alluvium, weathered bedrock, and/or highly jointed bedrock will perform best if designed at an angle no steeper than 2:1. It will also be more feasible to establish vegetation on slopes if they are not steeper than 2:1. The stability of any 2:1 cut slopes in bedrock units higher than 20 feet should be individually evaluated once a tentative design is established. All cut slopes should be inspected for adverse conditions during grading by a qualified engineering geologist.   |
| EIR #190 pg. 56                      | Incorporation of appropriate parameters for the design of one and two-story buildings and conformity with the latest Uniform Building Code, the Environmental Hazards and Resources Element of the Comprehensive General Plan, and other County ordinances can be expected to satisfactorily mitigate the effects of seismic ground shaking.   |
| EIR #190 pg. 56                      | Secondary earthquake hazards, such as liquefaction, flow landsliding, seismically induced settlement and ground lurching or cracking, are generally associated with relatively high intensities of ground shaking, shallow ground water conditions and the presence of loose sandy soils or alluvial deposits. Although these secondary hazards appear unlikely, additional geotechnical investigation, including soil sampling and testing is required to adequately assess these constraints. At this time, it is expected that foundation designs incorporating appropriate engineering recommendations will be adequate to mitigate any of these kinds of constraints. |
| Addendum 1 pg. IV-14                 | First, all structures and ancillary uses shall be restricted to areas having a slope range of less than 24%. All streets shall be aligned through slope having a gradient of no more than 16%. By restricting development to the flatter areas, the site will be less susceptible to falling rock resulting from unstabilizing hillside cuts, measures for mitigating biological impacts will remain intact, the potential for unsightly hillside scarring will be eliminated.   |
| Addendum 1 pg. IV-14                 | Secondly, a detailed geotechnical investigation shall be conducted for the site to further analyze the thickness of colluvium and the degree of rock decomposition as they relate to the proposed development plan. The study shall include recommendations for appropriate cut and fill slope grades, degree of rippability of the soil, and methods to protect future structures from damage caused by falling rock.   |
| Addendum 1 pg. IV-14                 | Embedded rock outcroppings shall be included as part of future landscaping plans for the purpose of economic as well as aesthetic enhancement of site development.   |
| COA 73                               | A soils Engineering report including but not limited to a statement regarding the potential of ground settlement, shall be completed prior to the issuance of the grading permit.  |
| COA 74                               | Potential rockfall and rollout zones shall be identified and restricted from development. These zones shall be preserved as part of the natural open space areas as shown on Exhibit "C" Amended No. 1 Land Use Plan.  |
| <b>Hydrology, Flooding, Drainage</b> |  |
| EIR #190 pg. 68                      | Implementation of the Moreno Valley Ranch Specific Plan will eliminate the floodplain hazards of the site. Major features of the flood control system include a trapezoidal channel and possibly the lake system, as shown on Figure IV-19, Master Drainage Plan. All facilities will be constructed in accordance with the standards of the Riverside County Flood Control District and will implement the Sunnymead and Moreno Area Master Plans.  |
| EIR #190 pg. 69                      | The Flood Control District assesses fees for the support of drainage improvements within the boundaries of adopted Area Drainage Plans, which will be applicable to the developer of the Moreno Valley Ranch. These fees will mitigate any financial impacts.  |

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| EIR #190 pg. 69            | The improvements proposed by the Moreno Valley Ranch Master Drainage Plan respond to the Flooding Land Use Standards of the Environmental Hazards and Resources Element of the Comprehensive General Plan through mitigation of the existing floodplain condition and by payment of fees set forth by the Master Drainage Plans. All applicable Flooding Land Use Standards will be satisfied by the proposed project.   |
| EIR #190 pg. 69            | Erosion control devices will be utilized in hillside development areas to mitigate the effect of increased runoff at points of discharge. Devices may include temporary berms, culverts, sandbagging or desilting basins.  |
| EIR #190 pg. 69            | A lake consultant has been retained to advise regarding the lake system design and construction, in order to ensure that water quality in the lake meets all applicable standards. The water level of the lakes will be maintained on a year-round basis, and a water circulation system will be utilized to prevent water stagnation.   |
| EIR #190 pg. 69            | A water quality maintenance program can be implemented to mitigate the impact of urban runoff on surface water quality over the long term. A suitable program is outlined in Water Pollution Aspects of Street Surface Contaminants (prepared by the U.S. Environmental Protection Agency). This program provides recommendations for street cleaning and prevention of pollutant generation. Its implementation rests with local agencies, the project Homeowners Association and individual residents  |
| COA 65                     | The existing drainage courses shall be developed in accordance with conditions and standards set by the Riverside County Flood Control and Water Conservation District and the City Engineer. Where possible within District guidelines, drainage courses shall be left in a natural state. Riparian areas shall be maintained by the master property owner's association, or as otherwise approved by the Flood Control District and the City Engineer.   |
| COA 66                     | Retention basins or other facilities shall be developed as required and approved by the Riverside County Flood Control District and the City Engineer to ensure that drainage flow velocities onto adjacent properties do not exceed those experienced under existing conditions.  |
| COA 67                     | The developer shall participate in the fee mitigation program of the Master Drainage Plans for this area.  |
| <b>Landform/Topography</b> |  |
| EIR #190 pg. 41            | All grading will be performed in accordance with the Riverside County Grading Policies. Measures to reduce soil erosion, such as performing grading operations during dry (summer) months, keeping the soil mantle moist during grading and providing erosion control facilities should be implemented. Soil erosion potential will be further reduced through implementation of the Riverside County Flood Control District's Master Plan for the site as proposed by the project. Landscaping all cut and fill slopes will protect the slopes from erosion and minimize the visual impacts of grading operations. As previously mentioned, grading will occur in phases, minimizing the areal extent of exposed soils, thereby reducing erosion. |
| Addendum 1 pg. IV-11       | In conformance with the Hillside Development Standards, providing erosion control facilities as required by the City Public Works Department, and landscaping all manufactured slopes in accordance with City Standards. The proposed amendment will not create any greater impacts.   |
| COA 68                     | The common boundary between the U.C. Riverside Experimental Farm and the specific plan shall be planted with high, middle and low canopy foliage to form a dense barrier. The use of berms and walls in conjunction with this barrier can be used to increase noise attenuation. The developer shall meet with the appropriate staff of the University of California at Riverside to develop a buffering program and to provide adequate security provision for this area. Such program shall be submitted to the Moreno Valley Planning Commission for approval prior to approval of any tract map in Phase I.  |

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| COA 69          | The common boundary between the EMWD wastewater treatment plant and the specific plan shall be planted to form a buffer for noise reduction purposes. Berms and walls may be used in conjunction with this barrier to enhance noise reduction.  |
| <b>Land Use</b> |   |
| COA 15          | <p>The total specific plan shall be developed with maximum 12,695 dwelling units on 1620 acres pursuant to Exhibit "C" - Amended No. 1 Land Use Plan.</p> <p>Final development densities for each phase shown in Exhibit "D" 7/25/85 Revision shall be determined through the appropriate tract application, up to the maximum density identified for the planning unit in question, based upon, but not limited to the following:</p> <ul style="list-style-type: none"> <li>A. adequate availability of services;</li> <li>B. adequate access and circulation;</li> <li>C. sensitivity to land forms;</li> <li>D. innovation in housing types, design, conservation, or opportunities</li> <li>E. adequate provision of recreational open space within planned residential developments (PRD 1 s);</li> <li>F. sensitivity to neighborhood design through appropriate lot and street layouts;</li> <li>G. compatibility with surrounding off-site development land uses and densities;</li> <li>H. adequate mitigation of all school impacts identified by the affected school district;</li> </ul> |
| COA 16          | Lots created pursuant to this specific plan shall be in conformance with the development standards of the zones ultimately applied to the property.   |
| COA 17          | A change of zone application may be required, as determined by the Planning Department, with each subsequent development application.   |
| COA 18          | Flag lots shall not be permitted.   |
| COA 19          | All utilities shall be placed underground.  |
| COA 20          | All landscaped common greenbelt, park, improved open space, and linear park areas within the specific plan shall include automatic irrigation systems.  |
| COA 21          | <p>Prior to the recordation of any final subdivision, improvement plans for developed common park, landscaped areas, and parkway areas for that subdivision or to mitigate an environmental impact for that stage of development shall be submitted to the Planning Commission for approval. The improvement plans shall include, but not be limited to the following:</p> <ul style="list-style-type: none"> <li>A. Final grading plan.</li> <li>B. Irrigation plans certified by a landscape architect.</li> <li>C. A landscaping plan with seed mixes for mulching and staking methods. Locations, type, size and quantity of plantings.</li> <li>D. A Hardscaping plan with location and type and quantity of recreational amenities/facilities.</li> </ul>   |
| COA 22          | The 26 acre area designated for commercial development located at the intersection of Iris Avenue and Lasselle Street as shown on Exhibit "C", Amended No. 1 Land Use Plan shall be developed pursuant to Commercial Specific Plan or an alternate development procedure adopted by the city.   |
| COA 23          | The proposed neighborhood commercial areas, other than that described in Condition No. 22 above, shall be subject to Plot Plan review submitted under provision of Section 18.12 and 18.30 of Ordinance 348. Architectural compatibility with surrounding development shall be maintained.  |
| COA 24          | The area designated as Light Industrial as shown on Exhibit "C" - Amended No. 1 Land Use Plan shall be subject to Plot Plan review submitted under provision of Section 18.12 and 18.30 of Ordinance 348. Architectural compatibility with surrounding development shall be maintained.   |

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| COA 25                 | At the time of recordation of any tentative final subdivision which contains a common greenbelt, park, and/or linear park areas, the subdivision shall have those common areas conveyed to the master property owners association or appropriate public maintenance agency.  |
| <b>Noise</b>           |  |
| EIR #190 pg. 75        | Construction activities should be limited, especially during the later phases of development, to maintain quiet during evening hours and weekends. In addition, construction equipment should be equipped with effective muffling devices.   |
| EIR #190 pg. 75        | In residential areas which lie within the 65 CNEL zone due to traffic noise, noise barriers will be required. An earthen berm or non-porous wall can result in significant and adequate noise reduction, if interposed between source and receiver. The barrier should effectively block the line of sight from the noise source. The required height of these barriers is directly dependent upon precise elevation differentials between the source and receiver. As a result, these barriers will be designed at subsequent, more detailed stages of project design. Special construction techniques can be used to maintain interior noise levels at acceptable standards. Measures such as the use of double-pane windows, additional insulation, weather-stripped doors and windows and baffled vent openings can be incorporated into the building design, if needed. |
| EIR #190 pg. 76        | Noise - Land Use Standards as set forth by the Environmental Hazards and Resources Element will be satisfied by the Moreno Valley Ranch Specific Plan, including attainment of 45 dBA and 65 dBA for interior and exterior noise levels respectively.  |
| COA 57                 | Prior to the issuance of building permits an acoustical study shall be performed by an engineer to establish appropriate mitigation measures for on-site impacts and to buffer the UCR Farm. This mitigation shall be applied to individual dwelling units within implementing subdivisions located adjacent to collector and larger roadways as well as providing noise attenuation between on-site uses adjacent to the UCR Farm, and to reduce noise ambient interior noise levels to 45 db(a). The required acoustical studies shall be subject to Planning Commission approval and review by the appropriate staff of UCR and any mitigation measures recommended in the reports shall be incorporated into the design of the specific plan and construction of residential units.  |
| <b>Public Services</b> |  |
| EIR #190 pg. 144       | As the EMWD has indicated their ability to provide <u>water and sewer service</u> to the project, no mitigations are needed. The use of reclaimed water for landscape irrigation is being considered and may also be used in the proposed lakes. Water and sewer district annexation fees, per unit fees for capacity in the sewage treatment plant, and per unit water service connection fees will prevent any negative financial impacts to the District. As discussed above, water demand can be partially reduced by utilizing reclaimed water.   |
| EIR #190 pg. 148       | The project applicant should study the possibility of including trash compactors as a standard feature in the new homes as well as the feasibility of installing recycling bins on the site for residents' use and convenience to reduce <u>solid waste generation</u> .   |
| EIR #190 pg. 156       | The project applicant will work with the County of Riverside <u>Fire Department</u> in order to insure the adequacy of the location and size of the presently proposed fire station sites. A fee of \$600 per unit is assessed by the "Public Facilities Plan for the Moreno Valley". A portion of this will be allocated to the Fire Department to cover costs of constructing the stations. A number of measures to reduce the potential for fire occurring have been incorporated into the project design.  |
| EIR #190 pg. 159       | The applicant will also cooperate with the Sheriff's Department to insure that adequate police protection is provided.   |
| EIR #190 pg. 159       | The proposed ten-acre civic center site could, if deemed necessary, serve as a location for a police sub-station.  |
| EIR #190 pg. 164       | A number of <u>natural gas and electricity conserving techniques</u> have been incorporated into the project design, as described in the Specific Plan.  |

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| EIR #190 pg. 169                            | The project proponent will continue working with the four affected <u>school</u> districts to insure adequate facilities are provided. Payment of District(s) development fees will help mitigate financial impacts.  |
| COA 59                                      | The following fire impact mitigation measures shall be required: <ul style="list-style-type: none"> <li>A. Fire protection shall be provided in accordance with Schedule "A" of Ordinance 460 and/or 546.</li> <li>B. All dwelling units and structures must have built-in smoke detectors and alarm systems.</li> <li>C. Buildings should be designed and constructed to be fire resistant through following: <ul style="list-style-type: none"> <li>1) Adequate spacing between buildings to allow the movement of fire equipment around the inner portions of the project.</li> <li>2) All buildings within the project shall have Class A roofing material.</li> <li>3) Overhead decking for multiple story structures should be designed to preclude a fire from burning under it and up through it.</li> <li>4) Exterior spark arrestors on chimneys shall be provided. A sample shall be submitted to the County Fire Department for inspection and approval prior to installation.</li> </ul> </li> <li>D. Site specific project design should include the following: <ul style="list-style-type: none"> <li>1) A circulation pattern that has roadways which are of sufficient width to be easily traveled by fire vehicles, cul-de-sacs less than 1320 feet, and multiple access points into residential neighborhoods through loop streets and throughways.</li> </ul> </li> </ul> |
| COA 60                                      | The project sponsor shall participate in the Public Facilities Fee Program for Moreno Valley.   |
| COA 61                                      | Fuel modification zones constructed to the standards of the County Fire Department will be provided for each subdivision or development plan as required by the County Fire Department. Fuel modification features (e.g. dirt roads) shall be outside the natural open space areas offered for dedication to the appropriate public agencies.   |
| COA 62                                      | Each subdivision within the specific plan shall provide school impact mitigation measures as determined by the Moreno Valley Unified, Val Verde Elementary, Perris Union, and NuView Union Elementary School districts through the dedication of sites and through developer fees.  |
| COA 63                                      | Ultimate phases which contain a proposed school site shall provide improvements which shall include, but not be limited to, utilities and street improvements to the site at no cost to the school districts.   |
| COA 64                                      | The developer shall mitigate potential safety and security impacts in the following manner: <ul style="list-style-type: none"> <li>A. Prior to recordation of the implementing tract maps the following action shall occur: <ul style="list-style-type: none"> <li>1) An application shall be submitted to the City of Moreno Valley for the formation of a street lighting district, or annexation to an existing light district.</li> <li>2) This application shall be filed concurrently with the submittal of street improvement plans to the Riverside County Road Commissioner.</li> </ul> </li> <li>B. The project design shall incorporate security hardware as recommended by law enforcement agencies on all structures, and an emphasis on visibility through location and landscaping of structures.</li> </ul>   |
| <b>Traffic, Circulation, Scenic Highway</b> |   |
| EIR #190 pg. 134                            | Those portions of the following roadways should be re-designated on the County Master Plan of Highways as "Specific Plan Roads" and be classified as six lane divided arterials: <ul style="list-style-type: none"> <li>- Perris Blvd.,</li> <li>- Alessandro Blvd.,</li> <li>- Moreno Beach Dr., and</li> </ul>  |



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|                  | <p>- Iris Ave.</p> <p>In order to avoid off-site impacts to the area circulation system, the county of Riverside should insure the orderly implementation of their Master Plan of Highways, with the amendments described above.</p>   |
| EIR #190 pg. 135 | <p>To provide for adequate internal roadway circulation, the Traffic Engineer, Kunzman Associates, has recommended guidelines for the development of the project. These recommendations are included in their entirety as Section VI.D., Technical Appendices - Traffic Analysis. Briefly, these mitigations deal with:</p> <ol style="list-style-type: none"> <li>1) Internal Design Guidelines for Residential Development</li> <li>2) Residential Design Guidelines for Fire Safety and Emergency Access.</li> <li>3) Internal Design Guidelines for Commercial Development</li> <li>4) Commercial Access Design Guidelines</li> <li>5) Internal Design Guidelines for Industrial park development</li> </ol>   |
| EIR #190 pg. 135 | <p>In addition, the circulation system proposed by Moreno Valley Ranch Specific Plan has been designed in accordance with the County policies for the Moreno Valley Community Policy area as follows:</p> <ol style="list-style-type: none"> <li>1) The project implements the County Master Plan of Street and Highways.</li> <li>2) Heavy through traffic has been eliminated from residential neighborhoods.</li> <li>3) Pedestrian traffic has been separated from vehicular traffic, particularly in commercial and high density areas. As described in Section IV.E.5 Open Space and Recreation Plan - Trails, a pedestrian trails system is proposed. A community trail system is planned that will provide pedestrian and bicycle access throughout the Moreno Valley Ranch, linking the project with adjacent residential areas, the State Recreation Area, as well as internally with parks, schools, recreation facilities, the lakes, civic center and a vista point near the western village core.</li> </ol> |
| EIR #190 pg. 136 | <p>In regards to non-peak hour congestion problems at the Lake Perris State Recreation Area entrance, the project applicant should work with the State and the County to find solutions. A number can be considered, including:</p> <ol style="list-style-type: none"> <li>1) Implementing the Davis Road entrance, in accordance with the State's Master Plan for the Lake Perris Recreation Area</li> <li>2) Altering the present system for admitting visitors so that those hoping to get into the park later in the day do not wait in vehicle queues.</li> <li>3) Changing and augmenting the current park signage program to clarify park operations, procedures, and hours to reduce vehicle congestion by information seekers and potential park users.</li> </ol>  |
| COA 40           | <p>All road improvements within the project boundaries shall be constructed to ultimate City standards in accordance with Ordinance No. 460 and 461 as a requirement of the implementing subdivisions for this project and shall be subject to approval by the City Engineer.</p>  |
| COA 41           | <p>The applicant shall submit for Planning Commission approval, a composite circulation plan prior to the issuance of grading permits for each stage of development in question which combines and defines the type and extent of pedestrian, equestrian and vehicular circulation modes identified in the Specific Plan and EIR. The composite circulation plan shall establish the development standards, phasing and maintenance responsibilities for the various circulation components, public and private streets, sidewalks, streetscapes, trails and bridges.</p>  |
| COA 42           | <p>The subdivider shall comply with the following street improvement recommendations:</p> <ol style="list-style-type: none"> <li>A. The master circulation plan shall be revised to designate Iris Avenue/Moreno Beach Drive as a six-lane arterial within the project boundaries.</li> <li>B. The applicant/developer of any subdivision within Specific Plan 193 shall participate</li> </ol>  |

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|                           | on a fair share basis in any mitigation and/or fee program designed to alleviate off site roadway and freeway interchange deficiencies.  |
| COA 43                    | Road improvements shall be provided in accordance with the requirements of the implementing subdivision for this project and/or as recommended by the City Engineer.   |
| COA 44                    | The basic circulation system shall be developed substantially in accordance with the Specific Plan, EIR and Read Engineering Department conditions as contained herein.  |
| COA 45                    | Collector roadways shall minimize the use of reverse frontage walls by such treatments as increased setbacks, landscaping, and berming or other techniques which will allow individual residential developments to have frontage on the collector roadways without the use of masonry walls or fences.   |
| COA 46                    | The project proponent shall participate in the Traffic Signal Mitigation Program as adopted by the City of Moreno Valley.  |
| COA 47                    | All proposed school bus stop locations and turnouts shall be subject to approval by the school districts prior to the approval of any subdivisions within each Phase.  |
| COA 48                    | Concrete sidewalks shall be constructed throughout this development  |
| COA 49                    | Handicapped/bicycle ramps shall be incorporated into all curb and sidewalk designs.  |
| COA 50                    | A sufficient quantity of bicycle racks shall be provided by the developer at the neighborhood commercial center.   |
| COA 51                    | Prior to any residential or commercial development within Phase II, Iris Avenue shall be completed to Moreno Beach Drive or another secondary access shall be provided as approved by the Read Engineering Department.   |
| COA 52                    | Prior to the recordation of any subdivision or development plan within Phase II of this specific plan the project sponsor will submit to the Read Engineering Department and Planning Commission a circulation plan designed to mitigate traffic impacts resulting from the use of Moreno Beach Drive as the main access to the Lake Perris State Recreation Area. Upon approval this circulation plan will become a condition of approval for any or all development within Phase III as deemed appropriate by the Road Department. This circulation plan shall evaluate the proposed commercial and residential land uses interfacing with the Moreno Beach Drive intersection/Lake Perris entry to insure that these uses have adequate access which will not impact area residents and park users. |
| <b>General Conditions</b> |  |
| COA 1                     | The specific plan approval shall consist of the following:<br>Exhibit "A" Specific Plan Text - Amended 10/23/86<br>Exhibit "B" Specific Plan Conditions - Amended 10/23/86<br>Exhibit "C" Land Use Plan - Amended No. 1 10/23/86<br>Exhibit "D" Phasing Plan -7/25/85 Revision<br>Exhibit "E" Circulation<br>Exhibit "F" Project Circulation<br>Exhibit "G" Biological Constraints<br>Exhibit "H" Project Design Manuel  |
| COA 2                     | If any of the following conditions of approval differ from the commitment made by the developer in the specific plan text or map exhibits, the conditions enumerated herein shall take precedence.   |
| COA 3                     | The development of the property shall be in accordance with the mandatory requirements of all City of Moreno Valley Ordinances and State Laws and shall conform substantially with approved Specific Plan No. 193 as filed in the offices of the City of Moreno Valley unless otherwise amended.   |
| COA 4                     | No portion of the specific plan which purports or proposes to change, waive or modify any ordinance or other legal requirement in effect at time of final approval for the development   |

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|        | shall be considered to be a part of the adopted specific plan.  |
| COA 5  | Water and sewage disposal facilities shall be installed in accordance with the requirements and specifications of the Riverside County Health Department. Such requirements will be applied at the subdivision or plot plan stage.  |
| COA 6  | Drainage and flood control facilities and improvements shall be provided in accordance with Riverside County Flood Control and Water Conservation District and City Engineer's requirements. Such requirements will be applied at the subdivision and plot plan stage. <ol style="list-style-type: none"> <li>a. All proposed improvements and construction shall be in conformance with the City of Moreno Valley Flood Prevention Ordinance.</li> </ol>   |
| COA 7  | Prior to issuance of a building permit for construction of any use contemplated by this approval, the applicant shall first obtain clearance from the City of Moreno Valley Planning Department that all pertinent conditions of approval have been satisfied with the ' specific plan for the phase of development or planning unit in question.   |
| COA 8  | An environmental assessment shall be conducted with each filing for tentative tract map, change of zone, plot plan, specific plan amendment or any other discretionary permit application required to implement the specific plan. At a minimum, the environmental assessments shall utilize the evaluation of impacts addressed in the EIR prepared for Specific Plan No. 193 and Addendum No. 1 to the EIR, prepared for Specific Plan No. 193 Amendment No. 1.   |
| COA 9  | All future development shall be subject to and in accordance with the applicable ordinances of the City of Moreno Valley in effect at the time of application as contained in those County Ordinances (including Ordinances 348 and 460) that were adopted by the City following incorporation. Any future revisions to these City Ordinances shall be effective against all development phases for which Tentative Tract Maps have not been approved, as of the date of the revision.  |
| COA 10 | A master property owners association or appropriate public maintenance agency shall be established by the developer encompassing the entire specific plan for the ownership, maintenance and management of lakes, parks, irrigation systems, landscaping along the public roads, major project entry point facilities, and, signing and lighting responsibilities as necessary as defined through the specific plan conditions of approval and its subsequent amendments.   |
| COA 11 | Where applicable by ordinance or required by adoption of a condition of approval relating to the underlying tentative tract proposal, a neighborhood owners association shall be established prior to the recordation of the final tract map for each residential development. The neighborhood owners association shall be responsible for any common area improvements that are unique to that neighborhood/sub-community and other responsibilities as necessary as defined through the specific plan conditions of approval.                                    |
| COA 12 | A commercial property owners association shall be established for the commercial area as shown in Exhibit "C" - Amended No. 1 Land Use Plan. The commercial property owners association will be developed prior to the issuance of any building permits within the first phase of the commercial center. The commercial property owners association shall be responsible for private roads, parking, signing, landscaped areas, irrigation, common areas and other responsibilities as necessary and as defined through the specific plan conditions of approval.   |
| COA 13 | An industrial property owners association shall be established for the industrial area as shown in Exhibit "C" - Amended No. 1 Lands Use Plan. The industrial property owners association will be developed prior to the issuance of any building permits within the first phase of the industrial center. The industrial property owners association shall be responsible for private roads, parking, signing, landscaped areas, irrigation, common areas and other responsibilities as necessary and as defined through the specific plan conditions of approval. |



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| COA 14                          | <p>Prior to the recordation of any final subdivision map, or building permits being issued for conditional use permits and plot plans, the applicant shall submit to the Planning Commission the following documents which shall demonstrate to the satisfaction of the City that the individual appropriate owners associations will be established and will operate in accordance with the intent and purpose of the specific plan.</p> <ol style="list-style-type: none"> <li>A. The document to convey title.</li> <li>B. Covenants, Conditions and Restrictions to be recorded.</li> <li>C. Management and Maintenance agreements to be entered into with the unit/lot owners of the Project.</li> </ol> <p>The master property owners association, neighborhood owners association, commercial and industrial owners associations shall be charged with the unqualified right to assess their own individual owners who own individual units for reasonable maintenance and management costs which shall be established and continuously maintained. The individual owners associations shall have the right to lien the property. of any owners who default in payment of their assessment fees. Such a lien shall not be subordinate to any encumbrance other than a first deed of trust, provided such deed of trust is made in good faith and for good value and is of record prior to the lien of the individual owners association.</p> |
| <b>Planning Area Conditions</b> |   |
| COA 26                          | <p>Specific Plan 193 shall be developed in accordance with the conditions of approval, Exhibit "C" - Amended No. 1 Land Use Plan and the following specific development criteria for each individual identified planning unit.</p> <ol style="list-style-type: none"> <li>A. All areas designated as landscape spaces and parks on the development plan shall be subject to the following development criteria: <ol style="list-style-type: none"> <li>1. Areas designated as Planning Area 7,8,16,18,19, 28,38,45,46,54,63,68, and 79 shall be owned and managed by the Master Property Owners Association or appropriate public maintenance agency.</li> <li>2. Planning unit 27 shall be developed as ci vie center for government and public offices or as a professional business complex. A fire station shall also be placed in this location if deemed appropriate by the County Fire Department and/or the City of Moreno Valley. Architectural compatibility with surrounding development shall be maintained.</li> <li>3. Detailed development plans, including facilities, landscaping and irrigation shall be for submitted Planning Department approval concurrently with the submittal of the tentative tract maps which include these areas.</li> </ol> </li> </ol>   |
|                                 | <ol style="list-style-type: none"> <li>B. Planning area 4 shall be developed as a Industrial Center in the following manner. <ol style="list-style-type: none"> <li>1. The Industrial Center shall be developed subject to a plot plan to be submitted under provisions of Section 18.12 and 18. 30 of Ordinance 348. This plot plan shall include detailed building sizes elevations, parking, roof treatment, landscaping and circulation design.</li> <li>2. The Industrial Center shall be designed and developed in a manner which is compatible in all respects with residential development proposed within Specific Plan 193.</li> <li>3. Energy considerations shall be incorporated into the design of industrial areas. Parking areas shall be heavily landscaped to reduce heat gain. Passive and active solar systems should be considered in structural designs.</li> <li>4. All signs shall be in compliance with Section 1,9.4 of Ordinance 348.</li> </ol> </li> </ol>   |
|                                 | <ol style="list-style-type: none"> <li>C. Planning areas 3, 21, 57, 59, and 75 shall be developed as neighborhood commercial centers in the following manner: <ol style="list-style-type: none"> <li>1. The Commercial Centers shall be developed subject to a plot plan to be submitted</li> </ol> </li> </ol>   |

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|  | <p>under the provisions of Sections 18.12 and 18.30 of Ordinance 348. This plot plan shall include detailed building sizes, elevations, parking, roof treatment, landscaping and circulation designs, and will designate the major uses proposed on each site.</p> <ol style="list-style-type: none"> <li>2. The Commercial Center shall be developed in a manner that is architecturally harmonious with its own defined identity incorporating development criteria from the defined theme of Specific Plan 193.</li> <li>3. The Commercial Center all incorporate efficient pedestrian, bikeway, auto, and public transportation systems. Development details shall be provided concurrently with the plot plan which will be evaluated by the Planning Commission and other affected agencies.</li> <li>4. Energy considerations shall be incorporated into the design of commercial areas. Parking areas shall be heavily landscaped to reduce heat gain. Passive and active solar systems shall be considered in structural designs.</li> <li>5. All signs shall be in compliance with Section 19.4 of Ordinance 148.</li> </ol> |
|  | <p>D. Planning Areas 19 and 79 shall be developed as Community Recreational Centers as described in Exhibit "A" - Amended 9/86 and in accordance with the following:</p> <ol style="list-style-type: none"> <li>1. The centers shall be owned and managed by the Master Home Owners Association or other appropriate public agency.</li> <li>2. Detailed development plans, including facilities, landscaping, and irrigation shall be submitted for Planning Department approval concurrently with the submittal of the tentative tract maps which include this area.</li> </ol>  |
|  | <p>E. Planning Areas 9, 13, 33, 37, 53, 65 and 70 shall be developed in accordance with Exhibit "C" - Amended No. 1 Land Use Plan and the following criteria.</p> <ol style="list-style-type: none"> <li>1. The Master Home Owners Association or the developer shall manage the site until such time as the appropriate School District assumes title to the property.</li> <li>2. The site shall be maintained in a manner which is aesthetically pleasing and does not present a hazard to health and safety.</li> <li>3. If the appropriate School District determines that a site is not required or desirable as a future school facility, that site shall be developed as a maintained park. If development other than that above is proposed, such development shall be approved by the Planning Commission and may require a Specific Plan Amendment.</li> </ol>  |
|  | <p>F. Flood Control facilities within each phase will be constructed prior to or concurrently with the initial development within that phase.</p>  |
|  | <p>G. Prior to the issuance of grading permits for the construction of the lake system the developer shall submit a plot plan application to the Planning Commission for approval. The development of the lake system shall occur in the following manner:</p> <ol style="list-style-type: none"> <li>1. The construction and maintenance program of the lake system shall be certified by a limnologist.</li> <li>2. Any stocking and fishing program of the lake system will require clearance from the California State Department of Fish and Game.</li> <li>3. If boating is proposed, the rules and regulations which will affect the equipping and/or operations of the vessels on the lake system shall be submitted to the California State Department of Boating and Waterways for clearance.</li> <li>4. A temporary graded maintenance/emergency road shall be provided around the lake system until such time that the area around the lake is fully developed.</li> </ol>  |
|  | <p>H. Planning Area 2 shall be developed to (1) equestrian/recreational uses as described in the required "Design Handbook" and, (2) such other related commercial uses as may be approved by the City through public hearing procedures. Approved</p>   |

Attachment: Exhibit A to Resolution 2019-03 - Addendum (3376) : The proposal includes a General Plan Amendment, Specific Plan Amendment,

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|                           | <p>equestrian/recreational related uses may be owned and managed by the Master Homeowners Association or the Commercial Property Owners Association. The additional commercial uses as may be approved by the City Council through the public hearing process required above shall be maintained by the Commercial Property Owners Association. In either situation, Planning Area 2 shall be subject to the following:</p> <ol style="list-style-type: none"> <li>Detailed development plans including facilities, landscaping, and irrigation shall be submitted for Planning Commission approval concurrently with the submittal of the tentative tract maps which include this area.</li> </ol> |
| <b>Phasing Conditions</b> |   |
| COA 27                    | Construction of the development permitted hereby, including recordation of final subdivision maps, may be done progressively in stages, provided adequate vehicular access is constructed for all dwelling units in each stage of development and further provided that each phase of development conforms substantially with the intent and purpose of the Specific Plan Master Phasing Program. Any proposed variation to the Master Phasing Plan shall be reviewed by the Planning Commission for determination of substantial conformance to the Specific Plan.   |
| COA 28                    | Development applications may be filed out of the numerical sequence of the Master Phasing Plan, provided that the development application complies with all conditions, including requirements for public facilities, infrastructure and recreational amenities, for the phase and planning unit in which it is located and all intervening phases and planning units.  |
| COA 29                    | Area and density transfers between Master Phases shall be prohibited.   |
| COA 30                    | <p>A. Phase One</p> <ol style="list-style-type: none"> <li>Infrastructure</li> <li>3282 Residential units</li> <li>12 acres of commercial development</li> <li>34 acres for School sites</li> <li>35 acres of parks and recreational areas</li> <li>27 acres of lakes</li> <li>225 acres of natural open space (NOS "B") to be dedicated to the Department of Fish and Game pursuant to Condition #72.</li> </ol>   |
|                           | <p>B. Phase Two</p> <ol style="list-style-type: none"> <li>Infrastructure</li> <li>3296 Residential units</li> <li>29 acres of commercial development</li> <li>10 acres of civic center or professional offices</li> <li>1 acres for fire station</li> <li>8 acres for school sites</li> <li>420 acres of natural open space</li> <li>15 acres of parks and recreational areas</li> <li>8 acres of lake</li> <li>76 acres of community college campus that includes related uses.</li> </ol>  |
|                           | <p>C. Phase Three</p> <ol style="list-style-type: none"> <li>Infrastructure</li> <li>912 dwelling units</li> <li>14 acres of commercial development</li> <li>7 acres for school sites</li> <li>152 acres of natural open space</li> <li>15 acres of parks and recreational areas</li> <li>5 acres for park sites</li> </ol>   |

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|                           | <p>D. Phase Four</p> <ol style="list-style-type: none"> <li>1. Infrastructure</li> <li>2. 2407 dwelling units</li> <li>3. 2 acres of commercial development</li> <li>4. 28 acres of light industrial development</li> <li>5. 40 acres for school sites</li> <li>6. 103 acres of natural open space</li> <li>7. 14 acres of parks and recreational areas</li> <li>8. 47 acres of equestrian recreation facilities</li> </ol>  |
|                           | <p>E. Phase Five</p> <ol style="list-style-type: none"> <li>1. Infrastructure</li> <li>2. 1730 dwelling units</li> <li>3. 10 acres of commercial development</li> <li>4. 1 acres for a fire station site</li> <li>5. 25 acres for school sites</li> <li>6. 85 acres of natural open space</li> <li>7. 20 acres of park and community recreational areas</li> <li>8. 20 acres of lake</li> </ol>  |
|                           | <p>F. Phase Six</p> <ol style="list-style-type: none"> <li>1. Infrastructure</li> <li>2. 1068 dwelling units</li> <li>3. 700 acres of natural open space</li> </ol>  |
| COA 31                    | Each planning phase as identified in Exhibit "D" 7/25/85 Revised shall incorporate internal pedestrian access to common landscaped spaces and recreation areas. No direct pedestrian access shall be provided to the natural open space areas.   |
| COA 32                    | Within eight (8) and sixteen (16) years of City Council's adoption of the Resolution for the specific plan, any portion of this specific plan, that has not been developed or for which an implementation development plan has not been approved by the City Council, the City Council may review and may require an amended specific plan at the developer's expense prior to further development.  |
| COA 33                    | Construction of the lakes in Phases I, II and V shall commence prior to or concurrently with the initial development in each applicable phase.   |
| COA 34                    | Construction of parks, community and equestrian recreational areas shall commence prior to, or concurrently with adjoining development in each applicable phase.   |
| COA 35                    | Any area within Specific Plan No. 193 which is designated as a school site, is exempt from the provisions of the Master Phasing program. Sites designated for schools may be developed at such time the applicable school districts deem appropriate provided adequate water, sewer and other necessary services are available to the site.  |
| <b>Grading Conditions</b> |  |
| COA 36                    | No grading shall be permitted for any development area prior to tentative map or plot plan approval and issuance of grading permits for the area of development in question, excluding stock pile plans or as approved by the City Engineer.   |
| COA 37                    | <p>All grading within the specific plan shall comply with City Ordinance No. 45 and the following conditions and development criteria:</p> <ol style="list-style-type: none"> <li>A. All grading shall be in accordance with the County's Hillside Grading Policies, as adopted by the City.</li> <li>B. Where cut and fill slopes are created in excess of 10 feet in vertical height, detailed landscaping and irrigation plans shall be submitted to the Planning Department and Engineering Department prior to approval of grading plans. The plans will be reviewed for type and density of ground cover, seed mix, plant sizes and irrigation systems.</li> </ol> |

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|   | C. Gradients of all driveways and private roadways shall not exceed 15% percent.  |
|   | D. All manufactured slopes shall be contour-graded incorporating the following grading techniques: <ol style="list-style-type: none"> <li>1. The angle of the graded slope shall be gradually adjusted to the angle of the natural terrain.</li> <li>2. The toes and tops of all slopes in excess of 10 feet in vertical height shall be rounded with curves with radii designed in proportion to the total height of the slope where drainage and stability permit such rounding.</li> <li>3. Where cut and fill slopes exceed 150 feet in horizontal length, the horizontal contours of the slopes shall be curved in a continuous, undulating fashion.</li> </ol>  |
|   | E. Natural features such as trees with four inch or larger trunk diameters and significant rock outcrops shall be protected to the greatest extent feasible in the siting of individual lots and building pads. These features shall be shown on the grading plan with appropriate protection and relocation notes.   |
|   | F. All dwellings shall be located a minimum of 10 feet from the toes and tops of all slopes over 10 feet in vertical height unless otherwise approved by the City Engineer.   |
|   | G. Natural drainage courses shall be retained in their natural state wherever possible.   |
|   | H. All brow ditches, terrace drains and other minor swales where required shall be lined with natural erosion control materials or concrete, as approved by the Planning Director and City Engineer.  |
|   | I. All grading work shall be balanced within the limits the phase boundary, eliminating any off-site transport of materials.  |
|   | J. All graded but undeveloped land shall be maintained in a weed-free condition and planted with interim landscaping.   |
|   | K. The applicant and/or developer shall be responsible for the maintenance and upkeep of all slope planting and irrigation systems until such time as those operations are the responsibility of other parties.   |
| COA 38                                      | All tentative tract map submittals shall include and overall conceptual grading plan for the stage of development in question. The grading plans shall include but not be limited to the following: <ol style="list-style-type: none"> <li>A. Preliminary quantity estimates for grading.</li> <li>B. Areas of temporary borrowing or depositing of material.</li> <li>C. Techniques which will be utilized to prevent erosion and sedimentation during and after the grading process.</li> <li>D. Approximate time frames for grading including identification of areas which may be graded during the higher probability rain months of January through March.</li> <li>E. Preliminary pad and roadway elevations.</li> <li>F. Hydrology and hydraulic concerns and mitigation measures.</li> </ol> |
| COA 39                                      | Any trees with four inch or larger trunk diameters which are removed shall be replaced with native specimen trees on a three to one basis, as approved by the Planning Director. Trees which are to be removed shall be indicated on the proposed grading plan.   |
| <b>Parks and Recreation Area Conditions</b> |   |
| COA 53                                      | The parks and recreation areas shown on Exhibit "C" - Amended No. 1 Land Use Plan shall be developed in accordance with the requirements and standards of the R-5 zone as follows: <ol style="list-style-type: none"> <li>A. Maintenance of the landscaped spaces, park areas and recreation areas shall be the developer's responsibility until such time as operation and maintenance is assumed by a county service areas, community services district, or other appropriate public agency.</li> <li>B. Bike lanes and equestrian trails shall be constructed in accordance with Exhibit II A", these conditions and the "Design Manual II referenced in Condition #79 as approved by the City Parks Department and the Planning Department.</li> </ol>  |

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|                                     | C. Park areas shall be equipped with play and picnic facilities and landscaping with automatic irrigation. These facilities shall be Provided to the satisfaction of the Planning Departments.  |
|                                     | D. Permanent automatic irrigation system shall also be installed on all other landscaped areas requiring irrigation. Landscaping and irrigation plans shall be prepared and certified by a qualified landscape architect and submitted for Planning Department approval.  |
|                                     | E. Native specimen trees and shrubs shall be utilized wherever possible, as approved by the Planning Department.  |
|                                     | F. Landscape screening shall be designed to be opaque up to a minimum height of six (6) feet at maturity.   |
|                                     | G. All utility service areas and enclosures shall be screened from view with landscaping and decorative barriers or baffle treatments, as approved by the Planning Department.  |
|                                     | H. All landscaping and irrigation shall be installed in accordance with approved plans prior to the issuance of occupancy permits. If seasonal conditions do not permit planting, interim landscaping erosion control measure shall be utilized as approved by the Planning Department.   |
|                                     | I. Landscaping maintenance and upkeep, shall be the responsibility of the applicant and developer until such time as those functions become the responsibility of the master property owner's association or appropriate public agency.   |
| COA 54                              | Prior to the issuance of building and grading permits, landscaping, irrigation, and improvement plans for landscaped areas and recreation areas shall be submitted to the Planning Commission and approved for the stage and area of development in question. Improvement plans shall conform to concepts, features and standards established in the specific plan and these conditions.  |
| COA 55                              | <p>An equestrian-trail system shall be constructed along the alignments shown on Land Use Plan Exhibit C Amended No 1 Land Use Plan. The trail system, except for that portion along Davis Road, shall be improved in accordance with details illustrated in the "Design Handbook" prepared for the Moreno Valley Ranch project as approved by the Planning Commission and shall be offered for dedication to the Riverside County Parks Department, or other public agency as appropriate, when tentative tract maps adjacent to this system are being processed. If the system is not accepted for maintenance by the County Parks Department, or other appropriate public agency, it shall be owned and maintained by the Master Homeowners Association or other entity as approved by the City.</p> <p>The Davis Road section of the system shall be improved and offered for dedication as provided for above at the time the adjacent natural open space Area "B" as shown on Exhibit C - Amended No. 1 Land Use Plan, is conveyed to the appropriate agency as required by Condition 72.</p> <p>The system shall also incorporate <math>\pm</math> 1 acre trail head or staging area, if appropriate, in the vicinity of the Wilmont or Davis Road entrance to the project site. Any staging area or trailhead located along Davis Road within or adjacent to NOS-B as shown on Exhibit "C" - 7/25/85 Revision shall be reviewed by the Department of Fish and Game prior to approval by the City. Until such time as the permanent system is completed, usable existing equestrian access shall not be curtailed.</p> |
| <b>Impact Mitigation Conditions</b> |   |
| COA 56                              | The developer shall incorporate all special impact mitigation plans, findings, and recommendations into the design of all applicable development plans including subdivision, grading, and building plans.  |



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| COA 76 | The developer shall provide within one of the commercial components of the development an improved park and ride facility or participate towards contributions for the purchase of and improvement to an off-site facility if recommended by Caltrans at the development stage.   |
| COA 77 | <p>The developer shall provide solar water heating systems as the primary source of water heating in all residential units designated medium, medium high and high density.</p> <p>The credit allowable to satisfy the Title 24 requirements shall be limited to the points allowed for the gas water heater. Also, any group swimming pools planned for the three major community recreation facilities, as well as the group swimming pools planned in residential areas designated medium, medium-high and high density shall use solar water heating as the primary method of heating the swimming pools. The Planning Department shall verify that these requirements have been satisfied prior to that issuance of building permits.</p>                            |
| COA 78 | A land division map may be filed on a portion of or the entire project site for the purpose of financing, and to delineate the planning areas in accordance with Exhibit C - Amended No. 1. Land Use Plan prior to the implementation of the first tentative tract map. This land division map shall provide for the establishment of the Master Home Owners Association and the appropriate division, development and management of landscaped areas, dedication of access routes and shall be exempt from those Specific Plan conditions of approval which refer to the tentative tract maps which will implement the development of the numbered planning areas.   |
| COA 79 | The applicant shall prepare a "Design Handbook" to be submitted to the City of Moreno Valley Planning Commission for review and approval prior to the approval of any tract map in Phase I. This handbook will contain information pertinent to the design of residential, commercial and recreation product types and facilities. The handbook shall be submitted to the appropriate staff of the University of California Riverside, for review and comment with respect to the project interface with the UCR Farm.  |
| COA 80 | The Riverside Community College facility (Planning Area 22) shall be exempt from the City's public use permit process. However, the hospital site shall be required to file an application for a public use permit with the City of Moreno Valley.  |
| COA 81 | Planning Unit 26 shall be developed as a recreational center owned and operated by the Riverside Community College District and available to the public through a joint use agreement.  |
| COA 82 | <p>Detailed design standards shall be submitted to the Planning Department for review at the time an application is filed for development within Planning Areas 21 and 21A. Information submitted shall include the following:</p> <ol style="list-style-type: none"> <li>a. Plan showing the placement of buildings, location of usable open space, and delineating proposed setbacks;</li> <li>b. Building design and architecture;</li> <li>c. Elevations including examples of proposed materials for exteriors and heights of buildings;</li> <li>d. Fencing plan including height and details of proposed materials to be used.</li> <li>e. Conceptual landscaping and irrigation plan;</li> <li>f. Parking design;</li> <li>g. conceptual grading plan.</li> </ol> |
| COA 83 | A cross-sectional rendering, illustrating land use relationships between Planning Areas 21A and 22A, shall be submitted for Planning Department review concurrently with the initial development request.   |
| COA 84 | Should public transportation (bus) service be available at the time of development request submittal for uses within Planning Areas 26, 27, 21, and 22, a bus turn out facility shall be incorporated in implementing site plans to the satisfaction of the Planning Department and the   |



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|   | Riverside Transit Agency.   |
| COA 85  | Tentative tract maps implementing the development of Planning Areas 49 and 50 shall show the proposed alignment of the 66 foot collection road bisecting NOS "A" and NOS "C".   |
| COA 86  | Concurrently with the submittal of any implementing subdivisions, the project sponsor shall submit a schedule for traffic control facility installations based on traffic studies contained within EIR 190 and subsequent plan amendments. The schedule shall include signalization, stop signs, and other required traffic controls.   |
| COA 87  | <ol style="list-style-type: none"> <li>a. All structures and ancillary uses shall be restricted to areas having a slope range of less than 24%.</li> <li>b. All streets shall be aligned through slope having a gradient of more than 16%.</li> </ol>   |
| COA 88  | A detailed geotechnical investigation shall be conducted. for the site to further analyze the thickness of colluvium and the degree of rock decomposition as they relate to the proposed development plan. The study shall include recommendations for appropriate cut and fill slope grades, degree of rippability of the soil, and methods to protect future structures from damage caused by falling rock. |
| COA 89  | Embedded rock outcroppings shall be included as part of future landscaping plans for the purpose of economic as well as aesthetic enhancement of site development.  |
| <p><i>Source:</i><br/> <i>Moreno Valley Ranch Specific Plan/ Environmental Impact Report No. 190. August 13, 1985.</i><br/> <i>Addendum No. 1 to Environmental Impact Report No. 190. November 25, 1986.</i><br/> <i>Specific Plan 193 (Moreno Valley Ranch) Final Conditions of Approval. July 25, 1985, Amended 10-23-86.</i></p> |   |

## 1.8 Project Design Features and Standard Conditions of Approval

The Modified Project includes several Project Design Features (PDFs) and Standard Conditions of Approval, which represent elements of the project design that have been included proactively either in response to prior mitigation measures/conditions or approval or in order to comply with City ordinances or State regulations. The following provides a summary of PDFs and Standard Conditions applicable to the Modified Project.

### 1.8.1 Air Quality

The following PDFs and Standard Conditions of Approval have been applied to the Modified Project to conform to standard rules applied by the South Coast Air Quality Management District and current technology for grading equipment.

**PDF AQ-1:** During the site preparation phase, construction equipment greater than 150 horsepower (>150 HP), the Construction Contractor shall use off-road diesel construction equipment that complies with EPA/CARB Tier 3 emissions standards and will ensure that all construction equipment be tuned and maintained in accordance with the manufacturer's specifications.

**SC AQ-1:** The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403.

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.

- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

**SC AQ-2:** Only “Low-Volatile Organic Compounds” paints (no more than 50 gram/liter of VOC) and/or High- Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.

## 1.8.2 Cultural

The City of Moreno Valley has worked with local Native American tribes to streamline the consultation process on new development projects. As a result, the City applies the following standard conditions to new development projects.

**SC CR-1:** Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the Project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

- a. Project grading and development scheduling;
- b. The Project archeologist and the Consulting Tribes(s) as defined in CR-1 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis;

- c. The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

**SC CR-2:** Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians for tribal monitoring. The Project Applicant is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2.

**SC CR-3:** In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

- a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:
- i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.
  - ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure CR-1. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in CR-1.

**SC CR-4:** The City shall verify that the following note is included on the Grading Plan:

*"If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."*

**SC CR-5:** If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Standard Conditions above, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in CR-1 before any further work commences in the affected area.

**SC CR-6:** If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 5-days of the published finding to be given a reasonable opportunity to identify the “most likely descendant”. The “most likely descendant” shall then make recommendations and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

EIR 190 on Page 102 included a mitigation measure requiring paleontological monitoring during grading in areas with the potential to produce paleontological resources. The potential for paleontological resources was evaluated and presented in the *Cultural and Paleontological Resources Assessment* prepared by Duke CRM, July 2018, and included in Appendix C. Given the potential for paleontological resources to be present on the Project site, the following PDF has been added to provide more clarity and definition to the original mitigation measures.

**PDF CR-1:** A paleontological monitor shall be present to observe ground disturbing activities within the Project property. The monitor shall work under the direct supervision of a qualified paleontologist (B.S. /B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated experience and competence in paleontological research, fieldwork, reporting, and curation).

1. The qualified paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols.
2. Paleontological monitoring shall start at part-time. If no paleontological resources are discovered after half of the ground disturbance has occurred, monitoring can be reduced to spot-checking.
3. The monitor shall be empowered to temporarily halt or redirect grading efforts if paleontological resources are discovered.
4. In the event of a paleontological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area.

5. In consultation with the qualified paleontologist the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly removed, and the area cleared.

6. If the discovery is significant the qualified paleontologist shall notify the applicant and the City immediately.

7. In consultation with the applicant, the qualified paleontologist shall develop a plan which will likely include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

### 1.8.3 Geotechnical

Conditional of Approval 88 from EIR 190 Addendum No. 1 and SPA Amendment No. 1 requires a detailed geotechnical investigation and incorporation of recommendations presented in the study. Included in Appendix D is a *Geotechnical Investigation Update* prepared by GeoCon West Inc. dated March 2018. The following Standard Condition is included to require implementation of the recommendations included in the geotechnical report, consistent with Condition of Approval 88 from EIR 190 Addendum No. 1.

**SC GEO-1:** Prior to the issuance of a grading permit, the recommendations presented in the *Geotechnical Investigation Update* shall be incorporated into the final geotechnical report and on the grading plans.

### 1.8.4 Noise

EIR 190 Page 76 requires attainment of 45 dBA interior noise levels and EIR 190 on Page 75 includes a mitigation measure, “special construction techniques can be used to maintain interior noise levels at acceptable standards.” In compliance with those measures and to provide greater specificity to the Modified Project, the following PDF is incorporated.

**PDF NO-1:** To meet the City of Moreno Valley 45 dBA CNEL interior noise standards the following on-site standard construction measures are required:

- **Windows/Glass Doors:** All units require windows and sliding glass doors that have well-fitted, well-weather-stripped assemblies, and minimum sound transmission class (STC) ratings of 27.
- **Exterior Doors (Non-Glass):** All exterior doors shall be well weather-stripped and have well-sealed perimeter gaps to achieve minimum sound transmission class (STC) ratings of 27.
- **Exterior Walls:** At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.

- **Roof:** Roof sheathing of wood construction shall be per manufacturer's specification or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer's specification or well sealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic space.
- **Ventilation:** Arrangements for any habitable room shall be such that any exterior door or window can be kept closed when the room is in use and still receive circulated air. A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code.

EIR 190 Page 75 also requires attenuation of construction noise. In addition to requiring compliance with established construction hours, EIR 190 also included noise reduction in the form of berms and walls. In compliance with those measures and to provide greater specificity to the Modified Project, the following PDF is incorporated.

**PDF NO-2:** The following PDFs are included in the Project design to reduce construction noise and vibration levels produced by the construction equipment to the nearby sensitive land uses.

- If R6 represents occupied residential use at the time of Project construction, install a minimum 10-foot high temporary construction noise barrier at the Project's site boundary adjacent to sensitive receiver location R6, shown on Exhibit ES-B, for the duration of Project construction. The noise control barriers must have a solid face from top to bottom. The noise control barrier must meet the minimum height and be constructed as follows:
  - o The temporary noise barrier shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts. Example photos are provided in Appendix 11.2.;
  - o The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired;
  - o The noise control barrier and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity.
- Large mobile equipment (greater than or equal to 80,000 pounds) (5) shall not be used within 50 feet of receiver locations R2 and R6 if occupied at the time of Project construction, as shown on Exhibit ES-B. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used within this area during Project construction.
- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that Project construction activities shall comply with the City of Moreno Valley Municipal Code requirements.



- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site during all Project construction (i.e., to the western center).
- The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

### 1.8.5 Traffic

EIR 190 Addendum No. 1 includes several conditions of approval that require roadway improvements and payment of fees. Specifically, Condition of Approval No. 42(b) states: "The applicant/developer of any subdivision within Specific Plan 193 shall participate on a fair share basis in any mitigation and/or fee program designed to alleviate off site roadway and freeway interchange deficiencies."

An updated Traffic Impact Analysis (TIA) was prepared for the Modified Project (Appendix J). The TIA concluded that while the Modified Project would not cause any direct traffic impacts, two roadway deficiencies would occur in the future regardless of whether or not the Modified Project is constructed. In compliance with COA 42(b) and to provide greater specificity to the Modified Project, the following PDF is incorporated to require the Modified Project to contribute its fair-share to resolve future roadway deficiencies.

**PDF TR-1:** Prior to the issuance of Certificates of Occupancy, the Applicant shall contribute fair share towards the following intersection improvements as specified in the 2018 TIA prepared for the Modified Project:

#### *Improvement – Lasselle Street & Iris Avenue (#2)*

- Implement a 130-second cycle length during the peak hours.

#### *Improvement – Lasselle Street & Krameria Avenue (#5)*

- Modify the median and striping to accommodate dual northbound left turn lanes, a through lane, and shared through-right turn lane.
- Restripe the eastbound approach with 2 lefts, 1 through, and 1 right turn lane.
- Modify the traffic signal to implement overlap phasing on the eastbound right turn lane.
- Implement a 130-second cycle length during the peak hours.



## 1.9 Summary of Findings

In accordance with the analysis presented in Section 2.0, and pursuant to Section 15162, 15164, and 15183 of the *State CEQA Guidelines*, the City of Moreno Valley has determined that:

- 1) The modified project does not result in substantial changes that would require major revisions to the previously certified EIRs due to new or substantially more severe significant environmental effects than previously analyzed; and
- 2) No substantial changes in circumstances have occurred that would result in new or more severe significant environmental impacts than previously analyzed; and
- 3) No new information of substantial importance as described in Section 15162 (a)(3) has been identified that would require major revisions to the analysis or conclusions presented in the prior EIRs.

## 1.10 Cumulative Impacts

The Modified Project would not change the permitted land uses, extent of construction activities, or intensity of development beyond what was previously analyzed. Since the most intense short-term construction impacts entailing rough grading has already occurred, the construction impacts for the Modified Project are less than the Approved Project. For this reason, no new or greater cumulative impacts would occur from the Modified Project. Since there is no change in land use or an increase in intensity of development, the long-term operational impacts associated with the Modified Project would remain consistent with the analysis provided in the prior CEQA documents. There would be no changes to the analysis or conclusions regarding cumulative impacts.

## SECTION 2.0 ENVIRONMENTAL CHECKLIST

### 2.1 Aesthetics

| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| AESTHETICS. Would the project:  |                                    |                            |                                     |                          |
| a) Have a substantial adverse effect on a scenic vista?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially damage scenic resources, including scenic vistas from public parks and views from designated scenic highways or arterial roadways?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Will the project create a new source of substantial night light that would result in "sky glow" (i.e. illumination of the night sky in urban areas) or "spill light" (i.e. light that falls outside of the area intended to be lighted) onto adjacent sensitive land uses. | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

#### Discussion:

The prior CEQA documents determined that development of the Project site would not have significant impacts on visual resources for the following reasons:

- The Moreno Valley General Plan identifies scenic highways, panoramic viewsheds, and photographic viewing locations within the aesthetic resource element, none of which occur within the vicinity of the Project site.
- The Project site has been previously mass graded under prior project approvals, therefore the site does not contain scenic resources, rock outcroppings or historic structures.
- The area surrounding the Project site has been developed with a community college, residential development, and an elementary school.

The proposed changes associated with the Modified Project would not change the prior conclusions with respect to Aesthetics impacts and would not require new or revised mitigation measures.

**a, b)** The Project Site remains the same size and in the same location as analyzed in the prior CEQA documents. Therefore, the prior conclusions the Project Site does not constitute a scenic resource or provide views of a scenic vista remain unchanged.

**c)** The Modified Project would revert a portion of the site back to commercial land uses as approved in Specific Plan Amendment No. 1. The remainder of the site would remain designed for residential development. The areas surrounding the Project site has been developed with complementary land uses, such as a community college, elementary school, and residential development. The Modified Project represents a continuation of planned development in the area. The Specific Plan and Municipal Code include design guidelines and development standards that ensure the new development would be designed and constructed consistent with surrounding land uses.

**d, e)** The Modified Project would not change the potential impact of night lighting on glare or “sky glow.” The overall land use (residential and commercial) and building intensity (number of dwelling units and size of the commercial) have not changed substantially from prior approvals. The type and intensity of night lighting would remain as previously analyzed and regulated by the Municipal Code.

**Conclusion:** The changes in design associated with the Modified Project would not change the visibility or character of the development. Therefore, no changes to the conclusions presented in the prior CEQA documents are warranted. No new impacts or intensification of previously identified impacts would occur with the Modified Project and no new mitigation is necessary.

## 2.2 Agriculture and Forestry Resources

| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest protocols adopted by the California Air Resources Board. Would the project: |                                    |                            |                                     |                          |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The prior CEQA documents concluded development of the Project Site would not impact Agriculture and Forest Resources because no resources exist on the Project site; the Project site is not designated Prime or Unique Farmland; the Project site does not have an Agriculture or Forest zoning designation; and the Project site is not subject to a Williamson Act contract.

- 
- a) The Modified Project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as documented on the Riverside County Important Farmland 2016 map (Sheet 1 of 3) prepared by the California Department of Conservation as part of the Farmland Mapping and Monitoring Program. Therefore, the Modified Project would not cause new impacts to occur.
- b) The Modified Project site is not zoned Agriculture on the City's Zoning Map. The Modified Project site is also not designated Agriculture by the City's General Plan.
- c) According to the General Plan and Zoning Map, no timber farmland designation exists on the Modified Project site. Therefore, no new impacts would occur.
- d) No forest or timber resources are located on the Modified Project site. Therefore, no new impacts would occur.
- e) No other conditions exist that would convert farmland or timberland as a result of the Modified Project because timberland does not exist on the Modified Project site or in the area. Furthermore, the Modified Project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, no new impacts would occur as a result of the Modified Project.

**Conclusion:** The proposed changes associated with the Project would not change the conclusions in the Prior EIRs. The Project site continues to not have agriculture or timber resources or be subject to agriculture, timber, or Williamson Act land use restrictions. None of the components of the Modified Project (GPA/SPA) would change those designations or conclusions. No new impacts or intensification of previously identified impacts would occur with the Modified Project.

## 2.3 Air Quality

| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:  |                                    |                            |                                     |                          |
| a) Conflict with or obstruct implementation of the applicable air quality plan?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** Air quality emissions apply to both construction activities and operation of the proposed land uses. Construction impacts are dependent on the size of the Project site and the amount of construction activity. The Project site, 11.64 acres, has not changed from that analyzed in prior CEQA documents. Construction activities have already occurred on the Project site, including prior mass grading. The Modified Project requires additional grading to remove and replace the upper 3 to 5 feet of unengineered fill material and recontour the site to accommodate the development proposal. The Modified Project proposes to perform the grading work with at least Tier III grading equipment, which tends to be the current standard for large grading contractors. The Modified Project is also subject to standard rules published by South Coast Air Quality Management District (SCAQMD) including Rule 403 to curb fugitive dust and Rule 1113 to curb VOC emissions from paints. Therefore, the following PDFs and Standard Conditions of Approval have been applied to the Modified Project to conform to standard rules applied by the South Coast Air Quality Management District and current technology for grading equipment.

**PDF AQ-1:** During the site preparation phase, construction equipment greater than 150 horsepower (>150 HP), the Construction Contractor shall use off-road diesel construction equipment that complies with EPA/CARB Tier 3 emissions standards and will ensure that all construction equipment be tuned and maintained in accordance with the manufacturer's specifications.



**SC AQ-1:** The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403.

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

**SC AQ-2:** Only “Low-Volatile Organic Compounds” paints (no more than 50 gram/liter of VOC) and/or High- Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.

Included as Appendix A to this Addendum is the report *Continental Villages Air Quality Impact Analysis*, prepared by Urban Crossroads (November 2018). The report provides a project specific air quality analysis. Table 3-4 in the Air Quality Impact Analysis report summarizes construction emissions for the Modified Project. The analysis determined that no significant impacts would occur. Emissions from construction activities would not exceed criteria pollutant thresholds of significance established by the South Coast Air Quality Management District.

Operational emissions consist of area source emissions, energy source emissions, and mobile source emissions. Collectively, the operational emissions depend on the land use type and intensity of the project being evaluated. The Moreno Valley Ranch Specific Plan planned development of the Project site in the original EIR document. During the intervening years, several Specific Plan Amendments (SPA) have changed the land use designations on the Project site. The most intensive land use was approved by SPA No. 1 and analyzed in EIR 190 Addendum No. 1. SPA No. 1 approved 130 high density residential dwelling units and 4.57 acres of commercial retail (119,442 square feet based on a 0.60 floor to area ratio). Compared to the Modified Project, SPA No. 1 permitted more residential uses (130 compared to 112) and more commercial square footage (119,442 square feet compared to 21,000 square feet). Therefore, the Modified Project is substantially less intensive and therefore, would have less operational emissions.

The report, *Continental Villages Air Quality Impact Analysis*, prepared by Urban Crossroads (November 2018) also analyzed operational emissions from the Modified Project. As summarized in Table 3-5, the Modified Project would not exceed the applicable regional thresholds of significance established by the South Coast Air Quality Management District for any criteria pollutant.

The study concludes the Modified Project site’s air pollution emissions would be less than significant and less than or equal to those contained in the prior CEQA documents. Therefore, the proposed changes associated with the Modified Project would not change the conclusions in the prior CEQA documents.

a) In March 2017, the AQMD released the Final 2016 Air Quality Management Plan (AQMP). The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the national air quality standards (NAAQS). The Project's consistency with the AQMP is determined using the following criteria found in the AQMP:

- Consistency Criterion No. 1: The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The Project would not result in or cause national (NAAQS) or state (CAAQS) air quality violations. Construction and operation emissions are less than the thresholds of significance for criteria pollutants. Although the Project would require a General Plan Amendment, construction and operational source impacts would not exceed the applicable SCAQMD regional and localized thresholds. As per the *Continental Villages Focused Air Quality and Greenhouse Gas Memorandum*, the air quality emissions associated with the Project are less than land uses previously approved for the site. As such, the Project would have a less than significant impact with respect to consistency with the AQMP and the Modified Project would not cause new or more severe impacts to occur.

b) The Modified Project was evaluated against thresholds of significance for criteria pollutants established by the South Coast Air Quality Management District (SQAQMD) for construction and operational activities. In both cases, emissions from the Modified Project would not exceed the applicable regional thresholds of significance.

Table 3-4 and 3-5 from the Air Quality Study summarize emissions from the Modified Project, as shown below.

**Table 2.3 - 1 Summary of Construction Emissions (Without Mitigation)**

| Year                       | Emissions (Pounds Per Day) |                 |           |                 |                  |                   |
|----------------------------|----------------------------|-----------------|-----------|-----------------|------------------|-------------------|
|                            | VOC                        | NO <sub>x</sub> | CO        | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| 2019                       | 4.61                       | 59.32           | 36.68     | 0.08            | 9.78             | 5.64              |
| 2020                       | 50.59                      | 37.83           | 28.11     | 0.08            | 3.93             | 2.07              |
| Maximum Daily Emissions    | 50.59                      | 59.32           | 36.68     | 0.08            | 9.78             | 5.64              |
| SCAQMD Regional Threshold  | 75                         | 100             | 550       | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b> | <b>NO</b>                  | <b>NO</b>       | <b>NO</b> | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

Source: Table 3-4 from *Continental Villages Air Quality Impact Analysis*, prepared by Urban Crossroads (November 2018)

**Table 2.3-2 Summary of Operational Emissions - Summer (Without Mitigation)**

| Year                                 | Emissions (Pounds Per Day) |                 |              |                 |                  |                   |
|--------------------------------------|----------------------------|-----------------|--------------|-----------------|------------------|-------------------|
|                                      | VOC                        | NO <sub>x</sub> | CO           | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area Emissions                       | 3.93                       | 1.97            | 10.12        | 0.01            | 0.20             | 0.20              |
| Energy Emissions                     | 0.05                       | 0.45            | 0.20         | 2.89E-03        | 0.04             | 0.04              |
| Mobile Emissions                     | 4.93                       | 31.81           | 38.26        | 0.14            | 8.81             | 2.44              |
| <b>Total Maximum Daily Emissions</b> | <b>8.91</b>                | <b>34.23</b>    | <b>48.58</b> | <b>0.16</b>     | <b>9.04</b>      | <b>2.68</b>       |
| SCAQMD Regional Threshold            | 55                         | 55              | 550          | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>           | <b>NO</b>                  | <b>NO</b>       | <b>NO</b>    | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

Source: Table 3-5 (1 of 2) from *Continental Villages Air Quality Impact Analysis*, prepared by Urban Crossroads (November 2018)

**Table 2.3-3 Summary of Operational Emissions - Winter (Without Mitigation)**

| Year                                 | Emissions (Pounds Per Day) |                 |              |                 |                  |                   |
|--------------------------------------|----------------------------|-----------------|--------------|-----------------|------------------|-------------------|
|                                      | VOC                        | NO <sub>x</sub> | CO           | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area Emissions                       | 3.93                       | 1.97            | 10.12        | 0.01            | 0.20             | 0.20              |
| Energy Emissions                     | 0.05                       | 0.45            | 0.20         | 2.89E-03        | 0.04             | 0.04              |
| Mobile Emissions                     | 4.10                       | 31.40           | 35.39        | 0.13            | 8.81             | 2.44              |
| <b>Total Maximum Daily Emissions</b> | <b>8.08</b>                | <b>33.82</b>    | <b>45.71</b> | <b>0.14</b>     | <b>9.05</b>      | <b>2.68</b>       |
| SCAQMD Regional Threshold            | 55                         | 55              | 550          | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>           | <b>NO</b>                  | <b>NO</b>       | <b>NO</b>    | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

Source: Table 3-5 (2 of 2) from *Continental Villages Air Quality Impact Analysis*, prepared by Urban Crossroads (November 2018)

Therefore, emissions from the Modified Project are less than significant, consistent with the findings in the prior CEQA documents.

c) The SCAQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*.

This report states that projects that do not generate operational or construction emissions that exceed SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions. Since the Modified Project does not exceed the SCAQMD's thresholds of significance for any criteria pollutant for operational and construction emissions, the Modified Project would not cause a cumulatively considerable impact.

**d)** The report, *Continental Villages Air Quality Impact Analysis*, prepared by Urban Crossroads (November 2018) includes an analysis of Localized Significance Thresholds (LST) and potential impacts to sensitive receptors. Surrounding the Project site is an elementary school and residential development, both considered sensitive receptors.

Table 3-7 on Page 32 of the report, *Continental Villages Air Quality Impact Analysis*, prepared by Urban Crossroads (November 2018) summarizes the results of the LST analysis for construction activity. For each criteria pollutant, the Modified Project would produce emissions less than the significance thresholds.

A potential operational impact on sensitive receptors from operational emissions is a carbon monoxide "hotspot." CO hotspots have adversely high concentrations of carbon monoxide. Hotspots generally occur at congested intersections caused by excessive vehicle emissions. Based on the traffic volumes associated with the Modified Project, no CO hotspot would occur.

Given the Modified Project's less than significant LST and hotspot emissions, impacts to sensitive land uses would also be less than significant.

**e)** Land uses that are generally associated with causing significant odor impacts include, agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. The land uses associated with the Modified Project, residential and neighborhood commercial, are not among those that generate noxious odors. Therefore, impacts associated with odors would be less than significant.

**Conclusion:** The changes in land use associated with the Modified Project would not change the conclusions presented in the prior CEQA documents. The amount of daily grading and development intensity remain less than previously analyzed. Furthermore, based on project-specific studies, impacts associated with the Modified Project would be less than significant. Therefore, no changes to the conclusions presented in the prior CEQA documents are warranted. No new impacts or intensification of previously identified impacts would occur with the Modified Project.

## 2.4 Biological Resources

| Issues:  | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|--|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| BIOLOGICAL RESOURCES. Would the project:   |                                    |                            |                                     |                          |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The Modified Project occurs within the boundaries previously analyzed in the prior CEQA documents. Initial biological studies occurred in Addendum No. 1 to EIR 190. Comprehensive biological mitigation was provided at that time for sensitive species such as Stephens Kangaroo Rat and raptor foraging on a Specific Plan-wide basis. At the time the Negative Declaration was prepared in 2012, grading had already occurred on the Project site in approximately 2004 – 2005 when the adjacent elementary school was constructed. In support of the Negative Declaration, Gonzales Environmental Consulting, LLC performed a biological



assessment and jurisdictional delineation on the Project Site. The Gonzales report (2011) determined no sensitive species or habitat would occur on site, however the report identified a potentially jurisdictional drainage leading from the corner of the elementary school toward the intersection of Krameria and Lasselle Streets. Two detention basins and riprap were also constructed as part of this drainage system. The Gonzales report concluded that the drainage did not constitute Water of the U.S. and therefore did not fall under jurisdiction of the U.S. Army Corps of Engineers. However, the Gonzales report was less conclusive in determining whether the drainage constituted Waters of the State.

In conjunction with this Addendum, a biological resources study of the Modified Project site was prepared and is included in Appendix B (Carlson Strategic Land Solutions, November 2018, “Biological Technical Report for the Continental Villages Project”). The Biological Technical Report (BTR) assessed the current site conditions and determined all 11.64 acres to have been graded and disturbed. Furthermore, the potentially jurisdictional drainage and detention basins referenced in the Gonzales Report are no longer present on site. In preparation of the BTR historical aerial photographs were analyzed of Project Site and surrounding area and no evidence of jurisdictional drainages, including the drainage observed by Gonzales, were identified in the natural condition prior to grading and development of the school site. Only after grading and development of the school site did the drainage observed by Gonzales appear. Furthermore, the watershed that would have served any natural drainage on the Project site was cut off with construction of Krameria Avenue, the residential development to the east of Krameria Avenue, and the construction of Lasselle Elementary School. Based on those factors and the inclusion of detention basins and riprap, the BTR has concluded that no natural drainages previously existed on the Project site and the drainage observed by Gonzales was only created by runoff and nuisance from the impervious surface and ballfields on the school site.

**a)** The Modified Project site has been completely disturbed and graded under authority of prior land use approvals and environmental clearance. No special status animal or plant species, or habitat classifications, exist on the Project Site. The conclusions presented in the prior CEQA documents remain unchanged. No new or more severe impacts would occur as a result of the Modified Project, and impacts remain less than significant.

**b, c)** The Modified Project site has been completely disturbed and graded under authority of prior land use approvals and environmental clearance. No wetlands or riparian features are present on the Project site. A previous biological study in 2011 identified a drainage crossing a portion of the property. However, after further review of historical aerial photographs, the current BTR determined the drainage to be created from urban runoff from the Lasselle Elementary School site and non-jurisdictional. Therefore, the conclusions presented in the prior CEQA documents remain unchanged. No new or more severe impacts would occur as a result of the Modified Project, and impacts remain less than significant.

**d)** The Modified Project site has been completely disturbed and graded under authority of prior land use approvals and environmental clearance. The Project site has been fenced for construction and is completely surrounding by streets and development. Those conditions eliminate any chance for wildlife movement across the Project site. Therefore, the conclusions presented in the prior CEQA documents remain unchanged. No new or more severe impacts would occur as a result of the Modified Project, and impacts remain less than significant.

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e, f) The Modified Project Site is located within the Reche Canyon/Badlands Area Plan of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). The Project site is not located within any MSHCP Criteria Areas, Cell Groups, Subunits, Narrow Endemic Plants, or Burrowing Owl overlays. Therefore, development of the Project Site is consistent with the MSHCP designations. Furthermore, development of the proposed Project will be required to pay MSHCP development impact fees.

**Conclusion:** The Modified Project would not change the biological analysis included in the prior CEQA documents and no new impacts or intensification of previously identified impacts would occur with the Modified Project.

## 2.5 Cultural Resources

| Issues:  | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|--|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| CULTURAL RESOURCES. Would the project:   |                                    |                            |                                     |                          |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?    | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?        | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries?                           | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** EIR 190 included a cultural resources study prepared by Scientific Resource Surveys (SRS) over the entire Moreno Valley Ranch Specific Plan area. A total of 51 archaeological resources were known to exist on the Project site. The archaeological sites include occupation site, processing sites, and isolated rock art sites. However, none of the resources were identified on the Project site. EIR 190 Addendum No. 1 determined that the archeological sites with significant resources would not be directly impacted by implementation of the Specific Plan. The EIR included several mitigation measures to ensure less than significant impacts, including fencing, caretakers, and other measures in conjunction with the State Department of Parks and Recreation.

Field reviews were conducted in October 2004 in conjunction with the Negative Declaration. No evidence of archaeological, paleontological, or historical resources were observed on the Project site. The Negative Declaration references a standard condition placed by the City for monitoring if any archaeological, paleontological, or historical resources are uncovered on the Project site.

, a Cultural and Paleontological Resources Assessment was prepared by Duke CRM (July 2018) for the Project site, included as Appendix C.

EIR 190 on Page 102 included a mitigation measure requiring paleontological monitoring during grading in areas with the potential to produce paleontological resources. In conjunction with this Addendum, the potential for paleontological resources was evaluated and presented in the *Cultural and Paleontological Resources Assessment* prepared by Duke CRM, July 2018, and included in Appendix C. The Cultural Assessment determined that no archaeological or historic resources have been identified on the Project site or are likely to be impacted. However, there is a high sensitivity to paleontological resources. Given the potential for paleontological resources to be present on the Project site, the following PDF has been added to provide more clarity and definition to the original mitigation measures.

**PDF CR-1:** A paleontological monitor shall be present to observe ground disturbing activities within the Project property. The monitor shall work under the direct supervision of a qualified paleontologist (B.S. /B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated experience and competence in paleontological research, fieldwork, reporting, and curation).

1. The qualified paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols.
2. Paleontological monitoring shall start at part-time. If no paleontological resources are discovered after half of the ground disturbance has occurred, monitoring can be reduced to spot-checking.
3. The monitor shall be empowered to temporarily halt or redirect grading efforts if paleontological resources are discovered.
4. In the event of a paleontological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area.
5. In consultation with the qualified paleontologist the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly removed, and the area cleared.
6. If the discovery is significant the qualified paleontologist shall notify the applicant and the City immediately.
7. In consultation with the applicant, the qualified paleontologist shall develop a plan which will likely include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

Since the Modified Project includes a General Plan Amendment and a Specific Plan Amendment, the Modified Project is subject to tribal notification under SB 18. On March 20, 2018 notice was sent to the Native American Heritage Commission. On March 21, 2018, the Native American Heritage Commission indicated no Native American cultural resources have been identified on the Project site. On August 27, 2018, all individuals/groups on the City's list, consisting of ten individuals/tribes were notified under SB 18. A second notification was made on September 4, 2018 and follow-up phone calls were made on October 10 and October 11, 2018. Two tribes requested consultation and/or information. The Cahuilla Band of Indians stated they did not want to consult but requested to be informed of any future developments or changes and they requested a monitor be present during ground disturbance. The Soboba Band of Luiseno Indians requested consultation and a monitor be present during ground disturbing activities. City staff consulted with Soboba by telephone on November 14, 2018. The consultation concluded with a commitment by the City to implement its standard tribal monitoring conditions, which Soboba finds acceptable, and tribal consultation concluded.

In order to address Native American tribal concerns, the City decided to develop a series of standard conditions applicable to all projects as opposed to crafting individual mitigation measures, unless a project site had resources or very high potential for resources. Therefore, the following standard conditions apply. These conditions represent further definition of the monitoring requirements identified in the prior Negative Declaration.

**CR-1:** Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the Project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

- d. Project grading and development scheduling;
- e. The Project archeologist and the Consulting Tribes(s) as defined in CR-1 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis;
- f. The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

**CR-2:** Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians for tribal monitoring. The Project Applicant is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-



foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2.

**CR-3:** In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:

i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.

ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure CR-1. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in CR-1.

**CR-4:** The City shall verify that the following note is included on the Grading Plan:

*"If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."*

**CR-5:** If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Standard Conditions above, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in CR-1 before any further work commences in the affected area.

**CR-6:** If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 5-days of the published finding to be given a reasonable opportunity to identify the "most likely descendant". The "most likely descendant"

shall then make recommendations and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

a) The prior CEQA documents and the cultural resources study prepared for the Modified Project site determined no historic resources exist on the Project site and the conclusions in the prior CEQA documents have not changed.

Therefore, no new or more severe impacts would occur as a result of the Modified Project, and impacts remain less than significant.

b) The prior CEQA documents and the cultural resources study prepared for the Modified Project site determined low potential for archaeological resources to exist on the Project site and the conclusions in the prior CEQA documents have not changed.

City staff has consulted with Native American tribes pursuant to SB 18. The consultation concluded with a commitment from the City to implement its standard conditions pertaining to tribal monitoring during ground disturbing activities. The City's standard conditions are outlined above in the discussion section.

Therefore, no new or more severe impacts would occur as a result of the Modified Project, and impacts remain less than significant.

c) The prior CEQA documents included a mitigation measure requiring paleontological monitoring during grading in areas with the potential to produce paleontological resources. The updated cultural resources report prepared for the Modified Project reached the same conclusion on the potential for paleontological resources. Therefore, a Project Design Feature, as detailed above in the discussion, has been included to provide more specificity to the previous mitigation measure included in the prior CEQA documents.

Therefore, the conclusions presented in the prior CEQA documents remain unchanged. No new or more severe impacts would occur as a result of the Modified Project, and impacts remain less than significant.

d) The prior CEQA documents did not identify any evidence suggesting the Project site was used in the past for human burials. The updated Cultural Resources Report prepared by Duke CRM reaches the same conclusion for the Modified Project site. The City's standard conditions require tribal monitors be present during grading and if human remains are discovered, protocol is in place to stop grading activities and recover the remains properly with Native American tribe oversight.

Therefore, the conclusions presented in the prior CEQA documents remain unchanged. No new or more severe impacts would occur as a result of the Modified Project, and impacts remain less than significant.

**Conclusion:** The changes associated with the Modified Project would not change the cultural resources analysis and conclusions presented in the prior CEQA documents. A Cultural Resources Report prepared for the Modified Project site justifies these conclusions. Therefore, no changes to the conclusions presented in the prior CEQA documents are warranted. The Negative Declaration referenced implementation of standard conditions to address discovery of cultural, archaeological,

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paleontological, or tribal resources. Since issuance of the Negative Declaration the City has worked closely with local tribes and development more detailed standard conditions, which would apply to the proposed project. Therefore, no new impacts or intensification of previously identified impacts would occur with the Modified Project and impacts remain less than significant

## 2.6 Geology and Soils

| Issues:  | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|--|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| GEOLOGY AND SOILS. Would the project:  |                                    |                            |                                     |                          |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii) Strong seismic ground shaking?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iv) Landslides?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** Geologic conditions within the Moreno Valley Ranch Specific Plan area were analyzed by Leighton and Associated in a report titled, “Preliminary Geotechnical Investigation for EIR Purposes, Wolfskill Ranch” dated June 1983. This report was used in EIR 190 and Addendum No. 1 to conclude the overall Specific Plan area did not present any significant geologic impacts. The Negative Declaration relied on the report in EIR 190 to draw the same conclusions.

Conditional of Approval 88 from EIR 190 Addendum No. 1 and SPA Amendment No. 1 requires a detailed geotechnical investigation and incorporation of recommendations presented in the study. Included in Appendix D is “Geotechnical Update Investigation, Continental Villages, Southeast

of Lasselle Street & Krameria Avenue, Moreno Valley, California,” dated March 26, 2018, prepared by GeoCon West Inc. The following Standard Condition is included to require implementation of the recommendations included in the geotechnical report, consistent with Condition of Approval 88 from EIR 190 Addendum No. 1.

**SC GEO-1:** Prior to the issuance of a grading permit, the recommendations presented in the *Geotechnical Investigation Update* shall be incorporated into the final geotechnical report and on the grading plans.

GeoCon’s investigation included records/report review, subsurface exploration, and engineering review of the proposal. The conclusions presented in the 2018 GeoCon geotechnical investigation are consistent with the findings in the prior CEQA documents as follows:

- The Modified Project site is underlain by older alluvial soils with unengineered fill. Near surface soils, approximately 3 to 5 feet, will require removal and recompaction to be suitable for development.
- Groundwater was not encountered during exploration to depths of 51.5 feet.
- The Modified Project site is not located within a State of California Earthquake Fault-Rupture Zone. No active or potentially active faults with the potential for fault rupture are known to pass underneath the site. The closest fault is the San Jacinto fault located approximately 5+ miles away.
- The main seismic hazard is ground shaking from one of the active regional faults, which can be mitigated through compliance with building code standards.
- The potential for post construction liquefaction and liquefaction-induced dynamic settlement is considered very low.
- The on-site soils generally consist of silty and clayey sands. Laboratory tests indicate a very low expansion potential.
- No landslides have been mapped on or adjacent to the Project site.
- No slope stability issues have been identified. Fill and cut slopes consistent with standard grading specifications are expected to perform well.
- The Project site is located 40+ miles from the coastline, therefore there is no risk from tsunamis and seiches.
- The site soils are not classified as corrosive.

The Preliminary Geotechnical Report prepared for the Modified Project site confirmed the conclusions in the prior CEQA documents that the Modified Project site is feasible for construction without significant geotechnical hazards and no new mitigation measures are required.

- a) i) – iv)** As presented in the Preliminary Geotechnical Report prepared for the Modified Project site the conclusions presented in the prior CEQA documents remain unchanged. The Modified Project site remains outside of the Alquist-Priolo Earthquake Fault Zone, the underlying geology remains the same and suitable for development, and the Modified Project does not increase or alter the potential risks from fault rupture, seismic shaking, liquefaction, or landslides.
- b)** The Modified Project would not increase the risk of top soil loss or erosion. The Modified Project site would be graded and landscaped. During construction, the Modified Project site is subject to the requirements of a NPDES General Construction Permit, which requires Best Management Practices (BMPs) to prevent erosion or soil loss during construction.
- c)** The stability of the geologic unit was analyzed in the prior CEQA documents and confirmed in the geotechnical report prepared for the Modified Project site. The changes in land use associated with the Modified Project would not change the stability of the underlying geologic unit. Included as a Standard Condition is the requirement to implement the recommendations found in the geotechnical report for the Modified Project to further ensure geologic stability.
- d)** As documented in the geotechnical report, based on preliminary laboratory test results, the onsite soils have a “Very Low” expansion potential. Final design expansion potential must be determined at the completion of grading.
- e)** Septic tanks are not proposed as part of the Modified Project.

**Conclusion:** The changes in land use associated with the Modified Project would not change the geology and soils analysis included in the prior CEQA documents. The City’s standard practice through Standard Conditions requires incorporation of the recommendations from the geotechnical report into the grading plans and site design, which would be the case for the Modified Project. No new impacts or intensification of previously identified impacts would occur with the Modified Project.



## 2.7 Greenhouse Gas Emissions

| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| GREENHOUSE GAS EMISSIONS. Would the project:  |                                    |                            |                                     |                          |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?     | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** While Greenhouse Gas (GHG) emissions tend to be a global issue, the State of California has adopted a series of legislative actions aimed at reducing GHG emissions for projects within the State. To analyze potential impacts from the Modified Project on GHG emissions, the report, *Continental Villages Greenhouse Gas Analysis*, was prepared by Urban Crossroads, dated November 2018 and included in Appendix E.

The City of Moreno Valley adopted a Climate Action Plan (CAP) in October 2012. The measures identified in the CAP represent the City's actions to achieve the GHG reduction targets of AB 32 for target year 2020. While specific thresholds of significance have not been adopted by the State (SCAQMD) or by the City of Moreno Valley, the SCAQMD has implemented a screening threshold for residential and commercial project of 3,000 MTCO<sub>2e</sub> per year.

As shown in Table 3-1 of the *Greenhouse Gas Analysis* prepared by Urban Crossroads, the combined construction and operational emissions from the Modified Project equals 2,649.11 MTCO<sub>2e</sub> per year, which is less than the screening threshold of 3,000 MTCO<sub>2e</sub> per year.

a) The prior CEQA documents determined development of the Project Site would result in less than significant GHG impacts. The *Greenhouse Gas Analysis* (2018) determined the combined construction and operational emissions would be 2,649.11 MTCO<sub>2e</sub> per year, which is less than the screening threshold of 3,000 MTCO<sub>2e</sub> per year. Construction, area, energy, waste, and water usage emissions total approximately 556.23 MTCO<sub>2e</sub> per year. An additional 2092.88 MTCO<sub>2e</sub> per year would occur from mobile source emissions. Therefore, GHG emissions from the Modified Project would be less than significant. No new or more intensive impacts would occur from the Modified Project.

b) The California Air Resources Board (CARB) prepared a 2008 and 2017 Scoping Plan that includes strategies to meet the goals of AB 32. Table 3-2 in the *Greenhouse Gas Analysis* (2018) documents the Modified Project's consistency with those state and regional strategies. Furthermore, the City of Moreno Valley adopted a CAP, which includes local strategies for consistency with AB 32. The Modified Project is also consistent with the local strategies listed in the CAP. Further, the Modified Project is subject to California Building Code requirements. New buildings must achieve the 2016 Building and Energy Efficiency Standards and the 2016 California Green Building Standards requirements, which include water conservation measures.

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Overall, the Modified Project would not conflict with the City of Moreno Valley CAP and impacts would be less than significant. No new or more intensive impacts would occur from the Modified Project.

**Conclusion:** The changes in land use designation associated with the Modified Project would not change the GHG conclusions included in the prior CEQA documents. The overall GHG emissions would remain less than the target 3,000 MTCO<sub>2e</sub> per year and the Modified Project would be consistent with the City of Moreno Valley CAP and the CARB 2008 and 2017 Scoping Plans. No new impacts or intensification of previously identified impacts would occur with the Modified Project, and impacts remain less than significant.

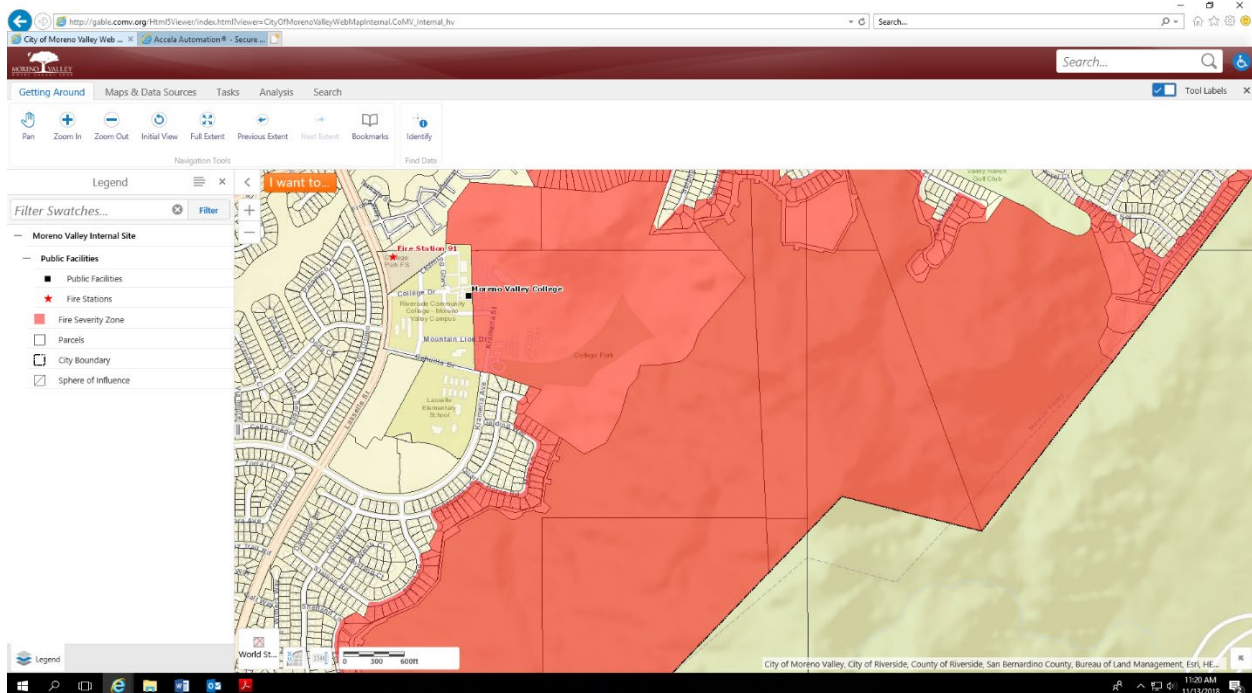
## 2.8 Hazards and Hazardous Materials

| Issues:  | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|--|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| HAZARDS AND HAZARDOUS MATERIALS. Would the project:  |                                    |                            |                                     |                          |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?                                   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The prior CEQA documents concluded that potential Hazards and Hazardous Waste impacts would be less than significant. In support of this Addendum a Phase I Environmental Site Assessment was prepared by Group Delta, dated March 29, 2018, and included in Appendix F.

The Phase I ESA included a physical site inspection and record search to determine whether hazardous materials were historically reported on the Project site or if there is any current evidence of the use of hazardous materials. The Phase I ESA concluded no Recognized Environmental Conditions (REC) were reported or observed on the Project site. Furthermore, the proposed land uses of residential and neighborhood commercial do not present a risk for release of hazardous materials during construction or operation.

The Project site is surrounded by an elementary school and residential development. According to the City's GIS mapping program, the Project site is located outside of the mapped Very High Fire Hazard Severity Zone, as shown below.



Therefore, the Modified Project would not change the conclusions in the prior CEQA documents.

**a-c)** The Modified Project includes a mix of land use previously analyzed in prior CEQA documents, including residential and neighborhood retail. Therefore, no new transport, use, or potential release of hazardous materials would occur as a result of the Modified Project.

**d)** The prior CEQA documents and the Phase I Environmental Site Assessment prepared for the Modified Project site determined the site is not included on a list of hazardous materials sites and does not pose a risk to the public. No significant impacts would occur as a result of the Modified Project.

**e-f)** The Project site is not located in an airport land use plan or near a private or public airstrip. As presented in the Negative Declaration, the nearest airport is March Air Reserve Base located approximately 5-miles to the west. The Project site is not within the crash zones or the noise contours identified in the most recent Air Installation Compatible Use Zone (AICUZ) study (Municipal Code Section 9.07.060). The Modified Project would not change these findings.

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**g)** The roadway circulation patterns and land use patterns remain the same as analyzed in the prior CEQA documents, therefore no changes to emergency access routes or evacuation routes would occur as a result of the Modified Project.

**h)** The Project site is located outside of the Very High Fire Hazard Severity Zone as show on the City's GIS mapping system. Therefore, no impacts would occur as a result of the Modified Project.

**Conclusion:** The prior CEQA documents concluded the development of the project site would result in less than significant impacts from hazards and hazardous materials. The Phase I Environmental Site Assessment (Appendix F) confirmed the conclusions and findings presented in the prior CEQA documents. No new impacts or intensification of previously identified impacts would occur with the Modified Project, and impacts remain less than significant.

## 2.9 Hydrology and Water Quality

| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| HYDROLOGY AND WATER QUALITY. Would the project:   |                                    |                            |                                     |                          |
| a) Violate any water quality standards or waste discharge requirements?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in flooding- or off-site?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff above pre-development condition in a manner which would result in flooding on- or off-site?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Otherwise substantially degrade water quality?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |



| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| j) Cause inundation by seiche, tsunami, or mudflow?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| k) Deposit sediment and debris materials within existing channels obstructing flows?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| l) Exceed the capacity of a channel and cause overflow during design storm conditions?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| m) Adversely change the rate, direction or flow of groundwater?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| n) Have an impact on groundwater that is inconsistent with a groundwater management plan prepared by the water agencies with the responsibility for groundwater management? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| o) Cause a significant alteration of receiving water quality during or following construction?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| p) Create or contribute runoff water which would generate substantial additional sources of polluted runoff?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| q) Substantially degrade water quality by discharge which affects the beneficial uses (i.e. swimming, fishing, etc.) of the receiving or downstream waters?                 | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| r) Increase in any pollutant for which the receiving water body is already impaired as listed on the Clean Water Act Section 303(d) list?                                   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The Project site has always been contemplated for development since adoption of the original Moreno Valley Ranch Specific Plan. As development has occurred around the Project site infrastructure, such as storm drains, have been installed. Following the adoption of the Negative Declaration, the City approved *Final Hydrology Study, Continental Villages Tentative Tract 36401, PA11-0026 for Phase 1 of PM 36468*, prepared by Pacific Coast Land Consultants, Inc. (2017). While that study primary focused on Parcel 1, which consists of 125 apartments, the study analyzed runoff from the greater drainage area which is bound by Lasselle Street, Krameria Avenue, and Cahuilla Drive. The drainage area generally flows southwest to the corner of Krameria and Lasselle. The Negative Declaration concluded development of the Project site would not cause significant hydraulic or runoff impacts, which is supported by the Pacific Coast Land Consultants study.

In support of this Addendum a second hydrology study has been prepared, titled *Preliminary Hydrology and Hydraulics Study for Continental Villages Phases 2 and 3*, by JLC Engineering & Consulting, Inc. (June 2018), attached as Appendix G. The JLC study analyzed the same drainage area and reached the same conclusion that runoff from the Project site would not cause significant

impacts. The study determined the Project site discharges into an existing storm drain system that has been designed for the peak 100-year flow rate, which is engineered and maintained to convey flows to Canyon Lake. The increase in impervious surface associated with development of the Project site has been accounted for and peak flows are reduced in the planned bioretention basins that also provide water quality benefit. Therefore, the JLC study concluded development of the Project site would not cause significant impacts.

A Preliminary Water Quality Management Plan (PWQMP) was prepared in conjunction with the Negative Declaration. The PWQMP required implementation of treatment BMPs to treat pollutants of concern. For the current proposal, an updated PWQMP was prepared by JLC Engineering and Consulting, Inc. (August 2018), included as Appendix H. The geotechnical investigated for SPA No. 10 determined the Project site does not have sufficient infiltration rates to use infiltration as a treatment strategy. Therefore, the PWQMP identifies bioretention/biotreatment solutions. The multi-family areas will drain into three bioretention basins where flows will be treated prior to discharge into the storm drain system. The bioretention basins have been sized to accommodate the design storm in the Santa Ana Watershed, in which the Project site is located in. At the time the plot plan is prepared for the commercial site, the WQMP will be updated to include treatment BMPs.

Based upon the Riverside County Stormwater & Water Conservation Tracking Tool, the Project site is exempt from Hydromodifications.

**a, f, o–r)** The Modified Project site drains into a regional storm drain system that conveys flows to Canyon Lake. An updated Preliminary WQMP, which includes treatment BMPs consisting of three bioretention basins, has been prepared to demonstrate compliance with MS4 water quality requirements. Furthermore, during construction, the Modified Project would be required to comply with NPDES and SWPPP requirements to prevent runoff or discharge from the Modified Project site during construction. Therefore, no new or more severe water quality impacts would occur as a result of the Modified Project.

**b, n)** As stated in the Negative Declaration, the Eastern Municipal Water District (EMWD) supplies water to the Project site as opposed to relying on individual water wells. Furthermore, the geotechnical study concluded ground water depths are greater than 50 feet below ground surface and infiltration rates are not sufficient to use infiltration as a water quality treatment. Therefore, while development of the Project site will increase the amount of impervious surface, the Project site did not provide an area important to groundwater infiltration. No new or more severe water quality impacts would occur as a result of the Modified Project.

**c–d)** The Negative Declaration concluded no stream or streambed is located on the Project site and the Project will not cause a change in the existing on-site drainage patterns that would result in substantial erosion. As documented in the *Preliminary Hydrology and Hydraulics Study for Continental Villages Phases 2 and 3*, by JLC Engineering & Consulting, Inc. (June 2018), the Project site drains into existing storm drain facilities sized to accommodate the 100-year storm event. On-site bioretention basins provide storage volume to reduce peak discharge rates. Therefore, the Project would not change the existing drainage pattern or cause downstream erosion. No new or more severe impacts would occur as a result of the Modified Project.

e) The Negative Declaration explained, “It should be noted that the Riverside County Flood Control Agency was contacted and indicated in a letter dated September 6, 2011, that the proposed project involves District Master Plan facilities (Perris Valley MDD Lat. V-3) and is located within the limits of the District’s Perris Valley Drainage Plan and that drainage fees have been adopted, which will need to be paid prior to the issuance of permits.” Those conditions described in the Negative Declaration remain applicable.

The *Preliminary Hydrology and Hydraulics Study for Continental Villages Phases 2 and 3*, prepared by JLC Engineering & Consulting, Inc. (June 2018), determined the Project site drains into existing storm drain facilities sized to accommodate the 100-year storm event. The PWQMP prepared by JLC Engineering and Consulting, Inc. (August 2018) identifies bioretention basins as the means to treat runoff. Furthermore, the on-site bioretention basins provide storage volume to reduce peak discharge rates. Therefore, runoff from the Project site would not exceed the capacity of existing stormwater facilities and would not provide substantial sources of polluted runoff. No significant impacts would occur.

g–i) As documented in the Negative Declaration, the Project site is located in Federal Emergency Management Agency Zone “X”, outside of the 100-year floodplain. The Project Site is also located outside of the delineated dam inundation area for Perris Dam at Lake Perris Reservoir. The Modified Project would not change any of these conditions or conclusions, which is further substantiated by the *Preliminary Hydrology and Hydraulics Study for Continental Villages Phases 2 and 3*, prepared by JLC Engineering & Consulting, Inc. (June 2018). The Preliminary Hydrology Study determine the Project would drain into existing storm drains sized to accommodate the 100-year storm event. Therefore, no new or more severe impacts would occur as a result of the Modified Project.

j) The Project site is located 40+ miles from the coastline and therefore not subject to tsunami or seiche. The Project site and the immediately surrounding area is relatively flat with the largest slope approximately 15 feet tall. This condition does not create a potential for mudflow. Furthermore, the Project site is separated from natural foothills by residential development and an elementary school, which provide sufficient buffer from mudflows. Therefore, no new or more severe impacts would occur as a result of the Modified Project.

k) The drainage area for the Project site is bound by Lasselle Street, Krameria Avenue, and Cahuilla Drive, and will be entirely developed with residential, elementary school, and commercial land uses. Therefore, the drainage area does not provide a source for sediment or debris. Furthermore, prior to discharge into the storm drain system, runoff will flow through one of three bioretention basins designed to provide water quality treatment, which includes the removal of sediment and debris. Therefore, no new or more severe impacts would occur as a result of the Modified Project.

l) The *Preliminary Hydrology and Hydraulics Study for Continental Villages Phases 2 and 3*, by JLC Engineering & Consulting, Inc. (June 2018), the Project site drains into existing storm drain facilities sized to accommodate the 100-year storm event. On-site bioretention basins provide storage volume to reduce peak discharge rates. Therefore, the Project would not cause overflow of storm drain facilities. No new or more severe impacts would occur as a result of the Modified Project.

m) Groundwater was determined to be over 50 feet below ground surface. Infiltration rates are too low to permit infiltration as a water quality strategy. Therefore, the Project would not have a significant effect on groundwater movement. No new or more severe impacts would occur as a result of the Modified Project.

**Conclusion:** The Project site has always been contemplated for development since adoption of the original Moreno Valley Ranch Specific Plan. As development has occurred around the Project site infrastructure, such as storm drains, have been installed. The change associated with the Modified Project would not change the direction or volume of runoff or contribute to a water quality impact. The analysis and conclusions found in the prior CEQA documents remain unchanged for the Modified Project. This has been confirmed through the preparation of a hydrology and hydraulic study (Appendix G) and a Preliminary Water Quality Management Plan (Appendix H), which details the project's water quality treatment features. Therefore, no new impacts or intensification of previously identified impacts would occur with the Modified Project.

## 2.10 Land Use and Planning

| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| LAND USE AND PLANNING. Would the project:   |                                    |                            |                                     |                          |
| a) Physically divide an established community?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially conflict with on-site or adjacent land use due to project-related significant unavoidable indirect effects (e.g., noise, aesthetics, etc.) that preclude use of the land as it was intended by the General Plan.   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Conflict with the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) of which the City of Moreno Valley is a participant?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The Modified Project constitutes a minor change in land use, reverting the approved land use on 2.84 acres (Parcel 2) from High Density Residential back to Neighborhood Commercial as specified in Specific Plan Amendment No. 1, and construct multi-family housing on 8.80 acres (Parcel 3), at a lower density than the existing zoning requirements allow. The Modified Project requires a General Plan Amendment, Zone Change, and Specific Plan Amendment to ensure vertical consistency among land use governing documents. Specifically, the General Plan Amendment would revert the land use designation on Parcel 2, an approximately 2.84-acre parcel located at the corner of Lasselle Street and Krameria Avenue, from R-20 to Neighborhood Commercial, consistent with the commercial land use designation specified in Specific Plan Amendment No. 1. The General Plan Amendment would also change the land use designation on Parcel 3, approximately 8.80 acres, from R-20 to R-15 Residential: Max 15 du/ac to accommodate lower density residential housing.

The Zone Change would amend the City's Zoning Map to be consistent with the General Plan Amendment, including change the zoning designation on Parcel 2, a 2.84-acre parcel located at the corner of Lasselle Street and Krameria Avenue, from Multi-family to Neighborhood Commercial. Parcel 3, a 8.80-acre parcel, would remain zoned Multi-family, however the Specific Plan would designate Parcel 3 for a maximum of 15 du/ac. Additionally, the Zoning Map would be amended to include reference to Specific Plan 193 over the entire area covered by the Tentative Parcel Map.

The proposed Specific Plan Amendment would make the following changes to the Moreno Valley Ranch Specific Plan No. 193.

- Revert the currently approved land use on Parcel 2, 2.84 acres, at the corner of Lasselle Street and Krameria Avenue, from High Density Residential back to Neighborhood Commercial as designated by Specific Plan Amendment No. 1.
- Change the designation of High Density Residential on Parcel 3, 8.80 acres, to Medium-High Density, to accommodate lower density residential housing more consistent with the surrounding land uses.
- The development standards for the multi-family land use shall be consistent with the R-15 zoning standards, except where modified per Specific Plan No. 193. Additionally, the SPA shall include a provision in the multi-family development standards that building separations of 15 feet shall be permitted for buildings two-stories and less, and buildings with 8 or less units in each building.
- The development standards for the Neighborhood Commercial land use shall be consistent with the Neighborhood Commercial zoning standards.
- Parcel 3, 8.80 acres, is the area subject to the proposed General Plan Amendment, Zone Change, Specific Plan Amendment, and Plot Plan, to reduce the density from R-20 to R-15 for the construction of multi-family residential apartments.

**a)** The Project site has been planned for development since the adoption of the Moreno Valley Ranch Specific Plan. The Modified Project would change specific land uses to be consistent with prior designations. The area surrounding the Project site has been developed with residential and school uses. Therefore, the Modified Project would not physically divide an established community.

**b, c, d)** The entitlements associated with the Modified Project would ensure vertical consistency among land use governing documents. Therefore, the Modified Project would be consistent with General Plan, Zoning Code, and Specific Plan upon approval.

The Project site is surrounded by other residential, commercial, and institutional (school) land uses. Therefore, the Modified Project would not create a conflict with existing surrounding land uses.

The Modified Project site is located within the Reche Canyon/Badlands Area Plan of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). The Project site is not located within any MSHCP Criteria Areas, Cell Groups, Subunits, Narrow Endemic Plants, or Burrowing Owl overlays. Therefore, development of the Project Site is consistent with the MSHCP designations. Furthermore, development of the proposed Project will be required to pay MSHCP development impact fees.

**Conclusion:** The changes associated with the Modified Project require a General Plan Amendment, Zone Change, and Specific Plan Amendment. The analysis of those changes remains consistent with the analysis in the prior CEQA documents because the prior CEQA documents analyzed the proposed land uses (neighborhood commercial and medium high density residential) and determined the impacts would be less than significant. Therefore, no new or more severe impacts would occur as a result of the Modified Project; no mitigation is required; and the impacts remain less than significant.



## 2.11 Mineral Resources

| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| MINERAL RESOURCES. Would the project:   |                                    |                            |                                     |                          |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?                                | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The prior CEQA documents concluded that development of the Project site would not cause a loss in mineral resource recovery. Before adoption of the Moreno Valley Ranch Specific Plan, the area was used for agriculture. Upon adoption of Moreno Valley Ranch Specific Plan, the Project site was zoned for commercial and residential development. No mineral recovery programs are located within the Project site or the Specific Plan area.

**a)** Consistent with the findings in the prior CEQA documents, no known mineral resources are located on the Modified Project site. Therefore, no new or more severe impacts would occur as a result of the Modified Project.

**b)** The Modified Project site is designated for residential development in the General Plan, Zoning Map, and Specific Plan, and not mineral recovery. Therefore, no loss of mineral resources identified on any City land use maps would occur as a result of the Modified Project.

**Conclusion:** The Modified Project would not change the analysis or conclusions found in the prior CEQA documents and would not result in any new or more intense impacts related to mineral resources. Impacts would remain less than significant as a result of the Modified Project.

## 2.12 Noise

| Issues:  | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|--|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| NOISE. Would the project result in:  |                                    |                            |                                     |                          |
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Project traffic will cause a noise level increase of 3 dB or more on a roadway segment adjacent to a noise sensitive land use. Noise sensitive land uses include the following: residential (single-family, multi-family, mobile home); hotels; motels; nursing homes; hospitals; parks, playgrounds and recreation areas; and schools? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| h) The resulting "future with project" noise level exceeds the noise standard for sensitive land uses as identified in the City of Moreno Valley General Plan?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| i) Exceeds the stationary source noise criteria for the City of Moreno Valley as specified by the noise standards set forth in the Moreno Valley Municipal Code?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The prior CEQA documents analyzed potential construction, operation, and vibration noise associated with development of the Project Site and determined impacts would be less than

significant. The changes associated with the Modified Project would not change the analysis included in the prior CEQA documents.

EIR 190 Page 76 requires attainment of 45 dBA interior noise levels and EIR 190 on Page 75 includes a mitigation measure, “special construction techniques can be used to maintain interior noise levels at acceptable standards.” In compliance with those measures and to provide greater specificity to the Modified Project, the following PDF is incorporated.

**PDF NO-1:** To meet the City of Moreno Valley 45 dBA CNEL interior noise standards the following on-site standard construction measures are required:

- **Windows/Glass Doors:** All units require windows and sliding glass doors that have well-fitted, well-weather-stripped assemblies, and minimum sound transmission class (STC) ratings of 27.
- **Exterior Doors (Non-Glass):** All exterior doors shall be well weather-stripped and have well-sealed perimeter gaps to achieve minimum sound transmission class (STC) ratings of 27.
- **Exterior Walls:** At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.
- **Roof:** Roof sheathing of wood construction shall be per manufacturer’s specification or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer’s specification or wellsealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic space.
- **Ventilation:** Arrangements for any habitable room shall be such that any exterior door or window can be kept closed when the room is in use and still receive circulated air. A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code.

EIR 190 Page 75 also requires attenuation of construction noise. In addition to requiring compliance with established construction hours, EIR 190 also included noise reduction in the form of berms and walls. In compliance with those measures and to provide greater specificity to the Modified Project, the following PDF is incorporated.

**PDF NO-2:** The following PDFs are included in the Project design to reduce construction noise and vibration levels produced by the construction equipment to the nearby sensitive land uses.

- If R6 represents occupied residential use at the time of Project construction, install a minimum 10-foot high temporary construction noise barrier at the Project’s site boundary adjacent to sensitive receiver location R6, shown on Exhibit ES-B, for the duration of Project construction. The noise control barriers must have a solid face from top to bottom. The noise control barrier must meet the minimum height and be constructed as follows:

- The temporary noise barrier shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts. Example photos are provided in Appendix 11.2.;
  - The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired;
  - The noise control barrier and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity.
- Large mobile equipment (greater than or equal to 80,000 pounds) shall not be used within 50 feet of receiver locations R2 and R6 if occupied at the time of Project construction, as shown on Exhibit ES-B. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used within this area during Project construction.
  - Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that Project construction activities shall comply with the City of Moreno Valley Municipal Code requirements.
  - During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
  - The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site during all Project construction (i.e., to the western center).
  - The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

With implementation of the PDFs above, construction noise levels would remain less than significant. Therefore, no new or more severe noise impacts, including vibration, would occur from the Modified Project.

Operational noise in residential neighborhoods occurs from vehicle traffic. While the Modified Project would generate less traffic than permitted by SPA No. 1, the 2018 Noise Study analyzed potential increases in operational noise levels. The Noise Study analyzed 11 roadway segments surrounding the Project site and predicted changes in noise levels based on changes to average daily traffic (ADT) volumes. The Noise Study found the increases in operational noise associated with the Modified Project would remain less than significant.

**a–d)** The City of Moreno Valley established a stationary source noise level limit of 60 dBA Leq (daytime) for residential uses and 65 dBA Leq (daytime) for commercial uses. In addition, grading operations are limited to 7:00 am to 6:00 pm, Monday through Friday, and 8:00 am to 4:00 pm on weekends and holidays. With implementation of the PDFs, construction noise levels would remain less than significant. Therefore, no new or more severe noise impacts, including vibration, would occur from the Modified Project.

**e–f)** The Modified Project site is not located near a public or private airport or airstrip; therefore, the Modified Project would not create a significant impact or alter the analysis or conclusions in the prior CEQA documents.

**g–i)** The 2018 Noise Study documents the Modified Project’s consistency with the City’s General Plan and Municipal Code noise standards, including land use compatibility and stationary source noise standards. The prior CEQA documents analyzed development of the Project site at greater intensity than proposed by the Modified Project. Therefore, the Noise Study found operational noise associated with the Modified Project would remain less than significant.

**Conclusion:** The Modified Project would not change the location or intensity of construction activities analyzed in the prior CEQA documents. Given the City’s Municipal Code requirements on construction noise and the presence of surrounding sensitive receptors, the Modified Project has included Project Design Features to proactively reduce construction noise. Furthermore, the Modified Project as a standard condition must comply with the construction hours specified in the Municipal Code. Therefore, no new or more severe construction noise or vibration impacts would occur. The Modified Project proposes a reduction in development intensity compared to the approved land uses analyzed in EIR 190 Addendum No. 1. Furthermore, the 2018 Noise Study analyzed operational noise from the Modified Project and determined the increase in noise levels is less than significant and consistent with the City’s General Plan and Municipal Code standards. Therefore, the Modified Project would not create a new or more intense significant impact.

## 2.13 Population and Housing

| Issues:  | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|--|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| POPULATION AND HOUSING. Would the project:   |                                    |                            |                                     |                          |
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The Moreno Valley Ranch Specific Plan originally permitted 12,703 dwelling units. The prior nine Specific Plan Amendments reduced the total number of permitted dwelling units within the Moreno Valley Ranch Specific Plan from 12,703 to approximately 10,505<sup>2</sup> dwelling units. For the Project site, SPA No. 1 permitted 130 dwelling units and 4.57 acres of commercial. SPA No. 6 converted the commercial land use to residential and permitted a total of 215 dwelling units. The Modified Project proposes 112 dwelling units and 2.87 acres of commercial. Therefore, the Modified Project does not cause new or more intensive impacts to population and housing.

**a)** The Modified Project includes fewer dwelling units than approved under SPA Nos. 1 and 6. Therefore, the Modified Project would not increase the population beyond that analyzed in the prior CEQA documents. No new impacts or intensification of impacts would occur as a result of the Modified Project.

**b)** No housing currently exists on the Modified Project site; therefore, no displacement of existing housing would occur as a result of the Modified Project.

**c)** No housing currently exists on the Modified Project site; therefore, no displacement of existing housing would occur as a result of the Modified Project.

**Conclusion:** The Modified Project would not change the land use or intensity of development, including the number of permitting dwelling units beyond what was previously analyzed in the prior CEQA documents. Therefore, no additional population or housing would be created as part of the Modified Project, and no new impacts or intensification of previously identified impacts would occur as a result of the Modified Project.

<sup>2</sup> Specific Plan Amendment No. 9 concluded the prior nine Specific Plan Amendments result in 10,439 dwelling units permitted within the Specific Plan area. The difference between 10,505 and 10,439 is due to several planning areas that permit a range of densities that could alter the total number of permitted dwelling units.



## 2.14 Public Service

| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| PUBLIC SERVICES.  |                                    |                            |                                     |                          |
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Fire protection?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Police protection?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Schools?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Parks?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Other public facilities?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The Modified Project would decrease population compared to what was analyzed in the prior CEQA documents. Both SPA No.1 and SPA No. 6 permitted more dwelling units than proposed by the Modified Project. Since the demand on public services is directly related to development intensity and mix of land uses, the Modified Project would not cause any new or more intense impacts on public facilities.

**a)** The demand on public services is directly related to development intensity and mix of land uses. The Modified Project would reduce development intensity compared to from what was analyzed in the prior CEQA documents for SPA Nos 1 and 6. Therefore, no new or more severe impacts as a result of the Modified Project would occur associated with the demand for public services.

**Conclusion:** The changes associated with the Modified Project pertain to a change in land use, resulting in less development intensity that what is permitted by SPA No. 6. Therefore, no additional demands on public services would be created as part of the Modified Project, and no new impacts or intensification of previously identified impacts would occur. Impacts as a result of the Modified Project would remain less than significant.

## 2.15 Recreation

| Issues:  | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|--|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| RECREATION. Would the project:   |                                    |                            |                                     |                          |
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment?                             | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The Moreno Valley Ranch Specific Plan incorporates recreation facilities for the entire Specific Plan area, not on each individual Project site. To meet the County of Riverside Recreation standard, the Moreno Valley Ranch Specific Plan provides three lakes, three major community recreation facilities, ten neighborhood parks, as well as equestrian facilities and bike trails. The Modified Project includes a change in land use to commercial on 2.87 acres and a reduction in density for the remaining residential areas. The deviations associated with the change in land uses will reduce the previously anticipated demand on the recreation services. Therefore, no new or more severe impacts as a result of the Modified Project would occur associated with the demand for recreation services and facilities.

a) The Modified Project would not increase development intensity beyond that analyzed in the prior CEQA documents and the Modified Project would not change the number and size of parks included in the Specific Plan area.

b) Since the Modified Project would not increase the number of dwelling units or change the amount of park included in the Specific Plan, no new impacts would occur.

**Conclusion:** The changes associated with the Modified Project do not increase the development intensity of land uses that would place more demand on parks. Therefore, no additional demands on recreation would be created as part of the Modified Project, and no new impacts or intensification of previously identified impacts would occur.

## 2.16 Transportation/Traffic

| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| TRANSPORTATION/TRAFFIC. Would the project:  |                                    |                            |                                     |                          |
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Result in inadequate emergency access?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** Traffic studies for the prior CEQA documents determined development of the Project site would not cause a significant impact. EIR 190 Addendum No. 1 included a comprehensive traffic study prepared by Linscott, Law, and Greenspan. The study analyzed 24 intersections and associated roadway segments. The study determined SPA No. 1 would not cause significant traffic impacts with implementation of mitigation measures. For the Project site, SPA No. 1 represents the highest generating land use approved on the Project Site with development limitations of 130 dwelling units and 119,442 square feet of commercial. SPA No. 6 and the Negative Declaration prepared in 2012 both relied on the traffic study provided for SPA No. 1, based on reduction in development intensity.

EIR 190 Addendum No. 1 includes several conditions of approval that require roadway improvements and payment of fees. Specifically, Condition of Approval No. 42(b) states: “The applicant/developer of any subdivision within Specific Plan 193 shall participate on a fair share basis in any mitigation and/or fee program designed to alleviate off site roadway and freeway interchange deficiencies.”

While the Modified Project also represents a reduction in development intensity from what was approved in SPA No. 1, an updated comprehensive traffic study was prepared by Urban Crossroads, titled *Continental Villages Traffic Impact Analysis, City of Moreno Valley*, dated October 26, 2018, and included as Appendix J. The 2018 Traffic Impact Analysis (TIA) analyzes the following four conditions:

- Existing (2018)
- Existing plus Project
- Opening Year Cumulative (2023), without and with Project
- Horizon Year (2040), without and with Project

The study area for the 2018 TIA was defined by the intersections where the Modified Project would contribute 50 or more peak hour trips. Seven intersections were identified as follows:

- Kitching Street & Krameria Avenue
- Lasselle Street & Iris Avenue
- Lasselle Street & Cahuilla Drive
- Lasselle Street & Driveway 1 – future intersection
- Lasselle Street & Krameria Avenue
- Driveway 2/Colt Way & Krameria Avenue
- Krameria Avenue & Driveway 3/Quarter Horse Road

The intersections were analyzed for each of the six scenarios listed above to determine whether the Project would cause significant traffic impacts. The following table provides a summary of the analysis:

**Table 2.16-1 Summary of Deficient Intersections by Analysis Scenario**

| # | Intersection                     | Existing (2018) | E+P | Opening Year (2023) Without Project | Opening Year (2023) With Project | Horizon Year (2040) Without Project | Horizon Year (2040) With Project |
|---|----------------------------------|-----------------|-----|-------------------------------------|----------------------------------|-------------------------------------|----------------------------------|
| 1 | Kitching St. & Krameria Av.      | ●               | ●   | ●                                   | ●                                | ●                                   | ●                                |
| 2 | Lasselle St. & Iris Av.          | ●               | ●   | ●                                   | ●                                | ●                                   | ●                                |
| 3 | Lasselle St. & Cahuilla Dr.      | ●               | ●   | ●                                   | ●                                | ●                                   | ●                                |
| 4 | Lasselle St. & Dwy. 1            | NA              | ●   | NA                                  | ●                                | NA                                  | ●                                |
| 5 | Lasselle St. & Krameria Av.      | ●               | ●   | ●                                   | ●                                | ●                                   | ●                                |
| 6 | Dwy. 2/Colt Wy. & Krameria Av.   | ●               | ●   | ●                                   | ●                                | ●                                   | ●                                |
| 7 | Krameria Av. & Quarter Horse Rd. | ●               | ●   | ●                                   | ●                                | ●                                   | ●                                |

**LEGEND:**

- - AM PEAK HOUR
- - PM PEAK HOUR
- - LOS A-D
- - LOS D-E
- - LOS F
- NA - NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

Source: *Continental Villages Traffic Impact Analysis, City of Moreno Valley*, prepared by Urban Crossroads (October 2018)

As shown in the table, no change in intersection level of service (LOS) would occur between the Existing and Existing plus Project scenarios. Opening Year with and without Project shows a LOS change at Lasselle St. and Iris Avenue. As specified in the TIA, a change in signal timing to a 130-second cycle length during peak hours would offset the change in level of service. Since that change is an operational change that can only be made by the City and not a physical change, no significant impact would occur.

Based on the analysis included in the 2018 TIA, the Modified Project does not directly cause a significant traffic impact. The Modified Project does contribute traffic to the overall circulation system in the cumulative condition, including Lasselle Street and Krameria Avenue, which would operate at a deficient level of service in 2040 with or without the proposed Project. When an intersection is projected to operate at a deficient level of service with or without a project and a proposed project could contribute trips to that intersection, the City's standard practice is to require the project applicant contribute its fair share toward the cumulative improvement to that intersection as a condition of approval. That standard practice would be applied to the Proposed Project for the additional trips contributed to Lasselle Street/Krameria Avenue and Lasselle Street/Iris Avenue intersections.

It should be noted that following submittal of the project application and preparation of the TIA, the City implemented a "road diet" to address safety concerns, primarily for bicyclists. The "road diet" includes the removal of certain travel lanes to accommodate a larger bicycle lane. Since this improvement has started implementation after the project application and completion of the TIA, the effects of the "road diet" are not included in the TIA. Furthermore, prior to implementation the City studied the potential traffic impacts associated with the "road diet" and determined no significant traffic impacts would occur.

**a, b)** The 2018 TIA prepared for the Modified Project confirms the change in land use as part of the Modified Project would not result in new or more severe traffic impacts. Therefore, the analysis and conclusions presented in the prior CEQA documents remain unchanged and applicable to the Modified Project.

**c)** Development of the Modified Project site would not impact air traffic or air travel; therefore, the changes associated with the Modified Project would also not cause a new or more severe impact.

**d)** The Modified Project reverts land uses back to what was previously approved in SPA No. 1. That change in land use does not create incompatible land uses or a traffic hazard. Three intersections provide access to the Project site. Those intersections have been analyzed in the 2018 TIA and no hazardous conditions were identified. The TIA included a queuing analysis and determined that non-project specific background traffic causes a queuing deficiency at the Lasselle Street & Krameria Avenue intersection. The remedy includes modification to the center median to lengthen the turn pockets. The TIA also analyzed intersection performance and determined two intersections, Lasselle/Iris and Lasselle/Krameria, will operate deficiently in the cumulative condition without the proposed project. Consistent with the City's standard practices and conditions of approval, if a project contributes trips to an already deficient intersection, the project must pay its fair share contribution to City sponsored improvements. This is also consistent

with the Prior EIR Condition of Approval No. 42(b). The TIA includes the following recommendations for those two intersections:

***Improvement – Lasselle Street & Iris Avenue (#2)***

- Implement a 130-second cycle length during the peak hours.

***Improvement – Lasselle Street & Krameria Avenue (#5)***

- Modify the median and striping to accommodate dual northbound left turn lanes, a through lane, and shared through-right turn lane.
- Restripe the eastbound approach with 2 lefts, 1 through, and 1 right turn lane.
- Modify the traffic signal to implement overlap phasing on the eastbound right turn lane.
- Implement a 130-second cycle length during the peak hours.

A standard condition requires the Modified Project to contribute its fair share to those improvements.

Furthermore, the previously approved Parcel Map that includes the Project site and the proposed Plot Plan for the residential portion of the Modified Project have been reviewed by the City's traffic engineer and engineering department for inconsistencies with design standards and hazardous conditions, and none have been identified. Therefore, the Modified Project would not create new hazardous conditions or incompatible land uses.

e) The Modified Project is located in a developed portion of the City and is surrounded by existing streets (Krameria Avenue, Lasselle Street, and Cahuilla Drive) that have been designed and constructed to City standards. Those streets form the backbone of emergency access from the Project site. The Modified Project would not alter or restrict access to those streets, therefore, no impact to emergency access would occur.

f) The Modified Project would not affect the surrounding roadway system, including lane configuration and design, bicycle facilities, bus routes, and pedestrian circulation. No new or more intense impacts would occur as a result of the Modified Project.

**Conclusion:** The Modified Project would change the permitted land uses on the Project site to include neighborhood commercial and Medium High Density Residential. The proposed land use intensity is less than the land use intensity approved by SPA No. 1 and analyzed in EIR 190 Addendum No. 1. An updated Traffic Impact Analysis was prepared for the Modified Project, which concluded that the Modified Project would not cause any significant impacts. The Modified Project is expected to comply with standard conditions of approval to pay its fair share for cumulative traffic conditions. Therefore, no new or more intense impacts would occur as a result of the Modified Project.



## 2.17 Utilities and Service Systems

| Issues:   | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|---|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| UTILITIES AND SERVICE SYSTEMS. Would the project:   |                                    |                            |                                     |                          |
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? In making this determination, the Authority shall consider whether the project is subject to the water supply assessment requirements of Water Code Section 10910, et. seq. (SB 610), and the requirements of Government Code Section 664737 (SB 221). | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:** The Moreno Valley Ranch Specific Plan originally permitted 12,703 dwelling units. The prior nine Specific Plan Amendments reduced the total number of permitted dwelling units within the Moreno Valley Ranch Specific Plan from 12,703 to approximately 10,505<sup>3</sup> dwelling

<sup>3</sup> Specific Plan Amendment No. 9 concluded the prior nine Specific Plan Amendments result in 10,439 dwelling units permitted within the Specific Plan area. The difference between 10,505 and 10,439 is due to several planning areas that permit a range of densities that could alter the total number of permitted dwelling units.

units. For the Project site, SPA No. 1 permitted 130 dwelling units and 4.57 acres of commercial. SPA No. 6 converted the commercial land use to residential and permitted a total of 215 dwelling units. The Modified Project proposes 112 dwelling units and 2.87 acres of commercial. The Project site is located within a developed portion of the Moreno Valley Ranch Specific Plan. The surrounding utility infrastructure system is in place and capable of serving the Modified Project as documented in the prior CEQA documents.

**a–b and e)** The Eastern Municipal Water District (EMWD) provides potable water and waste water treatment. EMWD has also indicated an ability and willingness to serve the Project site. Connections to all utilities exist at the Project site boundaries and no off-site infrastructure improvements are required. As documented in the Negative Declaration, the planned buildout of the Moreno Valley Ranch Specific Plan was substantially greater than what has been constructed and left to be built. Therefore, the utility systems would have been oversized to accommodate the current level of development. Therefore, impacts to the utility system are considered less than significant and the Modified Project would not cause new or more intense impacts.

**c)** As detailed in *Section 2.9 Hydrology and Water Quality*, the existing storm drain system surrounding the Project site has been designed and maintained to accommodate the 100-year storm event. Furthermore, the Modified Project has incorporated three bioretention basins for water quality purposes that also provide storage capacity to temporarily hold storm flows, thereby reducing peak discharge rates. Therefore, impacts to the storm drain system are considered less than significant and the Modified Project would not cause new or more intense impacts.

**d)** The demand for domestic water depends on development intensity. The Modified Project would not cause an increase in the number of dwelling units or square footage of commercial uses beyond that analyzed in EIR 190 Addendum No. 1. The prior CEQA documents concluded that domestic water capacity is sufficient to accommodate the Modified Project. Therefore, no new or more severe impacts would occur as a result of the Modified Project.

**f–g)** Solid waste disposal from the Project site is taken to the Badlands Sanitary Disposal site in the City of Moreno Valley. The original solid waste generation estimates from the Moreno Valley Ranch Specific Plan has been substantially reduced with the reduction in permitted dwelling units from 12,703 to 10,505. Specific to the Project site, the development intensity has reduced from that analyzed in the EIR 190 Addendum No. 1 to the current Modified Project. That reduction in land use intensity results in less solid waste generation. According to the Negative Declaration, “The project will be served by a landfill in the Badlands with sufficient permitted capacity to accommodate the project’s solid waste disposal needs.” In 1989 the State of California enacted AB 939, known as the Integrated Waste Management Act, which required a 25% reduction in solid waste by 1995 and a 50% reduction by 2000. AB 939 required jurisdictions create a waste reduction and recycling program, which remains in effect. Therefore, impacts associated with solid waste generation remain less than significant and the Modified Project would not cause new or more intense impacts.

**Conclusion:** Demands placed on utility and service systems are tied to the intensity of development. The nine previous amendments to the Moreno Valley Ranch Specific Plan have reduced overall development intensity from 12,703 to approximately 10,505 dwelling units. Specific to the Project Site, the development intensity has been reduced from 130 dwelling units

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and 119,442 square feet of commercial of potential development capacity to an actual proposal of 112 dwelling units and 21,000 square feet of commercial. Therefore, the Modified Project does not cause any new or more severe impacts.

## 2.18 Mandatory Findings of Significance

| Issues:  | New Potentially Significant Impact | New Mitigation is Required | No New Impact/No Impact             | Reduced Impact           |
|--|------------------------------------|----------------------------|-------------------------------------|--------------------------|
| MANDATORY FINDINGS OF SIGNIFICANCE   |                                    |                            |                                     |                          |
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?   | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects.)  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?  | <input type="checkbox"/>           | <input type="checkbox"/>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**a)** The Modified Project would not change the biological analysis included in the prior CEQA documents. The prior CEQA documents determined impacts to biological resources would be less than significant. The Modified Project does not impact any sensitive species or sensitive habitat. Furthermore, the Modified Project is consistent with the Western Riverside Multiple Species Habitat Conservation Plan. No new impacts or intensification of previously identified impacts would occur with the Modified Project

**b)** The Modified Project does not cause any new or more severe short-term or long-term significant impacts. No new or revised mitigation measures are required as a result of the Modified Project and the conclusions presented in the prior CEQA documents remain unchanged.

**c)** The Modified Project would reduce the development intensity analyzed in EIR 190 Addendum No. 1 from 130 dwelling units and 119,442 square feet of commercial of potential development capacity to an actual proposal of 112 dwelling units and 21,000 square feet of commercial. The corresponding reduction in development intensity results in reduced short-term construction

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impacts and long-term operational impacts compared to that analyzed in prior CEQA documents. The findings of significance presented in the prior CEQA documents would remain without change and without intensification as a result of the Modified Project.

**d)** The changes associated with the Modified Project are minor and no new impacts or more severe impacts to human beings, either directly or indirectly, would occur as a result of the Modified Project.

**MITIGATION MONITORING AND REPORTING PROGRAM  
ENVIRONMENTAL DOCUMENT REFERENCE NUMBER (SCH NO. 84050907)**

In 1985, the Moreno Valley City Council adopted Specific Plan 193 and EIR 190, creating the Moreno Valley Ranch Specific Plan. Specific Plan 193 was initially approved for 12,703 residential units encompassing 3,959 acres. During the intervening years Specific Plan 193 has been amended 9 times, as summarized within Moreno Valley Ranch EIR Addendum No 2 (Modified Project). The prior CEQA documents included mitigation measures and conditions of approval affecting development of the Modified Project site. The applicable measures and conditions of approval from the prior CEQA documents are listed below. The Modified Project includes several Project Design Features (PDFs) and Standard Conditions of Approval, which represent elements of the project design that have been included proactively within the Modified Project design, either in response to prior mitigation measures/conditions or approval or in order to comply with City ordinances or State regulations.

**PROJECT NAME:** Continental Villages Development Project

**PROJECT LOCATION:** The Project site is bound on the west by Lasselle Street, on the north by Cahuilla Drive, and on the south by Krameria Avenue.

**PROJECT DESCRIPTION:** The Project Applicant proposes to modify the previous development approvals to 1) Revert the approved land use on 2.84 acres (Parcel 2) from High Density Residential back to Neighborhood Commercial; and 2) Construct multi-family housing on 8.80 acres (Parcel 3), at a lower density than the existing zoning requirements allow. This proposal requires a General Plan Amendment, Zone Change, Specific Plan Amendment, Plot Plan, and environmental documentation pursuant to CEQA.

**LEAD AGENCY:** City of Moreno Valley

**CONTACT PERSON/ TELEPHONE NO.:** Jeff Bradshaw, Associate Planner/ (951) 413-3224

**APPLICANT:** Continental East Development Inc.

**CONTACT PERSON/ TELEPHONE NO.:** Andrew Spousta/ (951) 600-8600

| No.                | Mitigation Measure  | Time Frame and Responsible Party for Implementation      | Time Frame and Responsible Party for Monitoring | Verification of Compliance |      |         |
|--------------------|---|--|---|----------------------------|------|---------|
|                    |   |  |   | Initials                   | Date | Remarks |
| <b>Air Quality</b> |   |  |   |                            |      |         |
| EIR #190 pg. 116   | The quantity of particulate matter emitted during the grading and construction phase of the project may be reduced through watering graded surfaces and planting groundcover as dust palliatives. | During Construction – Applicant/ Construction Contractor | During Construction – City                      |                            |      |         |



| No.              | Mitigation Measure   | Time Frame and Responsible Party for Implementation | Time Frame and Responsible Party for Monitoring | Verification of Compliance |      |         |
|------------------|--|---|---|----------------------------|------|---------|
|                  |  |   |   | Initials                   | Date | Remarks |
| EIR #190 pg. 116 | Modes of transportation other than the automobile (bicycles, pedestrian, equestrian, etc.) should be encouraged as a strategy in reducing pollution from mobile sources. The proposed network of pedestrian trails providing access to residential, commercial, recreational and industrial areas should assist to reduce residents' reliance on the automobile. These routes should be widely publicized. | Post Construction – Applicant                       | Post Construction – City                        |                            |      |         |
| EIR #190 pg. 116 | Additionally, the design of efficient and direct traffic flow patterns on the project site can help reduce the quantity of air pollutants generated, by minimizing the places in the roadway system where automobiles would be idling unnecessarily. Extension of public transit routes to serve the property would also assist in this regard.  | Pre-Construction – Applicant                        | Pre-Construction – City                         |                            |      |         |
| EIR #190 pg. 117 | The SCAQMD's Regional Air Quality Strategy proposes measures to reduce pollutants from mobile sources. These include:<br>1) expansion of ride-sharing efforts;<br>2) expansion of transit systems;<br>3) encouragement of increased bicycle travel;<br>4) improvements in traffic flows;<br>5) encouragement of pedestrian travel;<br>6) expansion of interurban bus and rail systems; and                 | Pre-Construction – Applicant                        | Pre-Construction – City                         |                            |      |         |

| No.              | Mitigation Measure   | Time Frame and Responsible Party for Implementation | Time Frame and Responsible Party for Monitoring | Verification of Compliance |      |         |
|------------------|--|---|---|----------------------------|------|---------|
|                  |  |   |   | Initials                   | Date | Remarks |
|                  | 7) freeway ramp metering. These tactics are noted above.   |   |   |                            |      |         |
| EIR #190 pg. 117 | Reduction of stationary source air pollution emissions may be achieved by incorporating energy-saving devices and additional insulation into the proposed homes as discussed in Section IV.A.7, Energy Conservation.   | Post Construction – Applicant                       | Post Construction – City                        |                            |      |         |
| EIR #190 pg. 117 | The Environmental Hazards and Resources Element of the Comprehensive. General Plan sets forth Land Use Standards - Air Quality Impact Mitigations, stating that major development proposals which may create a significant new source of air pollutant emissions must contribute to the mitigation of adverse air quality impacts. Air quality mitigation measures to reduce automobile use include the following: <ul style="list-style-type: none"> <li>- Bicycle facilities, such as bike lanes, racks and lockers</li> <li>- Transit facilities such as benches, shelters and turnouts</li> <li>- Park and Ride facilities</li> <li>- Energy efficient buildings</li> <li>- Solar access orientation of structures</li> <li>- Solar heated and cooled structures and swimming pools</li> </ul> | Post Construction – Applicant                       | Post Construction – City                        |                            |      |         |
| COA 58           | The project shall conform to the requirements specified in Title 24 as well as   | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

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|          |  |   |   | Initials                   | Date | Remarks |
|          | solar water heating requirements of Condition #77.   |   |   |                            |      |         |
| PDF AQ-1 | During the site preparation phase, construction equipment greater than 150 horsepower (>150 HP), the Construction Contractor shall use off-road diesel construction equipment that complies with EPA/CARB Tier 3 emissions standards and will ensure that all construction equipment be tuned and maintained in accordance with the manufacturer’s specifications.   | During Grading and Excavation – Applicant / Construction Contractor | During Grading and Excavation – City            |                            |      |         |
| SC AQ-1  | The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403. <ul style="list-style-type: none"> <li>- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.</li> <li>- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.</li> </ul> | During Grading and Excavation – Applicant / Construction Contractor | During Grading and Excavation – City            |                            |      |         |

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|                             |   |   |   | Initials                   | Date | Remarks |
|                             | - The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less  |   |   |                            |      |         |
| SC AQ-2                     | Only “Low-Volatile Organic Compounds” paints (no more than 50 gram/liter of VOC) and/or High- Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.  | During Grading and Excavation – Applicant / Construction Contractor | During Grading and Excavation – City            |                            |      |         |
| <b>Biological Resources</b> |   |   |   |                            |      |         |
| EIR #190 pg. 91             | <p>The following measures are recommended by the Biological Consultant to minimize project impacts:</p> <ul style="list-style-type: none"> <li>• Access to the natural open space area should be limited to designated trails</li> <li>• Revegetation of cut and fill slopes, and other graded areas should be accomplished with plant palettes containing predominantly native species. Steeper slopes should be revegetated with genera or species of native perennial grasses including Stipa sp., Poa sp. and others.</li> <li>• Possibly in conjunction with fuel modification zones, dense brush should be cleared from lower, more gentle slopes of hillsides to re-place</li> </ul> | During Construction – Applicant/ Construction Contractor            | During Construction – City                      |                            |      |         |

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|                           | bird of prey foraging habitat lost.   |   |  |                            |      |         |
| COA 71                    | All project related lighting shall be hooded or otherwise directed in a manner which will prevent or reduce direct lighting and glare on the adjacent hillsides.  | During Construction – Applicant/ Construction Contractor    | During Construction – City                             |                            |      |         |
| <b>Cultural Resources</b> |   |   |  |                            |      |         |
| EIR #190 pg. 101          | <p>Cultural Resources - Direct Impact Mitigations</p> <p>Necessary procedures to mitigate the direct impacts of construction on any site include:</p> <ol style="list-style-type: none"> <li>1. Surface documentation as described for "Indirect Impact Mitigations.</li> <li>2. In the area(s) of direct impact, a series of 1x2 meter excavation units must be dug by hand to gain a scientifically controlled sample of areas to be destroyed. This sampling could be from a 1%-5% sample of the processing sites, and includes processing through screen mesh, C14 dating, laboratory processing and analysis, and report preparation.</li> <li>3. Any area(s) containing archaeological sites must be</li> </ol> | During Grading and Excavation – Applicant/ Cultural Monitor | During Grading and Excavation – City/ Cultural Monitor |                            |      |         |

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|          | monitored during the grading process; The monitor will be empowered to temporarily halt, divert or redirect the mechanical- equipment to document any feature(s) uncovered.  |   |  |                            |      |         |
| PDF CR-1 | <p>A paleontological monitor shall be present to observe ground disturbing activities within the Project property. The monitor shall work under the direct supervision of a qualified paleontologist (B.S. /B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated experience and competence in paleontological research, fieldwork, reporting, and curation).</p> <ol style="list-style-type: none"> <li>1. The qualified paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols.</li> <li>2. Paleontological monitoring shall start at part-time. If no paleontological resources are discovered after half of the ground disturbance has occurred, monitoring can be reduced to spot-checking.</li> <li>3. The monitor shall be empowered to temporarily halt or redirect grading</li> </ol> | During Grading and Excavation – Applicant/ Cultural Monitor | During Grading and Excavation – City/ Cultural Monitor |                            |      |         |



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|     | <p>efforts if paleontological resources are discovered.</p> <p>4. In the event of a paleontological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area.</p> <p>5. In consultation with the qualified paleontologist the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly removed, and the area cleared.</p> <p>6. If the discovery is significant the qualified paleontologist shall notify the applicant and the City immediately.</p> <p>7. In consultation with the applicant, the qualified paleontologist shall develop a plan which will likely include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified</p> |   |   |                            |      |         |

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|         | repository, and preparation of a report summarizing the find.  |   |  |                            |      |         |
| SC CR-1 | <p>Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the Project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:</p> <ul style="list-style-type: none"> <li>a. Project grading and development scheduling;</li> <li>b. The Project archeologist and the</li> </ul> | During Grading and Excavation – Applicant/ Cultural Monitor | During Grading and Excavation – City/ Cultural Monitor |                            |      |         |

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|     | <p>Consulting Tribes(s) as defined in CR-1 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s)</p> |   |   |                            |      |         |

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|         | <p>shall make themselves available to provide the training on an as-needed basis;</p> <p>c. The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.</p>  |   |  |                            |      |         |
| SC CR-2 | <p>Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians for tribal monitoring. The Project Applicant is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately</p> | <p>Pre-Grading and Excavation – Applicant/ Cultural Monitor</p> | <p>Pre-Grading and Excavation – City/ Cultural Monitor</p> |                            |      |         |

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|         | redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2.  |  |   |                            |      |         |
| SC CR-3 | <p>In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:</p> <p>a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:</p> <p>i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.</p> | Pre-Grading and Excavation – Applicant/ Cultural Monitor | Pre-Grading and Excavation – City/ Cultural Monitor |                            |      |         |

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|         | <p>ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure CR-1. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in CR-1.</p> |   |   |                            |      |         |
| SC CR-4 | <p>The City shall verify that the following note is included on the Grading Plan:</p> <p><i>"If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."</i></p>        | Pre-Grading and Excavation – Applicant              | Pre-Grading and Excavation – City               |                            |      |         |
| SC CR-5 | If potential historic or cultural resources are uncovered during excavation or construction   | During Grading and Excavation                       | During Grading and Excavation –                 |                            |      |         |



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|         | activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Standard Conditions above, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in CR-1 before any further work commences in the affected area. | – Applicant/<br>Cultural Monitor                               | City/ Cultural Monitor                                 |                            |      |         |
| SC CR-6 | If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 5-days of the published finding to be given a reasonable opportunity   | During Grading and Excavation – Applicant/<br>Cultural Monitor | During Grading and Excavation – City/ Cultural Monitor |                            |      |         |

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|                          | to identify the “most likely descendant”. The “most likely descendant” shall then make recommendations and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).   |  |  |                            |      |         |
| <b>Geology and Soils</b> |   |  |  |                            |      |         |
| EIR #190 pg. 55          | Prior to site planning, seismic refraction surveys should be conducted in those areas to obtain reasonable approximations of the depths to boundaries of rippable, marginally rippable and non-rippable rock.   | Pre-grading – Applicant/ Geotechnical Engineer   | Pre-grading – Applicant/ City Geotechnical Engineer  |                            |      |         |
| EIR #190 pg. 55          | Slope stability constraints on the proposed development are expected to be minimal. Some precautions, such as providing green belt areas or building setbacks, below natural slopes may be necessary to ensure protection from the hazard of rockfall. Cut slopes less than 20 feet in height in non-highly jointed weathered bedrock are expected to be grossly stable against deep-seated failure. The project as currently designed avoids development where boulder rolling is expected to occur. | The Project as currently designed avoids development where boulder rolling is expected to occur. | The Project as currently designed avoids development where boulder rolling is expected to occur. |                            |      |         |
| EIR #190 pg. 55          | Cut slopes in alluvium should be no more than 30 feet in height. All artificial slopes will require measures to minimize surficial degradation.   | During Grading and Excavation – Applicant/ Geotechnical Engineer                                 | During Grading and Excavation – Applicant/ City Geotechnical Engineer                            |                            |      |         |

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| EIR #190 pg. 55 | To provide for surficial stability, and to prevent piecemeal sloughing, cut slopes in alluvium, weathered bedrock, and/or highly jointed bedrock will perform best if designed at an angle no steeper than 2:1. It will also be more feasible to establish vegetation on slopes if they are not steeper than 2:1. The stability of any 2:1 cut slopes in bedrock units higher than 20 feet should be individually evaluated once a tentative design is established. All cut slopes should be inspected for adverse conditions during grading by a qualified engineering geologist. | During Grading and Excavation – Applicant/ Geotechnical Engineer | During Grading and Excavation – Applicant/ City Geotechnical Engineer |                            |      |         |
| EIR #190 pg. 56 | Incorporation of appropriate parameters for the design of one and two-story buildings and conformity with the latest Uniform Building Code, the Environmental Hazards and Resources Element of the Comprehensive General Plan, and other County ordinances can be expected to satisfactorily mitigate the effects of seismic ground shaking.   | Pre-Construction – Applicant/ Geotechnical Engineer              | Pre-Construction – Applicant/ City Geotechnical Engineer              |                            |      |         |
| EIR #190 pg. 56 | Secondary earthquake hazards, such as liquefaction, flow landsliding, seismically induced settlement and ground lurching or cracking, are generally associated with relatively high intensities of ground shaking, shallow ground water conditions and the presence of loose sandy soils or alluvial deposits. Although these secondary hazards  | Foundation Design incorporates appropriate measures.             | Foundation Design incorporates appropriate measures.                  |                            |      |         |

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|                      | appear unlikely, additional geotechnical investigation, including soil sampling and testing is required to adequately assess these constraints. At this time, it is expected that foundation designs incorporating appropriate engineering recommendations will be adequate to mitigate any of these kinds of constraints.   |   |  |                            |      |         |
| Addendum 1 pg. IV-14 | First, all structures and ancillary uses shall be restricted to areas having a slope range of less than 24%. All streets shall be aligned through slope having a gradient of no more than 16%. By restricting development to the flatter areas, the site will be less susceptible to falling rock resulting from unstabilizing hillside cuts, measures for mitigating biological impacts will remain intact, the potential for unsightly hillside scarring will be eliminated. | Design Phase – Applicant                                      | Design Phase – City  |                            |      |         |
| Addendum 1 pg. IV-14 | Secondly, a detailed geotechnical investigation shall be conducted for the site to further analyze the thickness of colluvium and the degree of rock decomposition as they relate to the proposed development plan. The study shall include recommendations for appropriate cut and fill slope grades, degree of rippability of the soil, and methods to protect future structures from damage caused by falling rock.   | Pre-Grading and Excavation – Applicant/ Geotechnical Engineer | Pre-Grading and Excavation – Applicant/ City Geotechnical Engineer |                            |      |         |

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| Addendum 1 pg. IV-14               | Embedded rock outcroppings shall be included as part of future landscaping plans for the purpose of economic as well as aesthetic enhancement of site development.  | Design Phase – Applicant                                      | Design Phase – City  |                            |      |         |
| COA 73                             | A soils Engineering report including but not limited to a statement regarding the potential of ground settlement, shall be completed prior to the issuance of the grading permit.                                     | Pre-Grading and Excavation – Applicant/ Geotechnical Engineer | Pre-Grading and Excavation – Applicant/ City Geotechnical Engineer |                            |      |         |
| COA 74                             | Potential rockfall and rollout zones shall be identified and restricted from development. These zones shall be preserved as part of the natural open space areas as shown on Exhibit "C" Amended No. 1 Land Use Plan. | Pre-Grading – Applicant/ Geotechnical Engineer                | Pre-Grading – Applicant/ City Geotechnical Engineer                |                            |      |         |
| COA 89                             | Embedded rock outcroppings shall be included as part of future landscaping plans for the purpose of economic as well as aesthetic enhancement of site development.  | During Construction – Applicant / Construction Contractor     | During Construction – City   |                            |      |         |
| SC GEO-1                           | Prior to the issuance of a grading permit, the recommendations presented in the <i>Geotechnical Investigation Update</i> shall be incorporated into the final geotechnical report and on the grading plans.           | Pre-Grading – Applicant/ Geotechnical Engineer                | Pre-Grading – Applicant/ City Geotechnical Engineer                |                            |      |         |
| <b>Hydrology and Water Quality</b> |   |   |  |                            |      |         |
| EIR #190 pg. 69                    | The Flood Control District assesses fees for the support of drainage improvements within the boundaries of adopted Area Drainage Plans, which will be applicable to   | Pre-Grading – Applicant                                       | Pre-Grading – City/ Flood Control District                         |                            |      |         |

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|                 | the developer of the Moreno Valley Ranch. These fees will mitigate any financial impacts.   |  |   |                            |      |         |
| EIR #190 pg. 69 | The improvements proposed by the Moreno Valley Ranch Master Drainage Plan respond to the Flooding Land Use Standards of the Environmental Hazards and Resources Element of the Comprehensive General Plan through mitigation of the existing floodplain condition and by payment of fees set forth by the Master Drainage Plans. All applicable Flooding Land Use Standards will be satisfied by the proposed project.      | Pre-Grading and Excavation – Applicant                             | Pre-Grading and Excavation – City               |                            |      |         |
| EIR #190 pg. 69 | Erosion control devices will be utilized in hillside development areas to mitigate the effect of increased runoff at points of discharge. Devices may include temporary berms, culverts, sandbagging or desilting basins.   | During Grading and Excavation – Applicant/ Construction Contractor | During Grading and Excavation – City            |                            |      |         |
| EIR #190 pg. 69 | A water quality maintenance program can be implemented to mitigate the impact of urban runoff on surface water quality over the long term. A suitable program is outlined in Water Pollution Aspects of Street Surface Contaminants (prepared by the U.S. Environmental Protection Agency). This program provides recommendations for street cleaning and prevention of pollutant generation. Its implementation rests with | Post Construction – Applicant/ Construction Contractor             | Post Construction – City                        |                            |      |         |



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|                            | local agencies, the project Homeowners Association and individual residents.   |  |   |                            |      |         |
| COA 66                     | Retention basins or other facilities shall be developed as required and approved by the Riverside County Flood Control District and the City Engineer to ensure that drainage flow velocities onto adjacent properties do not exceed those experienced under existing conditions.  | Pre-Grading – Applicant/ Engineer                                  | Pre-Grading – City                              |                            |      |         |
| COA 67                     | The developer shall participate in the fee mitigation program of the Master Drainage Plans for this area.  | Pre-Grading – Applicant  | Pre-Grading – City                              |                            |      |         |
| <b>Landform/Topography</b> |  |  |   |                            |      |         |
| EIR #190 pg. 41            | All grading will be performed in accordance with the Riverside County Grading Policies. Measures to reduce soil erosion, such as performing grading operations during dry (summer) months, keeping the soil mantle moist during grading and providing erosion control facilities should be implemented. Soil erosion potential will be further reduced through implementation of the Riverside County Flood Control District's Master Plan for the site as proposed by the project. Landscaping all cut and fill slopes will protect the slopes from erosion and minimize the visual impacts of grading operations. As previously mentioned, grading will occur in | During Grading and Excavation – Applicant/ Construction Contractor | During Grading and Excavation – City            |                            |      |         |

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|                      | phases, minimizing the areal extent of exposed soils, thereby reducing erosion.   |  |   |                            |      |         |
| Addendum 1 pg. IV-11 | In conformance with the Hillside Development Standards, providing erosion control facilities as required by the City Public Works Department, and landscaping all manufactured slopes in accordance with City Standards.  | During Grading and Excavation – Applicant/ Construction Contractor | During Grading and Excavation – City            |                            |      |         |
| <b>Land Use</b>      |   |  |   |                            |      |         |
| COA 15               | <p>The total specific plan shall be developed with maximum 12,695 dwelling units on 1620 acres pursuant to Exhibit "C" - Amended No. 1 Land Use Plan.</p> <p>Final development densities for each phase shown in Exhibit "D" 7/25/85 Revision shall be determined through the appropriate tract application, up to the maximum density identified for the planning unit in question, based upon, but not limited to the following:</p> <ul style="list-style-type: none"> <li>A. adequate availability of services;</li> <li>B. adequate access and circulation;</li> <li>C. sensitivity to land forms;</li> <li>D. innovation in housing types, design, conservation, or opportunities</li> <li>E. adequate provision of recreational open space within planned residential developments (PRD 1 s);</li> </ul> | Design Phase – Applicant   | Design Phase - City                             |                            |      |         |

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|        | F. sensitivity to neighborhood design through appropriate lot and street layouts;<br>G. compatibility with surrounding off-site development land uses and densities;<br>H. adequate mitigation of all school impacts identified by the affected school district; |   |   |                            |      |         |
| COA 16 | Lots created pursuant to this specific plan shall be in conformance with the development standards of the zones ultimately applied to the property.  | Design Phase – Applicant                            | Design Phase - City                             |                            |      |         |
| COA 17 | A change of zone application may be required, as determined by the Planning Department, with each subsequent development application.  | Design Phase – Applicant                            | Design Phase - City                             |                            |      |         |
| COA 18 | Flag lots shall not be permitted.  | Design Phase – Applicant                            | Design Phase - City                             |                            |      |         |
| COA 19 | All utilities shall be placed underground.   | Design Phase – Applicant                            | Design Phase - City                             |                            |      |         |
| COA 20 | All landscaped common greenbelt, park, improved open space, and linear park areas within the specific plan shall include automatic irrigation systems.   | Design Phase – Applicant/<br>Landscape Architect    | Design Phase - City                             |                            |      |         |
| COA 21 | Prior to the recordation of any final subdivision, improvement plans for developed common park, landscaped areas, and parkway areas for that subdivision or to   | Design Phase – Applicant                            | Design Phase - City                             |                            |      |         |

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|                 | mitigate an environmental impact for that stage of development shall be submitted to the Planning Commission for approval. The improvement plans shall include, but not be limited to the following:<br>A. Final grading plan.<br>B. Irrigation plans certified by a landscape architect.<br>C. A landscaping plan with seed mixes for mulching and staking methods. Locations, type, size and quantity of plantings.<br>D. A Hardscaping plan with location and type and quantity of recreational amenities/facilities. |  |   |                            |      |         |
| COA 23          | The proposed neighborhood commercial areas, other than that described in Condition No. 22 above, shall be subject to Plot Plan review submitted under provision of Section 18.12 and 18.30 of Ordinance 348. Architectural compatibility with surrounding development shall be maintained.   | Design Phase – Applicant/ Architect                                | Design Phase - City                             |                            |      |         |
| <b>Noise</b>    |  |  |   |                            |      |         |
| EIR #190 pg. 75 | Construction activities should be limited, especially during the later phases of development, to maintain quiet during evening hours and weekends. In addition, construction equipment should be   | During Grading and Excavation – Applicant/ Construction Contractor | During Grading and Excavation – City            |                            |      |         |

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|          | equipped with effective muffling devices.   |   |   |                            |      |         |
| COA 57   | Prior to the issuance of building permits an acoustical study shall be performed by an engineer to establish appropriate mitigation measures for on-site impacts and to buffer the UCR Farm. This mitigation shall be applied to individual dwelling units within implementing subdivisions located adjacent to collector and larger roadways as well as providing noise attenuation between on-site uses adjacent to the UCR Farm, and to reduce noise ambient interior noise levels to 45 db(a). The required acoustical studies shall be subject to Planning Commission approval and review by the appropriate staff of UCR and any mitigation measures recommended in the reports shall be incorporated into the design of the specific plan and construction of residential units. | Pre-Construction – Applicant                        | Pre-Construction – City                         |                            |      |         |
| PDF NO-1 | To meet the City of Moreno Valley 45 dBA CNEL interior noise standards the following on-site standard construction measures are required: <ul style="list-style-type: none"> <li>• Windows/Glass Doors: All units require windows and sliding glass doors that have well-fitted, well-weather-stripped</li> </ul>   | During Construction – Applicant                     | During Construction – City                      |                            |      |         |

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|     | <p>assemblies, and minimum sound transmission class (STC) ratings of 27.</p> <ul style="list-style-type: none"> <li>• Exterior Doors (Non-Glass): All exterior doors shall be well weather-stripped and have well-sealed perimeter gaps to achieve minimum sound transmission class (STC) ratings of 27.</li> <li>• Exterior Walls: At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.</li> <li>• Roof: Roof sheathing of wood construction shall be per manufacturer's specification or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer's specification or well sealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic space.</li> <li>• Ventilation: Arrangements for any habitable room shall be such that any exterior door or window can be kept closed when the room is in use and still receive circulated air. A forced air</li> </ul> |   |   |                            |      |         |



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|          | circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code.  |  |   |                            |      |         |
| PDF NO-2 | <p>The following PDFs are included in the Project design to reduce construction noise and vibration levels produced by the construction equipment to the nearby sensitive land uses.</p> <ul style="list-style-type: none"> <li>• If R6 represents occupied residential use at the time of Project construction, install a minimum 10-foot high temporary construction noise barrier at the Project’s site boundary adjacent to sensitive receiver location R6, shown on Exhibit ES-B, for the duration of Project construction. The noise control barriers must have a solid face from top to bottom. The noise control barrier must meet the minimum height and be constructed as follows: <ul style="list-style-type: none"> <li>o The temporary noise barrier shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or</li> </ul> </li> </ul> | During Grading and Excavation – Applicant/ Construction Contractor | During Grading and Excavation – City            |                            |      |         |

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|     | <p>quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts. Example photos are provided in Appendix 11.2.;</p> <ul style="list-style-type: none"> <li>o The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired;</li> <li>o The noise control barrier and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity.</li> </ul> <p>• Large mobile equipment (greater than or equal to 80,000 pounds) (5) shall not be used within 50 feet of receiver locations R2 and R6 if occupied at the time of Project construction, as shown on Exhibit ES-B. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used within this area during Project construction.</p> |   |   |                            |      |         |

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|     | <ul style="list-style-type: none"> <li>• Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that Project construction activities shall comply with the City of Moreno Valley Municipal Code requirements.</li> <li>• During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.</li> <li>• The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site during all Project construction (i.e., to the western center).</li> <li>• The contractor shall design delivery routes to minimize the exposure of</li> </ul> |   |   |                            |      |         |

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|                        | sensitive land uses or residential dwellings to delivery truck-related noise.   |  |  |                            |      |         |
| <b>Public Services</b> |   |  |  |                            |      |         |
| EIR #190 pg. 148       | The project applicant should study the possibility of including trash compactors as a standard feature in the new homes as well as the feasibility of installing recycling bins on the site for residents' use and convenience to reduce <u>solid waste generation</u> .  | Design Phase – Applicant   | Design Phase – City  |                            |      |         |
| EIR #190 pg. 156       | The project applicant will work with the County of Riverside <u>Fire Department</u> in order to insure the adequacy of the location and size of the presently proposed fire station sites. A fee of \$600 per unit is assessed by the "Public Facilities Plan for the Moreno Valley". A portion of this will be allocated to the Fire Department to cover costs of constructing the stations. A number of measures to reduce the potential for fire occurring have been incorporated into the project design. | Measures reducing the potential for fire have been incorporated into the project design. | Measures reducing the potential for fire have been incorporated into the project design. |                            |      |         |
| EIR #190 pg. 159       | The applicant will also cooperate with the Sheriff's Department to insure that adequate police protection is provided.  | Pre-Grading and Excavation – Applicant   | Pre-Grading and Excavation – City  |                            |      |         |
| EIR #190 pg. 164       | A number of <u>natural gas and electricity</u> conserving techniques have been incorporated into the project design, as described in the Specific Plan.   | Condition is included within the Design of the Project.                                  | Condition is included within the Design of the Project.                                  |                            |      |         |

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| EIR #190<br>pg. 169 | The project proponent will continue working with the four affected <u>school</u> districts to insure adequate facilities are provided. Payment of District(s) development fees will help mitigate financial impacts.  | Pre-Grading and Excavation – Applicant              | Pre-Grading and Excavation – City               |                            |      |         |
| COA 59              | <p>The following fire impact mitigation measures shall be required:</p> <ul style="list-style-type: none"> <li>A. Fire protection shall be provided in accordance with Schedule "A" of Ordinance 460 and/or 546.</li> <li>B. All dwelling units and structures must have built-in smoke detectors and alarm systems.</li> <li>C. Buildings should be designed and constructed to be fire resistant through following:               <ul style="list-style-type: none"> <li>1) Adequate spacing between buildings to allow the movement of fire equipment around the inner portions of the project.</li> <li>2) All buildings within the project shall have Class A roofing material.</li> <li>3) Overhead decking for multiple story structures should be designed to preclude a fire from burning under it and up</li> </ul> </li> </ul> | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

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|        | <p>through it.</p> <p>4) Exterior spark arrestors on chimneys shall be provided. A sample shall be submitted to the County Fire Department for inspection and approval prior to installation.</p> <p>D. Site specific project design should include the following:</p> <p>1) A circulation pattern that has roadways which are of sufficient width to be easily traveled by fire vehicles, cul-de-sacs less than 1320 feet, and multiple access points into residential neighborhoods through loop streets and throughways.</p> |   |   |                            |      |         |
| COA 60 | The project sponsor shall participate in the Public Facilities Fee Program for Moreno Valley.   | Pre-Grading – Applicant                             | Pre-Grading – City                              |                            |      |         |
| COA 62 | Each subdivision within the specific plan shall provide school impact mitigation measures as determined by the Moreno Valley Unified, Val Verde Elementary, Perris Union, and NuView Union Elementary School districts through the dedication of sites and through developer fees.  | Pre-Grading – Applicant                             | Pre-Grading – City                              |                            |      |         |



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| COA 64         | <p>The developer shall mitigate potential safety and security impacts in the following manner:</p> <p>A. Prior to recordation of the implementing tract maps the following action shall occur:</p> <ol style="list-style-type: none"> <li>1) An application shall be submitted to the City of Moreno Valley for the formation of a street lighting district, or annexation to an existing light district.</li> <li>2) This application shall be filed concurrently with the submittal of street improvement plans to the Riverside County Road Commissioner.</li> </ol> <p>B. The project design shall incorporate security hardware as recommended by law enforcement agencies on all structures, and an emphasis on visibility through location and landscaping of structures.</p> | Prior to Recordation of Maps – Applicant            | Prior to Recordation of Maps – City             |                            |      |         |
| <b>Traffic</b> |  |   |   |                            |      |         |
| COA 40         | All road improvements within the project boundaries shall be constructed to ultimate City standards in accordance with   | Pre-Grading – Applicant                             | Pre-Grading – City                              |                            |      |         |

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|        | Ordinance No. 460 and 461 as a requirement of the implementing subdivisions for this project and shall be subject to approval by the City Engineer.  |   |   |                            |      |         |
| COA 41 | The applicant shall submit for Planning Commission approval, a composite circulation plan prior to the issuance of grading permits for each stage of development in question which combines and defines the type and extent of pedestrian, equestrian and vehicular circulation modes identified in the Specific Plan and EIR. The composite circulation plan shall establish the development standards, phasing and maintenance responsibilities for the various circulation components, public and private streets, sidewalks, streetscapes, trails and bridges. | Pre-Grading – Applicant                             | Pre-Grading – City                              |                            |      |         |
| COA 42 | The subdivider shall comply with the following street improvement recommendations:<br>A. The master circulation plan shall be revised to designate Iris Avenue/Moreno Beach Drive as a six-lane arterial within the project boundaries.<br>B. The applicant/developer of any subdivision within Specific Plan 193 shall participate on a fair share  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

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|        | basis in any mitigation and/or fee program designed to alleviate off site roadway and freeway interchange deficiencies.  |   |   |                            |      |         |
| COA 43 | Road improvements shall be provided in accordance with the requirements of the implementing subdivision for this project and/or as recommended by the City Engineer.   | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 44 | The basic circulation system shall be developed substantially in accordance with the Specific Plan, EIR and Read Engineering Department conditions as contained herein.  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 45 | Collector roadways shall minimize the use of reverse frontage walls by such treatments as increased setbacks, landscaping, and berming or other techniques which will allow individual residential developments to have frontage on the collector roadways without the use of masonry walls or fences. | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 46 | The project proponent shall participate in the Traffic Signal Mitigation Program as adopted by the City of Moreno Valley.  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 48 | Concrete sidewalks shall be constructed throughout this development  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 49 | Handicapped/bicycle ramps shall be incorporated into all curb and sidewalk   | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

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|          | designs.  |   |   |                            |      |         |
| COA 50   | A sufficient quantity of bicycle racks shall be provided by the developer at the neighborhood commercial center.  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| PDF TR-1 | <p>Prior to the issuance of Certificates of Occupancy, the Applicant shall contribute fair share towards the following intersection improvements as specified in the 2018 TIA prepared for the Modified Project:</p> <p><u>Improvement – Lasselle Street &amp; Iris Avenue (#2)</u></p> <ul style="list-style-type: none"> <li>Implement a 130-second cycle length during the peak hours.</li> </ul> <p><u>Improvement – Lasselle Street &amp; Krameria Avenue (#5)</u></p> <ul style="list-style-type: none"> <li>Modify the median and striping to accommodate dual northbound left turn lanes, a through lane, and shared through-right turn lane.</li> <li>Restripe the eastbound approach with 2 lefts, 1 through, and 1 right turn lane.</li> </ul> | Prior to Certificates of Occupancy – Applicant      | Prior to Certificates of Occupancy – City       |                            |      |         |

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|                           | <ul style="list-style-type: none"> <li>Modify the traffic signal to implement overlap phasing on the eastbound right turn lane.</li> <li>Implement a 130-second cycle length during the peak hours.</li> </ul>   |   |   |                            |      |         |
| <b>General Conditions</b> |  |   |   |                            |      |         |
| COA 2                     | If any of the following conditions of approval differ from the commitment made by the developer in the specific plan text or map exhibits, the conditions enumerated herein shall take precedence.   | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 3                     | The development of the property shall be in accordance with the mandatory requirements of all City of Moreno Valley Ordinances and State Laws and shall conform substantially with approved Specific Plan No. 193 as filed in the offices of the City of Moreno Valley unless otherwise amended. | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 4                     | No portion of the specific plan which purports or proposes to change, waive or modify any ordinance or other legal requirement in effect at time of final approval for the development shall be considered to be a part of the adopted specific plan.  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

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| COA 5 | Water and sewage disposal facilities shall be installed in accordance with the requirements and specifications of the Riverside County Health Department. Such requirements will be applied at the subdivision or plot plan stage.   | Construction Phase – Applicant                      | Construction Phase – City                       |                            |      |         |
| COA 6 | Drainage and flood control facilities and improvements shall be provided in accordance with Riverside County Flood Control and Water Conservation District and City Engineer's requirements. Such requirements will be applied at the subdivision and plot plan stage.<br>a. All proposed improvements and construction shall be in conformance with the City of Moreno Valley Flood Prevention Ordinance. | Design Phase – Applicant/ Engineer                  | Design Phase – City/ City Engineer              |                            |      |         |
| COA 7 | Prior to issuance of a building permit for construction of any use contemplated by this approval, the applicant shall first obtain clearance from the City of Moreno Valley Planning Department that all pertinent conditions of approval have been satisfied with the ' specific plan for the phase of development or planning unit in question.  | Pre-Construction – Applicant                        | Pre-Construction – City                         |                            |      |         |
| COA 8 | An environmental assessment shall be conducted with each filing for tentative  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

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|        | tract map, change of zone, plot plan, specific plan amendment or any other discretionary permit application required to implement the specific plan. At a minimum, the environmental assessments shall utilize the evaluation of impacts addressed in the EIR prepared for Specific Plan No. 193 and Addendum No. 1 to the EIR, prepared for Specific Plan No. 193 Amendment No. 1.  |   |   |                            |      |         |
| COA 9  | All future development shall be subject to and in accordance with the applicable ordinances of the City of Moreno Valley in effect at the time of application as contained in those County Ordinances (including Ordinances 348 and 460) that were adopted by the City following incorporation. Any future revisions to these City Ordinances shall be effective against all development phases for which Tentative Tract Maps have not been approved, as of the date of the revision. | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 11 | Where applicable by ordinance or required by adoption of a condition of approval relating to the underlying tentative tract proposal, a neighborhood owners association shall be established prior to the recordation of the final tract map for each residential development. The   | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

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|        | neighborhood owners association shall be responsible for any common area improvements that are unique to that neighborhood/sub-community and other responsibilities as necessary as defined through the specific plan conditions of approval.  |   |   |                            |      |         |
| COA 14 | <p>Prior to the recordation of any final subdivision map, or building permits being issued for conditional use permits and plot plans, the applicant shall submit to the Planning Commission the following documents which shall demonstrate to the satisfaction of the City that the individual appropriate owners associations will be established and will operate in accordance with the intent and purpose of the specific plan.</p> <ul style="list-style-type: none"> <li>A. The document to convey title.</li> <li>B. Covenants, Conditions and Restrictions to be recorded.</li> <li>C. Management and Maintenance agreements to be entered into with the unit/lot owners of the Project.</li> </ul> <p>The master property owners association, neighborhood owners association, commercial and industrial owners</p> | Prior to Recordation of Final Map – Applicant       | Prior to Recordation of Final Map – City        |                            |      |         |

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|                                 | associations shall be charged with the unqualified right to assess their own individual owners who own individual units for reasonable maintenance and management costs which shall be established and continuously maintained. The individual owners associations shall have the right to lien the property. of any owners who default in payment of their assessment fees. Such a lien shall not be subordinate to any encumbrance other than a first deed of trust, provided such deed of trust is made in good faith and for good value and is of record prior to the lien of the individual owners association. |   |   |                            |      |         |
| <b>Planning Area Conditions</b> |  |   |   |                            |      |         |
| COA 26 C.                       | <p>Planning areas 3, 21, 57, 59, and 75 shall be developed as neighborhood commercial centers in the following manner:</p> <ol style="list-style-type: none"> <li>1. The Commercial Centers shall be developed subject to a plot plan to be submitted under the provisions 6f Sections 18.12 and 18.30 of Ordinance 348. This plot plan shall include detailed building sizes, elevations, parking, roof treatment, landscaping and circulation designs, and will designate the major uses proposed on each site.</li> </ol>   | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

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|           | <p>2. The Commercial Center shall be developed in a manner that is architecturally harmonious with its own defined identity incorporating development criteria from the defined theme of Specific Plan 193.</p> <p>3. The Commercial Center all incorporate efficient pedestrian, bikeway, auto, and public transportation systems. Development details shall be provided concurrently with the plot plan which will be evaluated by the Planning Commission and other affected agencies.</p> <p>4. Energy considerations shall be incorporated into the design of commercial areas. Parking areas shall be heavily landscaped to reduce heat gain. Passive and active solar systems shall be considered in structural designs.</p> <p>5. All signs shall be in compliance with Section 19.4 of Ordinance 148.</p> |   |   |                            |      |         |
| COA 26 F. | Flood Control facilities within each phase will be constructed prior to or concurrently with the initial development within that phase.  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

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| <b>Phasing Conditions</b> |   |   |   |                            |      |         |
| COA 27                    | Construction of the development permitted hereby, including recordation of final subdivision maps, may be done progressively in stages, provided adequate vehicular access is constructed for all dwelling units in each stage of development and further provided that each phase of development conforms substantially with the intent and purpose of the Specific Plan Master Phasing Program. Any proposed variation to the Master Phasing Plan shall be reviewed by the Planning Commission for determination of substantial conformance to the Specific Plan. | During Construction – Applicant                     | During Construction – City                      |                            |      |         |
| COA 28                    | Development applications may be filed out of the numerical sequence of the Master Phasing Plan, provided that the development application complies with all conditions, including requirements for public facilities, infrastructure and recreational amenities, for the phase and planning unit in which it is located and all intervening phases and planning units.  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 29                    | Area and density transfers between Master Phases shall be prohibited.   | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

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| COA 31                    | Each planning phase as identified in Exhibit "D" 7/25/85 Revised shall incorporate internal pedestrian access to common landscaped spaces and recreation areas. No direct pedestrian access shall be provided to the natural open space areas.  | Post Construction – Applicant                       | Post Construction – City                        |                            |      |         |
| COA 32                    | Within eight (8) and sixteen (16) years of City Council's adoption of the Resolution for the specific plan, any portion of this specific plan, that has not been developed or for which an implementation development plan has not been approved by the City Council, the City Council may review and may require an amended specific plan at the developer's expense prior to further development. | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 34                    | Construction of parks, community and equestrian recreational areas shall commence prior to, or concurrently with adjoining development in each applicable phase.  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| <b>Grading Conditions</b> |   |   |   |                            |      |         |
| COA 36                    | No grading shall be permitted for any development area prior to tentative map or plot plan approval and issuance of grading permits for the area of development in question, excluding stock pile plans or as approved by the City Engineer.  | Pre-Grading and Excavation – Applicant              | Pre-Grading and Excavation – City               |                            |      |         |

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|--------|---|--|---|----------------------------|------|---------|
|        |   |  |   | Initials                   | Date | Remarks |
| COA 37 | <p>All grading within the specific plan shall comply with City Ordinance No. 45 and the following conditions and development criteria:</p> <ul style="list-style-type: none"> <li>A. All grading shall be in accordance with the County's Hillside Grading Policies, as adopted by the City.</li> <li>B. Where cut and fill slopes are created in excess of 10 feet in vertical height, detailed landscaping and irrigation plans shall be submitted to the Planning Department and Engineering Department prior to approval of grading plans. The plans will be reviewed for type and density of ground cover, seed mix, plant sizes and irrigation systems.</li> <li>C. Gradients of all driveways and private roadways shall not exceed 15% percent.</li> <li>D. All manufactured slopes shall be contour-graded incorporating the following grading techniques:                             <ul style="list-style-type: none"> <li>1. The angle of the graded slope shall be gradually adjusted to the angle of the natural terrain.</li> <li>2. The toes and tops of all slopes in excess of 10 feet in vertical height</li> </ul> </li> </ul> | During Grading and Excavation – Applicant/ Construction Contractor | During Grading and Excavation – City            |                            |      |         |



| No. | Mitigation Measure   | Time Frame and Responsible Party for Implementation | Time Frame and Responsible Party for Monitoring | Verification of Compliance |      |         |
|-----|--|---|---|----------------------------|------|---------|
|     |  |   |   | Initials                   | Date | Remarks |
|     | <p>shall be rounded with curves with radii designed in proportion to the total height of the slope where drainage and stability permit such rounding.</p> <p>3. Where cut and fill slopes exceed 150 feet in horizontal length, the horizontal contours of the slopes shall be curved in a continuous, undulating fashion.</p> <p>E. Natural features such as trees with four inch or larger trunk diameters and significant rock outcrops shall be protected to the greatest extent feasible in the siting of individual lots and building pads. These features shall be shown on the grading plan with appropriate protection and relocation notes.</p> <p>F. All dwellings shall be located a minimum of 10 feet from the toes and tops of all slopes over 10 feet in vertical height unless otherwise approved by the City Engineer.</p> <p>G. Natural drainage courses shall be retained in their natural state wherever possible.</p> <p>H. All brow ditches, terrace drains and other minor swales where required</p> |   |   |                            |      |         |

| No.    | Mitigation Measure  | Time Frame and Responsible Party for Implementation | Time Frame and Responsible Party for Monitoring | Verification of Compliance |      |         |
|--------|---|---|---|----------------------------|------|---------|
|        |   |   |   | Initials                   | Date | Remarks |
|        | <p>shall be lined with natural erosion control materials or concrete, as approved by the Planning Director and City Engineer.</p> <p>I. All grading work shall be balanced within the limits the phase boundary, eliminating any off-site transport of materials.</p> <p>J. All graded but undeveloped land shall be maintained in a weed-free condition and planted with interim landscaping.</p> <p>K. The applicant and/or developer shall be responsible for the maintenance and upkeep of all slope planting and irrigation systems until such time as those operations are the responsibility of other parties.</p> |   |   |                            |      |         |
| COA 38 | <p>All tentative tract map submittals shall include the overall conceptual grading plan for the stage of development in question. The grading plans shall include but not be limited to the following:</p> <p>A. Preliminary quantity estimates for grading.</p> <p>B. Areas of temporary borrowing or depositing of material.</p> <p>C. Techniques which will be utilized to prevent erosion and sedimentation during and after the grading process.</p>   | Pre-Grading and Excavation – Applicant              | Pre-Grading and Excavation – City               |                            |      |         |

| No.   | Mitigation Measure   | Time Frame and Responsible Party for Implementation | Time Frame and Responsible Party for Monitoring | Verification of Compliance |      |         |
|---|--|---|---|----------------------------|------|---------|
|   |  |   |   | Initials                   | Date | Remarks |
|   | <p>D. Approximate time frames for grading including identification of areas which may be graded during the higher probability rain months of January through March.</p> <p>E. Preliminary pad and roadway elevations.</p> <p>F. Hydrology and hydraulic concerns and mitigation measures.</p>  |   |   |                            |      |         |
| <b>Parks and Recreation Area Conditions</b> |  |   |   |                            |      |         |
| COA 54                                      | Prior to the issuance of building and grading permits, landscaping, irrigation, and improvement plans for landscaped areas and recreation areas shall be submitted to the Planning Commission and approved for the stage and area of development in question. Improvement plans shall conform to concepts, features and standards established in the specific plan and these conditions. | Pre-Grading and Excavation – Applicant              | Pre-Grading and Excavation – City               |                            |      |         |
| <b>Impact Mitigation Conditions</b>         |  |   |   |                            |      |         |
| COA 56                                      | The developer shall incorporate all special impact mitigation plans, findings, and recommendations into the design of all applicable development plans including subdivision, grading, and building plans.   | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 77                                      | The developer shall provide solar water heating systems as the primary source of water heating in all residential units  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

| No.    | Mitigation Measure   | Time Frame and Responsible Party for Implementation | Time Frame and Responsible Party for Monitoring | Verification of Compliance |      |         |
|--------|--|---|---|----------------------------|------|---------|
|        |  |   |   | Initials                   | Date | Remarks |
|        | <p>designated medium, medium high and high density.</p> <p>The credit allowable to satisfy the Title 24 requirements shall be limited to the points allowed for the gas water heater. Also, any group swimming pools planned for the three major community recreation facilities, as well as the group swimming pools planned in residential areas designated medium, medium-high and high density shall use solar water heating as the primary method of heating the swimming pools. The Planning Department shall verify that these requirements have been satisfied prior to that issuance of building permits.</p> |   |   |                            |      |         |
| COA 82 | <p>Detailed design standards shall be submitted to the Planning Department for review at the time an application is filed for development within Planning Areas 21 and 21A. Information submitted shall include the following:</p> <ul style="list-style-type: none"> <li>a. Plan showing the placement of buildings, location of usable open space, and delineating proposed setbacks;</li> <li>b. Building design and architecture;</li> <li>c. Elevations including examples of</li> </ul>  | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

| No.    | Mitigation Measure  | Time Frame and Responsible Party for Implementation | Time Frame and Responsible Party for Monitoring | Verification of Compliance |      |         |
|--------|---|---|---|----------------------------|------|---------|
|        |   |   |   | Initials                   | Date | Remarks |
|        | <p>proposed materials for exteriors and heights of buildings;</p> <p>d. Fencing plan including height and details of proposed materials to be used.</p> <p>e. Conceptual landscaping and irrigation plan;</p> <p>f. Parking design;</p> <p>g. conceptual grading plan.</p>  |   |   |                            |      |         |
| COA 83 | A cross-sectional rendering, illustrating land use relationships between Planning Areas 21A and 22A, shall be submitted for Planning Department review concurrently with the initial development request.   | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 84 | Should public transportation (bus) service be available at the time of development request submittal for uses within Planning Areas 26, 27, 21, and 22, a bus turn out facility shall be incorporated in implementing site plans to the satisfaction of the Planning Department and the Riverside Transit Agency. | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| COA 86 | Concurrently with the submittal of any implementing subdivisions, the project sponsor shall submit a schedule for traffic control facility installations based on traffic studies contained within EIR 190 and subsequent plan amendments. The schedule shall include signalization, stop                         | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |

Attachment: Exhibit B to Resolution 2019-03 - Mitigation Monitoring and Reporting Program (3376 : The

| No.   | Mitigation Measure  | Time Frame and Responsible Party for Implementation | Time Frame and Responsible Party for Monitoring | Verification of Compliance |      |         |
|---|---|---|---|----------------------------|------|---------|
|   |   |   |   | Initials                   | Date | Remarks |
|   | signs, and other required traffic controls.   |   |   |                            |      |         |
| COA 87  | a. All structures and ancillary uses shall be restricted to areas having a slope range of less than 24%.<br>b. All streets shall be aligned through slope having a gradient of more than 16%. | Design Phase – Applicant                            | Design Phase – City                             |                            |      |         |
| <p><b>Source:</b><br/>                     Moreno Valley Ranch Specific Plan/ Environmental Impact Report No. 190. August 13, 1985.<br/>                     Addendum No. 1 to Environmental Impact Report No. 190. November 25, 1986.<br/>                     Specific Plan 193 (Moreno Valley Ranch) Final Conditions of Approval. July 25, 1985, Amended 10-23-86.<br/>                     Moreno Valley Ranch Specific Plan/ Environmental Impact Report No. 190 Addendum #2. January 04, 2019.</p> |   |   |   |                            |      |         |

PLANNING COMMISSION RESOLUTION NO. 2019-04

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY RECOMMENDING THAT THE CITY COUNCIL APPROVE APPLICATION NO. PEN18-0119, AN AMENDMENT TO THE GENERAL PLAN LAND USE MAP, CHANGING THE LAND USE DESIGNATION FROM RESIDENTIAL 20 TO COMMERCIAL ON 2.8 ACRES LOCATED AT THE NORTHEAST CORNER OF LASSELLE STREET AND KRAMERIA AVENUE

WHEREAS, the applicant, Continental East Fund III, LLC, filed Application No. PEN18-0119, requesting an amendment to the Moreno Valley General Plan, as described in the title of this resolution and the attached Exhibit A; and

WHEREAS, on January 24, 2019, the Planning Commission of the City of Moreno Valley held a public hearing to consider the subject applications and all of the environmental documentation prepared for the project; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred; and

WHEREAS, the Planning Commission considered the Initial Study prepared for the project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Initial Study, it was determined that the project impacts remain less than significant and certification of an Addendum to a previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report is recommended.

NOW, THEREFORE, BE IT RESOLVED, it is hereby found, determined and resolved by the Planning Commission of the City of Moreno Valley as follows:

- A. This Planning Commission hereby specifically finds that all of the facts set forth above in this Resolution are true and correct.
- B. Based upon substantial evidence presented to this Planning Commission during the above-referenced meeting, including written and oral staff reports, and the record from the public hearing, this Planning Commission hereby specifically finds as follows:
  1. Conformance with General Plan Policies – The proposed general plan amendment is consistent with the General Plan, and its goals, objectives, policies and programs.

FACT: The Continental East Phase II project proposes to modify the previously approved Continental Villages project by subdividing the approximately 19 acre site into three parcels; establishing land use



designations for development of Medium High Density Residential and future Neighborhood Commercial development; and replacing the previously approved detached dwelling units with a 112 unit apartment project.

The project site is located within Planning Area 21 of the Moreno Valley Ranch Specific Plan (SP 193) which as approved on August 13, 1985. The General Plan land use designations for the project site were Commercial and High Density Residential.

In 2001, the City of Moreno Valley approved Amendment No. 6 to Specific Plan 193, which amended the land use designations for Planning Area 21, eliminating the Commercial designation and assigning High Density Residential to the entire site.

The project site has a current General Plan designation of R20. The proposed General Plan Amendment would change the land use designation on an approximately 2.8 acre parcel located at the corner of Lasselle Street and Krameria Avenue from R20 to Commercial. The balance of the project site would remain designated R20.

The project site is bounded by Lasselle Street along its western property line and Krameria along its eastern and southern property line. Beyond the contiguous streets, land uses surrounding the project site are primarily single-family residences in the Low and Medium-low Density Residential zones. Moreno Valley Community College is located directly north of Cahuilla Drive. Lasselle Elementary School is located northeast of the Project site and contiguous to the Project site on two sides.

General Plan Policy 2.4.1 states that the primary purpose of areas designated Commercial is to provide property for business purposes, including, but not limited to, retail stores, restaurants, banks, hotels, professional offices, personal services and repair services.

With approval of the requested General Plan Amendment, the project as designed and conditioned will achieve the objectives of the City of Moreno Valley's General Plan for commercial land uses and will promote development of the undeveloped portion of the project site.

2. Health, Safety and Welfare – The proposed general plan amendment will not be detrimental to the public health, safety or welfare.

FACT: The proposed General Plan Amendment is a legislative action and will not result in any direct physical impacts; therefore, the action itself could not be detrimental to the public health, safety or welfare.

The change in land use designation for the 2.8 acres vacant will allow for future commercial development that is consistent with the General Plan, zoning, and public health safety and welfare.

An Initial Study was for the project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Initial Study, it was determined that the project impacts remain less than significant and certification of an Addendum to a previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report is recommended.

There is no evidence that the proposed project will have a significant impact on public health or be materially injurious to surrounding properties of the environment as a whole.

BE IT FURTHER RESOLVED that the Planning Commission HEREBY APPROVES Resolution No. 2019-04, and RECOMMENDS that the City Council:

1. APPROVE General Plan Amendment Application No. PEN18-0119, based on the findings contained in this resolution and as depicted on the map attached as Exhibit "A".

APPROVED this 24<sup>th</sup> day of January, 2019.

AYES:  
NOES:  
ABSTAIN:

\_\_\_\_\_  
Jeffrey Barnes  
Chair, Planning Commission

ATTEST:

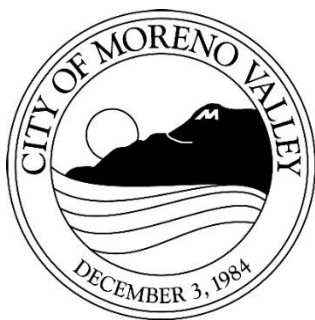
\_\_\_\_\_  
Patty Nevins, Planning Official  
Secretary to the Planning Commission

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

ATTACHED: General Plan Map

Attachment: Resolution 2019-04 - General Plan Amendment [Revision 2] (3376 : The proposal includes a General Plan Amendment, Specific



**GENERAL PLAN AMENDMENT**  
 Application No. PEN18-0119  
 Resolution No. 2019-04

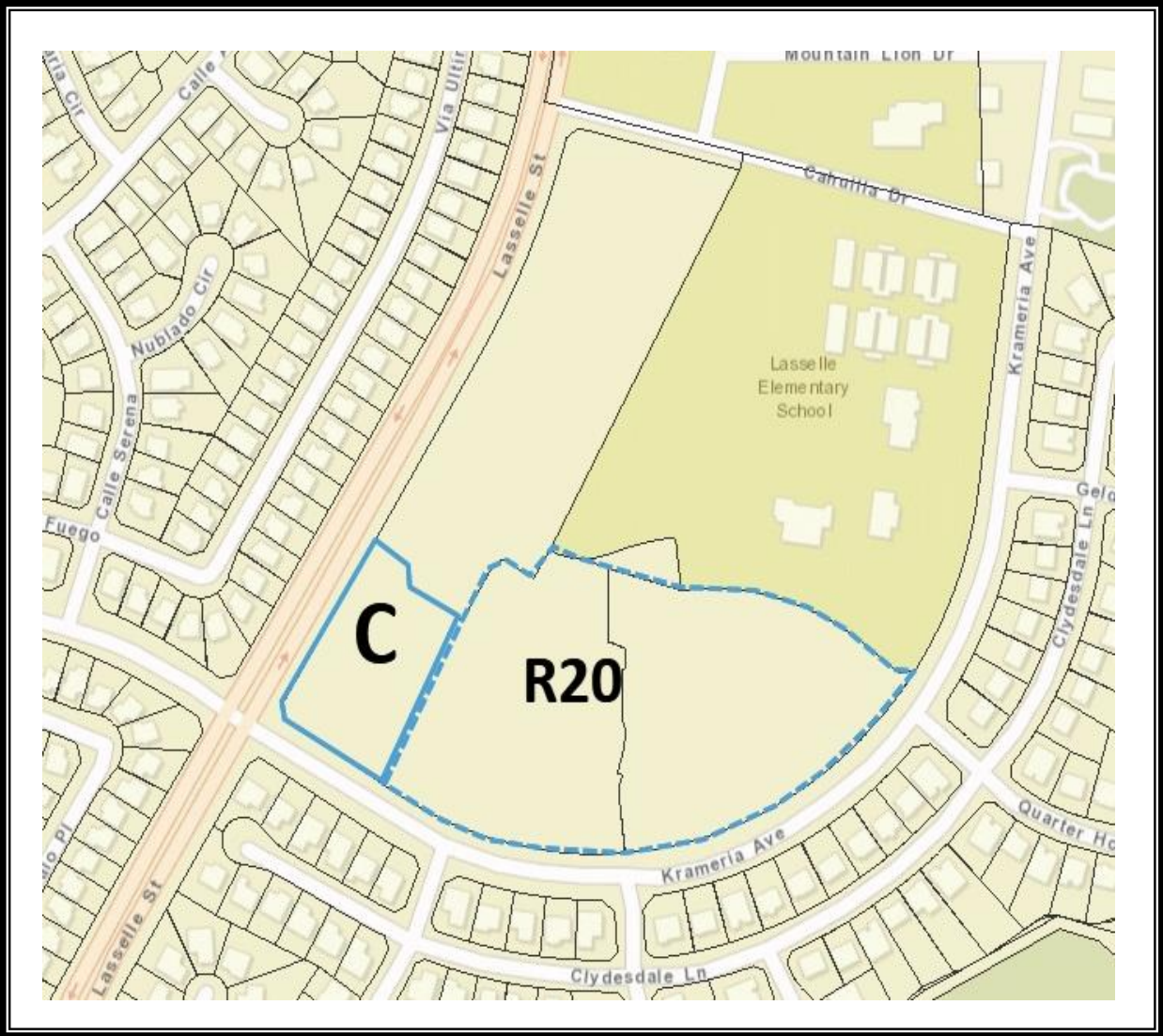


Exhibit A to Resolution 2019-04

Attachment: Exhibit A to Ordinance 2019-04 (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

PLANNING COMMISSION RESOLUTION NO. 2019-05

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY RECOMMENDING THAT THE CITY COUNCIL APPROVE APPLICATION NO. PEN18-0120, AN AMENDMENT TO THE MORENO VALLEY RANCH SPECIFIC PLAN, CHANGING THE LAND USE DESIGNATION FROM HIGH DENSITY RESIDENTIAL TO MEDIUM HIGH DENSITY RESIDENTIAL FOR 8.8 ACRES AND FROM HIGH DENSITY RESIDENTIAL TO NEIGHBORHOOD COMMERCIAL FOR 2.8 ACRES FOR PROPERTY LOCATED AT THE NORTHEAST CORNER OF LASSELLE STREET AND KRAMERIA AVENUE

WHEREAS, the applicant, Continental East Fund III, LLC, filed Application No. PEN18-0120, requesting an amendment to the Moreno Valley Ranch Specific Plan, as described in the title of this resolution and in the attached Exhibits A and B; and

WHEREAS, on January 24, 2019, the Planning Commission of the City of Moreno Valley held a public hearing to consider the subject applications and all of the environmental documentation prepared for the project; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred; and

WHEREAS, the Planning Commission considered the Initial Study prepared for the project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Initial Study, it was determined that the project impacts remain less than significant and certification of an Addendum to a previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report is recommended.

NOW, THEREFORE, BE IT RESOLVED, it is hereby found, determined and resolved by the Planning Commission of the City of Moreno Valley as follows:

- A. This Planning Commission hereby specifically finds that all of the facts set forth above in this Resolution are true and correct.
- B. Based upon substantial evidence presented to this Planning Commission during the above-referenced meeting, including written and oral staff reports, and the record from the public hearing, this Planning Commission hereby specifically finds as follows:
  1. Conformance with General Plan Policies – The proposed specific plan amendment is consistent with the General Plan, and its goals, objectives, policies and programs.

FACT: The Continental East Phase II project proposes to modify the previously approved Continental Villages project by subdividing the approximately 19 acre site into three parcels; establishing land use designations for development of Medium High Density Residential and future Neighborhood Commercial development; and replacing the previously approved detached dwelling units with a 112 unit apartment project.

The project site is located within Planning Area 21 of the Moreno Valley Ranch Specific Plan (SP 193) which as approved on August 13, 1985. The General Plan land use designations for the project site were Commercial and High Density Residential.

In 2001, the City of Moreno Valley approved Amendment No. 6 to Specific Plan 193, which amended the land use designations for Planning Area 21, eliminating the Commercial designation and assigning High Density Residential to the entire site.

The project site has a current General Plan designation of R20. The proposed Specific Plan Amendment would change the land use for 8.8 acres from High Density Residential to Medium High Density Residential and from High Density Residential to Neighborhood Commercial for 2.8 acres located at the corner of Lasselle Street and Krameria Avenue.

The project site is bounded by Lasselle Street along its western property line and Krameria along its eastern and southern property line. Beyond the contiguous streets, land uses surrounding the project site are primarily single-family residences in the Low and Medium-low Density Residential zones. Moreno Valley Community College is located directly north of Cahuilla Drive. Lasselle Elementary School is located northeast of the Project site and contiguous to the Project site on two sides.

General Plan Policy 2.2.10 states that the primary purpose of areas designated Residential 20 is to provide a range of high density multi-family housing types. Developments within Residential 20 areas shall also provide amenities, such as common open spaces and recreational facilities. The maximum density shall be 20 dwelling units per acre.

Medium High Density Residential is a zoning district with development standards that are consistent with the goals and intent of the Residential 20 land use designation.

General Plan Policy 2.4.1 states that the primary purpose of areas designated Commercial is to provide property for business purposes, including, but not limited to, retail stores, restaurants, banks, hotels, professional offices, personal services and repair services.



With approval of the requested Specific Plan Amendment, the project as designed and conditioned will achieve the objectives of the City of Moreno Valley's General Plan for multiple family and commercial land uses and will promote development of the undeveloped portion of the project site.

2. Conformance with the Zoning Regulations – The proposed specific plan amendment is consistent with the purposes and intent of Title 9 of the City of Moreno Valley Municipal Code.

FACT: The proposed Specific Plan Amendment would change the land use for 8.8 acres from High Density Residential to Medium High Density Residential (MHR) and from High Density Residential to Neighborhood Commercial (NC) for 2.8 acres located at the corner of Lasselle Street and Krameria Avenue.

Both the MHR and NC zones defer to the City's Municipal Code for development standards. With the adoption of the Specific Plan Amendment, the project would be consistent with the purposes and intent of Title 9.

3. Health, Safety and Welfare – The proposed specific plan amendment will not be detrimental to the public health, safety or welfare.

FACT: The proposed Specific Plan Amendment is a legislative action and will not result in any direct physical impacts; therefore, the action itself could not be detrimental to the public health, safety or welfare.

The change in land use designations for the project site vacant will allow for development of 112 unit apartment project and future commercial development that is consistent with the General Plan, zoning, and public health safety and welfare.

An Initial Study was for the project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Initial Study, it was determined that the project impacts remain less than significant and certification of an Addendum to a previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report is recommended.

There is no evidence that the proposed project will have a significant impact on public health or be materially injurious to surrounding properties of the environment as a whole.



BE IT FURTHER RESOLVED that the Planning Commission HEREBY APPROVES Resolution No. 2019-05, and RECOMMENDS that the City Council:

1. APPROVE Specific Plan Amendment Application No. PEN18-0120, based on the findings contained in this resolution, and as depicted on the map attached as Exhibit "A".

APPROVED this 24<sup>th</sup> day of January, 2019.

AYES:  
NOES:  
ABSTAIN:

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Jeffrey Barnes  
Chair, Planning Commission

ATTEST:

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Patty Nevins, Planning Official  
Secretary to the Planning Commission

APPROVED AS TO FORM:

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City Attorney

ATTACHED: Specific Plan Amendment No. 10  
Specific Plan Map

Attachment: Resolution 2019-05 - Specific Plan Amendment [Revision 2] (3376 : The proposal includes a General Plan Amendment, Specific

Moreno Valley Ranch Specific Plan Amendment No. 10

Executive Summary

The tenth Amendment to the Specific Plan covers approximately 11.64 acres of land designated High Density Residential in the Moreno Valley Ranch Specific Plan (SP No. 193). Specific Plan No. 193 was initially approved for 12,703 residential units encompassing 3,959 acres. The proposed change in Specific Plan land use designation for the 11.64-acre parcel is a negligible change affecting less than one-half percent of the total land area of the Specific Plan.

The acreage that would be modified by this Specific Plan Amendment is part of Planning Area 21 and 21A. More specifically, the project site is bound on the west by Lasselle Street, on the north by Cahuilla Drive, and on the south by Krameria Avenue.

Moreno Valley Ranch Specific Plan Amendment No. 10 changes the land use designation on 2.84 acres from High Density Residential to Neighborhood Commercial and on 8.80 acres from High Density Residential to Medium High Density Residential. These changes would accommodate approximately 21,000 square feet of neighborhood commercial and 112 multi-family dwelling units. There is no impact on the overall acreage of the Specific Plan itself.

The following table summarizes the progression of land use designations over the 11.64-acre Project site from original Specific Plan through Specific Plan Amendment No. 6.

| <b>Land Use</b>                 | <b>Original SP 193</b> | <b>SPA #1</b>                | <b>SPA #6</b>   | <b>SPA #10</b>             |
|---------------------------------|------------------------|------------------------------|-----------------|----------------------------|
| Medium Low Density Residential  | 11.64 acres (69 dus)   | -                            | -               |                            |
| Medium High Density Residential |                        |                              |                 | 8.80 acres (112 dus)       |
| High Density Residential        | -                      | 7.07 acres (130 du)          | 11.64 (215 dus) |                            |
| Commercial                      | -                      | 4.57 acres (119,442 sq. ft.) | -               | 2.84 acres (21,000 sq. ft) |
| Total                           | 11.64 acres            | 11.64 acres                  | 11.64 acres     | 11.64 acres                |

### Proposed Action

The Specific Plan Amendment pertains to 11.64 acres and would change the land use designations for parcels located within Planning Areas 21 and 21A of the Moreno Valley Ranch Specific Plan (SP No. 193) (Figure 1).

This Specific Plan Amendment is comprised of the Specific Plan text included herein, and the update of the land use and zoning exhibits of the Specific Plan. No other modifications to the Specific Plan are required to satisfy the State Government Code sections applicable to Specific Plans.

### Summary of Key Elements of Specific Plan Amendment 10

The proposed Specific Plan Amendment would make the following changes to the Moreno Valley Ranch Specific Plan No. 193.

- Revert the currently approved land use on Parcel 2, 2.84 acres, at the corner of Lasselle Street and Krameria Avenue, from High Density Residential back to Neighborhood Commercial as designated by Specific Plan Amendment No. 1.
- Change the designation of High Density Residential on Parcel 3, 8.80 acres, to Medium-High Density, to accommodate lower density residential housing more consistent with the surrounding land uses.
- The development standards for the multi-family land use shall be consistent with the R20 zoning standards, except where modified per Specific Plan No. 193.
- The development standards for the Neighborhood Commercial land use shall be consistent with the Neighborhood Commercial zoning standards.
- Parcel 3, 8.80 acres, is the area subject to the proposed General Plan Amendment, Zone Change, Specific Plan Amendment, and Plot Plan, to reduce the density from R20 to R15 for the construction of multi-family residential apartments.

### Background

In 1985, the Moreno Valley City Council adopted Specific Plan 193 and EIR 190, creating the Moreno Valley Ranch Specific Plan. Specific Plan 193 was initially approved for 12,703 residential units encompassing 3,959 acres. During the intervening years Specific Plan 193 has been amended 9 times, as summarized below.

Amendment 1 (1987) added the Moreno Valley campus of the Riverside Community College to the Specific Plan 193. The addition of the college campus rearranged land uses in other Planning Areas resulting in a net reduction of 8 dwelling units.

Amendment 2 (1987) incorporated the 27-hole golf course into the Specific Plan. The effect of that change was a reduction of 642 residential units.

Amendment No. 3 (1988) changed land use designations in Planning Areas 18, 19, and 23, resulting in an increase in public parkland by 1.3 acres and a reduction in dwelling units by approximately 54 single family dwellings.

Amendment No. 4 (1990) changed land uses among Planning Areas, most notably resulting in the construction of a 10-acre sports complex in Planning Area 4. The other land uses changes resulted in an increased in the maximum number of residential development units by approximately 137 dwelling units.

Amendment No. 5 (1998) amended the Specific Plan to modify eight planning areas of the Specific Plan generally modifying residential categories that allow for higher density to Medium Low Residential (4-8 dwelling units per acre) and Medium Residential (8-13 dwelling units per acre). The approval decreased the potential build-out within these Planning Areas of the Specific Plan by 1,160 dwelling units.

Amendment No. 6 (2001) modified uses in fourteen Planning Areas on 227 acres, resulting in a 1,221 dwelling unit reduction.

Amendment No. 7 modified the Specific Plan to allow for a maximum of 176 additional dwelling units.

Amendment No. 8 modified the Specific Plan to allow for condominiums, increasing the number of dwelling units by 135.

Amendment No. 9 (2018) amended land use designations, including the conversion of nine holes of the golf course known as the Lakes 9 to passive park and open space. Amendment No. 9 added 439 dwelling units.

The prior nine Specific Plan Amendments reduced the total number of permitted dwelling units within the Moreno Valley Ranch Specific Plan from 12,703 to approximately 10,505<sup>1</sup> dwelling units.

The Project Site is located in Planning Areas 21 and 21A of the Moreno Valley Ranch Specific Plan, which have been previously amended by Specific Plan Amendment Nos. 1 and 6.

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<sup>1</sup> Specific Plan Amendment No. 9 concluded the prior nine Specific Plan Amendments result in 10,439 dwelling units permitted within the Specific Plan area. The difference between 10,505 and 10,439 is due to several planning areas that permit a range of densities that could alter the total number of permitted dwelling units.

Specific Plan 193 originally designated Planning Area 21 (50 acres) for Medium Low density residential. Assuming 6 dwelling units per acre, Planning Area 21 could accommodate approximately 300 dwelling units.

In 1987, the City of Moreno Valley approved Amendment No. 1 to Specific Plan 193 to permit the Riverside Community College campus within Planning Area 22 and a portion of Planning Area 21. Amendment No. 1 reconfigured the Planning Area boundaries, leaving Planning Area 21 (15 acres) designated as Commercial and created Planning Area 21A (18 acres) designated as High Density Residential (333 dwelling units).

In 2001, the City of Moreno Valley approved Amendment No. 6 to Specific Plan 193, which amended the land use designations for Planning Areas 21 and 21A. Specific Plan Amendment No. 6 eliminated the Commercial designation and designated both Planning Areas as High Density Residential (32.19 acres).

In 2004, approximately 13.35 acres of Planning Areas 21 and 21A became an elementary school. The Lasselle Elementary School is primarily situated in Planning Area 21A, but a portion crosses into Planning Area 21, leaving the remaining 18.84 acres designed High Density Residential.

In 2012, the City of Moreno Valley approved a subdivision on the remaining 18.84 acres (PA 11-0026) to build three types of residential products for a total of 216 dwelling units. Conditional Use Permit (CUP) PA11-0027 provided for 36 detached single family and 55 cluster residential units. A CUP was required because the housing was less than the minimum density established for the property's land use and zoning designations. Plot Plan PA11-0025 provided for a 125-unit multi-family apartment project with a recreation building on approximately 7.20 acres. A variance was also approved to allow for parking to encroach into street side setbacks given the site's unique constraints.

While the City approved a CUP and Plot Plan, an Amendment to Specific Plan 193 was not approved. Therefore, the underlying zoning for the 18.84 acres remains High Density Residential as established in Specific Plan Amendment No. 6.

As a result of the City's action in 2012, approximately 7.20 acres of the Planning Area is currently being constructed with 125 apartments. The remaining 11.64 acres is subject to Specific Plan Amendment No. 10.

### Requirements for a Specific Plan

Based on Section 65451 of the Government Code, it is mandated that a specific plan include the following structure:

- A. A Specific Plan shall include a text and diagram which specify the distribution, location, and extent of the uses of land, including open space covered by the plan.
- B. The proposed distribution, location, extent and intensity of major components of public and private transportation, sewer, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan.
- C. Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.
- D. A program of implementation of measures including regulations, programs, public works projects, and financing measures necessary to carry out (A), (B), and (C).

### Analysis of Specific Plan Amendment

Specific Plan Amendment No. 10 includes a reversion of 2.84 acres back to Neighborhood Commercial and a reduction in density on the remaining 8.8 acres from High Density Residential to Medium High Density Residential. The proposed land use changes are consistent with the purpose and intent of the land use patterns established in the Specific Plan.

This Specific Plan Amendment would 1) adjust the Specific Plan land use map, as shown in Figure 2 (attached); 2) amend the text to specify the development standards for the multi-family land use shall be consistent with the R-15 zoning standards, except building separations of 15 feet shall be permitted for buildings two-stories or less and buildings with 8 or less units in each building; and 3) Neighborhood Commercial zoning standards shall apply to the Neighborhood Commercial land use designation. These amendments to the Specific Plan are consistent with the purpose and intent of the land use patterns and design guidelines established in Specific Plan 193 and no conflicts would arise.

In evaluating the major components of infrastructure in the Specific Plan, the Specific Plan Amendment will have a negligible effect on infrastructure as the Amendment is within the scope of the Specific Plan as originally adopted. Further, the existing backbone street and utility systems have already been constructed and have sufficient capacity to adequately serve the site. Conditions of approval will be placed on the project to make sure that the project complies with all City requirements.

An Addendum to EIR 190 has been prepared and the Specific Plan Amendment would not cause new or more severe significant impacts. Several mitigation measures and conditions of approval established in EIR 190 and Amendment No. 1 remain applicable to this Specific Plan Amendment. No new mitigation measures are required.

#### Public Participation and Review Process

A specific plan is a tool for implementation of the General Plan. Consistent with the recommended specific plan process, public input will be provided through the public hearing process. The Specific Plan Amendment will be reviewed by the Planning Commission, and approval will require City Council review and action.

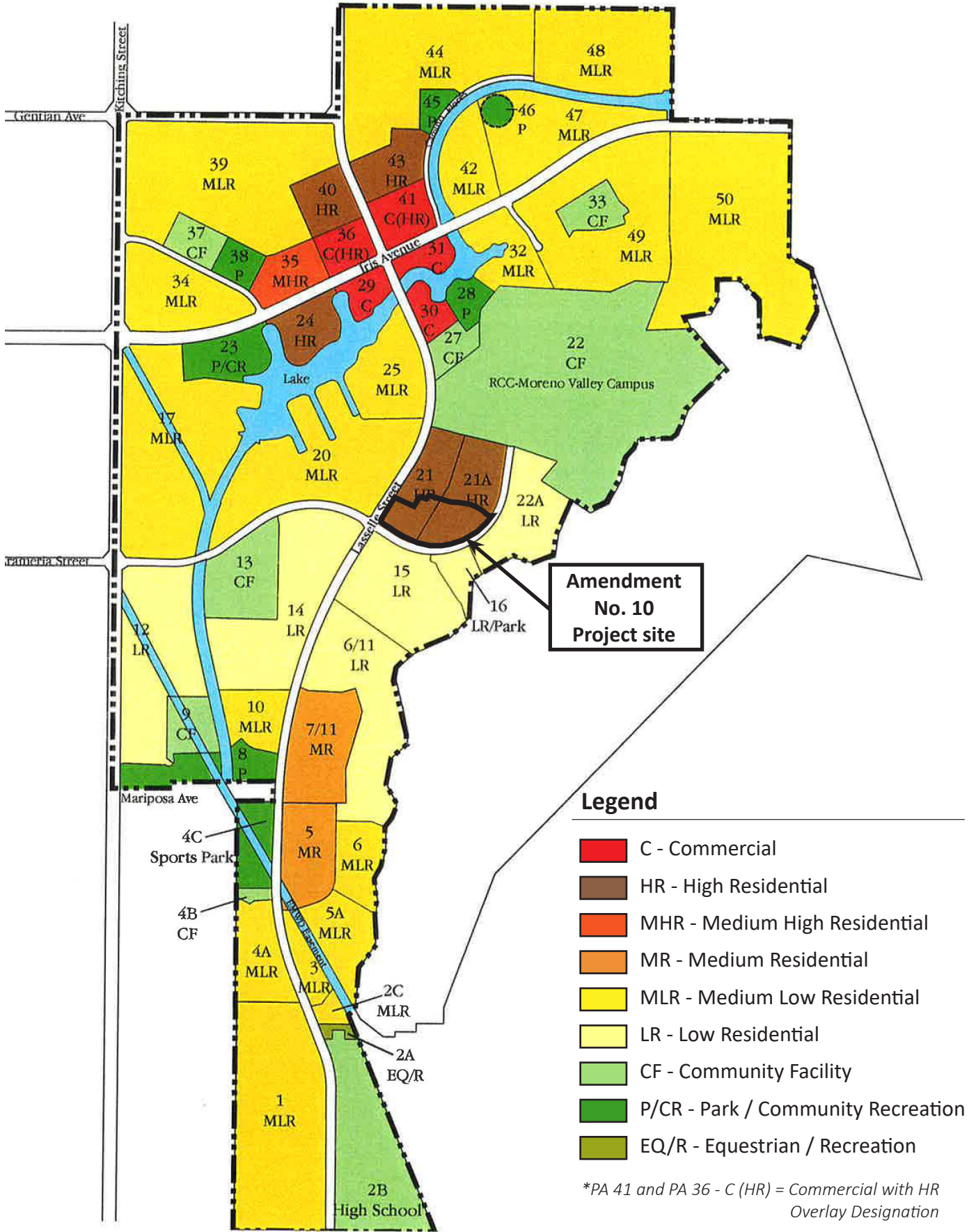
#### Specific Plan Objectives

The implementation of the Specific Plan to date has furthered one of the primary purposes of a Specific Plan which is to provide a tool for developing a community “sense of place.” The Specific Plan is over 90% developed with only a few remaining sites to complete. The key backbone infrastructure, generous streetscapes, entry monumentation, and architecture have established a “sense of place” for existing development within the Specific Plan.

For Specific Plan Amendment No. 10, any development project on the 11.64 acres will be required to comply with the Specific Plan and the related zoning standards ensuring that this project is of a quality similar to other development within Moreno Valley Ranch. In addition, the measures included within this Specific Plan Amendment, and the project conditions of approval for any development implementing this Amendment, will ensure that the design and quality of development is compatible with surrounding land uses.

As outlined above, Specific Plan Amendment 10 will be consistent with all required elements of a Specific Plan as provided for in Government Code section 65451, and related sections.





Attachment: Exhibit A to Resolution 2019-05 - Specific Plan Amendment (3376 : The proposal includes a General Plan Amendment, Specific

Graphic Prepared By:  
Carlson SLS  
Created: January 10, 2019



Data Source: Moreno Valley Ranch  
West Village: Figure II  
(February 2001)

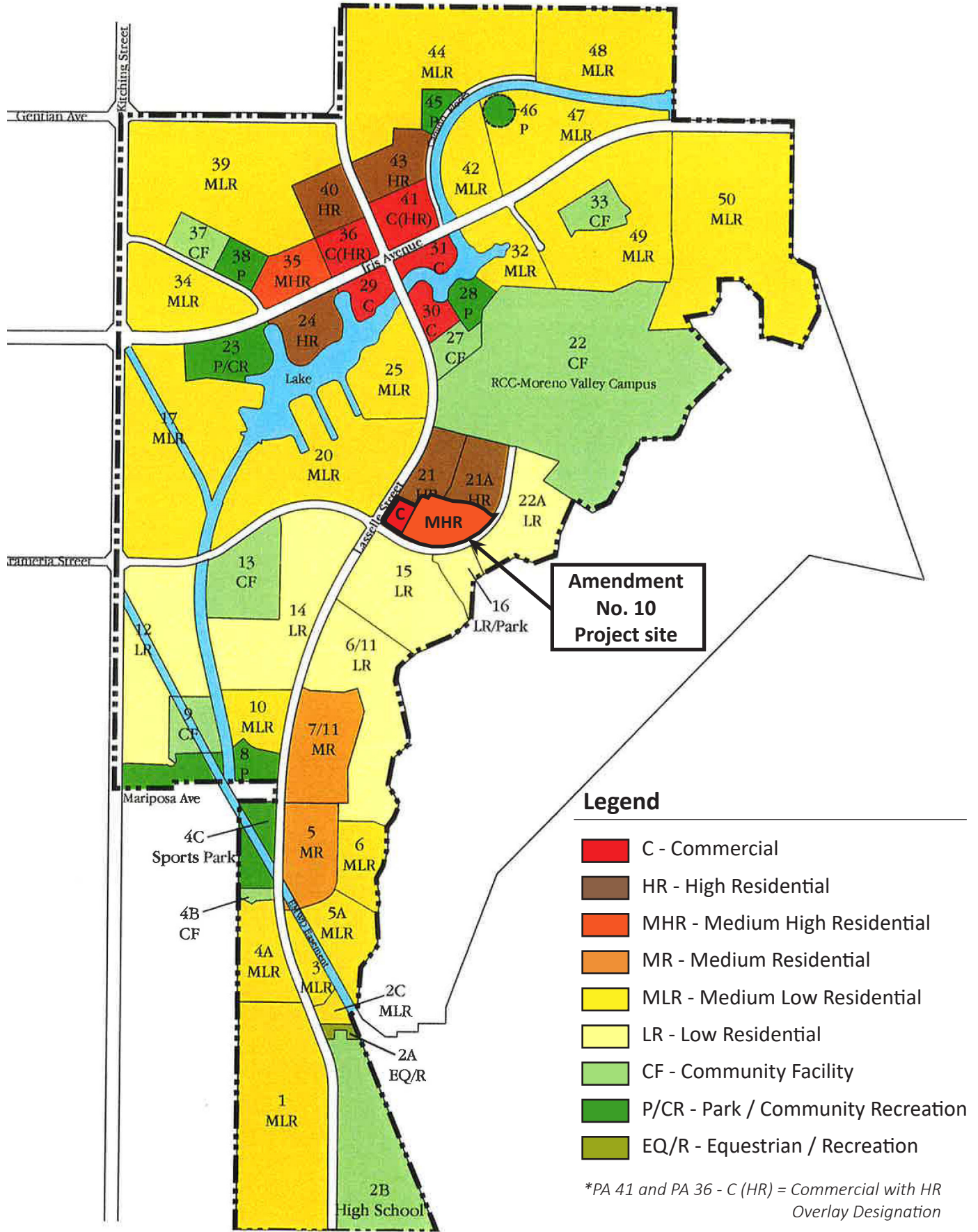
Moreno Valley Ranch Specific Plan Amendment No. 10

Specific Plan Amendment No. 6

Existing Land Use Plan

Packet Pg. 189

FIGURE 1



Attachment: Exhibit A to Resolution 2019-05 - Specific Plan Amendment (3376) : The proposal includes a General Plan Amendment, Specific

Graphic Prepared By:  
Carlson SLS  
Created: January 10, 2019



Data Source: Moreno Valley Ranch  
West Village: Figure II  
(February 2001)

Moreno Valley Ranch Specific Plan Amendment No. 10

Specific Plan Amendment No. 10

Revised [unclear]

Packet Pg. 190

FIGURE 2



PLANNING COMMISSION RESOLUTION NO. 2019-06

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY RECOMMENDING THAT THE CITY COUNCIL APPROVE ZONE CHANGE APPLICATION NO. PEN18-0121: AN AMENDMENT TO THE OFFICIAL ZONING ATLAS, CHANGING THE ZONING CLASSIFICATION FROM HIGH DENSITY RESIDENTIAL (HR) TO MEDIUM HIGH DENSITY RESIDENTIAL (MHR) FOR 8.8 ACRES AND FROM HIGH DENSITY RESIDENTIAL (HR) TO NEIGHBORHOOD COMMERCIAL (NC) FOR 2.8 ACRES LOCATED AT THE NORTHEAST CORNER OF LASSELLE STREET AND KRAMERIA AVENUE

WHEREAS, the applicant, Continental East Fund III, LLC, filed Application No. PEN18-0121, requesting an amendment to Pages 155 of the Official Zoning Atlas to the zoning classification for certain property, as described in the title of this resolution and the attached Exhibit A; and

WHEREAS, the application has been evaluated in accordance with established City of Moreno Valley procedures, and with consideration of the General Plan and other applicable regulations; and

WHEREAS, the proposed application for the Zone Change has been fully evaluated and considered with respect to the City's General Plan; and

WHEREAS, the Planning Commission considered the Initial Study prepared for the project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Initial Study, it was determined that the project impacts remain less than significant and certification of an Addendum to a previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report is recommended; and

WHEREAS, on January 24, 2019, the Planning Commission of the City of Moreno Valley held a public hearing to consider the subject applications and all of the environmental documentation prepared for the project; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred; and

NOW, THEREFORE, BE IT RESOLVED, it is hereby found and determined and resolved by the Planning Commission of the City of Moreno Valley as follows:

- A. This Planning Commission hereby specifically finds that all of the facts set forth above in this Resolution are true and correct.

B. Based upon substantial evidence presented to this Planning Commission during the above-referenced meeting, including written and oral staff reports, and the record from the public hearing, this Planning Commission hereby specifically finds as follows:

1. Conformance with General Plan Policies – The proposed Change of Zone is consistent with the General Plan, and its goals, objectives, policies and programs.

FACT: The Continental East Phase II project proposes to modify the previously approved Continental Villages project by subdividing the approximately 19 acre site into three parcels; establishing land use designations for development of Medium High Density Residential and future Neighborhood Commercial development; and replacing the previously approved detached dwelling units with a 112 unit apartment project.

The project site is located within Planning Area 21 of the Moreno Valley Ranch Specific Plan (SP 193) which was approved on August 13, 1985. The General Plan land use designations for the project site were Commercial and High Density Residential.

In 2001, the City of Moreno Valley approved Amendment No. 6 to Specific Plan 193, which amended the land use designations for Planning Area 21, eliminating the Commercial designation and assigning High Density Residential to the entire site.

The project site has a current General Plan designation of R20. The proposed Zone Change would change the land use for 8.8 acres from High Density Residential to Medium High Density Residential and from High Density Residential to Neighborhood Commercial for 2.8 acres located at the corner of Lasselle Street and Krameria Avenue.

General Plan Policy 2.2.10 states that the primary purpose of areas designated Residential 20 is to provide a range of high density multi-family housing types. Developments within Residential 20 areas shall also provide amenities, such as common open spaces and recreational facilities. The maximum density shall be 20 dwelling units per acre.

Medium High Density Residential is a zoning district with development standards that are consistent with the goals and intent of the Residential 20 land use designation.

General Plan Policy 2.4.1 states that the primary purpose of areas designated Commercial is to provide property for business purposes, including, but not limited to, retail stores, restaurants,

banks, hotels, professional offices, personal services and repair services.

With approval of the requested Zone Change, the project as designed and conditioned will achieve the objectives of the City of Moreno Valley's General Plan for multiple family and commercial land uses and will promote development of the undeveloped portion of the project site.

2. Conformance with the Zoning Regulations – The proposed Zone Change is consistent with the purposes and intent of Title 9 of the City of Moreno Valley Municipal Code.

FACT: The proposed Zone Change would change the land use for 8.8 acres from High Density Residential to Medium High Density Residential (MHR) and from High Density Residential to Neighborhood Commercial (NC) for 2.8 acres located at the corner of Lasselle Street and Krameria Avenue.

Both the MHR and NC zones defer to the City's Municipal Code for development standards. With the adoption of the Specific Plan Amendment, the project would be consistent with the purposes and intent of Title 9 of the Municipal Code.

3. Health, Safety and Welfare – The proposal will not be detrimental to the public health, safety or welfare.

FACT: The proposed Zone Change is a legislative action and will not result in any direct physical impacts; therefore, the action itself could not be detrimental to the public health, safety or welfare.

The change in land use designations for the remaining vacant portion of the project site will allow for development of a 112 unit apartment project and future commercial development that is consistent with the General Plan, zoning, and public health safety and welfare.

An Initial Study was for the project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Initial Study, it was determined that the project impacts remain less than significant and certification of an Addendum to the previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report is recommended.

There is no evidence that the proposed project will have a significant impact on public health or be materially injurious to surrounding properties of the environment as a whole.

BE IT FURTHER RESOLVED that the Planning Commission HEREBY APPROVES Resolution No. 2019-06, and RECOMMENDS that the City Council:

1. APPROVE Change of Zone Application No. PEN18-0121, based on the findings contained in this resolution and the Zoning Map and as depicted on the map attached as Exhibit A.

APPROVED this 24<sup>th</sup> day of January, 2019.

AYES:  
NOES:  
ABSTAIN:

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Jeffrey Barnes  
Chair, Planning Commission

ATTEST:

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Patty Nevins, Planning Official  
Secretary to the Planning Commission

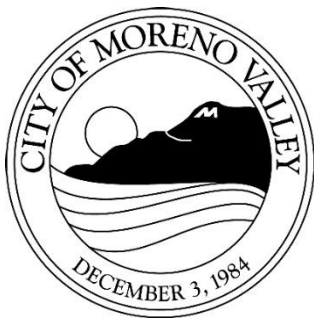
APPROVED AS TO FORM:

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City Attorney

ATTACHED: Zone Change Map

Attachment: Resolution 2019-06 - Zone Change [Revision 2] (3376 : The proposal includes a General Plan Amendment, Specific Plan



**ZONE CHANGE**  
 Application No. PEN18-0121  
 Resolution No. 2019-06



Exhibit A to Resolution 2019-06

Attachment: Exhibit A to Ordinance 2019-06 (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



PLANNING COMMISSION RESOLUTION NO. 2019-07

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY RECOMMENDING THAT THE CITY COUNCIL APPROVE PLOT PLAN APPLICATION NO. PEN18-0107 FOR DEVELOPMENT OF A 112 UNIT APARTMENT PROJECT ON 8.8 ACRES LOCATED AT THE NORTHEAST CORNER OF LASSELLE STREET AND KRAMERIA AVENUE

WHEREAS, Continental East Fund III, LLC, has filed an application for the approval of Plot Plan PEN18-0107 for development of a 112 unit apartment project as described in the title above; and

WHEREAS, the application has been evaluated in accordance with established City of Moreno Valley (City) procedures, and with consideration of the General Plan, Moreno Valley Specific Plan and other applicable regulations; and

WHEREAS, the City has reviewed this project and determined that it is consistent with the site's General Plan Residential 20 designation, all applicable General Plan policies and the Medium High Density Residential zoning district of the Moreno Valley Ranch Specific Plan (SP 193) subject to approval of a Specific Plan Amendment, and Zone Change; and

WHEREAS, the Planning Commission considered the Initial Study prepared for the project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Initial Study, it was determined that the project impacts remain less than significant and certification of an Addendum to a previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report is recommended; and

WHEREAS, upon completion of a thorough development review process, the project was appropriately agendized and noticed for a public hearing before the Planning Commission of the City of Moreno Valley (Planning Commission); and

WHEREAS, the public hearing notice for this project was published in the local newspaper on January 11, 2019. Public notice was sent to all property owners of record within 300 feet of the project site on January 10, 2019. The public hearing notice for this project was also posted on the project site on January 11, 2019;

WHEREAS, on January 24, 2019, the Planning Commission held a public hearing to consider the application; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred; and

WHEREAS, pursuant to Government Code Section 66020(d)(1), NOTICE IS HEREBY GIVEN that this project is subject to certain fees, dedications, reservations and other exactions as provided herein.

NOW, THEREFORE, BE IT RESOLVED, it is hereby found, determined and resolved by the Planning Commission as follows:

A. This Planning Commission hereby specifically finds that all of the facts set forth above in this Resolution are true and correct.

B. Based upon substantial evidence presented to this Planning Commission during the above-referenced meeting on January 24, 2018, including written and oral staff reports, public testimony and the record from the public hearing, this Planning Commission hereby specifically finds as follows:

1. Conformance with General Plan Policies – The proposed use is consistent with the General Plan, and its goals, objectives, policies and programs.

FACT: The General Plan Land Use designation for the project site is Residential 20. General Plan Policy 2.2.10 states that the primary purpose of areas designated Residential 20 is to provide a range of high density multi-family housing types. Developments within Residential 20 areas shall also provide amenities, such as common open spaces and recreational facilities. The maximum density shall be 20 dwelling units per acre.

The project as designed and conditioned will achieve the objectives of the City of Moreno Valley's General Plan. The proposed project is consistent with the General Plan and with its goals, objectives, policies, and programs established within the Plan.

2. Conformance with Zoning Regulations – The proposed use complies with all applicable zoning and other regulations.

FACT: The project proposes to develop the 8.8 acre site consistent with the development standards of the Medium High Density Residential (MHR) zoning district of the Moreno Valley Ranch Specific Plan.

The MHR zone defers to the City's Municipal Code for some development standards. As designed and conditioned and with the adoption of a Specific Plan Amendment and Zone Change, the project would be consistent with the purposes and intent of Title 9 of the Municipal Code.

3. Health, Safety and Welfare – The proposed use will not be detrimental to the public health, safety or welfare or materially injurious to properties or improvements in the vicinity.

FACT: The proposed Plot Plan as designed and conditioned will provide acceptable levels of protection from natural and man-made hazards to life, health, and property consistent with General Goal 9.6.1. The project site is located less than one half mile from Fire Station No. 91 located to the north on Lasselle Street near Iris Avenue. Therefore, adequate emergency services can be provided to the site consistent with General Plan Goal 9.6.2.

The proposed project as designed and conditioned will result in a development that will minimize the potential for loss of life and protect residents, workers, and visitors to the City from physical injury and property damage due to seismic ground shaking and flooding as provided for in General Plan Objective 6.1 and General Plan Objective 6.2.

The project site is bounded by Lasselle Street along its western property line and Krameria along its eastern and southern property line. Beyond the contiguous streets, land uses surrounding the project site are primarily single-family residences in the Low and Medium-low Density Residential zones. Moreno Valley Community College is located directly north of Cahuilla Drive. Lasselle Elementary School is located northeast of the Project site and contiguous to the project site on two sides.

The project as designed is consistent with the Medium High Density Residential zone of the Moreno Valley Ranch Specific Plan. Planning staff worked with Carlson Strategic Land Solutions in the preparation of an Initial Study and Addendum in accordance with the provisions of the California Environmental Quality Act (CEQA). Based on the Initial Study, it was determined that the project impacts remain less than significant and certification of an Addendum to the previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report is recommended.

4. Location, Design and Operation – The location, design and operation of the proposed project will be compatible with existing and planned land uses in the vicinity.

FACT: The project is located at the northeast corner of Lasselle Street and Krameria Avenue within Planning Area 21 of the Moreno Valley Ranch Specific Plan. Permitted uses for the 8.8 acre project site are the uses listed under the Medium High Density Residential zone of the Moreno Valley Ranch Specific Plan.

The project site is bounded by Lasselle Street along its western property line and Krameria along its eastern and southern property line. Beyond the contiguous streets, land uses surrounding the project site are primarily single-family residences in the Low and Medium-low Density Residential zones. Moreno Valley Community College is located directly north of Cahuilla Drive. Lasselle Elementary School is located northeast of the Project site and contiguous to the project site on two sides.

The Medium High Density Residential (MHR) zone of the Moreno Valley Ranch Specific Plan states that land designated MHR is intended for multiple-family residential development that ranges from 13 to 17 dwelling units per gross acre. Housing types include townhouses, condominiums, and apartments.

The project as designed and conditioned is compatible with existing and proposed land uses in the vicinity.

The MHR zone defers to the City's Municipal Code for some development standards. As designed and conditioned and with the adoption of a Specific Plan Amendment and Zone Change, the project would be consistent with the purposes and intent of Title 9 of the Municipal Code.

## FEES, DEDICATIONS, RESERVATIONS, AND OTHER EXACTIONS

### 1. FEES

Impact, mitigation and other fees are due and payable under currently applicable ordinances and resolutions. These fees may include but are not limited to: Development Impact Fee, Transportation Uniform Mitigation Fee (TUMF), Multi-species Habitat Conservation Plan (MSHCP) Mitigation Fee, Stephens Kangaroo Habitat Conservation fee, Underground Utilities in lieu Fee, Area Drainage Plan fee, Bridge and Thoroughfare Mitigation fee (Future) and Traffic Signal Mitigation fee. The final amount of fees payable is dependent upon information provided by the applicant and will be determined at the time the fees become due and payable.

Unless otherwise provided for by this Resolution, all impact fees shall be calculated and collected at the time and in the manner provided in Chapter 3.32 of the City of Moreno Valley Municipal Code or as so provided in the applicable ordinances and resolutions. The City expressly reserves the right to amend the fees and the fee calculations consistent with applicable law.

## 2. DEDICATIONS, RESERVATIONS, AND OTHER EXACTIONS

The adopted Conditions of Approval for PEN18-0107, incorporated herein by reference, may include dedications, reservations, and exactions pursuant to Government Code Section 66020 (d) (1).

## 3. CITY RIGHT TO MODIFY/ADJUST; PROTEST LIMITATIONS

The City expressly reserves the right to establish, modify or adjust any fee, dedication, reservation or other exaction to the extent permitted and as authorized by law.

Pursuant to Government Code Section 66020(d)(1), NOTICE IS FURTHER GIVEN that the 90 day period to protest the imposition of any impact fee, dedication, reservation, or other exaction described in this Resolution begins on the effective date of this Resolution and any such protest must be in a manner that complies with Section 66020(a) and failure to timely follow this procedure will bar any subsequent legal action to attack, review, set aside, void or annul imposition.

The right to protest the fees, dedications, reservations, or other exactions does not apply to planning, zoning, grading, or other similar application processing fees or service fees in connection with this project and it does not apply to any fees, dedication, reservations, or other exactions of which a notice has been given similar to this, nor does it revive challenges to any fees for which the applicable statute of limitations has previously expired.

BE IT FURTHER RESOLVED that the Planning Commission HEREBY APPROVES Resolution No. 2019-07, and RECOMMENDS that the City Council:

1. APPROVE Plot Plan Application No. PEN18-0107, based on the findings contained in this resolution and subject to the conditions of approval included as Exhibit A.

APPROVED this 24<sup>th</sup> day of January, 2019.

---

Jeffrey Barnes  
Chair, Planning Commission

ATTEST:

---

Patty Nevins, Planning Official  
Secretary to the Planning Commission

APPROVED AS TO FORM:

---

City Attorney

Exhibit A

**CONDITIONS OF APPROVAL**

Plot Plan (PEN18-0107)

Page 1

CITY OF MORENO VALLEY  
 CONDITIONS OF APPROVAL  
 Plot Plan (PEN18-0107)

EFFECTIVE DATE:

EXPIRATION DATE:

**COMMUNITY DEVELOPMENT DEPARTMENT****Planning Division**

1. Plot Plan PEN18-0107 is approved for development of a 112 unit apartment project (96 units in six two-story buildings, and 16 units in eight two-story duplex-style buildings) to include common passive recreation areas, basins for water quality treatment, and a 3,836 square foot recreation building, which includes a fitness room, offices, a community room and a pool. A total of 235 parking spaces shall be provided including 32 carports with solar panels, 203 open parking spaces for residents and guests, and six accessible parking spaces.
2. Any expansion to this use or exterior alterations will require the submittal of a separate application(s) and shall be reviewed and approved under separate permit(s). (MC 9.02.080)
3. The developer, or the developer's successor-in-interest, shall be responsible for maintaining any undeveloped portion of the site in a manner that provides for the control of weeds, erosion and dust. (MC 9.02.030)
4. This approval shall expire three years after the approval date of this project unless used or extended as provided for by the City of Moreno Valley Municipal Code; otherwise it shall become null and void and of no effect whatsoever. Use means the beginning of substantial construction contemplated by this approval within the three-year period, which is thereafter pursued to completion, or the beginning of substantial utilization contemplated by this approval. (MC 9.02.230)
5. All landscaped areas shall be maintained in a healthy and thriving condition, free from weeds, trash and debris. (MC 9.02.030)
6. This project is located within the Moreno Valley Ranch Specific Plan (SP 193). The provisions of the specific plan, the design manual, their subsequent amendments, and the Conditions of Approval shall prevail unless modified herein. (MC 9.13)
7. The site shall be developed in accordance with the approved plans on file in the Community Development Department - Planning Division, the Municipal Code regulations, General Plan, and the conditions contained herein. Prior to any use of



**CONDITIONS OF APPROVAL**

Plot Plan (PEN18-0107)

Page 2

the project site or business activity being commenced thereon, all Conditions of Approval shall be completed to the satisfaction of the Planning Official. (MC 9.14.020)

8. Any signs indicated on the submitted plans are not included with this approval. Any signs, whether permanent (e.g. wall, monument) or temporary (e.g. banner, flag), require separate application and approval by the Planning Division. No signs are permitted in the public right of way. (MC 9.12)
9. All site plans, grading plans, landscape and irrigation plans, fence/wall plans, lighting plans and street improvement plans shall be coordinated for consistency with this approval.
10. A change or modification to the land use or the approved site plans may require a separate approval. Prior to any change or modification, the property owner shall contact the City of Moreno Valley Community Development Department to determine if a separate approval is required.

Special Conditions

11. The following Mitigation Measures apply to this project:

Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

- a. Project grading and development scheduling;
- b. The Project archeologist and the Consulting Tribes(s) as defined in CR-1 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the

**CONDITIONS OF APPROVAL**

Plot Plan (PEN18-0107)

Page 3

monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Pr

12. Prior to the issuance of a grading permit, the City of Moreno Valley shall secure agreements with the Soboba Band of Luiseño Indians and Pechanga Band of Luiseño Indians for tribal monitoring. The City is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2. (only applicable if tribes require monitoring)
  
13. In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:
  - a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:
    - i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.
    - ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure CR-1. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in CR-1. The location for the future reburial area shall be identified on a confidential exhibit on file with the City, and concurred to by the Consulting Native American Tribal Governments prior to certification of the environmental document.

**CONDITIONS OF APPROVAL**

Plot Plan (PEN18-0107)

Page 4

14. The City shall verify that the following note is included on the Grading Plan:

"If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."

15. If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration, and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in CR-1 before any further work commences in the affected area.
16. If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the "most likely descendant". The "most likely descendant" shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).
17. This project shall comply with the project design features listed in the attached Exhibit A to the conditions of approval.

Prior to Grading Permit

18. Prior to issuance of any grading permit, all Conditions of Approval and Mitigation Measures shall be printed on the grading plans.
19. Prior to the issuance of grading permits, decorative (e.g. colored/scored concrete or as approved by the Planning Official) pedestrian pathways across circulation aisles/paths shall be provided throughout the development to connect dwellings with open spaces and/or recreational uses and/or the public right-of-way. The pathways shall be shown on the precise grading plan. (GP Objective 46.8, DG)

**CONDITIONS OF APPROVAL**

Plot Plan (PEN18-0107)

Page 5

20. Prior to issuance of any grading permits, mitigation measures contained in the Mitigation Monitoring Program approved with this project shall be implemented as provided therein. A mitigation monitoring fee, as provided by City ordinance, shall be paid by the applicant within 30 days of project approval. No City permit or approval shall be issued until such fee is paid. (CEQA)
21. Prior to issuance of grading permits, the developer shall pay the applicable Stephens' Kangaroo Rat (SKR) Habitat Conservation Plan mitigation fee. (Ord)
22. Within thirty (30) days prior to any grading or other land disturbance, a pre-construction survey for Burrowing Owls shall be conducted pursuant to the established guidelines of Multiple Species Habitat Conservation Plan. The pre-construction survey shall be submitted to the Planning Division prior to any disturbance of the site and/or grading permit issuance.
23. Prior to approval of any grading permits, plans for any security gate system shall be submitted to and approved by to the Planning Division.
24. Prior to the issuance of grading permits, the site plan and grading plans shall show decorative hardscape (e.g. colored concrete, stamped concrete, pavers or as approved by the Planning Official) consistent and compatible with the design, color and materials of the proposed development for all driveway ingress/egress locations of the project. [apply to commercial and multi-family project, and major entry driveways for industrial]
25. Prior to issuance of grading permits, the developer shall submit wall/fence plans to the Planning Division for review and approval as follows:
  - A. If the developer chooses to secure the project, then a maximum 6 foot high tubular steel fence with pilasters and a cap shall be required. The design and materials shall be consistent with the design guidelines of the Moreno Valley Ranch Specific Plan.
  - B. 3-foot high decorative wall, solid hedge or berm shall be placed in any setback areas between a public right of way and a parking lot for screening.
  - C. Any proposed retaining walls shall also be decorative in nature, while the combination of retaining and other walls on top shall not exceed the height requirement.
26. Prior to the issuance of grading permits, a temporary project identification sign shall be erected on the site in a secure and visible manner. The sign shall be conspicuously posted at the site and remain in place until occupancy of the project. The sign shall include the following:

**CONDITIONS OF APPROVAL**

Plot Plan (PEN18-0107)

Page 6

- a. The name (if applicable) and address of the development.
  - b. The developer's name, address, and a 24-hour emergency telephone number.
27. Prior to issuance of grading permits, the location of the trash enclosure shall be included on the plans.
28. If potential historic, archaeological, Native American cultural resources or paleontological resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person (meeting the Secretary of the Interior's standards (36CFR61)) shall be consulted by the applicant to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, prehistoric, or paleontological resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration, and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all affected Native American Tribes before any further work commences in the affected area.

If human remains are discovered during grading and other construction excavation, no further disturbance shall occur until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 5-days of the published finding to be given a reasonable opportunity to identify the "most likely descendant." The "most likely descendant" shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

Prior to Building Permit

29. Prior to issuance of any building permit, all Conditions of Approval and Mitigation Measures shall be printed on the building plans.
30. Prior to the issuance of building permits, proposed covered trash enclosures shall be included in the Planning review of the Fence and Wall plan or separate Planning submittal. The trash enclosure(s), including the roof materials, shall be compatible with the architecture, color and materials of the building(s) design. Trash enclosure areas shall include landscaping on three sides. Approved design plans shall be included in a Building submittal (Fence and Wall or building design plans). (GP Objective 43.6, DG)
31. Prior to the issuance of building permits, landscape and irrigation plans for areas

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maintained by the Homeowner's Association shall be submitted to the Planning Division. All landscape plans shall be approved by the Planning Division prior to the release of any building permits for the site. The plans shall be prepared in accordance with the City's Landscape Development Guidelines and the Moreno Valley Ranch design guidelines. Landscaping is required for the sides and or slopes of all water quality basin and drainage areas, while a hydroseed mix with irrigation is acceptable for the bottom of the basin areas. All detention basins shall include trees, shrubs and groundcover up to the concreted portion of the basin. A solid decorative wall with pilasters, tubular steel fence with pilasters or other fence or wall approved by the Planning Official is required to secure all water quality and detention basins.

32. Prior to issuance of any building permits, final landscaping and irrigation plans shall be submitted for review and approved by the Planning Division. After the third plan check review for landscape plans, an additional plan check fee shall apply. The plans shall be prepared in accordance with the City's Landscape Requirements and shall include:
- A. A three (3) foot high decorative wall, solid hedge or berm shall be placed in any setback areas between a public right of way and a parking lot for screening.
  - B. Finger and end planters with required step outs and curbing shall be provided every 12 parking stalls as well as at the terminus of each aisle.
  - C. Drought tolerant landscape shall be used. Sod shall be limited to gathering areas or no sod shall be installed.
  - D. Street trees shall be provided every 40 feet on center in the right of way.
  - E. On-site trees shall be planted at an equivalent of one (1) tree per thirty (30) linear feet of the perimeter of a parking lot and per thirty linear feet of a building dimension for the portions of the building visible from a parking lot or right of way. Trees may be massed for pleasing aesthetic effects.
  - F. Enhanced landscaping shall be provided at all driveway entries and street corner locations. The review of all utility boxes, transformers etc. shall be coordinated to provide adequate screening from public view.
  - G. Landscaping on three sides of any trash enclosure.
  - H. All site perimeter and parking lot landscape and irrigation shall be installed prior to the release of certificate of any occupancy permits for the site or phase in question.



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33. Prior to issuance of building permits, the Planning Division shall review and approve the location and method of enclosure or screening of transformer cabinets, commercial gas meters and back flow preventers as shown on the final working drawings. Location and screening shall comply with the following criteria: transformer cabinets and commercial gas meters shall not be located within required setbacks and shall be screened from public view either by architectural treatment or landscaping; multiple electrical meters shall be fully enclosed and incorporated into the overall architectural design of the building(s); back-flow preventers shall be screened by landscaping. (GP Objective 43.30)
34. Prior to issuance of a building permit, the developer/property owner or developer's successor-in-interest shall pay all applicable impact fees due at permit issuance, including but not limited to Multi-species Habitat Conservation Plan (MSHCP) mitigation fees. (Ord)
35. Prior to building final, the developer/owner or developer's/owner's successor-in-interest shall pay all applicable impact fees, including but not limited to Transportation Uniform Mitigation fees (TUMF), and the City's adopted Development Impact Fees. (Ord)
36. Prior to issuance of building permits, for projects that will be phased, a phasing plan shall be submitted to and approved by the Planning Division if occupancy is proposed to be phased.
37. Prior to or at building plan check submittal, the elevation plans shall include decorative lighting sconces on all sides of the buildings of the complex facing a parking lot, courtyard or plaza, or public right of way or open space to provide up-lighting and shadowing on the structures. Include drawings of the sconce details for each building within the elevation plans, approved by the Planning Division prior to building permit issuance.
38. Prior to or at building plan check submittal, two copies of a detailed, on-site, computer generated, point-by-point comparison lighting plan, including exterior building, parking lot, and landscaping lighting, shall be submitted to the Planning Division for review and approval prior to the issuance of a building permit. The lighting plan shall be generated on the plot plan and shall be integrated with the final landscape plan. The plan shall indicate the manufacturer's specifications for light fixtures used, shall include style, illumination, location, height and method of shielding per the City's Municipal Code requirements. After the third plan check review for lighting plans, an additional plan check fee will apply. (MC 9.08.100, 9.16.280)
39. Prior to issuance of building permits, screening details shall be addressed on the building plans for roof top equipment submitted for Planning Division review and approval through the building plan check process. All equipment shall be



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completely screened so as not to be visible from public view, and the screening shall be an integral part of the building.

40. Prior to the issuance of building permits, the developer shall provide documentation that contact was made to the U.S. Postal Service to determine the appropriate type and location of mailboxes.

Prior to Building Final or Occupancy

41. Prior to building final, all required landscaping and irrigation shall be installed per plan, certified by the Landscape Architect and inspected by the Planning Division. (MC 9.03.040, MC 9.17).
42. Prior to building final, Planning approved/stamped landscape plans shall be provided to the Community Development Department – Planning Division on a CD disk.
43. Prior to building final, all required and proposed fences and walls shall be constructed according to the approved plans on file in the Planning Division. (MC 9.080.070).
44. Prior to building final or Certificate of Occupancy, the owner or owner's representative shall provide documentation to the Planning Division that they have contacted the Moreno Valley Police Department to establish and maintain a relationship with the City of Moreno Valley Police Department and cooperate with the Problem Oriented Policing (POP) program, or its successors.

**COMMUNITY DEVELOPMENT DEPARTMENT**Building Division

45. The proposed residential project (3 or more dwelling units) shall comply with the latest Federal Law, Americans with Disabilities Act, and State Law, California Code of Regulations, Title 24, Chapter 11A for accessibility standards for the disabled including access to the site, exits, kitchens, bathrooms, common spaces, pools/spas, etc.
46. Prior to submittal, all new development, including residential second units, are required to obtain a valid property address prior to permit application. Addresses can be obtained by contacting the Building Safety Division at 951.413.3350.
47. Contact the Building Safety Division for permit application submittal requirements.
48. All new buildings 10,000 square feet and over, shall include building

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- commissioning in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (OPR). All requirements in The 2016 California Green Building Standards Code, sections 5.410.2 - 5.410.2.6 must be met.
49. Any construction within the city shall only be completed between the hour of seven a.m. to seven p.m. Monday through Friday, excluding holidays and from eight a.m. to four p.m. on Saturday, unless written approval is obtained from the city building official or city engineer (Municipal Code Section 8.14.040.E).
  50. Building plans submitted shall be signed and sealed by a California licensed design professional as required by the State Business and Professions Code.
  51. The proposed development is subject to the payment of applicable processing fees as required by the City's current Fee Ordinance at the time a building permit application is submitted or prior to the issuance of permits as determined by the City.
  52. The proposed project will be subject to approval by the Eastern Municipal Water District and all applicable fees and charges shall be paid prior to permit issuance. Contact the water district at 951.928.3777 for specific details.
  53. All new structures shall be designed in conformance to the latest design standards adopted by the State of California in the California Building Code, (CBC) Part 2, Title 24, California Code of Regulations including requirements for allowable area, occupancy separations, fire suppression systems, accessibility, etc. The current code edition is the 2016 CBC.
  54. The proposed project's occupancy shall be classified by the Building Official and must comply with exiting, occupancy separation(s) and minimum plumbing fixture requirements. Minimum plumbing fixtures shall be provided per the 2016 California Plumbing Code, Table 422.1. The occupant load and occupancy classification shall be determined in accordance with the California Building Code.
  55. The proposed residential project shall comply with The 2016 California Green Building Standards Code, Section 4.106.4, mandatory requirements for Electric Vehicle Charging Station (EVCS).
  56. Prior to permit issuance, every applicant shall submit a properly completed Waste Management Plan (WMP), as a portion of the building or demolition permit process. (MC 8.80.030)

**PUBLIC WORKS DEPARTMENT**

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Land Development

57. Aggregate slurry, as defined in Section 203-5 of Standard Specifications for Public Works Construction, may be required just prior to the end of the one-year warranty period of the public streets at the discretion of the City Engineer. If slurry is required, a slurry mix design shall be submitted for review and approved by the City Engineer. The latex additive shall be Ultra Pave 70 (for anionic) or Ultra Pave 65 K (for cationic) or an approved equal per the geotechnical report. The latex shall be added at the emulsion plant after weighing the asphalt and before the addition of mixing water. The latex shall be added at a rate of two to two-and-one-half (2 to 2½) parts to one-hundred (100) parts of emulsion by volume. Any existing striping shall be removed prior to slurry application and replaced per City standards.
58. The developer shall comply with all applicable City ordinances and resolutions including the City's Municipal Code (MC) and if subdividing land, the Government Code (GC) of the State of California, specifically Sections 66410 through 66499.58, said sections also referred to as the Subdivision Map Act (SMA). [MC 9.14.010]
59. The final approved conditions of approval (COAs) and any applicable Mitigation Measures issued by the Planning Division shall be photographically or electronically placed on mylar sheets and included in the Grading and Street Improvement plans.
60. The developer shall monitor, supervise and control all construction related activities, so as to prevent these activities from causing a public nuisance, including but not limited to, insuring strict adherence to the following:
- (a) Removal of dirt, debris, or other construction material deposited on any public street no later than the end of each working day.
  - (b) Observance of working hours as stipulated on permits issued by the Land Development Division.
  - (c) The construction site shall accommodate the parking of all motor vehicles used by persons working at or providing deliveries to the site.
  - (d) All dust control measures per South Coast Air Quality Management District (SCAQMD) requirements during the grading operations.
- Violation of any condition, restriction or prohibition set forth in these conditions shall subject the owner, applicant, developer or contractor(s) to remedy as noted in City Municipal Code 8.14.090. In addition, the City Engineer or Building Official may suspend all construction related activities for violation of any condition, restriction or prohibition set forth in these conditions until such time as it has been determined that all operations and activities are in conformance with these conditions.
61. Drainage facilities (e.g., catch basins, water quality basins, etc.) with sump conditions shall be designed to convey the tributary 100-year storm flows. Secondary emergency escape shall also be provided.

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62. In the event right-of-way or offsite easements are required to construct offsite improvements necessary for the orderly development of the surrounding area to meet the public health and safety needs, the developer shall make a good faith effort to acquire the needed right-of-way in accordance with the Land Development Division's administrative policy. If unsuccessful, the Developer shall enter into an agreement with the City to acquire the necessary right-of-way or offsite easements and complete the improvements at such time the City acquires the right-of-way or offsite easements which will permit the improvements to be made. The developer shall be responsible for all costs associated with the right-of-way or easement acquisition. [GC 66462.5]
63. If improvements associated with this project are not initiated within two (2) years of the date of approval of the Public Improvement Agreement (PIA), the City Engineer may require that the engineer's estimate for improvements associated with the project be modified to reflect current City construction costs in effect at the time of request for an extension of time for the PIA or issuance of a permit. [MC 9.14.210(B)(C)]
64. The developer shall protect downstream properties from damage caused by alteration of drainage patterns (i.e. concentration or diversion of flow, etc). Protection shall be provided by constructing adequate drainage facilities, including, but not limited to, modifying existing facilities or by securing a drainage easement. [MC 9.14.110]
65. Public drainage easements, when required, shall be a minimum of 30 feet wide and shall be shown on the map and plan, and noted as follows: "Drainage Easement – no structures, obstructions, or encroachments by land fills are allowed." In addition, the grade within the easement area shall not exceed a 3:1 (H:V) slope, unless approved by the City Engineer.
66. The maintenance responsibility of the proposed storm drain line shall be clearly identified. Storm drain lines within private property will be privately maintained and those within public streets will be publicly maintained.
67. The proposed private storm drain system shall connect to the existing public storm drain system. A storm drain manhole shall be placed at the right-of-way line to mark the beginning of the publicly maintained portion of this storm drain.
68. All lots shall drain toward the street unless otherwise approved by the City Engineer. Lot drainage to the street shall be by side yard swales, and must be directed to a drainage devices located outside the right-of-way in accordance with City Standard MVS1-154-0.
69. This project shall submit civil engineering design plans, reports and/or documents (prepared by a registered/licensed civil engineer) for review and approval by the

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City Engineer per the current submittal requirements, prior to the indicated threshold or as required by the City Engineer. The submittal consists of, but is not limited to, the following:

- a. Parcel Map recordation prior to building permit issuance;
- b. Rough grading w/ erosion control plan prior to grading permit issuance;
- c. Precise grading w/ erosion control plan prior to building permit issuance;
- d. Public improvement plan (e.g., street/storm drain w/ striping, RCFC storm drain, sewer/water, etc.) prior to map approval or encroachment permit issuance;
- e. Final drainage study prior to grading plan approval;
- f. Final WQMP prior to grading plan approval;
- g. Legal documents (e.g., easement(s), dedication(s), lot line adjustment, vacation, etc.) prior to building permit issuance;
- h. As-Built revision for all plans prior to Occupancy release;

Prior to Grading Plan Approval

70. Resolution of all drainage issues shall be as approved by the City Engineer.
71. A final detailed drainage study (prepared by a registered/licensed civil engineer) shall be submitted for review and approved by the City Engineer. The study shall include, but not be limited to: existing and proposed hydrologic conditions as well as hydraulic calculations for all drainage control devices and storm drain lines. The study shall analyze 1, 3, 6 and 24-hour duration events for the 2, 5, 10 and 100-year storm events [MC 9.14.110(A.1)]. A digital (pdf) copy of the approved drainage study shall be submitted to the Land Development Division.
72. Emergency overflow areas shall be shown at all applicable drainage improvement locations in the event that the drainage improvement fails or exceeds full capacity. This may include, but not be limited to, sump catch basin, bio-retention basins, etc.
73. A final project-specific Water Quality Management Plan (WQMP) shall be submitted for review and approved by the City Engineer, which:
  - a. Addresses Site Design Best Management Practices (BMPs) such as minimizing impervious areas, maximizing permeability, minimizes directly connected impervious areas to the City's street and storm drain systems, and conserves natural areas;
  - b. Incorporates Source Control BMPs and provides a detailed description of their implementation;
  - c. Describes the long-term operation and maintenance requirements for BMPs requiring maintenance; and
  - d. Describes the mechanism for funding the long-term operation and maintenance of the BMPs.

A copy of the final WQMP template can be obtained on the City's Website or by contacting the Land Development Division. A digital (pdf) copy of the approved

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- final project-specific Water Quality Management Plan (WQMP) shall be submitted to the Land Development Division.
74. The developer shall ensure compliance with the City Grading ordinance, these Conditions of Approval and the following criteria:
    - a. The project street and lot grading shall be designed in a manner that perpetuates the existing natural drainage patterns with respect to tributary drainage area and outlet points. Unless otherwise approved by the City Engineer, lot lines shall be located at the top of slopes.
    - b. Any grading that creates cut or fill slopes adjacent to the street shall provide erosion control, sight distance control, and slope easements as approved by the City Engineer.
    - c. All improvement plans are substantially complete and appropriate clearance letters are provided to the City.
    - d. A soils/geotechnical report (addressing the soil's stability and geological conditions of the site) shall be submitted to the Land Development Division for review. A digital (pdf) copy of the soils/geotechnical report shall be submitted to the Land Development Division.
  75. Grading plans (prepared by a registered/licensed civil engineer) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
  76. The developer shall select Low Impact Development (LID) Best Management Practices (BMPs) designed per the latest version of the Water Quality Management Plan (WQMP) - a guidance document for the Santa Ana region of Riverside County.
  77. The developer shall submit recorded slope easements from adjacent property owners in all areas where grading resulting in slopes is proposed to take place outside of the project boundaries. For all other offsite grading, written permission from adjacent property owners shall be submitted.
  78. The developer shall pay all remaining plan check fees.
  79. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared in conformance with the State's current Construction Activities Storm Water General Permit. A copy of the current SWPPP shall be kept at the project site and be available for review upon request.
  80. Any proposed trash enclosure(s) shall be dual bin (1 for trash and 1 for recyclables) [MC 9.03.040 (G)]. The enclosure shall have a solid roof and appropriate drainage collection for water quality purposes. The architecture shall be approved by the Planning Division and any structural approvals shall be made by the Building & Safety Division.



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81. For projects that will result in discharges of storm water associated with construction with a soil disturbance of one or more acres of land, the developer shall submit a Notice of Intent (NOI) and obtain a Waste Discharger's Identification number (WDID#) from the State Water Quality Control Board (SWQCB) which shall be noted on the grading plans.
82. Landscape & Irrigation plans (prepared by a registered/licensed civil engineer) for water quality BMPs shall be submitted for review and approved by the City Engineer per the current submittal requirements, if applicable.

Prior to Grading Permit

83. A receipt showing payment of the Area Drainage Plan (ADP) fee to Riverside County Flood Control and Water Conservation District shall be submitted. [MC 9.14.100(O)]
84. If the developer chooses to construct the project in phases, a Construction Phasing Plan for the construction of on-site public or private improvements shall be submitted for review and approved by the City Engineer.
85. The developer shall pay current Development Impact Fee (DIF) fees adopted by the City Council. [Ord. 695 § 1.1 (part), 2005] [MC 3.38.030, 040, 050]
86. A digital (pdf) copy of all approved grading plans shall be submitted to the Land Development Division.
87. Security, in the form of a cash deposit (preferable), or letter of credit shall be submitted as a guarantee of the implementation and maintenance of erosion control measures. At least twenty-five (25) percent of the required security shall be in the form of a cash deposit with the City. [MC 8.21.160(H)]
88. Security, in the form of a cash deposit (preferable), or letter of credit shall be submitted as a guarantee of the completion of the grading operations for the project. [MC 8.21.070]
89. The developer shall pay all applicable inspection fees.
90. The developer shall pay current Transportation Uniform Mitigation Fee (TUMF), fees adopted by the City Council. [Ord. 835 § 2.1, 2012] [MC 3.44.060]

Prior to Map Approval

91. All proposed street names shall be submitted for review and approved by the City Engineer, if applicable. [MC 9.14.090(E.2.k)]



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92. A copy of the Covenants, Conditions and Restrictions (CC&R's) shall be submitted for review and approved by the City Engineer. The CC&R's shall include, but not be limited to, access easements, reciprocal access, private and/or public utility easements as may be relevant to the project. In addition, for residential development, bylaws and articles of incorporation shall also be included as part of the maintenance agreement for any water quality BMPs.
93. The developer shall enter into a Cooperative Agreement with the City and Riverside County Flood Control and Water Conservation District establishing the terms and conditions covering the inspection, operation and maintenance of Master Drainage Plan facilities that may be required to be constructed as part of the project.
94. After recordation, a digital (pdf) copy of the recorded map shall be submitted to the Land Development Division.
95. Resolution of all drainage issues shall be as approved by the City Engineer.
96. If the project involves the subdivision of land, maps may be developed in phases with the approval of the City Engineer. Financial security shall be provided for all public improvements associated with each phase of the map. The boundaries of any multiple map increment shall be subject to the approval of the City Engineer. If the project does not involve the subdivision of land and it is necessary to dedicate right-of-way/easements, the developer shall make the appropriate offer of dedication by separate instrument. In either case, the City Engineer may require the dedication and construction of necessary utility, street or other improvements beyond the project boundary, if the improvements are needed for circulation, parking, access, or for the welfare or safety of the public. This approval must be obtained prior to the Developer submitting a Phasing Plan to the California Bureau of Real Estate. [MC 9.14.080(B)(C), GC 66412 & 66462.5]
97. Maps (prepared by a registered civil engineer and/or licensed surveyor) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
98. Under the current permit for storm water activities required as part of the National Pollutant Discharge Elimination System (NPDES) as mandated by the Federal Clean Water Act, this project is subject to the following requirements:
  - a. Establish a Home Owners Association (HOA) to finance the maintenance of the "Water Quality BMPs". Any lots which are identified as "Water Quality BMPs" shall be owned in fee by the HOA.
  - b. Dedicate a maintenance easement to the City of Moreno Valley.
  - c. Execute a maintenance agreement between the City of Moreno Valley and the HOA, which shall be approved by City Council.
  - d. Provide a certificate of insurance per the terms of the maintenance

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agreement.

e. Select one of the following options to meet the financial responsibility to provide storm water utilities services for the required continuous operation, maintenance, monitoring system evaluations and enhancements, remediation and/or replacement, all in accordance with Resolution No. 2002-46.

i. Participate in the mail ballot proceeding in compliance with Proposition 218, for the Residential NPDES Regulatory Rate Schedule and pay all associated costs with the ballot process, or

ii. Establish an endowment to cover future maintenance costs for the Residential NPDES Regulatory Rate Schedule.

f. Notify the Special Districts Division of the intent to record the final map 90 days prior to City Council action authorizing recordation of the final map and the financial option selected. The final option selected shall be in place prior to the issuance of certificate of occupancy. [California Government Code & Municipal Code]

99. The developer shall guarantee the completion of all related improvements required for this project by executing a Public Improvement Agreement (PIA) with the City and posting the required security. [MC 9.14.220]
100. All public improvement plans required for this project shall be approved by the City Engineer in order to execute the Public Improvement Agreement (PIA).
101. The developer shall comply with the requirements of the City Engineer based on recommendations of the Riverside County Flood Control District regarding the construction of County Master Plan Facilities.
102. All street dedications shall be free of all encumbrances, irrevocably offered to the public and shall continue in force until the City accepts or abandons such offers, unless otherwise approved by the City Engineer.

Prior to Improvement Plan Approval

103. The developer is required to bring any existing access ramps adjacent to and fronting the project to current ADA (Americans with Disabilities Act) requirements. However, when work is required in an intersection that involves or impacts existing access ramps, all access ramps in that intersection shall be retrofitted to comply with current ADA requirements, unless otherwise approved by the City Engineer.
104. The developer shall submit clearances from all applicable agencies, and pay all applicable plan check fees.
105. The street improvement plans shall comply with current City policies, plans and applicable City standards (i.e. MVSI-160 series, etc.) throughout this project.

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106. The design plan and profile shall be based upon a centerline, extending beyond the project boundaries a minimum distance of 300 feet at a grade and alignment approved by the City Engineer.
107. Drainage facilities (i.e. catch basins, etc.) with sump conditions shall be designed to convey the tributary 100-year storm flows. Secondary emergency escape shall also be provided.
108. The hydrology study shall be designed to accept and properly convey all off-site drainage flowing onto or through the site. In the event that the City Engineer permits the use of streets for drainage purposes, the provisions of current City standards shall apply. Should the quantities exceed the street capacity or the use of streets be prohibited for drainage purposes, as in the case where one travel lane in each direction shall not be used for drainage conveyance for emergency vehicle access on streets classified as minor arterials and greater, the developer shall provide adequate facilities as approved by the City Engineer. [MC 9.14.110 A.2]
109. All public improvement plans (prepared by a licensed/registered civil engineer) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
110. Any missing or deficient existing improvements along the project frontage, shall be constructed or secured for construction. The City Engineer may require the ultimate structural section for pavement to half-street width plus 18 feet or provide core test results confirming that existing pavement section and structures are per current City Standards, or the developer may still be required to perform a one-tenth inch grind and overlay or slurry seal depending on the severity of existing pavement cracking; additional signing & striping to accommodate increased traffic imposed by the development, as required by the City Engineer.
111. For non-subdivision projects, all street dedications shall be free of encumbrances, irrevocably offered to the public and shall continue in force until the City accepts or abandons such offers, unless otherwise approved by the City Engineer.
112. The plans shall indicate any restrictions on trench repair pavement cuts to reflect the City's moratorium on disturbing newly-constructed pavement less than three (3) years old and recently slurry sealed streets less than one (1) year old. Pavement cuts for trench repairs may be allowed for emergency repairs or as specifically approved by the City Engineer.
113. All dry and wet utilities shall be shown on the plans and any crossings shall be potholed to determine actual location and elevation. Any conflicts shall be identified and addressed on the plans. The pothole survey data shall be submitted to Land Development with the public improvement plans for reference purposes only. The

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developer is responsible to coordinate with all affected utility companies and bear all costs of any utility relocation.

Prior to Encroachment Permit

114. A digital (pdf) copy of all approved improvement plans shall be submitted to the Land Development Division.
115. All applicable inspection fees shall be paid.
116. For non-subdivision projects, execution of a Public Improvement Agreement (PIA) and/or security (in the form of a cash deposit or other approved means) may be required as determined by the City Engineer. [MC 9.14.220]
117. Any work performed within public right-of-way requires an encroachment permit.

Prior to Building Permit

118. An engineered-fill certification, rough grade certification and compaction report shall be submitted for review and approved by the City Engineer. A digital (pdf) copy of the approved compaction report shall be submitted to the Land Development Division. All pads shall meet pad elevations per approved grading plans as noted by the setting of "blue-top" markers installed by a registered land surveyor or licensed civil engineer.
119. The developer shall enter into a Cooperative Agreement with the City and Riverside County Flood Control and Water Conservation District establishing the terms and conditions covering the inspection, operation and maintenance of Master Drainage Plan facilities if required to be constructed as part of the project.
120. For all subdivision projects, the map shall be recorded, [MC 9.14.190]
121. For non-subdivision projects, the developer shall guarantee the completion of all related public improvements required for this project by executing a Public Improvement Agreement (PIA) with the City and posting the required security. [MC 9.14.220]
122. The Applicant shall, prior to building or grading permit closeout or the issuance of a certificate of occupancy, demonstrate:
  - a. That all structural BMPs have been constructed and installed in conformance with the approved plans and specifications;
  - b. That all structural BMPs described in the F-WQMP have been implemented in accordance with approved plans and specifications;

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- c. That the applicant is prepared to implement all non-structural BMPs included in the F-WQMP, conditions of approval, and building/grading permit conditions; and
  - d. That an adequate number of copies of the approved F-WQMP are available for the future owners/occupants of the project.
123. For Commercial/Industrial projects, the owner may have to secure coverage under the State's General Industrial Activities Storm Water Permit as issued by the State Water Resources Control Board.
  124. All street dedications shall be free of encumbrances, irrevocably offered to the public and shall continue in force until the City accepts or abandons such offers, unless otherwise approved by the City Engineer.
  125. A walk through with a Land Development Inspector shall be scheduled to inspect existing improvements within public right of way along project frontage. Any missing, damaged or substandard improvements including handicap access ramps that do not meet current City standards shall be required to be installed, replaced and/or repaired. The applicant shall post security to cover the cost of the repairs and complete the repairs within the time allowed in the public improvement agreement used to secure the improvements.
  126. Certification to the line, grade, flow test and system invert elevations for the water quality control BMPs shall be submitted for review and approved by the City Engineer.

Prior to Occupancy

127. All outstanding fees shall be paid.
128. All required as-built plans (prepared by a registered/licensed civil engineer) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
129. The final/precise grade certification shall be submitted for review and approved by the City Engineer.
130. For commercial, industrial and multi-family projects, in compliance with Proposition 218, the developer shall agree to approve the City of Moreno Valley NPDES Regulatory Rate Schedule that is in place at the time of certificate of occupancy issuance. Under the current permit for storm water activities required as part of the National Pollutant Discharge Elimination System (NPDES) as mandated by the Federal Clean Water Act, this project is subject to the following requirements:
  - a. Select one of the following options to meet the financial responsibility to provide storm water utilities services for the required continuous operation,

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maintenance, monitoring system evaluations and enhancements, remediation and/or replacement, all in accordance with Resolution No. 2002-46.

i. Participate in the mail ballot proceeding in compliance with Proposition 218, for the Common Interest, Commercial, Industrial and Quasi-Public Use NPDES Regulatory Rate Schedule and pay all associated costs with the ballot process; or

ii. Establish an endowment to cover future City costs as specified in the Common Interest, Commercial, Industrial and Quasi-Public Use NPDES Regulatory Rate Schedule.

b. Notify the Special Districts Division of the intent to request building permits 90 days prior to their issuance and the financial option selected. The financial option selected shall be in place prior to the issuance of certificate of occupancy. [California Government Code & Municipal Code]

131. The developer shall complete all public improvements in conformance with current City standards, except as noted in the Special Conditions, including but not limited to the following:

a. Street improvements including, but not limited to: pavement, base, curb and/or gutter, cross gutters, spandrel, sidewalks, drive approaches, pedestrian ramps, street lights, signing, striping, under sidewalk drains, landscaping and irrigation, medians, pavement tapers/transitions and traffic control devices as appropriate.

b. Storm drain facilities including, but not limited to: storm drain pipe, storm drain laterals, open channels, catch basins and local depressions.

c. City-owned utilities.

d. Sewer and water systems including, but not limited to: sanitary sewer, potable water and recycled water.

e. Under grounding of all existing and proposed utilities adjacent to and on-site. Prior to occupancy, all overhead utility lines less than 115,000 volts fronting or within the entire project site boundary shall be placed underground. [per Section 9.14.130C of the City Municipal Code]

f. Relocation of overhead electrical utility lines including, but not limited to: electrical, cable and telephone.

132. For phase construction, punch list work for improvements and capping of streets in that phase shall be completed and approved for acceptance by the City Engineer, prior to permit releases for another phase.

133. For commercial, industrial and multi-family projects, a "Stormwater Treatment Device and Control Measure Access and Maintenance Covenant" shall be recorded to provide public notice of the maintenance requirements to be implemented per the approved final project-specific WQMP. A boilerplate copy of the "Stormwater Treatment Device and Control Measure Access and Maintenance Covenant" can be obtained by contacting the Land Development Division.



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134. The applicant shall ensure the following, pursuant to Section XII. I. of the 2010 NPDES Permit:
- a. Field verification that structural Site Design, Source Control and Treatment Control BMPs are designed, constructed and functional in accordance with the approved Final Water Quality Management Plan (WQMP).
  - b. Certification of best management practices (BMPs) from a state licensed civil engineer. An original WQMP BMP Certification shall be submitted for review and approved by the City Engineer.
135. The Developer shall comply with the following water quality related items:
- a. Notify the Land Development Division prior to construction and installation of all structural BMPs so that an inspection can be performed.
  - b. Demonstrate that all structural BMPs described in the approved final project-specific WQMP have been constructed and installed in conformance with the approved plans and specifications;
  - c. Demonstrate that Developer is prepared to implement all non-structural BMPs described in the approved final project-specific WQMP; and
  - d. Demonstrate that an adequate number of copies of the approved final project-specific WQMP are available for future owners/occupants.
  - e. Clean and repair the water quality BMP's, including re-grading to approved civil drawing if necessary.
  - f. Obtain approval and complete installation of the irrigation and landscaping.
136. The interior Street A (per TPM 37514 Lots G, H, and I), is a Local City Standard MVS1-107A-0 (56-foot RW / 36-foot CC). At the intersections with Krameria Avenue and Lassell Street, the road width is modified (72-foot RW/ 50-foot CC with a 12-foot wide median) per Moreno Valley Ranch Specific Plan. Improvements to be constructed shall consist of, but not be limited to, pavement, base, curb, gutter, sidewalk, pedestrian ramps, vehicle access, driveway approach per City Standard MVS1-112C-0, street light, utility relocations and undergrounding of overhead utilities less than 115,000 volts along project frontage.

Special Conditions

137. Krameria Avenue, Minor Arterial, City Standard MVS1-105A-0 (88-foot RW / 64-foot CC) shall be constructed to include missing improvements and replacement of damaged or non-standard improvements along project frontage. Improvements shall consist of, but not be limited to, pavement, sidewalk, curb and gutter, driveway approaches, drainage structures, pedestrian ramps, dry and wet utilities, relocation of any street light at conflict with proposed project entrance location, removal of the existing driveway approach opposite Quarter Horse Road including replacement access entrance per City Standard No. MVS1-112C-0, and abandonment of any existing storm drain lateral.



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138. Project access entrances along Street A and Krameria Avenue shall be constructed per City Standard No. MVS1-112C-0. The final map shall show an additional 4-foot minimum right-of-way dedication along Krameria Avenue behind the driveway approaches or per a separate recorded document. No decorative pavers shall be placed within the public right-of-way.

Special Districts Division

139. The ongoing maintenance of any landscaping required to be installed behind the curb shall be the responsibility of the property owner.
140. Any damage to existing landscape areas maintained by the City of Moreno Valley due to project construction shall be repaired/replaced by the Developer, or Developer's successors in interest, at no cost to the City of Moreno Valley.
141. The Moreno Valley Community Services District Zone A (Parks & Community Services) tax is assessed per parcel or per dwelling unit for parcels with more than one dwelling unit. Upon the issuance of building permits, the Zone A tax will be assessed based on 112 dwelling units.
142. The parcel(s) associated with this project have been incorporated into the Moreno Valley Community Services District Zone A (Parks & Community Services), Zone C (Arterial Street Lighting) and LMD2014-02 Zn 03. All assessable parcels therein shall be subject to annual parcel taxes for Zone A, Zone C and LMD2014-02 Zn 03 for operations and capital improvements.

Prior to Building Permit

143. This project has been identified to potentially be included in the formation of a Map Act Area of Benefit Special District for the construction of major thoroughfares and/or freeway improvements. The property owner(s) shall participate in such District and pay any special tax, assessment, or fee levied upon the project property for such District. At the time of the public hearing to consider formation of the district, the property owner(s) will not protest the formation, but will retain the right to object any eventual assessment that is not equitable should the financial burden of the assessment not be reasonably proportionate to the benefit the affected property obtains from the improvements to be installed. The Developer must notify the Special Districts Division at 951.413.3480 or at specialdistricts@moval.org of its selected financial option when submitting an application for the first building permit to determine whether the development will be subjected to this condition. If subject to the condition, the special election requires a 90 day process in compliance with the provisions of Article 13C of the California Constitution. (Street & Highway Code,

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GP Objective 2.14.2, MC 9.14.100).

144. This project is conditioned for a proposed district to provide a funding source for the operation and maintenance of public improvements and/or services associated with new development in that territory. The Developer shall satisfy this condition with one of the options outlined below.

a. Participate in a special election for maintenance/services and pay all associated costs of the election process and formation, if any. Financing may be structured through a Community Facilities District, Landscape and Lighting Maintenance District, or other financing structure as determined by the City; or

b. Establish an endowment fund to cover the future maintenance and/or service costs.

The Developer must notify the Special Districts Division at 951.413.3480 or at [specialdistricts@moval.org](mailto:specialdistricts@moval.org) when submitting the application for building permit issuance. If the first building permit is pulled prior to formation of the district, this condition will not apply. If the district has been or is in the process of being formed the Developer must inform the Special Districts Division of its selected financing option (a. or b. above). The option for participating in a special election requires 90 days to complete the special election process. This allows adequate time to be in compliance with the provisions of Article 13C of the California Constitution.

The financial option selected shall be in place prior to the issuance of the first certificate of occupancy for the project.

145. This project has been conditioned to provide a funding source for the continued maintenance, enhancement, and or retrofit of neighborhood parks, open spaces, linear parks, and/or trails systems. The Developer shall satisfy this condition with one of the options below.

a. Participate in a special election for annexation into Community Facilities District No. 1 or other district and pay all associated costs with the special election process and formation, if any; or

b. Establish an endowment fund to cover future maintenance costs for new neighborhood parks.

The Developer must notify the Special Districts Division at 951.413.3480 or at [specialdistricts@moval.org](mailto:specialdistricts@moval.org) when submitting the application for building permit issuance of its selected financial option. If option a. is selected, the special election will require a 90 day process prior to building permit issuance. This allows adequate time to be in compliance with the provisions of Article 13C of the

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California Constitution.

Annexation to CFD No. 1 shall be completed or proof of payment to establish the endowment fund shall be provided prior to the issuance of the first certificate of occupancy for the project.

146. This project has been identified to be included in the formation of a Community Facilities District (Mello-Roos) for Public Safety services, including but not limited to Police, Fire Protection, Paramedic Services, Park Rangers, and Animal Control services. The property owner(s) shall not protest the formation; however, they retain the right to object to the rate and method of maximum special tax. In compliance with Proposition 218, the property owner shall agree to approve the mail ballot proceeding (special election) for either formation of the CFD or annexation into an existing district. The Developer must notify the Special Districts Division at 951.413.3480 or at [specialdistricts@moval.org](mailto:specialdistricts@moval.org) when submitting the application for building permit issuance to determine the requirement for participation. If the first building permit is pulled prior to formation of the district, this condition will not apply. If the condition applies, the special election will require a minimum of 90 days prior to issuance of the first building permit. This allows adequate time to be in compliance with the provisions of Article 13C of the California Constitution. (California Government Code Section 53313 et. seq.)
147. Residential (BP) If Land Development, a Division of the Public Works Department, requires this project to supply a funding source necessary to provide for, but not limited to, stormwater utilities services for the required continuous operation, maintenance, monitoring, system evaluations and enhancements, remediation and/or replacement of on-site facilities and performing annual inspections of the affected areas to ensure compliance with state mandated storm water regulations, a funding source needs to be established. The Developer must notify the Special Districts Division at 951.413.3480 or at [specialdistricts@moval.org](mailto:specialdistricts@moval.org) of its selected financial option for the National Pollution Discharge Elimination System (NPDES) program when submitting the application for the first building permit issuance. (see Land Development's related condition). Participating in a special election the process requires a 90 day period prior to the City's issuance of a building permit. This allows adequate time to be in compliance with the provisions of Article 13D of the California Constitution. (California Health and Safety Code Sections 5473 through 5473.8 (Ord. 708 Section 3.1, 2006) & City of Moreno Valley Municipal Code Title 3, Section 3.50.050.)

Transportation Engineering Division

148. Conditions of approval may be modified and/or added if the project is phased or altered from any approved plans.

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149. The project driveways shall conform to City of Moreno Valley Standard No. MVSI-112C-0 for Commercial Driveway Approaches. Access to the project shall be allowed as follows:
- Lasselle Street: right-turn in/out only.
  - Krameria Avenue: full access.
150. Any gated entrance shall be provided with the following, or as approved by the City Traffic Engineer:
- A. A storage lane with a minimum of 60' provided for queuing.
  - B. A second storage lane for visitors to stop prior to the gate to utilize a call box (or other device) to receive permission to enter the site.
  - C. Signing and striping for A. and B.
  - D. A turnaround outside the gates of 38' radius.
  - E. No Parking Signs shall be posted in the turnaround areas.
  - F. A separate pedestrian entry.
  - G. Presence loop detectors (or another device) within 1 or 2 feet of the gates that ensures that the gates remain open while any vehicle is in the queue.
151. All on-site traffic signing and striping should be accordance with the latest version of the California Manual on Uniform Traffic Control Devices (CAMUTCD).
152. Sight distance at the proposed roadways and driveways shall conform to City of Moreno Valley Standard No. MVSI-164A,B,C-0 at the time of preparation of final grading, landscape, and street improvement plans.
153. Lasselle Street is designated as an Arterial (100'RW/76'CC) at the project location per City Standard Plan No. MVSI-104A-0. Any improvements undertaken by this project shall be consistent with the City's standards for this facility.
154. Krameria Avenue is designated as a minor arterial (88'RW/64'CC) at the project location per City Standard Plan No. MVSI-105A-1. Any improvements undertaken by this project shall be consistent with the City's standards for this facility.
155. Communication conduit along Lasselle Street project frontage may be required per City Standard Plan No. MVSI-186-0.
156. Prior to final approval of the landscape plans and construction plans for any type of fencing or monument sign, the project plans shall demonstrate that sight distance at the project driveways conforms to City Standard Plan No. MVSI-164A-0 through MVSI-164C-0. Trees, plants, shrubs, fence and monument signing shall not be located in an area that obstructs the drivers' line-of-sight.
157. Prior to the final approval of the street improvement plans, signing and striping plans

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shall be prepared per City of Moreno Valley Standard Plans - Section 4 for all streets along the project frontages. Signing and striping plans shall be prepared per the latest edition of the California Manual on Uniform Traffic Control Devices (CAMUTCD) and current City of Moreno Valley Standard Plans by a qualified registered Civil or Traffic Engineer.

158. Prior to the final approval of the street improvement plans, a median improvement plan shall be prepared by a registered civil engineer for the existing landscaped median on Lasselle Street, north of Krameria Avenue. The median shall be designed per current City Standards to extend the existing southbound left-turn lane storage length to 300 feet at Lasselle Street/Krameria Avenue intersection.
159. Prior to the final approval of the street improvement plans, a bus turnout shall be designed per the latest City of Moreno Valley Standard Plans, or as approved by the City Engineer, for northbound traffic and shall be located on the east side of Lasselle Street, between the project access and Lasselle Street/Krameria Avenue intersection.
160. Prior to issuance of an encroachment permit for work within the public right-of-way, construction traffic control plans prepared by a qualified, registered Civil or Traffic Engineer shall be required for plan approval by the City Traffic Engineer.

Prior to Building Permit

161. Prior to the issuance of Building Permit, the project applicant shall make a fair-share payment to the City of Moreno Valley for improvements identified in the project Traffic Study.

Prior to Building Final or Occupancy

162. Prior to issuance of Certificate of Occupancy for the 1st unit of this project (including model apartment units/leasing office), improvements to extend the southbound left-turn lane at Lasselle Street/Krameria Avenue intersection shall be completed and fully operational per the approved plans to the satisfaction of the City Engineer. Median construction shall include but not be limited to: paving, concrete curbs, median hardscape, signing and striping.
163. Prior to issuance of Certificate of Occupancy for the 1st unit of this project (including model apartment units/leasing office), all signing and striping shall be installed per current City Standards and the approved plans.
164. Prior to issuance of Certificate of Occupancy for the 1st unit of this project (including model apartment units/leasing office), a bus turnout shall be installed for northbound

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traffic and shall be located on the east side of Lasselle Street, between the project access and Lasselle Street/Krameria Avenue intersection. Applicant shall work with Riverside Transit Agency to relocate the existing bus stop for northbound Lasselle Street at Cahuilla Drive and any existing amenities to this location.

**PARKS & COMMUNITY SERVICES DEPARTMENT**

165. This project is subject to current Development Impact Fees.
166. This project is required to supply a funding source for the continued maintenance, enhancement, and or retrofit of neighborhood parks, open spaces, linear parks, and/or trails systems. This can be achieved through annexing into Community Facilities District No. 1 (Park Maintenance). Please contact the Special Districts Division at 951.413.3480 or specialdistricts@moval.org to complete the annexation process.
167. This project is subject to current Quimby Fees.
168. The parcel(s) associated with this project have been incorporated into the Moreno Valley Community Services District Zone A (Parks and Community Services). All assessable parcels therein shall be subject to the annual Zone 'A' charge for operations and capital improvements. Proof of such shall be supplied to Parks and Community Services upon Final Map and at Building Permits.

## 1.1 Project Design Features and Standard Conditions of Approval

The Modified Project includes several Project Design Features (PDFs) and Standard Conditions of Approval, which represent elements of the project design that have been included proactively either in response to prior mitigation measures/conditions or approval or in order to comply with City ordinances or State regulations. The following provides a summary of PDFs and Standard Conditions applicable to the Modified Project.

### 1.8.1 Air Quality

The following PDFs and Standard Conditions of Approval have been applied to the Modified Project to conform to standard rules applied by the South Coast Air Quality Management District and current technology for grading equipment.

**PDF AQ-1:** During the site preparation phase, construction equipment greater than 150 horsepower (>150 HP), the Construction Contractor shall use off-road diesel construction equipment that complies with EPA/CARB Tier 3 emissions standards and will ensure that all construction equipment be tuned and maintained in accordance with the manufacturer's specifications.

**SC AQ-1:** The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403.

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

**SC AQ-2:** Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) and/or High- Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.

### 1.8.2 Cultural

The City of Moreno Valley has worked with local Native American tribes to streamline the consultation process on new development projects. As a result, the City applies the following standard conditions to new development projects.

**SC CR-1:** Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect



earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the Project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

- a. Project grading and development scheduling;
- b. The Project archeologist and the Consulting Tribes(s) as defined in CR-1 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis;
- c. The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

**SC CR-2:** Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians for tribal monitoring. The Project Applicant is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2.

**SC CR-3:** In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:

i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.

ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure CR-1. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in CR-1.

**SC CR-4:** The City shall verify that the following note is included on the Grading Plan:

*“If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find.”*

**SC CR-5:** If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Standard Conditions above, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in CR-1 before any further work commences in the affected area.

**SC CR-6:** If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 5-days of the published finding to be given a reasonable opportunity to identify the “most likely descendant”. The “most likely descendant” shall then make recommendations and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

EIR 190 on Page 102 included a mitigation measure requiring paleontological monitoring during grading in areas with the potential to produce paleontological resources. The potential for paleontological resources was evaluated and presented in the *Cultural and Paleontological Resources Assessment* prepared by Duke CRM, July 2018, and included in Appendix C. Given the potential for paleontological resources to be present on the Project site, the following PDF has been added to provide more clarity and definition to the original mitigation measures.

**PDF CR-1:** A paleontological monitor shall be present to observe ground disturbing activities within the Project property. The monitor shall work under the direct supervision of a qualified paleontologist (B.S. /B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated experience and competence in paleontological research, fieldwork, reporting, and curation).

1. The qualified paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols.
2. Paleontological monitoring shall start at part-time. If no paleontological resources are discovered after half of the ground disturbance has occurred, monitoring can be reduced to spot-checking.
3. The monitor shall be empowered to temporarily halt or redirect grading efforts if paleontological resources are discovered.
4. In the event of a paleontological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area.
5. In consultation with the qualified paleontologist the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly removed, and the area cleared.
6. If the discovery is significant the qualified paleontologist shall notify the applicant and the City immediately.
7. In consultation with the applicant, the qualified paleontologist shall develop a plan which will likely include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

### 1.8.3 Geotechnical

Conditional of Approval 88 from EIR 190 Addendum No. 1 and SPA Amendment No. 1 requires a detailed geotechnical investigation and incorporation of recommendations presented in the study. Included in Appendix D is a *Geotechnical Investigation Update* prepared by GeoCon West Inc. dated March 2018. The following Standard Condition is included to require implementation of the recommendations included in the geotechnical report, consistent with Condition of Approval 88 from EIR 190 Addendum No. 1.

**SC GEO-1:** Prior to the issuance of a grading permit, the recommendations presented in the *Geotechnical Investigation Update* shall be incorporated into the final geotechnical report and on the grading plans.

#### 1.8.4 Noise

EIR 190 Page 76 requires attainment of 45 dBA interior noise levels and EIR 190 on Page 75 includes a mitigation measure, “special construction techniques can be used to maintain interior noise levels at acceptable standards.” In compliance with those measures and to provide greater specificity to the Modified Project, the following PDF is incorporated.

**PDF NO-1:** To meet the City of Moreno Valley 45 dBA CNEL interior noise standards the following on-site standard construction measures are required:

- **Windows/Glass Doors:** All units require windows and sliding glass doors that have well-fitted, well-weather-stripped assemblies, and minimum sound transmission class (STC) ratings of 27.
- **Exterior Doors (Non-Glass):** All exterior doors shall be well weather-stripped and have well-sealed perimeter gaps to achieve minimum sound transmission class (STC) ratings of 27.
- **Exterior Walls:** At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.
- **Roof:** Roof sheathing of wood construction shall be per manufacturer’s specification or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer’s specification or wellsealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic space.
- **Ventilation:** Arrangements for any habitable room shall be such that any exterior door or window can be kept closed when the room is in use and still receive circulated air. A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code.

EIR 190 Page 75 also requires attenuation of construction noise. In addition to requiring compliance with established construction hours, EIR 190 also included noise reduction in the form of berms and walls. In compliance with those measures and to provide greater specificity to the Modified Project, the following PDF is incorporated.

**PDF NO-2:** The following PDFs are included in the Project design to reduce construction noise and vibration levels produced by the construction equipment to the nearby sensitive land uses.

- If R6 represents occupied residential use at the time of Project construction, install a minimum 10-foot high temporary construction noise barrier at the Project’s site boundary adjacent to sensitive receiver location R6, shown on Exhibit ES-B, for the duration of

Project construction. The noise control barriers must have a solid face from top to bottom. The noise control barrier must meet the minimum height and be constructed as follows:

- o The temporary noise barrier shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts. Example photos are provided in Appendix 11.2.;
  - o The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired;
  - o The noise control barrier and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity.
- Large mobile equipment (greater than or equal to 80,000 pounds) (5) shall not be used within 50 feet of receiver locations R2 and R6 if occupied at the time of Project construction, as shown on Exhibit ES-B. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used within this area during Project construction.
  - Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that Project construction activities shall comply with the City of Moreno Valley Municipal Code requirements.
  - During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
  - The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site during all Project construction (i.e., to the western center).
  - The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

### 1.8.5 Traffic

EIR 190 Addendum No. 1 includes several conditions of approval that require roadway improvements and payment of fees. Specifically, Condition of Approval No. 42(b) states: "The applicant/developer of any subdivision within Specific Plan 193 shall participate on a fair share basis in any mitigation and/or fee program designed to alleviate off site roadway and freeway interchange deficiencies."

An updated Traffic Impact Analysis (TIA) was prepared for the Modified Project (Appendix J). The TIA concluded that while the Modified Project would not cause any direct traffic impacts, two roadway deficiencies would occur in the future regardless of whether or not the Modified Project is constructed. In compliance with COA 42(b) and to provide greater specificity to the Modified Project, the following PDF is incorporated to require the Modified Project to contribute its fair-share to resolve future roadway deficiencies.

**PDF TR-1:** Prior to the issuance of Certificates of Occupancy, the Applicant shall contribute fair share towards the following intersection improvements as specified in the 2018 TIA prepared for the Modified Project:

***Improvement – Lasselle Street & Iris Avenue (#2)***

- Implement a 130-second cycle length during the peak hours.

***Improvement – Lasselle Street & Krameria Avenue (#5)***

- Modify the median and striping to accommodate dual northbound left turn lanes, a through lane, and shared through-right turn lane.
- Restripe the eastbound approach with 2 lefts, 1 through, and 1 right turn lane.
- Modify the traffic signal to implement overlap phasing on the eastbound right turn lane.
- Implement a 130-second cycle length during the peak hours.



PLANNING COMMISSION RESOLUTION NO. 2019-08

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY RECOMMENDING THAT THE CITY COUNCIL APPROVE TENTATIVE PARCEL MAP 37514 (APPLICATION NO. PEN18-0090) TO SUBDIVIDE 19 ACRES INTO THREE PARCELS FOR DEVELOPMENT OF MULTIPLE FAMILY APARTMENT UNITS AND FOR FUTURE COMMERCIAL DEVELOPMENT ON PROPERTY LOCATED AT THE NORTHEAST CORNER OF LASSELLE STREET AND KRAMERIA AVENUE

WHEREAS, Continental East Fund III, LLC, has filed an application for the approval of Tentative Parcel Map 37514 (application PEN18-0090), a proposal to subdivide 19 acres located into three parcels as described in the title of this Resolution;

WHEREAS, the application has been evaluated in accordance with established City of Moreno Valley (City) procedures, and with consideration of the General Plan, Moreno Valley Ranch Specific and other applicable regulations; and

WHEREAS, the Planning Commission considered the Initial Study prepared for the project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Initial Study, it was determined that the project impacts remain less than significant and certification of an Addendum to a previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report is recommended; and

WHEREAS, upon completion of a thorough development review process the project was appropriately agendized and noticed for a public hearing before the Planning Commission of the City of Moreno Valley (Planning Commission); and

WHEREAS, the public hearing notice for this project was published in the local newspaper on January 11, 2019. Public notice was sent to all property owners of record within 300 feet of the project site on January 10, 2019. The public hearing notice for this project was also posted on the project site on January 11, 2019;

WHEREAS, on January 24, 2019, the Planning Commission held a public hearing to consider the application; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred; and

WHEREAS, pursuant to Government Code Section 66020(d)(1), NOTICE IS HEREBY GIVEN that this project is subject to certain fees, dedications, reservations and other exactions as provided herein.

NOW, THEREFORE, BE IT RESOLVED, it is hereby found, determined and resolved by the Planning Commission of the City of Moreno Valley as follows:



- A. This Planning Commission hereby specifically finds that all of the facts set forth above in this Resolution are true and correct.
- B. Based upon substantial evidence presented to this Planning Commission during the above-referenced meeting on January 24, 2019, including written and oral staff reports, and the record from the public hearing, this Planning Commission hereby specifically finds as follows:

1. That the proposed map is consistent with applicable general and specific plans and the zoning ordinance;

FACT: The project site has a current General Plan designation of R20. The related Specific Plan Amendment and Zone Change applications would change the land use for 8.8 acres from High Density Residential to Medium High Density Residential and from High Density Residential to Neighborhood Commercial for 2.8 acres located at the corner of Lasselle Street and Krameria Avenue.

General Plan Policy 2.2.10 states that the primary purpose of areas designated Residential 20 is to provide a range of high density multi-family housing types. Developments within Residential 20 areas shall also provide amenities, such as common open spaces and recreational facilities. The maximum density shall be 20 dwelling units per acre.

Medium High Density Residential is a zoning district with development standards that are consistent with the goals and intent of the Residential 20 land use designation.

General Plan Policy 2.4.1 states that the primary purpose of areas designated Commercial is to provide property for business purposes, including, but not limited to, retail stores, restaurants, banks, hotels, professional offices, personal services and repair services.

The project as designed and conditioned will achieve the objectives of the City of Moreno Valley's General Plan and the Moreno Valley Ranch Specific Plan. The proposed project is consistent with the General Plan and does not conflict with the goals, objectives, policies, and programs established within the Plan.

2. That the design or improvement of the proposed subdivision is consistent with applicable general and specific plans;

FACT: The land division proposed by Tentative Parcel Map No. 37514 is consistent with the General Plan and Specific Plan land use designations proposed for the site. The design of the subdivision is consistent with the Moreno Valley Ranch Specific Plan and the City's

Municipal Code Section 9.14 Land Divisions. The proposed parcel map will subdivide the 19 acres into three parcels for development of two apartment projects and a future commercial center.

The subdivision as designed and conditioned is consistent with existing goals, objectives, policies and programs of the General Plan.

3. That the site is physically suitable for the type of development;

FACT: The project site is located at the northeast corner of Lasselle Street and Krameria Avenue. The project site is irregular in shape and is comprised of topography that varies from level to sloping. The site has been massed graded several times for work related to prior approvals on the site. There are no existing trees, streambeds, drainage features or riparian vegetation or soils on the project site. There are no fault zones or soils prone to liquefaction within the project site. Overall, the project site is well suited for the proposed subdivision.

4. That the site of the proposed land division is physically suitable for the proposed density of the development;

FACT: The project site is irregular in shape and is comprised of topography that varies from level to rolling to sloping. The parcel map is designed in accordance with the provisions of the Moreno Valley Ranch Specific Plan and the City's Municipal Code Section 9.14 Land Divisions. The project site is physically suitable for the proposed density of the development.

5. That the design of the subdivision or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat;

FACT: The project site is bounded by Lasselle Street along its western property line and Krameria Avenue along its eastern and southern property line. Beyond the contiguous streets, land uses surrounding the project site are primarily single-family residences in the Low and Medium-low Density Residential zones. Moreno Valley Community College is located directly north of Cahuilla Drive. Lasselle Elementary School is located northeast of the Project site and contiguous to the project site on two sides. There are no existing trees, streambeds, drainage features or riparian vegetation on the project site. Based upon information from the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Full Report as provided by the Riverside County Transportation and Land Management Agency, there are no identified candidate, sensitive or special status species associated with the project site. Based on an Initial Study prepared for the project, it was determined that the project impacts remain less than

significant and certification of an Addendum to a previously approved Negative Declaration and Moreno Valley Ranch Specific Plan Environmental Impact Report is recommended. Therefore, the parcel map will not cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat

6. That the design of the subdivision or type of improvements is not likely to cause serious public health problems;

FACT: As conditioned, the proposed parcel map would not cause serious public health problems. The Eastern Municipal Water District will provide water and sewer services to the project site. There are no known hazardous conditions associated with the property, the design of the land division or the type of improvements.

The proposed parcel map as designed and conditioned will not result in unacceptable levels of protection from natural and man-made hazards to life, health, and property and is therefore consistent with General Goal 9.6.1. The project site is located less than one half mile from Fire Station #91, which is consistent with General Plan Goal 9.6.2 which requires emergency services that are adequate to meet minor emergency and major catastrophic situations.

The proposed parcel map will not result in a development that would be inconsistent with General Plan Objective 6.1 to minimize the potential for loss of life and protect residents, workers, and visitors to the City from physical injury and property damage due to seismic ground shaking and secondary effects or General Plan Objective 6.2 to minimize the potential for loss of life and protect residents, workers, and visitors to the City from physical injury and property damage, and to minimize nuisances due to flooding.

The parcel map has been designed consistently with the Moreno Valley Ranch Specific Plan, the City's Municipal Code Section 9.14 Land Divisions and meets all City requirements related to subdividing a property.

7. That the design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision;

FACT: The tentative tract map has been designed to accommodate and not conflict with existing easements on the subject site including utility and storm drain easements.

8. That the proposed land division and the associated design and improvements are consistent with applicable ordinances of the city.

FACT: The land division proposed by Tentative Parcel Map No. 37514 is consistent with the City's Municipal Code Section 9.14 Land Divisions and the Moreno Valley Ranch Specific Plan. The subdivision as designed and conditioned is consistent with applicable ordinances of the city.

## FEES, DEDICATIONS, RESERVATIONS, AND OTHER EXACTIONS

### 1. FEES

Impact, mitigation and other fees are due and payable under currently applicable ordinances and resolutions. These fees may include but are not limited to: Development Impact Fee, Transportation Uniform Mitigation Fee (TUMF), Multi-species Habitat Conservation Plan (MSHCP) Mitigation Fee, Stephens Kangaroo Habitat Conservation fee, Underground Utilities in lieu Fee, Area Drainage Plan fee, Bridge and Thoroughfare Mitigation fee (Future) and Traffic Signal Mitigation fee. The final amount of fees payable is dependent upon information provided by the applicant and will be determined at the time the fees become due and payable.

Unless otherwise provided for by this Resolution, all impact fees shall be calculated and collected at the time and in the manner provided in Chapter 3.32 of the City of Moreno Valley Municipal Code or as so provided in the applicable ordinances and resolutions. The City expressly reserves the right to amend the fees and the fee calculations consistent with applicable law.

### 2. DEDICATIONS, RESERVATIONS, AND OTHER EXACTIONS

The adopted Conditions of Approval for PEN18-0090, incorporated herein by reference, may include dedications, reservations, and exactions pursuant to Government Code Section 66020 (d) (1).

### 3. CITY RIGHT TO MODIFY/ADJUST; PROTEST LIMITATIONS

The City expressly reserves the right to establish, modify or adjust any fee, dedication, reservation or other exaction to the extent permitted and as authorized by law.

Pursuant to Government Code Section 66020(d)(1), NOTICE IS FURTHER GIVEN that the 90 day period to protest the imposition of any impact fee, dedication, reservation, or other exaction described in this Resolution begins on the effective date of this Resolution and any such protest must be in a manner that complies with Section 66020(a) and failure to timely follow this procedure will bar any subsequent legal action to attack, review, set aside, void or annul imposition.

The right to protest the fees, dedications, reservations, or other exactions does not apply to planning, zoning, grading, or other similar application processing fees or service fees in connection with this project and it does not apply to any fees, dedication, reservations, or other exactions of which a notice has been given similar to this, nor does it revive challenges to any fees for which the applicable statute of limitations has previously expired.

BE IT FURTHER RESOLVED that the Planning Commission HEREBY APPROVES Resolution No. 2019-08, and RECOMMENDS that the City Council:

1. APPROVE Tentative Parcel Map 37514 (Application No. PEN18-0090), based on the findings contained in this resolution and subject to the conditions of approval included as Exhibit A.

APPROVED this 24<sup>th</sup> day of January, 2019.

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Jeffrey Barnes  
Chair, Planning Commission

ATTEST:

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Patty Nevins, Planning Official  
Secretary to the Planning Commission

APPROVED AS TO FORM:

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City Attorney

Exhibit A

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN18-0090)

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CITY OF MORENO VALLEY  
 CONDITIONS OF APPROVAL  
 Tentative Parcel Map (PEN18-0090)

EFFECTIVE DATE:

EXPIRATION DATE:

**COMMUNITY DEVELOPMENT DEPARTMENT**Planning Division

1. Tentative Parcel Map 37514 (PEN18-0090) subdivides the approximately 19-acre project area into three parcels:
  - Parcel 1 - approximately 7.2 acres; and
  - Parcel 2 - approximately 2.84 acres; and
  - Parcel 3 - approximately 8.80 acres.
2. A change or modification to the approved tentative parcel map may require a separate approval. Prior to any change or modification, the property owner shall contact the City of Moreno Valley Community Development Department to determine if a separate approval is required.

Special Conditions

3. All site plans, grading plans, landscape and irrigation plans, and street improvement plans shall be coordinated for consistency with this approval.
4. This approval shall comply with all applicable requirements of the City of Moreno Valley Municipal Code and the Moreno Valley Ranch Specific Plan (SP 193).
5. The site shall be developed in accordance with the approved tentative map on file in the Community Development Department -Planning Division, the Municipal Code regulations, General Plan, and the conditions contained herein. (MC 9.14.020)
6. Prior to building final, the developer/owner or developer's/owner's successor-in-interest shall pay all applicable impact fees, including but not limited to Transportation Uniform Mitigation fees (TUMF), and the City's adopted Development Impact Fees. (Ord)
7. If potential historic, archaeological, Native American cultural resources, or paleontological resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN18-0090)

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person (meeting the Secretary of the Interior's standards (36CFR61)) shall be consulted by the applicant to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, prehistoric, or paleontological resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration, and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all affected Native American Tribes before any further work commences in the affected area.

If human remains are discovered during grading and other construction excavation, no further disturbance shall occur until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 5-days of the published finding to be given a reasonable opportunity to identify the "most likely descendant." The "most likely descendant" shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

8. All landscaped areas in perpetuity shall be maintained in a healthy and thriving condition, free from weeds, trash and debris. (MC 9.02.030)
9. Prior to issuance of building permit issuance, landscape plans (trees, shrubs and groundcover) for basins maintained by an HOA or other private entity shall be submitted to and approved by the Planning Division for the sides and/or slopes. A hydroseed mix w/irrigation is acceptable for the bottom of all the basin areas. All detention basins shall include trees, shrubs and groundcover up to the concreted portion of the basin. A solid decorative (e.g. split face, color variation, pattern variation, or as approved by the Planning Official) wall with pilasters, tubular steel fence with pilasters or other fence or wall approved by the Planning Official is required to secure all water quality and detention basins more than 18 inches in depth.
10. This tentative map shall expire three years after the approval date of this tentative map unless extended as provided by the City of Moreno Valley Municipal Code; otherwise it shall become null and void and of no effect whatsoever in the event the applicant or any successor in interest fails to properly file a final map before the date of expiration. (MC 9.02.230, 9.14.050, 080)
11. Prior to the issuance of grading permits, mitigation measures contained in the Mitigation Monitoring Program approved with this project shall be implemented as provided therein.



**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN18-0090)

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12. Prior to any site disturbance and/or grading plan submittal, and or final map recordation, a mitigation monitoring fee, as provided by City ordinance, shall be paid by the applicant/owner. No City permit or approval shall be issued until such fee is paid. (CEQA)
13. Prior to issuance of a building permit, the developer/property owner or developer's successor-in-interest shall pay all applicable impact fees due at permit issuance, including but not limited to Multi-species Habitat Conservation Plan (MSHCP) mitigation fees. (Ord.)
14. Within thirty (30) days prior to any grading or other land disturbance, a pre-construction survey for Burrowing Owls shall be conducted pursuant to the established guidelines of Multiple Species Habitat Conservation Plan. The pre-construction survey shall be submitted to the Planning Division prior to any disturbance of the site and/or grading permit issuance.
15. Prior to building final, all required and proposed fences and walls shall be constructed/installed per the approved plans on file in the Planning Division. (MC 9.080.070)
16. Prior to the issuance of grading permits, a temporary project identification sign shall be erected on the site in a secure and visible manner. The sign shall be conspicuously posted at the site and remain in place until occupancy of the project. The sign shall include the following: The name and address of the development and the developer's name and address to include a 24-hour emergency phone number.
17. Prior to approval of any grading permits, plans for any security gate system shall be submitted to and approved by to the Planning Division.
18. Prior to issuance of grading permits, the developer shall pay the applicable Stephen's' Kangaroo Rat (SKR) Habitat Conservation Plan mitigation fee.
19. Prior to recordation of the final subdivision map, the following documents shall be submitted to and approved by the Planning Division which shall demonstrate that the project will be developed and maintained in accordance with the intent and purpose of the approval:
  - a. The document to convey title
  - b. Deed restrictions, easements, or Covenants, Conditions and Restrictions to be recorded

The approved documents shall be recorded at the same time that the subdivision map is recorded. The documents shall contain provisions for reciprocal access to proposed parcels, general maintenance of the site to include common open space, water quality basins, lighting, landscaping and common area use items such as

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN18-0090)

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general building maintenance of apartments, tot lot/public seating areas and other recreation facilities or buildings. The approved documents shall also contain a provision, which provides that they may not be terminated and/or substantially amended without the consent of the City and the developer's successor-in-interest. (MC 9.14.090)

In addition, the following deed restrictions and disclosures shall be included within the document and grant deed of the properties:

- a. The developer and homeowners association shall promote the use of native plants and trees and drought tolerant species.
  - b. All lots designated for open space and or detention basins, shall be included as an easement to, and maintained by a Homeowners Association (HOA) or other private maintenance entity. All reverse frontage landscape areas shall also be maintained by the onsite HOA. Language to this effect shall be included and reviewed within the required Covenant Conditions and Restrictions (CC&Rs) prior to the approval of the final map.
  - c. Maintenance of any and all common facilities.
20. All undeveloped portions of the site in perpetuity shall be maintained in a manner that provides for the control of weeds, erosion and dust. (MC 9.02.030)
  21. Prior to the issuance of building permits, the developer shall provide documentation that contact was made to the U.S. Postal Service to determine the appropriate type and location of mailboxes.

**COMMUNITY DEVELOPMENT DEPARTMENT****Building Division**

22. The proposed residential project (3 or more dwelling units) shall comply with the latest Federal Law, Americans with Disabilities Act, and State Law, California Code of Regulations, Title 24, Chapter 11A for accessibility standards for the disabled including access to the site, exits, kitchens, bathrooms, common spaces, pools/spas, etc.
23. Prior to submittal, all new development, including residential second units, are required to obtain a valid property address prior to permit application. Addresses can be obtained by contacting the Building Safety Division at 951.413.3350.
24. Contact the Building Safety Division for permit application submittal requirements.
25. Any construction within the city shall only be completed between the hour of seven a.m. to seven p.m. Monday through Friday, excluding holidays and from eight a.m. to

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN18-0090)

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- four p.m. on Saturday, unless written approval is obtained from the city building official or city engineer (Municipal Code Section 8.14.040.E).
26. Building plans submitted shall be signed and sealed by a California licensed design professional as required by the State Business and Professions Code.
  27. The proposed development is subject to the payment of applicable processing fees as required by the City's current Fee Ordinance at the time a building permit application is submitted or prior to the issuance of permits as determined by the City.
  28. The proposed project will be subject to approval by the Eastern Municipal Water District and all applicable fees and charges shall be paid prior to permit issuance. Contact the water district at 951.928.3777 for specific details.
  29. All new structures shall be designed in conformance to the latest design standards adopted by the State of California in the California Building Code, (CBC) Part 2, Title 24, California Code of Regulations including requirements for allowable area, occupancy separations, fire suppression systems, accessibility, etc. The current code edition is the 2016 CBC.
  30. The proposed project's occupancy shall be classified by the Building Official and must comply with exiting, occupancy separation(s) and minimum plumbing fixture requirements. Minimum plumbing fixtures shall be provided per the 2016 California Plumbing Code, Table 422.1. The occupant load and occupancy classification shall be determined in accordance with the California Building Code.
  31. The proposed residential project shall comply with The 2016 California Green Building Standards Code, Section 4.106.4, mandatory requirements for Electric Vehicle Charging Station (EVCS).
  32. Onsite Water and Sewer Plans: A separate construction set of onsite water and sewer plans must be submitted to Building & Safety Division for design approvals and permit issuance. Sewer and Water design must comply with the 2016 California Plumbing Code.
  33. Prior to permit issuance, every applicant shall submit a properly completed Waste Management Plan (WMP), as a portion of the building or demolition permit process. (MC 8.80.030)

**PUBLIC WORKS DEPARTMENT****Land Development**

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN18-0090)

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34. The developer shall comply with all applicable City ordinances and resolutions including the City's Municipal Code (MC) and if subdividing land, the Government Code (GC) of the State of California, specifically Sections 66410 through 66499.58, said sections also referred to as the Subdivision Map Act (SMA). [MC 9.14.010]
35. The final approved conditions of approval (COAs) and any applicable Mitigation Measures issued by the Planning Division shall be photographically or electronically placed on mylar sheets and included in the Grading and Street Improvement plans.
36. The developer shall monitor, supervise and control all construction related activities, so as to prevent these activities from causing a public nuisance, including but not limited to, insuring strict adherence to the following:
- (a) Removal of dirt, debris, or other construction material deposited on any public street no later than the end of each working day.
  - (b) Observance of working hours as stipulated on permits issued by the Land Development Division.
  - (c) The construction site shall accommodate the parking of all motor vehicles used by persons working at or providing deliveries to the site.
  - (d) All dust control measures per South Coast Air Quality Management District (SCAQMD) requirements during the grading operations.
- Violation of any condition, restriction or prohibition set forth in these conditions shall subject the owner, applicant, developer or contractor(s) to remedy as noted in City Municipal Code 8.14.090. In addition, the City Engineer or Building Official may suspend all construction related activities for violation of any condition, restriction or prohibition set forth in these conditions until such time as it has been determined that all operations and activities are in conformance with these conditions.
37. In the event right-of-way or offsite easements are required to construct offsite improvements necessary for the orderly development of the surrounding area to meet the public health and safety needs, the developer shall make a good faith effort to acquire the needed right-of-way in accordance with the Land Development Division's administrative policy. If unsuccessful, the Developer shall enter into an agreement with the City to acquire the necessary right-of-way or offsite easements and complete the improvements at such time the City acquires the right-of-way or offsite easements which will permit the improvements to be made. The developer shall be responsible for all costs associated with the right-of-way or easement acquisition. [GC 66462.5]
38. If improvements associated with this project are not initiated within two (2) years of the date of approval of the Public Improvement Agreement (PIA), the City Engineer may require that the engineer's estimate for improvements associated with the project be modified to reflect current City construction costs in effect at the time of request for an extension of time for the PIA or issuance of a permit. [MC 9.14.210(B)(C)]

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN18-0090)

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39. All Conditions of Approval from previously approved PA11-0026 shall continue to apply unless otherwise indicated herein.
40. The developer shall protect downstream properties from damage caused by alteration of drainage patterns (i.e. concentration or diversion of flow, etc). Protection shall be provided by constructing adequate drainage facilities, including, but not limited to, modifying existing facilities or by securing a drainage easement. [MC 9.14.110]
41. Public drainage easements, when required, shall be a minimum of 25 feet wide and shall be shown on the map and plan, and noted as follows: "Drainage Easement – no structures, obstructions, or encroachments by land fills are allowed." In addition, the grade within the easement area shall not exceed a 3:1 (H:V) slope, unless approved by the City Engineer.
42. The maintenance responsibility of the proposed storm drain line shall be clearly identified. Storm drain lines within private property will be privately maintained and those within public streets will be publicly maintained.
43. The proposed on-site private storm drain system will connect to the existing Riverside County Flood Control storm drain in Krameria Avenue. A storm drain manhole shall be placed at the right-of-way line to mark the beginning of the publicly maintained portion of this storm drain.
44. For single family residential subdivisions, all lots shall drain toward the street unless otherwise approved by the City Engineer. Residential lot drainage to the street shall be by side yard swales, and must be directed to a driveway or drainage devices located outside the right-of-way in accordance with City Standard MVSI-154-0. No cross-lot or over the sidewalk drainage shall be allowed.
45. This project shall submit civil engineering design plans, reports and/or documents (prepared by a registered/licensed civil engineer) for review and approval by the City Engineer per the current submittal requirements, prior to the indicated threshold or as required by the City Engineer. The submittal consists of, but is not limited to, the following:
  - a. Parcel Map recordation prior to building permit issuance;
  - b. Rough grading w/ erosion control plan prior to grading permit issuance;
  - c. Precise grading w/ erosion control plan prior to building permit issuance;
  - d. Public improvement plan (e.g., street/storm drain w/ striping, RCFC storm drain, sewer/water, etc.) prior to map approval or encroachment permit issuance;
  - e. Final drainage study prior to grading plan approval;
  - f. Final WQMP prior to grading plan approval;
  - g. Legal documents (e.g., easement(s), dedication(s), lot line adjustment, vacation, etc.) prior to Occupancy release;

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN18-0090)

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h. As-Built revision for all plans prior to Occupancy release.

46. Water quality best management practices (BMPs) designed to meet Water Quality Management Plan (WQMP) requirements for single-family residential development shall not be used as a construction BMP. Water quality BMPs shall be maintained for the entire duration of the project construction and be used to treat runoff from those developed portions of the project. Water quality BMPs shall be protected from upstream construction related runoff by having proper best management practices in place and maintained. Water quality BMPs shall be graded per the approved design plans and once landscaping and irrigation has been installed, it and its maintenance shall be turned over to an established Homeowner's Association (HOA). The Homeowner's Association shall enter into an agreement with the City for basin maintenance.

Prior to Grading Plan Approval

47. Resolution of all drainage issues shall be as approved by the City Engineer.
48. A final detailed drainage study (prepared by a registered/licensed civil engineer) shall be submitted for review and approved by the City Engineer. The study shall include, but not be limited to: existing and proposed hydrologic conditions as well as hydraulic calculations for all drainage control devices and storm drain lines. The study shall analyze 1, 3, 6 and 24-hour duration events for the 2, 5, 10 and 100-year storm events [MC 9.14.110(A.1)]. A digital (pdf) copy of the approved drainage study shall be submitted to the Land Development Division.
49. A final project-specific Water Quality Management Plan (WQMP) shall be submitted for review and approved by the City Engineer, which:
- a. Addresses Site Design Best Management Practices (BMPs) such as minimizing impervious areas, maximizing permeability, minimizes directly connected impervious areas to the City's street and storm drain systems, and conserves natural areas;
  - b. Incorporates Source Control BMPs and provides a detailed description of their implementation;
  - c. Describes the long-term operation and maintenance requirements for BMPs requiring maintenance; and
  - d. Describes the mechanism for funding the long-term operation and maintenance of the BMPs.
- A copy of the final WQMP template can be obtained on the City's Website or by contacting the Land Development Division. A digital (pdf) copy of the approved final project-specific Water Quality Management Plan (WQMP) shall be submitted to the Land Development Division.
50. The developer shall ensure compliance with the City Grading ordinance, these



**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN18-0090)

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Conditions of Approval and the following criteria:

a. The project street and lot grading shall be designed in a manner that perpetuates the existing natural drainage patterns with respect to tributary drainage area and outlet points. Unless otherwise approved by the City Engineer, lot lines shall be located at the top of slopes.

b. Any grading that creates cut or fill slopes adjacent to the street shall provide erosion control, sight distance control, and slope easements as approved by the City Engineer.

c. All improvement plans are substantially complete and appropriate clearance letters are provided to the City.

d. A soils/geotechnical report (addressing the soil's stability and geological conditions of the site) shall be submitted to the Land Development Division for review. A digital (pdf) copy of the soils/geotechnical report shall be submitted to the Land Development Division.

51. Grading plans (prepared by a registered/licensed civil engineer) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
52. The developer shall select Low Impact Development (LID) Best Management Practices (BMPs) designed per the latest version of the Water Quality Management Plan (WQMP) - a guidance document for the Santa Ana region of Riverside County.
53. The developer shall submit recorded slope easements from adjacent property owners in all areas where grading resulting in slopes is proposed to take place outside of the project boundaries. For all other offsite grading, written permission from adjacent property owners shall be submitted.
54. The developer shall pay all remaining plan check fees.
55. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared in conformance with the State's current Construction Activities Storm Water General Permit. A copy of the current SWPPP shall be kept at the project site and be available for review upon request.
56. Any proposed trash enclosure(s) shall be dual bin (1 for trash and 1 for recycables) [MC 9.03.040 (G)]. The enclosure shall have a solid roof and appropriate drainage collection for water quality purposes. The architecture shall be approved by the Planning Division and any structural approvals shall be made by the Building & Safety Division.
57. For projects that will result in discharges of storm water associated with construction with a soil disturbance of one or more acres of land, the developer shall submit a Notice of Intent (NOI) and obtain a Waste Discharger's Identification number (WDID#) from the State Water Quality Control Board (SWQCB) which shall be



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noted on the grading plans.

58. Landscape & Irrigation plans (prepared by a registered/licensed civil engineer) for water quality BMPs shall be submitted for review and approved by the City Engineer per the current submittal requirements, if applicable.

Prior to Grading Permit

59. A receipt showing payment of the Area Drainage Plan (ADP) fee to Riverside County Flood Control and Water Conservation District shall be submitted. [MC 9.14.100(O)]
60. If the developer chooses to construct the project in phases, a Construction Phasing Plan for the construction of on-site public or private improvements shall be submitted for review and approved by the City Engineer.
61. The developer may be required to pay current Development Impact Fee (DIF) fees adopted by the City Council, if said fees have not already been paid. [Ord. 695 § 1.1 (part), 2005] [MC 3.38.030, 040, 050]
62. A digital (pdf) copy of all approved grading plans shall be submitted to the Land Development Division.
63. Security, in the form of a cash deposit (preferable), or letter of credit shall be submitted as a guarantee of the implementation and maintenance of erosion control measures. At least twenty-five (25) percent of the required security shall be in the form of a cash deposit with the City. [MC 8.21.160(H)]
64. Security, in the form of a cash deposit (preferable), or letter of credit shall be submitted as a guarantee of the completion of the grading operations for the project. [MC 8.21.070]
65. The developer shall pay all applicable inspection fees.
66. The developer may be required to pay current Transportation Uniform Mitigation Fee (TUMF) fees adopted by the City Council, if said fees have not already been paid. [Ord. 835 § 2.1, 2012] [MC 3.44.060]

Prior to Map Approval

67. If the project involves the subdivision of land, maps may be developed in phases with the approval of the City Engineer. Financial security shall be provided for all public improvements associated with each phase of the map. The boundaries of any multiple map increment shall be subject to the approval of the City Engineer. If

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the project does not involve the subdivision of land and it is necessary to dedicate right-of-way/easements, the developer shall make the appropriate offer of dedication by separate instrument. In either case, the City Engineer may require the dedication and construction of necessary utility, street or other improvements beyond the project boundary, if the improvements are needed for circulation, parking, access, or for the welfare or safety of the public. This approval must be obtained prior to the Developer submitting a Phasing Plan to the California Bureau of Real Estate. [MC 9.14.080(B)(C), GC 66412 & 66462.5]

68. Maps (prepared by a registered civil engineer and/or licensed surveyor) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
69. All street dedications shall be free of all encumbrances, irrevocably offered to the public and shall continue in force until the City accepts or abandons such offers, unless otherwise approved by the City Engineer.

Prior to Improvement Plan Approval

70. The developer is required to bring any existing access ramps adjacent to and fronting the project to current ADA (Americans with Disabilities Act) requirements. However, when work is required in an intersection that involves or impacts existing access ramps, all access ramps in that intersection shall be retrofitted to comply with current ADA requirements, unless otherwise approved by the City Engineer.
71. The developer shall submit clearances from all applicable agencies, and pay all applicable plan check fees.
72. The street improvement plans shall comply with current City policies, plans and applicable City standards (i.e. MVSI-160 series, etc.) throughout this project.
73. The plans shall indicate any restrictions on trench repair pavement cuts to reflect the City's moratorium on disturbing newly-constructed pavement less than three (3) years old and recently slurry sealed streets less than one (1) year old. Pavement cuts for trench repairs may be allowed for emergency repairs or as specifically approved by the City Engineer.
74. All dry and wet utilities shall be shown on the plans and any crossings shall be potholed to determine actual location and elevation. Any conflicts shall be identified and addressed on the plans. The pothole survey data shall be submitted to Land Development with the public improvement plans for reference purposes only. The developer is responsible to coordinate with all affected utility companies and bear all costs of any utility relocation.

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Prior to Building Permit

75. An engineered-fill certification, rough grade certification and compaction report shall be submitted for review and approved by the City Engineer. A digital (pdf) copy of the approved compaction report shall be submitted to the Land Development Division. All pads shall meet pad elevations per approved grading plans as noted by the setting of "blue-top" markers installed by a registered land surveyor or licensed civil engineer.
76. For all subdivision projects, the map shall be recorded. [MC 9.14.190]
77. For Commercial/Industrial projects, the owner may have to secure coverage under the State's General Industrial Activities Storm Water Permit as issued by the State Water Resources Control Board.
78. For non-subdivision projects, all street dedications shall be free of encumbrances, irrevocably offered to the public and shall continue in force until the City accepts or abandons such offers, unless otherwise approved by the City Engineer.
79. A walk through with a Land Development Inspector shall be scheduled to inspect existing improvements within public right of way along project frontage. Any missing, damaged or substandard improvements including handicap access ramps that do not meet current City standards shall be required to be installed, replaced and/or repaired. The applicant shall post security to cover the cost of the repairs and complete the repairs within the time allowed in the public improvement agreement used to secure the improvements.
80. Certification to the line, grade, flow test and system invert elevations for the water quality control BMPs shall be submitted for review and approved by the City Engineer.

Prior to Occupancy

81. All outstanding fees shall be paid.
82. All required as-built plans (prepared by a registered/licensed civil engineer) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
83. The final/precise grade certification shall be submitted for review and approved by the City Engineer.
84. For commercial, industrial and multi-family projects, in compliance with Proposition 218, the developer shall agree to approve the City of Moreno Valley NPDES

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Regulatory Rate Schedule that is in place at the time of certificate of occupancy issuance. Under the current permit for storm water activities required as part of the National Pollutant Discharge Elimination System (NPDES) as mandated by the Federal Clean Water Act, this project is subject to the following requirements:

a. Select one of the following options to meet the financial responsibility to provide storm water utilities services for the required continuous operation, maintenance, monitoring system evaluations and enhancements, remediation and/or replacement, all in accordance with Resolution No. 2002-46.

i. Participate in the mail ballot proceeding in compliance with Proposition 218, for the Common Interest, Commercial, Industrial and Quasi-Public Use NPDES Regulatory Rate Schedule and pay all associated costs with the ballot process; or

ii. Establish an endowment to cover future City costs as specified in the Common Interest, Commercial, Industrial and Quasi-Public Use NPDES Regulatory Rate Schedule.

b. Notify the Special Districts Division of the intent to request building permits 90 days prior to their issuance and the financial option selected. The financial option selected shall be in place prior to the issuance of certificate of occupancy. [California Government Code & Municipal Code]

85. The developer shall complete all public improvements in conformance with current City standards, except as noted in the Special Conditions, including but not limited to the following:

a. Street improvements including, but not limited to: pavement, base, curb and/or gutter, cross gutters, spandrel, sidewalks, drive approaches, pedestrian ramps, street lights, signing, striping, under sidewalk drains, landscaping and irrigation, medians, pavement tapers/transitions and traffic control devices as appropriate.

b. Storm drain facilities including, but not limited to: storm drain pipe, storm drain laterals, open channels, catch basins and local depressions.

c. City-owned utilities.

d. Sewer and water systems including, but not limited to: sanitary sewer, potable water and recycled water.

e. Under grounding of all existing and proposed utilities adjacent to and on-site. [MC 9.14.130]

f. Relocation of overhead electrical utility lines including, but not limited to: electrical, cable and telephone.

86. For residential subdivisions, punch list work for improvements and capping of streets in that phase shall be completed and approved for acceptance by the City Engineer, prior to the following thresholds:

a. Acceptance into the City's maintain system.

87. For commercial, industrial and multi-family projects, a "Stormwater Treatment

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Device and Control Measure Access and Maintenance Covenant” shall be recorded to provide public notice of the maintenance requirements to be implemented per the approved final project-specific WQMP. A boilerplate copy of the “Stormwater Treatment Device and Control Measure Access and Maintenance Covenant” can be obtained by contacting the Land Development Division.

88. The applicant shall ensure the following, pursuant to Section XII. I. of the 2010 NPDES Permit:
- a. Field verification that structural Site Design, Source Control and Treatment Control BMPs are designed, constructed and functional in accordance with the approved Final Water Quality Management Plan (WQMP).
  - b. Certification of best management practices (BMPs) from a state licensed civil engineer. An original WQMP BMP Certification shall be submitted for review and approved by the City Engineer.
89. The Developer shall comply with the following water quality related items:
- a. Notify the Land Development Division prior to construction and installation of all structural BMPs so that an inspection can be performed.
  - b. Demonstrate that all structural BMPs described in the approved final project-specific WQMP have been constructed and installed in conformance with the approved plans and specifications;
  - c. Demonstrate that Developer is prepared to implement all non-structural BMPs described in the approved final project-specific WQMP; and
  - d. Demonstrate that an adequate number of copies of the approved final project-specific WQMP are available for future owners/occupants.
  - e. Clean and repair the water quality BMP's, including re-grading to approved civil drawing if necessary.
  - f. Obtain approval and complete installation of the irrigation and landscaping.

Special Conditions

90. Prior to approval of any grading plan, the additional right-of-way required at project entrances shall be shown on the grading plans and shall be consistent with that shown on the final map.
91. Prior to approval of any grading plan, proposed onsite private street grades shall be designed at 1%. Special approval is required from the City Engineer to construct at the absolute minimum street grade of 0.67%. Clustered unit parking common areas shall also be designed at 1% minimum.
92. Prior to approval of any grading plan, the plans shall clearly show that any slope near the public right-of-way has a minimum set-back area at 2% maximum of 2 feet before the start of the top of toe of slope.

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93. Prior to rough grading plan approval, the grading plan shall clearly demonstrate that drainage is properly collected and conveyed. The plan shall show all necessary on-site drainage improvements to properly collect and convey drainage entering, within, and leaving the project. This may include, but not be limited to on-site and perimeter drainage improvements to properly convey drainage within and along the project site. A storm drain pipe within a private storm drain easement used to convey the runoff from the adjacent elementary school to Krameria Avenue shall be shown on all grading plans.
94. Prior to precise grading plan approval for the multi-family residential portion of the project, the plan shall show any proposed trash enclosure as dual bin; one bin for trash and one bin for recyclables. The trash enclosure shall be per City Standard Plan MVGF-660A-0.
95. Prior to final map approval, the developer shall submit for review and approval either a reciprocal access agreement for the shared use of the proposed driveway on Lasselle Street between the multi-family parcel and the clustered units parcel and the connecting access to Krameria Avenue across from Colt Way or alternatively, covenants, conditions, and restrictions (CCRs) that provide for the shared use of the driveway.
96. Prior to final map approval, the developer shall guarantee the construction of the following improvements by entering into a public improvement agreement and posting security. The improvements shall be completed prior to occupancy of the first building or as otherwise determined by the City Engineer. Public improvements shall be constructed per City standards.
- a. Lasselle Street, Arterial, City Standard MVSI-104A-0 Modified per Moreno Valley Ranch Specific Plan (100-foot RW / 76-foot CC) shall be constructed to include missing improvements and replacement of damaged or non-standard improvements along project frontage. Improvements shall consist of, but not be limited to, sidewalk, pedestrian ramps, emergency vehicle median access, driveway approach, and undergrounding of overhead utilities less than 115,000 volts along project frontage. Improvements between Krameria Avenue and the project entrance shall consist of pavement, base, curb, gutter, sidewalk, relocation of a street light, and relocation of a power pole.
- b. Krameria Avenue, Minor Arterial, City Standard MVSI-105A-0 (88-foot RW / 64-foot CC) shall be constructed to include missing improvements and replacement of damaged or non-standard improvements along project frontage. Improvements shall consist of, but not be limited to, sidewalk, driveway approaches, drainage structures, pedestrian ramps, dry and wet utilities, relocation of existing street light at conflict with proposed project entrance location, removal and replacement of existing driveway approach opposite Quarter Horse Road including any



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replacement of curb and gutter, and abandonment of an existing storm drain lateral.

c. Project entrances at Krameria Avenue across the street from Colt Way shall be constructed per City Standard No. MVSI-112C-0. The final map shall show an additional 4-foot minimum right-of-way dedication behind the driveway approach. No decorative pavers shall be placed within the public right-of-way.

d. Pavement core samples of existing pavement may be taken and findings submitted to the City for review and consideration of pavement improvements. The City will determine the adequacy of the existing pavement structural section. If the existing pavement structural section is found to be adequate meeting current City standards, the developer may still be required to perform a one-tenth inch grind and overlay or slurry seal depending on the severity of existing pavement cracking, as required by the City Engineer. If the existing pavement section is found to be inadequate, the Developer shall replace the pavement to meet or exceed the City's pavement structural section standard.

97. Prior to final map approval, the applicant shall schedule a walk through with a Land Development Inspector to inspect existing improvements within public right-of-way along project frontage. The applicant will be required to install, replace and/or repair any missing, damaged or substandard improvements including handicap access ramps that do not meet current City standards. The applicant shall post security to cover the cost of the repairs and complete the repairs within the time allowed in the public improvement agreement used to secure the improvements.
98. Prior to building permit issuance, this project shall cause the vacation of those easements underneath proposed building footprints and the existing storm drain improvements shall be abandoned or removed.
99. Prior to building permit issuance, a private storm drain easement from the adjacent school site to Krameria Avenue and the multi-family development (Parcel 1) shall be submitted for review and approval, and then shall record. A private storm drain, conveying offsite, adjacent school site runoff and Parcel 1 across this project site to Krameria Avenue, is required. A private storm drain easements are required to accommodate the private storm drains.
100. Prior to occupancy, all overhead utility lines less than 115,000 volts fronting or within the entire project site boundary shall be placed underground per Section 9.14.130C of the City Municipal Code. Overhead utility lines along the east side of Lasselle Street along project frontage that are 115,000 volts or greater which do not meet the undergrounding of overhead utilities criteria, may remain above ground in which case any existing power poles, such as the one located at the proposed project entrance, shall be relocated outside of the proposed driveway approach and sidewalk areas.



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101. Prior to occupancy, all ramps and traveled ways, including those at the intersection of Lasselle Street at Krameria Avenue and Lasselle Street at Cahuilla Drive shall comply with current ADA standards.
102. The Applicant shall submit two up dated P-WQMP approved documents consisting of two originally Applicant-signed and notarized documents that are also wet-stamped and signed by a California Registered Civil Engineer.
103. The Applicant shall prepare and submit for approval a final, project-specific water quality management plan (F-WQMP) for PEN18-0090 Continental Villages. The F-WQMP shall be consistent with the approved P-WQMP and the Special Project Conditions listed above, as well as in full conformance with the document; "Riverside County Water Quality Management Plan for Urban Runoff" dated 2010. At a minimum, the F-WQMP shall include the following: Site design BMPs; Source control BMPs; Treatment control BMPs; Operation and Maintenance requirements for BMPs; and sources of funding for BMP implementation.
104. The Applicant shall, prior to building or grading permit closeout or the issuance of a certificate of occupancy, demonstrate:
  - a. That all structural BMPs have been constructed and installed in conformance with the approved plans and specifications;
  - b. That all structural BMPs described in the F-WQMP have been implemented in accordance with approved plans and specifications;
  - c. That the applicant is prepared to implement all non-structural BMPs included in the F-WQMP, conditions of approval, and building/grading permit conditions; and
  - d. That an adequate number of copies of the approved F-WQMP are available for the future owners/occupants of the project.
105. On-site 2-foot pedestrian easement shall be required on the final map if on-street parking along Krameria Avenue is approved.

Special Districts Division

106. Inspection fees for the monitoring of landscape installation associated with the City of Moreno Valley maintained parkways/medians are due prior to the required pre-construction meeting. (MC 3.32.040)
107. The ongoing maintenance of any landscaping required to be installed behind the curb shall be the responsibility of the property owner.
108. Modification of existing irrigation systems for parkway or median improvements may be required per the direction of, approval by and coordination with the Special

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Districts Division. Please contact Special District Division staff at 951.413.3480 or specialdistricts@moval.org to coordinate the modifications.

109. Any damage to existing landscape areas maintained by the City of Moreno Valley due to project construction shall be repaired/replaced by the Developer, or Developer's successors in interest, at no cost to the City of Moreno Valley.
110. Street Light Authorization forms for all street lights that are conditioned to be installed as part of this project must be submitted to the Special Districts Division for approval, prior to street light installation. The Street Light Authorization form can be obtained from the utility company providing electric service to the project, either Moreno Valley Utility or Southern California Edison. For questions, contact the Special Districts Division at 951.413.3480 or specialdistricts@moval.org.
111. The removal of existing trees with four-inch or greater trunk diameters (calipers), shall be replaced, at a three to one ratio, with minimum twenty-four (24) inch box size trees of the same species, or a minimum thirty-six (36) inch box for a one to one replacement, where approved. (MC 9.17.030)
112. The parcel(s) associated with this project have been incorporated into the Moreno Valley Community Services District Zone A (Parks & Community Services), Zone C (Arterial Street Lighting), and Landscape Maintenance District (LMD) 2014-02 Zone 03. All assessable parcels therein shall be subject to annual parcel taxes for Zone A and Zone C and an annual assessment for LMD 2014-02 Zone 03 for operations and capital improvements
113. The Developer, or the Developer's successors or assignees shall be responsible for all parkway and/or median landscape maintenance for a period of one (1) year commencing from the time all items of work have been completed to the satisfaction of Special Districts staff as per the City of Moreno Valley Public Works Department Landscape Design Guidelines, or until such time as the District accepts maintenance responsibilities.
114. Parkway, median, slope and/or open space landscape areas maintained as part of the City of Moreno Valley Community Facilities District 2014-01 shall be required to have independent utility systems, including but not limited to water, electric, and telephone services. An independent irrigation controller and pedestal will also be required. Combining utility systems with existing or future landscape areas not associated with the City of Moreno Valley Community Facilities District (CFD) landscaping will not be permitted.
115. Plans for parkway, median, slope, and/or open space landscape areas designated in the project's Conditions of Approval for incorporation into a City Coordinated landscape maintenance program, shall be prepared and submitted in accordance with the City of Moreno Valley Public Works Department Landscape Design

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Guidelines. The guidelines are available on the City's website at [www.moval.org/sd](http://www.moval.org/sd) or from the Special Districts Division (951.413.3480 or [specialdistricts@moval.org](mailto:specialdistricts@moval.org)).

116. In the event the City of Moreno Valley determines that funds authorized by any Proposition 218 mail ballot proceeding are insufficient to meet the costs for parkway, slope, and/or open space maintenance and utility charges, the City shall have the right, at its option, to terminate the grant of any or all parkway, slope, and/or open space maintenance easements. This power of termination, should it be exercised, shall be exercised in the manner provided by law to quit claim and abandon the property so conveyed to the District, and to revert to the Developer or the Developer's successors in interest, all rights, title, and interest in said parkway, slope, and/or open space areas, including but not limited to responsibility for perpetual maintenance of said areas.
117. Plan check fees for review of parkway/median landscape plans for improvements that shall be maintained by the City of Moreno Valley are due upon the first plan submittal. (MC 3.32.040)

Prior to Building Permit

118. This project has been identified to potentially be included in the formation of a Map Act Area of Benefit Special District for the construction of major thoroughfares and/or freeway improvements. The property owner(s) shall participate in such District and pay any special tax, assessment, or fee levied upon the project property for such District. At the time of the public hearing to consider formation of the district, the property owner(s) will not protest the formation, but will retain the right to object any eventual assessment that is not equitable should the financial burden of the assessment not be reasonably proportionate to the benefit the affected property obtains from the improvements to be installed. The Developer must notify the Special Districts Division at 951.413.3480 or at [specialdistricts@moval.org](mailto:specialdistricts@moval.org) of its selected financial option when submitting an application for the first building permit to determine whether the development will be subjected to this condition. If subject to the condition, the special election requires a 90 day process in compliance with the provisions of Article 13C of the California Constitution. (Street & Highway Code, GP Objective 2.14.2, MC 9.14.100).
119. This project is conditioned to provide a funding source for the following special financing program(s):
- a. Street Lighting Services for capital improvements, energy charges, and maintenance.

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The Developer's responsibility is to provide a funding source for the capital improvements and the continued maintenance. The Developer shall satisfy this condition with one of the options below.

i. Participate in a special election (mail ballot proceeding) and pay all associated costs of the special election and formation, if any. Financing may be structured through a Community Services District zone, Community Facilities District, Landscape and Lighting Maintenance District, or other financing structure as determined by the City; or

ii. Establish a Property Owner's Association (POA) or Home Owner's Association (HOA) which will be responsible for any and all operation and maintenance costs

The Developer must notify the Special Districts Division at 951.413.3480 or at specialdistricts@moval.org of its selected financial option when submitting the application for building permit issuance. The option for participating in a special election requires approximately 90 days to complete the special election process. This allows adequate time to be in compliance with the provisions of Article 13C of the California Constitution.

The financial option selected shall be in place prior to the issuance of the first certificate of occupancy for the project and prior to acceptance of any improvements.

120. Parkway, open space, and/or median landscaping specified in the project's Conditions of Approval shall be constructed in compliance with the City of Moreno Valley Public Works Design Guidelines and completed prior to the issuance of 25% (or 24) of the dwelling permits for this tract or 12 months from the issuance of the first dwelling permit, whichever comes first. In cases where a phasing plan is submitted, the actual percentage of dwelling permits issued prior to the completion of the landscaping shall be subject to the review of the construction phasing plan.
121. For those areas to be maintained by the City and prior to the issuance of the first Building Permit, Planning Division (Community Development Department), Special Districts Division (the Public Works Department) and Transportation Division (the Public Works Department) shall review and approve the final median, parkway, slope, and/or open space landscape/irrigation plans as designated on the tentative map or in these Conditions of Approval prior to the issuance of the first Building Permit.
122. Prior to the issuance of the first building permit for this project, the Developer shall pay Advanced Energy fees for all applicable Residential and Arterial Street Lights required for this development. Payment shall be made to the City of Moreno Valley

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and collected by the Land Development Division. Fees are based upon the Advanced Energy fee rate in place at the time of payment, as set forth in the current Listing of City Fees, Charges, and Rates adopted by City Council. The Developer shall provide a copy of the receipt to the Special Districts Division (specialdistricts@moval.org). Any change in the project which may increase the number of street lights to be installed will require payment of additional Advanced Energy fees at the then current fee. Questions may be directed to the Special Districts Division at 951.413.3480 or specialdistricts@moval.org.

123. This project is conditioned for a proposed district to provide a funding source for the operation and maintenance of public improvements and/or services associated with new development in that territory. The Developer shall satisfy this condition with one of the options outlined below.

a. Participate in a special election for maintenance/services and pay all associated costs of the election process and formation, if any. Financing may be structured through a Community Facilities District, Landscape and Lighting Maintenance District, or other financing structure as determined by the City; or

b. Establish an endowment fund to cover the future maintenance and/or service costs.

The Developer must notify the Special Districts Division at 951.413.3480 or at specialdistricts@moval.org when submitting the application for building permit issuance. If the first building permit is pulled prior to formation of the district, this condition will not apply. If the district has been or is in the process of being formed the Developer must inform the Special Districts Division of its selected financing option (a. or b. above). The option for participating in a special election requires 90 days to complete the special election process. This allows adequate time to be in compliance with the provisions of Article 13C of the California Constitution.

The financial option selected shall be in place prior to the issuance of the first certificate of occupancy for the project.

Prior to Map Approval

124. This project has been conditioned to provide a funding source for the continued maintenance, enhancement, and/or retrofit of parks, open spaces, linear parks, and/or trail systems. The Developer shall satisfy this condition with one of the options below.

a. Participate in a special election for annexation into Community Facilities District No. 1 or other district and pay all associated costs of the special election

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process and formation, if any; or

b. Establish an endowment fund to cover future maintenance costs for new neighborhood parks.

The Developer must notify the Special Districts Division at 951.413.3480 or at [specialdistricts@moval.org](mailto:specialdistricts@moval.org) of its selected financial option prior to City Council action authorizing recordation of the final map for the development. A minimum of 90 days is needed to complete the special election process. This allows adequate time to be in compliance with the provisions of Article 13C of the California Constitution for conducting a special election.

Annexation to CFD No. 1 shall be completed or proof of payment to establish the endowment fund shall be provided prior to the issuance of the first building permit for this project.

125. This project has been identified to be included in the formation of a Community Facilities District for Public Safety services including but not limited to Police, Fire Protection, Paramedic Services, Park Rangers, and Animal Control services. The property owner(s) shall not protest the formation; however, they retain the right to object to the rate and method of maximum special tax. In compliance with Proposition 218, the property owner shall agree to approve the mail ballot proceeding (special election) for either formation of the CFD or annexation into an existing district that may already be established. The Developer must notify the Special Districts Division at 951.413.3480 or [specialdistricts@moval.org](mailto:specialdistricts@moval.org) of its intent to record the final map for the development 90 days prior to City Council action authorizing recordation of the map. This allows adequate time to be in compliance with the provisions of Article 13C of the California Constitution. (California Government Code Section 53313 et. seq.)
126. Residential (R) If Land Development, a Division of the Public Works Department, requires this project to supply a funding source necessary to provide for, but not limited to, stormwater utilities services for the required continuous operation, maintenance, monitoring, systems evaluation and enhancements of on-site facilities and performing annual inspections of the affected areas to ensure compliance with state mandated storm water regulations, a funding source needs to be established. The Developer must notify the Special Districts Division at 951.413.3480 or at [specialdistricts@moval.org](mailto:specialdistricts@moval.org) of its selected financial option for the National Pollution Discharge Elimination System (NPDES) program (see Land Development's related condition). Participating in a special election the process requires a 90 day period prior to City Council action authorizing recordation of the final map for the development and to participate in a special election process. This allows adequate time to be in compliance with the provisions of Article 13D of the California Constitution. California Health and Safety Code Sections 5473 through 5473.8



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(Ord. 708 Section 3.1, 2006) & City of Moreno Valley Municipal Code Title 3, Section 3.50.050.)

127. Prior to the recordation of the final map, the Developer shall provide all necessary documents to convey to the City the required easements for parkway and/or slope maintenance as specified on the tentative map or in these Conditions of Approval.
128. Easements for reverse frontage parkway and slope landscape areas abutting Lasselle St. shall be 10ft. and Krameria Ave. shall be 6ft. or to top of parkway facing slope or to face of perimeter tract wall, whichever is greater. Easements shall be dedicated to the City of Moreno Valley for landscape maintenance purposes, and shall be depicted on the final map, and an offer of their dedication made thereon.

**PARKS & COMMUNITY SERVICES DEPARTMENT**

129. This project is subject to current Development Impact Fees.
130. This project is required to supply a funding source for the continued maintenance, enhancement, and or retrofit of neighborhood parks, open spaces, linear parks, and/or trails systems. This can be achieved through annexing into Community Facilities District No. 1 (Park Maintenance). Please contact the Special Districts Division at 951.413.3480 or specialdistricts@moval.org to complete the annexation process.
131. This project is subject to current Quimby Fees.
132. The parcel(s) associated with this project have been incorporated into the Moreno Valley Community Services District Zone A (Parks and Community Services). All assessable parcels therein shall be subject to the annual Zone 'A' charge for operations and capital improvements. Proof of such shall be supplied to Parks and Community Services upon Final Map and at Building Permits.





Attachment: Project Site Plan (3376) : The proposal includes a General Plan Amendment, Specific Plan

NOT TO SCALE

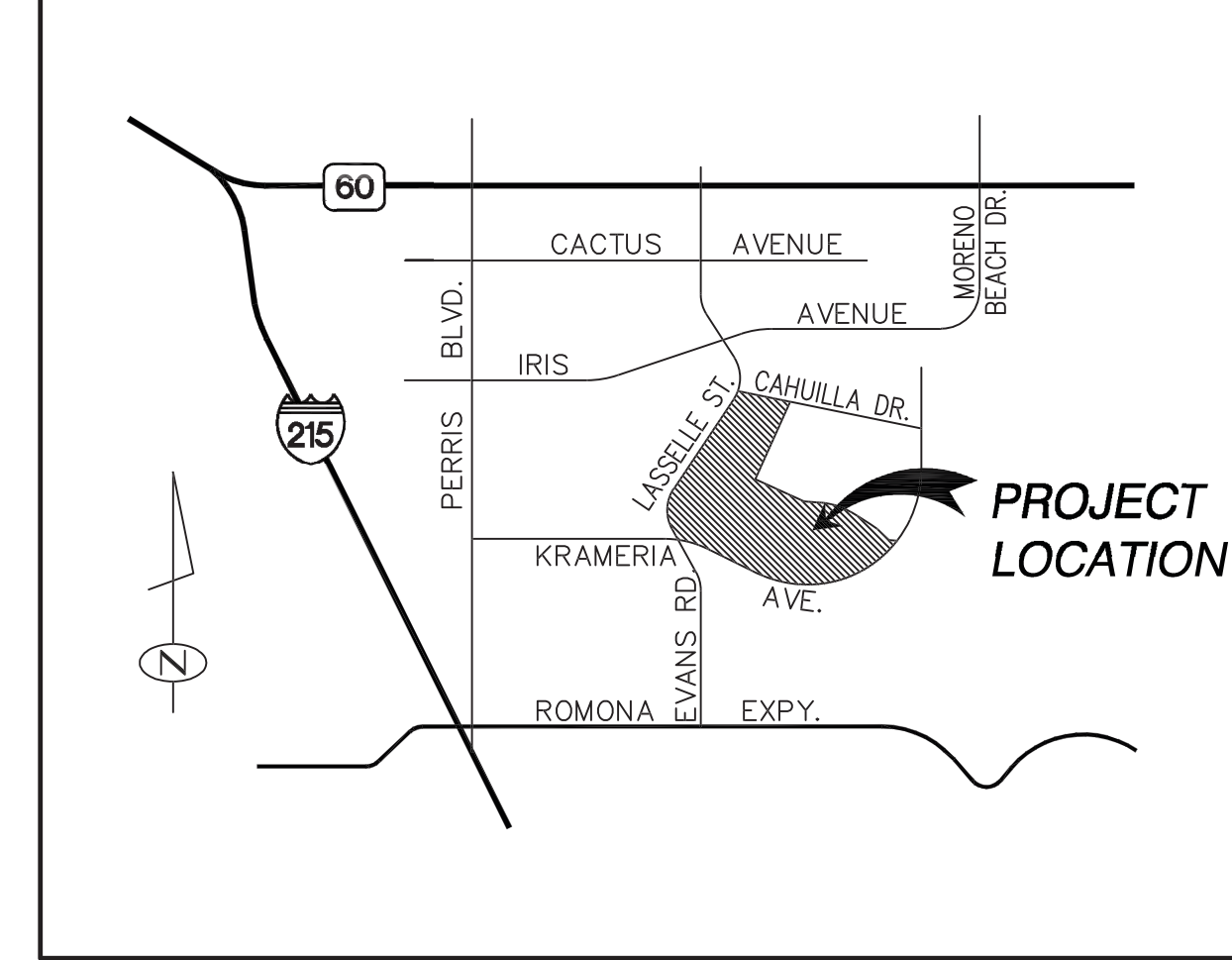


# TENTATIVE PARCEL MAP NO. 37514

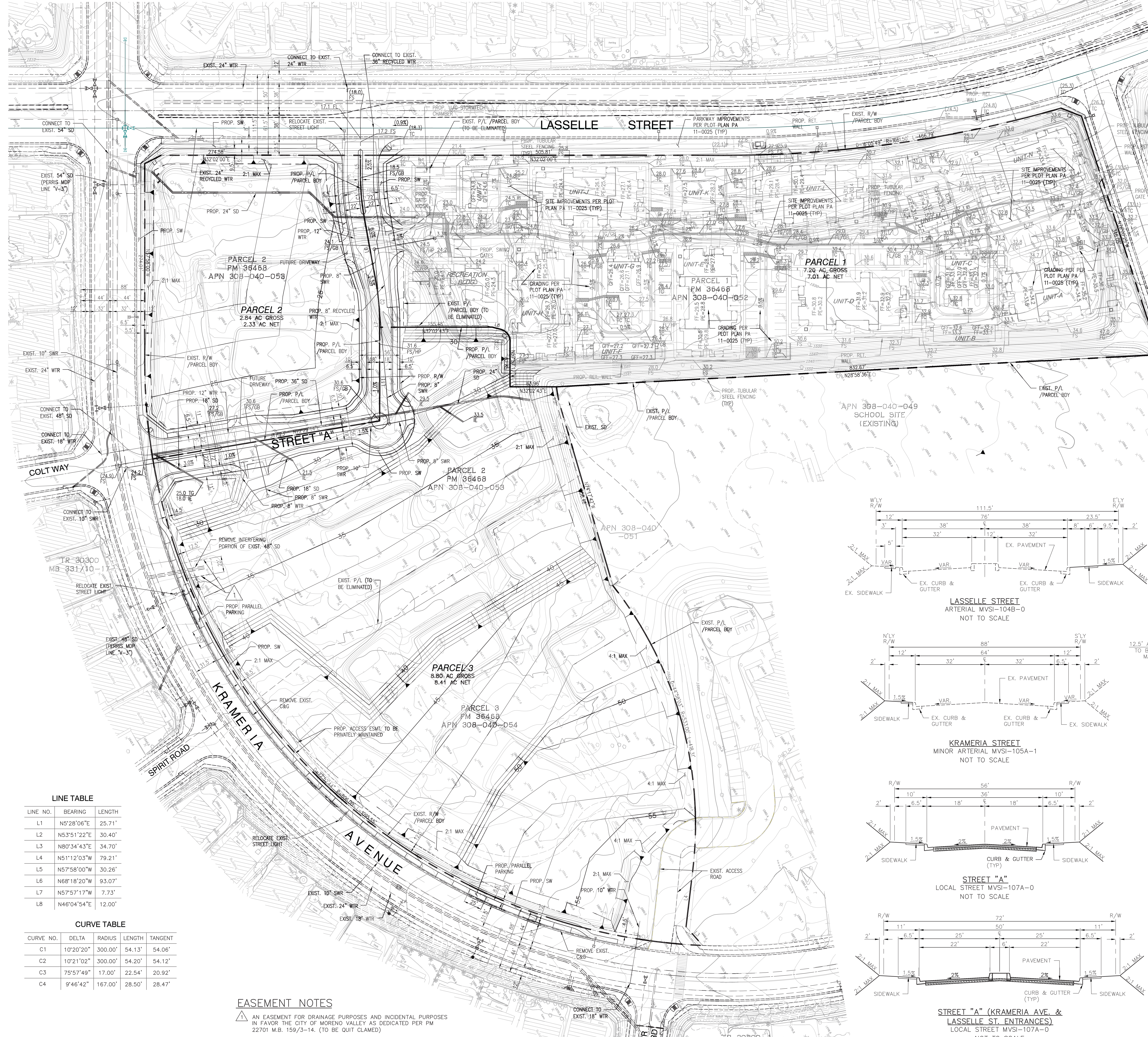
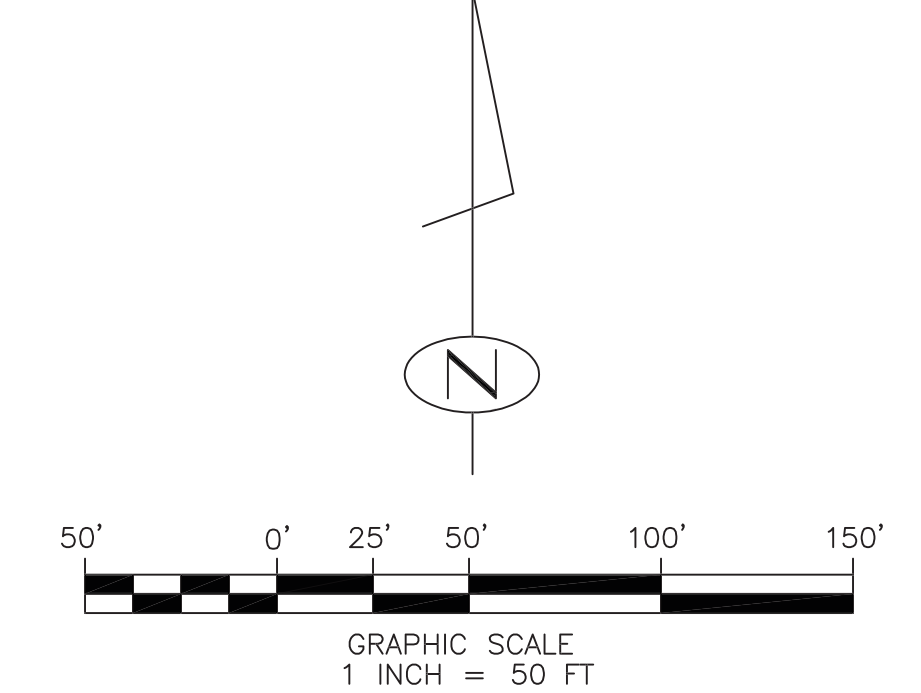
PARCEL 1 OF PARCEL MAP NO. 36468, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP FILED IN BOOK 243, PAGES 27 THROUGH 29 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

ASSESSOR PARCEL NUMBERS 308-050-052, 308-050-053 AND 308-050-053

APRIL, 2018



VACINITY MAP  
NOT TO SCALE



### GENERAL NOTES

- ASSESSOR PARCEL NUMBER (APN): 308-040-052, 308-040-053 AND 308-040-054.
- THE PROPERTY SHOWN HEREON CONTAINS THE ENTIRE CONTIGUOUS OWNER.
- TOTAL APPROXIMATE AREA: 18.84 AC GROSS
- CONTOUR INTERVAL = 1 FOOT.
- ALL SLOPES ARE 2:1 OR FLATTER.
- NO REGULATED TREES EXIST ON SITE, UNLESS NOTED.
- THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS MAP ARE APPROXIMATE.
- SOURCE OF TOPOGRAPHY: PACIFIC COAST LAND CONSULTANTS, INC., 25069 JEFFERSON AVE., SUITE D, MURRIETA, CA 92562. PERFORMED ON MARCH 25, 2011.
- THIS PROJECT IS NOT LOCATED IN A SPECIAL STUDIES ZONE.
- THIS PROPERTY IS NOT SUBJECT TO LIQUEFACTION OR OTHER GEOLOGIC HAZARDS AND IS NOT LOCATED IN A SPECIAL STUDIES ZONE.
- THIS PROPERTY IS NOT SUBJECT TO OVERFLOW, INUNDATION OR OTHER FLOOD HAZARDS.
- PROJECT IS LOCATED ON PAGE 747, J-3 OF THOMAS BROTHERS (RIVERSIDE COUNTY, 2015 EDITION).

### EXISTING LAND USE NOTES

EXISTING ZONING: SP  
EXISTING LAND USE: RESIDENTIAL  
ADJACENT EXISTING LAND USE: RESIDENTIAL AND PUBLIC INSTITUTION

### FLOOD ZONING

THIS AREA IS NOT WITHIN A FLOOD HAZARD AREA. THE AREA IS CONSIDERED A ZONE X (UNSHADED) FLOOD HAZARD WHICH IS OUTSIDE OF THE 100-YEAR FLOOD LIMITS.

### LEGAL DESCRIPTION

PARCEL 1 OF PARCEL MAP NO. 36468, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP FILED IN BOOK 243, PAGES 27 THROUGH 29 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

### BENCHMARK

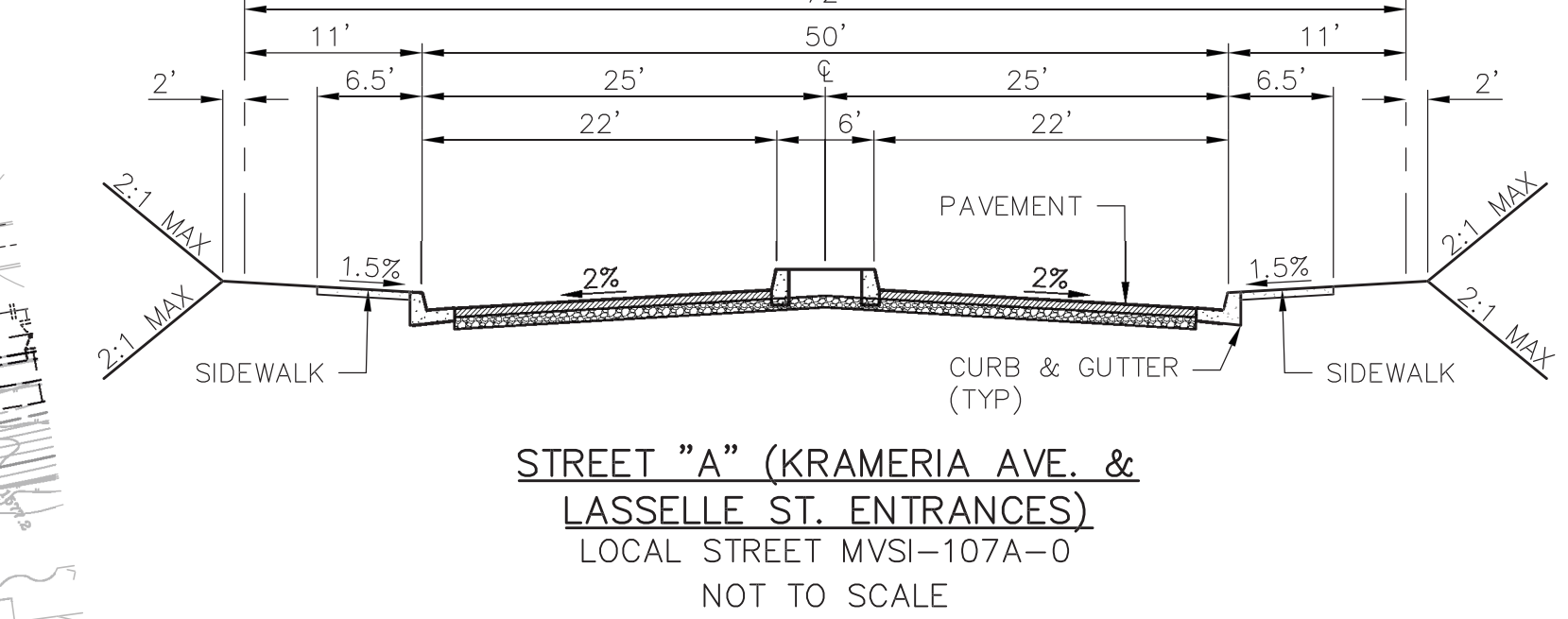
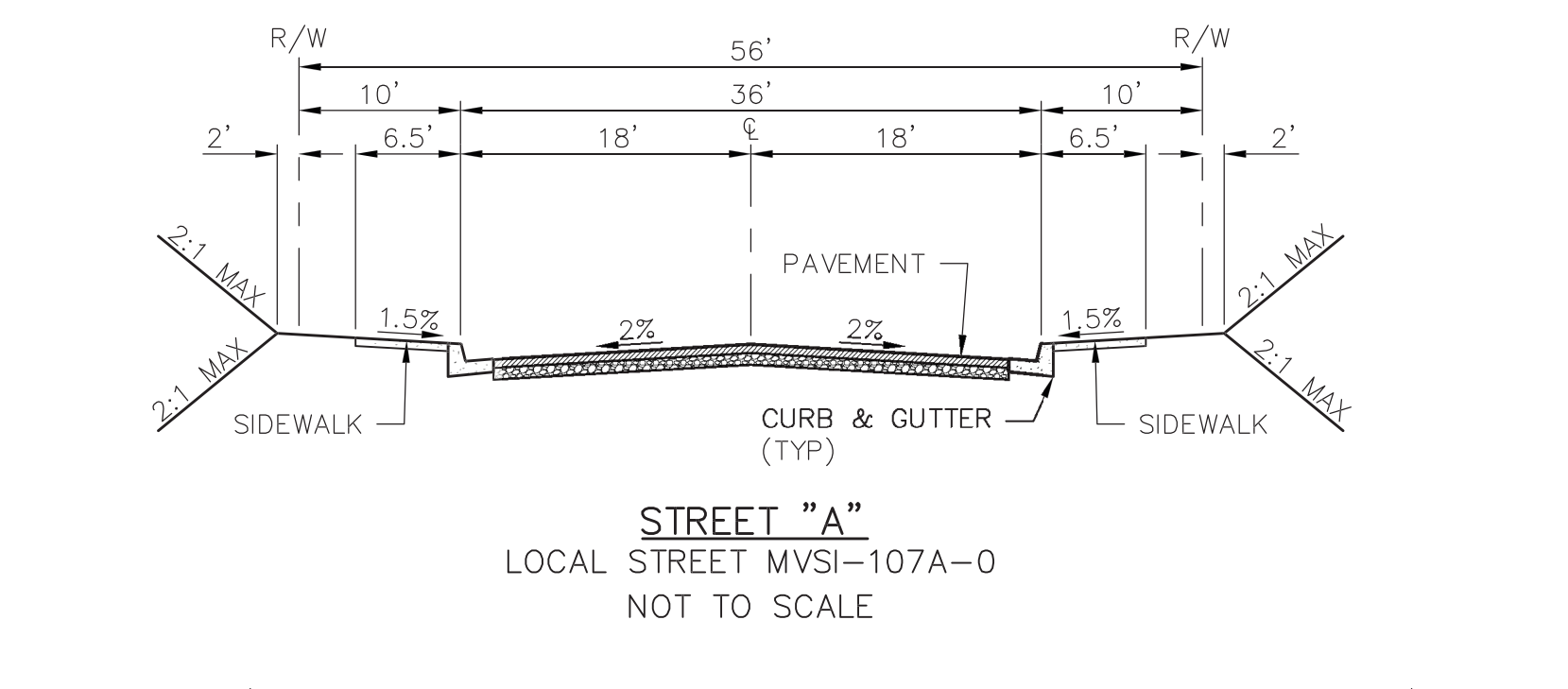
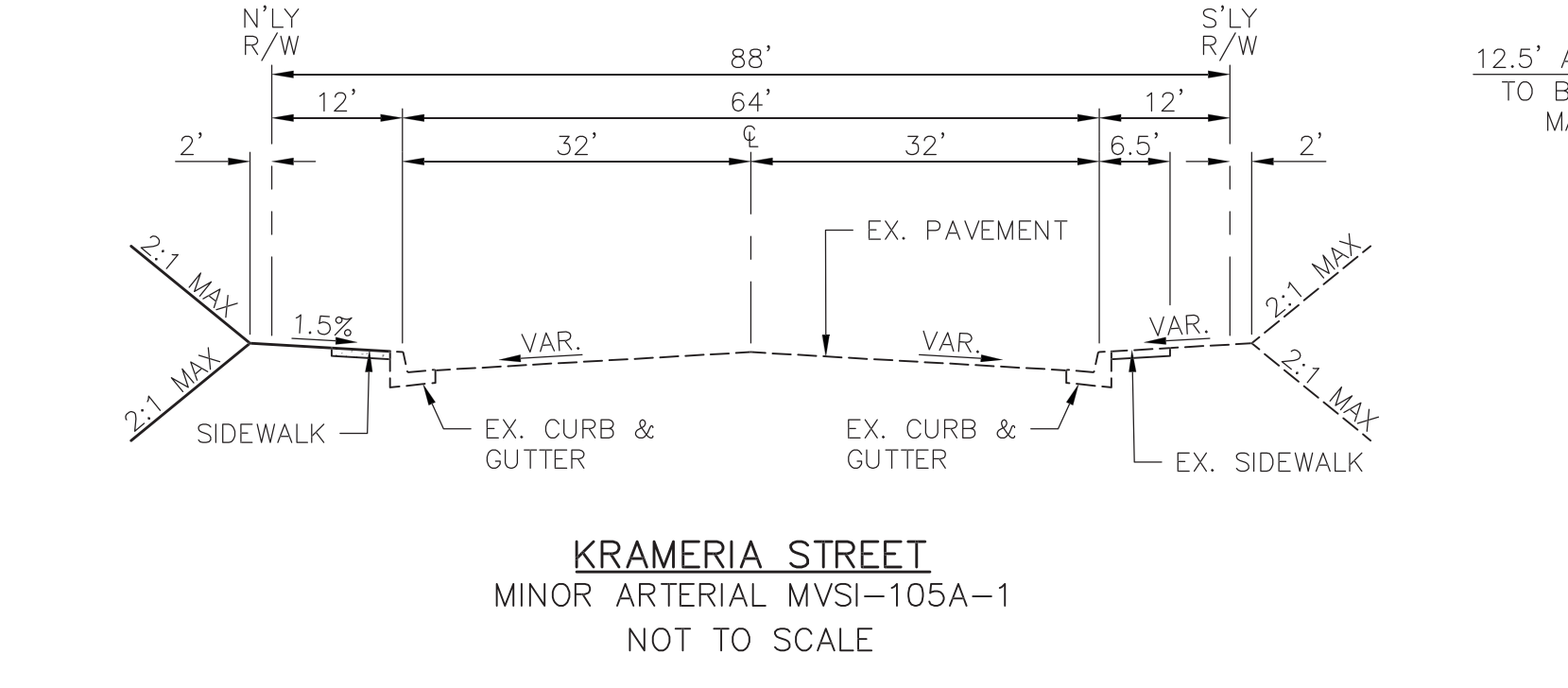
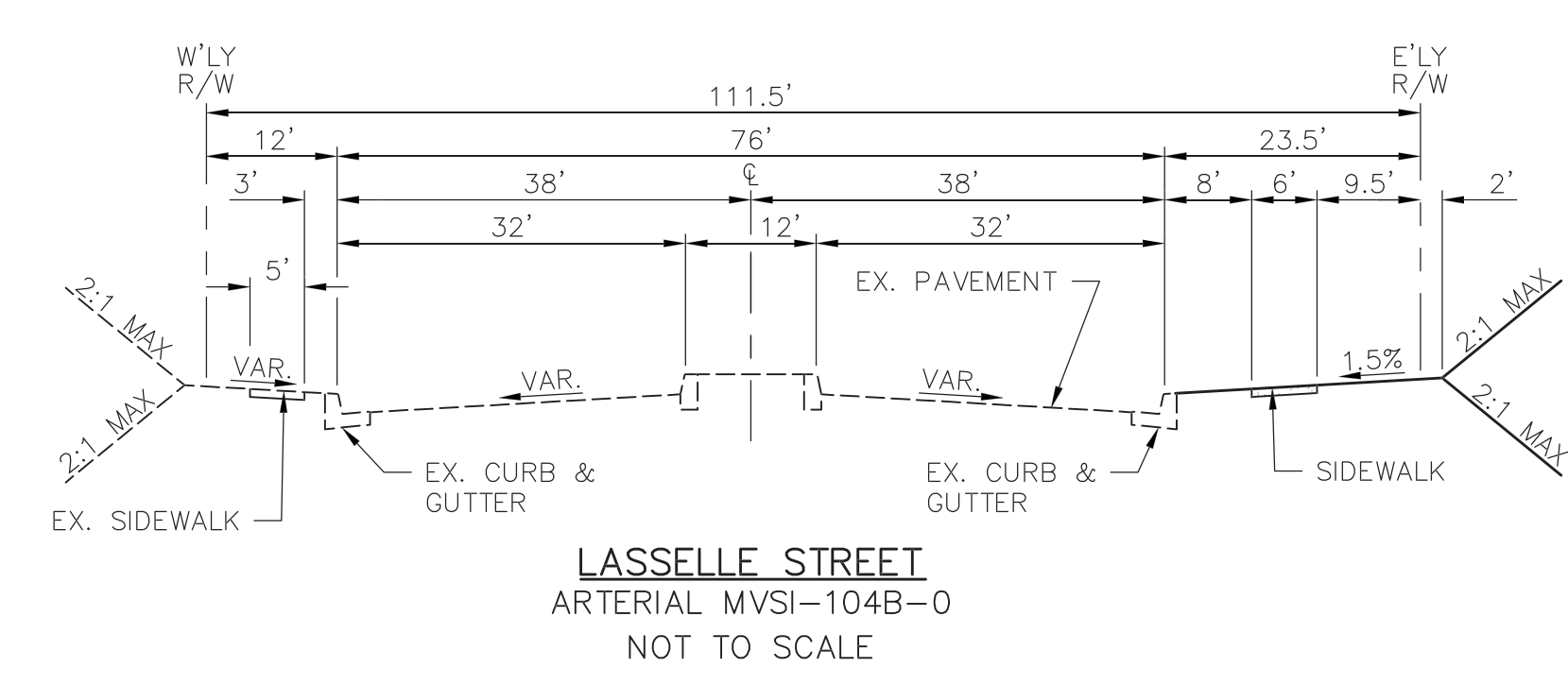
AT THE INTERSECTION OF PERRIS BOULEVARD AND IRIS AVENUE, 58.55 FEET SOUTHWEST OF A CHISELED "X" IN A 3" IRON CORNER POST; 40.89 FEET NORTHEAST OF NAIL AND TAG IN THE WEST SIDE OF POWER POLE #213136; 34.39 FEET NORTHWEST OF A NAIL AND TAG SET IN SOUTHWEST SIDE OF TELEPHONE POLE #15160; A 1" IRON PIPE AND TAG AND SURVEY IN A NADWELL MONUMENT; M-32, DATE 1963

### PARCEL AREA SUMMARY

PARCEL 1: 7.20 AC GROSS, 7.01 AC NET  
PARCEL 2: 2.84 AC GROSS, 2.33 AC NET  
PARCEL 3: 8.80 AC GROSS, 8.41 AC NET  
TOTAL ACREAGE: 18.84 AC GROSS, 17.75 AC NET

### LEGEND

- (xx.xx) EXISTING ELEVATION
- EXISTING PROPERTY LINE
- - - EXISTING RIGHT OF WAY
- RIGHT OF WAY
- - - PROJECT BOUNDARY
- 40 MAJOR CONTOUR
- MINOR CONTOUR
- 1.0% SLOPE INDICATOR
- SLOPE (IF > 4:1)
- SANITARY SEWER
- POTABLE/RECYCLED WATER
- STORM DRAIN



### UTILITY PURVEYORS

WATER: EASTERN MUNICIPAL WATER DISTRICT  
2270 TRUMBULE ROAD  
PERRIS, CA. 92572  
(951) 928-3777

SEWER: EASTERN MUNICIPAL WATER DISTRICT  
2270 TRUMBULE ROAD  
PERRIS, CA. 92572  
(951) 928-3777

ELECTRIC: MORENO VALLEY ELECTRIC DISTRICT  
6100 MENEFEE ROAD  
ROMOLAND, CA 92585  
(800) 655-4555

NATURAL GAS: SOUTHERN CALIFORNIA GAS COMPANY  
527 NORTH SAN JACINTO STREET  
HEMET, CA 92543  
(800) 427-2200

TELEPHONE: VERIZON  
30098 HAJUN RD #320  
MENEFEE, CA 92584  
(951) 723-8452

CABLE: FRONTIER  
SOUTH 4TH STREET  
REDLANDS, CA 92373  
(877) 507-7905

### ABBREVIATIONS

|            |                        |       |                |
|------------|------------------------|-------|----------------|
| AC         | ASPHALT CONCRETE       | LP    | LOW POINT      |
| APN        | ASSESSOR PARCEL NUMBER | PE    | PAD ELEVATION  |
| BO         | BOUNDARY               | P/L   | PROPERTY LINE  |
| CB         | CATCH BASIN            | PM    | PARCEL MAP     |
| C/L        | CENTERLINE             | EXST. | EXIST.         |
| DC         | DOUBLE DETECTOR CHECK  | R/W   | RIGHT OF WAY   |
| ESMT.      | EASEMENT               | SW    | STORM DRAIN    |
| EP         | EDGE OF PAVEMENT       | SD    | SIDEWALK       |
| EX. EXIST. | EXISTING               | SWR   | SANITARY SEWER |
| FG         | FINISH GRADE           | TC    | TOP OF CURB    |
| FF         | FINISH FLOOR           | TO    | TOP OF GRADE   |
| FL         | FLOW LINE              | TRW   | TEMPORARY      |
| FS         | FINISH SURFACE         | WTR   | POTABLE WATER  |
| GB         | GRADE BREAK            | VAR.  | VARIES         |
| HP         | HIGH POINT             |       |                |

### OWNER

CONTINENTAL EAST FUND III, L.L.C.  
25467 MEDICAL CENTER DR., SUITE 201  
MURRIETA, CA 92562

### ENGINEER

ANDERSON CONSULTING ENGINEERS, INC  
12526 HIGH BLUFF DRIVE, SUITE 300  
SAN DIEGO, CA 92130  
CONTACT: JEFFERY A. ANDERSON  
EMAIL: jaa@ace-civil.com  
TELEPHONE: (858) 925-7918

### APPLICANT

CONTINENTAL EAST FUND III, L.L.C.  
25467 MEDICAL CENTER DR., SUITE 201  
MURRIETA, CA 92562  
CONTACT: ANDREW SPOUSTA  
EMAIL: aspousta@continentaldev.com  
TELEPHONE: (951) 600-8600

### LINE TABLE

| LINE NO. | BEARING     | LENGTH |
|----------|-------------|--------|
| L1       | N5°28'06"E  | 25.71' |
| L2       | N5°35'12"E  | 30.40' |
| L3       | N80°34'43"E | 34.70' |
| L4       | N51°12'03"W | 79.21' |
| L5       | N57°58'00"W | 30.26' |
| L6       | N68°18'20"W | 93.07' |
| L7       | N57°57'17"W | 7.73'  |
| L8       | N46°04'54"E | 12.00' |

### CURVE TABLE

| CURVE NO. | DELTA     | RADIUS  | LENGTH | TANGENT |
|-----------|-----------|---------|--------|---------|
| C1        | 10°20'20" | 300.00' | 54.13' | 54.06'  |
| C2        | 10°21'02" | 300.00' | 54.20' | 54.12'  |
| C3        | 75°57'49" | 17.00'  | 22.54' | 20.92'  |
| C4        | 9°46'42"  | 167.00' | 28.50' | 28.47'  |

### EASEMENT NOTES

AN EASEMENT FOR DRAINAGE PURPOSES AND INCIDENTAL PURPOSES IN FAVOR OF THE CITY OF MORENO VALLEY AS DEDICATED PER PM 22701 M.B. 159/3-14. (TO BE QUIT CLAIMED)

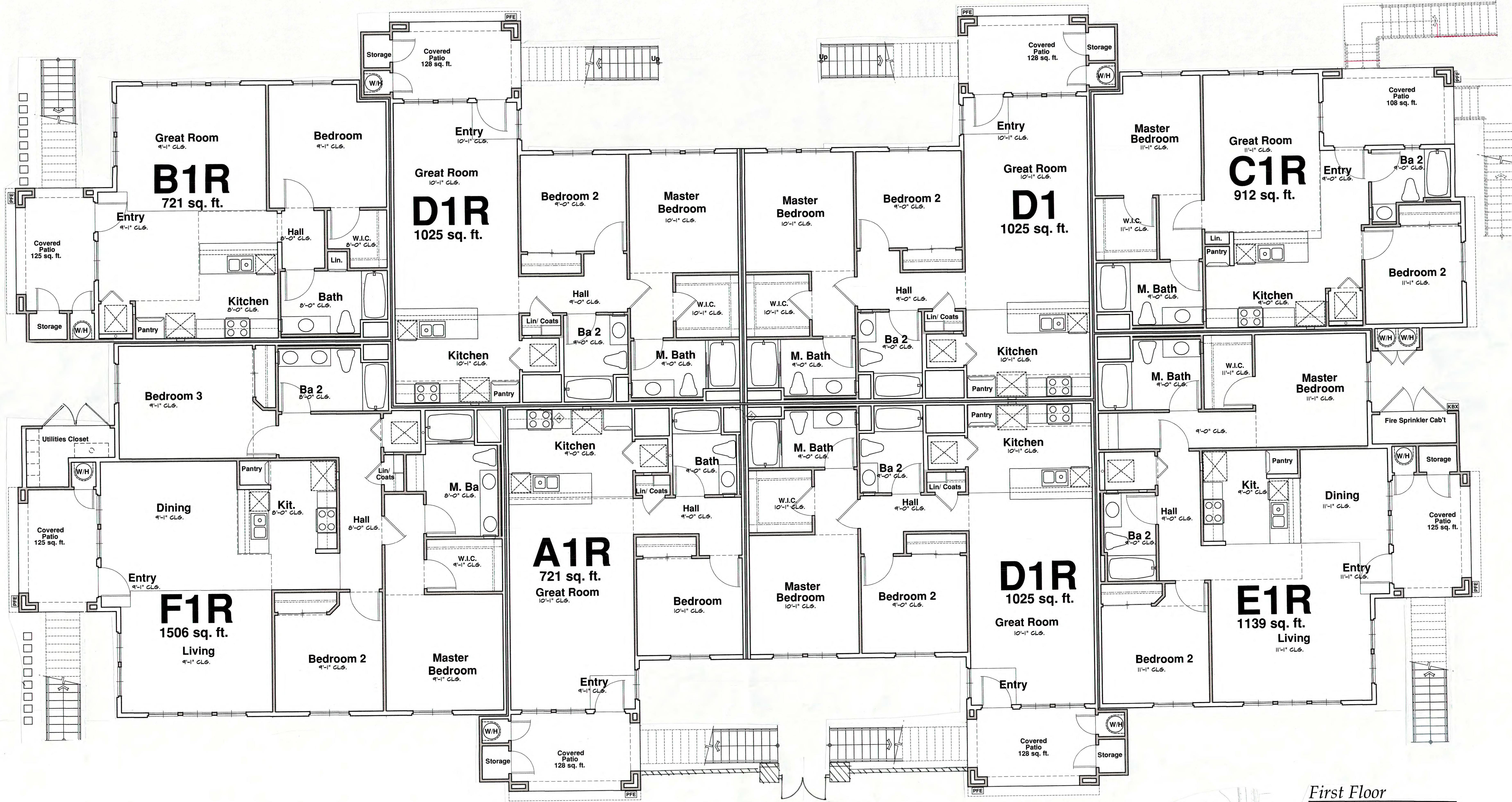
**ANDERSON CONSULTING ENGINEERS, INC.**  
12526 HIGH BLUFF DR. SUITE 300  
SAN DIEGO, CA 92130  
(858) 925-7918

## TENTATIVE PARCEL MAP NO. 37514

CITY OF MORENO VALLEY, STATE OF CALIFORNIA

| SUBMITTALS       |  |
|------------------|--|
| DESIGNED BY: JAA |  |
| DRAWN BY: JAA    |  |
| CHECKED BY: JAA  |  |
| SHEET 1 OF 1     |  |





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 (951) 600-8600

8074 S.F. @ 1<sup>st</sup> FLOOR  
 8074 S.F. @ 2<sup>nd</sup> FLOOR  
 16,148 BUILDING TOATL SQUARE FOOTAGE

# Apartments Continental Villages

Moreno Valley, CA



Site Plan

## First Floor Floor Plan

Scale: 1/4" = 1'-0"

**PEKAREK** architects, inc.

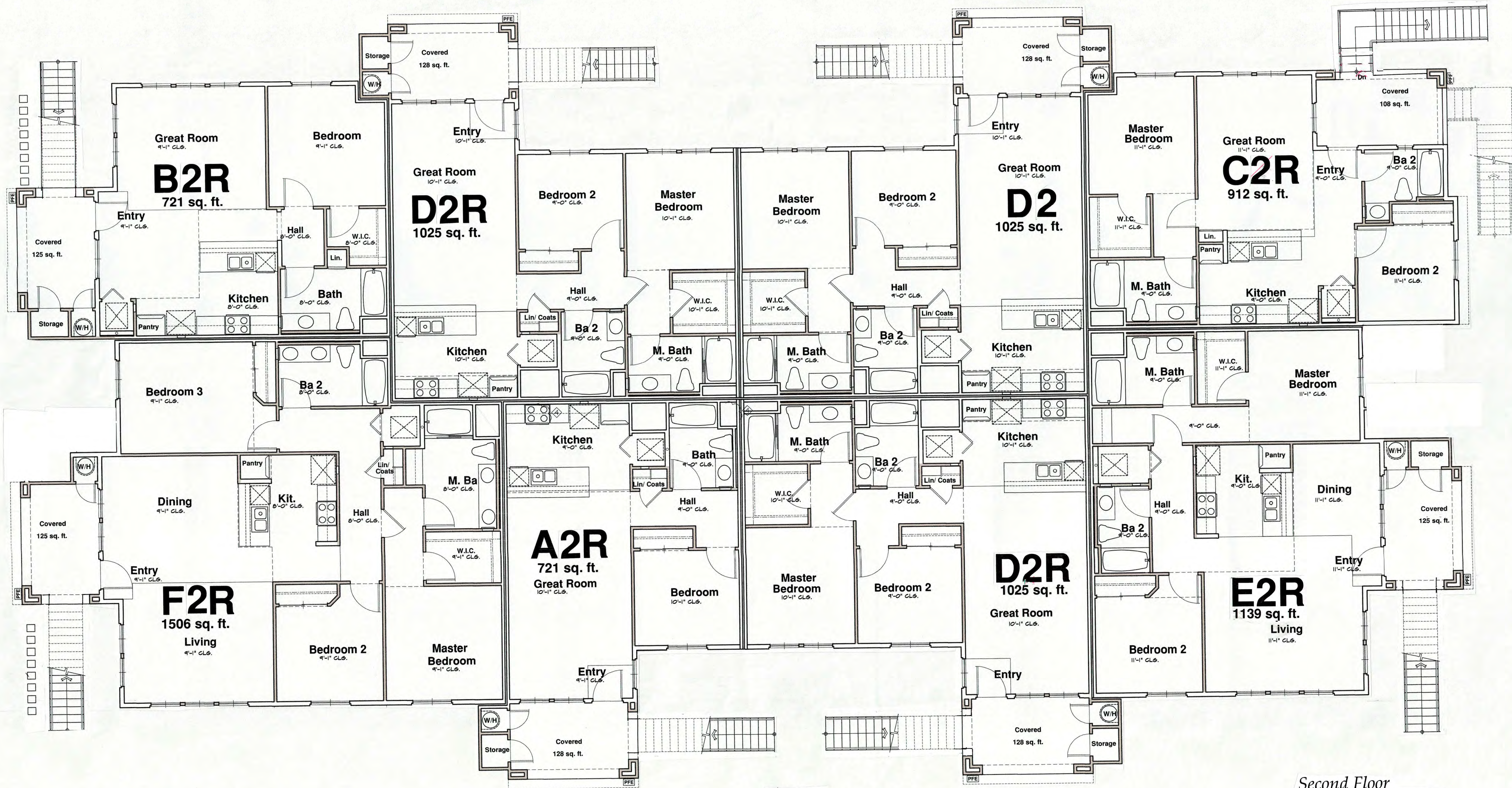
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 san juan capistrano  
 ca, 92675  
 (949) 487-2320

5-1-18 5-24-18,

#18-12  
PEN18-0107

Attachment: Project Plans - Apartments (3376 - The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of Zone, a Plot Plan)





FRONT

Second Floor  
**Floor Plan**

Scale: 1/4" = 1'-0"

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*Apartments*  
**Continental Villages**

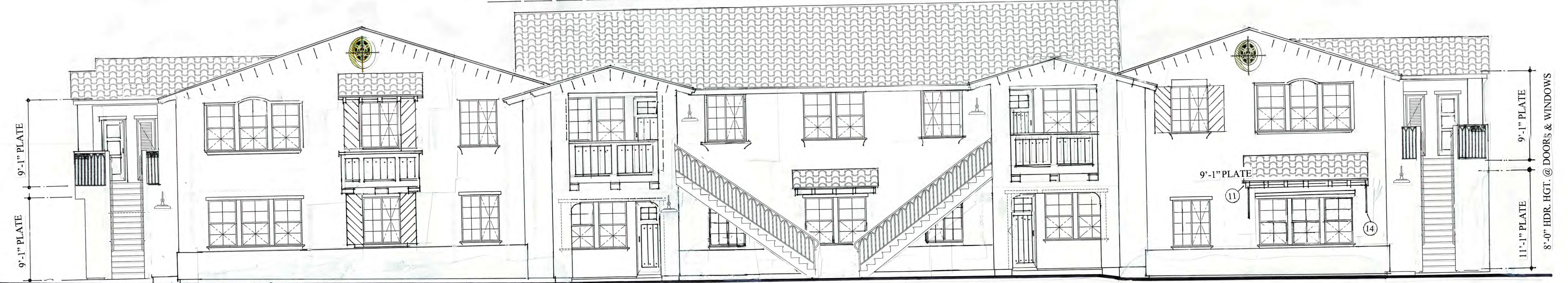
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MAX. BUILDING HEIGHT - 30'-0" @ FINISH GRADE



**FRONT ELEVATION**

**EXTERIOR MATERIALS**

1. CONCRETE 'S' ROOF TILE
2. STUCCO
3. 2x 6 FASCIA
4. 2 x 8 BARGE
5. METAL LOUVERED DOOR
6. SHAPED FOAM SILL W/ STUCCO OVER DECORATIVE POLURETHANE SHUTTERS
7. METAL HANDRAIL @ STAIRS
8. "HARDWOOD" SIDING @ DECKS
9. STUCCO OVER FOAM CORBELS
10. EXPOSED WOOD TAILS
11. FURRED BASE
12. METAL FINIAL @ GABLE
13. METAL BRACKETS @ SHED ROOF
14. STUCCO OVER FOAM TRIM @ WINDOWS & DOORS
15. MAX. BUILDING HEIGHT - 30'-0" @ FINISH GRADE

**SPANISH STYLE ARCHITECTURE**

**Vents**

- Standard clay pipe +/-3" diameter
- Opening in wall with full stucco wrap and screen behind
- Mission clay tile stacked in opening extended minimum 1" from face and screen behind

**Architectural Elements**

- Long porches in the form of colonnaded arcades with elaborate masonry arches supporting the roof.
- Porches can have roofs as extensions of main roof or a separate shed roof.
- Columns supporting the porches can be of heavy timber often with a bracket above or square Greek revival columns.
- Cantilevered second floor porches on two-story houses with delicate wooden balustrades.
- Second level cantilevers over wood or precast concrete corbels.
- Doors on the second floor can have Juliet balconies with wrought iron railing and brackets.
- Recesses door and window openings in convex thick wall appearance.
- Arched shaped windows complementing the colonnaded arcades. Square, rectangular and round window shapes can also be used according to the design requirements.
- Decorative iron details over the windows.
- Simple window trims with a header and sill. Variations of sill include sloping and sculpted stucco sills.
- Decorative iron lanterns, sconces, hinges and hardware.
- Shutters as occasional accents.

**Arch Types**

**Corbels**

**Doors**

**Windows Configuration & Hardware**

**Chimneys**

**Spanish Colonial**

**History and Character**

Spanish inspired homes began appearing in the early part of the twentieth century in the form of the Mission style, reflecting a loose adaptation of features often found in detailing from Moorish influences and other various styles. Spanish Colonial Style is unified by the order of arches, courtyards, strong form and cast-plaster wall surfaces, and tile roofs, all derived from Mediterranean architectural styles. It is most often characterized by an informal plan arrangement and massing. This informality reflects the natural composition of the farmhouse and small estates of Spain, which were not symmetrically composed.

**General Attributes:**

**Massing**

- Simple hip and gable shed roof form
- Formal focus of elevation to enhanced front door surround
- Usually 2 story main house form, supported by one or two story wings forming a courtyard

**Roofs**

- Low pitched roofs of 3:12 to 4:12
- Exposed rafter tails or continuous corbel at eave
- Clay or concrete barrel tile

**Windows and Doors**

- Deep recessed windows and doors of vertical proportions
- Front door may have enhanced precast concrete or plaster surround with balcony above
- Shutters are not typical to style

**Details and Ornamentation**

- Ornate wrought iron balconies, window grills, awning braces, and light fixtures

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**Apartments**  
**Continental Villages**

Moreno Valley, CA

**Elevation**

Scale: 1/4" = 1'-0"

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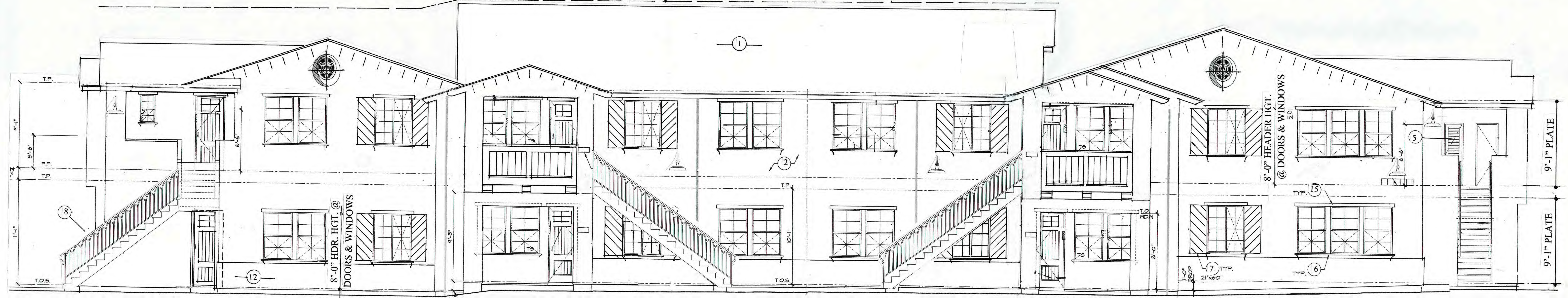


**RIGHT ELEVATION**

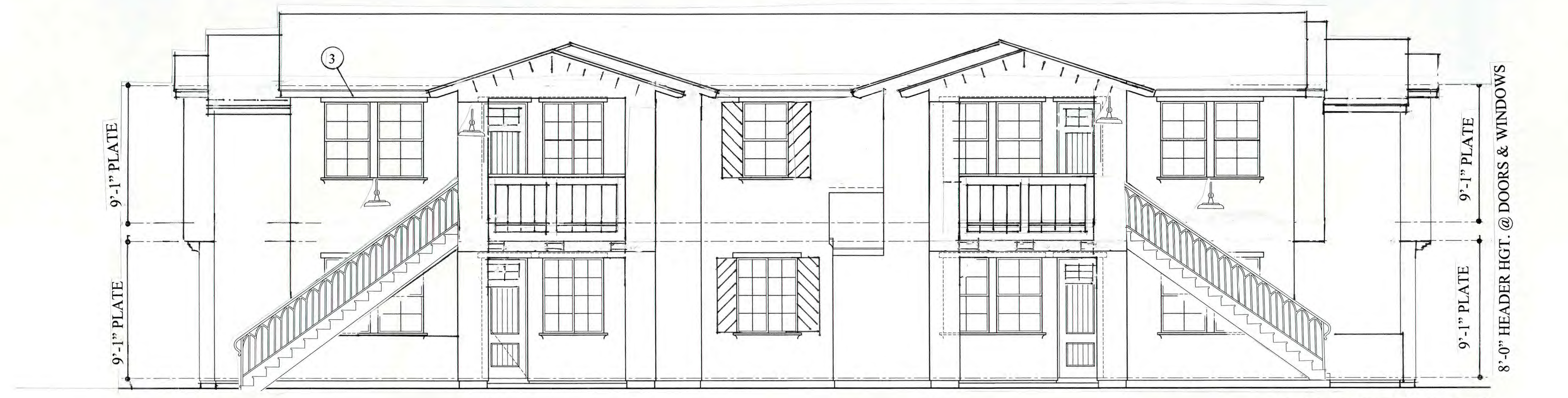
**EXTERIOR MATERIALS**

1. CONCRETE 'S' ROOF TILE
2. STUCCO
3. 2x 6 FASCIA
4. 2 x 8 BARGE
5. METAL LOUVERED DOOR
6. SHAPED FOAM SILL W/ STUCCO OVER
7. DECORATIVE POLURETHANE SHUTTERS
8. METAL HANDRAIL @ STAIRS
9. "HARDWOOD" SIDING @ DECKS
10. STUCCO OVER FOAM CORBELS
11. EXPOSED WOOD TAILS
12. FURRED BASE
13. METAL FINIAL @ GABLE
14. METAL BRACKETS @ SHED ROOF
15. STUCCO OVER FOAM TRIM @ WINDOWS & DOORS
16. MAX. BUILDING HEIGHT - 30'-0" @ FINISH GRADE

MAX. BUILDING HEIGHT - 30'-0" @ FINISH GRADE



**REAR ELEVATION**



**LEFT ELEVATION**

**ROOF NOTES**

1. 4:12 ROOF PITCH
2. 24" EAVE OVERHANG
3. 12" RAKE OVERHANG
4. CONCRETE 'S' TILE

*Elevations*

Scale: 1/4" = 1'-0"

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*Apartments*  
**Continental Villages**

Moreno Valley, CA



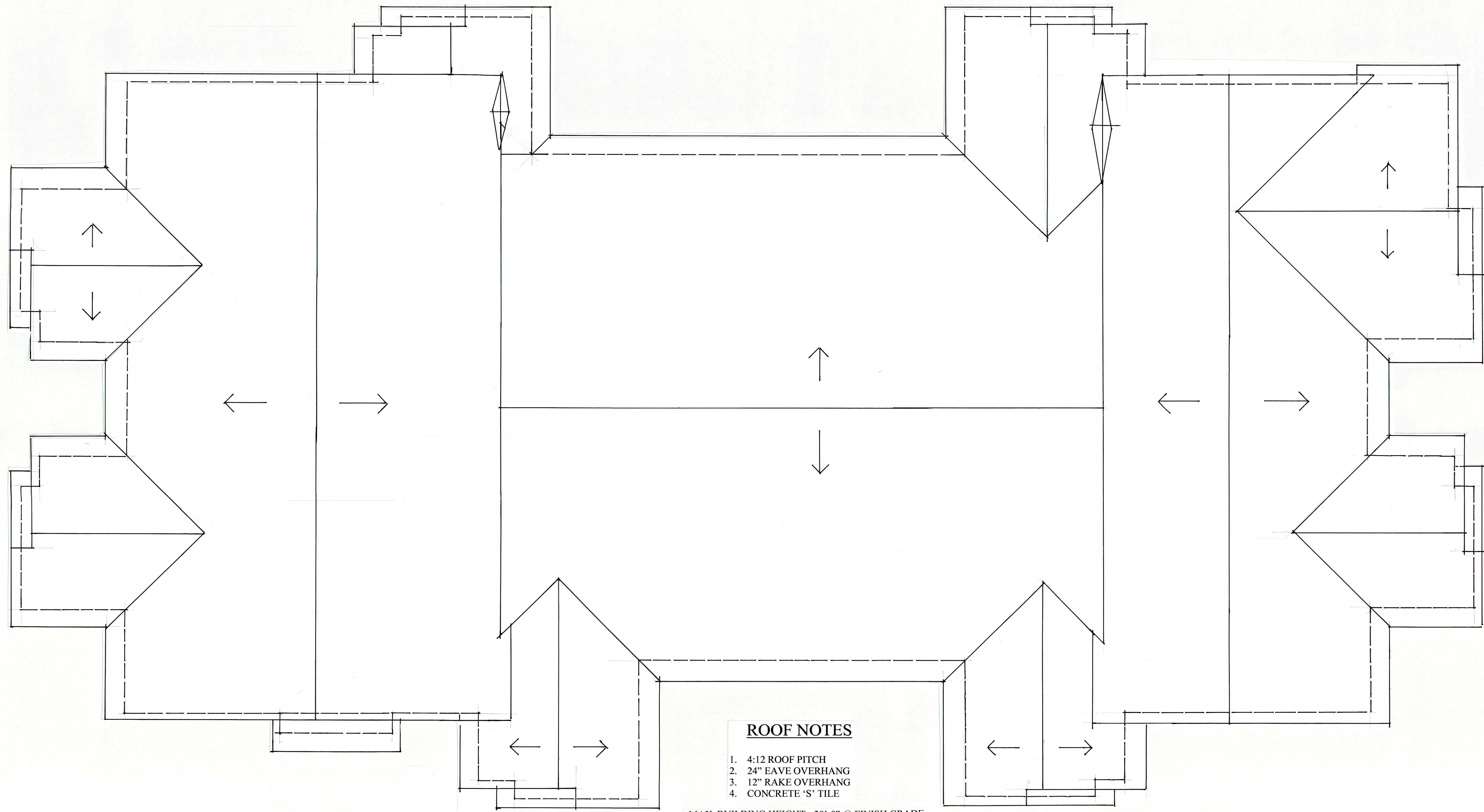
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PEN18-0107

Attachment: Project Plans - Apartments (3376 - The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of Zone, a Plot Plan)





**ROOF NOTES**

- 1. 4:12 ROOF PITCH
- 2. 24" EAVE OVERHANG
- 3. 12" RAKE OVERHANG
- 4. CONCRETE 'S' TILE

MAX. BUILDING HEIGHT - 30'-0" @ FINISH GRADE

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*Apartments*  
**Continental Villages**

Moreno Valley, CA

**Roof Plan**

Scale: 1/4" = 1'-0"



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 PEN-0107





FRONT ELEVATION

SPANISH STYLE ARCHITECTURE

**Corbels**

- 2nd level cantilever over wood or precast concrete corbels
- Shaped wood corbel on masonry
- Sculpted corbel

**Doors**

- Small square
- No glass
- Full glass in style & rail door
- Small glass in full arch plank door

**Windows Configuration & Hardware**

- Full arch over double panel
- Two singles
- Circle
- Twisted iron cross over accent window or vent

**Chimneys**

- Stucco & clay cap double flue
- Stucco - opening two ends
- Stucco & tile arch opening at gable & side opening

**Vents**

- Standard clay pipe +/- 3" diameter
- Opening in wall with full stucco wrap and screen behind
- Mission clay tile stacked in opening extended minimum 1" from face and screen behind

**Architectural Elements**

- Long porches in the form of colonnaded arcades with elaborate masonry arches supporting the roof.
- Porches can have roofs as extensions of main roof or a separate shed roof.
- Columns supporting the porches can be of heavy timber often with a bracket above or square Greek revival columns.
- Cantilevered second floor porches on two-story houses with delicate wooden balustrades.
- Second level cantilevers over wood or precast concrete corbels.
- Doors on the second floor can have Juliet balconies with wrought iron railing and brackets.
- Recessed door and window openings to convey thick wall appearance.
- Arched shaped windows complementing the colonnaded arcades. Square, rectangular and round window shapes can also be used according to the design requirements.
- Decorative iron details over the windows.
- Simple window trims with a header and sill. Variations of sill include sloping and sculpted stucco sills.
- Decorative iron lanterns, sconces, hinges and hardware.
- Shutters as occasional accents.

**Arch Types**

- Full arch-over-radius point
- Elliptical-7 radius points
- Palladian
- Arch detail in courtyard

**Spanish Colonial**

**History and Character**

Spanish inspired homes began appearing in the early part of the twentieth century in the form of the Mission style, reflecting a loose adaptation of features often found in detailing from Moorish influences and other various styles. Spanish Colonial Style is unified by the order of arches, courtyards, arched form and mass, plain wall surfaces, and tile roofs, all derived from Mediterranean architectural styles. It is most often characterized by an informal plan arrangement and massing. This informality reflects the natural composition of the farmhouse and small estates of Spain, which were not symmetrically composed.

**General Attributes:**

**Massing**

- Single hip and gable shed roof form
- Formal focus of elevation to enhanced front door surround
- Usually 2 story main house form, supported by one or two story wings forming a courtyard

**Roofs**

- Low pitched roofs of 3:12 to 4:12
- Exposed rafters or continuous corbel at eave
- Clay or concrete barrel tile

**Windows and Doors**

- Deep recessed windows and doors of vertical proportions
- Front door may have enhanced precast concrete or plaster surround with balcony above
- Shutters are not typical to style

**Details and Ornamentation**

- Ornate wrought iron balconies, window grills, awning braces, and light fixtures

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Apartments  
 Continental Villages

Moreno Valley, CA

Elevation

Scale: 1/4" = 1'-0"



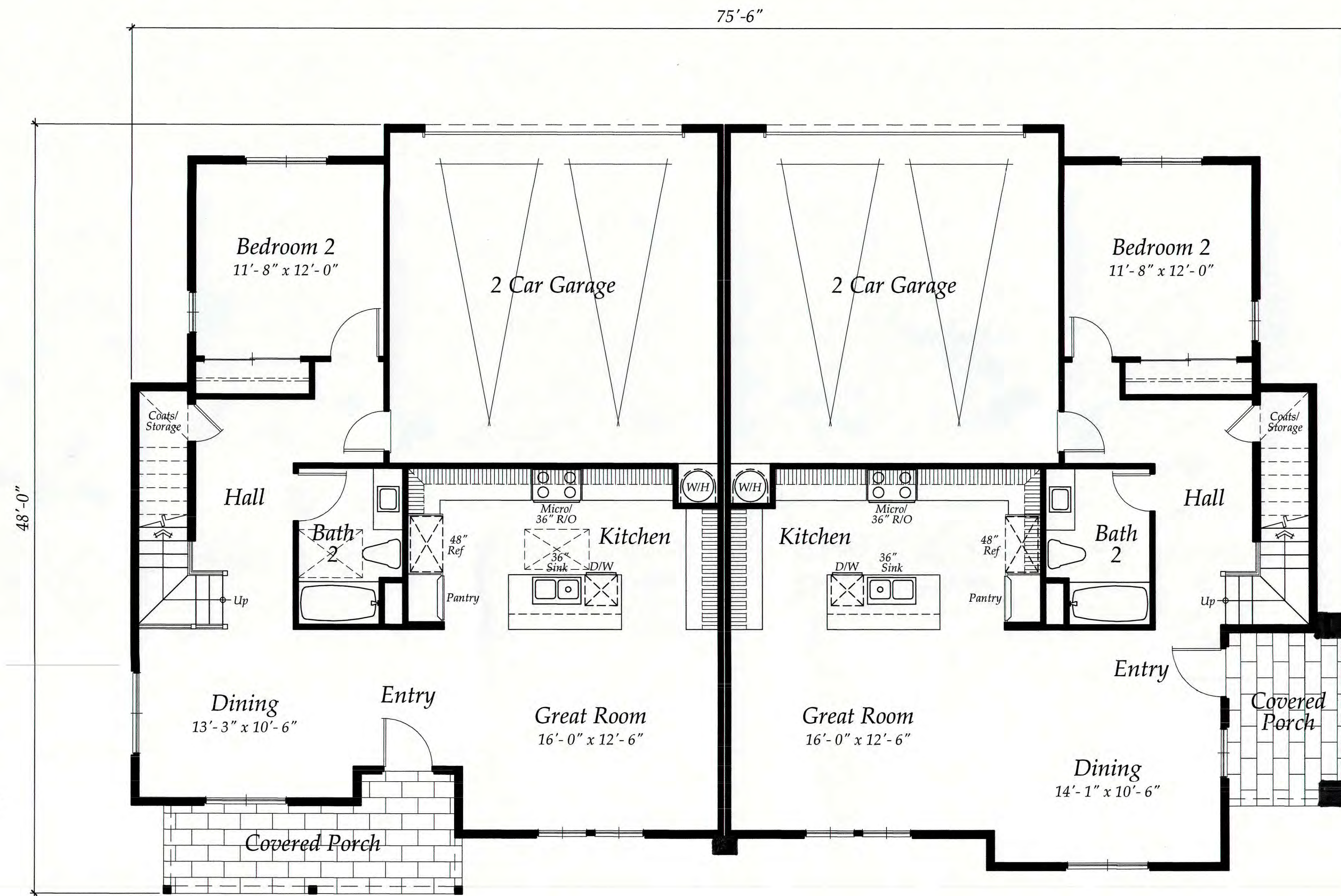
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5-1-18 5-24-18

#18-12  
 PEN18-0107



**Plan A**  
2,215 Sq. Ft.



*First Floor*

Scale: 1/4" = 1'-0"



**Plan B**  
2,233 Sq. Ft.

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# Duplexes Continental Villages

Moreno Valley, CA

## Floor Plans

Scale: 1/4" = 1'-0"



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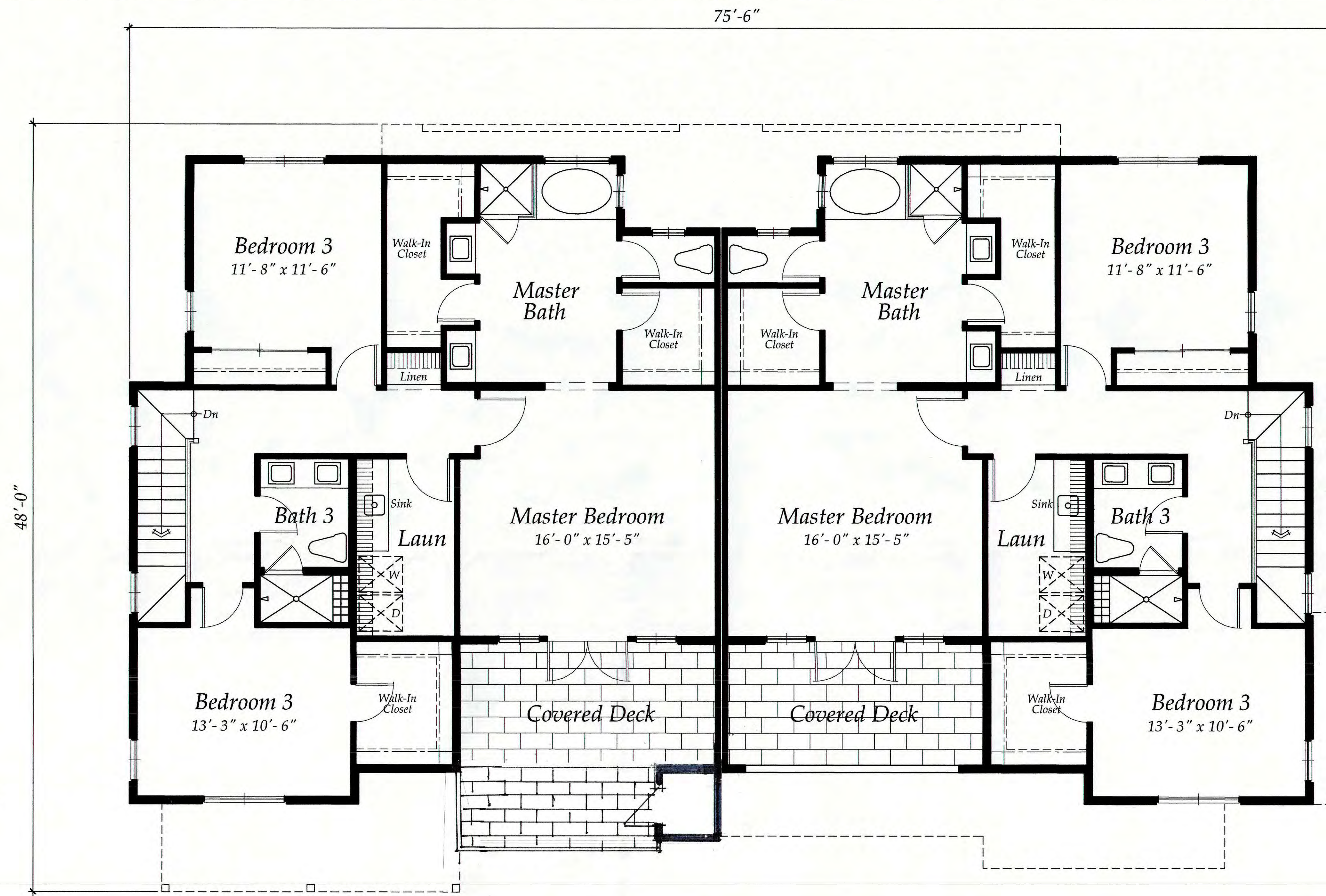
2-7-18 5-24-18

#1B-10  
PEN18-0107

Attachment: Project Plans - Duplexes (0376) - The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of Zone, a Plot Plan



*Plan A*  
2,215 Sq. Ft.



*Plan B*  
2,233 Sq. Ft.

*Second Floor*

Scale: 1/4" = 1'-0"

**Continental East Development**  
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# Duplexes Continental Villages

Moreno Valley, CA

## Floor Plans

Scale: 1/4" = 1'-0"



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suite 300  
san juan capistrano  
ca, 92675  
(949) 487-2320

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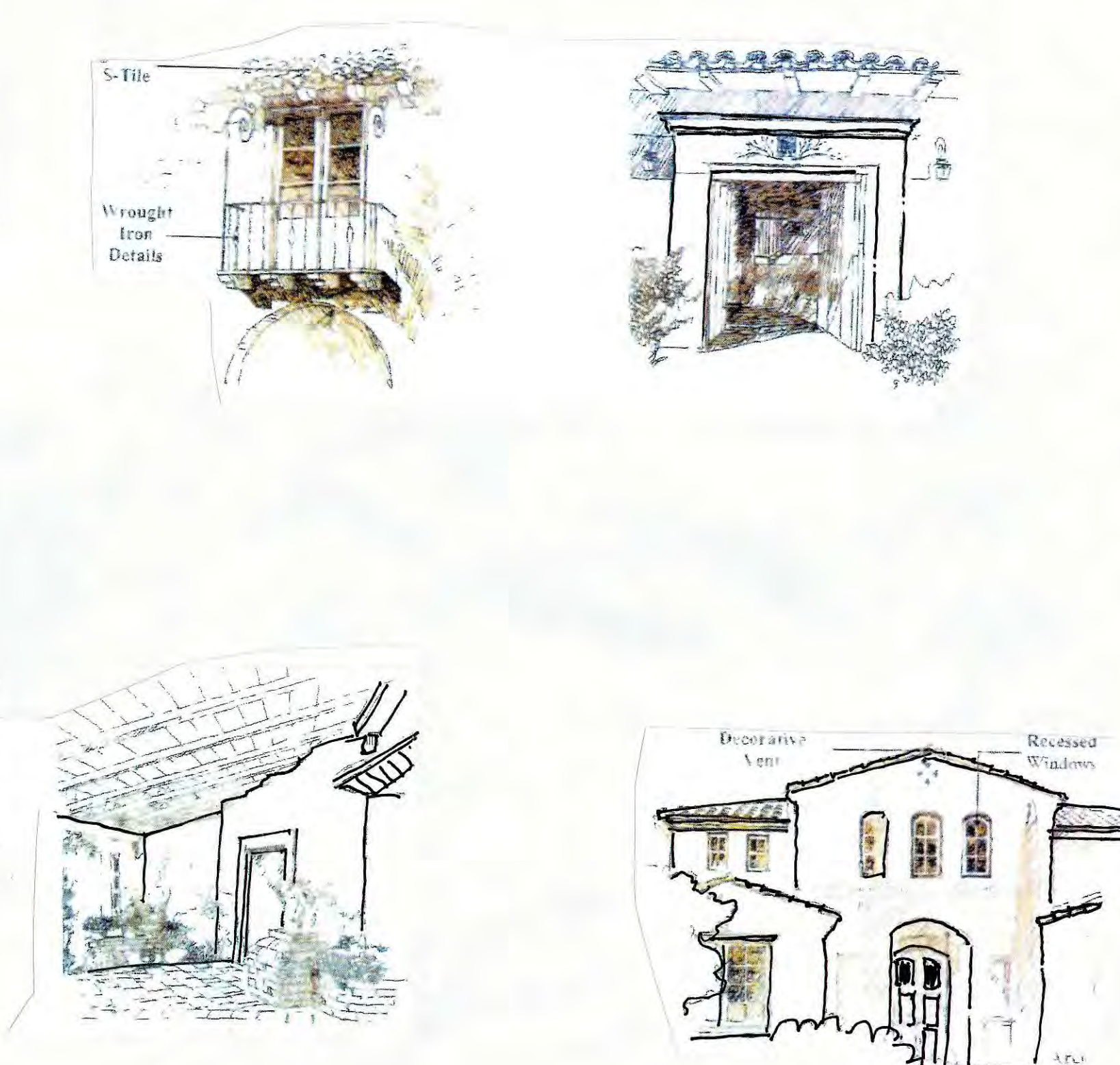
#18-10  
PEN18-0107

Attachment: Project Plans - Duplexes (0376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of Zone, a Plot Plan)





Front Elevation



**SPANISH STYLE ARCHITECTURE**

**Yenils**

- Standard clay pipe - 4\"/>

**Architectural Elements**

- Long porches in the form of colonnaded arcades with elaborate masonry arches supporting the roof.
- Porches can have roofs as extensions of main roof or a separate shed roof.
- Columns supporting the porches can be of heavy timber often with a bracket above or square Greek revival columns.
- Canilevered second floor porches on two-story houses with delicate wooden balustrades.
- Second level cantilevers over wood or precast concrete corbels.
- Doors on the second floor can have Juliet balconies with wrought iron railing and brackets.
- Recessed door and window openings to convey thick wall appearance.
- Arched shaped windows complementing the colonnaded arcades. Square, rectangular and round window shapes can also be used according to the design requirements.
- Decorative iron details over the windows.
- Simple window trims with a header and sill. Variations of sill include sloping and sculpted stucco sills.
- Decorative iron lanterns, sconces, hinges and hardware.
- Shutters as occasional accents.

**Arch Types**



Right Elevation

**Spanish Colonial**

**History and Character**

Spanish inspired homes began appearing in the early part of the nineteenth century in the form of the Mission style, reflecting a focus on quality of materials often found in detailing from Mexican influences and other various styles. Spanish Colonial Style is unified by the order of arches, courtyards, arched forms and cast iron wall surfaces, and tile roofs, all derived from Mediterranean architectural styles. It is a style of architecture characterized by an informal plan arrangement and massing. This informality reflects the natural composition of the haciendas and small estates of Spain, which were not geometrically composed.

**General Attributes:**

**Massing**

- Simple hip and gable shed roof forms
- Formal focus of elevation to enhanced front door surround
- Usually 2 story main house form, supported by one or two story wings forming a courtyard

**Roofs**

- Low pitched roofs of 3:12 to 4:12
- Exposed rafter tails or continuous eave at eave
- Clay or concrete barrel tile

**Windows and Doors**

- Deep recessed windows and doors of vertical proportions
- Front door may have enhanced precast concrete or plaster surround with balcony above
- Shutters are not typical to style

**Details and Ornamentation**

- Ornate wrought iron balconies, window grills, awning braces, and light fixtures.

**EXTERIOR MATERIALS**

- CONCRETE 'S' TILE
- FLAT CONCRETE TILE
- POLYURETHANE SHUTTERS
- CONCRETE FINIAL
- STUCCO SCALLOPED RAKE DETAIL
- POLYURETHANE 2 x 8 FASCIA BOARD
- STUCCO OVER FOAM TRIM @ WINDOWS
- FURRED BASE
- METAL LIGHT FIXTURE
- ROLL-UP GARAGE DOORS
- POLYURETHANE 2 x 8 BARGE BOARD
- METAL RAILING
- 8 x 8 WOOD POST
- STUCCO OVER FOAM CORBELS @ DECK
- STUCCO
- MAX. BUILDING HEIGHT - 28'-0" @ FINISH GRADE
- 2 x 10 HEADER - STUCCO OVER FOAM

# Continental East Development

25467 Medical Center Drive, Suite 201  
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# Duplexes Continental Villages

Moreno Valley, CA

# Elevations

Scale: 1/4" = 1'-0"



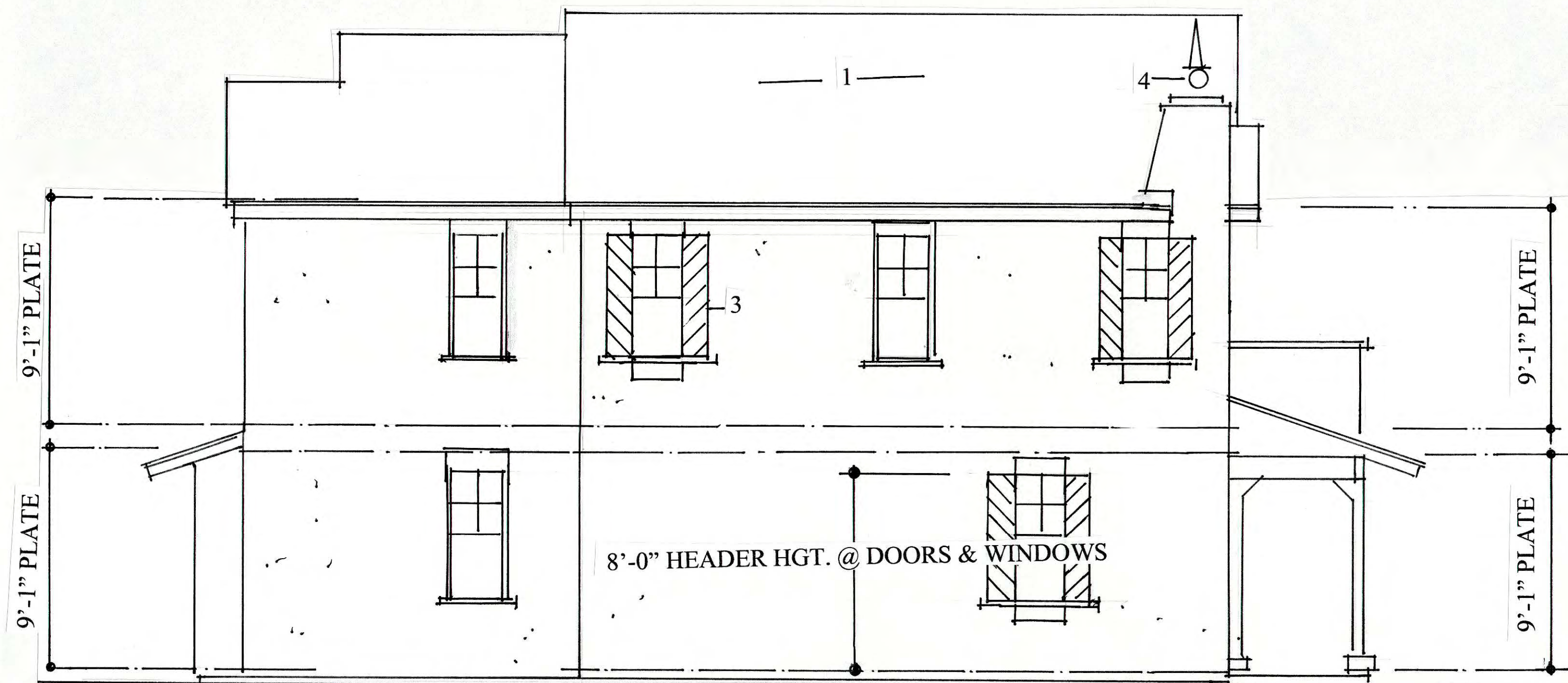
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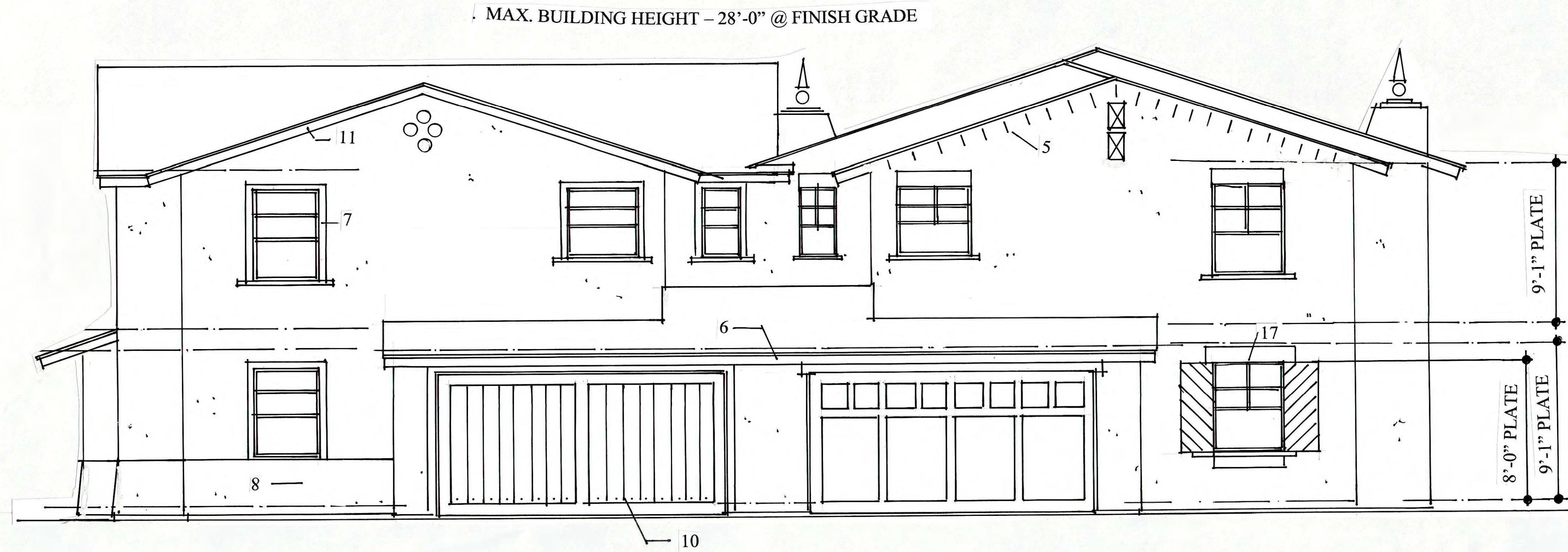
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Attachment: Project Plans - Duplexes (0376) - The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of Zone, a Plot Plan

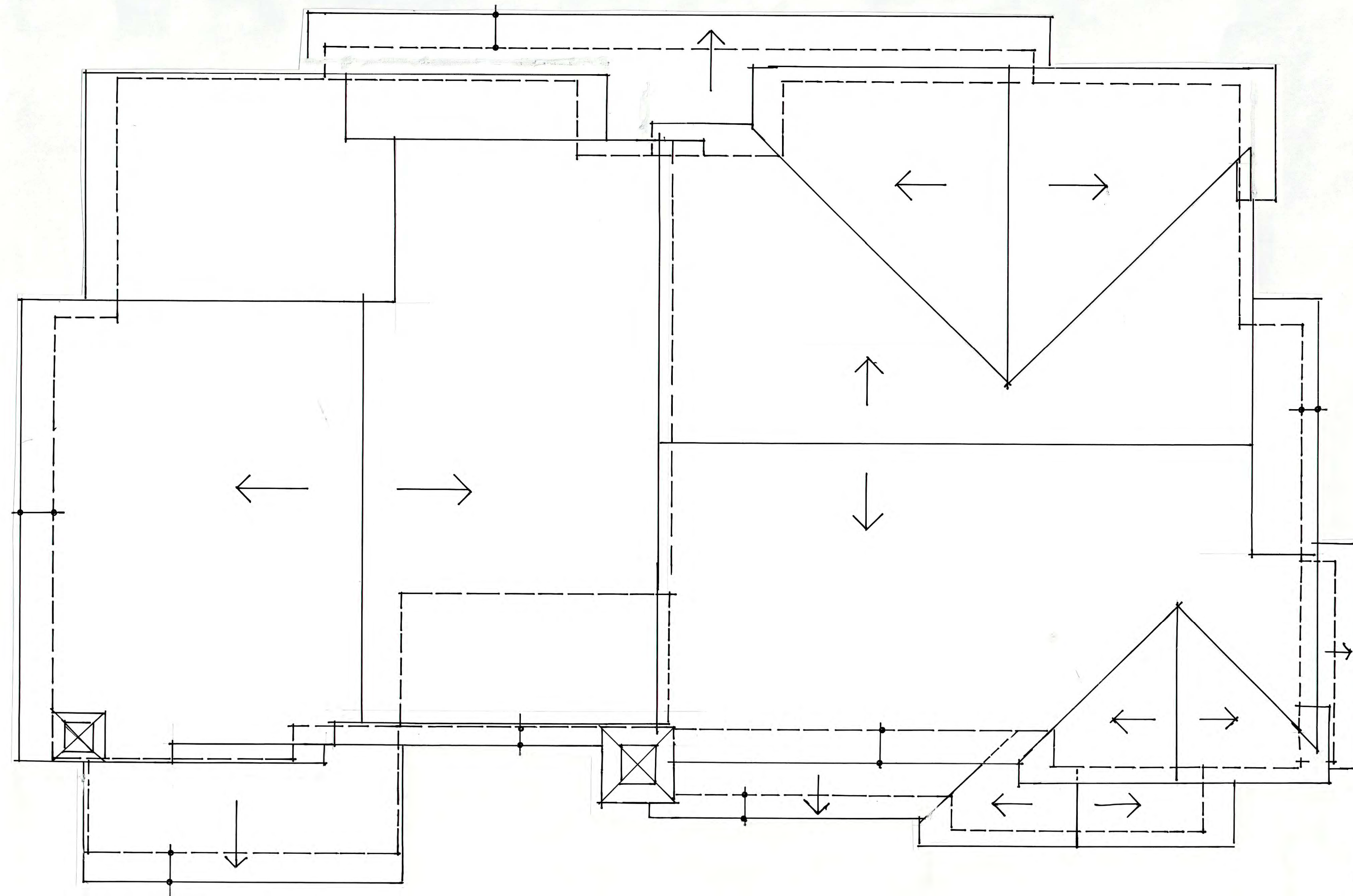




Left Elevation



Rear Elevation



Roof Plan

**ROOF NOTES**

- 1. 4:12 ROOF PITCH
- 2. 24" EAVE OVERHANG
- 3. 12" RAKE OVERHANG
- 4. CONCRETE 'S' TILE

**EXTERIOR MATERIALS**

- 1. CONCRETE 'S' TILE
- 2. FLAT CONCRETE TILE
- 3. POLYURETHANE SHUTTERS
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- 16. MAX. BUILDING HEIGHT - 28'-0" @ FINISH GRADE
- 17. 2 x 10 HEADER - STUCCO OVER FOAM

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*Duplexes*  
**Continental Villages**

Moreno Valley, CA

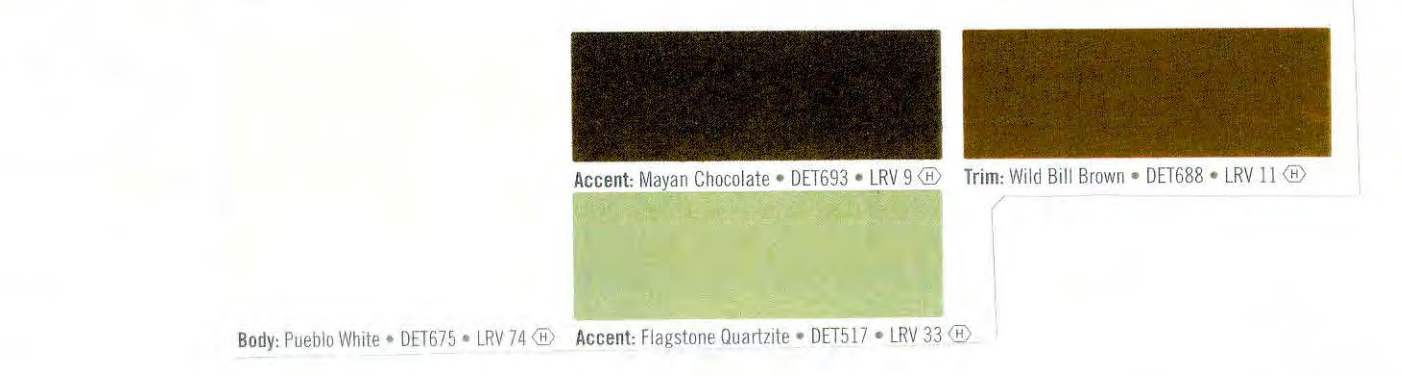
**Elevations**

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**SPANISH STYLE ARCHITECTURE**

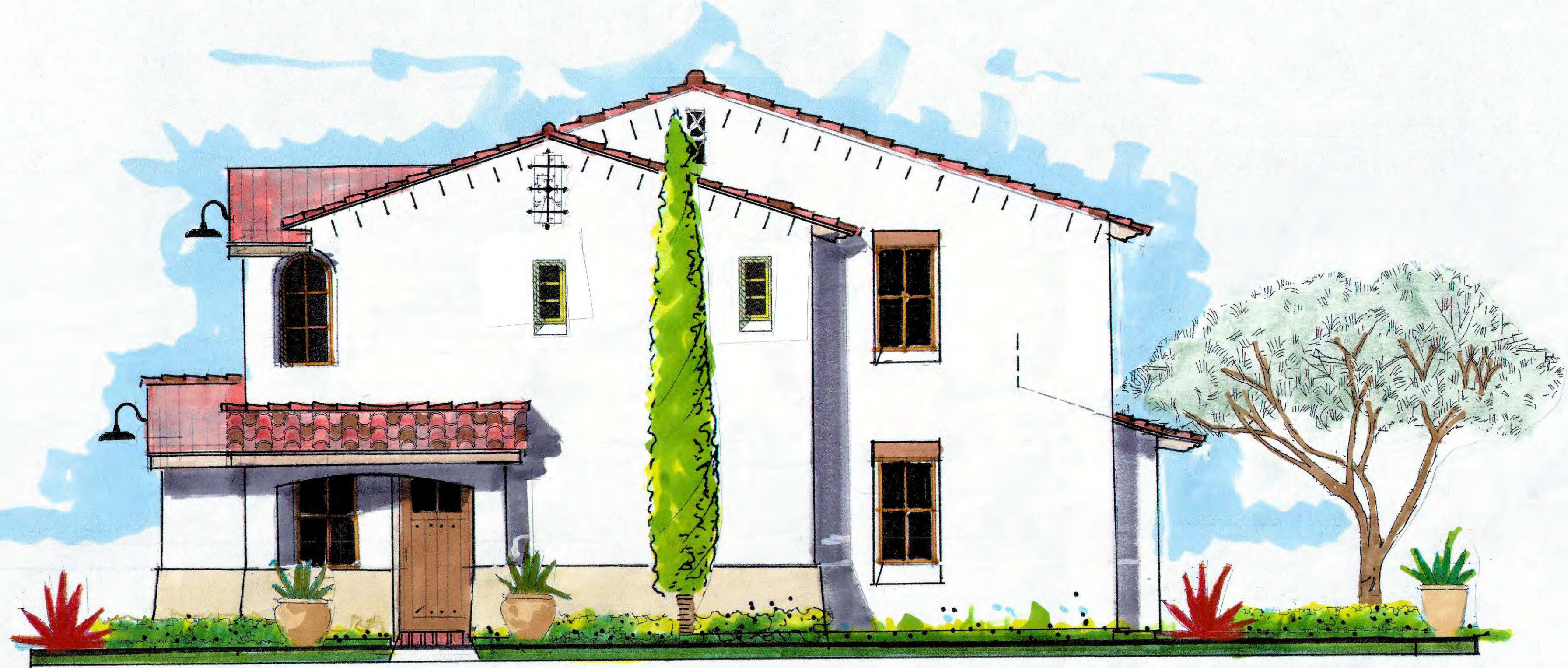
**Vents**

- Standard clay pipe 4-5" diameter
- Opening in wall with full stucco wrap and screen behind
- Mission clay tile stacked in opening extended minimum 1" from face and screen behind

**Architectural Elements**

- Long porches in the form of colonnaded arcades with elaborate masonry arches supporting the roof.
- Porches can have roofs as extensions of main roof or a separate shed roof.
- Columns supporting the porches can be of heavy timber often with a bracket above or square Greek revival columns.
- Canilevered second floor porches on two-story houses with delicate wooden balustrades.
- Second level cantilevers over wood or precast concrete corbels.
- Doors on the second floor can have Juliet balconies with wrought iron railing and brackets.
- Recessed door and window openings to convey thick wall appearance.
- Arched shaped windows complementing the colonnaded arcades. Square, rectangular and round window shapes can also be used according to the design requirements.
- Decorative iron details over the windows.
- Simple window trims with a header and sill. Variations of sill include sloping and sculpted stucco sills.
- Decorative iron lanterns, sconces, hinges and hardware.
- Shutters as occasional accents.

**Arch Types**



**Spanish Colonial**

**History and Character**

Spanish inspired homes began appearing in the early part of the twentieth century in the form of the Mission style, reflecting a basic architectural features often found in dwelling from Mexico influences and other various styles. Spanish Colonial Style is unified by the order of arches, courtyards, strong form and color, plain wall surfaces and tile roofs, all derived from Mediterranean architectural styles. It is often characterized by an informal plan arrangement and massing. This informality reflects the natural composition of the farmhouses and small estates of Spain, which were not symmetrically composed.

**General Attributes**

**Massing**

- Single hip and gable shed roof forms
- Formal focus of elevation is enhanced front door surround
- Usually 2 story main house form, supported by one or two story wings forming a courtyard

**Roofs**

- Low pitched roofs of 3:12 to 4:12
- Exposed rafter tails or continuous corbel at eave
- Clay or concrete barrel tile

**Windows and Doors**

- Deep recessed windows and doors of vertical proportion
- Front door may have enhanced precast concrete or plaster surround with balcony above
- Shutters are not typical to style

**Details and Ornamentation**

- Ornate wrought iron balconies, window grills, awning brackets, and light fixtures.

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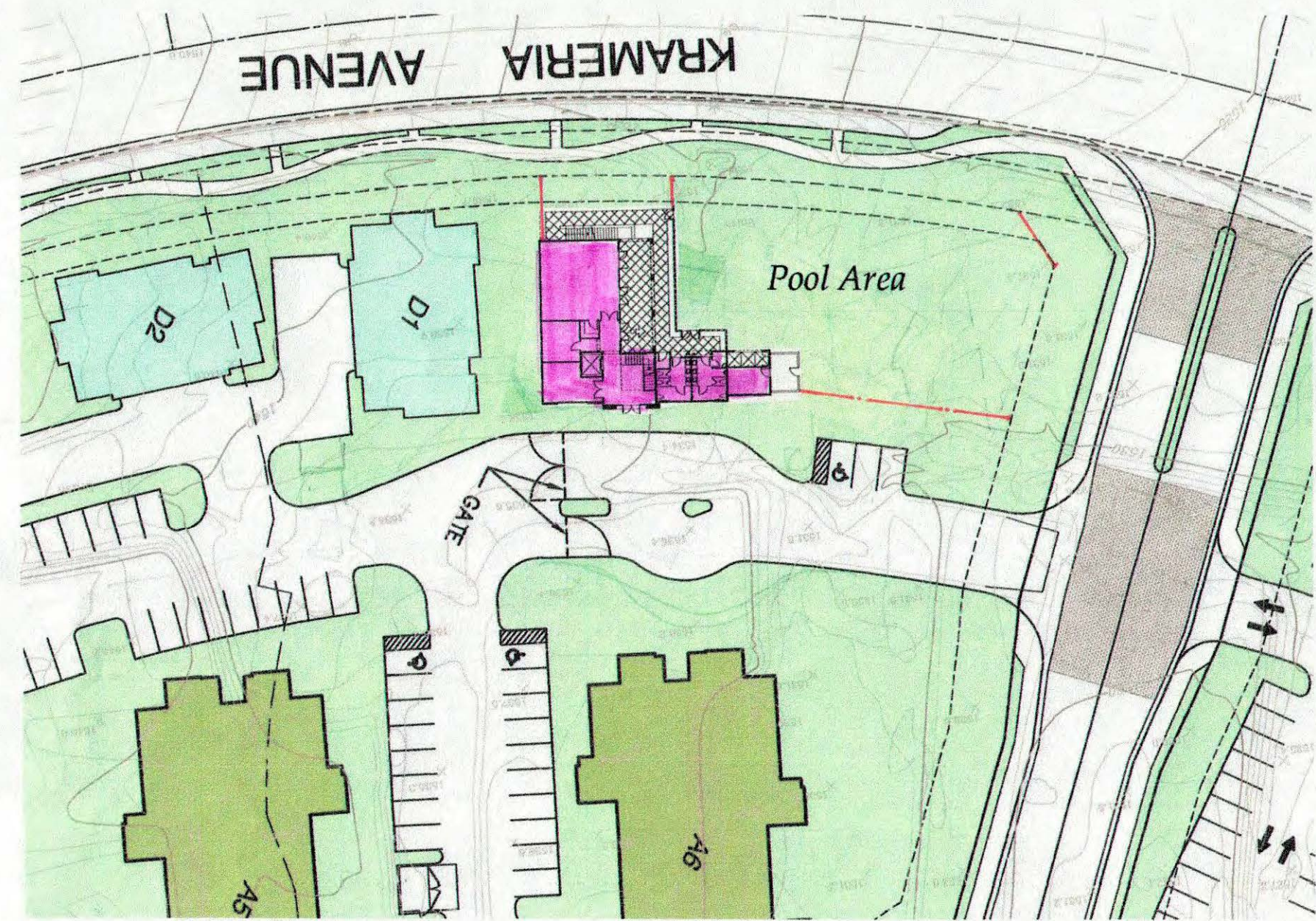
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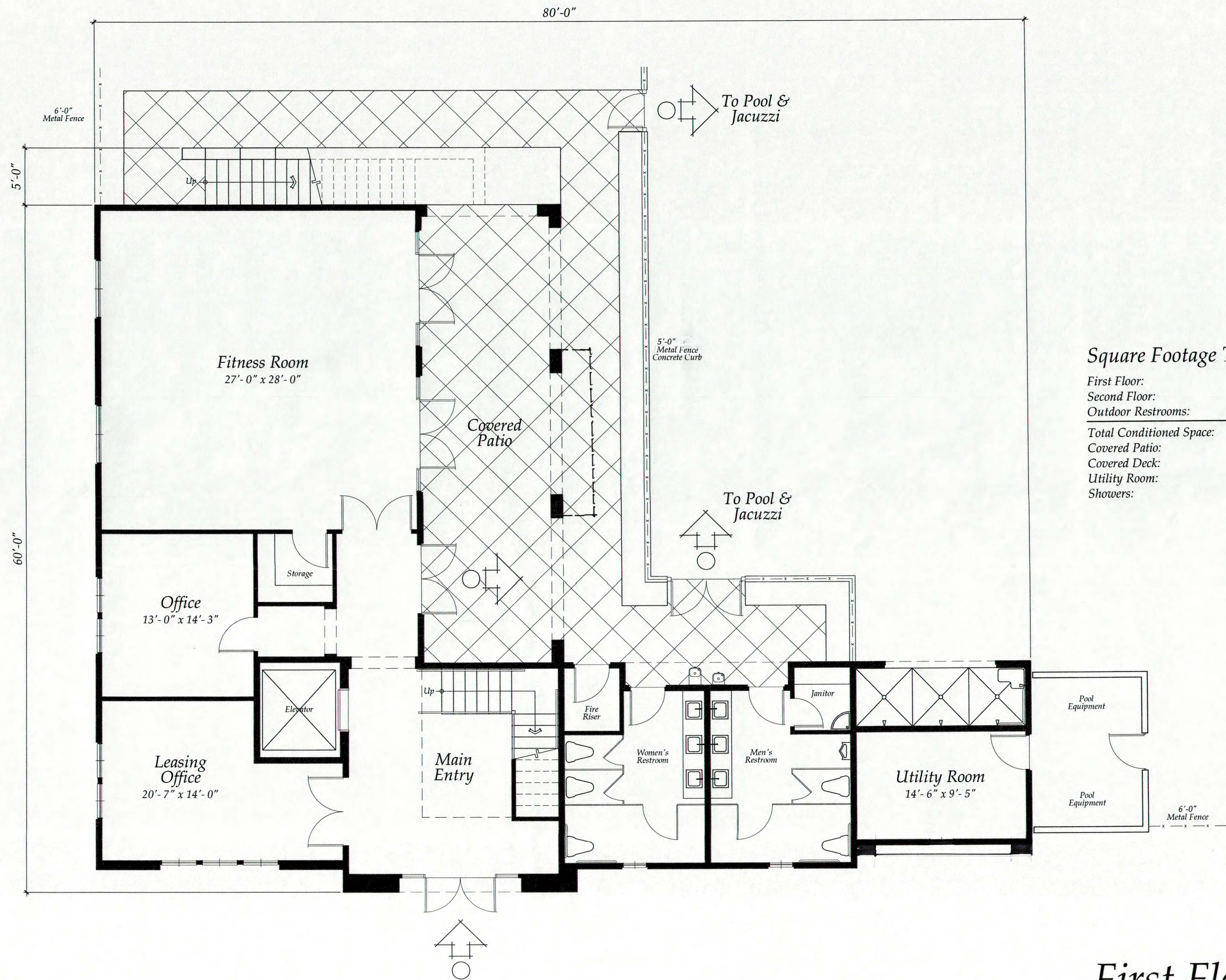


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Site Plan



**Square Footage Tabulation**

|                                 |                      |
|---------------------------------|----------------------|
| First Floor:                    | 1,867 sq. ft.        |
| Second Floor:                   | 1,547 sq. ft.        |
| Outdoor Restrooms:              | 422 sq. ft.          |
| <b>Total Conditioned Space:</b> | <b>3,836 sq. ft.</b> |
| Covered Patio:                  | 480 sq. ft.          |
| Covered Deck:                   | 480 sq. ft.          |
| Utility Room:                   | 155 sq. ft.          |
| Showers:                        | 85 sq. ft.           |

**First Floor**

Scale: 1/4" = 1'-0"

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**Recreation Building**  
**Continental Villages**

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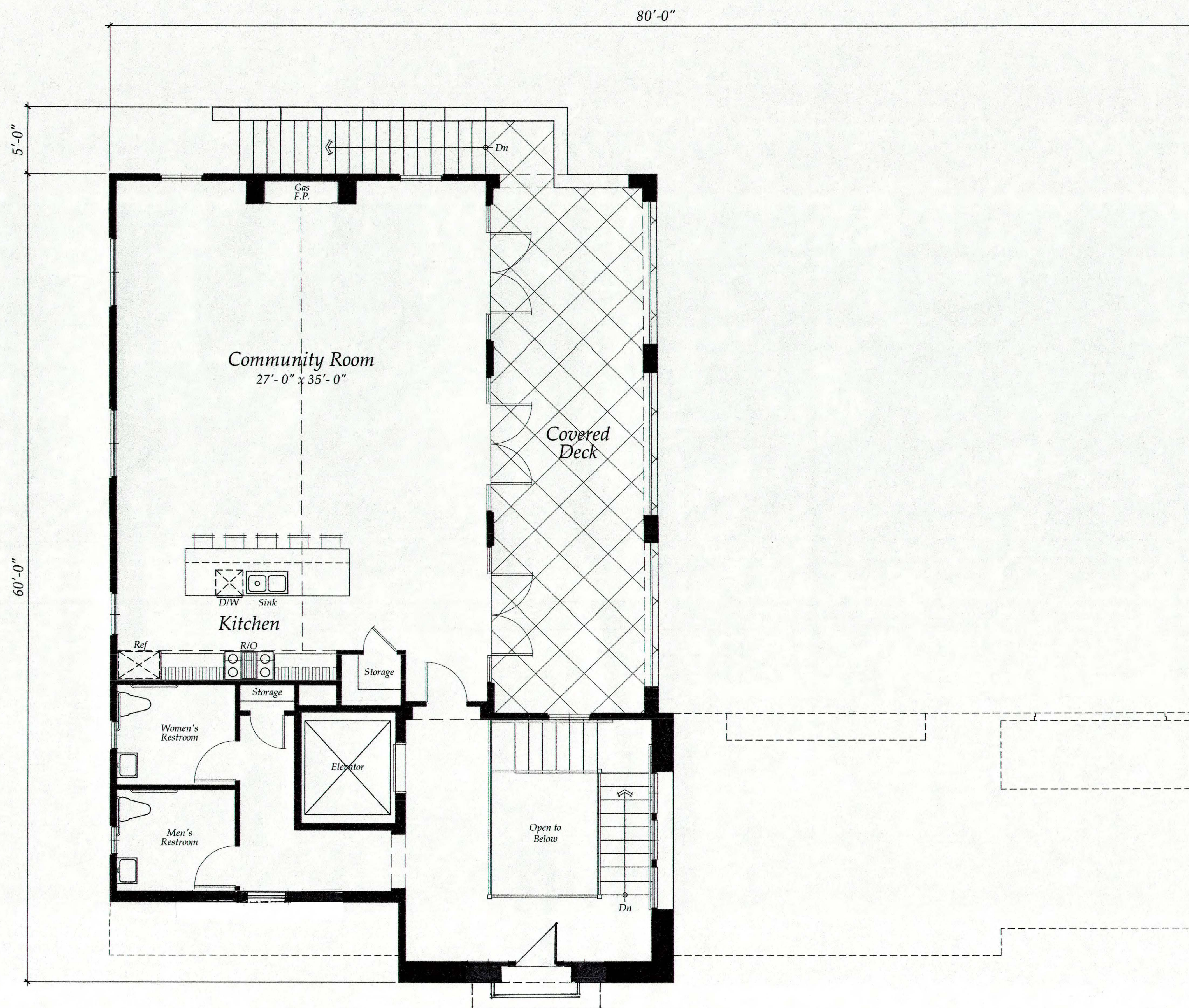


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**Square Footage Tabulation**

|                                 |                      |
|---------------------------------|----------------------|
| First Floor:                    | 1,867 sq. ft.        |
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**Second Floor**

Scale: 1/4" = 1'-0"

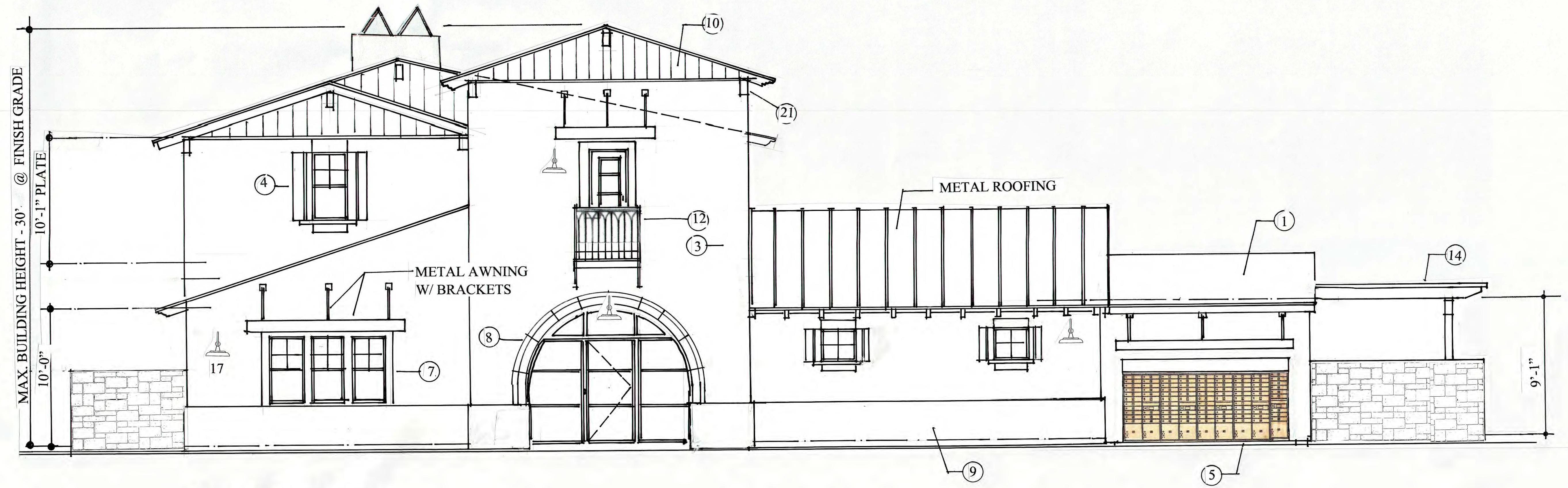


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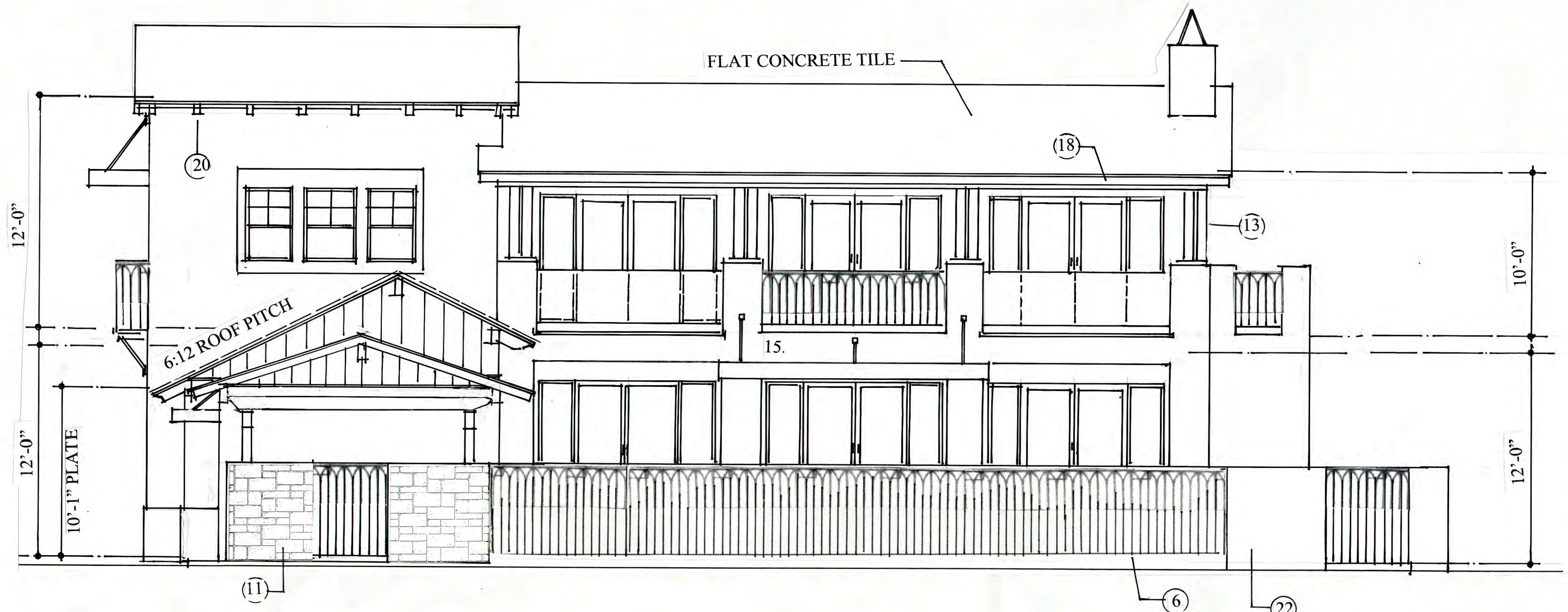
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Front Elevation



Right Elevation

**EXTERIOR MATERIALS**

- 1. FLAT CONCRETE TILE ROOFING
- 2. METAL ROOFING
- 3. STUCCO
- 4. POLYURETHANE SHUTTERS
- 5. METAL MAIL BOXES
- 6. METAL FENCING & GATES
- 7. STUCCO OVER FOAM WINDOW TRIM
- 8. CONCRETE TRIM
- 9. FURRED BASE
- 10. WOOD SIDING - HARDIBOARD
- 11. STONE VENEER WALLS - 6'-0" HIGH
- 12. DECORATIVE METAL RAILING
- 13. 6 x 6 WOOD POSTS
- 14. WOOD TRELLIS
- 15. METAL AWNING W/ BRACKETS
- 16. TILE @ SHOWERS
- 17. METAL LIGHT FIXTURE
- 18. 2 x FASCIA
- 19. 2 x BARGE
- 20. EXPOSED WOOD TAILS
- 21. WOOD OUTLOOKERS
- 22. STUCCO WALL - 6'-0" HIGH
- 23. MAX. BUILDING HEIGHT - 30'-6" @ FINISH GRADE

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**Elevations**

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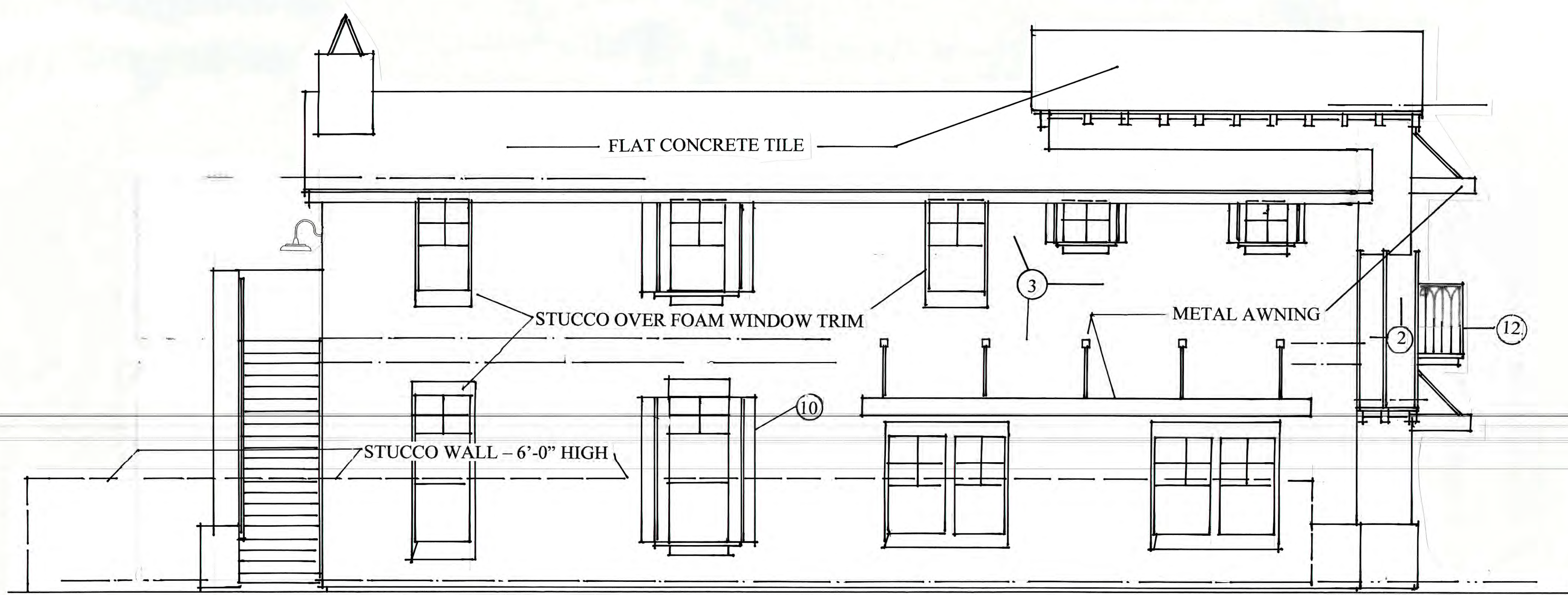
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Attachment: Project Plans - Recreation Building (3176) - The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of Zone, a Plot Plan

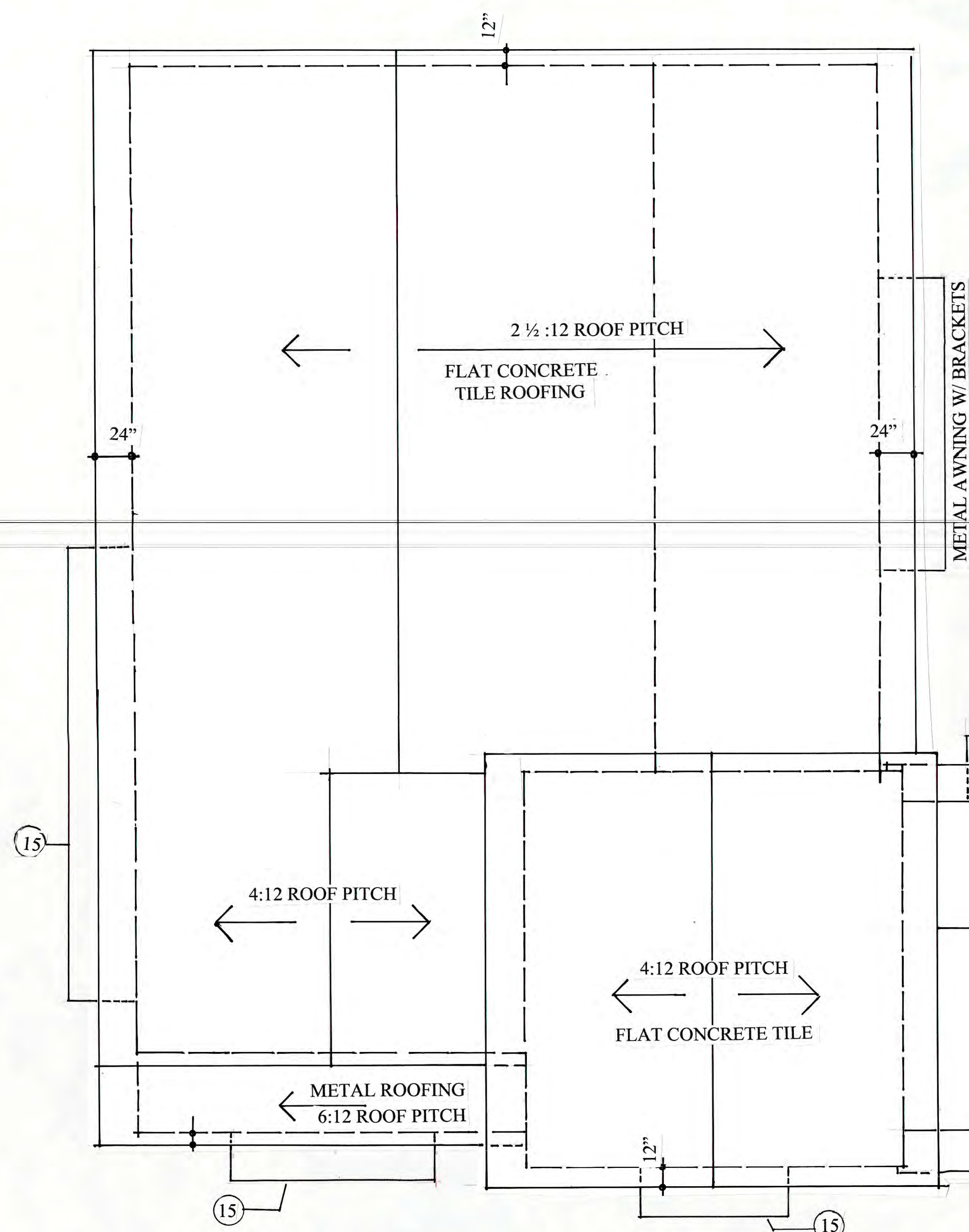




Rear Elevation



Left Elevation



ROOF NOTES

1. 4:12 ROOF PITCH
2. 24" EAVE OVERHANG
3. 12" RAKE OVERHANG
4. 6:12 ROOF PITCH
5. FLAT CONCRETE TILE
6. METAL ROOFING
7. METAL AWNING W/ BRACKETS
8. 2 1/2 :12 ROOF PITCH

EXTERIOR MATERIALS

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2. METAL ROOFING
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**Recreation Building**  
**Continental Villages**

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**Elevations**  
**Roof Plan**

Scale: 1/4" = 1'-0"



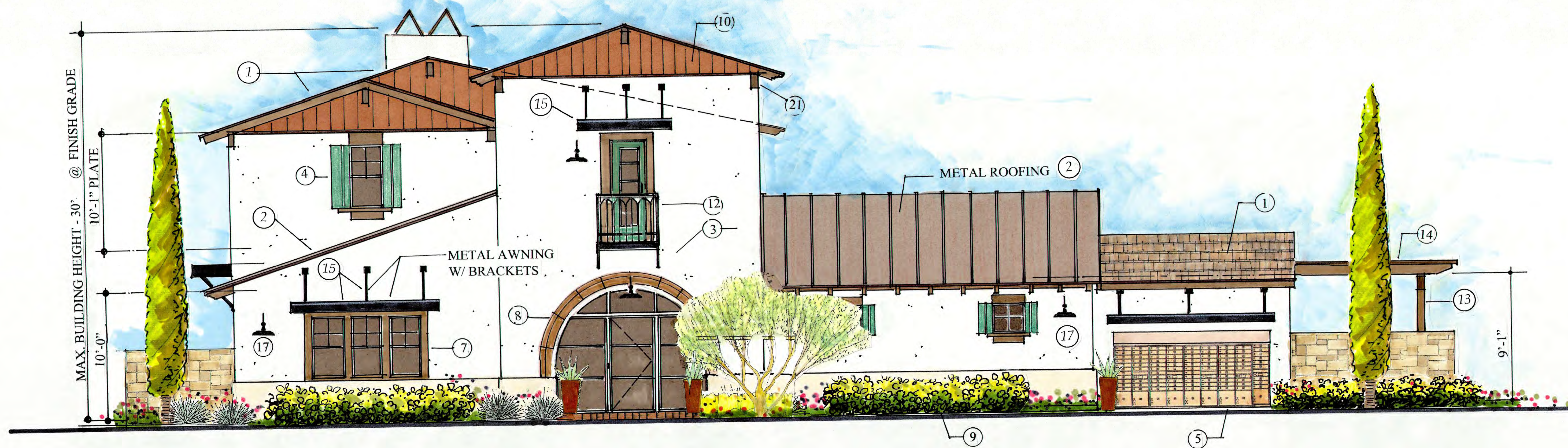
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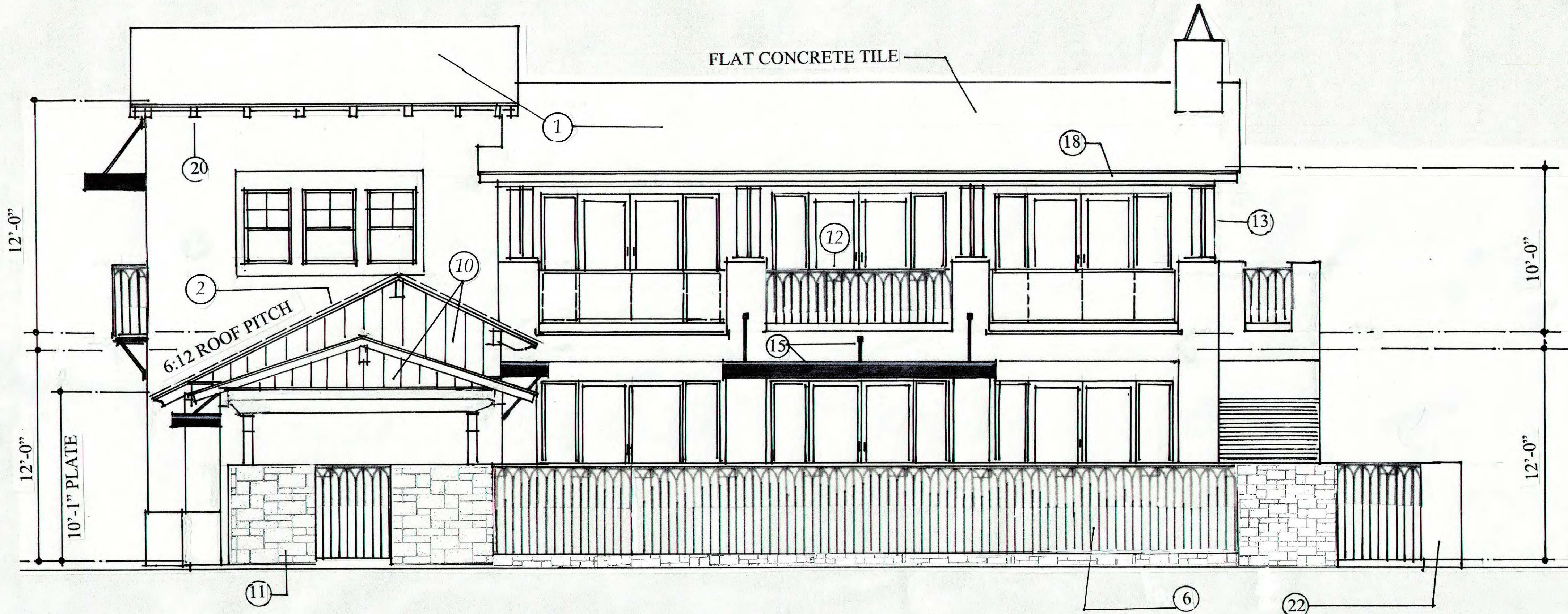
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Attachment: Project Plans - Recreation Building (3376) - The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of Zone, a Plot Plan





Front Elevation



Right Elevation

EXTERIOR MATERIALS

- 1. FLAT CONCRETE TILE ROOFING
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# Recreation Building Continental Villages

Moreno Valley, CA

## Elevations

Scale: 1/4" = 1'-0"

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# Continental Villages

## AIR QUALITY IMPACT ANALYSIS

### CITY OF MORENO VALLEY

PREPARED BY:

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NOVEMBER 16, 2018

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## LIST OF ABBREVIATED TERMS

|                          |   |
|--------------------------|---|
| (1)                      | Reference   |
| $\mu\text{g}/\text{m}^3$ | Microgram per Cubic Meter                             |
| AADT                     | Annual Average Daily Trips                            |
| AQIA                     | Air Quality Impact Analysis                           |
| AQMD                     | Air Quality Management District                       |
| AQMP                     | Air Quality Management Plan                           |
| ARB                      | California Air Resources Board                        |
| BACMs                    | Best Available Control Measures                       |
| BMPs                     | Best Management Practices                             |
| CAA                      | Federal Clean Air Act                                 |
| CAAQS                    | California Ambient Air Quality Standards              |
| CalEEMod                 | California Emissions Estimator Model                  |
| Caltrans                 | California Department of Transportation               |
| CAPCOA                   | California Air Pollution Control Officers Association |
| CARB                     | California Air Resources Board                        |
| CCR                      | California Code of Regulations                        |
| CEQA                     | California Environmental Quality Act                  |
| CFR                      | Code of Federal Regulations                           |
| CO                       | Carbon Monoxide                                       |
| DPM                      | Diesel Particulate Matter                             |
| EPA                      | Environmental Protection Agency                       |
| LST                      | Localized Significance Threshold                      |
| MMs                      | Mitigation Measures                                   |
| NAAQS                    | National Ambient Air Quality Standards                |
| $\text{NO}_2$            | Nitrogen Dioxide                                      |
| $\text{NO}_x$            | Oxides of Nitrogen                                    |
| Pb                       | Lead  |
| $\text{PM}_{10}$         | Particulate Matter 10 microns in diameter or less     |
| $\text{PM}_{2.5}$        | Particulate Matter 2.5 microns in diameter or less    |
| PPM                      | Parts Per Million                                     |
| Project                  | Continental Villages                                  |
| ROG                      | Reactive Organic Gases                                |
| SCAB                     | South Coast Air Basin                                 |
| SCAQMD                   | South Coast Air Quality Management District           |
| SIPs                     | State Implementation Plans                            |
| SRA                      | Source Receptor Area                                  |

|     |                            |
|-----|----------------------------|
| TAC | Toxic Air Contaminant      |
| TIA | Traffic Impact Analysis    |
| TOG | Total Organic Gases        |
| VMT | Vehicle Miles Traveled     |
| VOC | Volatile Organic Compounds |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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## EXECUTIVE SUMMARY

The results of this *Continental Villages Air Quality Impact Analysis* are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA for the Project.

**TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS (PROJECT)**

| Analysis                         | Report Section | Significance Findings        |            |
|----------------------------------|----------------|------------------------------|------------|
|                                  |                | Unmitigated                  | Mitigated  |
| Regional Construction Emissions  | 3.4            | <i>Less Than Significant</i> | <i>n/a</i> |
| Localized Construction Emissions | 3.6            | <i>Less Than Significant</i> | <i>n/a</i> |
| Regional Operational Emissions   | 3.5            | <i>Less Than Significant</i> | <i>n/a</i> |
| Localized Operational Emissions  | 3.7            | <i>Less Than Significant</i> | <i>n/a</i> |
| CO "Hot Spot" Analysis           | 3.8            | <i>Less Than Significant</i> | <i>n/a</i> |
| Air Quality Management Plan      | 3.9            | <i>Less Than Significant</i> | <i>n/a</i> |
| Sensitive Receptors              | 3.10           | <i>Less Than Significant</i> | <i>n/a</i> |
| Odors                            | 3.11           | <i>Less Than Significant</i> | <i>n/a</i> |
| Cumulative Impacts               | 3.12           | <i>Less Than Significant</i> | <i>n/a</i> |



# 1 INTRODUCTION

This report presents the results of the air quality impact analysis (AQIA) prepared by Urban Crossroads, Inc., for the proposed Continental Villages development (“Project”). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the proposed Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the South Coast Air Quality Management District (SCAQMD).

## 1.1 SITE LOCATION

The proposed Continental Villages site is located on the northeast corner of Lasselle Street and Krameria Avenue in the City of Moreno Valley, as shown on Exhibit 1-A. Existing uses in the Project study area include existing residential homes northwest, south, and east of the Project site, the Lasselle Elementary School north of the Project site, and future residential uses, currently under construction, north of the Project site.

## 1.2 PROJECT DESCRIPTION

The Project is proposed to consist of up to 112 apartments/duplexes and 21,000 square feet of commercial retail use, as shown on Exhibit 1-B. The Project is anticipated to have an Opening Year of 2020<sup>1</sup>.

## 1.3 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES (BACMs)

Measures listed below (or equivalent language) shall appear on all Project grading plans, construction specifications and bid documents, and the City shall ensure such language is incorporated prior to issuance of any development permits.

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) (2) and Rule 403 (Fugitive Dust) (3).

### **BACM AQ-1**

The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403.

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.

<sup>1</sup> The Traffic Impact Analysis (TIA) prepared for the Project evaluates an Opening Year of 2023 since the City of Moreno Valley traffic study guidelines require the Opening Year to be a minimum of 5 years from baseline (2018) conditions. Utilizing a 2020 Opening Year for purposes of this AQIA would generate more emissions than if the Project utilized a 2023 Opening Year consistent with the traffic study because as the analysis year increases, vehicle emission factors would decrease as a result of emissions regulations becoming more stringent. Utilizing a 2020 Opening Year for purposes of the AQIA herein represents a conservative estimate of emissions compared to if a 2023 Opening Year, consistent with the traffic study, were utilized.

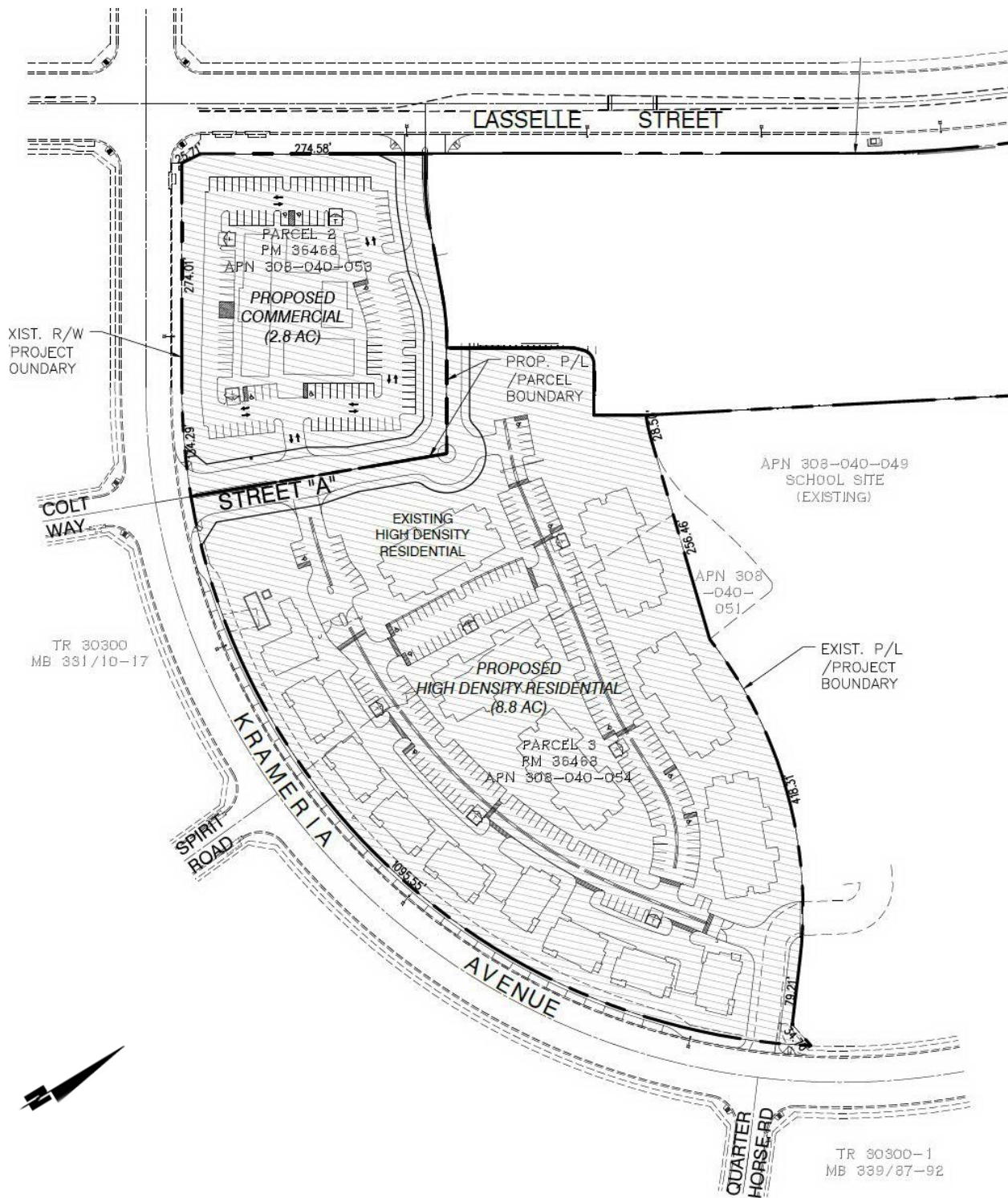
EXHIBIT 1-A: LOCATION MAP



Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



EXHIBIT 1-B: SITE PLAN



Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

### **BACM AQ-2**

Only “Low-Volatile Organic Compounds” paints (no more than 50 gram/liter of VOC) and/or High-Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.

## **1.4 PROJECT DESIGN FEATURES**

### **PDF AQ-1**

During the site preparation phase, construction equipment greater than 150 horsepower (>150 HP), the Construction Contractor shall use off-road diesel construction equipment that complies with EPA/CARB Tier 3 emissions standards and will ensure that all construction equipment be tuned and maintained in accordance with the manufacturer’s specifications.

## **1.5 CONSTRUCTION AND OPERATIONAL-SOURCE AIR POLLUTANT EMISSIONS MITIGATION MEASURES**

Project construction and operational-source emissions will be less than significant. Therefore, no mitigation measures are required.



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Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

## 2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

### 2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (4). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As discussed above, the Project site is located within the South Coast Air Basin, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The larger South Coast district boundary includes 10,743 square miles.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

### 2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s (degrees Fahrenheit). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.



More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year, there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal areas.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as NO<sub>x</sub> and CO from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

## 2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The Basin is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

## 2.4 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated and in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (5).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O<sub>3</sub>, CO, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are not equaled or exceeded at any time in any consecutive three-year period; and the federal standards (other than O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The O<sub>3</sub> standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.



TABLE 2-1: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

| Ambient Air Quality Standards                                  |                         |                                    |  |   |                                   |   |
|--|-------------------------|------------------------------------|--|---|-----------------------------------|---|
| Pollutant  | Averaging Time          | California Standards <sup>1</sup>  |  | National Standards <sup>2</sup>                         |                                   |   |
|  |                         | Concentration <sup>3</sup>         | Method <sup>4</sup>                                    | Primary <sup>3,5</sup>                                  | Secondary <sup>3,6</sup>          | Method <sup>7</sup>   |
| Ozone (O <sub>3</sub> ) <sup>8</sup>                           | 1 Hour                  | 0.09 ppm (180 µg/m <sup>3</sup> )  | Ultraviolet Photometry                                 | —   | Same as Primary Standard          | Ultraviolet Photometry  |
|  | 8 Hour                  | 0.070 ppm (137 µg/m <sup>3</sup> ) |  | 0.070 ppm (137 µg/m <sup>3</sup> )                      |                                   |   |
| Respirable Particulate Matter (PM <sub>10</sub> ) <sup>9</sup> | 24 Hour                 | 50 µg/m <sup>3</sup>               | Gravimetric or Beta Attenuation                        | 150 µg/m <sup>3</sup>                                   | Same as Primary Standard          | Inertial Separation and Gravimetric Analysis                        |
|  | Annual Arithmetic Mean  | 20 µg/m <sup>3</sup>               |  | —   |                                   |   |
| Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>9</sup>      | 24 Hour                 | —                                  | —  | 35 µg/m <sup>3</sup>                                    | Same as Primary Standard          | Inertial Separation and Gravimetric Analysis                        |
|  | Annual Arithmetic Mean  | 12 µg/m <sup>3</sup>               | Gravimetric or Beta Attenuation                        | 12.0 µg/m <sup>3</sup>                                  | 15 µg/m <sup>3</sup>              |   |
| Carbon Monoxide (CO)   | 1 Hour                  | 20 ppm (23 mg/m <sup>3</sup> )     | Non-Dispersive Infrared Photometry (NDIR)              | 35 ppm (40 mg/m <sup>3</sup> )                          | —                                 | Non-Dispersive Infrared Photometry (NDIR)                           |
|  | 8 Hour                  | 9.0 ppm (10 mg/m <sup>3</sup> )    |  | 9 ppm (10 mg/m <sup>3</sup> )                           | —                                 |   |
|  | 8 Hour (Lake Tahoe)     | 6 ppm (7 mg/m <sup>3</sup> )       |  | —   | —                                 |   |
| Nitrogen Dioxide (NO <sub>2</sub> ) <sup>10</sup>              | 1 Hour                  | 0.18 ppm (339 µg/m <sup>3</sup> )  | Gas Phase Chemiluminescence                            | 100 ppb (188 µg/m <sup>3</sup> )                        | —                                 | Gas Phase Chemiluminescence   |
|  | Annual Arithmetic Mean  | 0.030 ppm (57 µg/m <sup>3</sup> )  |  | 0.053 ppm (100 µg/m <sup>3</sup> )                      | Same as Primary Standard          |   |
| Sulfur Dioxide (SO <sub>2</sub> ) <sup>11</sup>                | 1 Hour                  | 0.25 ppm (655 µg/m <sup>3</sup> )  | Ultraviolet Fluorescence                               | 75 ppb (196 µg/m <sup>3</sup> )                         | —                                 | Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) |
|  | 3 Hour                  | —                                  |  | —   | 0.5 ppm (1300 µg/m <sup>3</sup> ) |   |
|  | 24 Hour                 | 0.04 ppm (105 µg/m <sup>3</sup> )  |  | 0.14 ppm (for certain areas) <sup>11</sup>              | —                                 |   |
|  | Annual Arithmetic Mean  | —                                  |  | 0.030 ppm (for certain areas) <sup>11</sup>             | —                                 |   |
| Lead <sup>12,13</sup>  | 30 Day Average          | 1.5 µg/m <sup>3</sup>              | Atomic Absorption                                      | —   | —                                 | High Volume Sampler and Atomic Absorption                           |
|  | Calendar Quarter        | —                                  |  | 1.5 µg/m <sup>3</sup> (for certain areas) <sup>12</sup> | Same as Primary Standard          |   |
|  | Rolling 3-Month Average | —                                  |  | 0.15 µg/m <sup>3</sup>                                  |                                   |   |
| Visibility Reducing Particles <sup>14</sup>                    | 8 Hour                  | See footnote 14                    | Beta Attenuation and Transmittance through Filter Tape | No National Standards                                   |                                   |   |
| Sulfates   | 24 Hour                 | 25 µg/m <sup>3</sup>               | Ion Chromatography                                     |   |                                   |   |
| Hydrogen Sulfide   | 1 Hour                  | 0.03 ppm (42 µg/m <sup>3</sup> )   | Ultraviolet Fluorescence                               |   |                                   |   |
| Vinyl Chloride <sup>12</sup>                                   | 24 Hour                 | 0.01 ppm (26 µg/m <sup>3</sup> )   | Gas Chromatography                                     |   |                                   |   |

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

**TABLE 2-1: AMBIENT AIR QUALITY STANDARDS (2 OF 2)**

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above  $150 \mu\text{g}/\text{m}^3$  is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of  $25^\circ\text{C}$  and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of  $25^\circ\text{C}$  and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from  $15 \mu\text{g}/\text{m}^3$  to  $12.0 \mu\text{g}/\text{m}^3$ . The existing national 24-hour PM2.5 standards (primary and secondary) were retained at  $35 \mu\text{g}/\text{m}^3$ , as was the annual secondary standard of  $15 \mu\text{g}/\text{m}^3$ . The existing 24-hour PM10 standards (primary and secondary) of  $150 \mu\text{g}/\text{m}^3$  also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour  $\text{SO}_2$  standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971  $\text{SO}_2$  national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.  
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ( $1.5 \mu\text{g}/\text{m}^3$  as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)



## 2.5 REGIONAL AIR QUALITY

The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Lead (Pb) air monitoring sites throughout the air district (6). In 2017, the federal and state ambient air quality standards (NAAQS and CAAQS) were exceeded on one or more days for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> at most monitoring locations. No areas of the SCAB exceeded federal or state standards for NO<sub>2</sub>, SO<sub>2</sub>, CO, sulfates or lead (6). See Table 2-2, for attainment designations for the SCAB (7) (8). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

**TABLE 2-2: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN (SCAB)**

| Criteria Pollutant      | State Designation | Federal Designation       |
|-------------------------|-------------------|---------------------------|
| Ozone - 1hour standard  | Nonattainment     | Nonattainment (“Extreme”) |
| Ozone - 8 hour standard | Nonattainment     | Nonattainment (“Extreme”) |
| PM <sub>10</sub>        | Nonattainment     | Attainment (Maintenance)  |
| PM <sub>2.5</sub>       | Nonattainment     | Nonattainment (“Serious”) |
| Carbon Monoxide         | Attainment        | Attainment (Maintenance)  |
| Nitrogen Dioxide        | Attainment        | Unclassifiable/Attainment |
| Sulfur Dioxide          | Attainment        | Unclassifiable/Attainment |
| Lead <sup>2</sup>       | Attainment        | Nonattainment (Partial)   |

Source: State/Federal designations were taken from <http://www.arb.ca.gov/degis/adm/adm.htm>

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the South Coast Air Basin

## 2.6 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site for Ozone (O<sub>3</sub>) and Particulate Matter ≤ 10 Microns (PM<sub>10</sub>) is the South Coast Air Quality Management District Perris Valley monitoring station (SRA 24), located approximately 6.24 miles south of the Project site (9). Data for Carbon Monoxide (CO), Nitrogen Dioxide (NO<sub>2</sub>), Ultra-Fine Particulates (PM<sub>2.5</sub>), and Sulfur Dioxide (SO<sub>2</sub>) was obtained from the Metropolitan Riverside County 1 monitoring station (SRA 23), located approximately 14.40 miles northwest of the Project site, respectively. It should be noted that the Metropolitan Riverside County 1, station was utilized in lieu of the Perris Valley monitoring station only where data was not available from the nearest monitoring site.

The most recent three (3) years of data available is shown on Table 2-3 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O<sub>3</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> for 2015 through 2017 was obtained from CARB’s iADAM Air Quality Data Statistics (10). Data for CO was obtained from the SCAQMD Air Quality Data Tables (11). It should be noted that the CO data for 2017 is currently unavailable from both CARB and SCAQMD. Additionally, data for SO<sub>2</sub> has

<sup>2</sup> The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

been omitted as attainment is regularly met in the South Coast Air Basin and few monitoring stations measure SO<sub>2</sub> concentrations.

**TABLE 2-3: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2015-2017**

| POLLUTANT  | STANDARD                | YEAR  |       |       |
|--|-------------------------|-------|-------|-------|
|  |                         | 2015  | 2016  | 2017  |
| Ozone  |                         |       |       |       |
| Maximum Federal 1-Hour Concentration (ppm)                 |                         | 0.124 | 0.131 | 0.120 |
| Maximum Federal 8-Hour Concentration (ppm)                 |                         | 0.102 | 0.098 | 0.105 |
| Number of Days Exceeding Federal 1-Hour Standard           |                         | 25    | 23    | 33    |
| Number of Days Exceeding State 1-Hour Standard             | > 0.09 ppm              | 50    | 56    | 86    |
| Number of Days Exceeding Federal 8-Hour Standard           | > 0.070 ppm             | 0     | 1     | 0     |
| Number of Days Exceeding State 8-Hour Standard             | > 0.070 ppm             | 49    | 55    | 80    |
| Carbon Monoxide (CO)                                       |                         |       |       |       |
| Maximum 1-Hour Concentration                               | > 35 ppm                | 2.5   | 1.7   | --    |
| Maximum 8-Hour Concentration                               | > 20 ppm                | 1.7   | 1.3   | --    |
| Nitrogen Dioxide (NO <sub>2</sub> )                        |                         |       |       |       |
| Maximum Federal 1-Hour Concentration                       | > 0.100 ppm             | 0.057 | 0.073 | 0.063 |
| Maximum State 1-Hour Concentration                         | > 0.18 ppm              | 0.057 | 0.073 | 0.063 |
| Annual Federal Standard Design Value                       |                         | 14    | 15    | 15    |
| Annual State Standard Design Value                         |                         | 15    | 15    | 14    |
| Number of Days Exceeding Federal 1-Hour Standard           | > 0.18 ppm              | 0     | 0     | 0     |
| Number of Days Exceeding State 1-Hour Standard             | > 0.18 ppm              | 0     | 0     | 0     |
| Particulate Matter ≤ 10 Microns (PM <sub>10</sub> )        |                         |       |       |       |
| Maximum Federal 24-Hour Concentration (µg/m <sup>3</sup> ) | > 150 µg/m <sup>3</sup> | 188.0 | 76.0  | 75.4  |
| Annual Federal Arithmetic Mean (µg/m <sup>3</sup> )        |                         | 33.1  | 32.2  | 32.6  |
| Number of Days Exceeding Federal 24-Hour Standard          | > 150 µg/m <sup>3</sup> | 1     | 0     | 0     |
| Particulate Matter ≤ 2.5 Microns (PM <sub>2.5</sub> )      |                         |       |       |       |
| Maximum Federal 24-Hour Concentration (µg/m <sup>3</sup> ) | > 35 µg/m <sup>3</sup>  | 54.7  | 51.5  | 50.3  |
| Maximum State 24-Hour Concentration (µg/m <sup>3</sup> )   |                         | 61.1  | 60.8  | 50.3  |
| Annual Federal Arithmetic Mean (µg/m <sup>3</sup> )        |                         | 11.8  | 12.5  | 12.2  |
| Number of Samples Exceeding Federal 24-Hour Standard       | > 35 µg/m <sup>3</sup>  | 9     | 5     | 7     |

Source: Data for O<sub>3</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> was obtained from CARB's iADAM. Data for CO was obtained from SCAQMD Air Quality Data Tables.  
 -- = data not available from ARB or SCAQMD



Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (12):

- **Carbon Monoxide (CO):** Is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- **Sulfur Dioxide (SO<sub>2</sub>):** Is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO<sub>2</sub> oxidizes in the atmosphere, it forms sulfates (SO<sub>4</sub>). Collectively, these pollutants are referred to as sulfur oxides (SO<sub>x</sub>).
- **Nitrogen Oxides (Oxides of Nitrogen, or NO<sub>x</sub>):** Nitrogen oxides (NO<sub>x</sub>) consist of nitric oxide (NO), nitrogen dioxide (NO<sub>2</sub>) and nitrous oxide (N<sub>2</sub>O) and are formed when nitrogen (N<sub>2</sub>) combines with oxygen (O<sub>2</sub>). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO<sub>2</sub> is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO<sub>2</sub> is the most abundant in the atmosphere. As ambient concentrations of NO<sub>2</sub> are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO<sub>2</sub> than those indicated by regional monitoring station.
- **Ozone (O<sub>3</sub>):** Is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
- **PM<sub>10</sub> (Particulate Matter less than 10 microns):** A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM<sub>10</sub> also causes visibility reduction and is a criteria air pollutant.
- **PM<sub>2.5</sub> (Particulate Matter less than 2.5 microns):** A similar air pollutant consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO<sub>2</sub> release from power plants and industrial facilities and nitrates that are formed from NO<sub>x</sub> release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. PM<sub>2.5</sub> is a criteria air pollutant.
- **Volatile Organic Compounds (VOC):** Volatile organic compounds are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical

reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O<sub>3</sub>, which is a criteria pollutant. The SCAQMD uses the terms VOC and ROG (see below) interchangeably.

- **Reactive Organic Gases (ROG):** Similar to VOC, Reactive Organic Gases (ROG) are also precursors in forming ozone and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O<sub>3</sub>, which is a criteria pollutant. The SCAQMD uses the terms ROG and VOC (see previous) interchangeably.
- **Lead (Pb):** Lead is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. It should be noted that the Project is not anticipated to generate a quantifiable amount of lead emissions. Lead is a criteria air pollutant.

## Health Effects of Air Pollutants

### Ozone

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

### Carbon Monoxide

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO



has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

#### Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in PM<sub>2.5</sub> concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM<sub>10</sub> and PM<sub>2.5</sub>.

#### Nitrogen Dioxide

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO<sub>2</sub> at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO<sub>2</sub> in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO<sub>2</sub> considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO<sub>2</sub>.

## Sulfur Dioxide

A few minutes of exposure to low levels of SO<sub>2</sub> can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO<sub>2</sub>. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO<sub>2</sub>.

Animal studies suggest that despite SO<sub>2</sub> being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO<sub>2</sub> levels. In these studies, efforts to separate the effects of SO<sub>2</sub> from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

## Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

## Odors

The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that cause odors poses a big challenge. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.



## 2.7 REGULATORY BACKGROUND

### 2.7.1 FEDERAL REGULATIONS

lead (13). The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (14). The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, CO, PM<sub>2.5</sub>, and lead. The NAAQS were amended in July 1997 to include an additional standard for O<sub>3</sub> and to adopt a NAAQS for PM<sub>2.5</sub>. Table 3-1 (previously presented) provides the NAAQS within the basin.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and nitrogen oxides (NO<sub>x</sub>). NO<sub>x</sub> is a collective term that includes all forms of nitrogen oxides (NO, NO<sub>2</sub>, NO<sub>3</sub>) which are emitted as byproducts of the combustion process.

### 2.7.2 CALIFORNIA REGULATIONS

**California Air Resource Board (CARB).** The CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (15) (13).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROG<sub>s</sub>, NO<sub>x</sub>, CO and PM<sub>10</sub>. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

**Title 24 Energy Efficiency Standards and California Green Building Standards.** California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 version of Title 24 was adopted by the California Energy Commission (CEC) and became effective on January 1, 2017 and is applicable to the Project.

The CEC indicates that the 2016 Title 24 standards will reduce energy consumption by 5 percent for nonresidential buildings above that achieved by the 2013 Title 24 (CEC 2015).

California Code of Regulations, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2011, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent update consisting of the 2016 California Green Building Code Standards that became effective January 1, 2017. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances and defers to them as the ruling guidance provided they establish a minimum 65 percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet



in order to be certified for occupancy, which is generally enforced by the local building official. CALGreen requires:

- Short-term bicycle parking. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).
- Designated parking. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling (5.410.1).
- Construction waste. A minimum 65 percent diversion of construction and demolition waste from landfills, increasing voluntarily to 80 percent for new homes and commercial projects (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).
- Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods:
  - The installation of water-conserving fixtures (5.303.3) or
  - Using nonpotable water systems (5.303.4).
- Water use savings. 20 percent mandatory reduction of indoor water use with voluntary goal standards for 30, 35 and 40 percent reductions (5.303.2, A5303.2.3 [nonresidential]).
- Water meters. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day (5.303.1).
- Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).
- Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard (5.404).
- Building commissioning. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

### 2.7.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB for PM<sub>10</sub>, PM<sub>2.5</sub>, and ozone. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards (16). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.9.

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Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



### 3 PROJECT AIR QUALITY IMPACT

#### 3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section.

#### 3.2 STANDARDS OF SIGNIFICANCE

The SCAQMD has developed regional and localized significance thresholds for regulated pollutants, as summarized at Table 3-1 (17). The SCAQMD's CEQA Air Quality Significance Thresholds (March 2015) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact. It should be noted that the SCAQMD provides a threshold for emissions of lead, however for purposes of this analysis no lead emissions are calculated as there are no substantive sources of lead emissions. Additionally, the air quality modeling program (discussed below) does not calculate any emissions of lead from typical construction or operational activities.

**TABLE 3-1: MAXIMUM DAILY EMISSIONS THRESHOLDS (1 OF 2)**

| Pollutant                  | Construction | Operations  |
|----------------------------|--------------|-------------|
| <b>Regional Thresholds</b> |              |             |
| NO <sub>x</sub>            | 100 lbs/day  | 55 lbs/day  |
| VOC                        | 75 lbs/day   | 55 lbs/day  |
| PM <sub>10</sub>           | 150 lbs/day  | 150 lbs/day |
| PM <sub>2.5</sub>          | 55 lbs/day   | 55 lbs/day  |
| SO <sub>x</sub>            | 150 lbs/day  | 150 lbs/day |
| CO                         | 550 lbs/day  | 550 lbs/day |
| Lead                       | 3 lbs/day    | 3 lbs/day   |

Source: Regional Thresholds presented in this table are based on the SCAQMD Air Quality Significance Thresholds, March 2015

**TABLE 3-1: MAXIMUM DAILY EMISSIONS THRESHOLDS<sup>B</sup> (2 OF 2)**

| Pollutant                   | Construction                     | Operations |
|-----------------------------|----------------------------------|------------|
| <b>Localized Thresholds</b> |                                  |            |
| NO <sub>x</sub>             | 220 lbs/day (Site Preparation)   | N/A        |
|                             | 237 lbs/day (Grading)            |            |
| CO                          | 1,230 lbs/day (Site Preparation) | N/A        |
|                             | 1,346 lbs/day (Grading)          |            |
| PM <sub>10</sub>            | 10 lbs/day (Site Preparation)    | N/A        |
|                             | 11 lbs/day (Grading)             |            |
| PM <sub>2.5</sub>           | 6 lbs/day (Site Preparation)     | N/A        |
|                             | 7 lbs/day (Grading)              |            |

Source: Localized Thresholds presented in this table are based on the SCAQMD Final Localized Significance Threshold Methodology, July 2008

### 3.3 CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ESTIMATE AQ EMISSIONS

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

On October 17, 2017, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2016.3.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO<sub>x</sub>, SO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (18). Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendix 3.1 through 3.2.

### 3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of VOCs, NO<sub>x</sub>, SO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating



Construction is expected to commence in March 2019 and will last through August 2020. The duration of construction activity was estimated based on information provided by the client. The construction schedule utilized in the analysis, shown in Table 3-2, represents a “worst-case” analytical scenario. The reason this schedule represents a “worst-case” analytical scenario is due to the fact that emission factors for construction equipment and vehicles decrease as time passes and as the analysis year increases due to emission regulations becoming more stringent and the natural turnover of older fleets that are replaced by newer fleets that are less polluting<sup>3</sup>. A detailed summary of construction, shown in Table 3-2, was estimated based on past project experience and CalEEMod model defaults. The site specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity and associated equipment both represent a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 through 3.2 of this analysis.

Dust is typically a major concern during rough grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions”. Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity.

Construction emissions for construction worker vehicles traveling to and from the Project site, as well as vendor trips (construction materials delivered to the Project site) were estimated based on CalEEMod.

**TABLE 3-2: CONSTRUCTION DURATION**

| Phase Name            | Start Date | End Date   | Days |
|-----------------------|------------|------------|------|
| Site Preparation      | 03/01/2019 | 03/14/2019 | 10   |
| Grading               | 03/15/2019 | 04/25/2019 | 30   |
| Building Construction | 04/26/2019 | 06/18/2020 | 300  |
| Paving                | 06/19/2020 | 07/16/2020 | 20   |
| Architectural Coating | 06/19/2020 | 07/16/2020 | 20   |

<sup>3</sup> As shown in the California Emissions Estimator Model (CalEEMod) User’s Guide Version 2016.3.2, Section 4.3 “OFFROAD Equipment” as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

**TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS**

| Activity              | Equipment           | Number | Hours Per Day |
|-----------------------|---------------------|--------|---------------|
| Site Preparation      | Crawler Tractors    | 4      | 8             |
|                       | Rubber Tired Dozers | 3      | 8             |
| Grading               | Crawler Tractors    | 2      | 8             |
|                       | Excavators          | 2      | 8             |
|                       | Graders             | 1      | 8             |
|                       | Rubber Tired Dozer  | 1      | 8             |
|                       | Scrapers            | 2      | 8             |
| Building Construction | Cranes              | 1      | 8             |
|                       | Crawler Tractors    | 3      | 8             |
|                       | Forklifts           | 3      | 8             |
|                       | Generator Sets      | 1      | 8             |
|                       | Welders             | 1      | 8             |
| Paving                | Pavers              | 2      | 8             |
|                       | Paver Equipment     | 2      | 8             |
|                       | Rollers             | 2      | 8             |
| Architectural Coating | Air Compressors     | 1      | 8             |

**3.4.1 CONSTRUCTION EMISSIONS SUMMARY**

The estimated maximum daily construction emissions without mitigation are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction would not exceed criteria pollutant thresholds established by the SCAQMD for emissions of any criteria pollutants.

**TABLE 3-4: EMISSIONS SUMMARY OF CONSTRUCTION (WITHOUT MITIGATION)**

| Year                           | Emissions (pounds per day) |                 |              |                 |                  |                   |
|--------------------------------|----------------------------|-----------------|--------------|-----------------|------------------|-------------------|
|                                | VOC                        | NO <sub>x</sub> | CO           | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| 2019                           | 4.61                       | 59.32           | 36.68        | 0.08            | 9.78             | 5.64              |
| 2020                           | 50.59                      | 37.83           | 28.11        | 0.08            | 3.93             | 2.07              |
| <b>Maximum Daily Emissions</b> | <b>50.59</b>               | <b>59.32</b>    | <b>36.68</b> | <b>0.08</b>     | <b>9.78</b>      | <b>5.64</b>       |
| SCAQMD Regional Threshold      | 75                         | 100             | 550          | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>     | <b>NO</b>                  | <b>NO</b>       | <b>NO</b>    | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |



### 3.5 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of NO<sub>x</sub>, VOC, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, and CO. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions

#### 3.5.1 AREA SOURCE EMISSIONS

##### Architectural Coatings

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using the CalEEMod model.

##### Consumer Products

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within the CalEEMod model.

##### Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod model.

#### 3.5.2 ENERGY SOURCE EMISSIONS

##### Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using the CalEEMod model.

### 3.5.3 MOBILE SOURCE EMISSIONS

#### Vehicles

Project mobile source air quality impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. The Project-related operational air quality impacts are derived primarily from vehicle trips generated by the Project. Trip characteristics available from the report, *Continental Villages Traffic Impact Analysis* (Urban Crossroads, Inc. 2018) were utilized in this analysis (19). The proposed Project is anticipated to generate a net total of 2,056 trip-ends per day with 215 net AM peak hour trips and 167 net PM peak hour trips.

It should be noted that due to the Project's proposed retail land use and the location of the Project to other residential land uses within a 1 to 2-mile radius of the Project site, and other fast-food and gasoline stations located in the project vicinity, an average trip length for customers of 3 miles was used in the assessment as opposed to the 8.4-mile model default trip length value. Additionally, 96% of all trips are assumed to be customer trips, 3% of all trips are assumed to be workers, and 1% of all trips are assumed to be other trips.

#### Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of tire wear particulates. The emissions estimates for travel on paved roads were calculated using the CalEEMod model.

### 3.5.4 OPERATIONAL EMISSIONS SUMMARY

Operational-source emissions are summarized on Table 3-5. Detailed construction model outputs are presented in Appendix 3.2. As indicated, the Project would not exceed the applicable regional thresholds of significance established by the SCAQMD for any criteria pollutant. Therefore, a less than significant impact would occur and no mitigation measures are required.

**TABLE 3-5: SUMMARY OF OPERATIONAL EMISSIONS (1 OF 2)**

| Operational Activities – Summer Scenario | Emissions (pounds per day) |                 |              |                 |                  |                   |
|--|----------------------------|-----------------|--------------|-----------------|------------------|-------------------|
|  | VOC                        | NO <sub>x</sub> | CO           | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area Source                              | 3.93                       | 1.97            | 10.12        | 0.01            | 0.20             | 0.20              |
| Energy Source                            | 0.05                       | 0.45            | 0.20         | 2.89E-03        | 0.04             | 0.04              |
| Mobile                                   | 4.93                       | 31.81           | 38.26        | 0.14            | 8.81             | 2.44              |
| <b>Total Maximum Daily Emissions</b>     | <b>8.91</b>                | <b>34.23</b>    | <b>48.58</b> | <b>0.16</b>     | <b>9.04</b>      | <b>2.68</b>       |
| SCAQMD Regional Threshold                | 55                         | 55              | 550          | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>               | <b>NO</b>                  | <b>NO</b>       | <b>NO</b>    | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |



TABLE 3-5: SUMMARY OF OPERATIONAL EMISSIONS (2 OF 2)

| Operational Activities – Winter Scenario | Emissions (pounds per day) |                 |              |                 |                  |                   |
|--|----------------------------|-----------------|--------------|-----------------|------------------|-------------------|
|  | VOC                        | NO <sub>x</sub> | CO           | SO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area Source                              | 3.93                       | 1.97            | 10.12        | 0.01            | 0.20             | 0.20              |
| Energy Source                            | 0.05                       | 0.45            | 0.20         | 2.89E-03        | 0.04             | 0.04              |
| Mobile (Passenger Cars)                  | 4.10                       | 31.40           | 35.39        | 0.13            | 8.81             | 2.44              |
| <b>Total Maximum Daily Emissions</b>     | <b>8.08</b>                | <b>33.82</b>    | <b>45.71</b> | <b>0.14</b>     | <b>9.05</b>      | <b>2.68</b>       |
| SCAQMD Regional Threshold                | 55                         | 55              | 550          | 150             | 150              | 55                |
| <b>Threshold Exceeded?</b>               | <b>NO</b>                  | <b>NO</b>       | <b>NO</b>    | <b>NO</b>       | <b>NO</b>        | <b>NO</b>         |

### 3.6 LOCALIZED SIGNIFICANCE- CONSTRUCTION ACTIVITY

#### BACKGROUND ON LOCALIZED SIGNIFICANCE THRESHOLD (LST) DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (Methodology) (19). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below State standards. In the case of CO and NO<sub>2</sub>, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM<sub>10</sub> and PM<sub>2.5</sub>; both of which are non-attainment pollutants.

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (20).

#### APPLICABILITY OF LSTs FOR THE PROJECT

For this Project, the appropriate Source Receptor Area (SRA) for the LST is the Perris Valley monitoring station (SRA 24). LSTs apply to carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>),

particulate matter  $\leq 10$  microns ( $PM_{10}$ ), and particulate matter  $\leq 2.5$  microns ( $PM_{2.5}$ ). The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- CalEEMod is utilized to determine the maximum daily on-site emissions that will occur during construction activity.
- The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (21) is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.
- If the total acreage disturbed is less than or equal to five acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in pounds per day that can be compared to CalEEMod outputs.
- If the total acreage disturbed is greater than five acres per day, then LST impacts are appropriately evaluated through dispersion modeling.

#### EMISSIONS CONSIDERED

SCAQMD's Methodology clearly states that "off-site mobile emissions from the Project should NOT be included in the emissions compared to LSTs (22)." Therefore, for purposes of the construction LST analysis only emissions included in the CalEEMod "on-site" emissions outputs were considered.

#### MAXIMUM DAILY DISTURBED-ACREAGE

Table 3-6 is used to determine the maximum daily disturbed-acreage for use in determining the applicability of the SCAQMD's LST look-up tables. Based on Table 3-6, the proposed Project could actively disturb 3.5 acres per day for the site preparation activities and 4 acres per day for the grading activities. The acres disturbed is based on the equipment list and days in for site preparation and grading according to the anticipated maximum number of acres a given piece of equipment can pass over in an 8-hour workday (as shown on Table 3-6). The equipment-specific grading rates are summarized in the CalEEMod user's guide, *Appendix A: Calculation Details for CalEEMod* (October 2017).

**TABLE 3-6: MAXIMUM DAILY DISTURBED-ACREAGE (1 OF 2)**

| Construction Phase                                    | Equipment Type      | Equipment Quantity | Acres graded per 8-hour day | Operating Hours per Day | Acres graded per day |
|---|---------------------|--------------------|-----------------------------|-------------------------|----------------------|
| Site Preparation                                      | Crawler Tractors    | 4                  | 0.5                         | 8                       | 2                    |
|   | Rubber Tired Dozers | 3                  | 0.5                         | 8                       | 1.5                  |
| Total acres disturbed per day during Site Preparation |                     |                    |                             |                         | 3.5                  |



TABLE 3-6: MAXIMUM DAILY DISTURBED-ACREAGE (2 OF 2)

| Construction Phase                                    | Equipment Type      | Equipment Quantity | Acres graded per 8-hour day | Operating Hours per Day | Acres graded per day |
|---|---------------------|--------------------|-----------------------------|-------------------------|----------------------|
| Grading   | Crawler Tractors    | 2                  | 0.5                         | 8                       | 1                    |
|   | Graders             | 1                  | 0.5                         | 8                       | 0.5                  |
|   | Rubber Tired Dozers | 1                  | 0.5                         | 8                       | 0.5                  |
|   | Scrapers            | 2                  | 1                           | 8                       | 2                    |
| Total acres disturbed per day during Site Preparation |                     |                    |                             |                         | 4                    |

### ***Sensitive Receptors***

To assess the potential for long-term operational and short-term construction impacts, the following six receiver locations, as shown on Exhibit 3-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Sensitive receptor land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas.

Sensitive receptor near the Project site include existing residential homes, Lasselle Elementary School, and future residential homes currently under construction, as described below. The nearest sensitive receptor to the Project site is R6, which are future residential homes currently under construction located approximately 30 feet/9.14 meters northwest of the project site. The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual and cumulatively significant impact

- R1: Located approximately 202 feet north of the Project site, R1 represents an existing baseball diamond and bleachers within Lasselle Elementary School.
- R2: Location R2 represents an existing Lasselle Elementary School classroom building at roughly 109 feet north of the Project site.
- R3: Location R3 represents the existing residential homes located south of the Project site at approximately 133 feet.
- R4: Located approximately 123 feet south of the Project site, R4 represents the existing residential homes south of Krameria Avenue.
- R5: Location R5 represents existing residential homes at roughly 148 feet west of the Project site.
- R6: Location R6 represents the future residential homes currently under construction northwest of the Project site at approximately 30 feet.

As previously stated, the nearest sensitive receptor is located roughly 30 feet/9.14 meters northwest of the Project site boundary. The *Methodology* explicitly states that “It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters (23).” Consistent with the SCAQMD’s Final LST Methodology, a 25-meter receptor distance is utilized in this analysis and provide for a conservative i.e. “health protective” standard of care.

EXHIBIT 3-A: RECEIVER LOCATIONS



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



LEGEND:

- Receiver Locations
- Distance from receiver to Project site boundary (in feet)
- Existing Barrier
- Existing Barrier Height (in feet)

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



## CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

Since the total acreage disturbed is less than five acres per day for the site preparation and grading phase of construction, the SCAQMD's screening look-up tables are utilized in determining impacts. A 25-meter receptor distance is conservatively utilized as a screening threshold to determine the LSTs for emissions of CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>.

### Impacts Without Mitigation Measures

Table 3-7 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Outputs from the model runs for construction LSTs are provided in Appendix 3.1. It should be noted that credit for BACMs AQ-1 and AQ-2 has been taken as well as PDF AQ-1. Without mitigation, localized construction emissions would not exceed the applicable SCAQMD LSTs during site preparation for emissions of any criteria pollutant. Outputs from the model runs for construction LSTs are provided in Appendix 3.1.

**TABLE 3-7: LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION**

| On-Site Site Preparation Emissions     | Emissions (pounds per day) |       |                  |                   |
|--|----------------------------|-------|------------------|-------------------|
|  | NO <sub>x</sub>            | CO    | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Maximum Daily Emissions                | 42.56                      | 26.51 | 9.58             | 5.58              |
| SCAQMD Localized Threshold             | 220                        | 1,230 | 10               | 6                 |
| Threshold Exceeded?                    | NO                         | NO    | NO               | NO                |
| On-Site Grading Emissions <sup>4</sup> | Emissions (pounds per day) |       |                  |                   |
|  | NO <sub>x</sub>            | CO    | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Maximum Daily Emissions                | 65.79                      | 33.92 | 6.47             | 3.91              |
| SCAQMD Localized Threshold             | 237                        | 1,346 | 11               | 7                 |
| Threshold Exceeded?                    | NO                         | NO    | NO               | NO                |

### 3.7 LOCALIZED SIGNIFICANCE – LONG-TERM OPERATIONAL ACTIVITY

The proposed project involves the construction and operation of 112 apartments/duplexes and 21,000 square feet of commercial retail use. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse buildings). The proposed project does not include such uses, and thus, due to the lack of significant stationary source emissions, no long-term localized significance threshold analysis is needed.

<sup>4</sup> Since MM AQ-1 applies to equipment operating during Site Preparation activities only, localized grading emissions will not be affected.

### 3.8 CO “HOT SPOT” ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or “hot spots.” Further, detailed modeling of Project-specific carbon monoxide (CO) “hot spots” is not needed to reach this conclusion.

An adverse CO concentration, known as a “hot spot”, would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the California AAQS and National AAQS for CO (24).

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as previously noted in Table 2-3. Also, CO concentrations in the Project vicinity have steadily declined, as indicated by historical emissions data presented previously at Table 2-4.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO “hot spot” analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This “hot spot” analysis did not predict any violation of CO standards, as shown on Table 3-8.

**TABLE 3-8: CO MODEL RESULTS**

| Intersection Location | Carbon Monoxide Concentrations (parts per million) |                  |        |
|-----------------------|--|------------------|--------|
|                       | Morning 1-hour                                     | Afternoon 1-hour | 8-hour |
| Wilshire-Veteran      | 4.6  | 3.5              | 3.7    |
| Sunset-Highland       | 4  | 4.5              | 3.5    |
| La Cienega-Century    | 3.7  | 3.1              | 5.2    |
| Long Beach-Imperial   | 3  | 3.1              | 8.4    |

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations  
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 8.4 ppm CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the “hot spot” analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (24). Therefore, even if the traffic volumes for the proposed Project were double or even triple of the traffic volumes generated at the Long Beach Blvd. and



Imperial Hwy. intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO “hot spot” at any study area intersections.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (25).

Traffic volumes generating the CO concentrations for the “hot spot” analysis is shown on Tables 3-9. The busiest intersection evaluated was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day and AM/PM traffic volumes of 8,062 vehicles per hour and 7,719 vehicles per hour respectively (24). The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).<sup>5</sup> At buildout of the Project, as shown on Exhibit 7-2 of the TIA, the highest average daily trips on a segment of road would be 46,601 daily trips on Lasselle Street and Iris Avenue, which is lower than the highest daily traffic volumes at Wilshire Blvd. and Veteran Ave. of 100,000 vehicles per day (19). Additionally, the 2003 AQMP determined that the highest traffic volumes on a segment of road is 8,674 vehicles per hour on La Cienega Boulevard and Century Boulevard. The highest trips on a segment of road for the Project is 6,586 vehicles per hour on Lasselle Street and Iris Avenue. As such, Project-related traffic volumes are less than the traffic volumes identified in the 2003 AQMP.

The proposed Project considered herein would not produce the volume of traffic required to generate a CO “hot spot” either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO threshold considerations, as shown on Table 3-10. Therefore, CO “hot spots” are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

**TABLE 3-9: TRAFFIC VOLUMES**

| Intersection Location | Peak Traffic Volumes (vehicles per hour) |                      |                       |                       |                  |
|-----------------------|--|----------------------|-----------------------|-----------------------|------------------|
|                       | Eastbound<br>(AM/PM)                     | Westbound<br>(AM/PM) | Southbound<br>(AM/PM) | Northbound<br>(AM/PM) | Total<br>(AM/PM) |
| Wilshire-Veteran      | 4,954/2,069                              | 1,830/3,317          | 721/1,400             | 560/933               | 8,062/7,719      |
| Sunset-Highland       | 1,417/1,764                              | 1,342/1,540          | 2,304/1,832           | 1,551/2,238           | 6,614/5,374      |
| La Cienega-Century    | 2,540/2,243                              | 1,890/2,728          | 1,384/2,029           | 821/1,674             | 6,634/8,674      |
| Long Beach-Imperial   | 1,217/2,020                              | 1,760/1,400          | 479/944               | 756/1,150             | 4,212/5,514      |

Source: 2003 AQMP

<sup>5</sup> Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

**TABLE 3-10: OPENING YEAR CUMULATIVE WITH PROJECT PEAK HOUR TRAFFIC VOLUMES**

| Intersection Location     | Peak Traffic Volumes (vph) |                       |                      |                      |                  |
|---------------------------|----------------------------|-----------------------|----------------------|----------------------|------------------|
|                           | Northbound<br>(AM/PM)      | Southbound<br>(AM/PM) | Eastbound<br>(AM/PM) | Westbound<br>(AM/PM) | Total<br>(AM/PM) |
| Kitcing St./Krameria Av.  | 1,044/996                  | 1,059/679             | 998/845              | 1,191/639            | 4,292/3,159      |
| Lasselle St./Iris Av.     | 1,957/1,658                | 1,284/1,388           | 1,298/1,442          | 1,776/2,097          | 6,315/6,586      |
| Lasselle St./Driveway 1   | 1,848/1,454                | 1,452/1,675           | 0/0                  | 37/54                | 3,338/3,184      |
| Lasselle St./Krameria Av. | 2,059/1,328                | 1,452/1,675           | 1,198/610            | 485/267              | 5,195/3,881      |

Source: Continental Villages Traffic Impact Analysis (Urban Crossroads, 2018).

### 3.9 AIR QUALITY MANAGEMENT PLANNING

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the Basin. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In March 2017, the AQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (26). Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 RTP/SCS and updated emission inventory methodologies for various source categories (27). The Project's consistency with the AQMP will be determined using the 2016 AQMP is discussed below:

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993) (28). These indicators are discussed below:

- Consistency Criterion No. 1: The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.



### **Construction Impacts**

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized significance thresholds (LSTs) or regional significance thresholds were exceeded. The Project would not exceed the applicable LST thresholds or regional significance thresholds for construction activity. Therefore, the Project would not conflict with the AQMP according to this criterion.

### **Operational Impacts**

The Project would not exceed the applicable LST thresholds or regional significance thresholds for operational activity for emissions of any criteria pollutants. Therefore, the Project would not have the potential to conflict with the AQMP according to this criterion.

On the basis of the preceding discussion, the Project is consistent with the first criterion.

- Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

### **Overview**

The 2016 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the Southern California Association of Governments (SCAG), which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Moreno Valley General Plan Update is considered to be consistent with the AQMP.

### **Construction Impacts**

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities.

### **Operational Impacts**

The City of Moreno Valley's General Plan Land Use designation for the Project site is "Residential: Max 20 du/ac" (R20). The R20 designation provides for a broad range of housing types in a more urban setting than is typically found within other areas of the City. The Project is proposed to consist of 112 apartments/duplexes and 21,000 square feet of commercial retail use. The Project's commercial retail land use and development is not consistent with the land use designation stated in the General Plan. As such, the Project would require a zoning change. However, since the Project construction and operational regional and localized emissions do not exceed the thresholds of significance, the Project would not cause an exceedance of an air quality violation and is therefore considered consistent with this criterion.

As per the *Continental Villages Trip Generation Evaluation* (Urban Crossroads 2018), the proposed Project is anticipated to result in a net reduction to the AM, PM, and daily trips

evaluated for the allowed land uses (29). The *Continental Villages Focused Air Quality and Greenhouse Gas Memorandum*, evaluates air quality emissions associated with the Project compared to the uses currently approved for the site. As per the Memorandum, the Project will result in a net decrease in NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> (30). As such, the proposed Project would result in fewer emissions and consequently fewer impacts beyond the impacts that occur with the allowed land uses.

On the basis of the preceding discussion, the Project is determined to be consistent with the second criterion.

### **AQMP Consistency Conclusion**

The Project would not result in or cause NAAQS or CAAQS violations. Although the Project would not be consistent with the site land use and zoning designations, construction and operational-source impacts would not exceed the applicable SCAQMD regional and localized thresholds. As per the *Continental Villages Focused Air Quality and Greenhouse Gas Memorandum*, the air quality emissions associated with the Project are fewer as compared to the uses currently approved for the site. As such, the Project would not have a significant impact with respect to the AQMP.

### **3.10 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS**

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors.

Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction.

Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during operational activity. Further Project traffic would not create or result in a CO "hotspot." Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.

### **3.11 ODORS**

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations



- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous commercial refuse. Consistent with City requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations, thereby precluding substantial generation of odors due to temporary holding of refuse on-site. Moreover, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances (31).

### 3.12 CUMULATIVE IMPACTS

The Project area is designated as an extreme non-attainment area for ozone, and a non-attainment area for PM<sub>10</sub>, PM<sub>2.5</sub>, and lead.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (32). In this report the SCAQMD clearly states (Page D-3):

*“...the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*

*Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.”*

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD’s recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

### Construction Impacts

Project construction-source air pollutant emissions would not exceed the SCAQMD regional thresholds for any criteria pollutant. Therefore, the Project would not result in a cumulatively considerable significant impact with respect to construction activity.

### Operational Impacts

Project operational-source air pollutant emissions would not exceed applicable SCAQMD regional thresholds. Therefore, the Project would not result in a cumulatively considerable significant impact with respect to operational activity.



## 4 REFERENCES

1. **State of California.** *California Environmental Quality Act, Appendix G.* 2016.
2. **South Coast Air Quality Management District.** RULE 1113. Architectural Coatings. [Online] <http://www.aqmd.gov/rules/reg/reg11/r1113.pdf>.
3. —. RULE 403. Fugitive Dust. [Online] <http://www.aqmd.gov/rules/reg/reg04/r403.pdf>.
4. —. Southern California Air Basins. [Online] [Cited: November 13, 2013.] <http://www.aqmd.gov/map/mapaqmd1.pdf>.
5. **California Air Resources Board.** Ambient Air Quality Standards (AAQS). [Online] 2013. [Cited: April 6, 2015.] <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.
6. **South Coast Air Quality Management District.** Annual Air Quality Monitoring Network Plan. [Online] July 2018. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/annual-air-quality-monitoring-network-plan-v2.pdf?sfvrsn=2>.
7. **Air Resources Board.** Air Quality Standards and Area Designations. [Online] 2018. <http://www.arb.ca.gov/desig/desig.htm>.
8. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan. *South Coast Air Quality Management District.* [Online] March 2017. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf>.
9. —. Map of Monitoring Areas. [Online] <http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>.
10. **California Air Resources Board.** iADAM: Air Quality Data Statistics. *California Air Resources Board.* [Online]
11. **District, South Coast Air Quality Management.** Air Quality Data Tables. [Online] <https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year>.
12. **South Coast Air Quality Management District.** *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.* 2005.
13. **Environmental Protection Agency.** National Ambient Air Quality Standards (NAAQS). [Online] 1990. [Cited: April 16, 2018.] <https://www.epa.gov/environmental-topics/air-topics>.
14. —. Air Pollution and the Clean Air Act. [Online] [Cited: November 13, 2013.] <http://www.epa.gov/air/caa/>.
15. **Air Resources Board.** California Ambient Air Quality Standards (CAAQS). [Online] 2009. [Cited: April 16, 2018.] <http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>.
16. **South Coast Air Quality Management District.** 2012 Air Quality Management Plan (AQMP). [Online] 2012. [Cited: November 13, 2013.] <http://www.aqmd.gov/aqmp/2012aqmp/draft/index.html>.
17. **South Coast Air Quality Management District (SCAQMD).** SCAQMD Air Quality Significance Thresholds. [Online] [Cited: November 2, 2017.] <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>.
18. **California Air Pollution Control Officers Association (CAPCOA).** California Emissions Estimator Model (CalEEMod). [Online] September 2016. [www.caleemod.com](http://www.caleemod.com).
19. **Urban Crossroads, Inc.** *Continental Villages Traffic Impact Analysis.* 2018.

20. **Lake Environmental.** US EPA Models. *Lake Environmental*. [Online] [http://www.weblakes.com/download/us\\_epa.html](http://www.weblakes.com/download/us_epa.html).
21. **South Coast Air Quality Management District.** Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. [Online] [Cited: December 9, 2013.] <http://aqmd.gov/ceqa/handbook/LST/CalEEModguidance.pdf>.
22. —. *Localized Significance Thresholds Methodology*. s.l. : South Coast Air Quality Management District, 2003.
23. —. *Localized Significance Thresholds Methodology*. s.l. : South Coast Air Quality Management District, 2003.
24. —. 2003 Air Quality Management Plan. [Online] 2003. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2003-air-quality-management-plan/2003-aqmp-appendix-v.pdf>.
25. **Bay Area Air Quality Management District.** [Online] <http://www.baaqmd.gov/>.
26. **South Coast Air Quality Management District.** Final 2016 Air Quality Management Plan (AQMP). [Online] March 2017. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=11>.
27. **Southern California Association of Governments.** 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. [Online] April 2016. <http://scagrtpscsc.net/Documents/2016/final/f2016RTPSCS.pdf>.
28. **South coast Air Quality Management District.** CEQA Air Quality Handbook (1993). [Online] 1993. [Cited: November 13, 2013.] <http://www.aqmd.gov/ceqa/oldhdbk.html>.
29. **Urban Crossroads, Inc.** *Continental Villages Trip Generation Evaluation* . 2018.
30. —. *Continental Villages Focused Air Quality and Greenhouse Gas Memorandum*. 2018.
31. **South Coast Air Quality Management District.** RULE 402. Nuisance. [Online] May 7, 1976. [Cited: November 13, 2013.] <http://www.aqmd.gov/rules/reg/reg04/r402.pdf>.
32. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. [http://www.aqmd.gov/rules/ciwig/final\\_white\\_paper.pdf](http://www.aqmd.gov/rules/ciwig/final_white_paper.pdf).



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## 5 CERTIFICATION

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Continental Villages Project. The information contained in this air quality impact report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

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### EDUCATION

Master of Science in Environmental Studies  
 California State University, Fullerton • May, 2010

Bachelor of Arts in Environmental Analysis and Design  
 University of California, Irvine • June, 2006

### PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners  
 AWMA – Air and Waste Management Association  
 ASTM – American Society for Testing and Materials

### PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June, 2013  
 Planned Communities and Urban Infill – Urban Land Institute • June, 2011  
 Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008  
 Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007  
 AB2588 Regulatory Standards – Trinity Consultants • November, 2006  
 Air Dispersion Modeling – Lakes Environmental • June, 2006



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**APPENDIX 2.1:****STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS**



**TABLE 2-3**  
National Ambient Air Quality Standards (NAAQS) Attainment Status - South Coast Air Basin

| Criteria Pollutant             | Averaging Time  | Designation <sup>a</sup>  | Attainment Date <sup>b</sup>    |
|--------------------------------|---|---|---------------------------------|
| Ozone (O <sub>3</sub> )        | (1979) <b>1-Hour</b> (0.12 ppm) <sup>c</sup>                        | Nonattainment (“extreme”)   | 2/26/2023<br>(revised deadline) |
|                                | (2015) <b>8-Hour</b> (0.070 ppm) <sup>d</sup>                       | Pending – Expect Nonattainment (“extreme”)                            | Pending<br>(beyond 2032)        |
|                                | (2008) <b>8-Hour</b> (0.075 ppm) <sup>d</sup>                       | Nonattainment (“extreme”)   | 7/20/2032                       |
|                                | (1997) <b>8-Hour</b> (0.08 ppm) <sup>d</sup>                        | Nonattainment (“extreme”)   | 6/15/2024                       |
| PM <sub>2.5</sub> <sup>e</sup> | (2006) <b>24-Hour</b> (35 µg/m <sup>3</sup> )                       | Nonattainment (“serious”)   | 12/31/2019                      |
|                                | (2012) <b>Annual</b> (12.0 µg/m <sup>3</sup> )                      | Nonattainment (“moderate”)  | 12/31/2021                      |
|                                | (1997) <b>Annual</b> (15.0 µg/m <sup>3</sup> )                      | Attainment (final determination pending)                              | 4/5/2015<br>(attained 2013)     |
| PM <sub>10</sub> <sup>f</sup>  | (1987) <b>24-hour</b> (150 µg/m <sup>3</sup> )                      | Attainment (Maintenance)  | 7/26/2013 (attained)            |
| Lead (Pb) <sup>g</sup>         | (2008) <b>3-Months Rolling</b><br>(0.15 µg/m <sup>3</sup> )         | Nonattainment (Partial)<br>(Attainment determination to be requested) | 12/31/2015                      |
| CO                             | (1971) <b>1-Hour</b> (35 ppm)                                       | Attainment (Maintenance)  | 6/11/2007 (attained)            |
|                                | (1971) <b>8-Hour</b> (9 ppm)  | Attainment (Maintenance)  | 6/11/2007 (attained)            |
| NO <sub>2</sub> <sup>h</sup>   | (2010) <b>1-Hour</b> (100 ppb)                                      | Unclassifiable/Attainment   | N/A (attained)                  |
|                                | (1971) <b>Annual</b> (0.053 ppm)                                    | Attainment (Maintenance)  | 9/22/1998 (attained)            |
| SO <sub>2</sub> <sup>i</sup>   | (2010) <b>1-Hour</b> (75 ppb)                                       | Designations Pending<br>(expect Unclassifiable/Attainment)            | N/A (attained)                  |
|                                | (1971) <b>24-Hour</b> (0.14 ppm)<br>(1971) <b>Annual</b> (0.03 ppm) | Unclassifiable/Attainment   | 3/19/1979 (attained)            |

- a) U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable
- b) A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for an attainment demonstration
- c) The 1979 1-hour ozone NAAQS (0.12 ppm) was revoked, effective 6/15/05 ; however, the Basin has not attained this standard and therefore has some continuing obligations with respect to the revoked standard; original attainment date was 11/15/2010; the revised attainment date is 2/6/23
- d) The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm, effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour ozone NAAQS (0.08 ppm) was revoked in the 2008 ozone NAAQS implementation rule, effective 4/6/15; there are continuing obligations under the revoked 1997 and revised 2008 ozone NAAQS until they are attained
- e) The attainment deadline for the 2006 24-hour PM<sub>2.5</sub> NAAQS was 12/31/15 for the former “moderate” classification; U.S.EPA approved reclassification to “serious,” effective 2/12/16 with an attainment deadline of 12/31/2019; the 2012 (proposal year) annual PM<sub>2.5</sub> NAAQS was revised on 1/15/13, effective 3/18/13, from 15 to 12 µg/m<sup>3</sup>; new annual designations were final 1/15/15, effective 4/15/15; on July 25, 2016 U.S. EPA finalized a determination that the Basin attained the 1997 annual (15.0 µg/m<sup>3</sup>) and 24-hour PM<sub>2.5</sub> (65 µg/m<sup>3</sup>) NAAQS, effective August 24, 2016
- f) The annual PM<sub>10</sub> NAAQS was revoked, effective 12/18/06; the 24-hour PM<sub>10</sub> NAAQS deadline was 12/31/2006; the Basin’s Attainment Re-designation Request and PM<sub>10</sub> Maintenance Plan was approved by U.S. EPA on 6/26/13, effective 7/26/13
- g) Partial Nonattainment designation – Los Angeles County portion of the Basin only for near-source monitors; expect to remain in attainment based on current monitoring data; attainment re-designation request pending
- h) New 1-hour NO<sub>2</sub> NAAQS became effective 8/2/10, with attainment designations 1/20/12; annual NO<sub>2</sub> NAAQS retained
- i) The 1971 annual and 24-hour SO<sub>2</sub> NAAQS were revoked, effective 8/23/10; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO<sub>2</sub> 1-hour NAAQS; final area designations expected by 12/31/20 due to new source-specific monitoring requirements; Basin expected to be in attainment due to ongoing clean data

**TABLE 2-4**  
National Ambient Air Quality Standards (NAAQS) Attainment Status  
Coachella Valley Portion of the Salton Sea Air Basin

| Criteria Pollutant                | Averaging Time  | Designation <sup>a</sup>                   | Attainment Date <sup>b</sup>        |
|-----------------------------------|---|--|-------------------------------------|
| <b>Ozone (O<sub>3</sub>)</b>      | (1979) <b>1-Hour</b> (0.12 ppm) <sup>c</sup>                        | Attainment                                 | 11/15/2007<br>(attained 12/31/2013) |
|                                   | (2015) <b>8-Hour</b> (0.070 ppm) <sup>d</sup>                       | Pending – Expect<br>Nonattainment (Severe) | Pending                             |
|                                   | (2008) <b>8-Hour</b> (0.075 ppm) <sup>d</sup>                       | Nonattainment (Severe-15)                  | 7/20/2027                           |
|                                   | (1997) <b>8-Hour</b> (0.08 ppm) <sup>d</sup>                        | Nonattainment (Severe-15)                  | 6/15/2019                           |
| <b>PM2.5<sup>e</sup></b>          | (2006) <b>24-Hour</b> (35 µg/m <sup>3</sup> )                       | Unclassifiable/Attainment                  | N/A (attained)                      |
|                                   | (2012) <b>Annual</b> (12.0 µg/m <sup>3</sup> )                      | Unclassifiable/Attainment                  | N/A (attained)                      |
|                                   | (1997) <b>Annual</b> (15.0 µg/m <sup>3</sup> )                      | Unclassifiable/Attainment                  | N/A (attained)                      |
| <b>PM10<sup>f</sup></b>           | (1987) <b>24-hour</b> (150 µg/m <sup>3</sup> )                      | Nonattainment (“serious”)                  | 12/31/2006                          |
| <b>Lead (Pb)</b>                  | (2008) <b>3-Months Rolling</b><br>(0.15 µg/m <sup>3</sup> )         | Unclassifiable/Attainment                  | Unclassifiable/<br>Attainment       |
| <b>CO</b>                         | (1971) <b>1-Hour</b> (35 ppm)                                       | Unclassifiable/Attainment                  | N/A (attained)                      |
|                                   | (1971) <b>8-Hour</b> (9 ppm)  | Unclassifiable/Attainment                  | N/A (attained)                      |
| <b>NO<sub>2</sub><sup>g</sup></b> | (2010) <b>1-Hour</b> (100 ppb)                                      | Unclassifiable/Attainment                  | N/A (attained)                      |
|                                   | (1971) <b>Annual</b> (0.053 ppm)                                    | Unclassifiable/Attainment                  | N/A (attained)                      |
| <b>SO<sub>2</sub><sup>h</sup></b> | (2010) <b>1-Hour</b> (75 ppb)                                       | Designations Pending                       | N/A                                 |
|                                   | (1971) <b>24-Hour</b> (0.14 ppm)<br>(1971) <b>Annual</b> (0.03 ppm) | Unclassifiable/Attainment                  | Unclassifiable/<br>Attainment       |

- a) U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable
- b) A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for an attainment demonstration
- c) The 1979 1-hour ozone NAAQS (0.12 ppm) was revoked, effective 6/15/05; the Southeast Desert Modified Air Quality Management Area, including the Coachella Valley, had not timely attained this standard by the 11/15/07 “severe-17” deadline, based on 2005-2007 data; on 8/25/14, U.S. EPA proposed a clean data finding based on 2011–2013 data and a determination of attainment for the former 1-hour ozone NAAQS for the Southeast Desert nonattainment area; this rule was finalized by U.S. EPA on 4/15/15, effective 5/15/15, that included preliminary 2014 data
- d) The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm, effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour ozone NAAQS (0.08 ppm) was revoked in the 2008 ozone NAAQS implementation rule, effective 4/6/15; there are continuing obligations under the 1997 and 2008 ozone NAAQS until they are attained
- e) The annual PM2.5 standard was revised on 1/15/13, effective 3/18/13, from 15 to 12 µg/m<sup>3</sup>
- f) The annual PM10 standard was revoked, effective 12/18/06; the 24-hour PM10 NAAQS attainment deadline was 12/31/2006; the Coachella Valley Attainment Re-designation Request and PM10 Maintenance Plan was postponed by U.S. EPA pending additional monitoring and analysis in the southeastern Coachella Valley
- g) New 1-hour NO<sub>2</sub> NAAQS became effective 8/2/10; attainment designations 1/20/12; annual NO<sub>2</sub> NAAQS retained
- h) The 1971 Annual and 24-hour SO<sub>2</sub> NAAQS were revoked, effective 8/23/10; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO<sub>2</sub> 1-hour standard; final area designations expected by 12/31/2020 with SSAB expected to be designated Unclassifiable/Attainment



The current status of CAAQS attainment for the pollutants with State standards is presented in Table 2-5 for the Basin and the Riverside County portion of the SSAB (Coachella Valley).

**TABLE 2-5**

California Ambient Air Quality Standards (CAAQS) Attainment Status  
South Coast Air Basin and Coachella Valley portion of Salton Sea Air Basin

| Pollutant                     | Averaging Time and Level <sup>b</sup>      | Designation <sup>a</sup> |                            |
|-------------------------------|--|--------------------------|----------------------------|
|                               |  | South Coast Air Basin    | Coachella Valley           |
| Ozone (O <sub>3</sub> )       | 1-Hour (0.09 ppm) <sup>c</sup>             | Nonattainment            | Nonattainment              |
|                               | 8-Hour (0.070 ppm) <sup>d</sup>            | Nonattainment            | Nonattainment              |
| PM2.5                         | Annual (12.0 µg/m <sup>3</sup> )           | Nonattainment            | Attainment                 |
| PM10                          | 24-Hour (50 µg/m <sup>3</sup> )            | Nonattainment            | Nonattainment              |
|                               | Annual (20 µg/m <sup>3</sup> )             | Nonattainment            | Nonattainment              |
| Lead (Pb)                     | 30-Day Average<br>(1.5 µg/m <sup>3</sup> ) | Attainment               | Attainment                 |
| CO                            | 1-Hour (20 ppm)                            | Attainment               | Attainment                 |
|                               | 8-Hour (9.0 ppm)                           | Attainment               | Attainment                 |
| NO <sub>2</sub>               | 1-Hour (0.18 ppm)                          | Attainment               | Attainment                 |
|                               | Annual (0.030 ppm)                         | Attainment               | Attainment                 |
| SO <sub>2</sub>               | 1-Hour (0.25 ppm)                          | Attainment               | Attainment                 |
|                               | 24-Hour (0.04 ppm)                         | Attainment               | Attainment                 |
| Sulfates                      | 24-Hour (25 µg/m <sup>3</sup> )            | Attainment               | Attainment                 |
| H <sub>2</sub> S <sup>c</sup> | 1-Hour (0.03 ppm)                          | Unclassified             | Unclassified <sup>c)</sup> |

- a) CA State designations shown were updated by CARB in 2016, based on the 2013–2015 3-year period; stated designations are based on a 3-year data period after consideration of outliers and exceptional events; Source: <http://www.arb.ca.gov/desig/statedesig.htm#current>
- b) CA State standards, or CAAQS, for ozone, CO, SO<sub>2</sub>, NO<sub>2</sub>, PM10 and PM2.5 are values not to be exceeded; lead, sulfates, and H<sub>2</sub>S standards are values not to be equaled or exceeded; CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations
- c) SCAQMD began monitoring H<sub>2</sub>S in the southeastern Coachella Valley in November 2013 due to odor events related to the Salton Sea; three full years of data are not yet available for a State designation, but nonattainment is anticipated for the H<sub>2</sub>S CAAQS in at least part of the Coachella Valley

The 1979 federal 1-hour ozone standard (0.12 ppm) was revoked by the U.S. EPA and replaced by the 8-hour average ozone standard (0.08 ppm), effective June 15, 2005. However, the Basin and the former Southeast Desert Modified Air Quality Management Area (which included the Coachella Valley) had not attained the 1-hour federal ozone NAAQS by the attainment dates in 2010 and 2007, respectively, and, therefore, had continuing obligations under the former standard. On August 25, 2014, U.S. EPA

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**APPENDIX 3.1:**

**CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS (UNMITIGATED)**

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**Continental Villages (Construction - Unmitigated)**  
**Riverside-South Coast County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses                | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------|--------|---------------|-------------|--------------------|------------|
| Apartments Low Rise      | 112.00 | Dwelling Unit | 5.48        | 132,472.00         | 320        |
| Regional Shopping Center | 21.00  | 1000sqft      | 0.87        | 21,000.00          | 0          |
| Parking Lot              | 593.00 | Space         | 5.30        | 237,200.00         | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.4   | <b>Precipitation Freq (Days)</b> | 28    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2020  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 702.44                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

**1.3 User Entered Comments & Non-Default Data**

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Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

Project Characteristics -

Land Use - Total Project Area is 11.64 acres.

Construction Phase -

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes.

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday.

Grading -

Architectural Coating - Rule 1113

Vehicle Trips - Construction Run Only.

Woodstoves - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation - All equipment operating >150 HP are required to be equipped with Tier 3 or better engines.

| Table Name              | Column Name                | Default Value | New Value |
|-------------------------|----------------------------|---------------|-----------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 100.00        | 50.00     |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 100.00        | 50.00     |
| tblArchitecturalCoating | EF_Parking                 | 100.00        | 50.00     |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00      |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 3    |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 3    |
| tblConstructionPhase    | PhaseEndDate               | 9/10/2020     | 7/16/2020 |
| tblConstructionPhase    | PhaseEndDate               | 7/16/2020     | 6/18/2020 |

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

|                      |                   |            |            |
|----------------------|-------------------|------------|------------|
| tblConstructionPhase | PhaseEndDate      | 5/23/2019  | 4/25/2019  |
| tblConstructionPhase | PhaseEndDate      | 8/13/2020  | 7/16/2020  |
| tblConstructionPhase | PhaseEndDate      | 4/11/2019  | 3/14/2019  |
| tblConstructionPhase | PhaseStartDate    | 8/14/2020  | 6/19/2020  |
| tblConstructionPhase | PhaseStartDate    | 5/24/2019  | 4/26/2019  |
| tblConstructionPhase | PhaseStartDate    | 4/12/2019  | 3/15/2019  |
| tblConstructionPhase | PhaseStartDate    | 7/17/2020  | 6/19/2020  |
| tblConstructionPhase | PhaseStartDate    | 3/29/2019  | 3/1/2019   |
| tblEnergyUse         | LightingElect     | 810.36     | 0.00       |
| tblEnergyUse         | LightingElect     | 0.35       | 0.00       |
| tblEnergyUse         | LightingElect     | 5.61       | 0.00       |
| tblEnergyUse         | NT24E             | 3,172.76   | 0.00       |
| tblEnergyUse         | NT24E             | 2.44       | 0.00       |
| tblEnergyUse         | NT24NG            | 6,030.00   | 0.00       |
| tblEnergyUse         | NT24NG            | 0.30       | 0.00       |
| tblEnergyUse         | T24E              | 877.14     | 0.00       |
| tblEnergyUse         | T24E              | 4.58       | 0.00       |
| tblEnergyUse         | T24NG             | 9,544.50   | 0.00       |
| tblEnergyUse         | T24NG             | 1.92       | 0.00       |
| tblFireplaces        | FireplaceDayYear  | 25.00      | 0.00       |
| tblFireplaces        | FireplaceHourDay  | 3.00       | 0.00       |
| tblFireplaces        | FireplaceWoodMass | 1,019.20   | 0.00       |
| tblFireplaces        | NumberGas         | 95.20      | 0.00       |
| tblFireplaces        | NumberNoFireplace | 11.20      | 0.00       |
| tblFireplaces        | NumberWood        | 5.60       | 0.00       |
| tblGrading           | MaterialExported  | 0.00       | 3,000.00   |
| tblLandUse           | LandUseSquareFeet | 112,000.00 | 132,472.00 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

|                     |                            |       |                  |
|---------------------|----------------------------|-------|------------------|
| tblLandUse          | LotAcreage                 | 7.00  | 5.48             |
| tblLandUse          | LotAcreage                 | 0.48  | 0.87             |
| tblLandUse          | LotAcreage                 | 5.34  | 5.30             |
| tblOffRoadEquipment | LoadFactor                 | 0.43  | 0.43             |
| tblOffRoadEquipment | LoadFactor                 | 0.43  | 0.43             |
| tblOffRoadEquipment | LoadFactor                 | 0.43  | 0.43             |
| tblOffRoadEquipment | OffRoadEquipmentType       |       | Crawler Tractors |
| tblOffRoadEquipment | OffRoadEquipmentType       |       | Crawler Tractors |
| tblOffRoadEquipment | OffRoadEquipmentType       |       | Crawler Tractors |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00  | 0.00             |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00  | 0.00             |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00  | 0.00             |
| tblOffRoadEquipment | UsageHours                 | 6.00  | 8.00             |
| tblOffRoadEquipment | UsageHours                 | 7.00  | 8.00             |
| tblOffRoadEquipment | UsageHours                 | 7.00  | 8.00             |
| tblSolidWaste       | SolidWasteGenerationRate   | 51.52 | 0.00             |
| tblSolidWaste       | SolidWasteGenerationRate   | 22.05 | 0.00             |
| tblVehicleTrips     | CC_TL                      | 8.40  | 0.00             |
| tblVehicleTrips     | CC_TL                      | 8.40  | 0.00             |
| tblVehicleTrips     | CC_TTP                     | 64.70 | 0.00             |
| tblVehicleTrips     | CNW_TL                     | 6.90  | 0.00             |
| tblVehicleTrips     | CNW_TL                     | 6.90  | 0.00             |
| tblVehicleTrips     | CNW_TTP                    | 19.00 | 0.00             |
| tblVehicleTrips     | CW_TL                      | 16.60 | 0.00             |
| tblVehicleTrips     | CW_TL                      | 16.60 | 0.00             |
| tblVehicleTrips     | CW_TTP                     | 16.30 | 0.00             |
| tblVehicleTrips     | DV_TP                      | 11.00 | 0.00             |

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Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

|                 |                     |              |      |
|-----------------|---------------------|--------------|------|
| tblVehicleTrips | DV_TP               | 35.00        | 0.00 |
| tblVehicleTrips | HO_TL               | 8.70         | 0.00 |
| tblVehicleTrips | HO_TTP              | 40.60        | 0.00 |
| tblVehicleTrips | HS_TL               | 5.90         | 0.00 |
| tblVehicleTrips | HS_TTP              | 19.20        | 0.00 |
| tblVehicleTrips | HW_TL               | 14.70        | 0.00 |
| tblVehicleTrips | HW_TTP              | 40.20        | 0.00 |
| tblVehicleTrips | PB_TP               | 3.00         | 0.00 |
| tblVehicleTrips | PB_TP               | 11.00        | 0.00 |
| tblVehicleTrips | PR_TP               | 86.00        | 0.00 |
| tblVehicleTrips | PR_TP               | 54.00        | 0.00 |
| tblVehicleTrips | ST_TR               | 7.16         | 0.00 |
| tblVehicleTrips | ST_TR               | 49.97        | 0.00 |
| tblVehicleTrips | SU_TR               | 6.07         | 0.00 |
| tblVehicleTrips | SU_TR               | 25.24        | 0.00 |
| tblVehicleTrips | WD_TR               | 6.59         | 0.00 |
| tblVehicleTrips | WD_TR               | 42.70        | 0.00 |
| tblWater        | IndoorWaterUseRate  | 7,297,250.87 | 0.00 |
| tblWater        | IndoorWaterUseRate  | 1,555,522.95 | 0.00 |
| tblWater        | OutdoorWaterUseRate | 4,600,440.77 | 0.00 |
| tblWater        | OutdoorWaterUseRate | 953,385.03   | 0.00 |
| tblWoodstoves   | NumberCatalytic     | 5.60         | 0.00 |
| tblWoodstoves   | NumberNoncatalytic  | 5.60         | 0.00 |
| tblWoodstoves   | WoodstoveDayYear    | 25.00        | 0.00 |
| tblWoodstoves   | WoodstoveWoodMass   | 999.60       | 0.00 |

2.0 Emissions Summary

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

|                | ROG            | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |                |                |               |                |               |                |                |               |                | lb/day        |                   |                   |               |               |                   |
| 2019           | 5.9350         | 69.0844        | 35.0878        | 0.0829        | 20.3885        | 2.9699        | 23.3584        | 10.2131        | 2.7323        | 12.9454        | 0.0000        | 8,273.9620        | 8,273.9620        | 2.3134        | 0.0000        | 8,331.7978        |
| 2020           | 50.5944        | 42.7239        | 25.8973        | 0.0751        | 2.4360         | 1.6796        | 4.1156         | 0.6539         | 1.5691        | 2.2230         | 0.0000        | 7,387.4255        | 7,387.4255        | 1.2958        | 0.0000        | 7,419.8214        |
| <b>Maximum</b> | <b>50.5944</b> | <b>69.0844</b> | <b>35.0878</b> | <b>0.0829</b> | <b>20.3885</b> | <b>2.9699</b> | <b>23.3584</b> | <b>10.2131</b> | <b>2.7323</b> | <b>12.9454</b> | <b>0.0000</b> | <b>8,273.9620</b> | <b>8,273.9620</b> | <b>2.3134</b> | <b>0.0000</b> | <b>8,331.7978</b> |

**Mitigated Construction**

|                | ROG            | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2019           | 4.6116         | 59.3187        | 36.6773        | 0.0829        | 8.0742        | 2.2180        | 9.7837        | 4.0156         | 2.0601        | 5.6359        | 0.0000        | 8,273.9620        | 8,273.9620        | 2.3134        | 0.0000        | 8,331.7978        |
| 2020           | 50.5944        | 37.8303        | 28.1091        | 0.0751        | 2.4360        | 1.4964        | 3.9325        | 0.6539         | 1.4155        | 2.0694        | 0.0000        | 7,387.4255        | 7,387.4255        | 1.2958        | 0.0000        | 7,419.8214        |
| <b>Maximum</b> | <b>50.5944</b> | <b>59.3187</b> | <b>36.6773</b> | <b>0.0829</b> | <b>8.0742</b> | <b>2.2180</b> | <b>9.7837</b> | <b>4.0156</b>  | <b>2.0601</b> | <b>5.6359</b> | <b>0.0000</b> | <b>8,273.9620</b> | <b>8,273.9620</b> | <b>2.3134</b> | <b>0.0000</b> | <b>8,331.7978</b> |

|                          | ROG         | NOx          | CO           | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio- CO2   | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|--------------|--------------|-------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>2.34</b> | <b>13.11</b> | <b>-6.23</b> | <b>0.00</b> | <b>53.95</b>  | <b>20.11</b> | <b>50.08</b> | <b>57.03</b>   | <b>19.20</b>  | <b>49.20</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**2.2 Overall Operational**  
**Unmitigated Operational**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                |                |               |               |                |
| Area         | 3.7095        | 0.1078        | 9.3340        | 4.9000e-004        |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        | 0.0000        | 16.7722        | 16.7722        | 0.0166        | 0.0000        | 17.1868        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000         | 0.0000         | 0.0000        |               | 0.0000         |
| <b>Total</b> | <b>3.7095</b> | <b>0.1078</b> | <b>9.3340</b> | <b>4.9000e-004</b> | <b>0.0000</b> | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b>  | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b> | <b>16.7722</b> | <b>16.7722</b> | <b>0.0166</b> | <b>0.0000</b> | <b>17.1868</b> |

**Mitigated Operational**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                |                |               |               |                |
| Area         | 3.7095        | 0.1078        | 9.3340        | 4.9000e-004        |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        | 0.0000        | 16.7722        | 16.7722        | 0.0166        | 0.0000        | 17.1868        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000         | 0.0000         | 0.0000        |               | 0.0000         |
| <b>Total</b> | <b>3.7095</b> | <b>0.1078</b> | <b>9.3340</b> | <b>4.9000e-004</b> | <b>0.0000</b> | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b>  | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b> | <b>16.7722</b> | <b>16.7722</b> | <b>0.0166</b> | <b>0.0000</b> | <b>17.1868</b> |

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Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 3/1/2019   | 3/14/2019 | 5             | 10       |                   |
| 2            | Grading               | Grading               | 3/15/2019  | 4/25/2019 | 5             | 30       |                   |
| 3            | Building Construction | Building Construction | 4/26/2019  | 6/18/2020 | 5             | 300      |                   |
| 4            | Paving                | Paving                | 6/19/2020  | 7/16/2020 | 5             | 20       |                   |
| 5            | Architectural Coating | Architectural Coating | 6/19/2020  | 7/16/2020 | 5             | 20       |                   |

Acres of Grading (Site Preparation Phase): 20

Acres of Grading (Grading Phase): 105

Acres of Paving: 5.3

Residential Indoor: 268,256; Residential Outdoor: 89,419; Non-Residential Indoor: 31,500; Non-Residential Outdoor: 10,500; Striped Parking Area: 14,232 (Architectural Coating – sqft)

OffRoad Equipment

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 8.00        | 78          | 0.48        |
| Site Preparation      | Crawler Tractors          | 4      | 8.00        | 212         | 0.43        |
| Grading               | Crawler Tractors          | 2      | 8.00        | 212         | 0.43        |
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Cranes                    | 1      | 8.00        | 231         | 0.29        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Building Construction | Crawler Tractors          | 3      | 8.00        | 212         | 0.43        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Building Construction | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Grading               | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Site Preparation      | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |
| Site Preparation      | Rubber Tired Dozers       | 3      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 2      | 8.00        | 367         | 0.48        |
| Building Construction | Welders                   | 1      | 8.00        | 46          | 0.45        |

Trips and VMT



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 7                       | 18.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 375.00              | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 187.00             | 54.00              | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 37.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Site Preparation - 2019**

**Unmitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |                |               |                |                |               |                | lb/day   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 20.1873        | 0.0000        | 20.1873        | 10.1597        | 0.0000        | 10.1597        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 5.8382        | 68.1103        | 23.1420        | 0.0569        |                | 2.9687        | 2.9687         |                | 2.7312        | 2.7312         |          | 5,636.7406        | 5,636.7406        | 1.7834        |     | 5,681.3258        |
| <b>Total</b>  | <b>5.8382</b> | <b>68.1103</b> | <b>23.1420</b> | <b>0.0569</b> | <b>20.1873</b> | <b>2.9687</b> | <b>23.1559</b> | <b>10.1597</b> | <b>2.7312</b> | <b>12.8909</b> |          | <b>5,636.7406</b> | <b>5,636.7406</b> | <b>1.7834</b> |     | <b>5,681.3258</b> |

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**3.2 Site Preparation - 2019**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0968        | 0.0630        | 0.6481        | 1.8400e-003        | 0.2012        | 1.2400e-003        | 0.2024        | 0.0534         | 1.1400e-003        | 0.0545        |          | 183.6931        | 183.6931        | 4.9800e-003        |     | 183.8177        |
| <b>Total</b> | <b>0.0968</b> | <b>0.0630</b> | <b>0.6481</b> | <b>1.8400e-003</b> | <b>0.2012</b> | <b>1.2400e-003</b> | <b>0.2024</b> | <b>0.0534</b>  | <b>1.1400e-003</b> | <b>0.0545</b> |          | <b>183.6931</b> | <b>183.6931</b> | <b>4.9800e-003</b> |     | <b>183.8177</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 7.8730        | 0.0000        | 7.8730        | 3.9623         | 0.0000        | 3.9623        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 3.0233        | 42.5552        | 26.5058        | 0.0569        |               | 1.7083        | 1.7083        |                | 1.6191        | 1.6191        | 0.0000        | 5,636.7406        | 5,636.7406        | 1.7834        |     | 5,681.3258        |
| <b>Total</b>  | <b>3.0233</b> | <b>42.5552</b> | <b>26.5058</b> | <b>0.0569</b> | <b>7.8730</b> | <b>1.7083</b> | <b>9.5813</b> | <b>3.9623</b>  | <b>1.6191</b> | <b>5.5814</b> | <b>0.0000</b> | <b>5,636.7406</b> | <b>5,636.7406</b> | <b>1.7834</b> |     | <b>5,681.3258</b> |

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**3.2 Site Preparation - 2019**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0968        | 0.0630        | 0.6481        | 1.8400e-003        | 0.2012        | 1.2400e-003        | 0.2024        | 0.0534         | 1.1400e-003        | 0.0545        |          | 183.6931        | 183.6931        | 4.9800e-003        |     | 183.8177        |
| <b>Total</b> | <b>0.0968</b> | <b>0.0630</b> | <b>0.6481</b> | <b>1.8400e-003</b> | <b>0.2012</b> | <b>1.2400e-003</b> | <b>0.2024</b> | <b>0.0534</b>  | <b>1.1400e-003</b> | <b>0.0545</b> |          | <b>183.6931</b> | <b>183.6931</b> | <b>4.9800e-003</b> |     | <b>183.8177</b> |

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |               |               |                |                |               |               | lb/day   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 9.7465        | 0.0000        | 9.7465         | 3.7129         | 0.0000        | 3.7129        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 5.4905        | 65.7890        | 33.9162        | 0.0714        |               | 2.6718        | 2.6718         |                | 2.4581        | 2.4581        |          | 7,075.1634        | 7,075.1634        | 2.2385        |     | 7,131.1260        |
| <b>Total</b>  | <b>5.4905</b> | <b>65.7890</b> | <b>33.9162</b> | <b>0.0714</b> | <b>9.7465</b> | <b>2.6718</b> | <b>12.4183</b> | <b>3.7129</b>  | <b>2.4581</b> | <b>6.1710</b> |          | <b>7,075.1634</b> | <b>7,075.1634</b> | <b>2.2385</b> |     | <b>7,131.1260</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**3.3 Grading - 2019**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Hauling      | 0.0738        | 3.2254        | 0.4514        | 9.3800e-003   | 0.2187        | 0.0118        | 0.2304        | 0.0600         | 0.0112        | 0.0712        |          | 994.6953          | 994.6953          | 0.0694        |     | 996.4299          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        |     | 0.0000            |
| Worker       | 0.1076        | 0.0700        | 0.7201        | 2.0500e-003   | 0.2236        | 1.3800e-003   | 0.2249        | 0.0593         | 1.2700e-003   | 0.0606        |          | 204.1034          | 204.1034          | 5.5400e-003   |     | 204.2419          |
| <b>Total</b> | <b>0.1814</b> | <b>3.2954</b> | <b>1.1716</b> | <b>0.0114</b> | <b>0.4422</b> | <b>0.0131</b> | <b>0.4554</b> | <b>0.1192</b>  | <b>0.0125</b> | <b>0.1318</b> |          | <b>1,198.7987</b> | <b>1,198.7987</b> | <b>0.0749</b> |     | <b>1,200.6718</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 3.8011        | 0.0000        | 3.8011        | 1.4480         | 0.0000        | 1.4480        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 4.4301        | 56.0233        | 35.5057        | 0.0714        |               | 2.2049        | 2.2049        |                | 2.0476        | 2.0476        | 0.0000        | 7,075.1634        | 7,075.1634        | 2.2385        |     | 7,131.1260        |
| <b>Total</b>  | <b>4.4301</b> | <b>56.0233</b> | <b>35.5057</b> | <b>0.0714</b> | <b>3.8011</b> | <b>2.2049</b> | <b>6.0060</b> | <b>1.4480</b>  | <b>2.0476</b> | <b>3.4957</b> | <b>0.0000</b> | <b>7,075.1634</b> | <b>7,075.1634</b> | <b>2.2385</b> |     | <b>7,131.1260</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**3.3 Grading - 2019**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Hauling      | 0.0738        | 3.2254        | 0.4514        | 9.3800e-003   | 0.2187        | 0.0118        | 0.2304        | 0.0600         | 0.0112        | 0.0712        |          | 994.6953          | 994.6953          | 0.0694        |     | 996.4299          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        |     | 0.0000            |
| Worker       | 0.1076        | 0.0700        | 0.7201        | 2.0500e-003   | 0.2236        | 1.3800e-003   | 0.2249        | 0.0593         | 1.2700e-003   | 0.0606        |          | 204.1034          | 204.1034          | 5.5400e-003   |     | 204.2419          |
| <b>Total</b> | <b>0.1814</b> | <b>3.2954</b> | <b>1.1716</b> | <b>0.0114</b> | <b>0.4422</b> | <b>0.0131</b> | <b>0.4554</b> | <b>0.1192</b>  | <b>0.0125</b> | <b>0.1318</b> |          | <b>1,198.7987</b> | <b>1,198.7987</b> | <b>0.0749</b> |     | <b>1,200.6718</b> |

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.6389        | 39.6094        | 19.1231        | 0.0430        |               | 1.8139        | 1.8139        |                | 1.6949        | 1.6949        |          | 4,181.0255        | 4,181.0255        | 1.1342        |     | 4,209.3809        |
| <b>Total</b> | <b>3.6389</b> | <b>39.6094</b> | <b>19.1231</b> | <b>0.0430</b> |               | <b>1.8139</b> | <b>1.8139</b> |                | <b>1.6949</b> | <b>1.6949</b> |          | <b>4,181.0255</b> | <b>4,181.0255</b> | <b>1.1342</b> |     | <b>4,209.3809</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        |     | 0.0000            |
| Vendor       | 0.1888        | 6.1330        | 1.3393        | 0.0137        | 0.3458        | 0.0473        | 0.3931        | 0.0996         | 0.0452        | 0.1448        |          | 1,441.4686        | 1,441.4686        | 0.1331        |     | 1,444.7962        |
| Worker       | 1.0060        | 0.6541        | 6.7330        | 0.0192        | 2.0902        | 0.0129        | 2.1031        | 0.5543         | 0.0119        | 0.5662        |          | 1,908.3671        | 1,908.3671        | 0.0518        |     | 1,909.6616        |
| <b>Total</b> | <b>1.1948</b> | <b>6.7871</b> | <b>8.0724</b> | <b>0.0328</b> | <b>2.4360</b> | <b>0.0602</b> | <b>2.4962</b> | <b>0.6539</b>  | <b>0.0571</b> | <b>0.7110</b> |          | <b>3,349.8357</b> | <b>3,349.8357</b> | <b>0.1849</b> |     | <b>3,354.4579</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 3.0895        | 33.9966        | 21.2301        | 0.0430        |               | 1.6034        | 1.6034        |                | 1.5160        | 1.5160        | 0.0000        | 4,181.0255        | 4,181.0255        | 1.1342        |     | 4,209.3809        |
| <b>Total</b> | <b>3.0895</b> | <b>33.9966</b> | <b>21.2301</b> | <b>0.0430</b> |               | <b>1.6034</b> | <b>1.6034</b> |                | <b>1.5160</b> | <b>1.5160</b> | <b>0.0000</b> | <b>4,181.0255</b> | <b>4,181.0255</b> | <b>1.1342</b> |     | <b>4,209.3809</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        |     | 0.0000            |
| Vendor       | 0.1888        | 6.1330        | 1.3393        | 0.0137        | 0.3458        | 0.0473        | 0.3931        | 0.0996         | 0.0452        | 0.1448        |          | 1,441.4686        | 1,441.4686        | 0.1331        |     | 1,444.7962        |
| Worker       | 1.0060        | 0.6541        | 6.7330        | 0.0192        | 2.0902        | 0.0129        | 2.1031        | 0.5543         | 0.0119        | 0.5662        |          | 1,908.3671        | 1,908.3671        | 0.0518        |     | 1,909.6616        |
| <b>Total</b> | <b>1.1948</b> | <b>6.7871</b> | <b>8.0724</b> | <b>0.0328</b> | <b>2.4360</b> | <b>0.0602</b> | <b>2.4962</b> | <b>0.6539</b>  | <b>0.0571</b> | <b>0.7110</b> |          | <b>3,349.8357</b> | <b>3,349.8357</b> | <b>0.1849</b> |     | <b>3,354.4579</b> |

**3.4 Building Construction - 2020**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.3583        | 36.6146        | 18.6077        | 0.0430        |               | 1.6350        | 1.6350        |                | 1.5268        | 1.5268        |          | 4,108.1936        | 4,108.1936        | 1.1258        |     | 4,136.3391        |
| <b>Total</b> | <b>3.3583</b> | <b>36.6146</b> | <b>18.6077</b> | <b>0.0430</b> |               | <b>1.6350</b> | <b>1.6350</b> |                | <b>1.5268</b> | <b>1.5268</b> |          | <b>4,108.1936</b> | <b>4,108.1936</b> | <b>1.1258</b> |     | <b>4,136.3391</b> |

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Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**3.4 Building Construction - 2020**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        |     | 0.0000            |
| Vendor       | 0.1588        | 5.5271        | 1.1902        | 0.0136        | 0.3458        | 0.0320        | 0.3778        | 0.0996         | 0.0306        | 0.1302        |          | 1,431.2309        | 1,431.2309        | 0.1241        |     | 1,434.3339        |
| Worker       | 0.9319        | 0.5822        | 6.0994        | 0.0185        | 2.0902        | 0.0127        | 2.1029        | 0.5543         | 0.0117        | 0.5660        |          | 1,848.0009        | 1,848.0009        | 0.0459        |     | 1,849.1485        |
| <b>Total</b> | <b>1.0907</b> | <b>6.1093</b> | <b>7.2896</b> | <b>0.0321</b> | <b>2.4360</b> | <b>0.0446</b> | <b>2.4807</b> | <b>0.6539</b>  | <b>0.0423</b> | <b>0.6961</b> |          | <b>3,279.2319</b> | <b>3,279.2319</b> | <b>0.1700</b> |     | <b>3,283.4824</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 2.8503        | 31.7211        | 20.8195        | 0.0430        |               | 1.4518        | 1.4518        |                | 1.3732        | 1.3732        | 0.0000        | 4,108.1936        | 4,108.1936        | 1.1258        |     | 4,136.3391        |
| <b>Total</b> | <b>2.8503</b> | <b>31.7211</b> | <b>20.8195</b> | <b>0.0430</b> |               | <b>1.4518</b> | <b>1.4518</b> |                | <b>1.3732</b> | <b>1.3732</b> | <b>0.0000</b> | <b>4,108.1936</b> | <b>4,108.1936</b> | <b>1.1258</b> |     | <b>4,136.3391</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**3.4 Building Construction - 2020**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        |     | 0.0000            |
| Vendor       | 0.1588        | 5.5271        | 1.1902        | 0.0136        | 0.3458        | 0.0320        | 0.3778        | 0.0996         | 0.0306        | 0.1302        |          | 1,431.2309        | 1,431.2309        | 0.1241        |     | 1,434.3339        |
| Worker       | 0.9319        | 0.5822        | 6.0994        | 0.0185        | 2.0902        | 0.0127        | 2.1029        | 0.5543         | 0.0117        | 0.5660        |          | 1,848.0009        | 1,848.0009        | 0.0459        |     | 1,849.1485        |
| <b>Total</b> | <b>1.0907</b> | <b>6.1093</b> | <b>7.2896</b> | <b>0.0321</b> | <b>2.4360</b> | <b>0.0446</b> | <b>2.4807</b> | <b>0.6539</b>  | <b>0.0423</b> | <b>0.6961</b> |          | <b>3,279.2319</b> | <b>3,279.2319</b> | <b>0.1700</b> |     | <b>3,283.4824</b> |

**3.5 Paving - 2020**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.3566        | 14.0656        | 14.6521        | 0.0228        |               | 0.7528        | 0.7528        |                | 0.6926        | 0.6926        |          | 2,207.7334        | 2,207.7334        | 0.7140        |     | 2,225.5841        |
| Paving       | 0.6943        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>2.0509</b> | <b>14.0656</b> | <b>14.6521</b> | <b>0.0228</b> |               | <b>0.7528</b> | <b>0.7528</b> |                | <b>0.6926</b> | <b>0.6926</b> |          | <b>2,207.7334</b> | <b>2,207.7334</b> | <b>0.7140</b> |     | <b>2,225.5841</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**3.5 Paving - 2020**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0748        | 0.0467        | 0.4893        | 1.4900e-003        | 0.1677        | 1.0200e-003        | 0.1687        | 0.0445         | 9.3000e-004        | 0.0454        |          | 148.2354        | 148.2354        | 3.6800e-003        |     | 148.3274        |
| <b>Total</b> | <b>0.0748</b> | <b>0.0467</b> | <b>0.4893</b> | <b>1.4900e-003</b> | <b>0.1677</b> | <b>1.0200e-003</b> | <b>0.1687</b> | <b>0.0445</b>  | <b>9.3000e-004</b> | <b>0.0454</b> |          | <b>148.2354</b> | <b>148.2354</b> | <b>3.6800e-003</b> |     | <b>148.3274</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.3566        | 14.0656        | 14.6521        | 0.0228        |               | 0.7528        | 0.7528        |                | 0.6926        | 0.6926        | 0.0000        | 2,207.7334        | 2,207.7334        | 0.7140        |     | 2,225.5841        |
| Paving       | 0.6943        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>2.0509</b> | <b>14.0656</b> | <b>14.6521</b> | <b>0.0228</b> |               | <b>0.7528</b> | <b>0.7528</b> |                | <b>0.6926</b> | <b>0.6926</b> | <b>0.0000</b> | <b>2,207.7334</b> | <b>2,207.7334</b> | <b>0.7140</b> |     | <b>2,225.5841</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**3.5 Paving - 2020**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0748        | 0.0467        | 0.4893        | 1.4900e-003        | 0.1677        | 1.0200e-003        | 0.1687        | 0.0445         | 9.3000e-004        | 0.0454        |          | 148.2354        | 148.2354        | 3.6800e-003        |     | 148.3274        |
| <b>Total</b> | <b>0.0748</b> | <b>0.0467</b> | <b>0.4893</b> | <b>1.4900e-003</b> | <b>0.1677</b> | <b>1.0200e-003</b> | <b>0.1687</b> | <b>0.0445</b>  | <b>9.3000e-004</b> | <b>0.0454</b> |          | <b>148.2354</b> | <b>148.2354</b> | <b>3.6800e-003</b> |     | <b>148.3274</b> |

**3.6 Architectural Coating - 2020**

**Unmitigated Construction On-Site**

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Archit. Coating | 47.9615        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.3229         | 2.2451        | 2.4419        | 3.9600e-003        |               | 0.1479        | 0.1479        |                | 0.1479        | 0.1479        |          | 375.2641        | 375.2641        | 0.0291        |     | 375.9904        |
| <b>Total</b>    | <b>48.2844</b> | <b>2.2451</b> | <b>2.4419</b> | <b>3.9600e-003</b> |               | <b>0.1479</b> | <b>0.1479</b> |                | <b>0.1479</b> | <b>0.1479</b> |          | <b>375.2641</b> | <b>375.2641</b> | <b>0.0291</b> |     | <b>375.9904</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

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**3.6 Architectural Coating - 2020**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.1844        | 0.1152        | 1.2068        | 3.6700e-003        | 0.4136        | 2.5000e-003        | 0.4161        | 0.1097         | 2.3100e-003        | 0.1120        |          | 365.6472        | 365.6472        | 9.0800e-003        |     | 365.8743        |
| <b>Total</b> | <b>0.1844</b> | <b>0.1152</b> | <b>1.2068</b> | <b>3.6700e-003</b> | <b>0.4136</b> | <b>2.5000e-003</b> | <b>0.4161</b> | <b>0.1097</b>  | <b>2.3100e-003</b> | <b>0.1120</b> |          | <b>365.6472</b> | <b>365.6472</b> | <b>9.0800e-003</b> |     | <b>365.8743</b> |

**Mitigated Construction On-Site**

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Archit. Coating | 47.9615        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.3229         | 2.2451        | 2.4419        | 3.9600e-003        |               | 0.1479        | 0.1479        |                | 0.1479        | 0.1479        | 0.0000        | 375.2641        | 375.2641        | 0.0291        |     | 375.9904        |
| <b>Total</b>    | <b>48.2844</b> | <b>2.2451</b> | <b>2.4419</b> | <b>3.9600e-003</b> |               | <b>0.1479</b> | <b>0.1479</b> |                | <b>0.1479</b> | <b>0.1479</b> | <b>0.0000</b> | <b>375.2641</b> | <b>375.2641</b> | <b>0.0291</b> |     | <b>375.9904</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**3.6 Architectural Coating - 2020**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.1844        | 0.1152        | 1.2068        | 3.6700e-003        | 0.4136        | 2.5000e-003        | 0.4161        | 0.1097         | 2.3100e-003        | 0.1120        |          | 365.6472        | 365.6472        | 9.0800e-003        |     | 365.8743        |
| <b>Total</b> | <b>0.1844</b> | <b>0.1152</b> | <b>1.2068</b> | <b>3.6700e-003</b> | <b>0.4136</b> | <b>2.5000e-003</b> | <b>0.4161</b> | <b>0.1097</b>  | <b>2.3100e-003</b> | <b>0.1120</b> |          | <b>365.6472</b> | <b>365.6472</b> | <b>9.0800e-003</b> |     | <b>365.8743</b> |

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

|             | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O | CO2e   |
|-------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-----|--------|
| Category    | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |     |        |
| Mitigated   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |

4.2 Trip Summary Information

| Land Use                 | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|--------------------------|-------------------------|----------|--------|-------------|------------|
|                          | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Apartments Low Rise      | 0.00                    | 0.00     | 0.00   |             |            |
| Parking Lot              | 0.00                    | 0.00     | 0.00   |             |            |
| Regional Shopping Center | 0.00                    | 0.00     | 0.00   |             |            |
| Total                    | 0.00                    | 0.00     | 0.00   |             |            |

4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Low Rise      | 0.00       | 0.00       | 0.00        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Parking Lot              | 0.00       | 0.00       | 0.00        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Regional Shopping Center | 0.00       | 0.00       | 0.00        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |

4.4 Fleet Mix

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

| Land Use                 | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Low Rise      | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |
| Parking Lot              | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |
| Regional Shopping Center | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

|                        | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|------------------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category               | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |        |        |
| NaturalGas Mitigated   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                          | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                 | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Apartments Low Rise      | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Parking Lot              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Regional Shopping Center | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>             |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                          | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                 | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Apartments Low Rise      | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Parking Lot              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Regional Shopping Center | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>             |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

6.1 Mitigation Measures Area

|             | ROG    | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|-------------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category    | lb/day |        |        |             |               |              |            |                |               |             | lb/day   |           |           |        |        |         |
| Mitigated   | 3.7095 | 0.1078 | 9.3340 | 4.9000e-004 |               | 0.0512       | 0.0512     |                | 0.0512        | 0.0512      | 0.0000   | 16.7722   | 16.7722   | 0.0166 | 0.0000 | 17.1868 |
| Unmitigated | 3.7095 | 0.1078 | 9.3340 | 4.9000e-004 |               | 0.0512       | 0.0512     |                | 0.0512        | 0.0512      | 0.0000   | 16.7722   | 16.7722   | 0.0166 | 0.0000 | 17.1868 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|-----------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| SubCategory           | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                |                |               |               |                |
| Architectural Coating | 0.2985        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Consumer Products     | 3.1228        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Landscaping           | 0.2882        | 0.1078        | 9.3340        | 4.9000e-004        |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        |               | 16.7722        | 16.7722        | 0.0166        |               | 17.1868        |
| <b>Total</b>          | <b>3.7095</b> | <b>0.1078</b> | <b>9.3340</b> | <b>4.9000e-004</b> |               | <b>0.0512</b> | <b>0.0512</b> |                | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b> | <b>16.7722</b> | <b>16.7722</b> | <b>0.0166</b> | <b>0.0000</b> | <b>17.1868</b> |

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Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**6.2 Area by SubCategory**

**Mitigated**

|                       | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|-----------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| SubCategory           | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                |                |               |               |                |
| Architectural Coating | 0.2985        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Consumer Products     | 3.1228        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Landscaping           | 0.2882        | 0.1078        | 9.3340        | 4.9000e-004        |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        |               | 16.7722        | 16.7722        | 0.0166        |               | 17.1868        |
| <b>Total</b>          | <b>3.7095</b> | <b>0.1078</b> | <b>9.3340</b> | <b>4.9000e-004</b> |               | <b>0.0512</b> | <b>0.0512</b> |                | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b> | <b>16.7722</b> | <b>16.7722</b> | <b>0.0166</b> | <b>0.0000</b> | <b>17.1868</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Stationary Equipment**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Winter

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

**11.0 Vegetation**

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Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**Continental Villages (Construction - Unmitigated)**  
**Riverside-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses                | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------|--------|---------------|-------------|--------------------|------------|
| Apartments Low Rise      | 112.00 | Dwelling Unit | 5.48        | 132,472.00         | 320        |
| Regional Shopping Center | 21.00  | 1000sqft      | 0.87        | 21,000.00          | 0          |
| Parking Lot              | 593.00 | Space         | 5.30        | 237,200.00         | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.4   | <b>Precipitation Freq (Days)</b> | 28    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2020  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 702.44                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

**1.3 User Entered Comments & Non-Default Data**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

Project Characteristics -

Land Use - Total Project Area is 11.64 acres.

Construction Phase -

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes.

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday.

Grading -

Architectural Coating - Rule 1113

Vehicle Trips - Construction Run Only.

Woodstoves - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation - All equipment operating >150 HP are required to be equipped with Tier 3 or better engines.

| Table Name              | Column Name                | Default Value | New Value |
|-------------------------|----------------------------|---------------|-----------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 100.00        | 50.00     |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 100.00        | 50.00     |
| tblArchitecturalCoating | EF_Parking                 | 100.00        | 50.00     |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 4.00      |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00      |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 3    |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 3    |
| tblConstructionPhase    | PhaseEndDate               | 9/10/2020     | 7/16/2020 |
| tblConstructionPhase    | PhaseEndDate               | 7/16/2020     | 6/18/2020 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

|                      |                   |            |            |
|----------------------|-------------------|------------|------------|
| tblConstructionPhase | PhaseEndDate      | 5/23/2019  | 4/25/2019  |
| tblConstructionPhase | PhaseEndDate      | 8/13/2020  | 7/16/2020  |
| tblConstructionPhase | PhaseEndDate      | 4/11/2019  | 3/14/2019  |
| tblConstructionPhase | PhaseStartDate    | 8/14/2020  | 6/19/2020  |
| tblConstructionPhase | PhaseStartDate    | 5/24/2019  | 4/26/2019  |
| tblConstructionPhase | PhaseStartDate    | 4/12/2019  | 3/15/2019  |
| tblConstructionPhase | PhaseStartDate    | 7/17/2020  | 6/19/2020  |
| tblConstructionPhase | PhaseStartDate    | 3/29/2019  | 3/1/2019   |
| tblEnergyUse         | LightingElect     | 810.36     | 0.00       |
| tblEnergyUse         | LightingElect     | 0.35       | 0.00       |
| tblEnergyUse         | LightingElect     | 5.61       | 0.00       |
| tblEnergyUse         | NT24E             | 3,172.76   | 0.00       |
| tblEnergyUse         | NT24E             | 2.44       | 0.00       |
| tblEnergyUse         | NT24NG            | 6,030.00   | 0.00       |
| tblEnergyUse         | NT24NG            | 0.30       | 0.00       |
| tblEnergyUse         | T24E              | 877.14     | 0.00       |
| tblEnergyUse         | T24E              | 4.58       | 0.00       |
| tblEnergyUse         | T24NG             | 9,544.50   | 0.00       |
| tblEnergyUse         | T24NG             | 1.92       | 0.00       |
| tblFireplaces        | FireplaceDayYear  | 25.00      | 0.00       |
| tblFireplaces        | FireplaceHourDay  | 3.00       | 0.00       |
| tblFireplaces        | FireplaceWoodMass | 1,019.20   | 0.00       |
| tblFireplaces        | NumberGas         | 95.20      | 0.00       |
| tblFireplaces        | NumberNoFireplace | 11.20      | 0.00       |
| tblFireplaces        | NumberWood        | 5.60       | 0.00       |
| tblGrading           | MaterialExported  | 0.00       | 3,000.00   |
| tblLandUse           | LandUseSquareFeet | 112,000.00 | 132,472.00 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

|                     |                            |       |                  |
|---------------------|----------------------------|-------|------------------|
| tblLandUse          | LotAcreage                 | 7.00  | 5.48             |
| tblLandUse          | LotAcreage                 | 0.48  | 0.87             |
| tblLandUse          | LotAcreage                 | 5.34  | 5.30             |
| tblOffRoadEquipment | LoadFactor                 | 0.43  | 0.43             |
| tblOffRoadEquipment | LoadFactor                 | 0.43  | 0.43             |
| tblOffRoadEquipment | LoadFactor                 | 0.43  | 0.43             |
| tblOffRoadEquipment | OffRoadEquipmentType       |       | Crawler Tractors |
| tblOffRoadEquipment | OffRoadEquipmentType       |       | Crawler Tractors |
| tblOffRoadEquipment | OffRoadEquipmentType       |       | Crawler Tractors |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00  | 0.00             |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00  | 0.00             |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00  | 0.00             |
| tblOffRoadEquipment | UsageHours                 | 6.00  | 8.00             |
| tblOffRoadEquipment | UsageHours                 | 7.00  | 8.00             |
| tblOffRoadEquipment | UsageHours                 | 7.00  | 8.00             |
| tblSolidWaste       | SolidWasteGenerationRate   | 51.52 | 0.00             |
| tblSolidWaste       | SolidWasteGenerationRate   | 22.05 | 0.00             |
| tblVehicleTrips     | CC_TL                      | 8.40  | 0.00             |
| tblVehicleTrips     | CC_TL                      | 8.40  | 0.00             |
| tblVehicleTrips     | CC_TTP                     | 64.70 | 0.00             |
| tblVehicleTrips     | CNW_TL                     | 6.90  | 0.00             |
| tblVehicleTrips     | CNW_TL                     | 6.90  | 0.00             |
| tblVehicleTrips     | CNW_TTP                    | 19.00 | 0.00             |
| tblVehicleTrips     | CW_TL                      | 16.60 | 0.00             |
| tblVehicleTrips     | CW_TL                      | 16.60 | 0.00             |
| tblVehicleTrips     | CW_TTP                     | 16.30 | 0.00             |
| tblVehicleTrips     | DV_TP                      | 11.00 | 0.00             |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

|                 |                     |              |      |
|-----------------|---------------------|--------------|------|
| tblVehicleTrips | DV_TP               | 35.00        | 0.00 |
| tblVehicleTrips | HO_TL               | 8.70         | 0.00 |
| tblVehicleTrips | HO_TTP              | 40.60        | 0.00 |
| tblVehicleTrips | HS_TL               | 5.90         | 0.00 |
| tblVehicleTrips | HS_TTP              | 19.20        | 0.00 |
| tblVehicleTrips | HW_TL               | 14.70        | 0.00 |
| tblVehicleTrips | HW_TTP              | 40.20        | 0.00 |
| tblVehicleTrips | PB_TP               | 3.00         | 0.00 |
| tblVehicleTrips | PB_TP               | 11.00        | 0.00 |
| tblVehicleTrips | PR_TP               | 86.00        | 0.00 |
| tblVehicleTrips | PR_TP               | 54.00        | 0.00 |
| tblVehicleTrips | ST_TR               | 7.16         | 0.00 |
| tblVehicleTrips | ST_TR               | 49.97        | 0.00 |
| tblVehicleTrips | SU_TR               | 6.07         | 0.00 |
| tblVehicleTrips | SU_TR               | 25.24        | 0.00 |
| tblVehicleTrips | WD_TR               | 6.59         | 0.00 |
| tblVehicleTrips | WD_TR               | 42.70        | 0.00 |
| tblWater        | IndoorWaterUseRate  | 7,297,250.87 | 0.00 |
| tblWater        | IndoorWaterUseRate  | 1,555,522.95 | 0.00 |
| tblWater        | OutdoorWaterUseRate | 4,600,440.77 | 0.00 |
| tblWater        | OutdoorWaterUseRate | 953,385.03   | 0.00 |
| tblWoodstoves   | NumberCatalytic     | 5.60         | 0.00 |
| tblWoodstoves   | NumberNoncatalytic  | 5.60         | 0.00 |
| tblWoodstoves   | WoodstoveDayYear    | 25.00        | 0.00 |
| tblWoodstoves   | WoodstoveWoodMass   | 999.60       | 0.00 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

2.0 Emissions Summary

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

|                | ROG            | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |                |                |               |                |               |                |                |               |                | lb/day        |                   |                   |               |               |                   |
| 2019           | 5.9373         | 69.0498        | 35.1888        | 0.0834        | 20.3885        | 2.9699        | 23.3584        | 10.2131        | 2.7323        | 12.9454        | 0.0000        | 8,322.6575        | 8,322.6575        | 2.3083        | 0.0000        | 8,380.3637        |
| 2020           | 50.5998        | 42.7336        | 27.1643        | 0.0778        | 2.4360         | 1.6793        | 4.1153         | 0.6539         | 1.5687        | 2.2226         | 0.0000        | 7,655.2864        | 7,655.2864        | 1.2902        | 0.0000        | 7,687.5404        |
| <b>Maximum</b> | <b>50.5998</b> | <b>69.0498</b> | <b>35.1888</b> | <b>0.0834</b> | <b>20.3885</b> | <b>2.9699</b> | <b>23.3584</b> | <b>10.2131</b> | <b>2.7323</b> | <b>12.9454</b> | <b>0.0000</b> | <b>8,322.6575</b> | <b>8,322.6575</b> | <b>2.3083</b> | <b>0.0000</b> | <b>8,380.3637</b> |

**Mitigated Construction**

|                | ROG            | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2019           | 4.6105         | 59.2841        | 36.7782        | 0.0834        | 8.0742        | 2.2178        | 9.7837        | 4.0156         | 2.0599        | 5.6359        | 0.0000        | 8,322.6575        | 8,322.6575        | 2.3083        | 0.0000        | 8,380.3637        |
| 2020           | 50.5998        | 37.8400        | 29.3761        | 0.0778        | 2.4360        | 1.4961        | 3.9321        | 0.6539         | 1.4151        | 2.0690        | 0.0000        | 7,655.2864        | 7,655.2864        | 1.2902        | 0.0000        | 7,687.5404        |
| <b>Maximum</b> | <b>50.5998</b> | <b>59.2841</b> | <b>36.7782</b> | <b>0.0834</b> | <b>8.0742</b> | <b>2.2178</b> | <b>9.7837</b> | <b>4.0156</b>  | <b>2.0599</b> | <b>5.6359</b> | <b>0.0000</b> | <b>8,322.6575</b> | <b>8,322.6575</b> | <b>2.3083</b> | <b>0.0000</b> | <b>8,380.3637</b> |

|                          | ROG         | NOx          | CO           | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|--------------|--------------|-------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>2.35</b> | <b>13.11</b> | <b>-6.10</b> | <b>0.00</b> | <b>53.95</b>  | <b>20.12</b> | <b>50.08</b> | <b>57.03</b>   | <b>19.20</b>  | <b>49.20</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**2.2 Overall Operational**

**Unmitigated Operational**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                |                |               |               |                |
| Area         | 3.7095        | 0.1078        | 9.3340        | 4.9000e-004        |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        | 0.0000        | 16.7722        | 16.7722        | 0.0166        | 0.0000        | 17.1868        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000         | 0.0000         | 0.0000        |               | 0.0000         |
| <b>Total</b> | <b>3.7095</b> | <b>0.1078</b> | <b>9.3340</b> | <b>4.9000e-004</b> | <b>0.0000</b> | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b>  | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b> | <b>16.7722</b> | <b>16.7722</b> | <b>0.0166</b> | <b>0.0000</b> | <b>17.1868</b> |

**Mitigated Operational**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                |                |               |               |                |
| Area         | 3.7095        | 0.1078        | 9.3340        | 4.9000e-004        |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        | 0.0000        | 16.7722        | 16.7722        | 0.0166        | 0.0000        | 17.1868        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000         | 0.0000         | 0.0000        |               | 0.0000         |
| <b>Total</b> | <b>3.7095</b> | <b>0.1078</b> | <b>9.3340</b> | <b>4.9000e-004</b> | <b>0.0000</b> | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b>  | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b> | <b>16.7722</b> | <b>16.7722</b> | <b>0.0166</b> | <b>0.0000</b> | <b>17.1868</b> |

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Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Site Preparation      | Site Preparation      | 3/1/2019   | 3/14/2019 | 5             | 10       |                   |
| 2            | Grading               | Grading               | 3/15/2019  | 4/25/2019 | 5             | 30       |                   |
| 3            | Building Construction | Building Construction | 4/26/2019  | 6/18/2020 | 5             | 300      |                   |
| 4            | Paving                | Paving                | 6/19/2020  | 7/16/2020 | 5             | 20       |                   |
| 5            | Architectural Coating | Architectural Coating | 6/19/2020  | 7/16/2020 | 5             | 20       |                   |

**Acres of Grading (Site Preparation Phase): 20**

**Acres of Grading (Grading Phase): 105**

**Acres of Paving: 5.3**

**Residential Indoor: 268,256; Residential Outdoor: 89,419; Non-Residential Indoor: 31,500; Non-Residential Outdoor: 10,500; Striped Parking Area: 14,232 (Architectural Coating – sqft)**

**OffRoad Equipment**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 8.00        | 78          | 0.48        |
| Site Preparation      | Crawler Tractors          | 4      | 8.00        | 212         | 0.43        |
| Grading               | Crawler Tractors          | 2      | 8.00        | 212         | 0.43        |
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Cranes                    | 1      | 8.00        | 231         | 0.29        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Building Construction | Crawler Tractors          | 3      | 8.00        | 212         | 0.43        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Building Construction | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Grading               | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Site Preparation      | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |
| Site Preparation      | Rubber Tired Dozers       | 3      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 2      | 8.00        | 367         | 0.48        |
| Building Construction | Welders                   | 1      | 8.00        | 46          | 0.45        |

Trips and VMT

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation      | 7                       | 18.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 375.00              | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 187.00             | 54.00              | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 37.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Site Preparation - 2019**

**Unmitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total    | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |                |               |                |                |               |                | lb/day   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 20.1873        | 0.0000        | 20.1873        | 10.1597        | 0.0000        | 10.1597        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 5.8382        | 68.1103        | 23.1420        | 0.0569        |                | 2.9687        | 2.9687         |                | 2.7312        | 2.7312         |          | 5,636.7406        | 5,636.7406        | 1.7834        |     | 5,681.3258        |
| <b>Total</b>  | <b>5.8382</b> | <b>68.1103</b> | <b>23.1420</b> | <b>0.0569</b> | <b>20.1873</b> | <b>2.9687</b> | <b>23.1559</b> | <b>10.1597</b> | <b>2.7312</b> | <b>12.8909</b> |          | <b>5,636.7406</b> | <b>5,636.7406</b> | <b>1.7834</b> |     | <b>5,681.3258</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.2 Site Preparation - 2019**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0991        | 0.0608        | 0.7997        | 2.0600e-003        | 0.2012        | 1.2400e-003        | 0.2024        | 0.0534         | 1.1400e-003        | 0.0545        |          | 204.7540        | 204.7540        | 5.7300e-003        |     | 204.8973        |
| <b>Total</b> | <b>0.0991</b> | <b>0.0608</b> | <b>0.7997</b> | <b>2.0600e-003</b> | <b>0.2012</b> | <b>1.2400e-003</b> | <b>0.2024</b> | <b>0.0534</b>  | <b>1.1400e-003</b> | <b>0.0545</b> |          | <b>204.7540</b> | <b>204.7540</b> | <b>5.7300e-003</b> |     | <b>204.8973</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 7.8730        | 0.0000        | 7.8730        | 3.9623         | 0.0000        | 3.9623        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 3.0233        | 42.5552        | 26.5058        | 0.0569        |               | 1.7083        | 1.7083        |                | 1.6191        | 1.6191        | 0.0000        | 5,636.7406        | 5,636.7406        | 1.7834        |     | 5,681.3258        |
| <b>Total</b>  | <b>3.0233</b> | <b>42.5552</b> | <b>26.5058</b> | <b>0.0569</b> | <b>7.8730</b> | <b>1.7083</b> | <b>9.5813</b> | <b>3.9623</b>  | <b>1.6191</b> | <b>5.5814</b> | <b>0.0000</b> | <b>5,636.7406</b> | <b>5,636.7406</b> | <b>1.7834</b> |     | <b>5,681.3258</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.2 Site Preparation - 2019**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0991        | 0.0608        | 0.7997        | 2.0600e-003        | 0.2012        | 1.2400e-003        | 0.2024        | 0.0534         | 1.1400e-003        | 0.0545        |          | 204.7540        | 204.7540        | 5.7300e-003        |     | 204.8973        |
| <b>Total</b> | <b>0.0991</b> | <b>0.0608</b> | <b>0.7997</b> | <b>2.0600e-003</b> | <b>0.2012</b> | <b>1.2400e-003</b> | <b>0.2024</b> | <b>0.0534</b>  | <b>1.1400e-003</b> | <b>0.0545</b> |          | <b>204.7540</b> | <b>204.7540</b> | <b>5.7300e-003</b> |     | <b>204.8973</b> |

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |               |               |                |                |               |               | lb/day   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 9.7465        | 0.0000        | 9.7465         | 3.7129         | 0.0000        | 3.7129        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 5.4905        | 65.7890        | 33.9162        | 0.0714        |               | 2.6718        | 2.6718         |                | 2.4581        | 2.4581        |          | 7,075.1634        | 7,075.1634        | 2.2385        |     | 7,131.1260        |
| <b>Total</b>  | <b>5.4905</b> | <b>65.7890</b> | <b>33.9162</b> | <b>0.0714</b> | <b>9.7465</b> | <b>2.6718</b> | <b>12.4183</b> | <b>3.7129</b>  | <b>2.4581</b> | <b>6.1710</b> |          | <b>7,075.1634</b> | <b>7,075.1634</b> | <b>2.2385</b> |     | <b>7,131.1260</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.3 Grading - 2019**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Hauling      | 0.0702        | 3.1933        | 0.3840        | 9.6200e-003   | 0.2187        | 0.0115        | 0.2302        | 0.0600         | 0.0110        | 0.0710        |          | 1,019.9897        | 1,019.9897        | 0.0634        |     | 1,021.5740        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        |     | 0.0000            |
| Worker       | 0.1101        | 0.0676        | 0.8885        | 2.2900e-003   | 0.2236        | 1.3800e-003   | 0.2249        | 0.0593         | 1.2700e-003   | 0.0606        |          | 227.5045          | 227.5045          | 6.3700e-003   |     | 227.6637          |
| <b>Total</b> | <b>0.1803</b> | <b>3.2608</b> | <b>1.2725</b> | <b>0.0119</b> | <b>0.4422</b> | <b>0.0129</b> | <b>0.4552</b> | <b>0.1192</b>  | <b>0.0123</b> | <b>0.1316</b> |          | <b>1,247.4941</b> | <b>1,247.4941</b> | <b>0.0697</b> |     | <b>1,249.2377</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 3.8011        | 0.0000        | 3.8011        | 1.4480         | 0.0000        | 1.4480        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 4.4301        | 56.0233        | 35.5057        | 0.0714        |               | 2.2049        | 2.2049        |                | 2.0476        | 2.0476        | 0.0000        | 7,075.1634        | 7,075.1634        | 2.2385        |     | 7,131.1260        |
| <b>Total</b>  | <b>4.4301</b> | <b>56.0233</b> | <b>35.5057</b> | <b>0.0714</b> | <b>3.8011</b> | <b>2.2049</b> | <b>6.0060</b> | <b>1.4480</b>  | <b>2.0476</b> | <b>3.4957</b> | <b>0.0000</b> | <b>7,075.1634</b> | <b>7,075.1634</b> | <b>2.2385</b> |     | <b>7,131.1260</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.3 Grading - 2019**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Hauling      | 0.0702        | 3.1933        | 0.3840        | 9.6200e-003   | 0.2187        | 0.0115        | 0.2302        | 0.0600         | 0.0110        | 0.0710        |          | 1,019.9897        | 1,019.9897        | 0.0634        |     | 1,021.5740        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        |     | 0.0000            |
| Worker       | 0.1101        | 0.0676        | 0.8885        | 2.2900e-003   | 0.2236        | 1.3800e-003   | 0.2249        | 0.0593         | 1.2700e-003   | 0.0606        |          | 227.5045          | 227.5045          | 6.3700e-003   |     | 227.6637          |
| <b>Total</b> | <b>0.1803</b> | <b>3.2608</b> | <b>1.2725</b> | <b>0.0119</b> | <b>0.4422</b> | <b>0.0129</b> | <b>0.4552</b> | <b>0.1192</b>  | <b>0.0123</b> | <b>0.1316</b> |          | <b>1,247.4941</b> | <b>1,247.4941</b> | <b>0.0697</b> |     | <b>1,249.2377</b> |

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.6389        | 39.6094        | 19.1231        | 0.0430        |               | 1.8139        | 1.8139        |                | 1.6949        | 1.6949        |          | 4,181.0255        | 4,181.0255        | 1.1342        |     | 4,209.3809        |
| <b>Total</b> | <b>3.6389</b> | <b>39.6094</b> | <b>19.1231</b> | <b>0.0430</b> |               | <b>1.8139</b> | <b>1.8139</b> |                | <b>1.6949</b> | <b>1.6949</b> |          | <b>4,181.0255</b> | <b>4,181.0255</b> | <b>1.1342</b> |     | <b>4,209.3809</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.1799        | 6.1470        | 1.1519        | 0.0142        | 0.3458        | 0.0467        | 0.3925        | 0.0996         | 0.0447        | 0.1442        |          | 1,497.434<br>1         | 1,497.434<br>1         | 0.1198        |     | 1,500.429<br>5         |
| Worker       | 1.0296        | 0.6319        | 8.3076        | 0.0214        | 2.0902        | 0.0129        | 2.1031        | 0.5543         | 0.0119        | 0.5662        |          | 2,127.166<br>7         | 2,127.166<br>7         | 0.0596        |     | 2,128.655<br>5         |
| <b>Total</b> | <b>1.2095</b> | <b>6.7789</b> | <b>9.4595</b> | <b>0.0356</b> | <b>2.4360</b> | <b>0.0596</b> | <b>2.4956</b> | <b>0.6539</b>  | <b>0.0566</b> | <b>0.7105</b> |          | <b>3,624.600<br/>9</b> | <b>3,624.600<br/>9</b> | <b>0.1794</b> |     | <b>3,629.085<br/>0</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                        |                        |               |     |                        |
| Off-Road     | 3.0895        | 33.9966        | 21.2301        | 0.0430        |               | 1.6034        | 1.6034        |                | 1.5160        | 1.5160        | 0.0000        | 4,181.025<br>5         | 4,181.025<br>5         | 1.1342        |     | 4,209.380<br>9         |
| <b>Total</b> | <b>3.0895</b> | <b>33.9966</b> | <b>21.2301</b> | <b>0.0430</b> |               | <b>1.6034</b> | <b>1.6034</b> |                | <b>1.5160</b> | <b>1.5160</b> | <b>0.0000</b> | <b>4,181.025<br/>5</b> | <b>4,181.025<br/>5</b> | <b>1.1342</b> |     | <b>4,209.380<br/>9</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000                 | 0.0000                 | 0.0000        |     | 0.0000                 |
| Vendor       | 0.1799        | 6.1470        | 1.1519        | 0.0142        | 0.3458        | 0.0467        | 0.3925        | 0.0996         | 0.0447        | 0.1442        |          | 1,497.434<br>1         | 1,497.434<br>1         | 0.1198        |     | 1,500.429<br>5         |
| Worker       | 1.0296        | 0.6319        | 8.3076        | 0.0214        | 2.0902        | 0.0129        | 2.1031        | 0.5543         | 0.0119        | 0.5662        |          | 2,127.166<br>7         | 2,127.166<br>7         | 0.0596        |     | 2,128.655<br>5         |
| <b>Total</b> | <b>1.2095</b> | <b>6.7789</b> | <b>9.4595</b> | <b>0.0356</b> | <b>2.4360</b> | <b>0.0596</b> | <b>2.4956</b> | <b>0.6539</b>  | <b>0.0566</b> | <b>0.7105</b> |          | <b>3,624.600<br/>9</b> | <b>3,624.600<br/>9</b> | <b>0.1794</b> |     | <b>3,629.085<br/>0</b> |

**3.4 Building Construction - 2020**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2              | Total CO2              | CH4           | N2O | CO2e                   |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                        |                        |               |     |                        |
| Off-Road     | 3.3583        | 36.6146        | 18.6077        | 0.0430        |               | 1.6350        | 1.6350        |                | 1.5268        | 1.5268        |          | 4,108.193<br>6         | 4,108.193<br>6         | 1.1258        |     | 4,136.339<br>1         |
| <b>Total</b> | <b>3.3583</b> | <b>36.6146</b> | <b>18.6077</b> | <b>0.0430</b> |               | <b>1.6350</b> | <b>1.6350</b> |                | <b>1.5268</b> | <b>1.5268</b> |          | <b>4,108.193<br/>6</b> | <b>4,108.193<br/>6</b> | <b>1.1258</b> |     | <b>4,136.339<br/>1</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.4 Building Construction - 2020**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        |     | 0.0000            |
| Vendor       | 0.1505        | 5.5562        | 1.0165        | 0.0141        | 0.3458        | 0.0316        | 0.3774        | 0.0996         | 0.0302        | 0.1298        |          | 1,487.1110        | 1,487.1110        | 0.1115        |     | 1,489.8995        |
| Worker       | 0.9516        | 0.5628        | 7.5401        | 0.0207        | 2.0902        | 0.0127        | 2.1029        | 0.5543         | 0.0117        | 0.5660        |          | 2,059.9818        | 2,059.9818        | 0.0528        |     | 2,061.3019        |
| <b>Total</b> | <b>1.1021</b> | <b>6.1189</b> | <b>8.5566</b> | <b>0.0348</b> | <b>2.4360</b> | <b>0.0443</b> | <b>2.4803</b> | <b>0.6539</b>  | <b>0.0419</b> | <b>0.6958</b> |          | <b>3,547.0928</b> | <b>3,547.0928</b> | <b>0.1643</b> |     | <b>3,551.2013</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 2.8503        | 31.7211        | 20.8195        | 0.0430        |               | 1.4518        | 1.4518        |                | 1.3732        | 1.3732        | 0.0000        | 4,108.1936        | 4,108.1936        | 1.1258        |     | 4,136.3391        |
| <b>Total</b> | <b>2.8503</b> | <b>31.7211</b> | <b>20.8195</b> | <b>0.0430</b> |               | <b>1.4518</b> | <b>1.4518</b> |                | <b>1.3732</b> | <b>1.3732</b> | <b>0.0000</b> | <b>4,108.1936</b> | <b>4,108.1936</b> | <b>1.1258</b> |     | <b>4,136.3391</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.4 Building Construction - 2020**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        |     | 0.0000            |
| Vendor       | 0.1505        | 5.5562        | 1.0165        | 0.0141        | 0.3458        | 0.0316        | 0.3774        | 0.0996         | 0.0302        | 0.1298        |          | 1,487.1110        | 1,487.1110        | 0.1115        |     | 1,489.8995        |
| Worker       | 0.9516        | 0.5628        | 7.5401        | 0.0207        | 2.0902        | 0.0127        | 2.1029        | 0.5543         | 0.0117        | 0.5660        |          | 2,059.9818        | 2,059.9818        | 0.0528        |     | 2,061.3019        |
| <b>Total</b> | <b>1.1021</b> | <b>6.1189</b> | <b>8.5566</b> | <b>0.0348</b> | <b>2.4360</b> | <b>0.0443</b> | <b>2.4803</b> | <b>0.6539</b>  | <b>0.0419</b> | <b>0.6958</b> |          | <b>3,547.0928</b> | <b>3,547.0928</b> | <b>0.1643</b> |     | <b>3,551.2013</b> |

**3.5 Paving - 2020**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.3566        | 14.0656        | 14.6521        | 0.0228        |               | 0.7528        | 0.7528        |                | 0.6926        | 0.6926        |          | 2,207.7334        | 2,207.7334        | 0.7140        |     | 2,225.5841        |
| Paving       | 0.6943        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>2.0509</b> | <b>14.0656</b> | <b>14.6521</b> | <b>0.0228</b> |               | <b>0.7528</b> | <b>0.7528</b> |                | <b>0.6926</b> | <b>0.6926</b> |          | <b>2,207.7334</b> | <b>2,207.7334</b> | <b>0.7140</b> |     | <b>2,225.5841</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.5 Paving - 2020**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0763        | 0.0451        | 0.6048        | 1.6600e-003        | 0.1677        | 1.0200e-003        | 0.1687        | 0.0445         | 9.3000e-004        | 0.0454        |          | 165.2392        | 165.2392        | 4.2400e-003        |     | 165.3451        |
| <b>Total</b> | <b>0.0763</b> | <b>0.0451</b> | <b>0.6048</b> | <b>1.6600e-003</b> | <b>0.1677</b> | <b>1.0200e-003</b> | <b>0.1687</b> | <b>0.0445</b>  | <b>9.3000e-004</b> | <b>0.0454</b> |          | <b>165.2392</b> | <b>165.2392</b> | <b>4.2400e-003</b> |     | <b>165.3451</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.3566        | 14.0656        | 14.6521        | 0.0228        |               | 0.7528        | 0.7528        |                | 0.6926        | 0.6926        | 0.0000        | 2,207.7334        | 2,207.7334        | 0.7140        |     | 2,225.5841        |
| Paving       | 0.6943        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>2.0509</b> | <b>14.0656</b> | <b>14.6521</b> | <b>0.0228</b> |               | <b>0.7528</b> | <b>0.7528</b> |                | <b>0.6926</b> | <b>0.6926</b> | <b>0.0000</b> | <b>2,207.7334</b> | <b>2,207.7334</b> | <b>0.7140</b> |     | <b>2,225.5841</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.5 Paving - 2020**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             |     | 0.0000          |
| Worker       | 0.0763        | 0.0451        | 0.6048        | 1.6600e-003        | 0.1677        | 1.0200e-003        | 0.1687        | 0.0445         | 9.3000e-004        | 0.0454        |          | 165.2392        | 165.2392        | 4.2400e-003        |     | 165.3451        |
| <b>Total</b> | <b>0.0763</b> | <b>0.0451</b> | <b>0.6048</b> | <b>1.6600e-003</b> | <b>0.1677</b> | <b>1.0200e-003</b> | <b>0.1687</b> | <b>0.0445</b>  | <b>9.3000e-004</b> | <b>0.0454</b> |          | <b>165.2392</b> | <b>165.2392</b> | <b>4.2400e-003</b> |     | <b>165.3451</b> |

**3.6 Architectural Coating - 2020**

**Unmitigated Construction On-Site**

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |     |                 |
| Archit. Coating | 47.9615        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.3229         | 2.2451        | 2.4419        | 3.9600e-003        |               | 0.1479        | 0.1479        |                | 0.1479        | 0.1479        |          | 375.2641        | 375.2641        | 0.0291        |     | 375.9904        |
| <b>Total</b>    | <b>48.2844</b> | <b>2.2451</b> | <b>2.4419</b> | <b>3.9600e-003</b> |               | <b>0.1479</b> | <b>0.1479</b> |                | <b>0.1479</b> | <b>0.1479</b> |          | <b>375.2641</b> | <b>375.2641</b> | <b>0.0291</b> |     | <b>375.9904</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.6 Architectural Coating - 2020**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |     |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     | 0.0000          |
| Worker       | 0.1883        | 0.1114        | 1.4919        | 4.0900e-003        | 0.4136        | 2.5000e-003        | 0.4161        | 0.1097         | 2.3100e-003        | 0.1120        |          | 407.5900        | 407.5900        | 0.0105        |     | 407.8512        |
| <b>Total</b> | <b>0.1883</b> | <b>0.1114</b> | <b>1.4919</b> | <b>4.0900e-003</b> | <b>0.4136</b> | <b>2.5000e-003</b> | <b>0.4161</b> | <b>0.1097</b>  | <b>2.3100e-003</b> | <b>0.1120</b> |          | <b>407.5900</b> | <b>407.5900</b> | <b>0.0105</b> |     | <b>407.8512</b> |

**Mitigated Construction On-Site**

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |               |               |                |               |               | lb/day        |                 |                 |               |     |                 |
| Archit. Coating | 47.9615        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.3229         | 2.2451        | 2.4419        | 3.9600e-003        |               | 0.1479        | 0.1479        |                | 0.1479        | 0.1479        | 0.0000        | 375.2641        | 375.2641        | 0.0291        |     | 375.9904        |
| <b>Total</b>    | <b>48.2844</b> | <b>2.2451</b> | <b>2.4419</b> | <b>3.9600e-003</b> |               | <b>0.1479</b> | <b>0.1479</b> |                | <b>0.1479</b> | <b>0.1479</b> | <b>0.0000</b> | <b>375.2641</b> | <b>375.2641</b> | <b>0.0291</b> |     | <b>375.9904</b> |

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Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**3.6 Architectural Coating - 2020**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e |                 |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |     |      |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     |      | 0.0000          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        |     |      | 0.0000          |
| Worker       | 0.1883        | 0.1114        | 1.4919        | 4.0900e-003        | 0.4136        | 2.5000e-003        | 0.4161        | 0.1097         | 2.3100e-003        | 0.1120        |          | 407.5900        | 407.5900        | 0.0105        |     |      | 407.8512        |
| <b>Total</b> | <b>0.1883</b> | <b>0.1114</b> | <b>1.4919</b> | <b>4.0900e-003</b> | <b>0.4136</b> | <b>2.5000e-003</b> | <b>0.4161</b> | <b>0.1097</b>  | <b>2.3100e-003</b> | <b>0.1120</b> |          | <b>407.5900</b> | <b>407.5900</b> | <b>0.0105</b> |     |      | <b>407.8512</b> |

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

|             | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O | CO2e   |
|-------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|-----|--------|
| Category    | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |     |        |
| Mitigated   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 |     | 0.0000 |

4.2 Trip Summary Information

| Land Use                 | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|--------------------------|-------------------------|----------|--------|-------------|------------|
|                          | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Apartments Low Rise      | 0.00                    | 0.00     | 0.00   |             |            |
| Parking Lot              | 0.00                    | 0.00     | 0.00   |             |            |
| Regional Shopping Center | 0.00                    | 0.00     | 0.00   |             |            |
| Total                    | 0.00                    | 0.00     | 0.00   |             |            |

4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Low Rise      | 0.00       | 0.00       | 0.00        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Parking Lot              | 0.00       | 0.00       | 0.00        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Regional Shopping Center | 0.00       | 0.00       | 0.00        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |

4.4 Fleet Mix

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

| Land Use                 | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Low Rise      | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |
| Parking Lot              | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |
| Regional Shopping Center | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

|                        | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|------------------------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Category               | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |        |        |
| NaturalGas Mitigated   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                          | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                 | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Apartments Low Rise      | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Parking Lot              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Regional Shopping Center | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>             |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                          | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                 | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Apartments Low Rise      | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Parking Lot              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Regional Shopping Center | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>             |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

6.1 Mitigation Measures Area

|             | ROG    | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e    |
|-------------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|---------|
| Category    | lb/day |        |        |             |               |              |            |                |               |             | lb/day   |           |           |        |        |         |
| Mitigated   | 3.7095 | 0.1078 | 9.3340 | 4.9000e-004 |               | 0.0512       | 0.0512     |                | 0.0512        | 0.0512      | 0.0000   | 16.7722   | 16.7722   | 0.0166 | 0.0000 | 17.1868 |
| Unmitigated | 3.7095 | 0.1078 | 9.3340 | 4.9000e-004 |               | 0.0512       | 0.0512     |                | 0.0512        | 0.0512      | 0.0000   | 16.7722   | 16.7722   | 0.0166 | 0.0000 | 17.1868 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|-----------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| SubCategory           | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                |                |               |               |                |
| Architectural Coating | 0.2985        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Consumer Products     | 3.1228        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Landscaping           | 0.2882        | 0.1078        | 9.3340        | 4.9000e-004        |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        |               | 16.7722        | 16.7722        | 0.0166        |               | 17.1868        |
| <b>Total</b>          | <b>3.7095</b> | <b>0.1078</b> | <b>9.3340</b> | <b>4.9000e-004</b> |               | <b>0.0512</b> | <b>0.0512</b> |                | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b> | <b>16.7722</b> | <b>16.7722</b> | <b>0.0166</b> | <b>0.0000</b> | <b>17.1868</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**6.2 Area by SubCategory**

**Mitigated**

|                       | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|-----------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| SubCategory           | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |                |                |               |               |                |
| Architectural Coating | 0.2985        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Consumer Products     | 3.1228        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                | 0.0000         |               |               | 0.0000         |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Landscaping           | 0.2882        | 0.1078        | 9.3340        | 4.9000e-004        |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        |               | 16.7722        | 16.7722        | 0.0166        |               | 17.1868        |
| <b>Total</b>          | <b>3.7095</b> | <b>0.1078</b> | <b>9.3340</b> | <b>4.9000e-004</b> |               | <b>0.0512</b> | <b>0.0512</b> |                | <b>0.0512</b> | <b>0.0512</b> | <b>0.0000</b> | <b>16.7722</b> | <b>16.7722</b> | <b>0.0166</b> | <b>0.0000</b> | <b>17.1868</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Stationary Equipment**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Villages (Construction - Unmitigated) - Riverside-South Coast County, Summer

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

**11.0 Vegetation**

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Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



## APPENDIX 3.2:

### CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS

Continental Village (Operations) - Riverside-South Coast County, Winter

**Continental Village (Operations)**  
**Riverside-South Coast County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses                | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------|--------|---------------|-------------|--------------------|------------|
| Parking Lot              | 593.00 | Space         | 5.30        | 237,200.00         | 0          |
| Apartments Low Rise      | 112.00 | Dwelling Unit | 5.48        | 132,472.00         | 320        |
| Regional Shopping Center | 21.00  | 1000sqft      | 0.87        | 21,000.00          | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.4   | <b>Precipitation Freq (Days)</b> | 28    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2020  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 702.44                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

**1.3 User Entered Comments & Non-Default Data**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



## Continental Village (Operations) - Riverside-South Coast County, Winter

## Project Characteristics -

Land Use - Total Project Area is 11.64 acres.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates are based on information provided in the the TIA by Urban Crossroads (2018).

Woodstoves - Rule 445

Mobile Land Use Mitigation -

Continental Village (Operations) - Riverside-South Coast County, Winter

| Table Name           | Column Name                | Default Value | New Value  |
|----------------------|----------------------------|---------------|------------|
| tblConstructionPhase | NumDays                    | 10.00         | 1.00       |
| tblFireplaces        | NumberGas                  | 95.20         | 112.00     |
| tblFireplaces        | NumberNoFireplace          | 11.20         | 0.00       |
| tblFireplaces        | NumberWood                 | 5.60          | 0.00       |
| tblLandUse           | LandUseSquareFeet          | 112,000.00    | 132,472.00 |
| tblLandUse           | LotAcreage                 | 5.34          | 5.30       |
| tblLandUse           | LotAcreage                 | 7.00          | 5.48       |
| tblLandUse           | LotAcreage                 | 0.48          | 0.87       |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 3.00          | 0.00       |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 4.00          | 0.00       |
| tblVehicleTrips      | CC_TL                      | 8.40          | 3.00       |
| tblVehicleTrips      | CC_TTP                     | 64.70         | 96.00      |
| tblVehicleTrips      | CNW_TTP                    | 19.00         | 1.00       |
| tblVehicleTrips      | CW_TTP                     | 16.30         | 3.00       |
| tblVehicleTrips      | PB_TP                      | 11.00         | 34.00      |
| tblVehicleTrips      | PR_TP                      | 54.00         | 31.00      |
| tblVehicleTrips      | ST_TR                      | 7.16          | 8.14       |
| tblVehicleTrips      | ST_TR                      | 49.97         | 89.15      |
| tblVehicleTrips      | SU_TR                      | 6.07          | 6.28       |
| tblVehicleTrips      | SU_TR                      | 25.24         | 89.15      |
| tblVehicleTrips      | WD_TR                      | 6.59          | 7.32       |
| tblVehicleTrips      | WD_TR                      | 42.70         | 89.15      |
| tblWoodstoves        | NumberCatalytic            | 5.60          | 0.00       |
| tblWoodstoves        | NumberNoncatalytic         | 5.60          | 0.00       |

2.0 Emissions Summary

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Village (Operations) - Riverside-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

|         | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|---------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Year    | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |        |        |
| 2019    | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Maximum | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**Mitigated Construction**

|         | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|---------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Year    | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |        |        |
| 2019    | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Maximum | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Winter

**2.2 Overall Operational**

**Unmitigated Operational**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                    |                    |               |               |                    |
| Area         | 3.9269        | 1.9657         | 10.1245        | 0.0124        |               | 0.2014        | 0.2014        |                | 0.2014        | 0.2014        | 0.0000        | 2,388.5369         | 2,388.5369         | 0.0620        | 0.0435        | 2,403.0458         |
| Energy       | 0.0529        | 0.4529         | 0.1979         | 2.8900e-003   |               | 0.0366        | 0.0366        |                | 0.0366        | 0.0366        |               | 577.2648           | 577.2648           | 0.0111        | 0.0106        | 580.6952           |
| Mobile       | 4.1005        | 31.3981        | 35.3873        | 0.1292        | 8.6857        | 0.1230        | 8.8087        | 2.3242         | 0.1159        | 2.4401        |               | 13,209.6213        | 13,209.6213        | 1.0885        |               | 13,236.8340        |
| <b>Total</b> | <b>8.0804</b> | <b>33.8168</b> | <b>45.7097</b> | <b>0.1444</b> | <b>8.6857</b> | <b>0.3610</b> | <b>9.0467</b> | <b>2.3242</b>  | <b>0.3539</b> | <b>2.6781</b> | <b>0.0000</b> | <b>16,175.4230</b> | <b>16,175.4230</b> | <b>1.1616</b> | <b>0.0541</b> | <b>16,220.5749</b> |

**Mitigated Operational**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                    |                    |               |               |                    |
| Area         | 3.9269        | 1.9657         | 10.1245        | 0.0124        |               | 0.2014        | 0.2014        |                | 0.2014        | 0.2014        | 0.0000        | 2,388.5369         | 2,388.5369         | 0.0620        | 0.0435        | 2,403.0458         |
| Energy       | 0.0529        | 0.4529         | 0.1979         | 2.8900e-003   |               | 0.0366        | 0.0366        |                | 0.0366        | 0.0366        |               | 577.2648           | 577.2648           | 0.0111        | 0.0106        | 580.6952           |
| Mobile       | 4.1005        | 31.3981        | 35.3873        | 0.1292        | 8.6857        | 0.1230        | 8.8087        | 2.3242         | 0.1159        | 2.4401        |               | 13,209.6213        | 13,209.6213        | 1.0885        |               | 13,236.8340        |
| <b>Total</b> | <b>8.0804</b> | <b>33.8168</b> | <b>45.7097</b> | <b>0.1444</b> | <b>8.6857</b> | <b>0.3610</b> | <b>9.0467</b> | <b>2.3242</b>  | <b>0.3539</b> | <b>2.6781</b> | <b>0.0000</b> | <b>16,175.4230</b> | <b>16,175.4230</b> | <b>1.1616</b> | <b>0.0541</b> | <b>16,220.5749</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Village (Operations) - Riverside-South Coast County, Winter

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name       | Phase Type       | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|------------------|------------------|------------|----------|---------------|----------|-------------------|
| 1            | Site Preparation | Site Preparation | 3/1/2019   | 3/1/2019 | 5             | 1        |                   |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

| Phase Name       | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Rubber Tired Dozers       | 0      | 8.00        | 247         | 0.40        |
| Site Preparation | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |

**Trips and VMT**

| Phase Name       | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 0                       | 0.00               | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Winter

**3.2 Site Preparation - 2019**

**Unmitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category      | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Fugitive Dust |               |               |               |               | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |               | 0.0000        |               |     | 0.0000        |
| Off-Road      | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Village (Operations) - Riverside-South Coast County, Winter

**3.2 Site Preparation - 2019**

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|-----|---------------|
| Category      | lb/day        |               |               |               |               |               |               |                |               |               | lb/day        |               |               |               |     |               |
| Fugitive Dust |               |               |               |               | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |               | 0.0000        |               |     | 0.0000        |
| Off-Road      | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**4.0 Operational Detail - Mobile**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Winter

4.1 Mitigation Measures Mobile

|             | ROG    | NOx     | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2       | Total CO2       | CH4    | N2O | CO2e            |
|-------------|--------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------------|-----------------|--------|-----|-----------------|
| Category    | lb/day |         |         |        |               |              |            |                |               |             | lb/day   |                 |                 |        |     |                 |
| Mitigated   | 4.1005 | 31.3981 | 35.3873 | 0.1292 | 8.6857        | 0.1230       | 8.8087     | 2.3242         | 0.1159        | 2.4401      |          | 13,209.62<br>13 | 13,209.62<br>13 | 1.0885 |     | 13,236.83<br>40 |
| Unmitigated | 4.1005 | 31.3981 | 35.3873 | 0.1292 | 8.6857        | 0.1230       | 8.8087     | 2.3242         | 0.1159        | 2.4401      |          | 13,209.62<br>13 | 13,209.62<br>13 | 1.0885 |     | 13,236.83<br>40 |

4.2 Trip Summary Information

| Land Use                 | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|--------------------------|-------------------------|----------|----------|-------------|------------|
|                          | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Apartments Low Rise      | 819.84                  | 911.68   | 703.36   | 2,789,489   | 2,789,489  |
| Parking Lot              | 0.00                    | 0.00     | 0.00     |             |            |
| Regional Shopping Center | 1,872.15                | 1,872.15 | 1872.15  | 956,898     | 956,898    |
| Total                    | 2,691.99                | 2,783.83 | 2,575.51 | 3,746,387   | 3,746,387  |

4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Low Rise      | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| Parking Lot              | 16.60      | 8.40       | 6.90        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Regional Shopping Center | 16.60      | 3.00       | 6.90        | 3.00       | 96.00      | 1.00        | 31             | 35       | 34      |

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Continental Village (Operations) - Riverside-South Coast County, Winter

**4.4 Fleet Mix**

| Land Use                 | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Low Rise      | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |
| Parking Lot              | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |
| Regional Shopping Center | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

|                        | ROG    | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|------------------------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category               | lb/day |        |        |             |               |              |            |                |               |             | lb/day   |           |           |        |        |          |
| NaturalGas Mitigated   | 0.0529 | 0.4529 | 0.1979 | 2.8900e-003 |               | 0.0366       | 0.0366     |                | 0.0366        | 0.0366      |          | 577.2648  | 577.2648  | 0.0111 | 0.0106 | 580.6952 |
| NaturalGas Unmitigated | 0.0529 | 0.4529 | 0.1979 | 2.8900e-003 |               | 0.0366       | 0.0366     |                | 0.0366        | 0.0366      |          | 577.2648  | 577.2648  | 0.0111 | 0.0106 | 580.6952 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Winter

**5.2 Energy by Land Use - Natural Gas**

**Unmitigated**

|                          | Natural Gas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------|-----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Land Use                 | kBTU/yr         | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Apartments Low Rise      | 4779.02         | 0.0515        | 0.4404        | 0.1874        | 2.8100e-003        |               | 0.0356        | 0.0356        |                | 0.0356        | 0.0356        |          | 562.2382        | 562.2382        | 0.0108        | 0.0103        | 565.5793        |
| Parking Lot              | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Regional Shopping Center | 127.726         | 1.3800e-003   | 0.0125        | 0.0105        | 8.0000e-005        |               | 9.5000e-004   | 9.5000e-004   |                | 9.5000e-004   | 9.5000e-004   |          | 15.0266         | 15.0266         | 2.9000e-004   | 2.8000e-004   | 15.1159         |
| <b>Total</b>             |                 | <b>0.0529</b> | <b>0.4529</b> | <b>0.1979</b> | <b>2.8900e-003</b> |               | <b>0.0366</b> | <b>0.0366</b> |                | <b>0.0366</b> | <b>0.0366</b> |          | <b>577.2648</b> | <b>577.2648</b> | <b>0.0111</b> | <b>0.0106</b> | <b>580.6952</b> |

**Mitigated**

|                          | Natural Gas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------|-----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Land Use                 | kBTU/yr         | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Apartments Low Rise      | 4.77902         | 0.0515        | 0.4404        | 0.1874        | 2.8100e-003        |               | 0.0356        | 0.0356        |                | 0.0356        | 0.0356        |          | 562.2382        | 562.2382        | 0.0108        | 0.0103        | 565.5793        |
| Parking Lot              | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Regional Shopping Center | 0.127726        | 1.3800e-003   | 0.0125        | 0.0105        | 8.0000e-005        |               | 9.5000e-004   | 9.5000e-004   |                | 9.5000e-004   | 9.5000e-004   |          | 15.0266         | 15.0266         | 2.9000e-004   | 2.8000e-004   | 15.1159         |
| <b>Total</b>             |                 | <b>0.0529</b> | <b>0.4529</b> | <b>0.1979</b> | <b>2.8900e-003</b> |               | <b>0.0366</b> | <b>0.0366</b> |                | <b>0.0366</b> | <b>0.0366</b> |          | <b>577.2648</b> | <b>577.2648</b> | <b>0.0111</b> | <b>0.0106</b> | <b>580.6952</b> |

**6.0 Area Detail**



Continental Village (Operations) - Riverside-South Coast County, Winter

6.1 Mitigation Measures Area

|             | ROG    | NOx    | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------|--------|--------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category    | lb/day |        |         |        |               |              |            |                |               |             | lb/day   |            |            |        |        |            |
| Mitigated   | 3.9269 | 1.9657 | 10.1245 | 0.0124 |               | 0.2014       | 0.2014     |                | 0.2014        | 0.2014      | 0.0000   | 2,388.5369 | 2,388.5369 | 0.0620 | 0.0435 | 2,403.0458 |
| Unmitigated | 3.9269 | 1.9657 | 10.1245 | 0.0124 |               | 0.2014       | 0.2014     |                | 0.2014        | 0.2014      | 0.0000   | 2,388.5369 | 2,388.5369 | 0.0620 | 0.0435 | 2,403.0458 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Winter

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| SubCategory           | lb/day        |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| Architectural Coating | 0.2985        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |               | 0.0000            |
| Consumer Products     | 3.1228        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |               | 0.0000            |
| Hearth                | 0.2174        | 1.8579        | 0.7906         | 0.0119        |               | 0.1502        | 0.1502        |                | 0.1502        | 0.1502        | 0.0000        | 2,371.7647        | 2,371.7647        | 0.0455        | 0.0435        | 2,385.8589        |
| Landscaping           | 0.2882        | 0.1078        | 9.3340         | 4.9000e-004   |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        |               | 16.7722           | 16.7722           | 0.0166        |               | 17.1868           |
| <b>Total</b>          | <b>3.9269</b> | <b>1.9657</b> | <b>10.1245</b> | <b>0.0124</b> |               | <b>0.2014</b> | <b>0.2014</b> |                | <b>0.2014</b> | <b>0.2014</b> | <b>0.0000</b> | <b>2,388.5370</b> | <b>2,388.5370</b> | <b>0.0620</b> | <b>0.0435</b> | <b>2,403.0458</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Village (Operations) - Riverside-South Coast County, Winter

**6.2 Area by SubCategory**

Mitigated

|                       | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| SubCategory           | lb/day        |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| Architectural Coating | 0.2985        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |               | 0.0000            |
| Consumer Products     | 3.1228        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |               | 0.0000            |
| Hearth                | 0.2174        | 1.8579        | 0.7906         | 0.0119        |               | 0.1502        | 0.1502        |                | 0.1502        | 0.1502        | 0.0000        | 2,371.7647        | 2,371.7647        | 0.0455        | 0.0435        | 2,385.8589        |
| Landscaping           | 0.2882        | 0.1078        | 9.3340         | 4.9000e-004   |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        |               | 16.7722           | 16.7722           | 0.0166        |               | 17.1868           |
| <b>Total</b>          | <b>3.9269</b> | <b>1.9657</b> | <b>10.1245</b> | <b>0.0124</b> |               | <b>0.2014</b> | <b>0.2014</b> |                | <b>0.2014</b> | <b>0.2014</b> | <b>0.0000</b> | <b>2,388.5370</b> | <b>2,388.5370</b> | <b>0.0620</b> | <b>0.0435</b> | <b>2,403.0458</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Stationary Equipment**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Winter

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

**11.0 Vegetation**

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Continental Village (Operations) - Riverside-South Coast County, Summer

**Continental Village (Operations)**  
**Riverside-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses                | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------|--------|---------------|-------------|--------------------|------------|
| Parking Lot              | 593.00 | Space         | 5.30        | 237,200.00         | 0          |
| Apartments Low Rise      | 112.00 | Dwelling Unit | 5.48        | 132,472.00         | 320        |
| Regional Shopping Center | 21.00  | 1000sqft      | 0.87        | 21,000.00          | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.4   | <b>Precipitation Freq (Days)</b> | 28    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2020  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 702.44                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

**1.3 User Entered Comments & Non-Default Data**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Summer

Project Characteristics -

Land Use - Total Project Area is 11.64 acres.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates are based on information provided in the the TIA by Urban Crossroads (2018).

Woodstoves - Rule 445

Mobile Land Use Mitigation -

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Village (Operations) - Riverside-South Coast County, Summer

| Table Name           | Column Name                | Default Value | New Value  |
|----------------------|----------------------------|---------------|------------|
| tblConstructionPhase | NumDays                    | 10.00         | 1.00       |
| tblFireplaces        | NumberGas                  | 95.20         | 112.00     |
| tblFireplaces        | NumberNoFireplace          | 11.20         | 0.00       |
| tblFireplaces        | NumberWood                 | 5.60          | 0.00       |
| tblLandUse           | LandUseSquareFeet          | 112,000.00    | 132,472.00 |
| tblLandUse           | LotAcreage                 | 5.34          | 5.30       |
| tblLandUse           | LotAcreage                 | 7.00          | 5.48       |
| tblLandUse           | LotAcreage                 | 0.48          | 0.87       |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 3.00          | 0.00       |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 4.00          | 0.00       |
| tblVehicleTrips      | CC_TL                      | 8.40          | 3.00       |
| tblVehicleTrips      | CC_TTP                     | 64.70         | 96.00      |
| tblVehicleTrips      | CNW_TTP                    | 19.00         | 1.00       |
| tblVehicleTrips      | CW_TTP                     | 16.30         | 3.00       |
| tblVehicleTrips      | PB_TP                      | 11.00         | 34.00      |
| tblVehicleTrips      | PR_TP                      | 54.00         | 31.00      |
| tblVehicleTrips      | ST_TR                      | 7.16          | 8.14       |
| tblVehicleTrips      | ST_TR                      | 49.97         | 89.15      |
| tblVehicleTrips      | SU_TR                      | 6.07          | 6.28       |
| tblVehicleTrips      | SU_TR                      | 25.24         | 89.15      |
| tblVehicleTrips      | WD_TR                      | 6.59          | 7.32       |
| tblVehicleTrips      | WD_TR                      | 42.70         | 89.15      |
| tblWoodstoves        | NumberCatalytic            | 5.60          | 0.00       |
| tblWoodstoves        | NumberNoncatalytic         | 5.60          | 0.00       |

2.0 Emissions Summary

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

|         | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|---------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Year    | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |        |        |
| 2019    | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Maximum | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**Mitigated Construction**

|         | ROG    | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|---------|--------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Year    | lb/day |        |        |        |               |              |            |                |               |             | lb/day   |           |           |        |        |        |
| 2019    | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Maximum | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Summer

**2.2 Overall Operational**

**Unmitigated Operational**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                    |                    |               |               |                    |
| Area         | 3.9269        | 1.9657         | 10.1245        | 0.0124        |               | 0.2014        | 0.2014        |                | 0.2014        | 0.2014        | 0.0000        | 2,388.5369         | 2,388.5369         | 0.0620        | 0.0435        | 2,403.0458         |
| Energy       | 0.0529        | 0.4529         | 0.1979         | 2.8900e-003   |               | 0.0366        | 0.0366        |                | 0.0366        | 0.0366        |               | 577.2648           | 577.2648           | 0.0111        | 0.0106        | 580.6952           |
| Mobile       | 4.9304        | 31.8086        | 38.2550        | 0.1408        | 8.6857        | 0.1208        | 8.8065        | 2.3242         | 0.1138        | 2.4380        |               | 14,389.8478        | 14,389.8478        | 1.0176        |               | 14,415.2877        |
| <b>Total</b> | <b>8.9103</b> | <b>34.2272</b> | <b>48.5775</b> | <b>0.1560</b> | <b>8.6857</b> | <b>0.3588</b> | <b>9.0445</b> | <b>2.3242</b>  | <b>0.3518</b> | <b>2.6760</b> | <b>0.0000</b> | <b>17,355.6495</b> | <b>17,355.6495</b> | <b>1.0907</b> | <b>0.0541</b> | <b>17,399.0286</b> |

**Mitigated Operational**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                    |                    |               |               |                    |
| Area         | 3.9269        | 1.9657         | 10.1245        | 0.0124        |               | 0.2014        | 0.2014        |                | 0.2014        | 0.2014        | 0.0000        | 2,388.5369         | 2,388.5369         | 0.0620        | 0.0435        | 2,403.0458         |
| Energy       | 0.0529        | 0.4529         | 0.1979         | 2.8900e-003   |               | 0.0366        | 0.0366        |                | 0.0366        | 0.0366        |               | 577.2648           | 577.2648           | 0.0111        | 0.0106        | 580.6952           |
| Mobile       | 4.9304        | 31.8086        | 38.2550        | 0.1408        | 8.6857        | 0.1208        | 8.8065        | 2.3242         | 0.1138        | 2.4380        |               | 14,389.8478        | 14,389.8478        | 1.0176        |               | 14,415.2877        |
| <b>Total</b> | <b>8.9103</b> | <b>34.2272</b> | <b>48.5775</b> | <b>0.1560</b> | <b>8.6857</b> | <b>0.3588</b> | <b>9.0445</b> | <b>2.3242</b>  | <b>0.3518</b> | <b>2.6760</b> | <b>0.0000</b> | <b>17,355.6495</b> | <b>17,355.6495</b> | <b>1.0907</b> | <b>0.0541</b> | <b>17,399.0286</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Village (Operations) - Riverside-South Coast County, Summer

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name       | Phase Type       | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|------------------|------------------|------------|----------|---------------|----------|-------------------|
| 1            | Site Preparation | Site Preparation | 3/1/2019   | 3/1/2019 | 5             | 1        |                   |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

| Phase Name       | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Rubber Tired Dozers       | 0      | 8.00        | 247         | 0.40        |
| Site Preparation | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |

**Trips and VMT**

| Phase Name       | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 0                       | 0.00               | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Summer

**3.2 Site Preparation - 2019**

**Unmitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category      | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Fugitive Dust |               |               |               |               | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |               | 0.0000        |               |     | 0.0000        |
| Off-Road      | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Summer

**3.2 Site Preparation - 2019**

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|-----|---------------|
| Category      | lb/day        |               |               |               |               |               |               |                |               |               | lb/day        |               |               |               |     |               |
| Fugitive Dust |               |               |               |               | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               |               | 0.0000        |               |     | 0.0000        |
| Off-Road      | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|-----|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |     |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        |     | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |     | <b>0.0000</b> |

**4.0 Operational Detail - Mobile**

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,



Continental Village (Operations) - Riverside-South Coast County, Summer

4.1 Mitigation Measures Mobile

|             | ROG    | NOx     | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O | CO2e        |
|-------------|--------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|-----|-------------|
| Category    | lb/day |         |         |        |               |              |            |                |               |             | lb/day   |             |             |        |     |             |
| Mitigated   | 4.9304 | 31.8086 | 38.2550 | 0.1408 | 8.6857        | 0.1208       | 8.8065     | 2.3242         | 0.1138        | 2.4380      |          | 14,389.8478 | 14,389.8478 | 1.0176 |     | 14,415.2877 |
| Unmitigated | 4.9304 | 31.8086 | 38.2550 | 0.1408 | 8.6857        | 0.1208       | 8.8065     | 2.3242         | 0.1138        | 2.4380      |          | 14,389.8478 | 14,389.8478 | 1.0176 |     | 14,415.2877 |

4.2 Trip Summary Information

| Land Use                 | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|--------------------------|-------------------------|----------|----------|-------------|------------|
|                          | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Apartments Low Rise      | 819.84                  | 911.68   | 703.36   | 2,789,489   | 2,789,489  |
| Parking Lot              | 0.00                    | 0.00     | 0.00     |             |            |
| Regional Shopping Center | 1,872.15                | 1,872.15 | 1872.15  | 956,898     | 956,898    |
| Total                    | 2,691.99                | 2,783.83 | 2,575.51 | 3,746,387   | 3,746,387  |

4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Low Rise      | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| Parking Lot              | 16.60      | 8.40       | 6.90        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Regional Shopping Center | 16.60      | 3.00       | 6.90        | 3.00       | 96.00      | 1.00        | 31             | 35       | 34      |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Summer

**4.4 Fleet Mix**

| Land Use                 | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Low Rise      | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |
| Parking Lot              | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |
| Regional Shopping Center | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

|                        | ROG    | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|------------------------|--------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Category               | lb/day |        |        |             |               |              |            |                |               |             | lb/day   |           |           |        |        |          |
| NaturalGas Mitigated   | 0.0529 | 0.4529 | 0.1979 | 2.8900e-003 |               | 0.0366       | 0.0366     |                | 0.0366        | 0.0366      |          | 577.2648  | 577.2648  | 0.0111 | 0.0106 | 580.6952 |
| NaturalGas Unmitigated | 0.0529 | 0.4529 | 0.1979 | 2.8900e-003 |               | 0.0366       | 0.0366     |                | 0.0366        | 0.0366      |          | 577.2648  | 577.2648  | 0.0111 | 0.0106 | 580.6952 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Summer

**5.2 Energy by Land Use - Natural Gas**

**Unmitigated**

|                          | Natural Gas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------|-----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Land Use                 | kBTU/yr         | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Apartments Low Rise      | 4779.02         | 0.0515        | 0.4404        | 0.1874        | 2.8100e-003        |               | 0.0356        | 0.0356        |                | 0.0356        | 0.0356        |          | 562.2382        | 562.2382        | 0.0108        | 0.0103        | 565.5793        |
| Parking Lot              | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Regional Shopping Center | 127.726         | 1.3800e-003   | 0.0125        | 0.0105        | 8.0000e-005        |               | 9.5000e-004   | 9.5000e-004   |                | 9.5000e-004   | 9.5000e-004   |          | 15.0266         | 15.0266         | 2.9000e-004   | 2.8000e-004   | 15.1159         |
| <b>Total</b>             |                 | <b>0.0529</b> | <b>0.4529</b> | <b>0.1979</b> | <b>2.8900e-003</b> |               | <b>0.0366</b> | <b>0.0366</b> |                | <b>0.0366</b> | <b>0.0366</b> |          | <b>577.2648</b> | <b>577.2648</b> | <b>0.0111</b> | <b>0.0106</b> | <b>580.6952</b> |

**Mitigated**

|                          | Natural Gas Use | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------------------|-----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Land Use                 | kBTU/yr         | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Apartments Low Rise      | 4.77902         | 0.0515        | 0.4404        | 0.1874        | 2.8100e-003        |               | 0.0356        | 0.0356        |                | 0.0356        | 0.0356        |          | 562.2382        | 562.2382        | 0.0108        | 0.0103        | 565.5793        |
| Parking Lot              | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Regional Shopping Center | 0.127726        | 1.3800e-003   | 0.0125        | 0.0105        | 8.0000e-005        |               | 9.5000e-004   | 9.5000e-004   |                | 9.5000e-004   | 9.5000e-004   |          | 15.0266         | 15.0266         | 2.9000e-004   | 2.8000e-004   | 15.1159         |
| <b>Total</b>             |                 | <b>0.0529</b> | <b>0.4529</b> | <b>0.1979</b> | <b>2.8900e-003</b> |               | <b>0.0366</b> | <b>0.0366</b> |                | <b>0.0366</b> | <b>0.0366</b> |          | <b>577.2648</b> | <b>577.2648</b> | <b>0.0111</b> | <b>0.0106</b> | <b>580.6952</b> |

**6.0 Area Detail**



Continental Village (Operations) - Riverside-South Coast County, Summer

6.1 Mitigation Measures Area

|             | ROG    | NOx    | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------|--------|--------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category    | lb/day |        |         |        |               |              |            |                |               |             | lb/day   |            |            |        |        |            |
| Mitigated   | 3.9269 | 1.9657 | 10.1245 | 0.0124 |               | 0.2014       | 0.2014     |                | 0.2014        | 0.2014      | 0.0000   | 2,388.5369 | 2,388.5369 | 0.0620 | 0.0435 | 2,403.0458 |
| Unmitigated | 3.9269 | 1.9657 | 10.1245 | 0.0124 |               | 0.2014       | 0.2014     |                | 0.2014        | 0.2014      | 0.0000   | 2,388.5369 | 2,388.5369 | 0.0620 | 0.0435 | 2,403.0458 |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Summer

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| SubCategory           | lb/day        |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| Architectural Coating | 0.2985        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |               | 0.0000            |
| Consumer Products     | 3.1228        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |               | 0.0000            |
| Hearth                | 0.2174        | 1.8579        | 0.7906         | 0.0119        |               | 0.1502        | 0.1502        |                | 0.1502        | 0.1502        | 0.0000        | 2,371.7647        | 2,371.7647        | 0.0455        | 0.0435        | 2,385.8589        |
| Landscaping           | 0.2882        | 0.1078        | 9.3340         | 4.9000e-004   |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        |               | 16.7722           | 16.7722           | 0.0166        |               | 17.1868           |
| <b>Total</b>          | <b>3.9269</b> | <b>1.9657</b> | <b>10.1245</b> | <b>0.0124</b> |               | <b>0.2014</b> | <b>0.2014</b> |                | <b>0.2014</b> | <b>0.2014</b> | <b>0.0000</b> | <b>2,388.5370</b> | <b>2,388.5370</b> | <b>0.0620</b> | <b>0.0435</b> | <b>2,403.0458</b> |

Attachment: Air Quality Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment,

Continental Village (Operations) - Riverside-South Coast County, Summer

**6.2 Area by SubCategory**

**Mitigated**

|                       | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|-----------------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| SubCategory           | lb/day        |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| Architectural Coating | 0.2985        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |               | 0.0000            |
| Consumer Products     | 3.1228        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |               | 0.0000            |
| Hearth                | 0.2174        | 1.8579        | 0.7906         | 0.0119        |               | 0.1502        | 0.1502        |                | 0.1502        | 0.1502        | 0.0000        | 2,371.7647        | 2,371.7647        | 0.0455        | 0.0435        | 2,385.8589        |
| Landscaping           | 0.2882        | 0.1078        | 9.3340         | 4.9000e-004   |               | 0.0512        | 0.0512        |                | 0.0512        | 0.0512        |               | 16.7722           | 16.7722           | 0.0166        |               | 17.1868           |
| <b>Total</b>          | <b>3.9269</b> | <b>1.9657</b> | <b>10.1245</b> | <b>0.0124</b> |               | <b>0.2014</b> | <b>0.2014</b> |                | <b>0.2014</b> | <b>0.2014</b> | <b>0.0000</b> | <b>2,388.5370</b> | <b>2,388.5370</b> | <b>0.0620</b> | <b>0.0435</b> | <b>2,403.0458</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Stationary Equipment**

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Continental Village (Operations) - Riverside-South Coast County, Summer

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

**11.0 Vegetation**

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# Biological Technical Report for the Continental Villages Project

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**November 2018**



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## ACRONYMS, ABBREVIATIONS, AND GLOSSARY OF TERMS

|         |   |
|---------|---|
| BLM     | United States Bureau of Land Management               |
| BMPs    | Best Management Practices                             |
| CDF     | California Department of Forestry and Fire Protection |
| CDFW    | California Department of Fish and Wildlife            |
| CESA    | California Endangered Species Act                     |
| CEQA    | California Environmental Quality Act                  |
| CNDDB   | California Natural Diversity Database                 |
| CNPS    | California Native Plant Society                       |
| Corps   | United States Army Corps of Engineers                 |
| CRPR    | California Rare Plant Rank                            |
| CWA     | Clean Water Act                                       |
| FESA    | Federal Endangered Species Act                        |
| FGC     | California Fish and Game Code                         |
| GPS     | Global Positioning System                             |
| I-210   | Interstate 210  |
| LBV     | least Bell's vireo                                    |
| MBTA    | Migratory Bird Treaty Act                             |
| MMRP    | Mitigation, Monitoring, and Reporting Program         |
| NEPA    | National Environmental Protection Act                 |
| NHD     | National Hydrography Dataset                          |
| NPDES   | National Pollutant Discharge Elimination System       |
| NPPA    | Native Plant Protection Act                           |
| NRCS    | Natural Resources Conservation Service                |
| NWI     | National Wetlands Inventory                           |
| OHWM    | Ordinary High-Water Mark                              |
| Project | California Grand Village Senior Village Project       |
| RWQCB   | Regional Water Quality Control Board                  |
| SAA     | Section 1600 Streambed Alteration Agreement           |
| SLS     | Carlson Strategic Land Solutions                      |
| SWPPP   | Storm Water Pollution Prevention Plan                 |
| U.S.    | United States   |
| USFS    | United States Forest Service                          |

*Biological Technical Report for the Continental Villages Project*

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|       |   |
|-------|---|
| USFWS | United States Fish and Wildlife Service |
| USGS  | United States Geological Survey         |
| WQC   | Section 401 Water Quality Certification |

Attachment: Biological Technical Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment,

## 1.0 Introduction

On behalf of the Continental East Development team and the Continental Village Project (Project), Carlson Strategic Land Solutions (SLS) has prepared this Biological Technical Report, which incorporates the findings from the field survey conducted by SLS biologist on March 13, 2018. This report provides a Technical Study for the approximately 12-acre Project site and surrounding 300-foot survey buffer, collectively known as the “Study Area.”

### 1.1 Purpose and Approach

This report provides a summary of the conditions present during the 2018 survey, an assessment of the potential presence of sensitive biological resources, and an analysis of the potential impacts to those resources due to Project implementation. This report describes the current biological resources present within the Study Area including habitat communities, jurisdictional waters, and the potential occurrence of listed and “special status”<sup>1</sup> plant and wildlife species. The potential biological significance of site construction and development in view of federal, state, and local laws and regulations are also identified in this report. The report also recommends, as appropriate, Best Management Practices (BMPs) and avoidance and minimization measures to reduce or avoid potential impacts. While general biological resources are discussed, the focus of this assessment is on those resources considered to be sensitive. This report was prepared based upon results of a literature review and field surveys.

### 1.2 Project Terms

The following terms will be used throughout this document and are defined as follows:

- Project site: the approximately 12-acre Continental Village Project site.
- Study Area: the area evaluated during the field survey, including the 12-acre Project site and surrounding 300-foot survey buffer area.
- Project Vicinity: intended to be a general term to describe the broader area surrounding the Study Area.

### 1.3 Project Location

The Project site is located northeast corner of Lasselle Street and Krameria Avenue in the City of Moreno Valley, Riverside County, California. The Project site assessor parcel number’s (APN) are 308-040-053 and 308-040-054 (Figures 1 and 2). The Project site is located in Riverside County, and within the United States Geological Survey (USGS) 7.5-Minute Topographic Map *Sunnymead* Quadrangle.

<sup>1</sup> These species typically have a limited geographic range and/or limited habitat.



Direct access to the Project site is from Krameria Avenue. Directions to the Project site from Interstate 215 (I-215) is to exit Ramona Expressway and head east on Ramona Expressway. From Ramona Expressway, head north onto Evan Road. Evans Road turns into Lassalle Street. From Lassalle Street head east onto Krameria Avenue.

#### **1.4 Existing and Surrounding Land Use**

The Project site has been previously rough graded with residential pads and appears actively maintained, therefore the Project site is disturbed and in a non-vegetated state. The Project site is devoid of native vegetation. The Project site is approximately 1500 feet above sea level. The Project site is located within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) within the Reche Canyon/Badlands Area Plan.

The surrounding land uses of the Project site include Lasalle Elementary School and a property under construction located to the north; and single-family residential subdivisions located to the east, west, and south.

### **2.0 Project Description**

The Applicant proposes to construct Neighborhood Commercial and Multi-family housing on the approximately 12 acres Project site. The Neighborhood Commercial is proposed on 2.8 acres at the corner of Lasselle Street and Krameria Avenue. Multi-family housing is proposed on the remaining 8.80 acres. As a result of Project Implementation, the entire site would be graded and is expected to be balanced onsite.

### 3.0 Regulatory Context

The following is a list of the key local, state, and federal laws and regulations that apply to protecting plant communities, plants, wildlife, and water quality from project impacts relevant to the Project.

#### 3.1 Federal Laws and Regulations

- Federal Endangered Species Act (FESA)
- Federal Clean Water Act (CWA)
- Migratory Bird Treaty Act (MBTA)

#### 3.2 California State Laws and Regulations

- California Environmental Quality Act (CEQA)
- California Endangered Species Act (CESA) and Fish and Game Code (FGC) sections 2050 et seq.
- Lake and Streambed Alteration Program – FGC sections 1600-1616
- Porter-Cologne Water Quality Act – California Code, Division 7
- Migratory Birds – FGC section 3513
- Nongame Birds – FGC section 3800 (a)
- Native Plant Protection Act (NPPA) – FGC sections 1900-1913

#### 3.3 Local Plans/Regulations

- City of Moreno Valley General Plan
- Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP): Reche Canyon/Badlands Area Plan

#### 3.4 Historical Biological Reports

- Moreno Valley 227 Wetlands Review & Rare Plant Evaluation (VHBC, Incorporated; February 8, 2011)
- Jurisdictional Delineation APN 308-040-050 (Gonzales Environmental Consulting, LLC; February 25, 2011)
- Burrowing Owl Survey - Continental Villages Site APN 308-040-050 (VHBC, Incorporated; February 2, 2012)

### **3.5 Regulatory Permits**

This report is prepared pursuant to and in support of CEQA, and any applicable regulatory permit applications, including the California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (SAA), Regional Water Quality Control Board (RWQCB) Section 401 Water Quality Certification (WQC), and United States Army Corps of Engineers (Corps) Section 404 permit.



## 4.0 Survey and Methods

Preparation for this biological study began with a review of relevant available literature. This effort was followed by an onsite field survey on March 13, 2018. The purpose of the field survey was to assess the existing habitat, confirm any onsite sensitive plant communities and jurisdictional waters, and determine whether special status plant and wildlife species occur or potentially occur within the Study Area.

### 4.1 Literature Review

The study began with a review of relevant available literature on the biological resources within the Study Area and Project Vicinity. The Project site is located within the boundary of the Western Riverside MSHCP, specifically within the Reche Canyon/Badlands Area Plan.

#### 4.1.1 Sensitive Plant Communities

Sensitive plant communities (sensitive habitats) are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. Sensitive habitats are often threatened with local extirpation and are therefore considered valuable biological resources. Plant communities are considered "sensitive" if they meet any of the criteria listed below.

- The habitat is recognized and considered sensitive by CDFW, United States Fish and Wildlife Service (USFWS), and/or special interest groups such as CNPS.
- The habitat is under the jurisdiction of the Corps pursuant to Section 404 of the CWA.
- The habitat is under the jurisdiction of the CDFW pursuant to Sections 1600 through 1612 of the California Fish and Game Code.
- The habitat is known or believed to be of high priority for inventory in the California Natural Diversity Database (CNDDDB).
- The habitat is considered regionally rare.
- The habitat has undergone a large-scale reduction due to increased encroachment and development.
- The habitat supports special status plant and/or wildlife species (defined below).
- The habitat functions as an important corridor for wildlife movement.

#### 4.1.2 Critical Habitat

Under the ESA, the federal government is required to designate "critical habitat" for any species it lists under the ESA. Federal agencies are prohibited from authorizing, funding or carrying out actions that "destroy or adversely modify" critical habitats. Section 3 of the ESA defines critical habitat as:

- The specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features

essential to the conservation of the species and that may require special management considerations or protection.

- The specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

“Conservation” means the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the ESA is no longer necessary. Critical habitat receives protection under Section 7(a)(2) of the ESA through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a federal agency. Section 7(a)(2) also requires conferences on federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat.

The USFWS’s online service for information regarding Threatened and Endangered Species Final Critical Habitat designation within California was reviewed to determine if the Study Area is within any species’ designated Critical Habitat (USFWS 2018a). The USFWS regulatory mapping process for the designation of critical habitat is an imprecise, broad-based, mapping exercise of areas that may or may not include constituent elements of the critical habitat designation. Due to this approach in mapping, large areas are designated as critical habitat regardless of the existing habitat, and as a result may include developed areas, such as buildings, roads, hardscape, and other such facilities, as well as natural habitats.

The constituent elements of the critical habitat designation consider the physical and biological features necessary for life processes and successful reproduction of the listed species. These include:

- Space for individual and population growth for normal behavior;
- Habitat cover or shelter;
- Food, water, or other nutritional or physiological requirements;
- Sites for breeding and rearing offspring; and
- Habitat that is protected from disturbance or is representative of the historical geographic and ecological distribution of a species.

#### **4.1.3 Special Status Plants and Wildlife**

Species of plants and animals are afforded “special status” by federal agencies, state agencies, and/or non-governmental organizations (e.g., USFWS, CDFW, and USFS, and CDF) because of their recognized rarity, potential vulnerability to extinction, and local importance. These species typically have a limited geographic range and/or limited habitat and are referred to collectively as “special status” species. Plant and wildlife species were considered “special status” species if they meet any of the following criteria.

- Taxa with official status under ESA, CESA, and/or the NPPA.

- Taxa proposed for listing under ESA and/or CESA.
- Taxa designated a species of special concern by CDFW.
- Taxa designated a state fully protected species by CDFW.
- Taxa identified as sensitive, unique or rare, by the USFWS, CDFW, the United States Forest Service (USFS), the United States Bureau of Land Management (BLM), and/or the California Department of Forestry and Fire Protection (CDF).
- Plants that meet the definition of rare or endangered under CEQA §15380(b) and (d). Species that may meet the definition of rare or endangered include the following:
  - Species considered by CNPS and CDFW to be “rare, threatened or endangered in California” (California Rare Plant Rank [CRPR] 1A, 1B and 2) (CNPS 2018). A majority of the CRPR 3 and CRPR 4 plant species generally do not qualify for protection under CESA and NPPA.
  - Species that may warrant consideration on the basis of local significance or recent biological information.
  - Some species included on the CNDDDB Special Plants, Bryophytes, and Lichens List (CDFW 2018g).
- Considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.

Available literature and databases were reviewed regarding sensitive habitats and special status plant and wildlife species. Special status plant and wildlife species that have the potential to occur within the immediate region of the Study Area were identified. Several agencies, including the USFWS, CDFW, and CNPS publish lists of particular taxa (species and subspecies) and the associated level of protection or concern associated with each. Reviewed and consulted literature and databases focused on the Study Area, and included the following sources listed below:

- The CNDDDB, a CDFW species account database that inventories status and locations of rare plants and wildlife in California, was used to identify any sensitive plant communities and special status plants and wildlife that may exist within a two-mile radius of the Project site. A CNDDDB search was performed assessing a two-mile radius around the Study Area (CDFW 2018f). CNDDDB records are generally used as a starting point when determining what special status species, if any, may occur in a particular area. However, these records may be old, lack data not yet entered, and do not represent all the special status species that could be in that particular area (Figure 3).
- A map of USFWS critical habitat to determine species with critical habitat mapped in the general vicinity of the Project (USFWS 2018a).<sup>2</sup>

<sup>2</sup> Lands located within the mapped critical habitat designation must meet additional specific criteria to be considered critical habitat. The final determination of the extent of critical habitat on a specific site is based on whether certain criteria are met. Criteria is outlined within Section .



- Online CNPS Inventory of Rare and Endangered Plants of California (CNPS 2018). A search for the USGS 7.5-Minute Topographic Map Sunnymead Quadrangle provided information regarding the distribution and habitats of special status vascular plants in the Project Vicinity.
- Pertinent maps, scientific literature, websites, and regional flora and fauna field guides.

The literature review was used as a resource to better understand the biological resources potentially occurring within the Study Area. Although the inventory list of special status plant and wildlife species was not exhaustive of all species that might occur on the property, it provides a wide range of species that are representative of the wildland habitats in the area. Species occurrence and distribution information is based on documented occurrences where surveys have taken place for individual projects; therefore, a lack of documented occurrence does not necessarily indicate that a given species is absent from the Study Area.

#### 4.1.4 Jurisdictional Waters

The following sources were reviewed to determine the potential presence or absence of jurisdictional streams/drainages, wetlands, and their location within the watersheds associated with the Study Area, and other features that might contribute to federal or state jurisdictional authority located within watersheds associated with the Study Area:

- National Wetlands Inventory (NWI) maps (USFWS 2018c). The NWI database indicates potential wetland areas based on changes in vegetation patterns as observed from satellite imagery. This database is used as a preliminary indicator of wetland habitats because the satellite data are not precise.
- Title 33 Code of Federal Register (CFR): Navigation and Navigable Waters Part 328
- USGS National Hydrography Dataset (NHD). Provides the locations of “blue-line” streams as mapped on 7.5-Minute Topographic Map coverage.
- Aerial Imagery (Google Earth©) (Google 2018).
- USGS 7.5-Minute Topographic Maps.
- Natural Resource Conservation Service (NRCS) Soil Survey.

#### 4.1.5 MSHCP Assessment

The Project site is located within the MSHCP, specifically within the Reche Canyon/Badlands Area Plan. The MSHCP is a comprehensive plan that includes portions of the County of Riverside and numerous cities. The MSHCP plans for conservation of 146 species and proposes a reserve system of approximately 500,000 acres. The MSHCP is intended to contribute to the economic viability of the County of Riverside by providing landowners, developers, and public infrastructure projects a streamlined regulatory process.

The Riverside Conservation Authority (RCA) MSHCP Information Application website was reviewed to verify any overlays that may occur on the Project site. Regardless of other overlays, MSHCP Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal*

*Pools*, is applicable to all projects within the MSHCP and describes the process through which protection of riparian/riverine areas, vernal pools, and fairy shrimp species will occur within the MSHCP Area. Protection of these resources is important for a number of MSHCP conservation objectives. An assessment of a Project's potentially significant effects on riparian/riverine areas, and vernal pools is required. Guidelines for determining whether or not these resources exist on site are described as follows:

- **Riparian/Riverine Areas** include “lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens which occur close to or which depend upon soil moisture from a nearby fresh water source or areas with fresh water flow during all or a portion of the year.” Riparian/riverine areas under the MSHCP also include drainage areas that are vegetated or have upland (non-riparian/riverine) vegetation and that drain directly into an area that is described for conservation under the MSHCP (or areas already conserved). The Project site was assessed for areas meeting this definition during the jurisdictional delineation performed on March 13, 2018.
- **Vernal Pools** are described by the MSHCP as “seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season.” This definition excludes artificially created wetlands created for proving wetlands habitat or human actions to create open waters or altering natural streams demonstrating characteristic as described above. The Project site was assessed for areas meeting this definition during the jurisdictional delineation performed on March 13, 2018.

## 4.2 Biological Survey

### 4.2.1 General Biological Survey

A field survey was performed on March 13, 2018 by SLS biologist Brianna Bernard to assess and map vegetation communities, plants, and wildlife, and to identify habitat areas that could be suitable for special status plant species.

Plant species were identified using plant field and taxonomical guides, such as The Jepson Manual: Vascular Plants of California, second edition (Baldwin et al. 2012). All plant species encountered during the field survey were identified and recorded in field notes. A one-day survey cannot be used to conclusively determine presence or absence of a species; therefore, assessments of presence/absence were made based on the previous surveys, presence of suitable habitat and soils to support the species, known records or occurrence within the area, and known distribution and elevation range obtained from the relevant literature.

During the field survey, the biologist assessed the existing habitat within the Study Area. The biologist paid special attention to those habitat areas that had the potential to provide suitable

habitat for special status plant and wildlife species. Aerial photographs and maps were used to assist in the delineation of plant community boundaries. Following field mapping, the plant communities were digitized and the vegetation map was created. General wildlife surveys were conducted on foot and with binoculars within the Study Area.

All wildlife species encountered visually or audibly during the field survey were identified and recorded in field notes. Biologists also recorded signs of wildlife species including animal tracks, burrows, nests, scat, and remains. Binoculars were used to aid in the identification of observed wildlife. Wildlife field guides and photographs were used to assist with identification of wildlife species during the field survey, as necessary. Photographs were taken to document existing conditions within the Study Area (Appendix A).

### **4.3 Jurisdictional Delineation**

An assessment of the Study Area for the presence of jurisdictional features was conducted by SLS biologist Brianna Bernard on March 13, 2018. All depressions and drainages were evaluated for the presence of bed and bank and wetlands according to the Corps and CDFW delineation guidelines, including connectivity or lack of connectivity to Traditional Navigable Waters. Dominant vegetation within and adjacent to any jurisdictional features within the Study Area was identified and recorded.

The Corps and the RWQCB have jurisdiction over Waters of the United States. Jurisdictional non-wetland features for the Waters of the United States are typically determined through the observation of an Ordinary High Water Mark (OHWM), which is defined as the “line on the shore established by the fluctuation of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” Projects with impacts to Waters of the United States are regulated under Sections 401 and 404 of the Clean Water Act.

To determine the presence of a jurisdictional wetland for the Waters of the United States, three indicators are required: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. The methodology published in the *United States Army Corps of Engineers 1987 Wetland Delineation Manual* and the *Arid West Supplement* sets the standards for meeting each of the three indicators, which normally require more than 50 percent cover of dominant plant species typical of a wetland, soils exhibiting characteristics of saturation, and hydrological indicators be present.

CDFW has jurisdiction over water of the Department’s interest (California Fish and Game Code §§1600 et seq.; California Code of Regulations, Title 14, §720). Section 1602 of the California Fish and Game Code (FGC) applies to all rivers, streams, lakes and streambeds. CDFW defines a stream as “a body of water that flows perennially or episodically and that is defined by the area in which water currently flows, or has flowed, over a given course during the historic hydrologic course regime, and where the width of its course can reasonably be identified by physical or biological



indicators” (Brady and Vyverberg 2013). Likewise, CDFW regulates jurisdictional areas of riparian habitat only to the extent that those areas are part of a stream, river, or lake as defined above. Waters of the State pertaining to Porter-Cologne in relation to RWQCB jurisdiction are defined by California Water Code Section 13050(e) as any surface or ground water within the boundaries of the state.

Prior to the field investigation, SLS biologist reviewed historical aerial imagery, historical biological reports, and topography for the Study Area to determine the potential for perennial, intermittent, or ephemeral drainages and associated riparian resources. Generally, indicators of jurisdictional drainages on an aerial photo include vegetation and/or incised lines indicating the path of flowing water. Following the desktop research, SLS biologist conducted an onsite field investigation. Based on the collective results of the desktop investigation and the field surveys, any observed jurisdictional features were mapped using the following parameters:

- As stated above, the limits of the Corps’ jurisdiction extend to the OHWM. OHWM indicators include: the observation of benches, break in bank slope, particle size distribution, sediment deposits, drift, litter, and/or change in plant community.
- The RWQCB shares the Corps’ jurisdictional methodology.
- CDFW’s jurisdiction applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. CDFW’s authority also includes riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, CDFW jurisdiction is mapped to the top of bank of the stream.

## 5.0 Results

### 5.1 Vegetation Communities

As stated previously, the Project site has been previously rough graded with residential pads and appears actively maintained; therefore, the Project site is disturbed and in a non-vegetated state. Vegetation communities were mapped based on the Holland Classification System (Holland 1986). Where necessary, deviations were made on best professional judgment when areas did not fit into a specific habitat description provided by Holland. Plant communities were mapped in the field directly onto a 200-scale (1" = 200') aerial photograph; acreages for the community observed is listed in Table 1 and graphically depicted on Figure 5. Representative photographs of the vegetation community observed can be found in Appendix A.

**Table 1. Vegetation Community Observed within the Project Site**

| Vegetation Community | Total Acreage |
|----------------------|---------------|
| Developed/Disturbed  | 12.41         |

The general description of the habitat observed during the 2018 field survey is described below.

#### 5.1.1 Developed/Disturbed

A total of 12.4 acres of disturbed area consisting of bare dirt and sparse vegetation is mapped onsite. This acreage includes the current water quality/Best Management Practice (BMP) Measures as part of the active construction located to the north of the Project site and original grading. The historical biological reports were reviewed, along with a series of historical aerials. Based on the series of aerial and biological reports, the site was first graded prior to 2002, as part of the larger community and the construction of Krameria Avenue and Lasselle Street. Based on the historical aerials, no natural drainage occurred on the site and with the construction of the streets and residential, was cut off from any watershed that would have served any natural drainage. The site appeared to be maintained through disking. The site was re-graded in 2004/2005 as part of construction of the adjacent Lasalle Elementary School. As part of the grading activities and construction of the adjacent school, two detention basins and a single spillway were incorporated into the grading.

As stated in the historical biological reports and observed in the historical aerials, nuisance water was present in the basins from the school property and associated with adjacent urban landscape runoff, including residential and commercial uses. The basins and spillway captured the runoff and nuisance flow from the School and the graded nature and lack of vegetation on the Project site and adjacent undeveloped northern property. Following the construction of the adjacent School, the Project site and adjacent undeveloped northern property remained in the rough graded state and vacant. As a result of the site siting dormant, vegetation grew within the basins and spillway, as observed on the historical aerials. However, various aerials show a lack of

vegetation within the basins and spillway. The difference of vegetation observed in the basins and spillway throughout the aeriels provides evidence that the vegetation depended on the nuisance flow and runoff into the BMPs and without the support of the nuisance water and runoff the vegetation within the areas cease to exist. Based on those factors and the inclusion of detention basins and riprap, no natural drainages previously existed on the Project site and the drainage observed by the historical biological reports was only created by runoff and nuisance from the impervious surface and ballfields on the school site.

The adjacent undeveloped northern property, outside of the 12-acre Project site, is currently under construction as observed in the 2018 aerial and site visit. As part of the active construction, the spillway was redirected via a tarped path to a retention basin located on the Project site. Both of the basins and spillway, located on the adjacent northern property, were removed as part of active construction. The retention basin located on the Project site captures the run-off and nuisance flow onsite due to the graded nature and lack of vegetation on the Project site, the school property, and associated with adjacent urban landscape.

## 5.2 Plants

Sensitive plant species include federally or state listed threatened or endangered species, those species listed on the CNPS rare and endangered plant inventory. A single listed plant species occurs within the USGS 7.5' Sunnymead quadrangle and a brief description of that species is included below. Special status plant species with the potential to occur in the Project site were analyzed based on distribution, habitat requirements, and existing site conditions (Appendix B). All plant species observed within the Project site totaled 7 species during the survey on March 13, 2018 are listed in Appendix C of this report.

### Nevin's barberry (*Berberis nevinii*)

**Status:** state endangered, federally endangered

**Distribution:** Los Angeles, Riverside, San Bernardino, and San Diego Counties.

**Habitat(s):** A perennial evergreen shrub that occurs in sandy or gravelly areas. Habitat communities include chaparral, cismontane woodland, coastal scrub, and riparian scrub. Occurs at approximately 230 to 2,700-foot elevation range. Blooms from March through June.

**Status onsite:** None. The site lacks suitable habitat and soils. Not observed during field visit.

As determined through the 2018 survey, no special status plant species were observed within the Project site and there is no opportunity for them to occur due to the disturbed nature of the Project site and lack of suitable habitat and soils.

## 5.3 Critical Habitat

The Project site contains no designated critical habitat. The closest designated critical habitat is located 4.40 miles southeast of the Project site for Spreading Navarretia (*Navarretia fossalis*).



## 5.4 Wildlife

Special status wildlife species with the potential to occur in the Study Area were analyzed based on the species identified in USGS 7.5' Sunnymead quadrangle and the surrounding eight quadrangles, distribution, habitat requirements, and existing site conditions (Appendix D). No special status wildlife was identified or observed within the Project site during the field visit. However, the following species were identified as being observed within 2-miles of the Project site: burrowing owl (*Athene cunicularia*), red-diamond rattlesnake (*Crotalus ruber*), Stephen's Kangaroo Rat (*Dipodomys stephensi*), western mastiff bat (*Eumops perotis californicus*), western yellow bat (*Lasiurus xanthinus*), and Los Angeles Pocket Mouse (*Perognathus longimembris brevinas*). A brief description of those species and their habitat is included below.

### Burrowing Owl (*Athene cunicularia*)

**Status:** species of special concern

**Habitat(s):** Burrowing owls are a year-round resident of California including habitats of open, dry grassland, and desert. They are generally restricted to mostly flat, open country with suitable nest sites. They use rodent or other burrows for roosting and nesting cover and acquire their burrows from either abandonment or eviction. Burrowing owls typically hunt from a perch.

**Status onsite:** None. The site lacks suitable habitat and contains no burrows. Not observed during field visit.

### Red-Diamond Rattlesnake (*Crotalus ruber*)

**Status:** species of special concern

**Habitat(s):** It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake, however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats. They need rodent burrows, cracks in rocks or surface cover objects.

**Status onsite:** None. The site lacks suitable habitat. Not observed during field visit.

### Stephen's Kangaroo Rat (*Dipodomys stephensi*)

**Status:** federally endangered, state threatened

**Habitat(s):** This species prefers large areas of disturbed or patchy annual and perennial grasslands and open coastal sage scrub. Preferred perennial plant species include buckwheat and chamise and preferred annual plant species include brome grass. The nearest known populations are in Rancho Guejito and at the Naval Weapons Station in Fallbrook.

**Status onsite:** None. The site lacks suitable habitat. Not observed during field visit.

### Western Mastiff Bat (*Eumops perotis californicus*)

**Status:** species of special concern

**Habitat(s):** Western mastiff bats are found in a variety of habitats, such as semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban, but the species' distribution may be geomorphically determined, occurring primarily where there are significant rock features offering suitable roosting habitat. A cliff dwelling species, where maternity colonies of 30 to several hundred roost generally under exfoliating rock slabs and rock crevices along cliffs. Western mastiff bats can also be found in similar crevices in large boulders and buildings. When roosting in rock crevices they require a sizable drop from their roost in order to achieve flight. Western mastiff bats prefer deep crevices that are at least 15 or 20 feet above the ground. Foraging is concentrated around bodies of water but also includes coastal sage scrub, chaparral, and grassland habitats.

**Status onsite:** None. The site lacks suitable habitat. Not observed during field visit.

Western yellow bat (*Lasiurus xanthinus*)

**Status:** species of special concern

**Habitat(s):** Roost in trees, hanging from the underside of a leaf. Commonly found in the southwestern U.S. roosting in the skirt of dead fronds in both native and non- native palm trees and have also been documented roosting in cottonwood trees.

**Status onsite:** None. The site lacks suitable habitat. Not observed during field visit.

Los Angeles Pocket Mouse (*Perognathus longimembris brevinas*)

**Status:** species of special concern

**Habitat(s):** Prefers sandy soil for burrowing. Also known to occur on gravel washes and in rocky soils. Associated with coastal scrub.

**Status onsite:** None. The site lacks suitable habitat. Not observed during field visit.

None of these species or evidence of their presence were observed or heard during the 2018 survey, and given the site's disturbed environment, existing surrounding residential housing and elementary school, and lack of habitat there is no opportunity for them to occur onsite.

#### 5.4.1 Wildlife Species Observed or Detected

The animal species or signs thereof observed during the SLS survey are listed below:

Birds:

- American crow (*Corvus brachyrhynchos*)
- Anna's hummingbird (*Calypte anna*)
- house finch (*Haemorhous mexicanus*)
- mourning dove (*Zenaida macroura*)
- California seagull (*Larus californicus*)

## 5.5 Regional Connectivity/Wildlife Movement

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, would not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967, Soule 1987, Harris and Gallagher 1989). Corridors effectively act as links between different populations of a species. A group of smaller populations (termed “demes”) linked together via a system of corridors is termed a “meta-population.” The long-term health of each deme within the meta-population is dependent upon its size and the frequency of interchange of individuals (immigration versus emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population’s genetic variability is generally associated with an increase in a population’s health.

Corridors mitigate the effects of habitat fragmentation by:

- Allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity.
- Providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction.
- Serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Fahrig and Merriam 1985, Simberloff and Cox 1987, Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories:

- Dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions).
- Seasonal migration.
- Movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover).

A number of terms have been used in various wildlife movement studies, such as “wildlife corridor,” “travel route,” “habitat linkage,” and “wildlife crossing” to refer to areas in which wildlife moves from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:



- **Travel route:** a landscape feature (such as a ridge line, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relatively direct link between target habitat areas.
- **Wildlife corridor:** a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as “habitat or landscape linkages”) can provide both transitory and resident habitat for a variety of species.
- **Wildlife crossing:** a small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings are typically manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often “choke points” along a movement corridor.

### 5.5.1 Wildlife Movement within the Study Area

Large open spaces support a diverse ecological community representing all types of wildlife movements. Each category of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds, on a local level to many square-mile home ranges of large mammals moving at a regional level. Due to the urbanized setting, the Project site does not serve as a local wildlife corridor.

## 5.6 Jurisdictional Areas

Prior to the field survey, the previous biological reports and historical aerials were reviewed. The Project site is surrounded by urban development and the site was first graded prior to 2002 as part of the larger community and construction of Krameria Avenue and Lasselle Street. Based on the historical aerials, no natural drainage occurred on the site and with the construction of the streets and residential, was cut off from any watershed that would have served any natural drainage. Following the construction of the adjacent development, the site appeared to be maintained through disking. The site was re-graded in 2004/2005 as part of construction of the adjacent Lasalle Elementary School. As part of the grading activities and construction of the adjacent school, two detention basins and a single spillway were incorporated into the grading plan.

As stated in the historical biological reports and observed on historical aerials, nuisance water was present in the basins from the school property and associated with adjacent urban landscape runoff, including residential and commercial uses. The basins and spillway captured the runoff and nuisance flow from the School and the graded nature and lack of vegetation on the Project site and adjacent undeveloped northern property. Following the construction of the adjacent School, the Project site and adjacent undeveloped northern property remained in the rough graded state and vacant. As a result of the site siting dormant, vegetation grew within the basins and spillway, as observed on the historical aerials. However, various aerials show a lack of vegetation within the basins and spillway. The difference of vegetation observed in the basins and spillway throughout the aerials provides evidence that the vegetation depended on the nuisance flow and runoff into the BMPs and without the support of the nuisance water and runoff the vegetation within the areas cease to exist. Based on those factors and the inclusion of detention basins and riprap, no natural drainages previously existed on the Project site and the drainage observed by the historical biological reports was only created by runoff and nuisance from the impervious surface and ballfields on the school site.

The adjacent undeveloped northern property, outside of the 12-acre Project site, is currently under construction as observed in the 2018 aerial and site visit. As part of the active construction, the spillway was redirected via a tarped path to a retention basin located on the Project site. Both of the basins and spillway, located on the adjacent northern property, were removed as part of active construction. The retention basin located on the Project site captures the run-off and nuisance flow onsite due to the graded nature and lack of vegetation on the Project site, the school property, and associated with adjacent urban landscape.

During the 2018 field survey, it was determined that the Project site does not include any jurisdictional areas or wetlands.

## **5.7 MSHCP Assessment**

The Project is located within the Reche Canyon/Badlands Area Plan of the MSHCP. The Project site is not located within any MSHCP Criteria Areas, Cell Groups, Subunits, Narrow Endemic Plants, or Burrowing Owl overlays. The Project site was surveyed and assessed for the following:

- Riparian and Riverine Areas (Section 6.1.2)

Thus, a separate Consistency Assessment has been prepared pursuant to that section. As stated in the historical biological reports and observed on historical aerials, the basins and spillway located onsite capture the runoff and nuisance flow from the school property, adjacent urban landscape runoff, including residential and commercial uses, and the graded nature and lack of vegetation on the Project site and adjacent undeveloped northern property. Following the construction of the adjacent School, the Project site and adjacent undeveloped northern property remained in the rough graded state and vacant. As a result of the site siting dormant,

vegetation grew within the basins and spillway, as observed on the historical aerials. However, various aerials show a lack of vegetation within the basins and spillway. The difference of vegetation observed in the basins and spillway throughout the aerials provides evidence that the vegetation depended on the nuisance flow and runoff into the BMPs and without the support of the nuisance water and runoff the vegetation within the areas cease to exist. Based on those factors and the inclusion of detention basins and riprap, no natural drainages previously existed on the Project site and the drainage observed by the historical biological reports was only created by runoff and nuisance from the impervious surface and ballfields on the school site.

During the 2018 field survey, it was determined that the Project site consists of Developed/Disturbed habitat and does not include any MSHCP defined Riparian or Riverine Areas.

## 5.8 Soils Mapping

The United States Department of Agriculture Natural Resource Conservation Service (NRCS) lists four soil types in the Project site (Figure 6), as described below:

### GyC2: Greenfield sandy loam, 2 to 8 percent slopes, eroded

Soils of this series consist of well drained soils with low runoff. These soils are found on 2 to 8 percent slopes at elevations of 100 to 3,500 feet. Greenfield sandy loam complex is mapped on approximately 59 percent of the Project site.

### HcC: Hanford coarse sandy loam, 2 to 8 percent slopes

Soils of this series consist of well drained soils with low runoff. These soils are found on 2 to 8 percent slopes at elevations of 150 to 900 feet. Hanford coarse sandy loam, 2 to 8 percent, is mapped on approximately 39 percent of the Project site.

### HcD2: Hanford coarse sandy loam, 8 to 15 percent slopes, eroded

Soils of this series consist of somewhat excessively drained soils with low runoff. These soils are found on 8 to 15 percent slopes at elevations of 150 to 900 feet. Hanford coarse sandy loam, 8 to 15 percent, is mapped on approximately 1 percent of the Project site.

### RaB3: Ramona sandy loam, 0 to 5 percent slopes, severely eroded

Soils of this series consist of well drained soils with medium runoff. These soils are found on 0 to 5 percent slopes at elevations of 250 to 3,500 feet. Ramona sandy loam complex is mapped on approximately 1 percent of the Project site.

## 6.0 Project Impacts

This section discusses potential impacts to biological resources that could result from Project implementation. Biological resources may be either directly or indirectly impacted by a Project.



Direct and indirect impacts may be either permanent or temporary in nature. These impact categories are defined below.

- **Direct impact:** any loss, alteration, disturbance or destruction of biological resources that would result from project-related activities is a direct impact. Examples include vegetation clearing, encroaching into wetlands, diverting natural surface water flows, and the loss of individual species and/or their habitats. Direct permanent impacts resulting from Project implementation consist of any ground-disturbing activities (i.e., vegetation removal, grading, paving, building of structures, installing landscaping, creating the fuel modification zone, etc.).
- **Indirect impact:** as a result of Project-related activities, biological resources may also be affected in a manner that is not direct. Examples of indirect impacts include elevated noise, light, and dust levels, increased human activity, decreased water quality, erosion created by the removal of vegetation, and the introduction of invasive plants and unnatural predators (e.g. domestic cats and dogs). These indirect impacts may be both short term and long term in their extent.
- **Permanent impacts:** all impacts that result in the long-term or irreversible removal of biological resources are considered permanent. Examples include constructing a building or permanent road on an area containing biological resources.
- **Temporary impacts:** any impacts considered to have reversible effects on biological resources can be viewed as temporary. Examples include the generation of fugitive dust during grading, or removing vegetation and either allowing the natural vegetation to recolonize or actively revegetating the impact area.

Under each section, potential impacts are discussed.

### **6.1 Impacts to Vegetation Communities/Habitats**

Figure 7 and Table 2 describe and list the approximate total acreages of vegetation communities that will be permanently and temporary impacted by Project activities. Calculations were based on the currently proposed development design in combination with the vegetation map from the field survey and aerial imagery.

Indirect temporary impacts to plant communities include the effects of fugitive dust created by grading activities, vehicle construction traffic, or offsite discharge of surface water runoff with its associated erosion and sedimentation. Grading-related dust could settle on plant surfaces and indirectly inhibit metabolic processes such as photosynthesis and respiration. Grading-related erosion, runoff, sedimentation, soil compaction, and alteration of drainage patterns may affect plants by altering site conditions so that the location in which they are growing becomes unfavorable. Another example of indirect impacts includes the introduction and spread of

invasive, exotic plants which could result in permanent indirect impacts to adjacent native plant communities.

**Table 2. Approximate Acreage of Potential Impacts to Vegetation Communities on the Project Site**

| Vegetation Community | Existing Vegetation onsite (acres) | Total Permanent Impacts (acres) | Total Temporary Impacts (acres) |
|----------------------|------------------------------------|---------------------------------|---------------------------------|
| Developed/Disturbed  | 12.41                              | 12.41                           | 0.00                            |

Permanent impacts to the 12.41 acres of the developed/disturbed community onsite from Project grading are not significant because these areas are not considered sensitive habitats.

## **6.2 Potential Impacts to Special Status Plants**

As concluded in Section 5.2 above, no special status plant species were observed during the 2018 survey and none are expected to occur onsite due to the urbanized nature of the Project site; therefore, there are no potential impacts to special status plants due to Project implementation.

## **6.3 Potential Impacts to Critical Habitat**

The proposed Project would not result in direct or indirect impacts to the designated critical habitats identified in Section 5.3 above due to the distance of the designated critical habitat and lack of suitable habitat found within the Project site.

## **6.4 Potential Impacts to Special Status Wildlife**

Due to the urbanized nature of the Project site, no impacts are expected to occur as a result of Project Implementation. Specifically, no suitable habitat for the special status species is found onsite, as shown in Table 3 below. Impacts to avian species protected by the MBTA may occur as a result of Project construction, both temporary short-term construction and operations (long-term). If Project construction is scheduled to occur during the typical breeding bird season (January through September), short-term noise effects to birds that may forage on the onsite may occur. However, it is expected such birds would fly away at the sight of approaching construction workers and equipment, and would therefore not be significantly impacted by construction-related noise levels and no mitigation required.

**Table 3 Impact Analysis Summary for Special Status Species**

| Species       | Extent of Impact   | Significance of Impact   |
|---------------|--|--|
| Burrowing Owl | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed |

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| Species                  | Extent of Impact   | Significance of Impact   |
|--------------------------|--|--|
|                          |  | during field visit.  |
| Red-Diamond Rattlesnake  | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed during field visit. |
| Stephen's Kangaroo Rat   | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed during field visit. |
| Western Mastiff Bat      | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed during field visit. |
| Western Yellow Bat       | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed during field visit. |
| Los Angeles Pocket Mouse | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed during field visit. |

Project construction could also result in additional short-term impacts including night lighting, littering, and illegal wildlife collections. However, Project compliance with the following BMPs under State and federal laws would reduce the potential for such indirect impacts to below significance:

- All temporary construction-related night lighting used in onsite development areas will be shielded and/or directed downward to avoid indirect impacts to nocturnal wildlife such that night lighting could increase predation rates.
- All construction contractors, subcontractors, and employees will comply with the litter and pollution laws and will institute a litter control/removal program during the course of construction activities to reduce the attractiveness of the area to opportunistic predators such as coyotes, opossums, and common ravens.
- Active nests (nests with chicks or eggs) cannot be removed or disturbed. Nests may be removed or disturbed by a qualified biologist, if not active.
- Construction employees, contractors, and site visitors will be prohibited from collecting wildlife.



With implementation of the night lighting reduction PDFs via their inclusion in the Project's MMRP, potential indirect long-term impacts to wildlife would be reduced to below significance.

### **6.5 Potential Impacts to Wildlife Movement**

As described earlier, the Project site does not function as a wildlife corridor due to the urbanized nature of the Project site. Therefore, the Project would not result in direct or indirect impacts to wildlife movement.

### **6.6 Potential Impacts to Jurisdictional Features**

No federal/State jurisdictional areas occur within the Project Site. Therefore, the Project would not result in direct or indirect impacts to jurisdictional waters and wetlands.

### **6.7 Potential Impacts to MSHCP Features**

The Project site was evaluated for suitable Riparian/Riverine habitat pursuant to MSHCP Section 6.1.2. The Project site does not contain any riparian habitat as determined during the field survey on March 13, 2018. Therefore, the proposed Project is consistent with Section 6.1.2 as outlined within the Project MSHCP Consistency Analysis Report.

## 7.0 BMPs/PDFs Incorporated into the Project and MMRP

The Project will comply with the following:

- Work area limits will be defined and respected. All grading areas will have their boundaries clearly flagged or marked before Project implementation and all disturbances will be confined to the flagged areas.
- Cleared or trimmed non-native, exotic vegetation and woody debris will be disposed of in a legal manner at an approved disposal site.
- Employees, contractors, and site visitors will be prohibited from collecting plants and wildlife.
- Access to construction sites will be via preexisting access routes.
- Construction equipment will be properly maintained; construction employees and contractors will be trained on proper implementation and monitoring of BMPs.
- Effective perimeter control BMPs to control discharge of pollutants from the Project site during construction.
- All temporary construction-related night lighting used in onsite development areas will be shielded and/or directed downward to avoid indirect impacts to nocturnal wildlife such that night lighting could increase predation rates.
- All construction contractors, subcontractors, and employees will comply with the litter and pollution laws and will institute a litter control/removal program during the course of construction activities to reduce the attractiveness of the area to opportunistic predators such as coyotes, opossums, and common ravens.
- Active nests (nests with chicks or eggs) cannot be removed or disturbed. Nests may be removed or disturbed by a qualified biologist, if not active.

## 8.0 Proposed Mitigation

No adverse impacts are expected on vegetation communities, special status plants and wildlife, critical habitat, jurisdictional or MSHCP features; therefore, no mitigation is proposed.

## 9.0 Cumulative Impacts

The loss of biological resources on the Project site must be considered in the context of the other development in the area. As identified within Section 6.1, the vegetation communities identified onsite are not considered sensitive habitats and are abundant in the surrounding Project vicinity.



## 10.0 Literature Cited

- Amphibiaweb. 2018. Species Accounts. Retrieved from:  
<http://amphibiaweb.org/search/index.html>
- AOU (The American Ornithologists' Union). 1998. Check-List of North American Birds. 7th Edition. American Ornithologists' Union, Washington, D.C. 829 pp.
- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, second edition. University California Press, Berkeley.
- Bowers, N., R. Bowers, and K. Kaufman. 2004. Mammals of North America. Houghton Mifflin Company, New York.
- Brady, Roland H. III, Kris Vyverberg. 2013. Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants. California Energy Commission. Publication Number: CEC-500-2014-013.
- Calflora. 2018. Calflora website - search for plants.  
 Retrieved from: <http://www.calflora.org/species/index.html>.
- CaliforniaHerps.com. 2018. California Herps. A Guide to the Reptiles and Amphibians of California. Retrieved from: <http://www.californiaherps.com/>.
- Cal-IPC (California Invasive Plant Council). 2006. California Invasive Plant Inventory. Cal-IPC Publication 2006-02. California Invasive Plant Council: Berkeley, CA. Retrieved from: <http://www.cal-ipc.org/ip/inventory/index.php>.
- CDFW (California Department of Fish and Wildlife). 2018. Natural Communities List. Biographic Data Branch. The Vegetation Classification and Mapping Program. <https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities>.
- CDFW (California Department of Fish and Wildlife). 2018a. California Endangered Species Act (CESA). Retrieved from: <https://www.wildlife.ca.gov/Conservation/CESA>.
- CDFW (California Department of Fish and Wildlife). 2018b. California Environmental Quality Act (CEQA). Retrieved from: <https://www.wildlife.ca.gov/Conservation/CEQA>.
- CDFW (California Department of Fish and Wildlife). 2018c. Fish and Game Code Section 1600-1616. Retrieved from: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=3784>.
- CDFW (California Department of Fish and Wildlife). 2018d. Lake and Streambed Alteration Program. Retrieved from: <https://www.wildlife.ca.gov/Conservation/LSA>.

- CDFW (California Department of Fish and Wildlife). 2018e. Life History Accounts and Range Maps – California Wildlife Habitat Relationship System. Retrieved from: <https://www.wildlife.ca.gov/Data/CWHR/Life-History-and-Range>.
- CDFW (California Department of Fish and Wildlife). 2018f. RareFind, California Department of Fish and Wildlife, California Natural Diversity Database (CNDDDB). State of California, The Natural Resources Agency, Department of Fish and Wildlife, Biogeographic Data Branch, California Natural Diversity Database, Sacramento, CA.
- CDFW (California Department of Fish and Wildlife), Natural Diversity Database. 2018g. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 124 pp.
- CDFW (California Department of Fish and Wildlife), Natural Diversity Database. 2018h. Special Animals List. Periodic publication. 51 pp.  
Retried from: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406>.
- CDFW (California Department of Fish and Wildlife). 2018i. State and Federally Listed Endangered, Threatened, and Rare Plants of California. State of California, The Resources Agency, Department of Fish and Wildlife, Resource Management and Planning Division, Biogeographic Data Branch, California Natural Diversity Database, Sacramento, CA.
- Clark, W.S. and B.K. Wheeler. 2001. A Field Guide to Hawks of North America, Second Edition. Houghton Mifflin Company, Boston and New York.
- California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 12 March 2018].
- Corps (United States Army Corps of Engineers). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- Eder, Tamara. 2005. Mammals of California. Lone Pine Publishing International Inc, Auburn, WA.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.
- EPA (United States Environmental Protection Agency). 2011. Laws and Regulations. Summary of the Endangered Species Act.  
Retrieved from: <http://www.epa.gov/lawsregs/laws/esa.html>

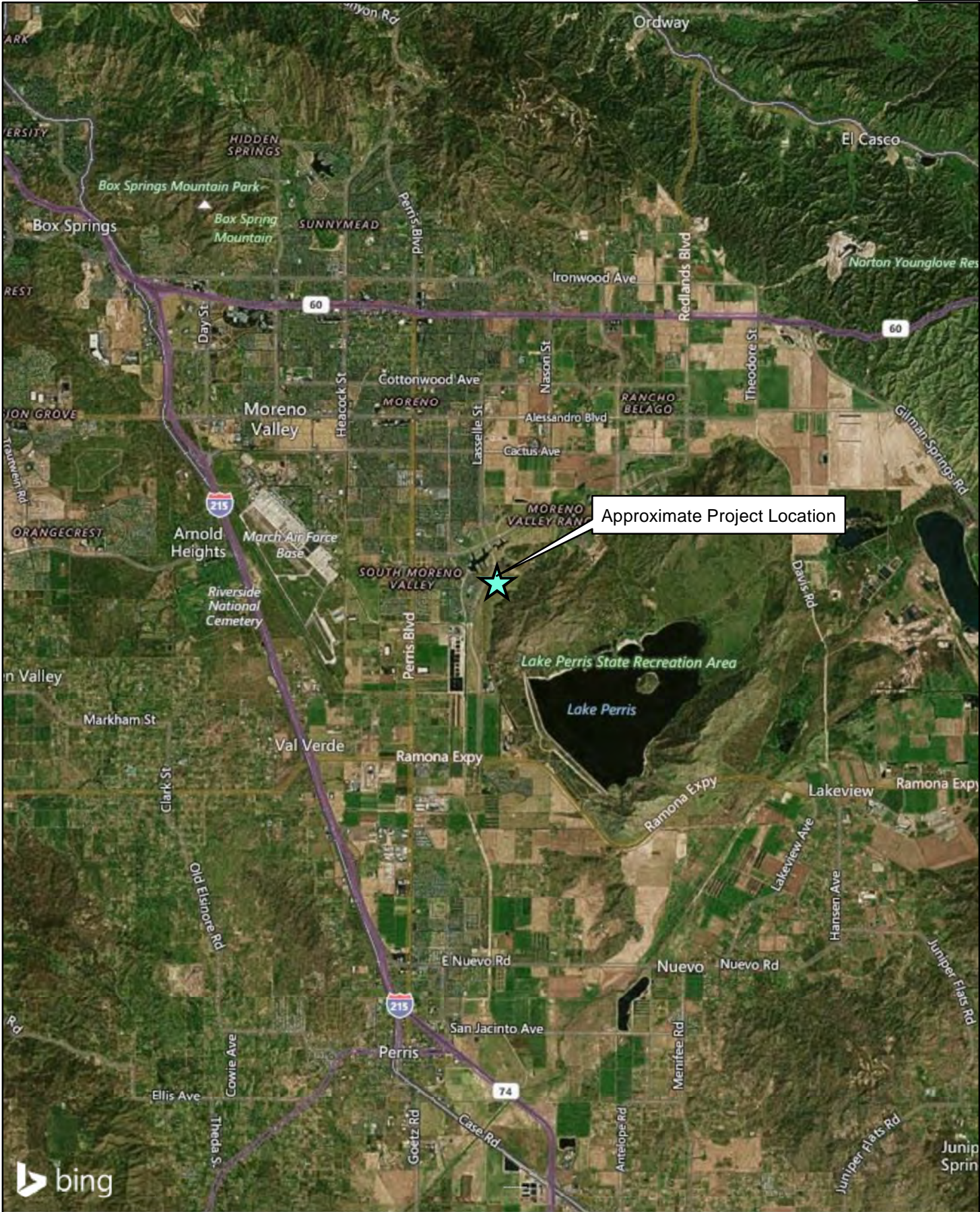
- Fahrig, L., and G. Merriam. 1985. Habitat patch connectivity and population survival. *Ecology* 66:1762-1768.
- Federal Interagency Committee for Wetland Delineation. 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands. U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and USDA Soil Conservation Service, Washington, DC Cooperative technical publication.
- Fish and Game Commission. 2018. California Law. California Fish and Game Code. Retrieved from: <http://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=FGC&tocTitle=+Fish+and+Game+Code+-+FGC>
- Google. 2018. GoogleEarth© website.
- Government Printing Office. 1991. Federal Register, 1989 "Federal Manual for Identifying Jurisdictional Wetlands; Proposed Revisions." August 14, 1991, Vol. 56, No. 157, pp 40446-40480.
- Harris, L.D. and Gallagher, P.B. 1989. New initiatives for wildlife conservation: The need for movement corridors. In *defense of wildlife: Preserving communities and corridors*. pp. 11-34. Edited by G. Mackintosh. Defenders of Wildlife, Washington, DC.
- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, Nongame Heritage Program, California Department of Fish & Game, Sacramento, Calif. 156 pp.
- Jennings, M.R. and M.P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Submitted to the California Department of Fish and Game Inland Fisheries Division. Rancho Cordova, CA.
- National Geographic Society. Edited by Jonathan Alderfer. 2006. Complete Birds of North America. National Geographic Society. Washington D.C.
- NatureServe. 2018. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>.
- NRCS (Natural Resource Conservation Service). 2018. Web Soil Survey. U.S. Department of Agriculture Natural Resources Conservation Service. Retrieved from: <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>
- Riverside, County of. June 2003. *Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)*. Prepared by Dudek.



- Sibley, David Allen. 2000. National Audubon Society, The Sibley Guide to Birds. Alfred A. Knopf, New York.
- Simberloff, D., and J. Cox. 1987. Consequences and costs of conservation corridors. *Conservation Biology*. 1:63-71.
- Soule, Michael E. 1987. Viable populations for conservation. Cambridge University Press. Cambridge Cambridgeshire and New York.
- SWRCB (State Water Resources Control Board). 2011. Porter-Cologne Water Quality Control Act with Additions and Amendments Effective April 2017. Compiled by the Office of Chief Counsel.  
Retrieved from: [http://www.swrcb.ca.gov/laws\\_regulations/docs/portercologne.pdf](http://www.swrcb.ca.gov/laws_regulations/docs/portercologne.pdf)
- USDA (United States Department of Agriculture) Natural Resources Conservation Service. 1995. Hydric Soils of California.
- USFWS (United States Fish and Wildlife Service). 2018a. FWS Critical Habitat for Threatened and Endangered Species. Retrieved from <https://www.fws.gov/endangered/>.
- USFWS (United States Fish and Wildlife Service). 2018b. Migratory Birds & Habitat Programs. Migratory Bird Treaty Act. Retrieved from: <https://www.fws.gov/birds/policies-and-regulations.php>.
- USFWS (United States Fish and Wildlife Service). 2018c. National Wetlands Inventory. Wetlands Mapper. Retrieved from: <http://www.fws.gov/wetlands/Data/mapper.html>.
- WTI (Wetland Training Institute, Inc.). 1999. Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual. Glenwood, NM WTI 99-1. 143 pp.
- WTI (Wetland Training Institute, Inc.). 2003. Wetland Delineation Lecture Notes and Field Guide for Wetland Delineation based on the Corps of Engineers 1987 Manual. WTI, New Mexico.

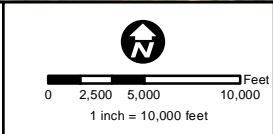
# Figures





GIS Prepared By:  
Carlson SLS

Created: March 12, 2018




Data Sources: Bing Maps

**Continental Villages**  
Regional Map

Attachment: Biological Technical Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment,



**Legend**

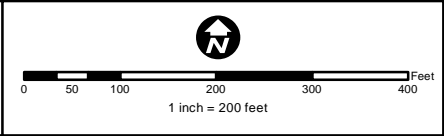
 Project Boundary



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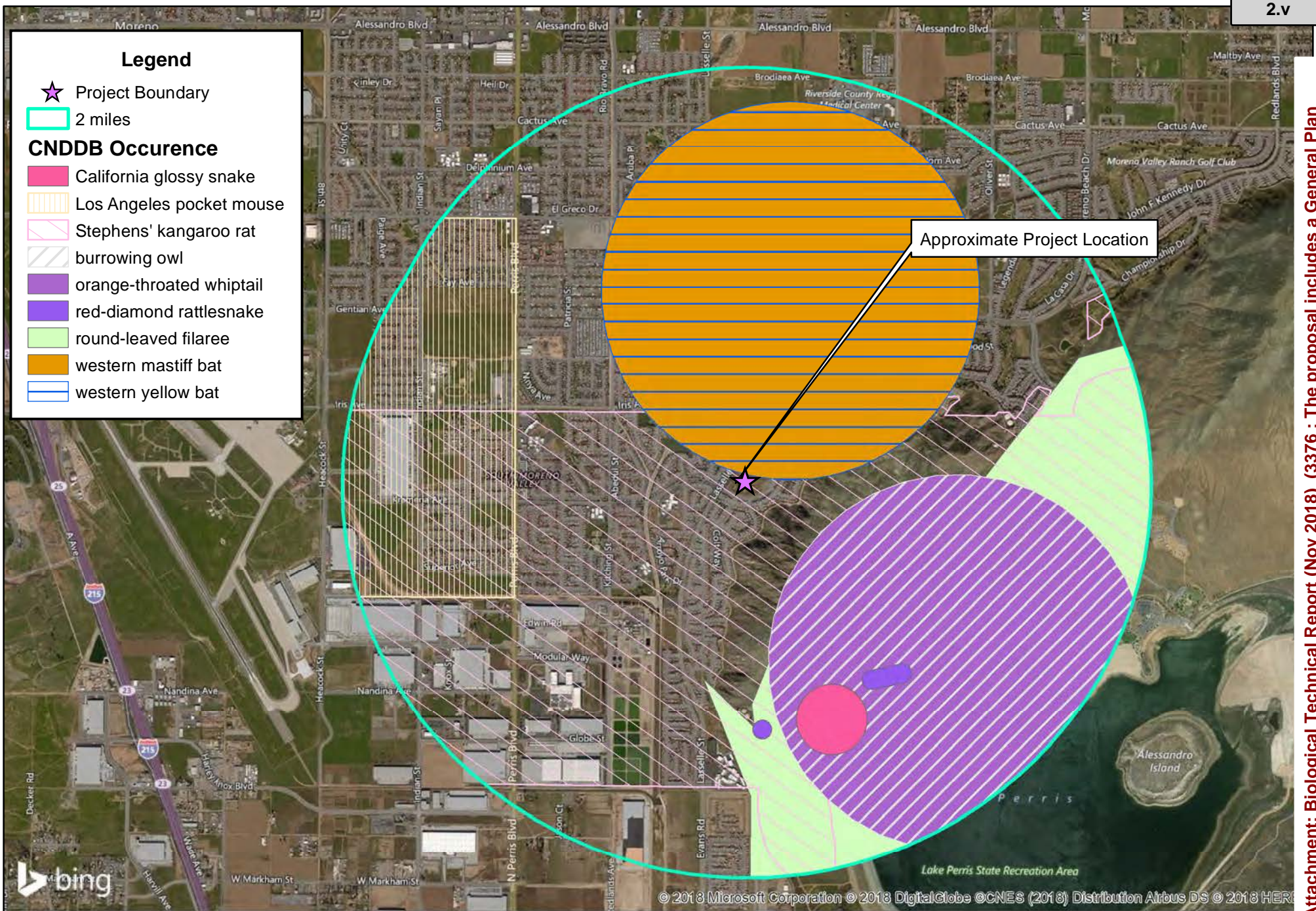
Data Source: Bing Map  
Anderson Consting Engineers, Inc (03/XX/2018)

**Continental Villages**  
Site Location

**Packet Pg. 469**

**FIGURE 2**

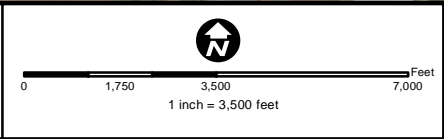




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Data Source: Bing Maps  
CNDDB (10/2017)

Continental Villages  
CNDDB Occurrences Results





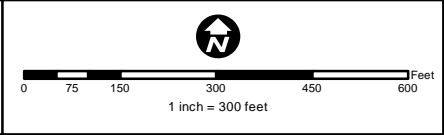
**Legend**

- Project Boundary
- MSHCP Overlays**
- Mammals
- Burrowing Owl

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


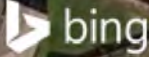
Data Source: Bing Maps  
CH (03/2015)

**Continental Villages**  
**MSHCP Overlay Results**



**Legend**

-  Project Boundary
- Vegetation Type**
-  Disturbed

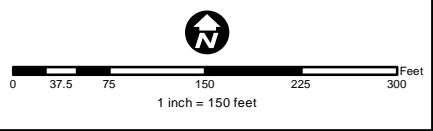


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




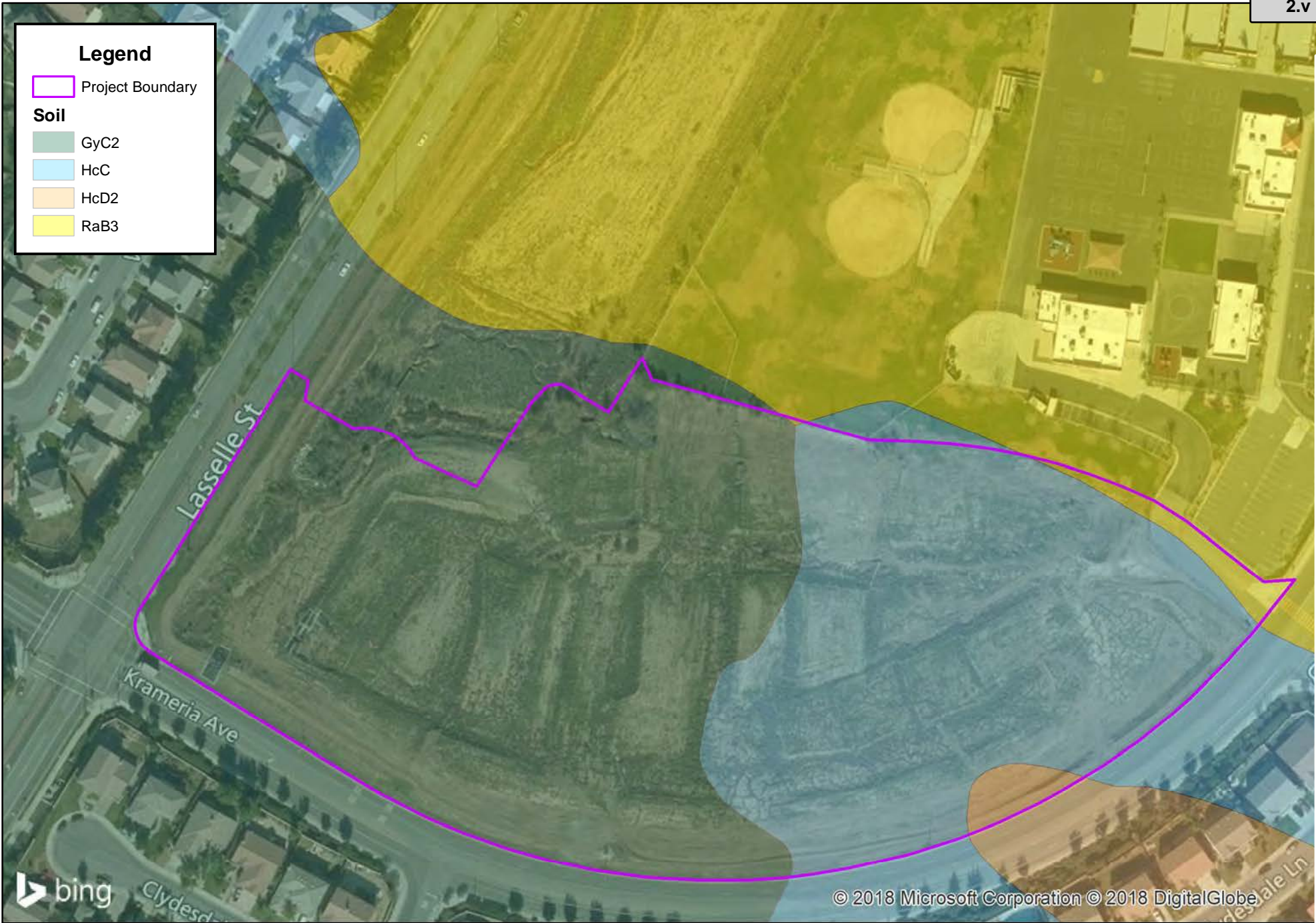
Data Source: Bing Map  
Anderson Consting Engineers, Inc (03/XX/2018)

*Continental Villages*  
Vegetation Map



**Legend**

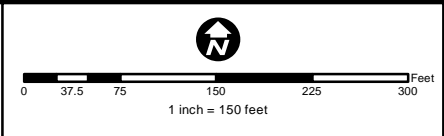
-  Project Boundary
- Soil**
-  GyC2
-  HcC
-  HcD2
-  RaB3



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



Data Source: Bing Map  
USDA Web Soil Survey Website (03/13/2018)


**Continental Villages**  
**Soil Map**  
Packet Pg. 473

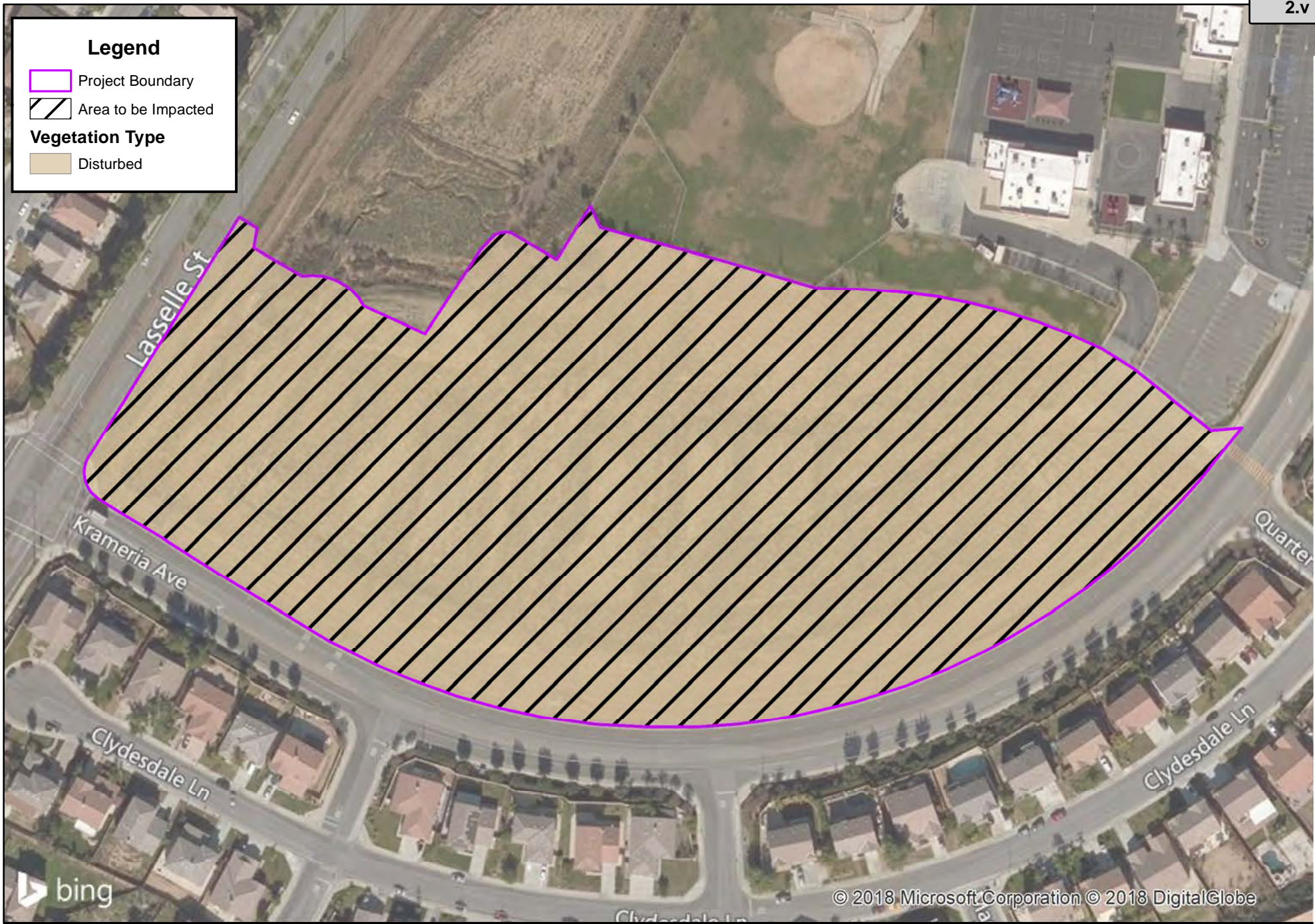


**Legend**

-  Project Boundary
-  Area to be Impacted

**Vegetation Type**

-  Disturbed

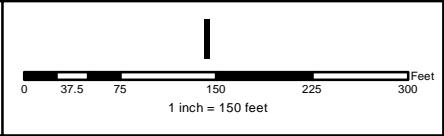


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Created: March 12, 2018



Data Source: Bing Map  
Anderson Consulting Engineers, Inc (03/XX/2018)

**Continental Villages**  
Vegetation Communities Impacts Map



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## **Appendix A: Representative Photographs of Community Classification**



Looking north-west across the Project site.



Looking north-east across the Project site.

Attachment: Biological Technical Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment,





Looking east across the Project site at the previously graded development pads.



Retention Basin located on the northwestern most portion of the site to capture and retain the nuisance water and runoff.

Attachment: Biological Technical Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment,





Looking south across the Project site.



Looking west at the Project Site.

Attachment: Biological Technical Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment,





Looking north-west across the Project Site.



The Project site is utilized as a stock pile location for the active construction located on the property directly north to the Project site.

Attachment: Biological Technical Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment,

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**Appendix B:**  
**Special Status Plant Species**  
**Potential Occurrence**  
**Determination**



## APPENDIX B

**Special Status Plant Species Potential Occurrence Determination**

This table summarizes conclusions from analysis and field surveys regarding the potential occurrence of special status plant species within the Study Area. During the field surveys, the potential for special status plant species to occur within the Study Area was assessed based on the following criteria:

- **Present**: observed on the site during the field surveys, or recorded on-site by other qualified biologists.
- **Known to Occur**: observed on site in the recent past, but not observed during the most recent biological survey.
- **High potential to occur**: observed in similar habitat in the region by a qualified biologist or habitat on the site is a type often utilized by the species, and the site is within the known distribution and elevation range of the species.
- **Moderate potential to occur**: reported sightings in surrounding region, or the site is within the known distribution and elevation range of the species, and habitat on the site is a type occasionally used by the species.
- **Low potential to occur**: the site is within the known distribution and elevation range of the species, but habitat on the site is rarely used by the species or for which there are no known recorded occurrences of the species within or adjacent to the site.
- **None**: a focused study failed to detect the species or no suitable habitat is present.
- **Unknown**: the species' distributional/elevation range and habitat are poorly known.

Even with field surveys, biologists assessed the probability of occurrence rather than make a definitive conclusion about species presence or absence. Failure to detect the presence of the species is not definitive, and may be due to variable effects associated with fire, rainfall patterns, and/or season.

## Appendix B – Special Status Plant Species Potential Occurrence Determination

## Special Status Plants: Potential to Occur within the Study Area

| Scientific Name                        | Common Name             | Status                                     | General Habitat Description  | Potential For Occurrence within the Study Area  |
|--|-------------------------|--|--|---|
| <i>Artemisia palmeri</i>               | San Diego sagewort      | CRPR: 4.2<br>MSHCP: Not covered            | Perennial deciduous shrub found in sandy or mesic areas. Habitat include chaparral, coastal sage scrub, riparian forest, riparian scrub, or riparian woodland. Known from 15 to 915 meters (49 to 3,000 feet) MSL.<br>Blooming period: May through September.                                      | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey.           |
| <i>Berberis nevini</i>                 | Nevin's barberry        | FE, SE<br>CRPR: 1B.1,<br>MSHCP:<br>Covered | A perennial evergreen shrub that occurs in sandy or gravelly areas. Habitat communities include chaparral, cismontane woodland, coastal scrub, and riparian scrub. Occurs at approximately 70 to 825 meters (230 to 2,700-foot) elevation range.<br>Blooming period: March to June                 | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Calochortus plummerae</i>           | Plummer's mariposa lily | CRPR:4.2<br>MSHCP:<br>Covered              | Perennial bulbiferous herb found in granitic or rocky areas. Habitat include chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, and valley and foothill grasslands. Known from 100 to 1,700 meters (330 to 5,500 feet) MSL.<br>Blooming period: May through July | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Caulanthus simulans</i>             | Payson's jewelflower    | CRPR:4.2<br>MSHCP:<br>Covered              | Annual herb found in sandy or granitic areas. Habitat include chaparral and coastal sage scrub. Known from 90 to 2,200 meters (295 to 7,200 feet) MSL.<br>Blooming period: March through May   | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Centromadia pungens ssp. laevis</i> | smooth tarplant         | CRPR:1B.2<br>MSHCP:<br>Covered             | Alkaline areas in chenopod scrub, meadows and seeps, ditches, playas, riparian woodland, and valley and foothill grassland. Known from below 480 meters (1,600 feet) MSL.<br>Blooming period: April through Sept   | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Chorizanthe leptotheca</i>          | Peninsular spineflower  | CRPR:4.2<br>MSHCP:<br>Covered              | Annual herb found in granitic or alluvial fan areas. Habitat include chaparral, coastal sage scrub, and lower montane coniferous forest. Known from 300 to 1,900 meters (980 to 6,200 feet) MSL.<br>Blooming period: May through August  | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Chorizanthe parryi</i>              | Parry's spineflower     | CRPR:1B.1<br>MSHCP:                        | Annual herb found in sandy, rocky, or open areas. Habitat include chaparral, cismontane woodland,  | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is  |

Appendix B – Special Status Plant Species Potential Occurrence Determination

| Scientific Name                         | Common Name          | Status                           | General Habitat Description   | Potential For Occurrence within the Study Area  |
|---|----------------------|----------------------------------|---|---|
|   |                      | Covered                          | coastal sage scrub, and valley and foothill grasslands. Known from 275 to 1,220 meters (900 to 4,000 feet) MSL.<br>Blooming period: April through June  | actively maintained and in a consistent non-vegetated state. Not observed during field survey.  |
| <i>Deinandra paniculata</i>             | paniculate tarplant  | CRPR: 4.2<br>MSHCP: Not covered  | Coastal scrub and valley and foothill grassland/usually vernal mesic. Known from 25 to 9540 meters (80 to 3,085 feet) MSL.<br>Blooming period: April through November.  | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Lasthenia glabrate ssp. coulteri</i> | Coulter's goldfields | CRPR:1B.1<br>MSHCP: Covered      | Annual herb found in marshes and swamps, playas, and vernal pool habitats. Known from 1 to 1,220 meters (3 to 4,000 feet) MSL.<br>Blooming period: February through June  | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Symphotrichum defoliatum</i>         | San Diego aster      | CRPR: 1B.2<br>MSHCP: Not covered | Perennial herb found near streams, ditches or springs. Habitat include cismontane woodland, coastal sage scrub, lower montane coniferous forest, meadows and seeps, marches and swamps, and valley and foothill grasslands. Known from 2 to 2,040 meters (6 to 6,600 feet) MSL.<br>Blooming period: July through November | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |

**Legend**

Federal Endangered Species Act (ESA) Listing Codes: federal listing is pursuant to the Federal Endangered Species Act of 1973, as amended (ESA).  
 FE = federally listed as endangered: any species, subspecies, or variety of plant or animal that is in danger of extinction throughout all or a significant portion of their range.  
 FT = federally listed as threatened: any species, subspecies, or variety of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.

California Endangered Species Act (CESA) Listing Codes: state listing is pursuant to § 1904 (Native Plant Protection Act of 1977) and §2074.2 and §2075.5 (California Endangered Species Act of 1984) of the Fish and Game Code, relating to listing of Endangered, Threatened and Rare species of plants and animals.  
 SE = state listed as endangered: any species, subspecies, or variety of plant or animal that are in serious danger of becoming extinct throughout all, or a significant portion, of their range.  
 ST = state listed as threatened: any species, subspecies, or variety of plant or animal that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future.

California Rare Plant Ranks (Formerly known as CRPR Lists): the CRPR is a statewide, non-profit organization that maintains, with CDFG, an Inventory of Rare and Endangered Plants of California. In the spring of 2011, CRPR and CDFG officially changed the name “CRPR List” or “CRPR Ranks” to “California Rare Plant Rank” (or CPRP). This was done to reduce confusion over the fact that CRPR and CDFG jointly manage the Rare Plant Status Review Groups and the rank assignments are the product of a collaborative effort and not solely a CRPR assignment.

Attachment: Biological Technical Report (Nov 2018) (3376 : The proposal includes a General Plan



*Appendix B – Special Status Plant Species Potential Occurrence Determination*

CRPR: 1B - California Rare Plant Rank 1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere. All of the plants constituting California Rare Plant Rank 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

CRPR: 2 - California Rare Plant Rank 2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere. All of the plants constituting California Rare Plant Rank 2 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

CRPR: 4 - California Rare Plant Rank 4 (formerly List 4): Plants of Limited Distribution - A Watch List. Very few of the plants constituting California Rare Plant Rank 4 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and few, if any, are eligible for state listing. Nevertheless, many of them are significant locally, and CRPR and CDFG strongly recommend that California Rare Plant Rank 4 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.

California Native Plant Society (CRPR) Threat Ranks: The CRPR Threat Rank is an extension added onto the California Rare Plant Rank (CRPR) and designates the level of endangerment by a 1 to 3 ranking with 1 being the most endangered and 3 being the least endangered. A Threat Rank is present for all California Rare Plant Rank 1B's, 2's, 4's, and the majority of California Rare Plant Rank 3's. California Rare Plant Rank 4 plants are seldom assigned a Threat Rank of 0.1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a California Rare Plant Rank. In addition, all California Rare Plant Rank 1A (presumed extinct in California), and some California Rare Plant Rank 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension.

0.1 = seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

0.2 = fairly endangered in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

Sources:

- Calflora website - search for plants (Calflora 2016).
- CRPR Inventory of Rare and Endangered Plants (CRPR 2016).
- The Status of Rare, Threatened, and Endangered Plants and Animals of California, 2000–2004 (CDFG 2005).
- The Jepson Manual: *Vascular Plants of California*, second edition (Baldwin *et al.* 2012).
- RareFind, CDFW, California Natural Diversity Database (CNDDDB) (CDFW 2016f).
- State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2016i).
- Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP, 2016)

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## **Appendix C:**

# **Plant Species Recorded During the Field Surveys**

Appendix C contains the list of vascular plant taxa recorded during the biological survey conducted within the Study Area. Plant nomenclature and taxonomic order is based on *The Jepson Manual: Vascular Plants of California*, second Edition (Baldwin *et al.* 2012).

## Appendix C Plant Species Observed during the Field Survey

| Scientific Name                         | Common Name                   |
|---|-------------------------------|
| <b><i>Asteraceae (Compositae)</i></b>   | <b>Sunflower Family</b>       |
| <i>Centaurea melitensis</i> *           | totalote (Malta star thistle) |
|   |                               |
| <b><i>Brassicaceae (Cruciferae)</i></b> | <b>Mustard Family</b>         |
| <i>Brassica nigra</i> *                 | black mustard                 |
|   |                               |
| <b><i>Boraginacea</i></b>               | <b>Borage Family</b>          |
| <i>Amsinckia intermedia</i>             | Common fiddleneck             |
|   |                               |
| <b><i>Chenopodiaceae</i></b>            | <b>Goosefoot Family</b>       |
| <i>Salsola tragus</i> *                 | Russian thistle (tumbleweed)  |
|   |                               |
| <b>Monocots</b>                         |                               |
| <b><i>Poaceae</i></b>                   | <b>Grass Family</b>           |
| <i>Avena barbata</i> *                  | slender oat                   |
| <i>Bromus diandrus</i> *                | ripgut grass                  |
| <i>Bromus madritensis ssp. Rubens</i> * | red brome                     |
|   |                               |
| <b>Legend</b>                           |                               |
| * exotic plant species                  |                               |



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**Appendix D:**  
**Special Status Wildlife Species**  
**Potential Occurrence**  
**Determination**

## APPENDIX D

### Special Status Wildlife Potential Occurrence Determination

This table summarizes conclusions from analysis and field surveys regarding the potential occurrence of special status wildlife species within the Study Area. During the field surveys, the potential for special status wildlife species to occur within the Study Area was assessed based on the following criteria:

- Present: observed on the site during the field surveys, or previously recorded on-site by other qualified biologists.
- Known to Occur: observed on site in the recent past, but not observed during the most recent biological survey.
- High potential to occur: observed in similar habitat in the region by a qualified biologist or habitat on the site is a type often utilized by the species, and the site is within the known distribution and elevation range of the species.
- Moderate potential to occur: reported sightings in surrounding region, or the site is within the known distribution and elevation range of the species, and habitat on the site is a type occasionally used by the species.
- Low potential to occur: the site is within the known distribution and elevation range of the species, but habitat on the site is rarely used by the species or for which there are no known recorded occurrences of the species within or adjacent to the site.
- None: a focused study failed to detect the species or no suitable habitat is present.
- Unknown: the species' distributional/elevation range and habitat are poorly known.

Even with field surveys, biologists assessed probability of occurrence rather than make definitive conclusions about species presence or absence. Failure to detect the species is not definitive, and may be due to variable effects associated with migration, weather, fire, and/or time of day and year.

**Special Status Wildlife: Potential to Occur within the Study Area**

| Scientific Name                     | Common Name                                | Status                                       | General Habitat Description   | Potential For Occurrence within the Study Area  |
|-------------------------------------|--|--|---|---|
| <i>Accipiter cooperii</i>           | Cooper’s hawk                              | WL<br><br>MSHCP:<br>Covered                  | The Cooper’s hawk breeds primarily in riparian areas and oak woodlands and is most common in montane canyons. It frequents landscapes where wooded areas occur in patches and groves and often uses patchy woodlands and edges with snags for perching. Dense stands with moderate crown-depths are usually used for nesting. They hunt in broken woodland and habitat edges. Within the range in California, it most frequently uses dense stands of live oak, riparian deciduous or other forest habitats near water. They are also found and can breed in suburban and urban settings. | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Agelaius tricolor</i>            | tricolored blackbird                       | BLMS, SSC, BCC<br><br>MSHCP:<br>Covered      | Colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat composed of grassland, woodland, or agricultural cropland.   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Aimophila ruficeps canescens</i> | southern California rufous-crowned sparrow | WL<br><br>MSHCP:<br>Covered                  | They are found on grass-covered hillsides, coastal sage scrub, and chaparral and often occur near the edges of the denser scrub and chaparral associations. Preference is shown for tracts of California sagebrush. Optimal habitat consists of sparse, low brush or grass, hilly slopes preferably interspersed with boulders and outcrops. The species may occur on steep grassy slopes without shrubs if rock outcrops are present. It is a very secretive species.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Ammodramus savannarum</i>        | grasshopper sparrow                        | SSC<br>MSHCP:<br>Species-Specific Objectives | Grasshopper sparrows in California breed (and primarily apparently winter) on slopes and mesas containing grasslands of varying compositions. The grasshopper sparrow generally prefers moderately open grasslands and prairies with patchy bare ground. They also appear to use abandoned croplands that are dominated by grassy species. The species frequents dense, dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting and   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |

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## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                         | Common Name           | Status                                     | General Habitat Description  | Potential For Occurrence within the Study Area  |
|---|-----------------------|--|--|---|
|   |                       |  | concealment. They require fairly continuous native grassland areas with occasional taller stems for breeding areas. They especially occur in grasslands composed of a variety of grasses and tall forbs with scattered shrubs for singing perches. They tend to avoid grassland areas with extensive shrub cover and the presence of native grasses is less important than the absence of trees. Species is found from southern Canada to the southern U.S., West Indies, Mexico, and Ecuador. |   |
| <i>Aquila chrysaetos</i>                | Golden Eagle          | BLMS, FP, WL, BBC<br><br>MSHCP:<br>Covered | Rolling foothills, mountain areas, sage-juniper flats, & desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.   | None. Suitable habitat does not exist within the Project site. Not observed during field survey.  |
| <i>Artemisiospiza belli</i>             | Bell's sage sparrow   | WL, BBC<br><br>MSHCP:<br>Covered           | Chaparral and coastal sage scrub along the coastal lowlands, inland valleys and in the lower foothills of local mountains.   | None. Suitable habitat does not exist within Study Area. Not observed during field survey.  |
| <i>Asio otus</i>                        | long-eared owl        | SSC<br><br>MSHCP: Not<br>Covered           | Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Aspidoscelis hyperythra beldingi</i> | orangethroat whiptail | SSC, FSS<br><br>MSHCP:<br>Covered          | The species is generally found in semi-arid brushy areas typically with loose soil and rocks, including washes, stream sides, rocky hillsides, and coastal chaparral. Habitat types include low elevation chaparral, non-native grassland, (Riversidian) coastal sage scrub, juniper woodland and oak woodland. Associations include alluvial fan scrub and riparian areas. Friable soil appears to be a necessary requirement for excavating burrows and hiding eggs.                         | None. Suitable habitat does not exist within Study Area. Not observed during field survey.  |
| <i>Aspidoscelis tigrus stejnegeri</i>   | coastal whiptail      | SSC  | This species is found in a variety of habitats, primarily hot and dry open areas with sparse vegetation including  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated  |

## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                    | Common Name                         | Status                                  | General Habitat Description   | Potential For Occurrence within the Study Area  |
|------------------------------------|-------------------------------------|---|---|---|
|                                    |                                     | MSHCP:<br>Covered                       | chaparral, woodland, and riparian areas. This subspecies is found in coastal southern California, north into Ventura County, and south into Baja California. Additional important habitat characteristics include Important habitat components include shrub cover with accumulated leaf litter, and an abundance of invertebrate prey, particularly termites.  | state. Not observed during field survey.  |
| <i>Athene cunicularia hypugaea</i> | burrowing owl                       | SSC, BLMS, BCC<br><br>MSHCP:<br>Covered | Burrowing owls are a year-round resident of California including habitats of open, dry grassland, and desert. They are generally restricted to mostly flat, open country with suitable nest sites. They use rodent or other burrows for roosting and nesting cover and acquire their burrows from either abandonment or eviction. Burrowing owls typically hunt from a perch.   | Low potential to occur onsite due to ongoing maintenance of habitat on site and lack of burrows observed onsite. Not observed during field survey.  |
| <i>Buteo swainsoni</i>             | Swainson's hawk                     | ST, BLMS, BCC<br>MSHCP:<br>Covered      | Swainson's hawks require large, open areas with abundant prey in association with suitable nest trees. Suitable foraging areas include native grasslands or lightly grazed pastures and croplands, open deserts, sparse shrub lands. Swainson's hawks often nest peripherally to riparian systems of the valley, as well as utilizing lone trees or groves of trees, such as oaks, cottonwoods, walnuts and willows, adjacent to their hunting areas. In the Great Basin, they typically nest in juniper trees of juniper-sage flats not near riparian zones. | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Chaetodipus fallax</i>          | northwestern San Diego pocket mouse | SSC<br><br>MSHCP: Not Covered           | This species is a common resident of sandy herbaceous areas, often on sandy substrates (rocks or coarse gravel) in southwestern California. In San Diego County the species occurs mainly in arid coastal and desert border areas. Habitats include coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland.   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Circus cyaneus</i>              | northern harrier                    | SSC<br>MSHCP:                           | Occurs from annual grassland up to lodge pole pine and alpine meadow habitats. Frequents open fresh and   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively   |

## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                         | Common Name                  | Status                                    | General Habitat Description   | Potential For Occurrence within the Study Area  |
|---|------------------------------|---|---|---|
|   |                              | Covered                                   | saltwater wetlands, grasslands, pastures, upland prairies, dry uplands, croplands, shrub-steppe, meadows, desert sinks. It is seldom found in wooded areas. It uses tall grasses and forbs in wetlands for cover and it roosts on ground. It is mostly found in flat, open areas of tall, dense grasses, moist or dry shrubs, in the vicinity of marshes, rivers, ponds, or grassy valleys for nesting, cover, and feeding.   | maintained and in a consistent non-vegetated state. Not observed during field survey.   |
| <i>Coccyzus americanus occidentalis</i> | western yellow-billed cuckoo | FT, SE, FSS, BCC<br><br>MSHCP:<br>Covered | This species is an uncommon to rare summer resident of valley foothill and desert riparian habitats in scattered locations in California. Formerly much more common and widespread throughout lowland California. Roosts and nests in densely foliated, deciduous trees and shrubs in extensive thickets, particularly willows.   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Coleonyx variegatus abbotti</i>      | San Diego banded gecko       | MSHCP:<br>Covered                         | Prefers rocky areas in coastal sage and chaparral.  | None. Suitable habitat does not exist within Study Area. Not observed during field survey.  |
| <i>Crotalus ruber</i>                   | red-diamond rattlesnake      | SSC, FSS<br><br>MSHCP:<br>Covered         | It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake, however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats. They need rodent burrows, cracks in rocks or surface cover objects. | None. Suitable habitat does not exist within Study Area. Not observed during field survey.  |
| <i>Dipodomys merriami parvus</i>        | San Bernardino kangaroo rat  | FE, SSC<br><br>MSHCP:<br>Covered          | Typically found in Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans and floodplains, and along washes with nearby sage scrub.  | None. No suitable habitat on site. Not observed during field survey.  |



## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                    | Common Name                    | Status                          | General Habitat Description   | Potential For Occurrence within the Study Area  |
|------------------------------------|--------------------------------|---------------------------------|---|---|
| <i>Dipodomys stephensi</i>         | Stephen's kangaroo rat         | FE, ST<br>MSHCP:<br>Covered     | This species prefers large areas of disturbed or patchy annual and perennial grasslands and open coastal sage scrub. Preferred perennials plant species include buckwheat and chamise and preferred annual plant species include brome grass. The nearest known populations are in Rancho Guejito and at the Naval Weapons Station in Fallbrook.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Elanus leucurus</i>             | White-tailed kite              | FP<br>MSHCP:<br>Covered         | Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands and oak woodlands. Dense canopies used for nesting and cover.   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Empidonax traillii extimus</i>  | Southwestern willow flycatcher | FE, SE<br>MSHCP:<br>Covered     | Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Emys marmorata</i>              | southwestern pond turtle       | SCC<br>MSHCP:<br>Covered        | Inhabits permanent or nearly permanent water below 1,830 meters (6000 feet) throughout California, west of the Sierra Cascade.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Eremophila alpestris actia</i>  | California horned lark         | WL<br>MSHCP:<br>Covered         | A year-long resident within the state and within a variety of open habitats, usually where trees and large shrubs are absent. They are not particular about the nature of the field, so long as it has very little vegetation. Range-wide, they breed in level or gently sloping short grass prairies, montane meadows, "bald" hills, open coastal plains, fallow grain fields, alkali flats, and rangelands. Within southern California, California horned larks breed primarily in open fields, (short) grasslands, and rangelands. Grasses, shrubs, forbs, rocks, litter, clods of soil, and other surface irregularities provide cover. | Moderate potential to occur on site due to the bare nature of the site. Not observed during field survey.   |
| <i>Eumops perotis californicus</i> | western mastiff bat            | SSC, BLMS<br>MSHCP: Not covered | Western mastiff bats are found in a variety of habitats, such as semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban, but the species' distribution may be  | None. No suitable habitat on site. Not observed during field survey.  |

## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                 | Common Name              | Status                        | General Habitat Description  | Potential For Occurrence within the Study Area  |
|---------------------------------|--------------------------|-------------------------------|--|---|
|                                 |                          |                               | geomorphically determined, occurring primarily where there are significant rock features offering suitable roosting habitat. A cliff dwelling species, where maternity colonies of 30 to several hundred roost generally under exfoliating rock slabs and rock crevices along cliffs. Western mastiff bats can also be found in similar crevices in large boulders and buildings. When roosting in rock crevices they require a sizable drop from their roost in order to achieve flight. Western mastiff bats prefer deep crevices that are at least 15 or 20 feet above the ground. Foraging is concentrated around bodies of water but also includes coastal sage scrub, chaparral, and grassland habitats. |   |
| <i>Icteria virens</i>           | yellow-breasted chat     | SSC<br><br>MSHCP:<br>Covered  | In southern California they are primarily found in tall, dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Breeding habitat must be dense to provide shade and concealment. It winters south to Central America.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Lasiurus xanthinus</i>       | Western yellow bat       | SSC<br><br>MSHCP: Not covered | Roost in trees, hanging from the underside of a leaf. Commonly found in the southwestern U.S. roosting in the skirt of dead fronds in both native and non-native palm trees and have also been documented roosting in cottonwood trees.  | None. No suitable habitat on site. Not observed during field survey.  |
| <i>Nyctinomops femorosaccus</i> | pocketed free-tailed bat | SSC<br><br>MSHCP: Not covered | This bat species prefers rocky desert areas with high cliffs or rock outcrops. Rock crevices in cliffs are preferred as roosting sites, since the bat must drop from the roost to gain flight speed. Typically reproduces in rock crevices, caverns, or buildings. Ranges from southern California to New Mexico.  | None. No suitable habitat on site. Not observed during field survey.  |
| <i>Perognathus blainvili</i>    | Los Angeles Pocket Mouse | SSC<br>MSHCP:<br>Covered      | Prefers sandy soil for burrowing. Also known to occur on gravel washes and in rocky soils. Associated with coastal scrub.  | Low. No suitable habitat on site. Not observed during field survey.   |

## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                           | Common Name                    | Status                             | General Habitat Description  | Potential For Occurrence within the Study Area  |
|---|--------------------------------|------------------------------------|--|---|
| <i>Phrynosoma blainvillii</i>             | coast horned lizard            | SSC, BLMS<br><br>MSHCP:<br>Covered | Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland and riparian woodlands.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Polioptila californica californica</i> | coastal California gnatcatcher | FT, SSC<br><br>MSHCP:<br>Covered   | A non-migratory, permanent resident of coastal sage scrub habitat, which is a broad category of vegetation that includes the following plant communities: Ventura coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. They also use chaparral, grassland and riparian habitats next to coastal sage scrub, but these habitats are used dispersal and foraging. They avoid nesting on steep slopes.   | None. No suitable habitat on site. Not observed during field survey.  |
| <i>Setophaga petechial</i>                | Yellow warbler                 | SSC, BBC<br><br>MSHCP:<br>Covered  | Riparian plant associations in close proximity to water. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Spea hammondi</i>                      | western spadefoot toad         | SSC, BLMS<br><br>MSHCP:<br>Covered | May be found in coastal sage scrub, open chaparral, pine-oak woodlands and grassland habitats, but is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas. Within these habitats, they require rain pools/vernal pools in which to reproduce and that persist with more than three weeks of standing water in which to metamorphose successfully. They can also breed in slow-moving streams (e.g., areas flooded by intermittent streams). Water breeding sites must lack fish, bullfrogs, and crayfish in order for to successfully reproduce and metamorphose. They estivate in sandy, gravelly soil in upland habitats adjacent to potential breeding sites in burrows approximating 1 meter in depth. | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Vireo bellii pusillus</i>              | least Bell's vireo             | FE, SE                             | Least Bell's vireos primarily occupy riverine riparian habitats that typically feature dense cover within 1-2 m  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively   |



Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name | Common Name | Status            | General Habitat Description  | Potential For Occurrence within the Study Area  |
|-----------------|-------------|-------------------|--|---|
|                 |             | MSHCP:<br>Covered | of the ground and a dense, stratified canopy. Typically, it is associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses. 2,000 feet elevation in the interior. This species is generally restricted to major river systems in San Diego County. | maintained and in a consistent non-vegetated state. Not observed during field survey. |

| Legend   |
|--|
| <p><u>Federal Endangered Species Act (ESA) Listing Codes:</u> federal listing is pursuant to the Federal Endangered Species Act (ESA) of 1973, as amended. The official federal listing of Endangered and Threatened Animals is published in the Federal Register, 50 CFR 17.11.</p> <p>FE = federally listed as endangered: any species, subspecies, or variety of plant or animal that is in danger of extinction throughout all or a significant portion of their range.</p> <p>FT = federally listed as threatened: any species, subspecies, or variety of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.</p> <p>FC = federal candidate for listing.</p> <p>FPT = federally proposed threatened.</p> <p><u>California Endangered Species Act (CESA) Listing Codes:</u> state listing is pursuant to §2074.2 and §2075.5 (California Endangered Species Act of 1984) of the Fish and Game Code, relating to listing of Endangered, Threatened and Rare species of plants and animals. The official California listing of Endangered and Threatened animals is contained in the California Code of Regulations, Title 14, and Section 670.5.</p> <p>SE = state listed as endangered: any species, subspecies, or variety of plant or animal that are in serious danger of becoming extinct throughout all, or a significant portion, of their range.</p> <p>ST = state listed as threatened: any species, subspecies, or variety of plant or animal that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future.</p> <p>SCT = state candidate for listing as threatened.</p> <p><u>California Department of Fish and Wildlife (CDFW):</u></p> <p>SSC = species of special concern: status applies to animals which 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist. The CDFW has designated certain vertebrate species as “species of special concern” because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.</p> <p>Fully protected: animal species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.</p> <p>WL = watch list: these birds have been designated as “Taxa to Watch” in the <i>California Bird Species of Special Concern report</i> (Shuford and Gardali 2008). The report defines</p> |

Attachment: Biological Technical Report (Nov 2018) (3376 : The proposal includes a General Plan

“Taxa to Watch” as those that are not on the current special concern list that (1) formerly were on the 1978 (Remsen 1978) or 1992 (CDFG 1992) special concern lists and are not currently listed as state threatened and endangered; (2) have been removed (delisted) from either the state or federal threatened and endangered lists (and remain on neither), or (3) are currently designated as “fully protected” in California.

United States Fish and Wildlife Service (USFWS):

BCC = USFWS bird of conservation concern: listed in the USFWS'S 2008 *Birds of Conservation Concern* report. The report identifies species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the ESA. While all of the bird species included in the report are priorities for conservation action, the list makes no finding with regard to whether they warrant consideration for ESA listing.

United States Forest Service (USFS):

FSS = Forest Service sensitive: those plant and animal species identified by a Regional Forester that are not listed or proposed for listing under the ESA and for which population viability is a concern, as evidenced by: (a) significant current or predicted downward trends in population numbers or density or (b) significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.”

United States Bureau of Land Management (BLM):

BLMS = BLM sensitive: those plant and animal species on BLM administered lands and that are (1) under status review by the USFWS/NMFS; or (2) whose numbers are declining so rapidly that federal listing may become necessary, or (3) with typically small and widely dispersed populations; or (4) those inhabiting ecological refugia or other specialized or unique habitats. BLM policy is to provide the same level of protection as USFWS candidate species.

California Department of Forestry and Fire Protection (CDF):

CDF: S = CDF sensitive: species is a California Department of Forestry and Fire Protection sensitive species. The Board of Forestry classifies as sensitive species those species that warrant special protection during timber operations.

Sources:

- A Guide to the Reptiles and Amphibians of California (CaliforniaHerps.com 2018).
- *A Field Guide to Hawks of North America, Second Edition* (Clark and Wheeler 2001).
- *Atlas of Breeding Birds, Orange County, California* (Gallagher 1997).
- Amphibian and Reptile Species of Special Concern in California (Jennings and Hayes 1994).
- *A Field Guide to Mammals of North America North of Mexico. Fourth Edition* (Reid 2006).
- *A Natural History of California* (Schoenherr 1992).
- *A Field Guide to Western Reptiles and Amphibians, Third Edition* (Stebbins 2003).
- Amphibian species accounts (Amphibiaweb 2018).
- AOU website (AOU 2018).
- *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California* (Shuford and Gardali 2008).
- Check-List of North American Birds, 7th edition (American Ornithologists' Union [AOU] 1998).
- *Complete Birds of North America* (National Geographic Society 2006).

- *Field Guide to the Birds of North America*, 4<sup>th</sup> Ed (National Geographic Society 2002).
- Fifty-first supplement to the AOU Check-List of North American Birds (Chesser et. al. 2010).
- Life History Accounts and Range Maps (CDFW 2018e).
- *Life on the Edge: A Guide to California's Endangered Natural Resources. Wildlife* (Thelander et al. 1994).
- *Mammals of North America* (Bowers et al. 2004).
- *Mammals of California* (Eder 2005).
- *Mammals of North America* (Kays and Wilson 2002).
- Mammalian Species of Special Concern in California (Williams 1986).
- *Mammal Species of the World* (Wilson and Reeder 2005).
- NatureServe Explorer (NatureServe 2018).
- *National Audubon Society, the Sibley Guide to Birds* (Sibley 2000).
- RareFind, CDFW, California Natural Diversity Database (CNDDB) (CDFW 2018).
- *Reference Atlas to the Birds of North America* (National Geographic Society 2003).
- *Shorebirds of North America. The Photographic Guide* (Paulson 2005).
- Special Animals List (CDFW 2018h).
- Standard Common and Current Scientific Names (Center for North American Herpetology website [CNAH] website 2018).
- *The Smithsonian Book of North American Mammals* (Wilson and Ruff 1999).
- Terrestrial Mammal Species of Special Concern in California (Bolster 1998).



# CONSISTENCY DETERMINATION

## CONTINENTAL VILLAGES PROJECT



**Submitted Pursuant to MSHCP**  
**Section 6.1.2 *Protection of Species Associated with***  
***Riparian/Riverine Areas and Vernal Pools***

**Submitted to:**

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**Prepared for:**

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**November 2018**

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Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

### Executive Summary

Continental East Development proposes to Neighborhood Commercial and Multi-family housing on the approximately 12 acres Project site. The Neighborhood Commercial is proposed on 2.8 acres at the corner of Lasselle Street and Krameria Avenue. Multi-family housing is proposed on the remaining 8.80 acres. As a result of Project Implementation, the entire site would be graded and is expected to be balanced onsite. The Project site is located northeast corner of Lasselle Street and Krameria Avenue in the City of Moreno Valley, Riverside County, California. The Project site assessor parcel number's (APN) are 308-040-053 and 308-040-054 (Figures 1 and 2). The Project is located within the Reche Canyon/Badlands Area Plan of the Riverside County Multiple Species Habitat Conservation Plan (MSHCP); however, the Project site is not located within any MSHCP Criteria Areas, Cell Groups, or Subunits. Portions of the Project site are located within overlay areas, as follows:

- Riparian and Riverine Areas (Section 6.1.2)

Thus, this consistency determination has been prepared pursuant to that section.

The Study Area is not located within or adjacent to any MSHCP Conservation Area. The area does not contain any riparian/riverine area that support Section 6.1.2 species. Thus, no mitigation is proposed. The proposed Project is consistent with Section 6.1.2 of the MSHCP.



## I. INTRODUCTION

The following Consistency Determination has been prepared by Carlson Strategic Land Solutions (SLS), on behalf of Continental East Development team pursuant to Section 6.1.2 *Protection of Species Associated with Riparian/Riverine areas and Vernal Pools* of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The purpose of the Consistency Determination is to determine if implementation of the Project is consistent with the requirements of the MSHCP.

The Applicant proposes to construct Neighborhood Commercial and Multi-family housing on the approximately 12 acres Project site. The Project site assessor parcel number's (APN) are 308-040-053 and 308-040-054 (Figures 1 and 2).

## II. DEFINITION OF PROJECT AREA

The proposed Project site encompasses approximately 12 acres and is located in the located northeast corner of Lasselle Street and Krameria Avenue in the City of Moreno Valley, Riverside County, California. The Project site assessor parcel number's (APN) are 308-040-053 and 308-040-054 (Figures 1 and 2). The Project site is found within Riverside County, specifically within the Sunnymead USGS 7.5" Quadrangle Map. Areas surrounding the Project Site include Lasalle Elementary School and a property under construction located to the north; and single-family residential subdivisions located to the east, west, and south. The Project site is approximately 1500 feet above mean sea level. (MSL) (Figure 2). The Project site and surrounding 300-foot buffer area was evaluated as a precautionary measure for potential off-site impacts.

The Project is located within the Reche Canyon/Badlands Area Plan of the MSHCP. The Project is not located within any MSHCP Criteria Areas, Cell Groups, or Subunits. The Project is not located within MSHCP survey areas for Narrow Endemic Plants, Criteria Area Plant Species, Species Survey Requirements for the western burrowing owl, Amphibians, Mammals, or Special Linkage Areas (Figure 3).

The Project site has been previously rough graded with residential pads and appears actively maintained, therefore the Project site is disturbed and in a non-vegetated state. The Project site is devoid of native vegetation.

## III. PROJECT DESCRIPTION

The Applicant proposes to construct Neighborhood Commercial and Multi-family housing on the approximately 12 acres Project site. The Neighborhood Commercial is proposed on 2.8 acres at the corner of Lasselle Street and Krameria Avenue. Multi-family housing is

proposed on the remaining 8.80 acres. As a result of Project Implementation, the entire site would be graded and is expected to be balanced onsite.

#### IV. METHODOLOGY

The Study Area is located within the planning area for the western Riverside County MSHCP (Reche Canyon/Badlands Area Plan), but is not located within any Criteria Cells, Cell Groups, or Subunits.

Biologist and Regulatory Specialist from SLS conducted a field survey at the Study Area on March 13, 2018. SLS conducted biological studies in three main components in order to identify and evaluate actual or potential impacts to biological resources associated with the proposed Project, including: (1) vegetation mapping; (2) site-specific biological surveys to evaluate the presence/absence of special-status species (or potentially suitable habitat) to the satisfaction of the MSHCP, CEQA, and Federal and State regulations; and (3) delineation of aquatic resources (including wetlands/riparian habitat) subject to the jurisdiction of the Corps, RWQCB, and CDFW. The jurisdictional delineation was conducted to determine the limits of Corps jurisdiction pursuant to Section 404 of the CWA, and CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the California Fish and Game Code.

The field studies focused on a number of primary objectives that would satisfy the special provisions of the MSHCP and also comply with CEQA requirements, including: (1) general reconnaissance surveys and vegetation mapping; (2) general wildlife surveys; (3) habitat assessments and surveys for special-status plants; (4) habitat assessments and focused biological surveys for special-status animals (including species designated by MSHCP survey areas); (5) wildlife movement analysis; (6) assessments of riparian/riverine areas and vernal pool habitats; and (7) delineation of areas subject to the jurisdiction of the Corps, RWQCB, and CDFW. Observations of plant and wildlife species were recorded during the survey efforts.

The consistency determination and prepared Biological Report (CarlsonSLS, November 2018, Appendix B) evaluates individual plants and animal species based on their special-status. For the purpose of the Biological Report, plants were considered special-status based on one or more of the following criteria:

- Listing through the Federal and/or State Endangered Species Act (ESA);
- Taxa designated a species of special concern by CDFW.
- Taxa designated a state fully protected species by CDFW.
- Taxa identified as sensitive, unique or rare, by the USFWS, CDFW, the United States Forest Service (USFS), the United States Bureau of Land Management (BLM), and/or the California Department of Forestry and Fire Protection (CDF).

- Plants that meet the definition of rare or endangered under CEQA §15380(b) and (d). Species that may meet the definition of rare or endangered include the following:
  - Species considered by CNPS and CDFW to be “rare, threatened or endangered in California” (California Rare Plant Rank [CRPR] 1A, 1B and 2) (CNPS 2018). A majority of the CRPR 3 and CRPR 4 plant species generally do not qualify for protection under CESA and NPPA.
  - Species that may warrant consideration on the basis of local significance or recent biological information.
  - Some species included on the CNDDDB Special Plants, Bryophytes, and Lichens List (CDFW 2018g).
- Considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.
- Evaluation and coverage under the MSHCP.

Prior to conducting fieldwork, pertinent literature on the flora of the region was examined. A thorough archival review was conducted using available literature and other historical records. These resources included, but were not limited to, the following: CNPS Inventory of Rare and Endangered Plants of California [CNPS 2018]; CNDDDB for the Corona South, and surrounding USGS quadrangle maps (CNDDDB 2018); and MSHCP Document, including *Section 6.1.2* and Table 9.3 (Riverside County Integrated Project 2003).

Vegetation communities were mapped based on the Holland Classification System (Holland 1986). Where necessary, deviations were made on best professional judgment when areas did not fit into a specific habitat description provided by Holland. Plant communities were mapped in the field directly onto a 200-scale (1" = 200') aerial photograph and a Trimble R1 GNSS Receiver paired with the ARCGIS Collector Application was utilized during the survey. Figure 4 (Study Area Vegetation Map) provides vegetation mapping for the Project site. Site photographs in Appendix C also provides representative photographs of site conditions.

#### *Section 6.1.2 Riparian/Riverine Areas and Vernal Pools*

Volume I, Section 6.1.2 of the MSHCP describes the process through which protection of riparian/riverine areas and vernal pools would occur within the MSHCP Plan Area. The purpose is to ensure that the biological functions and values of these areas throughout the MSHCP Conservation Area are maintained. The MSHCP requires that as projects are proposed within the overall Plan Area, the effect of those projects on riparian/riverine



areas and vernal pools must be addressed. The Study Area was evaluated for the presence/absence of MSHCP riparian/riverine areas and vernal pools. With respect to riparian habitat, the Study Area was evaluated for the potential habitat to support the least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii traillii*), the western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), listed fairy shrimp, and other species identified in Section 6.1.2 of the MSHCP.

The Study Area was evaluated to determine the limits of (1) Corps jurisdiction pursuant to Section 404 of the CWA; (2) CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code; and (3) MSHCP riparian/riverine areas and vernal pools. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats on the site were evaluated using the methodology set forth in the Corps' 1987 Wetland Delineation Manual (Wetland Manual) and the 2008 Regional Supplement to the Corps Wetland Delineation Manual: Arid West Region Version 2.0 (Arid West Supplement). While in the field, the limits of Corps and CDFW jurisdiction were recorded onto a 200-scale (1" = 200') color aerial photograph and a Trimble R1 GNSS Receiver paired with the ARCGIS Collector Application, with accuracy to +/- one foot. During the field survey, it was determined that the Project site does not include any jurisdictional areas or wetlands.

#### *General Biological Surveys*

Wildlife species were evaluated and detected during field surveys by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the Study Area by direct observation, including the use of binoculars. Observations of physical evidence and direct sightings of wildlife were recorded in field notes during each visit. A complete list of wildlife species observed within the Study Area is provided in the Biological Report. Scientific nomenclature and common names for vertebrate species referred to in this report follow the Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFW 2016), Standard Common and Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodylians 6th Edition, Collins and Taggart (2009) for amphibians and reptiles, and the AOU Checklist (2018) for birds. The methodology (including any applicable survey protocols) utilized to conduct the focused surveys or the habitat assessments for special-status animals is included below.

#### Reptiles and Amphibians

During general surveys within the Study Area, reptiles and amphibians were identified incidentally during surveys within each habitat type. Habitats were examined for diagnostic reptile sign, which include shed skins, scat, tracks, snake

prints, and lizard tail drag marks. All reptiles and amphibian species observed, as well as diagnostic sign, were recorded in field notes.

### Birds

During general surveys within the Study Area, birds were identified incidentally during surveys within each habitat type. Birds were detected by both direct observation and by vocalizations and were recorded in field notes. The majority of the Study Area consists of disturbed habitat with surrounding developed residential areas and commercial.

### Mammals

During general surveys within the Study Area, mammals were identified incidentally during surveys within each habitat type. Mammals were detected both by direct observations and by the presence of diagnostic sign (i.e., tracks, burrows, scat, etc.).

### Botanical Resources

During general surveys within the Study Area, botanical resources were identified during the survey within each habitat type. Botanical resource surveys consisted of five components: (1) a literature search; (2) preparation of a list of target special-status plant species and sensitive vegetation communities that could occur on site; (3) general field reconnaissance survey; (4) vegetation mapping based on the Holland Classification System; and (5) preparation of a vegetation map, including the location of any sensitive vegetation communities found on site.

### *Wildlife Movement Analysis*

In order to evaluate direct, indirect, and cumulative impacts of the proposed Project on wildlife movement, an analysis of wildlife use/movement was conducted for the Study Area. The analysis considered the movement and use of large mammals (i.e., mountain lion and mule deer), medium-sized mammals (mesocarnivores), and other wildlife such as small mammals, birds, reptiles, and amphibians. Methods utilized for the wildlife analysis included a review of existing information on wildlife use (including the MSHCP), general biological surveys to document the presence/absence of wildlife, and opportunistic observations of mammal tracks and scat.

Due to the urbanized setting, the Project site does not serve as a local wildlife corridor.

**V. CONSISTENCY ANALYSIS****A. Section 6.1.2 -- Protection of Species Associated with Riparian/Riverine Areas**

During the field survey, it was determined that the Project site does not include any jurisdictional areas or wetlands. Therefore, the Project site does not contain any Riparian/Riverine Areas as defined in Section 6.1.2. Furthermore, the site does not support Section 6.1.2 avian special status species associated with Riparian/Riverine areas. Thus, no mitigation is proposed.

The Study Area is not located within or adjacent to any MSHCP Conservation Area. Thus, no mitigation is proposed.

**B. Consistency Determination**

The proposed Project is consistent with Section 6.1.2 (Riparian/Riverine Guidelines) of the MSHCP due to the lack of riparian/riverine areas located onsite. Likewise, the Project site lacks suitable habitat for the Section 6.1.2 special status wildlife and plant species onsite.



**VI. LIST OF PREPARERS**

This report was prepared by Carlson Strategic Land Solutions:

- Peter Carlson, President
- Brianna Bernard, Project Manager and Biologist

## VII. REFERENCES

- American Ornithologists' Union (AOU). 1998. Checklist of North American Birds, Seventh Edition. American Ornithologists' Union, Washington, D.C. Accessed using the AOU website at <http://www.aou.org/checklist/north/>
- California Department of Fish and Game. 2016. Complete List of Amphibian, Reptile, Bird, and Mammal Species in California. State of California Resources Agency. Sacramento, California.
- California Native Plant Society. 2001. Inventory of Rare and Endangered Plants of California. (Sixth Edition). Rare Plant Advisory Committee, David P. Tibor, Convening Editor, California Native Plant Society. Sacramento, California, 388 pp.
- California Native Plant Society. 2018. Inventory of Rare and Endangered Plants of California. (Seventh Edition). Accessible online at <http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>
- Collins, Joseph T. and Travis W. Taggart. 2009. Standard Common and Current Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians. Sixth Edition. Publication of The Center For North American Herpetology, Lawrence. iv +44p.
- Carlson Strategic Land Solutions. April 2018. Biological Technical Report for the McMillan Project.
- Haug, E.A., B.A. Millsap, and M.S. Martell. 1993. Burrowing Owl (*Speotyto cunicularia*). The Birds of North America, No. 130 (A. Poole and F. Gill, Eds.) Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.
- Hickman, J.C., Ed. 1993. The Jepson Manual: Higher Plants of California. University of California Press. 1,400 pp.
- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, California Department of Fish and Game.
- Munz, P.A. 1974. A Flora of Southern California. University of California Press. 1,086 pp.

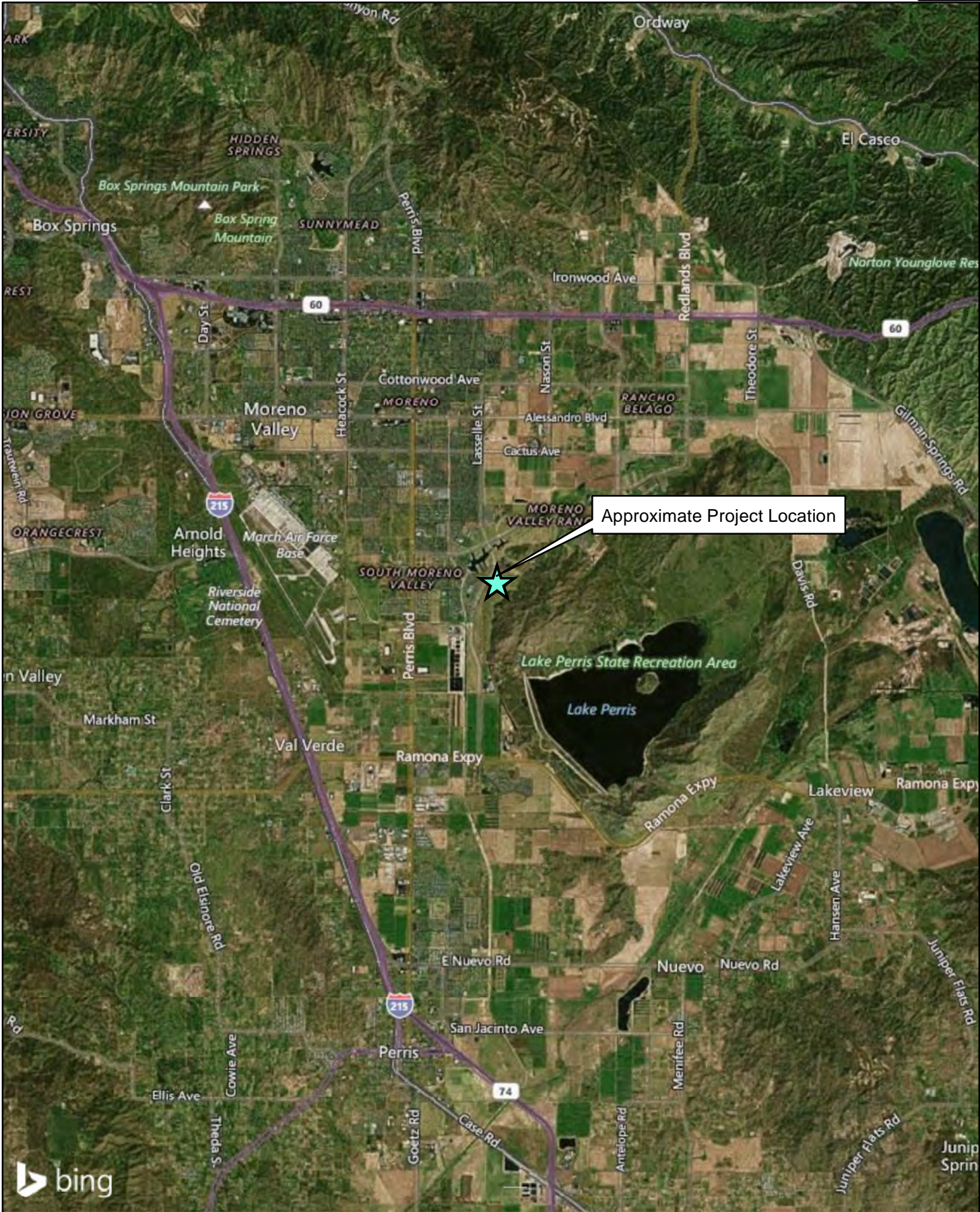
Nelson, J. 1984. Rare plant survey guidelines. In: Inventory of rare and endangered vascular plants of California. J. Smith and R. York (eds). Special Publication No. 1. California Native Plant Society.

Roberts, F.M., S.D. White, A.C. Sanders, D.E. Bramlet, and S. Boyd. 2004. The Vascular Plants of Western Riverside County, California, An Annotated Checklist. F.M. Roberts Publications. 192 pp.



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# Appendix A: Figures

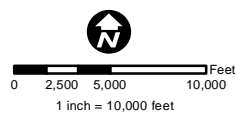


Approximate Project Location



GIS Prepared By:  
Carlson SLS

Created: March 12, 2018




Data Sources: Bing Maps

Continental Villages  
Regional Map

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



**Legend**

 Project Boundary



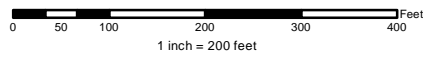
Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan



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GIS Prepared By:  
Carlson SLS

Created: March 12, 2018



Data Source: Bing Map  
Anderson Consting Engineers, Inc (03/XX/2018)

Continental Villages  
Site Location

Packet Pg. 513

FIGURE 2





**Legend**

- Project Boundary
- MSHCP Overlays**
  - Mammals
  - Burrowing Owl

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan

GIS Prepared By:  
Carlson SLS

Created: March 12, 2018



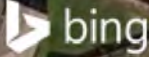
Data Source: Bing Maps  
CH (03/2015)

Continental Villages  
MSHCP Overlay Results



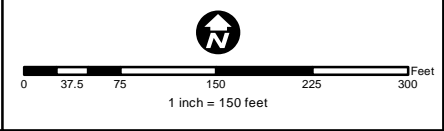
**Legend**

- Project Boundary
- Vegetation Type**
  - Disturbed



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GIS Prepared By:  
Carlson SLS  
Created: March 12, 2018



Data Source: Bing Map  
Anderson Consting Engineers, Inc (03/XX/2018)

Continental Villages  
Vegetation Map

Packet Pg. 515

FIGURE 4

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan

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## **Appendix B: Biological Technical Report**



# Biological Technical Report for the Continental Villages Project

**Prepared for:**

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**November 2018**

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## ACRONYMS, ABBREVIATIONS, AND GLOSSARY OF TERMS

|         |   |
|---------|---|
| BLM     | United States Bureau of Land Management               |
| BMPs    | Best Management Practices                             |
| CDF     | California Department of Forestry and Fire Protection |
| CDFW    | California Department of Fish and Wildlife            |
| CESA    | California Endangered Species Act                     |
| CEQA    | California Environmental Quality Act                  |
| CNDDB   | California Natural Diversity Database                 |
| CNPS    | California Native Plant Society                       |
| Corps   | United States Army Corps of Engineers                 |
| CRPR    | California Rare Plant Rank                            |
| CWA     | Clean Water Act                                       |
| FESA    | Federal Endangered Species Act                        |
| FGC     | California Fish and Game Code                         |
| GPS     | Global Positioning System                             |
| I-210   | Interstate 210  |
| LBV     | least Bell's vireo                                    |
| MBTA    | Migratory Bird Treaty Act                             |
| MMRP    | Mitigation, Monitoring, and Reporting Program         |
| NEPA    | National Environmental Protection Act                 |
| NHD     | National Hydrography Dataset                          |
| NPDES   | National Pollutant Discharge Elimination System       |
| NPPA    | Native Plant Protection Act                           |
| NRCS    | Natural Resources Conservation Service                |
| NWI     | National Wetlands Inventory                           |
| OHWM    | Ordinary High-Water Mark                              |
| Project | California Grand Village Senior Village Project       |
| RWQCB   | Regional Water Quality Control Board                  |
| SAA     | Section 1600 Streambed Alteration Agreement           |
| SLS     | Carlson Strategic Land Solutions                      |
| SWPPP   | Storm Water Pollution Prevention Plan                 |
| U.S.    | United States   |
| USFS    | United States Forest Service                          |

|       |   |
|-------|---|
| USFWS | United States Fish and Wildlife Service |
| USGS  | United States Geological Survey         |
| WQC   | Section 401 Water Quality Certification |



## 1.0 Introduction

On behalf of the Continental East Development team and the Continental Village Project (Project), Carlson Strategic Land Solutions (SLS) has prepared this Biological Technical Report, which incorporates the findings from the field survey conducted by SLS biologist on March 13, 2018. This report provides a Technical Study for the approximately 12-acre Project site and surrounding 300-foot survey buffer, collectively known as the “Study Area.”

### 1.1 Purpose and Approach

This report provides a summary of the conditions present during the 2018 survey, an assessment of the potential presence of sensitive biological resources, and an analysis of the potential impacts to those resources due to Project implementation. This report describes the current biological resources present within the Study Area including habitat communities, jurisdictional waters, and the potential occurrence of listed and “special status”<sup>1</sup> plant and wildlife species. The potential biological significance of site construction and development in view of federal, state, and local laws and regulations are also identified in this report. The report also recommends, as appropriate, Best Management Practices (BMPs) and avoidance and minimization measures to reduce or avoid potential impacts. While general biological resources are discussed, the focus of this assessment is on those resources considered to be sensitive. This report was prepared based upon results of a literature review and field surveys.

### 1.2 Project Terms

The following terms will be used throughout this document and are defined as follows:

- Project site: the approximately 12-acre Continental Village Project site.
- Study Area: the area evaluated during the field survey, including the 12-acre Project site and surrounding 300-foot survey buffer area.
- Project Vicinity: intended to be a general term to describe the broader area surrounding the Study Area.

### 1.3 Project Location

The Project site is located northeast corner of Lasselle Street and Krameria Avenue in the City of Moreno Valley, Riverside County, California. The Project site assessor parcel number’s (APN) are 308-040-053 and 308-040-054 (Figures 1 and 2). The Project site is located in Riverside County, and within the United States Geological Survey (USGS) 7.5-Minute Topographic Map *Sunnymead* Quadrangle.

<sup>1</sup> These species typically have a limited geographic range and/or limited habitat.

Direct access to the Project site is from Krameria Avenue. Directions to the Project site from Interstate 215 (I-215) is to exit Ramona Expressway and head east on Ramona Expressway. From Ramona Expressway, head north onto Evan Road. Evans Road turns into Lassalle Street. From Lassalle Street head east onto Krameria Avenue.

#### **1.4 Existing and Surrounding Land Use**

The Project site has been previously rough graded with residential pads and appears actively maintained, therefore the Project site is disturbed and in a non-vegetated state. The Project site is devoid of native vegetation. The Project site is approximately 1500 feet above sea level. The Project site is located within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) within the Reche Canyon/Badlands Area Plan.

The surrounding land uses of the Project site include Lasalle Elementary School and a property under construction located to the north; and single-family residential subdivisions located to the east, west, and south.

### **2.0 Project Description**

The Applicant proposes to construct Neighborhood Commercial and Multi-family housing on the approximately 12 acres Project site. The Neighborhood Commercial is proposed on 2.8 acres at the corner of Lasselle Street and Krameria Avenue. Multi-family housing is proposed on the remaining 8.80 acres. As a result of Project Implementation, the entire site would be graded and is expected to be balanced onsite.

### 3.0 Regulatory Context

The following is a list of the key local, state, and federal laws and regulations that apply to protecting plant communities, plants, wildlife, and water quality from project impacts relevant to the Project.

#### 3.1 Federal Laws and Regulations

- Federal Endangered Species Act (FESA)
- Federal Clean Water Act (CWA)
- Migratory Bird Treaty Act (MBTA)

#### 3.2 California State Laws and Regulations

- California Environmental Quality Act (CEQA)
- California Endangered Species Act (CESA) and Fish and Game Code (FGC) sections 2050 et seq.
- Lake and Streambed Alteration Program – FGC sections 1600-1616
- Porter-Cologne Water Quality Act – California Code, Division 7
- Migratory Birds – FGC section 3513
- Nongame Birds – FGC section 3800 (a)
- Native Plant Protection Act (NPPA) – FGC sections 1900-1913

#### 3.3 Local Plans/Regulations

- City of Moreno Valley General Plan
- Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP): Reche Canyon/Badlands Area Plan

#### 3.4 Historical Biological Reports

- Moreno Valley 227 Wetlands Review & Rare Plant Evaluation (VHBC, Incorporated; February 8, 2011)
- Jurisdictional Delineation APN 308-040-050 (Gonzales Environmental Consulting, LLC; February 25, 2011)
- Burrowing Owl Survey - Continental Villages Site APN 308-040-050 (VHBC, Incorporated; February 2, 2012)



### **3.5 Regulatory Permits**

This report is prepared pursuant to and in support of CEQA, and any applicable regulatory permit applications, including the California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (SAA), Regional Water Quality Control Board (RWQCB) Section 401 Water Quality Certification (WQC), and United States Army Corps of Engineers (Corps) Section 404 permit.

## 4.0 Survey and Methods

Preparation for this biological study began with a review of relevant available literature. This effort was followed by an onsite field survey on March 13, 2018. The purpose of the field survey was to assess the existing habitat, confirm any onsite sensitive plant communities and jurisdictional waters, and determine whether special status plant and wildlife species occur or potentially occur within the Study Area.

### 4.1 Literature Review

The study began with a review of relevant available literature on the biological resources within the Study Area and Project Vicinity. The Project site is located within the boundary of the Western Riverside MSHCP, specifically within the Reche Canyon/Badlands Area Plan.

#### 4.1.1 Sensitive Plant Communities

Sensitive plant communities (sensitive habitats) are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. Sensitive habitats are often threatened with local extirpation and are therefore considered valuable biological resources. Plant communities are considered "sensitive" if they meet any of the criteria listed below.

- The habitat is recognized and considered sensitive by CDFW, United States Fish and Wildlife Service (USFWS), and/or special interest groups such as CNPS.
- The habitat is under the jurisdiction of the Corps pursuant to Section 404 of the CWA.
- The habitat is under the jurisdiction of the CDFW pursuant to Sections 1600 through 1612 of the California Fish and Game Code.
- The habitat is known or believed to be of high priority for inventory in the California Natural Diversity Database (CNDDDB).
- The habitat is considered regionally rare.
- The habitat has undergone a large-scale reduction due to increased encroachment and development.
- The habitat supports special status plant and/or wildlife species (defined below).
- The habitat functions as an important corridor for wildlife movement.

#### 4.1.2 Critical Habitat

Under the ESA, the federal government is required to designate "critical habitat" for any species it lists under the ESA. Federal agencies are prohibited from authorizing, funding or carrying out actions that "destroy or adversely modify" critical habitats. Section 3 of the ESA defines critical habitat as:

- The specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features

essential to the conservation of the species and that may require special management considerations or protection.

- The specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

“Conservation” means the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the ESA is no longer necessary. Critical habitat receives protection under Section 7(a)(2) of the ESA through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a federal agency. Section 7(a)(2) also requires conferences on federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat.

The USFWS’s online service for information regarding Threatened and Endangered Species Final Critical Habitat designation within California was reviewed to determine if the Study Area is within any species’ designated Critical Habitat (USFWS 2018a). The USFWS regulatory mapping process for the designation of critical habitat is an imprecise, broad-based, mapping exercise of areas that may or may not include constituent elements of the critical habitat designation. Due to this approach in mapping, large areas are designated as critical habitat regardless of the existing habitat, and as a result may include developed areas, such as buildings, roads, hardscape, and other such facilities, as well as natural habitats.

The constituent elements of the critical habitat designation consider the physical and biological features necessary for life processes and successful reproduction of the listed species. These include:

- Space for individual and population growth for normal behavior;
- Habitat cover or shelter;
- Food, water, or other nutritional or physiological requirements;
- Sites for breeding and rearing offspring; and
- Habitat that is protected from disturbance or is representative of the historical geographic and ecological distribution of a species.

#### **4.1.3 Special Status Plants and Wildlife**

Species of plants and animals are afforded “special status” by federal agencies, state agencies, and/or non-governmental organizations (e.g., USFWS, CDFW, and USFS, and CDF) because of their recognized rarity, potential vulnerability to extinction, and local importance. These species typically have a limited geographic range and/or limited habitat and are referred to collectively as “special status” species. Plant and wildlife species were considered “special status” species if they meet any of the following criteria.

- Taxa with official status under ESA, CESA, and/or the NPPA.



- Taxa proposed for listing under ESA and/or CESA.
- Taxa designated a species of special concern by CDFW.
- Taxa designated a state fully protected species by CDFW.
- Taxa identified as sensitive, unique or rare, by the USFWS, CDFW, the United States Forest Service (USFS), the United States Bureau of Land Management (BLM), and/or the California Department of Forestry and Fire Protection (CDF).
- Plants that meet the definition of rare or endangered under CEQA §15380(b) and (d). Species that may meet the definition of rare or endangered include the following:
  - Species considered by CNPS and CDFW to be “rare, threatened or endangered in California” (California Rare Plant Rank [CRPR] 1A, 1B and 2) (CNPS 2018). A majority of the CRPR 3 and CRPR 4 plant species generally do not qualify for protection under CESA and NPPA.
  - Species that may warrant consideration on the basis of local significance or recent biological information.
  - Some species included on the CNDDDB Special Plants, Bryophytes, and Lichens List (CDFW 2018g).
- Considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.

Available literature and databases were reviewed regarding sensitive habitats and special status plant and wildlife species. Special status plant and wildlife species that have the potential to occur within the immediate region of the Study Area were identified. Several agencies, including the USFWS, CDFW, and CNPS publish lists of particular taxa (species and subspecies) and the associated level of protection or concern associated with each. Reviewed and consulted literature and databases focused on the Study Area, and included the following sources listed below:

- The CNDDDB, a CDFW species account database that inventories status and locations of rare plants and wildlife in California, was used to identify any sensitive plant communities and special status plants and wildlife that may exist within a two-mile radius of the Project site. A CNDDDB search was performed assessing a two-mile radius around the Study Area (CDFW 2018f). CNDDDB records are generally used as a starting point when determining what special status species, if any, may occur in a particular area. However, these records may be old, lack data not yet entered, and do not represent all the special status species that could be in that particular area (Figure 3).
- A map of USFWS critical habitat to determine species with critical habitat mapped in the general vicinity of the Project (USFWS 2018a).<sup>2</sup>

<sup>2</sup> Lands located within the mapped critical habitat designation must meet additional specific criteria to be considered critical habitat. The final determination of the extent of critical habitat on a specific site is based on whether certain criteria are met. Criteria is outlined within Section .

- Online CNPS Inventory of Rare and Endangered Plants of California (CNPS 2018). A search for the USGS 7.5-Minute Topographic Map Sunnymead Quadrangle provided information regarding the distribution and habitats of special status vascular plants in the Project Vicinity.
- Pertinent maps, scientific literature, websites, and regional flora and fauna field guides.

The literature review was used as a resource to better understand the biological resources potentially occurring within the Study Area. Although the inventory list of special status plant and wildlife species was not exhaustive of all species that might occur on the property, it provides a wide range of species that are representative of the wildland habitats in the area. Species occurrence and distribution information is based on documented occurrences where surveys have taken place for individual projects; therefore, a lack of documented occurrence does not necessarily indicate that a given species is absent from the Study Area.

#### 4.1.4 Jurisdictional Waters

The following sources were reviewed to determine the potential presence or absence of jurisdictional streams/drainages, wetlands, and their location within the watersheds associated with the Study Area, and other features that might contribute to federal or state jurisdictional authority located within watersheds associated with the Study Area:

- National Wetlands Inventory (NWI) maps (USFWS 2018c). The NWI database indicates potential wetland areas based on changes in vegetation patterns as observed from satellite imagery. This database is used as a preliminary indicator of wetland habitats because the satellite data are not precise.
- Title 33 Code of Federal Register (CFR): Navigation and Navigable Waters Part 328
- USGS National Hydrography Dataset (NHD). Provides the locations of “blue-line” streams as mapped on 7.5-Minute Topographic Map coverage.
- Aerial Imagery (Google Earth©) (Google 2018).
- USGS 7.5-Minute Topographic Maps.
- Natural Resource Conservation Service (NRCS) Soil Survey.

#### 4.1.5 MSHCP Assessment

The Project site is located within the MSHCP, specifically within the Reche Canyon/Badlands Area Plan. The MSHCP is a comprehensive plan that includes portions of the County of Riverside and numerous cities. The MSHCP plans for conservation of 146 species and proposes a reserve system of approximately 500,000 acres. The MSHCP is intended to contribute to the economic viability of the County of Riverside by providing landowners, developers, and public infrastructure projects a streamlined regulatory process.

The Riverside Conservation Authority (RCA) MSHCP Information Application website was reviewed to verify any overlays that may occur on the Project site. Regardless of other overlays, MSHCP Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal*

*Pools*, is applicable to all projects within the MSHCP and describes the process through which protection of riparian/riverine areas, vernal pools, and fairy shrimp species will occur within the MSHCP Area. Protection of these resources is important for a number of MSHCP conservation objectives. An assessment of a Project's potentially significant effects on riparian/riverine areas, and vernal pools is required. Guidelines for determining whether or not these resources exist on site are described as follows:

- **Riparian/Riverine Areas** include "lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens which occur close to or which depend upon soil moisture from a nearby fresh water source or areas with fresh water flow during all or a portion of the year." Riparian/riverine areas under the MSHCP also include drainage areas that are vegetated or have upland (non-riparian/riverine) vegetation and that drain directly into an area that is described for conservation under the MSHCP (or areas already conserved). The Project site was assessed for areas meeting this definition during the jurisdictional delineation performed on March 13, 2018.
- **Vernal Pools** are described by the MSHCP as "seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season." This definition excludes artificially created wetlands created for proving wetlands habitat or human actions to create open waters or altering natural streams demonstrating characteristic as described above. The Project site was assessed for areas meeting this definition during the jurisdictional delineation performed on March 13, 2018.

## 4.2 Biological Survey

### 4.2.1 General Biological Survey

A field survey was performed on March 13, 2018 by SLS biologist Brianna Bernard to assess and map vegetation communities, plants, and wildlife, and to identify habitat areas that could be suitable for special status plant species.

Plant species were identified using plant field and taxonomical guides, such as The Jepson Manual: Vascular Plants of California, second edition (Baldwin et al. 2012). All plant species encountered during the field survey were identified and recorded in field notes. A one-day survey cannot be used to conclusively determine presence or absence of a species; therefore, assessments of presence/absence were made based on the previous surveys, presence of suitable habitat and soils to support the species, known records or occurrence within the area, and known distribution and elevation range obtained from the relevant literature.

During the field survey, the biologist assessed the existing habitat within the Study Area. The biologist paid special attention to those habitat areas that had the potential to provide suitable



habitat for special status plant and wildlife species. Aerial photographs and maps were used to assist in the delineation of plant community boundaries. Following field mapping, the plant communities were digitized and the vegetation map was created. General wildlife surveys were conducted on foot and with binoculars within the Study Area.

All wildlife species encountered visually or audibly during the field survey were identified and recorded in field notes. Biologists also recorded signs of wildlife species including animal tracks, burrows, nests, scat, and remains. Binoculars were used to aid in the identification of observed wildlife. Wildlife field guides and photographs were used to assist with identification of wildlife species during the field survey, as necessary. Photographs were taken to document existing conditions within the Study Area (Appendix A).

### **4.3 Jurisdictional Delineation**

An assessment of the Study Area for the presence of jurisdictional features was conducted by SLS biologist Brianna Bernard on March 13, 2018. All depressions and drainages were evaluated for the presence of bed and bank and wetlands according to the Corps and CDFW delineation guidelines, including connectivity or lack of connectivity to Traditional Navigable Waters. Dominant vegetation within and adjacent to any jurisdictional features within the Study Area was identified and recorded.

The Corps and the RWQCB have jurisdiction over Waters of the United States. Jurisdictional non-wetland features for the Waters of the United States are typically determined through the observation of an Ordinary High Water Mark (OHWM), which is defined as the “line on the shore established by the fluctuation of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.” Projects with impacts to Waters of the United States are regulated under Sections 401 and 404 of the Clean Water Act.

To determine the presence of a jurisdictional wetland for the Waters of the United States, three indicators are required: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. The methodology published in the *United States Army Corps of Engineers 1987 Wetland Delineation Manual* and the *Arid West Supplement* sets the standards for meeting each of the three indicators, which normally require more than 50 percent cover of dominant plant species typical of a wetland, soils exhibiting characteristics of saturation, and hydrological indicators be present.

CDFW has jurisdiction over water of the Department’s interest (California Fish and Game Code §§1600 et seq.; California Code of Regulations, Title 14, §720). Section 1602 of the California Fish and Game Code (FGC) applies to all rivers, streams, lakes and streambeds. CDFW defines a stream as “a body of water that flows perennially or episodically and that is defined by the area in which water currently flows, or has flowed, over a given course during the historic hydrologic course regime, and where the width of its course can reasonably be identified by physical or biological

indicators” (Brady and Vyverberg 2013). Likewise, CDFW regulates jurisdictional areas of riparian habitat only to the extent that those areas are part of a stream, river, or lake as defined above. Waters of the State pertaining to Porter-Cologne in relation to RWQCB jurisdiction are defined by California Water Code Section 13050(e) as any surface or ground water within the boundaries of the state.

Prior to the field investigation, SLS biologist reviewed historical aerial imagery, historical biological reports, and topography for the Study Area to determine the potential for perennial, intermittent, or ephemeral drainages and associated riparian resources. Generally, indicators of jurisdictional drainages on an aerial photo include vegetation and/or incised lines indicating the path of flowing water. Following the desktop research, SLS biologist conducted an onsite field investigation. Based on the collective results of the desktop investigation and the field surveys, any observed jurisdictional features were mapped using the following parameters:

- As stated above, the limits of the Corps’ jurisdiction extend to the OHWM. OHWM indicators include: the observation of benches, break in bank slope, particle size distribution, sediment deposits, drift, litter, and/or change in plant community.
- The RWQCB shares the Corps’ jurisdictional methodology.
- CDFW’s jurisdiction applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. CDFW’s authority also includes riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, CDFW jurisdiction is mapped to the top of bank of the stream.

## 5.0 Results

### 5.1 Vegetation Communities

As stated previously, the Project site has been previously rough graded with residential pads and appears actively maintained; therefore, the Project site is disturbed and in a non-vegetated state. Vegetation communities were mapped based on the Holland Classification System (Holland 1986). Where necessary, deviations were made on best professional judgment when areas did not fit into a specific habitat description provided by Holland. Plant communities were mapped in the field directly onto a 200-scale (1" = 200') aerial photograph; acreages for the community observed is listed in Table 1 and graphically depicted on Figure 5. Representative photographs of the vegetation community observed can be found in Appendix A.

**Table 1. Vegetation Community Observed within the Project Site**

| Vegetation Community | Total Acreage |
|----------------------|---------------|
| Developed/Disturbed  | 12.41         |

The general description of the habitat observed during the 2018 field survey is described below.

#### 5.1.1 Developed/Disturbed

A total of 12.4 acres of disturbed area consisting of bare dirt and sparse vegetation is mapped onsite. This acreage includes the current water quality/Best Management Practice (BMP) Measures as part of the active construction located to the north of the Project site and original grading. The historical biological reports were reviewed, along with a series of historical aerials. Based on the series of aerial and biological reports, the site was first graded prior to 2002, as part of the larger community and the construction of Krameria Avenue and Lasselle Street. Based on the historical aerials, no natural drainage occurred on the site and with the construction of the streets and residential, was cut off from any watershed that would have served any natural drainage. The site appeared to be maintained through disking. The site was re-graded in 2004/2005 as part of construction of the adjacent Lasalle Elementary School. As part of the grading activities and construction of the adjacent school, two detention basins and a single spillway were incorporated into the grading.

As stated in the historical biological reports and observed in the historical aerials, nuisance water was present in the basins from the school property and associated with adjacent urban landscape runoff, including residential and commercial uses. The basins and spillway captured the runoff and nuisance flow from the School and the graded nature and lack of vegetation on the Project site and adjacent undeveloped northern property. Following the construction of the adjacent School, the Project site and adjacent undeveloped northern property remained in the rough graded state and vacant. As a result of the site siting dormant, vegetation grew within the basins and spillway, as observed on the historical aerials. However, various aerials show a lack of



vegetation within the basins and spillway. The difference of vegetation observed in the basins and spillway throughout the aeriels provides evidence that the vegetation depended on the nuisance flow and runoff into the BMPs and without the support of the nuisance water and runoff the vegetation within the areas cease to exist. Based on those factors and the inclusion of detention basins and riprap, no natural drainages previously existed on the Project site and the drainage observed by the historical biological reports was only created by runoff and nuisance from the impervious surface and ballfields on the school site.

The adjacent undeveloped northern property, outside of the 12-acre Project site, is currently under construction as observed in the 2018 aerial and site visit. As part of the active construction, the spillway was redirected via a tarped path to a retention basin located on the Project site. Both of the basins and spillway, located on the adjacent northern property, were removed as part of active construction. The retention basin located on the Project site captures the run-off and nuisance flow onsite due to the graded nature and lack of vegetation on the Project site, the school property, and associated with adjacent urban landscape.

## 5.2 Plants

Sensitive plant species include federally or state listed threatened or endangered species, those species listed on the CNPS rare and endangered plant inventory. A single listed plant species occurs within the USGS 7.5' Sunnymead quadrangle and a brief description of that species is included below. Special status plant species with the potential to occur in the Project site were analyzed based on distribution, habitat requirements, and existing site conditions (Appendix B). All plant species observed within the Project site totaled 7 species during the survey on March 13, 2018 are listed in Appendix C of this report.

### Nevin's barberry (*Berberis nevinii*)

**Status:** state endangered, federally endangered

**Distribution:** Los Angeles, Riverside, San Bernardino, and San Diego Counties.

**Habitat(s):** A perennial evergreen shrub that occurs in sandy or gravelly areas. Habitat communities include chaparral, cismontane woodland, coastal scrub, and riparian scrub. Occurs at approximately 230 to 2,700-foot elevation range. Blooms from March through June.

**Status onsite:** None. The site lacks suitable habitat and soils. Not observed during field visit. As determined through the 2018 survey, no special status plant species were observed within the Project site and there is no opportunity for them to occur due to the disturbed nature of the Project site and lack of suitable habitat and soils.

## 5.3 Critical Habitat

The Project site contains no designated critical habitat. The closest designated critical habitat is located 4.40 miles southeast of the Project site for Spreading Navarretia (*Navarretia fossalis*).

## 5.4 Wildlife

Special status wildlife species with the potential to occur in the Study Area were analyzed based on the species identified in USGS 7.5' Sunnymead quadrangle and the surrounding eight quadrangles, distribution, habitat requirements, and existing site conditions (Appendix D). No special status wildlife was identified or observed within the Project site during the field visit. However, the following species were identified as being observed within 2-miles of the Project site: burrowing owl (*Athene cunicularia*), red-diamond rattlesnake (*Crotalus ruber*), Stephen's Kangaroo Rat (*Dipodomys stephensi*), western mastiff bat (*Eumops perotis californicus*), western yellow bat (*Lasiurus xanthinus*), and Los Angeles Pocket Mouse (*Perognathus longimembris brevinas*). A brief description of those species and their habitat is included below.

### Burrowing Owl (*Athene cunicularia*)

**Status:** species of special concern

**Habitat(s):** Burrowing owls are a year-round resident of California including habitats of open, dry grassland, and desert. They are generally restricted to mostly flat, open country with suitable nest sites. They use rodent or other burrows for roosting and nesting cover and acquire their burrows from either abandonment or eviction. Burrowing owls typically hunt from a perch.

**Status onsite:** None. The site lacks suitable habitat and contains no burrows. Not observed during field visit.

### Red-Diamond Rattlesnake (*Crotalus ruber*)

**Status:** species of special concern

**Habitat(s):** It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake, however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats. They need rodent burrows, cracks in rocks or surface cover objects.

**Status onsite:** None. The site lacks suitable habitat. Not observed during field visit.

### Stephen's Kangaroo Rat (*Dipodomys stephensi*)

**Status:** federally endangered, state threatened

**Habitat(s):** This species prefers large areas of disturbed or patchy annual and perennial grasslands and open coastal sage scrub. Preferred perennial plant species include buckwheat and chamise and preferred annual plant species include brome grass. The nearest known populations are in Rancho Guejito and at the Naval Weapons Station in Fallbrook.

**Status onsite:** None. The site lacks suitable habitat. Not observed during field visit.

### Western Mastiff Bat (*Eumops perotis californicus*)

**Status:** species of special concern

**Habitat(s):** Western mastiff bats are found in a variety of habitats, such as semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban, but the species' distribution may be geomorphically determined, occurring primarily where there are significant rock features offering suitable roosting habitat. A cliff dwelling species, where maternity colonies of 30 to several hundred roost generally under exfoliating rock slabs and rock crevices along cliffs. Western mastiff bats can also be found in similar crevices in large boulders and buildings. When roosting in rock crevices they require a sizable drop from their roost in order to achieve flight. Western mastiff bats prefer deep crevices that are at least 15 or 20 feet above the ground. Foraging is concentrated around bodies of water but also includes coastal sage scrub, chaparral, and grassland habitats.

**Status onsite:** None. The site lacks suitable habitat. Not observed during field visit.

Western yellow bat (*Lasiurus xanthinus*)

**Status:** species of special concern

**Habitat(s):** Roost in trees, hanging from the underside of a leaf. Commonly found in the southwestern U.S. roosting in the skirt of dead fronds in both native and non- native palm trees and have also been documented roosting in cottonwood trees.

**Status onsite:** None. The site lacks suitable habitat. Not observed during field visit.

Los Angeles Pocket Mouse (*Perognathus longimembris brevinas*)

**Status:** species of special concern

**Habitat(s):** Prefers sandy soil for burrowing. Also known to occur on gravel washes and in rocky soils. Associated with coastal scrub.

**Status onsite:** None. The site lacks suitable habitat. Not observed during field visit.

None of these species or evidence of their presence were observed or heard during the 2018 survey, and given the site's disturbed environment, existing surrounding residential housing and elementary school, and lack of habitat there is no opportunity for them to occur onsite.

#### 5.4.1 Wildlife Species Observed or Detected

The animal species or signs thereof observed during the SLS survey are listed below:

Birds:

- American crow (*Corvus brachyrhynchos*)
- Anna's hummingbird (*Calypte anna*)
- house finch (*Haemorhous mexicanus*)
- mourning dove (*Zenaida macroura*)
- California seagull (*Larus californicus*)



## 5.5 Regional Connectivity/Wildlife Movement

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, would not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967, Soule 1987, Harris and Gallagher 1989). Corridors effectively act as links between different populations of a species. A group of smaller populations (termed “demes”) linked together via a system of corridors is termed a “meta-population.” The long-term health of each deme within the meta-population is dependent upon its size and the frequency of interchange of individuals (immigration versus emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population’s genetic variability is generally associated with an increase in a population’s health.

Corridors mitigate the effects of habitat fragmentation by:

- Allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity.
- Providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction.
- Serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Fahrig and Merriam 1985, Simberloff and Cox 1987, Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories:

- Dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions).
- Seasonal migration.
- Movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover).

A number of terms have been used in various wildlife movement studies, such as “wildlife corridor,” “travel route,” “habitat linkage,” and “wildlife crossing” to refer to areas in which wildlife moves from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

- **Travel route:** a landscape feature (such as a ridge line, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relatively direct link between target habitat areas.
- **Wildlife corridor:** a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as “habitat or landscape linkages”) can provide both transitory and resident habitat for a variety of species.
- **Wildlife crossing:** a small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings are typically manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often “choke points” along a movement corridor.

### 5.5.1 Wildlife Movement within the Study Area

Large open spaces support a diverse ecological community representing all types of wildlife movements. Each category of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds, on a local level to many square-mile home ranges of large mammals moving at a regional level. Due to the urbanized setting, the Project site does not serve as a local wildlife corridor.

## 5.6 Jurisdictional Areas

Prior to the field survey, the previous biological reports and historical aerials were reviewed. The Project site is surrounded by urban development and the site was first graded prior to 2002 as part of the larger community and construction of Krameria Avenue and Lasselle Street. Based on the historical aerials, no natural drainage occurred on the site and with the construction of the streets and residential, was cut off from any watershed that would have served any natural drainage. Following the construction of the adjacent development, the site appeared to be maintained through disking. The site was re-graded in 2004/2005 as part of construction of the adjacent Lasalle Elementary School. As part of the grading activities and construction of the adjacent school, two detention basins and a single spillway were incorporated into the grading plan.

As stated in the historical biological reports and observed on historical aerials, nuisance water was present in the basins from the school property and associated with adjacent urban landscape runoff, including residential and commercial uses. The basins and spillway captured the runoff and nuisance flow from the School and the graded nature and lack of vegetation on the Project site and adjacent undeveloped northern property. Following the construction of the adjacent School, the Project site and adjacent undeveloped northern property remained in the rough graded state and vacant. As a result of the site siting dormant, vegetation grew within the basins and spillway, as observed on the historical aerials. However, various aerials show a lack of vegetation within the basins and spillway. The difference of vegetation observed in the basins and spillway throughout the aerials provides evidence that the vegetation depended on the nuisance flow and runoff into the BMPs and without the support of the nuisance water and runoff the vegetation within the areas cease to exist. Based on those factors and the inclusion of detention basins and riprap, no natural drainages previously existed on the Project site and the drainage observed by the historical biological reports was only created by runoff and nuisance from the impervious surface and ballfields on the school site.

The adjacent undeveloped northern property, outside of the 12-acre Project site, is currently under construction as observed in the 2018 aerial and site visit. As part of the active construction, the spillway was redirected via a tarped path to a retention basin located on the Project site. Both of the basins and spillway, located on the adjacent northern property, were removed as part of active construction. The retention basin located on the Project site captures the run-off and nuisance flow onsite due to the graded nature and lack of vegetation on the Project site, the school property, and associated with adjacent urban landscape.

During the 2018 field survey, it was determined that the Project site does not include any jurisdictional areas or wetlands.

## **5.7 MSHCP Assessment**

The Project is located within the Reche Canyon/Badlands Area Plan of the MSHCP. The Project site is not located within any MSHCP Criteria Areas, Cell Groups, Subunits, Narrow Endemic Plants, or Burrowing Owl overlays. The Project site was surveyed and assessed for the following:

- Riparian and Riverine Areas (Section 6.1.2)

Thus, a separate Consistency Assessment has been prepared pursuant to that section. As stated in the historical biological reports and observed on historical aerials, the basins and spillway located onsite capture the runoff and nuisance flow from the school property, adjacent urban landscape runoff, including residential and commercial uses, and the graded nature and lack of vegetation on the Project site and adjacent undeveloped northern property. Following the construction of the adjacent School, the Project site and adjacent undeveloped northern property remained in the rough graded state and vacant. As a result of the site siting dormant,



vegetation grew within the basins and spillway, as observed on the historical aerials. However, various aerials show a lack of vegetation within the basins and spillway. The difference of vegetation observed in the basins and spillway throughout the aerials provides evidence that the vegetation depended on the nuisance flow and runoff into the BMPs and without the support of the nuisance water and runoff the vegetation within the areas cease to exist. Based on those factors and the inclusion of detention basins and riprap, no natural drainages previously existed on the Project site and the drainage observed by the historical biological reports was only created by runoff and nuisance from the impervious surface and ballfields on the school site.

During the 2018 field survey, it was determined that the Project site consists of Developed/Disturbed habitat and does not include any MSHCP defined Riparian or Riverine Areas.

## 5.8 Soils Mapping

The United States Department of Agriculture Natural Resource Conservation Service (NRCS) lists four soil types in the Project site (Figure 6), as described below:

### GyC2: Greenfield sandy loam, 2 to 8 percent slopes, eroded

Soils of this series consist of well drained soils with low runoff. These soils are found on 2 to 8 percent slopes at elevations of 100 to 3,500 feet. Greenfield sandy loam complex is mapped on approximately 59 percent of the Project site.

### HcC: Hanford coarse sandy loam, 2 to 8 percent slopes

Soils of this series consist of well drained soils with low runoff. These soils are found on 2 to 8 percent slopes at elevations of 150 to 900 feet. Hanford coarse sandy loam, 2 to 8 percent, is mapped on approximately 39 percent of the Project site.

### HcD2: Hanford coarse sandy loam, 8 to 15 percent slopes, eroded

Soils of this series consist of somewhat excessively drained soils with low runoff. These soils are found on 8 to 15 percent slopes at elevations of 150 to 900 feet. Hanford coarse sandy loam, 8 to 15 percent, is mapped on approximately 1 percent of the Project site.

### RaB3: Ramona sandy loam, 0 to 5 percent slopes, severely eroded

Soils of this series consist of well drained soils with medium runoff. These soils are found on 0 to 5 percent slopes at elevations of 250 to 3,500 feet. Ramona sandy loam complex is mapped on approximately 1 percent of the Project site.

## 6.0 Project Impacts

This section discusses potential impacts to biological resources that could result from Project implementation. Biological resources may be either directly or indirectly impacted by a Project.

Direct and indirect impacts may be either permanent or temporary in nature. These impact categories are defined below.

- **Direct impact:** any loss, alteration, disturbance or destruction of biological resources that would result from project-related activities is a direct impact. Examples include vegetation clearing, encroaching into wetlands, diverting natural surface water flows, and the loss of individual species and/or their habitats. Direct permanent impacts resulting from Project implementation consist of any ground-disturbing activities (i.e., vegetation removal, grading, paving, building of structures, installing landscaping, creating the fuel modification zone, etc.).
- **Indirect impact:** as a result of Project-related activities, biological resources may also be affected in a manner that is not direct. Examples of indirect impacts include elevated noise, light, and dust levels, increased human activity, decreased water quality, erosion created by the removal of vegetation, and the introduction of invasive plants and unnatural predators (e.g. domestic cats and dogs). These indirect impacts may be both short term and long term in their extent.
- **Permanent impacts:** all impacts that result in the long-term or irreversible removal of biological resources are considered permanent. Examples include constructing a building or permanent road on an area containing biological resources.
- **Temporary impacts:** any impacts considered to have reversible effects on biological resources can be viewed as temporary. Examples include the generation of fugitive dust during grading, or removing vegetation and either allowing the natural vegetation to recolonize or actively revegetating the impact area.

Under each section, potential impacts are discussed.

### **6.1 Impacts to Vegetation Communities/Habitats**

Figure 7 and Table 2 describe and list the approximate total acreages of vegetation communities that will be permanently and temporary impacted by Project activities. Calculations were based on the currently proposed development design in combination with the vegetation map from the field survey and aerial imagery.

Indirect temporary impacts to plant communities include the effects of fugitive dust created by grading activities, vehicle construction traffic, or offsite discharge of surface water runoff with its associated erosion and sedimentation. Grading-related dust could settle on plant surfaces and indirectly inhibit metabolic processes such as photosynthesis and respiration. Grading-related erosion, runoff, sedimentation, soil compaction, and alteration of drainage patterns may affect plants by altering site conditions so that the location in which they are growing becomes unfavorable. Another example of indirect impacts includes the introduction and spread of

invasive, exotic plants which could result in permanent indirect impacts to adjacent native plant communities.

**Table 2. Approximate Acreage of Potential Impacts to Vegetation Communities on the Project Site**

| Vegetation Community | Existing Vegetation onsite (acres) | Total Permanent Impacts (acres) | Total Temporary Impacts (acres) |
|----------------------|------------------------------------|---------------------------------|---------------------------------|
| Developed/Disturbed  | 12.41                              | 12.41                           | 0.00                            |

Permanent impacts to the 12.41 acres of the developed/disturbed community onsite from Project grading are not significant because these areas are not considered sensitive habitats.

## **6.2 Potential Impacts to Special Status Plants**

As concluded in Section 5.2 above, no special status plant species were observed during the 2018 survey and none are expected to occur onsite due to the urbanized nature of the Project site; therefore, there are no potential impacts to special status plants due to Project implementation.

## **6.3 Potential Impacts to Critical Habitat**

The proposed Project would not result in direct or indirect impacts to the designated critical habitats identified in Section 5.3 above due to the distance of the designated critical habitat and lack of suitable habitat found within the Project site.

## **6.4 Potential Impacts to Special Status Wildlife**

Due to the urbanized nature of the Project site, no impacts are expected to occur as a result of Project Implementation. Specifically, no suitable habitat for the special status species is found onsite, as shown in Table 3 below. Impacts to avian species protected by the MBTA may occur as a result of Project construction, both temporary short-term construction and operations (long-term). If Project construction is scheduled to occur during the typical breeding bird season (January through September), short-term noise effects to birds that may forage on the onsite may occur. However, it is expected such birds would fly away at the sight of approaching construction workers and equipment, and would therefore not be significantly impacted by construction-related noise levels and no mitigation required.

**Table 3 Impact Analysis Summary for Special Status Species**

| Species       | Extent of Impact   | Significance of Impact   |
|---------------|--|--|
| Burrowing Owl | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed |



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| Species                  | Extent of Impact   | Significance of Impact   |
|--------------------------|--|--|
|                          |  | during field visit.  |
| Red-Diamond Rattlesnake  | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed during field visit. |
| Stephen's Kangaroo Rat   | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed during field visit. |
| Western Mastiff Bat      | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed during field visit. |
| Western Yellow Bat       | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed during field visit. |
| Los Angeles Pocket Mouse | No suitable habitat is found within the Project site as identified within Section 5.4. | No Impact due to lack of suitable habitat onsite. Not observed during field visit. |

Project construction could also result in additional short-term impacts including night lighting, littering, and illegal wildlife collections. However, Project compliance with the following BMPs under State and federal laws would reduce the potential for such indirect impacts to below significance:

- All temporary construction-related night lighting used in onsite development areas will be shielded and/or directed downward to avoid indirect impacts to nocturnal wildlife such that night lighting could increase predation rates.
- All construction contractors, subcontractors, and employees will comply with the litter and pollution laws and will institute a litter control/removal program during the course of construction activities to reduce the attractiveness of the area to opportunistic predators such as coyotes, opossums, and common ravens.
- Active nests (nests with chicks or eggs) cannot be removed or disturbed. Nests may be removed or disturbed by a qualified biologist, if not active.
- Construction employees, contractors, and site visitors will be prohibited from collecting wildlife.

With implementation of the night lighting reduction PDFs via their inclusion in the Project's MMRP, potential indirect long-term impacts to wildlife would be reduced to below significance.

### **6.5 Potential Impacts to Wildlife Movement**

As described earlier, the Project site does not function as a wildlife corridor due to the urbanized nature of the Project site. Therefore, the Project would not result in direct or indirect impacts to wildlife movement.

### **6.6 Potential Impacts to Jurisdictional Features**

No federal/State jurisdictional areas occur within the Project Site. Therefore, the Project would not result in direct or indirect impacts to jurisdictional waters and wetlands.

### **6.7 Potential Impacts to MSHCP Features**

The Project site was evaluated for suitable Riparian/Riverine habitat pursuant to MSHCP Section 6.1.2. The Project site does not contain any riparian habitat as determined during the field survey on March 13, 2018. Therefore, the proposed Project is consistent with Section 6.1.2 as outlined within the Project MSHCP Consistency Analysis Report.

## 7.0 BMPs/PDFs Incorporated into the Project and MMRP

The Project will comply with the following:

- Work area limits will be defined and respected. All grading areas will have their boundaries clearly flagged or marked before Project implementation and all disturbances will be confined to the flagged areas.
- Cleared or trimmed non-native, exotic vegetation and woody debris will be disposed of in a legal manner at an approved disposal site.
- Employees, contractors, and site visitors will be prohibited from collecting plants and wildlife.
- Access to construction sites will be via preexisting access routes.
- Construction equipment will be properly maintained; construction employees and contractors will be trained on proper implementation and monitoring of BMPs.
- Effective perimeter control BMPs to control discharge of pollutants from the Project site during construction.
- All temporary construction-related night lighting used in onsite development areas will be shielded and/or directed downward to avoid indirect impacts to nocturnal wildlife such that night lighting could increase predation rates.
- All construction contractors, subcontractors, and employees will comply with the litter and pollution laws and will institute a litter control/removal program during the course of construction activities to reduce the attractiveness of the area to opportunistic predators such as coyotes, opossums, and common ravens.
- Active nests (nests with chicks or eggs) cannot be removed or disturbed. Nests may be removed or disturbed by a qualified biologist, if not active.



## 8.0 Proposed Mitigation

No adverse impacts are expected on vegetation communities, special status plants and wildlife, critical habitat, jurisdictional or MSHCP features; therefore, no mitigation is proposed.

## 9.0 Cumulative Impacts

The loss of biological resources on the Project site must be considered in the context of the other development in the area. As identified within Section 6.1, the vegetation communities identified onsite are not considered sensitive habitats and are abundant in the surrounding Project vicinity.

## 10.0 Literature Cited

- Amphibiaweb. 2018. Species Accounts. Retrieved from:  
<http://amphibiaweb.org/search/index.html>
- AOU (The American Ornithologists' Union). 1998. Check-List of North American Birds. 7th Edition. American Ornithologists' Union, Washington, D.C. 829 pp.
- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, second edition. University California Press, Berkeley.
- Bowers, N., R. Bowers, and K. Kaufman. 2004. Mammals of North America. Houghton Mifflin Company, New York.
- Brady, Roland H. III, Kris Vyverberg. 2013. Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants. California Energy Commission. Publication Number: CEC-500-2014-013.
- Calflora. 2018. Calflora website - search for plants.  
 Retrieved from: <http://www.calflora.org/species/index.html>.
- CaliforniaHerps.com. 2018. California Herps. A Guide to the Reptiles and Amphibians of California. Retrieved from: <http://www.californiaherps.com/>.
- Cal-IPC (California Invasive Plant Council). 2006. California Invasive Plant Inventory. Cal-IPC Publication 2006-02. California Invasive Plant Council: Berkeley, CA. Retrieved from: <http://www.cal-ipc.org/ip/inventory/index.php>.
- CDFW (California Department of Fish and Wildlife). 2018. Natural Communities List. Biographic Data Branch. The Vegetation Classification and Mapping Program. <https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities>.
- CDFW (California Department of Fish and Wildlife). 2018a. California Endangered Species Act (CESA). Retrieved from: <https://www.wildlife.ca.gov/Conservation/CESA>.
- CDFW (California Department of Fish and Wildlife). 2018b. California Environmental Quality Act (CEQA). Retrieved from: <https://www.wildlife.ca.gov/Conservation/CEQA>.
- CDFW (California Department of Fish and Wildlife). 2018c. Fish and Game Code Section 1600-1616. Retrieved from: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=3784>.
- CDFW (California Department of Fish and Wildlife). 2018d. Lake and Streambed Alteration Program. Retrieved from: <https://www.wildlife.ca.gov/Conservation/LSA>.

- CDFW (California Department of Fish and Wildlife). 2018e. Life History Accounts and Range Maps – California Wildlife Habitat Relationship System. Retrieved from: <https://www.wildlife.ca.gov/Data/CWHR/Life-History-and-Range>.
- CDFW (California Department of Fish and Wildlife). 2018f. RareFind, California Department of Fish and Wildlife, California Natural Diversity Database (CNDDDB). State of California, The Natural Resources Agency, Department of Fish and Wildlife, Biogeographic Data Branch, California Natural Diversity Database, Sacramento, CA.
- CDFW (California Department of Fish and Wildlife), Natural Diversity Database. 2018g. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 124 pp.
- CDFW (California Department of Fish and Wildlife), Natural Diversity Database. 2018h. Special Animals List. Periodic publication. 51 pp.  
Retried from: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406>.
- CDFW (California Department of Fish and Wildlife). 2018i. State and Federally Listed Endangered, Threatened, and Rare Plants of California. State of California, The Resources Agency, Department of Fish and Wildlife, Resource Management and Planning Division, Biogeographic Data Branch, California Natural Diversity Database, Sacramento, CA.
- Clark, W.S. and B.K. Wheeler. 2001. A Field Guide to Hawks of North America, Second Edition. Houghton Mifflin Company, Boston and New York.
- California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 12 March 2018].
- Corps (United States Army Corps of Engineers). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- Eder, Tamara. 2005. Mammals of California. Lone Pine Publishing International Inc, Auburn, WA.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.
- EPA (United States Environmental Protection Agency). 2011. Laws and Regulations. Summary of the Endangered Species Act.  
Retrieved from: <http://www.epa.gov/lawsregs/laws/esa.html>

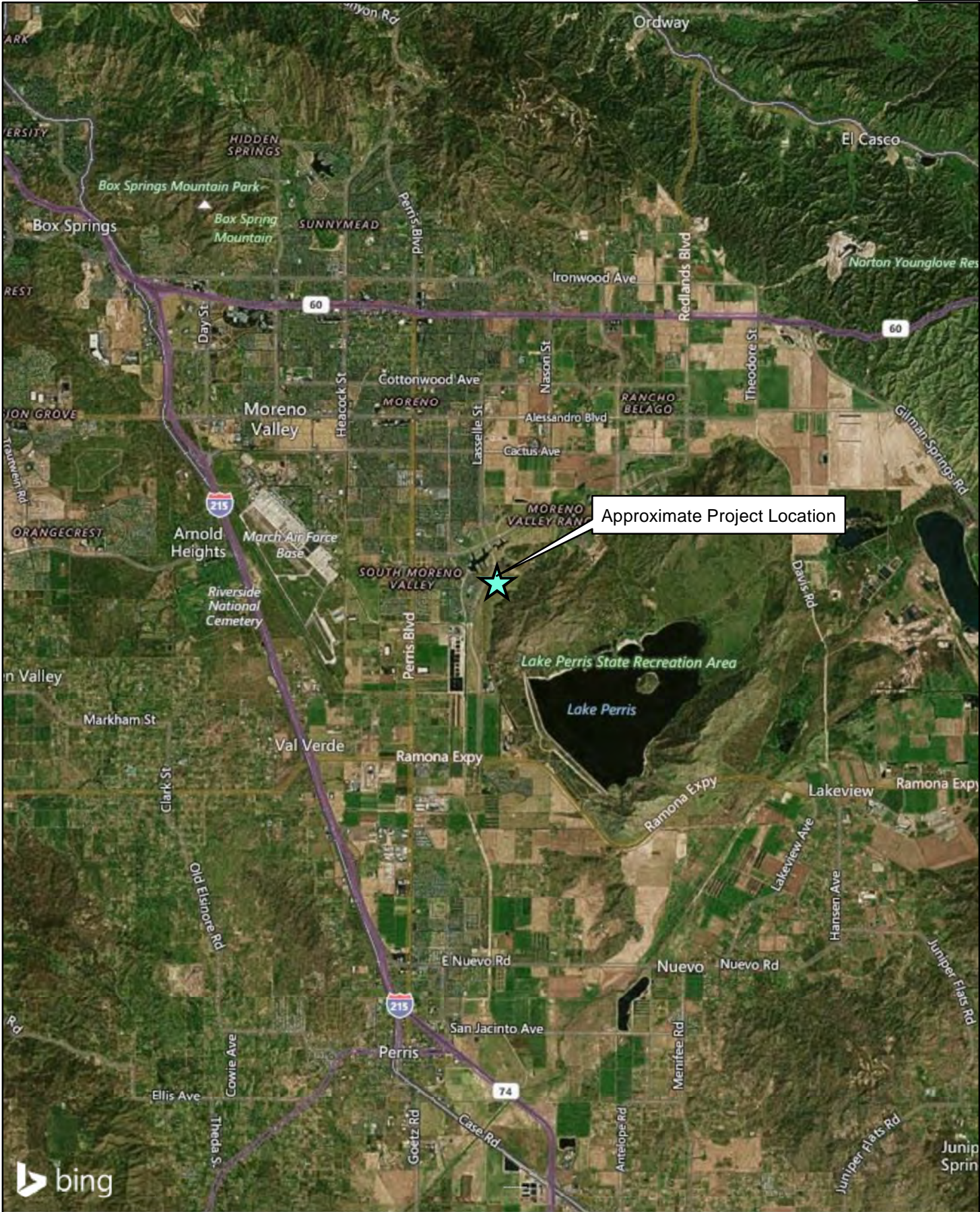


- Fahrig, L., and G. Merriam. 1985. Habitat patch connectivity and population survival. *Ecology* 66:1762-1768.
- Federal Interagency Committee for Wetland Delineation. 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands. U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and USDA Soil Conservation Service, Washington, DC Cooperative technical publication.
- Fish and Game Commission. 2018. California Law. California Fish and Game Code. Retrieved from: <http://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=FGC&tocTitle=+Fish+and+Game+Code+-+FGC>
- Google. 2018. GoogleEarth© website.
- Government Printing Office. 1991. Federal Register, 1989 "Federal Manual for Identifying Jurisdictional Wetlands; Proposed Revisions." August 14, 1991, Vol. 56, No. 157, pp 40446-40480.
- Harris, L.D. and Gallagher, P.B. 1989. New initiatives for wildlife conservation: The need for movement corridors. In *defense of wildlife: Preserving communities and corridors*. pp. 11-34. Edited by G. Mackintosh. Defenders of Wildlife, Washington, DC.
- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, Nongame Heritage Program, California Department of Fish & Game, Sacramento, Calif. 156 pp.
- Jennings, M.R. and M.P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Submitted to the California Department of Fish and Game Inland Fisheries Division. Rancho Cordova, CA.
- National Geographic Society. Edited by Jonathan Alderfer. 2006. Complete Birds of North America. National Geographic Society. Washington D.C.
- NatureServe. 2018. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>.
- NRCS (Natural Resource Conservation Service). 2018. Web Soil Survey. U.S. Department of Agriculture Natural Resources Conservation Service. Retrieved from: <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>
- Riverside, County of. June 2003. *Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)*. Prepared by Dudek.

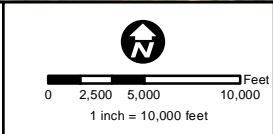
- Sibley, David Allen. 2000. National Audubon Society, The Sibley Guide to Birds. Alfred A. Knopf, New York.
- Simberloff, D., and J. Cox. 1987. Consequences and costs of conservation corridors. *Conservation Biology*. 1:63-71.
- Soule, Michael E. 1987. Viable populations for conservation. Cambridge University Press. Cambridge Cambridgeshire and New York.
- SWRCB (State Water Resources Control Board). 2011. Porter-Cologne Water Quality Control Act with Additions and Amendments Effective April 2017. Compiled by the Office of Chief Counsel.  
Retrieved from: [http://www.swrcb.ca.gov/laws\\_regulations/docs/portercologne.pdf](http://www.swrcb.ca.gov/laws_regulations/docs/portercologne.pdf)
- USDA (United States Department of Agriculture) Natural Resources Conservation Service. 1995. Hydric Soils of California.
- USFWS (United States Fish and Wildlife Service). 2018a. FWS Critical Habitat for Threatened and Endangered Species. Retrieved from <https://www.fws.gov/angered/>.
- USFWS (United States Fish and Wildlife Service). 2018b. Migratory Birds & Habitat Programs. Migratory Bird Treaty Act. Retrieved from: <https://www.fws.gov/birds/policies-and-regulations.php>.
- USFWS (United States Fish and Wildlife Service). 2018c. National Wetlands Inventory. Wetlands Mapper. Retrieved from: <http://www.fws.gov/wetlands/Data/mapper.html>.
- WTI (Wetland Training Institute, Inc.). 1999. Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual. Glenwood, NM WTI 99-1. 143 pp.
- WTI (Wetland Training Institute, Inc.). 2003. Wetland Delineation Lecture Notes and Field Guide for Wetland Delineation based on the Corps of Engineers 1987 Manual. WTI, New Mexico.

# Figures





GIS Prepared By:  
Carlson SLS  
Created: March 12, 2018




Data Sources: Bing Maps

Continental Villages  
Regional Map

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



**Legend**

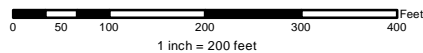
 Project Boundary



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Carlson SLS

Created: March 12, 2018



Data Source: Bing Map  
Anderson Consting Engineers, Inc (03/XX/2018)

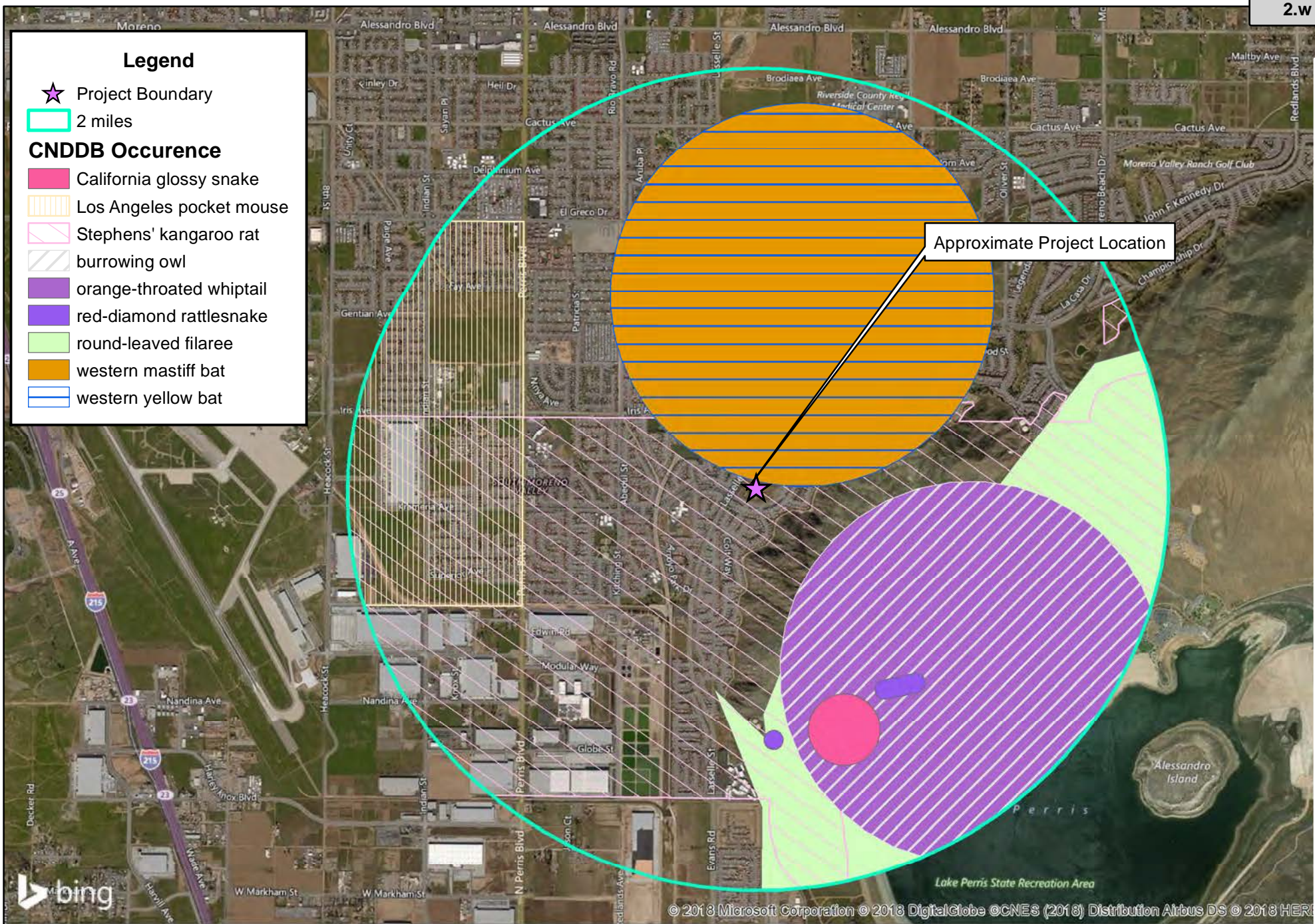
Continental Villages  
Site Location

Packet Pg. 554

FIGURE 2

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan





**Legend**

- ★ Project Boundary
- 2 miles

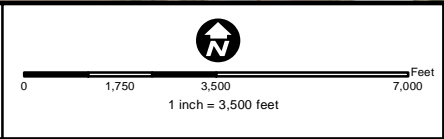
**CNDDB Occurrence**

- California glossy snake
- Los Angeles pocket mouse
- Stephens' kangaroo rat
- burrowing owl
- orange-throated whiptail
- red-diamond rattlesnake
- round-leaved filaree
- western mastiff bat
- western yellow bat

Approximate Project Location

GIS Prepared By:  
Carlson SLS

Created: March 12, 2018



Data Source: Bing Maps  
CNDDB (10/2017)

Continental Villages  
CNDDB Occurrences Results

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan



**Legend**

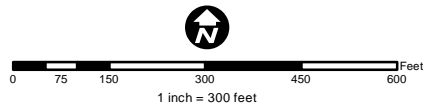
- Project Boundary
- MSHCP Overlays**
  - Mammals
  - Burrowing Owl



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GIS Prepared By:  
Carlson SLS

Created: March 12, 2018



Data Source: Bing Maps  
CH (03/2015)

*Continental Villages*  
MSHCP Overlay Results

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan



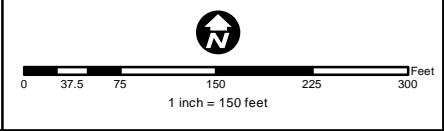
**Legend**

- Project Boundary
- Vegetation Type**
  - Disturbed



Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan

GIS Prepared By:  
Carlson SLS  
Created: March 12, 2018








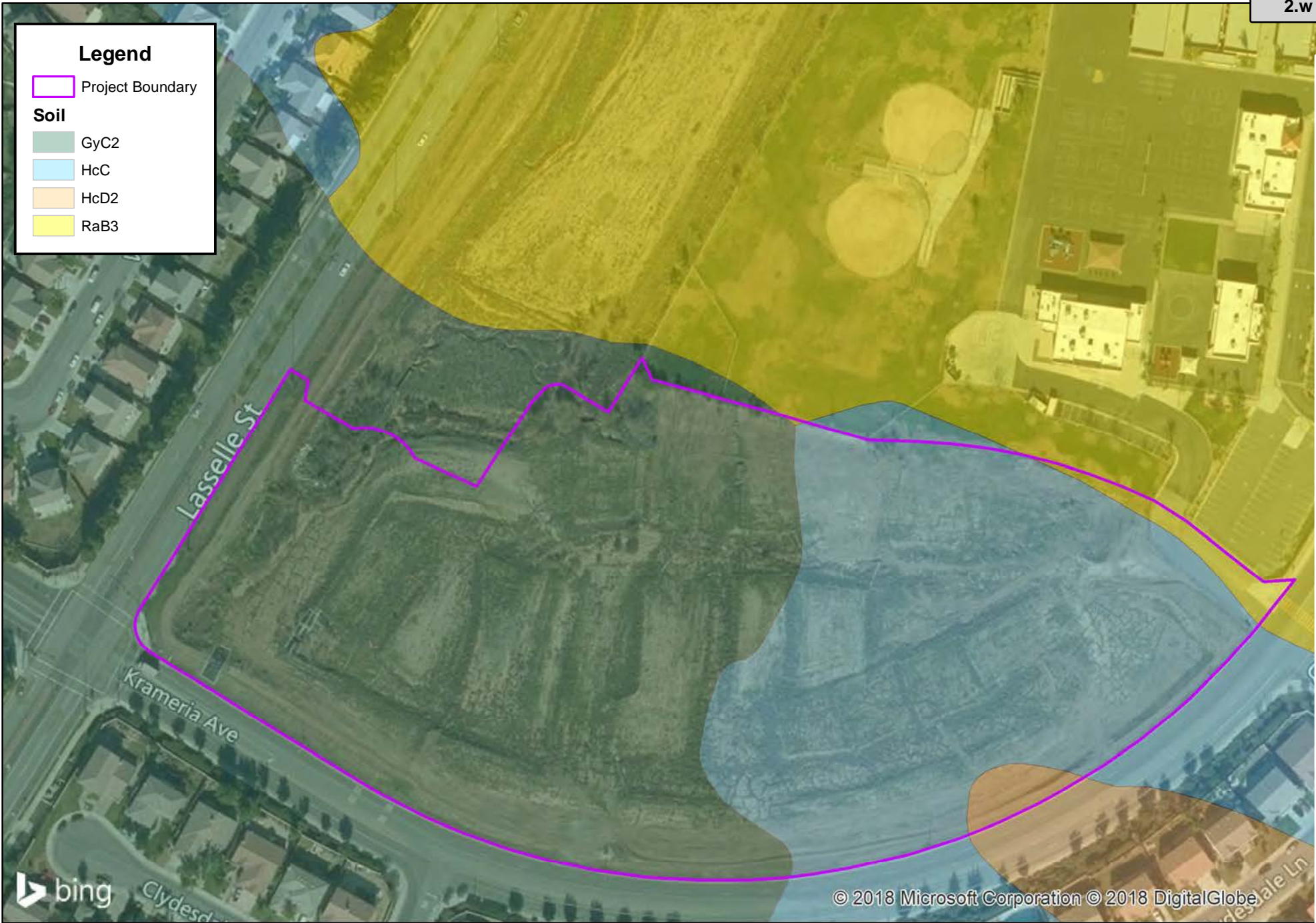
Data Source: Bing Map  
Anderson Consting Engineers, Inc (03/XX/2018)

Continental Villages  
Vegetation Map  
Packet Pg. 557  
**FIGURE 5**



**Legend**

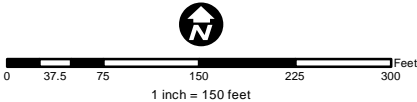
-  Project Boundary
- Soil**
-  GyC2
-  HcC
-  HcD2
-  RaB3



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GIS Prepared By:  
Carlson SLS

Created: March 12, 2018



Data Source: Bing Map  
USDA Web Soil Survey Website (03/13/2018)

Continental Villages  
Soil Map



Packet Pg. 558

FIGURE 6


Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan

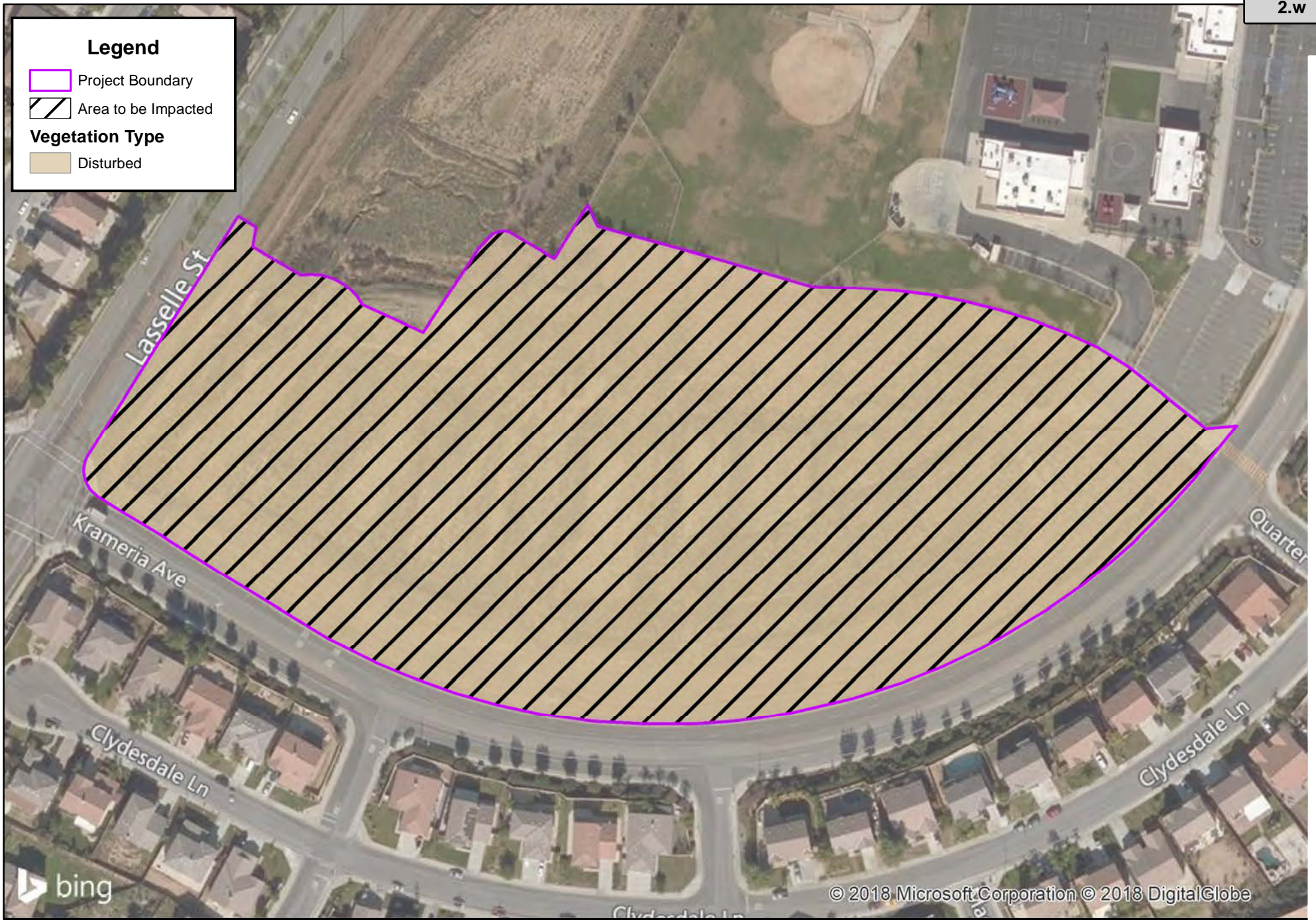


**Legend**

-  Project Boundary
-  Area to be Impacted

**Vegetation Type**

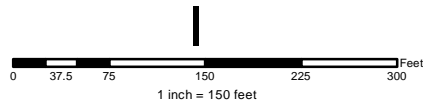
-  Disturbed



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GIS Prepared By:  
Carlson SLS

Created: March 12, 2018



Data Source: Bing Map  
Anderson Consulting Engineers, Inc (03/XX/2018)

*Continental Villages*  
Vegetation Communities Impacts Map

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan

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## **Appendix A: Representative Photographs of Community Classification**





Looking north-west across the Project site.



Looking north-east across the Project site.

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





Looking east across the Project site at the previously graded development pads.



Retention Basin located on the northwestern most portion of the site to capture and retain the nuisance water and runoff.

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





Looking south across the Project site.



Looking west at the Project Site.

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





Looking north-west across the Project Site.



The Project site is utilized as a stock pile location for the active construction located on the property directly north to the Project site.



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**Appendix B:**  
**Special Status Plant Species**  
**Potential Occurrence**  
**Determination**

## APPENDIX B

**Special Status Plant Species Potential Occurrence Determination**

This table summarizes conclusions from analysis and field surveys regarding the potential occurrence of special status plant species within the Study Area. During the field surveys, the potential for special status plant species to occur within the Study Area was assessed based on the following criteria:

- **Present**: observed on the site during the field surveys, or recorded on-site by other qualified biologists.
- **Known to Occur**: observed on site in the recent past, but not observed during the most recent biological survey.
- **High potential to occur**: observed in similar habitat in the region by a qualified biologist or habitat on the site is a type often utilized by the species, and the site is within the known distribution and elevation range of the species.
- **Moderate potential to occur**: reported sightings in surrounding region, or the site is within the known distribution and elevation range of the species, and habitat on the site is a type occasionally used by the species.
- **Low potential to occur**: the site is within the known distribution and elevation range of the species, but habitat on the site is rarely used by the species or for which there are no known recorded occurrences of the species within or adjacent to the site.
- **None**: a focused study failed to detect the species or no suitable habitat is present.
- **Unknown**: the species' distributional/elevation range and habitat are poorly known.

Even with field surveys, biologists assessed the probability of occurrence rather than make a definitive conclusion about species presence or absence. Failure to detect the presence of the species is not definitive, and may be due to variable effects associated with fire, rainfall patterns, and/or season.

## Appendix B – Special Status Plant Species Potential Occurrence Determination

## Special Status Plants: Potential to Occur within the Study Area

| Scientific Name                        | Common Name             | Status                                     | General Habitat Description  | Potential For Occurrence within the Study Area  |
|--|-------------------------|--|--|---|
| <i>Artemisia palmeri</i>               | San Diego sagewort      | CRPR: 4.2<br>MSHCP: Not covered            | Perennial deciduous shrub found in sandy or mesic areas. Habitat include chaparral, coastal sage scrub, riparian forest, riparian scrub, or riparian woodland. Known from 15 to 915 meters (49 to 3,000 feet) MSL.<br>Blooming period: May through September.                                      | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey.           |
| <i>Berberis nevini</i>                 | Nevin's barberry        | FE, SE<br>CRPR: 1B.1,<br>MSHCP:<br>Covered | A perennial evergreen shrub that occurs in sandy or gravelly areas. Habitat communities include chaparral, cismontane woodland, coastal scrub, and riparian scrub. Occurs at approximately 70 to 825 meters (230 to 2,700-foot) elevation range.<br>Blooming period: March to June                 | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Calochortus plummerae</i>           | Plummer's mariposa lily | CRPR:4.2<br>MSHCP:<br>Covered              | Perennial bulbiferous herb found in granitic or rocky areas. Habitat include chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, and valley and foothill grasslands. Known from 100 to 1,700 meters (330 to 5,500 feet) MSL.<br>Blooming period: May through July | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Caulanthus simulans</i>             | Payson's jewelflower    | CRPR:4.2<br>MSHCP:<br>Covered              | Annual herb found in sandy or granitic areas. Habitat include chaparral and coastal sage scrub. Known from 90 to 2,200 meters (295 to 7,200 feet) MSL.<br>Blooming period: March through May   | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Centromadia pungens ssp. laevis</i> | smooth tarplant         | CRPR:1B.2<br>MSHCP:<br>Covered             | Alkaline areas in chenopod scrub, meadows and seeps, ditches, playas, riparian woodland, and valley and foothill grassland. Known from below 480 meters (1,600 feet) MSL.<br>Blooming period: April through Sept   | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Chorizanthe leptotheca</i>          | Peninsular spineflower  | CRPR:4.2<br>MSHCP:<br>Covered              | Annual herb found in granitic or alluvial fan areas. Habitat include chaparral, coastal sage scrub, and lower montane coniferous forest. Known from 300 to 1,900 meters (980 to 6,200 feet) MSL.<br>Blooming period: May through August  | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Chorizanthe parryi</i>              | Parry's spineflower     | CRPR:1B.1<br>MSHCP:                        | Annual herb found in sandy, rocky, or open areas. Habitat include chaparral, cismontane woodland,  | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is  |



Appendix B – Special Status Plant Species Potential Occurrence Determination

| Scientific Name                         | Common Name          | Status                           | General Habitat Description   | Potential For Occurrence within the Study Area  |
|---|----------------------|----------------------------------|---|---|
|   |                      | Covered                          | coastal sage scrub, and valley and foothill grasslands. Known from 275 to 1,220 meters (900 to 4,000 feet) MSL.<br>Blooming period: April through June  | actively maintained and in a consistent non-vegetated state. Not observed during field survey.  |
| <i>Deinandra paniculata</i>             | paniculate tarplant  | CRPR: 4.2<br>MSHCP: Not covered  | Coastal scrub and valley and foothill grassland/usually vernal mesic. Known from 25 to 9540 meters (80 to 3,085 feet) MSL.<br>Blooming period: April through November.  | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Lasthenia glabrata ssp. coulteri</i> | Coulter's goldfields | CRPR:1B.1<br>MSHCP: Covered      | Annual herb found in marshes and swamps, playas, and vernal pool habitats. Known from 1 to 1,220 meters (3 to 4,000 feet) MSL.<br>Blooming period: February through June  | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Symphotrichum defoliatum</i>         | San Diego aster      | CRPR: 1B.2<br>MSHCP: Not covered | Perennial herb found near streams, ditches or springs. Habitat include cismontane woodland, coastal sage scrub, lower montane coniferous forest, meadows and seeps, marches and swamps, and valley and foothill grasslands. Known from 2 to 2,040 meters (6 to 6,600 feet) MSL.<br>Blooming period: July through November | None. No suitable habitat or soils are found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |

**Legend**

Federal Endangered Species Act (ESA) Listing Codes: federal listing is pursuant to the Federal Endangered Species Act of 1973, as amended (ESA).  
 FE = federally listed as endangered: any species, subspecies, or variety of plant or animal that is in danger of extinction throughout all or a significant portion of their range.  
 FT = federally listed as threatened: any species, subspecies, or variety of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.

California Endangered Species Act (CESA) Listing Codes: state listing is pursuant to § 1904 (Native Plant Protection Act of 1977) and §2074.2 and §2075.5 (California Endangered Species Act of 1984) of the Fish and Game Code, relating to listing of Endangered, Threatened and Rare species of plants and animals.  
 SE = state listed as endangered: any species, subspecies, or variety of plant or animal that are in serious danger of becoming extinct throughout all, or a significant portion, of their range.  
 ST = state listed as threatened: any species, subspecies, or variety of plant or animal that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future.

California Rare Plant Ranks (Formerly known as CRPR Lists): the CRPR is a statewide, non-profit organization that maintains, with CDFG, an Inventory of Rare and Endangered Plants of California. In the spring of 2011, CRPR and CDFG officially changed the name “CRPR List” or “CRPR Ranks” to “California Rare Plant Rank” (or CPRP). This was done to reduce confusion over the fact that CRPR and CDFG jointly manage the Rare Plant Status Review Groups and the rank assignments are the product of a collaborative effort and not solely a CRPR assignment.

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan

*Appendix B – Special Status Plant Species Potential Occurrence Determination*

CRPR: 1B - California Rare Plant Rank 1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere. All of the plants constituting California Rare Plant Rank 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

CRPR: 2 - California Rare Plant Rank 2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere. All of the plants constituting California Rare Plant Rank 2 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

CRPR: 4 - California Rare Plant Rank 4 (formerly List 4): Plants of Limited Distribution - A Watch List. Very few of the plants constituting California Rare Plant Rank 4 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and few, if any, are eligible for state listing. Nevertheless, many of them are significant locally, and CRPR and CDFG strongly recommend that California Rare Plant Rank 4 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.

California Native Plant Society (CRPR) Threat Ranks: The CRPR Threat Rank is an extension added onto the California Rare Plant Rank (CRPR) and designates the level of endangerment by a 1 to 3 ranking with 1 being the most endangered and 3 being the least endangered. A Threat Rank is present for all California Rare Plant Rank 1B's, 2's, 4's, and the majority of California Rare Plant Rank 3's. California Rare Plant Rank 4 plants are seldom assigned a Threat Rank of 0.1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a California Rare Plant Rank. In addition, all California Rare Plant Rank 1A (presumed extinct in California), and some California Rare Plant Rank 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension.

0.1 = seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

0.2 = fairly endangered in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

Sources:

- Calflora website - search for plants (Calflora 2016).
- CRPR Inventory of Rare and Endangered Plants (CRPR 2016).
- The Status of Rare, Threatened, and Endangered Plants and Animals of California, 2000–2004 (CDFG 2005).
- The Jepson Manual: *Vascular Plants of California*, second edition (Baldwin *et al.* 2012).
- RareFind, CDFW, California Natural Diversity Database (CNDDDB) (CDFW 2016f).
- State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2016i).
- Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP, 2016)

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## **Appendix C: Plant Species Recorded During the Field Surveys**



Appendix C contains the list of vascular plant taxa recorded during the biological survey conducted within the Study Area. Plant nomenclature and taxonomic order is based on *The Jepson Manual: Vascular Plants of California*, second Edition (Baldwin *et al.* 2012).

## Appendix C Plant Species Observed during the Field Survey

| Scientific Name                         | Common Name                   |
|---|-------------------------------|
| <b><i>Asteraceae (Compositae)</i></b>   | <b>Sunflower Family</b>       |
| <i>Centaurea melitensis</i> *           | totalote (Malta star thistle) |
|   |                               |
| <b><i>Brassicaceae (Cruciferae)</i></b> | <b>Mustard Family</b>         |
| <i>Brassica nigra</i> *                 | black mustard                 |
|   |                               |
| <b><i>Boraginacea</i></b>               | <b>Borage Family</b>          |
| <i>Amsinckia intermedia</i>             | Common fiddleneck             |
|   |                               |
| <b><i>Chenopodiaceae</i></b>            | <b>Goosefoot Family</b>       |
| <i>Salsola tragus</i> *                 | Russian thistle (tumbleweed)  |
|   |                               |
| <b>Monocots</b>                         |                               |
| <b><i>Poaceae</i></b>                   | <b>Grass Family</b>           |
| <i>Avena barbata</i> *                  | slender oat                   |
| <i>Bromus diandrus</i> *                | ripgut grass                  |
| <i>Bromus madritensis ssp. Rubens</i> * | red brome                     |
|   |                               |
| <b>Legend</b>                           |                               |
| * exotic plant species                  |                               |

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**Appendix D:**  
**Special Status Wildlife Species**  
**Potential Occurrence**  
**Determination**

## APPENDIX D

### Special Status Wildlife Potential Occurrence Determination

This table summarizes conclusions from analysis and field surveys regarding the potential occurrence of special status wildlife species within the Study Area. During the field surveys, the potential for special status wildlife species to occur within the Study Area was assessed based on the following criteria:

- Present: observed on the site during the field surveys, or previously recorded on-site by other qualified biologists.
- Known to Occur: observed on site in the recent past, but not observed during the most recent biological survey.
- High potential to occur: observed in similar habitat in the region by a qualified biologist or habitat on the site is a type often utilized by the species, and the site is within the known distribution and elevation range of the species.
- Moderate potential to occur: reported sightings in surrounding region, or the site is within the known distribution and elevation range of the species, and habitat on the site is a type occasionally used by the species.
- Low potential to occur: the site is within the known distribution and elevation range of the species, but habitat on the site is rarely used by the species or for which there are no known recorded occurrences of the species within or adjacent to the site.
- None: a focused study failed to detect the species or no suitable habitat is present.
- Unknown: the species' distributional/elevation range and habitat are poorly known.

Even with field surveys, biologists assessed probability of occurrence rather than make definitive conclusions about species presence or absence. Failure to detect the species is not definitive, and may be due to variable effects associated with migration, weather, fire, and/or time of day and year.



## Special Status Wildlife: Potential to Occur within the Study Area

| Scientific Name                     | Common Name                                | Status                                       | General Habitat Description   | Potential For Occurrence within the Study Area  |
|-------------------------------------|--|--|---|---|
| <i>Accipiter cooperii</i>           | Cooper's hawk                              | WL<br><br>MSHCP:<br>Covered                  | The Cooper's hawk breeds primarily in riparian areas and oak woodlands and is most common in montane canyons. It frequents landscapes where wooded areas occur in patches and groves and often uses patchy woodlands and edges with snags for perching. Dense stands with moderate crown-depths are usually used for nesting. They hunt in broken woodland and habitat edges. Within the range in California, it most frequently uses dense stands of live oak, riparian deciduous or other forest habitats near water. They are also found and can breed in suburban and urban settings. | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Agelaius tricolor</i>            | tricolored blackbird                       | BLMS, SSC, BCC<br><br>MSHCP:<br>Covered      | Colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat composed of grassland, woodland, or agricultural cropland.   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Aimophila ruficeps canescens</i> | southern California rufous-crowned sparrow | WL<br><br>MSHCP:<br>Covered                  | They are found on grass-covered hillsides, coastal sage scrub, and chaparral and often occur near the edges of the denser scrub and chaparral associations. Preference is shown for tracts of California sagebrush. Optimal habitat consists of sparse, low brush or grass, hilly slopes preferably interspersed with boulders and outcrops. The species may occur on steep grassy slopes without shrubs if rock outcrops are present. It is a very secretive species.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Ammodramus savannarum</i>        | grasshopper sparrow                        | SSC<br>MSHCP:<br>Species-Specific Objectives | Grasshopper sparrows in California breed (and primarily apparently winter) on slopes and mesas containing grasslands of varying compositions. The grasshopper sparrow generally prefers moderately open grasslands and prairies with patchy bare ground. They also appear to use abandoned croplands that are dominated by grassy species. The species frequents dense, dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting and   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |

## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                         | Common Name           | Status                                  | General Habitat Description  | Potential For Occurrence within the Study Area  |
|---|-----------------------|---|--|---|
|   |                       |   | concealment. They require fairly continuous native grassland areas with occasional taller stems for breeding areas. They especially occur in grasslands composed of a variety of grasses and tall forbs with scattered shrubs for singing perches. They tend to avoid grassland areas with extensive shrub cover and the presence of native grasses is less important than the absence of trees. Species is found from southern Canada to the southern U.S., West Indies, Mexico, and Ecuador. |   |
| <i>Aquila chrysaetos</i>                | Golden Eagle          | BLMS, FP, WL, BBC<br><br>MSHCP: Covered | Rolling foothills, mountain areas, sage-juniper flats, & desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.   | None. Suitable habitat does not exist within the Project site. Not observed during field survey.  |
| <i>Artemisiospiza belli</i>             | Bell's sage sparrow   | WL, BBC<br><br>MSHCP: Covered           | Chaparral and coastal sage scrub along the coastal lowlands, inland valleys and in the lower foothills of local mountains.   | None. Suitable habitat does not exist within Study Area. Not observed during field survey.  |
| <i>Asio otus</i>                        | long-eared owl        | SSC<br><br>MSHCP: Not Covered           | Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Aspidoscelis hyperythra beldingi</i> | orangethroat whiptail | SSC, FSS<br><br>MSHCP: Covered          | The species is generally found in semi-arid brushy areas typically with loose soil and rocks, including washes, stream sides, rocky hillsides, and coastal chaparral. Habitat types include low elevation chaparral, non-native grassland, (Riversidian) coastal sage scrub, juniper woodland and oak woodland. Associations include alluvial fan scrub and riparian areas. Friable soil appears to be a necessary requirement for excavating burrows and hiding eggs.                         | None. Suitable habitat does not exist within Study Area. Not observed during field survey.  |
| <i>Aspidoscelis tigrus stejnegeri</i>   | coastal whiptail      | SSC                                     | This species is found in a variety of habitats, primarily hot and dry open areas with sparse vegetation including  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated  |

## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                    | Common Name                         | Status                                  | General Habitat Description   | Potential For Occurrence within the Study Area  |
|------------------------------------|-------------------------------------|---|---|---|
|                                    |                                     | MSHCP:<br>Covered                       | chaparral, woodland, and riparian areas. This subspecies is found in coastal southern California, north into Ventura County, and south into Baja California. Additional important habitat characteristics include Important habitat components include shrub cover with accumulated leaf litter, and an abundance of invertebrate prey, particularly termites.  | state. Not observed during field survey.  |
| <i>Athene cunicularia hypugaea</i> | burrowing owl                       | SSC, BLMS, BCC<br><br>MSHCP:<br>Covered | Burrowing owls are a year-round resident of California including habitats of open, dry grassland, and desert. They are generally restricted to mostly flat, open country with suitable nest sites. They use rodent or other burrows for roosting and nesting cover and acquire their burrows from either abandonment or eviction. Burrowing owls typically hunt from a perch.   | Low potential to occur onsite due to ongoing maintenance of habitat on site and lack of burrows observed onsite. Not observed during field survey.  |
| <i>Buteo swainsoni</i>             | Swainson's hawk                     | ST, BLMS, BCC<br>MSHCP:<br>Covered      | Swainson's hawks require large, open areas with abundant prey in association with suitable nest trees. Suitable foraging areas include native grasslands or lightly grazed pastures and croplands, open deserts, sparse shrub lands. Swainson's hawks often nest peripherally to riparian systems of the valley, as well as utilizing lone trees or groves of trees, such as oaks, cottonwoods, walnuts and willows, adjacent to their hunting areas. In the Great Basin, they typically nest in juniper trees of juniper-sage flats not near riparian zones. | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Chaetodipus fallax</i>          | northwestern San Diego pocket mouse | SSC<br><br>MSHCP: Not Covered           | This species is a common resident of sandy herbaceous areas, often on sandy substrates (rocks or coarse gravel) in southwestern California. In San Diego County the species occurs mainly in arid coastal and desert border areas. Habitats include coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland.   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Circus cyaneus</i>              | northern harrier                    | SSC<br>MSHCP:                           | Occurs from annual grassland up to lodge pole pine and alpine meadow habitats. Frequents open fresh and   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively   |



## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                         | Common Name                  | Status                                    | General Habitat Description   | Potential For Occurrence within the Study Area  |
|---|------------------------------|---|---|---|
|   |                              | Covered                                   | saltwater wetlands, grasslands, pastures, upland prairies, dry uplands, croplands, shrub-steppe, meadows, desert sinks. It is seldom found in wooded areas. It uses tall grasses and forbs in wetlands for cover and it roosts on ground. It is mostly found in flat, open areas of tall, dense grasses, moist or dry shrubs, in the vicinity of marshes, rivers, ponds, or grassy valleys for nesting, cover, and feeding.   | maintained and in a consistent non-vegetated state. Not observed during field survey.   |
| <i>Coccyzus americanus occidentalis</i> | western yellow-billed cuckoo | FT, SE, FSS, BCC<br><br>MSHCP:<br>Covered | This species is an uncommon to rare summer resident of valley foothill and desert riparian habitats in scattered locations in California. Formerly much more common and widespread throughout lowland California. Roosts and nests in densely foliated, deciduous trees and shrubs in extensive thickets, particularly willows.   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Coleonyx variegatus abbotti</i>      | San Diego banded gecko       | MSHCP:<br>Covered                         | Prefers rocky areas in coastal sage and chaparral.  | None. Suitable habitat does not exist within Study Area. Not observed during field survey.  |
| <i>Crotalus ruber</i>                   | red-diamond rattlesnake      | SSC, FSS<br><br>MSHCP:<br>Covered         | It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake, however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats. They need rodent burrows, cracks in rocks or surface cover objects. | None. Suitable habitat does not exist within Study Area. Not observed during field survey.  |
| <i>Dipodomys merriami parvus</i>        | San Bernardino kangaroo rat  | FE, SSC<br><br>MSHCP:<br>Covered          | Typically found in Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans and floodplains, and along washes with nearby sage scrub.  | None. No suitable habitat on site. Not observed during field survey.  |

## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                    | Common Name                    | Status                              | General Habitat Description   | Potential For Occurrence within the Study Area  |
|------------------------------------|--------------------------------|-------------------------------------|---|---|
| <i>Dipodomys stephensi</i>         | Stephen's kangaroo rat         | FE, ST<br><br>MSHCP:<br>Covered     | This species prefers large areas of disturbed or patchy annual and perennial grasslands and open coastal sage scrub. Preferred perennials plant species include buckwheat and chamise and preferred annual plant species include brome grass. The nearest known populations are in Rancho Guejito and at the Naval Weapons Station in Fallbrook.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Elanus leucurus</i>             | White-tailed kite              | FP<br><br>MSHCP:<br>Covered         | Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands and oak woodlands. Dense canopies used for nesting and cover.   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Empidonax traillii extimus</i>  | Southwestern willow flycatcher | FE, SE<br><br>MSHCP:<br>Covered     | Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.   | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Emys marmorata</i>              | southwestern pond turtle       | SCC<br><br>MSHCP:<br>Covered        | Inhabits permanent or nearly permanent water below 1,830 meters (6000 feet) throughout California, west of the Sierra Cascade.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Eremophila alpestris actia</i>  | California horned lark         | WL<br><br>MSHCP:<br>Covered         | A year-long resident within the state and within a variety of open habitats, usually where trees and large shrubs are absent. They are not particular about the nature of the field, so long as it has very little vegetation. Range-wide, they breed in level or gently sloping short grass prairies, montane meadows, "bald" hills, open coastal plains, fallow grain fields, alkali flats, and rangelands. Within southern California, California horned larks breed primarily in open fields, (short) grasslands, and rangelands. Grasses, shrubs, forbs, rocks, litter, clods of soil, and other surface irregularities provide cover. | Moderate potential to occur on site due to the bare nature of the site. Not observed during field survey.   |
| <i>Eumops perotis californicus</i> | western mastiff bat            | SSC, BLMS<br><br>MSHCP: Not covered | Western mastiff bats are found in a variety of habitats, such as semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban, but the species' distribution may be  | None. No suitable habitat on site. Not observed during field survey.  |

## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                 | Common Name              | Status                        | General Habitat Description  | Potential For Occurrence within the Study Area  |
|---------------------------------|--------------------------|-------------------------------|--|---|
|                                 |                          |                               | geomorphically determined, occurring primarily where there are significant rock features offering suitable roosting habitat. A cliff dwelling species, where maternity colonies of 30 to several hundred roost generally under exfoliating rock slabs and rock crevices along cliffs. Western mastiff bats can also be found in similar crevices in large boulders and buildings. When roosting in rock crevices they require a sizable drop from their roost in order to achieve flight. Western mastiff bats prefer deep crevices that are at least 15 or 20 feet above the ground. Foraging is concentrated around bodies of water but also includes coastal sage scrub, chaparral, and grassland habitats. |   |
| <i>Icteria virens</i>           | yellow-breasted chat     | SSC<br><br>MSHCP:<br>Covered  | In southern California they are primarily found in tall, dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Breeding habitat must be dense to provide shade and concealment. It winters south to Central America.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Lasiurus xanthinus</i>       | Western yellow bat       | SSC<br><br>MSHCP: Not covered | Roost in trees, hanging from the underside of a leaf. Commonly found in the southwestern U.S. roosting in the skirt of dead fronds in both native and non-native palm trees and have also been documented roosting in cottonwood trees.  | None. No suitable habitat on site. Not observed during field survey.  |
| <i>Nyctinomops femorosaccus</i> | pocketed free-tailed bat | SSC<br><br>MSHCP: Not covered | This bat species prefers rocky desert areas with high cliffs or rock outcrops. Rock crevices in cliffs are preferred as roosting sites, since the bat must drop from the roost to gain flight speed. Typically reproduces in rock crevices, caverns, or buildings. Ranges from southern California to New Mexico.  | None. No suitable habitat on site. Not observed during field survey.  |
| <i>Perognathus blainvili</i>    | Los Angeles Pocket Mouse | SSC<br>MSHCP:<br>Covered      | Prefers sandy soil for burrowing. Also known to occur on gravel washes and in rocky soils. Associated with coastal scrub.  | Low. No suitable habitat on site. Not observed during field survey.   |



## Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name                           | Common Name                    | Status                             | General Habitat Description  | Potential For Occurrence within the Study Area  |
|---|--------------------------------|------------------------------------|--|---|
| <i>Phrynosoma blainvillii</i>             | coast horned lizard            | SSC, BLMS<br><br>MSHCP:<br>Covered | Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland and riparian woodlands.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Polioptila californica californica</i> | coastal California gnatcatcher | FT, SSC<br><br>MSHCP:<br>Covered   | A non-migratory, permanent resident of coastal sage scrub habitat, which is a broad category of vegetation that includes the following plant communities: Ventura coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. They also use chaparral, grassland and riparian habitats next to coastal sage scrub, but these habitats are used dispersal and foraging. They avoid nesting on steep slopes.   | None. No suitable habitat on site. Not observed during field survey.  |
| <i>Setophaga petechial</i>                | Yellow warbler                 | SSC, BBC<br><br>MSHCP:<br>Covered  | Riparian plant associations in close proximity to water. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Spea hammondi</i>                      | western spadefoot toad         | SSC, BLMS<br><br>MSHCP:<br>Covered | May be found in coastal sage scrub, open chaparral, pine-oak woodlands and grassland habitats, but is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas. Within these habitats, they require rain pools/vernal pools in which to reproduce and that persist with more than three weeks of standing water in which to metamorphose successfully. They can also breed in slow-moving streams (e.g., areas flooded by intermittent streams). Water breeding sites must lack fish, bullfrogs, and crayfish in order for to successfully reproduce and metamorphose. They estivate in sandy, gravelly soil in upland habitats adjacent to potential breeding sites in burrows approximating 1 meter in depth. | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively maintained and in a consistent non-vegetated state. Not observed during field survey. |
| <i>Vireo bellii pusillus</i>              | least Bell's vireo             | FE, SE                             | Least Bell's vireos primarily occupy riverine riparian habitats that typically feature dense cover within 1-2 m  | None. No suitable habitat is found within the Study Area. Furthermore, the Project site is actively   |

Appendix D – Special Status Wildlife Potential Occurrence Determination

| Scientific Name | Common Name | Status            | General Habitat Description  | Potential For Occurrence within the Study Area  |
|-----------------|-------------|-------------------|--|---|
|                 |             | MSHCP:<br>Covered | of the ground and a dense, stratified canopy. Typically, it is associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses. 2,000 feet elevation in the interior. This species is generally restricted to major river systems in San Diego County. | maintained and in a consistent non-vegetated state. Not observed during field survey. |

| Legend   |
|--|
| <p><b>Federal Endangered Species Act (ESA) Listing Codes:</b> federal listing is pursuant to the Federal Endangered Species Act (ESA) of 1973, as amended. The official federal listing of Endangered and Threatened Animals is published in the Federal Register, 50 CFR 17.11.</p> <p>FE = federally listed as endangered: any species, subspecies, or variety of plant or animal that is in danger of extinction throughout all or a significant portion of their range.</p> <p>FT = federally listed as threatened: any species, subspecies, or variety of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.</p> <p>FC = federal candidate for listing.</p> <p>FPT = federally proposed threatened.</p> <p><b>California Endangered Species Act (CESA) Listing Codes:</b> state listing is pursuant to §2074.2 and §2075.5 (California Endangered Species Act of 1984) of the Fish and Game Code, relating to listing of Endangered, Threatened and Rare species of plants and animals. The official California listing of Endangered and Threatened animals is contained in the California Code of Regulations, Title 14, and Section 670.5.</p> <p>SE = state listed as endangered: any species, subspecies, or variety of plant or animal that are in serious danger of becoming extinct throughout all, or a significant portion, of their range.</p> <p>ST = state listed as threatened: any species, subspecies, or variety of plant or animal that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future.</p> <p>SCT = state candidate for listing as threatened.</p> <p><b>California Department of Fish and Wildlife (CDFW):</b></p> <p>SSC = species of special concern: status applies to animals which 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist. The CDFW has designated certain vertebrate species as “species of special concern” because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.</p> <p>Fully protected: animal species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.</p> <p>WL = watch list: these birds have been designated as “Taxa to Watch” in the <i>California Bird Species of Special Concern report</i> (Shuford and Gardali 2008). The report defines</p> |

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan

“Taxa to Watch” as those that are not on the current special concern list that (1) formerly were on the 1978 (Remsen 1978) or 1992 (CDFG 1992) special concern lists and are not currently listed as state threatened and endangered; (2) have been removed (delisted) from either the state or federal threatened and endangered lists (and remain on neither), or (3) are currently designated as “fully protected” in California.

United States Fish and Wildlife Service (USFWS):

BCC = USFWS bird of conservation concern: listed in the USFWS'S 2008 *Birds of Conservation Concern* report. The report identifies species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the ESA. While all of the bird species included in the report are priorities for conservation action, the list makes no finding with regard to whether they warrant consideration for ESA listing.

United States Forest Service (USFS):

FSS = Forest Service sensitive: those plant and animal species identified by a Regional Forester that are not listed or proposed for listing under the ESA and for which population viability is a concern, as evidenced by: (a) significant current or predicted downward trends in population numbers or density or (b) significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.”

United States Bureau of Land Management (BLM):

BLMS = BLM sensitive: those plant and animal species on BLM administered lands and that are (1) under status review by the USFWS/NMFS; or (2) whose numbers are declining so rapidly that federal listing may become necessary, or (3) with typically small and widely dispersed populations; or (4) those inhabiting ecological refugia or other specialized or unique habitats. BLM policy is to provide the same level of protection as USFWS candidate species.

California Department of Forestry and Fire Protection (CDF):

CDF: S = CDF sensitive: species is a California Department of Forestry and Fire Protection sensitive species. The Board of Forestry classifies as sensitive species those species that warrant special protection during timber operations.

Sources:

- A Guide to the Reptiles and Amphibians of California (CaliforniaHerps.com 2018).
- *A Field Guide to Hawks of North America, Second Edition* (Clark and Wheeler 2001).
- *Atlas of Breeding Birds, Orange County, California* (Gallagher 1997).
- Amphibian and Reptile Species of Special Concern in California (Jennings and Hayes 1994).
- *A Field Guide to Mammals of North America North of Mexico. Fourth Edition* (Reid 2006).
- *A Natural History of California* (Schoenherr 1992).
- *A Field Guide to Western Reptiles and Amphibians, Third Edition* (Stebbins 2003).
- Amphibian species accounts (Amphibiaweb 2018).
- AOU website (AOU 2018).
- *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California* (Shuford and Gardali 2008).
- Check-List of North American Birds, 7th edition (American Ornithologists' Union [AOU] 1998).
- *Complete Birds of North America* (National Geographic Society 2006).



- *Field Guide to the Birds of North America*, 4<sup>th</sup> Ed (National Geographic Society 2002).
- Fifty-first supplement to the AOU Check-List of North American Birds (Chesser et. al. 2010).
- Life History Accounts and Range Maps (CDFW 2018e).
- *Life on the Edge: A Guide to California's Endangered Natural Resources. Wildlife* (Thelander et al. 1994).
- *Mammals of North America* (Bowers et al. 2004).
- *Mammals of California* (Eder 2005).
- *Mammals of North America* (Kays and Wilson 2002).
- Mammalian Species of Special Concern in California (Williams 1986).
- *Mammal Species of the World* (Wilson and Reeder 2005).
- NatureServe Explorer (NatureServe 2018).
- *National Audubon Society, the Sibley Guide to Birds* (Sibley 2000).
- RareFind, CDFW, California Natural Diversity Database (CNDDB) (CDFW 2018).
- *Reference Atlas to the Birds of North America* (National Geographic Society 2003).
- *Shorebirds of North America. The Photographic Guide* (Paulson 2005).
- Special Animals List (CDFW 2018h).
- Standard Common and Current Scientific Names (Center for North American Herpetology website [CNAH] website 2018).
- *The Smithsonian Book of North American Mammals* (Wilson and Ruff 1999).
- Terrestrial Mammal Species of Special Concern in California (Bolster 1998).

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## Appendix C: Site Photographs



Looking north-west across the Project site.



Looking north-east across the Project site.

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





Looking east across the Project site at the previously graded development pads.



Retention Basin located on the northwestern most portion of the site to capture and retain the nuisance water and runoff.

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





Looking south across the Project site.



Looking west at the Project Site.

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





Looking north-west across the Project Site.



The Project site is utilized as a stock pile location for the active construction located on the property directly north to the Project site.

Attachment: MSHCP Consistency Determination (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



# Cultural and Paleontological Resources Assessment

## Moreno Valley Ranch Specific Plan No. 193 Amendment No. X

### City of Moreno Valley, Riverside County, California

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Duke CRM Project Number: C-0254



July 11, 2018

Per California Government Code 6254.10 archaeological site location information is exempt from the California Public Records Act. Therefore archaeological site location information should be kept confidential and not be made available for public view.

# DUKE CULTURAL RESOURCES MANAGEMENT

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### Appendix A:

Resumes

## MANAGEMENT SUMMARY

Duke Cultural Resources Management, LLC (DUKE CRM) is under contract to Carlson Strategic Land Solutions to provide cultural and paleontological resources services for the Moreno Valley Ranch Specific Plan No. 193 Amendment No. X (Project), located northwest of Lake Perris in the southern portion of the City of Moreno Valley, Riverside County, California. The Project boundaries encompass approximately 11.64 acres. The purpose of this report is to document efforts made to comply with the California Environmental Quality Act (CEQA). The Applicant, Continental East Fund III, LLC, proposes to amend a previously approved project within the Moreno Valley Ranch Specific Plan No. 193.

The cultural and paleontological resources assessment includes background research and a field survey to identify cultural and paleontological resources. The cultural resources record search did not reveal any cultural resources within the Project boundary; however, 17 previously recorded cultural resources were identified within a one-mile buffer of the project. No fossil localities were documented within the Project; however, fossils are known from other nearby projects in similar geologic contexts. The field survey did not identify any cultural or paleontological resources within the Project boundaries.

DUKE CRM recommends that no archaeological and/or historic resources are likely to be impacted by the Project. However, there is a high sensitivity for paleontological resources in the Project. There is a high sensitivity for paleontological resources in the very old alluvial fan deposits that underlie the Project. Therefore, significant and unique paleontological resources may be impacted by the project during earth disturbing activities. These impacts would be considered potentially significant. In order to reduce the potential for impacts to paleontological resources to a level that is less than significant under CEQA paleontological monitoring is recommended during ground disturbance associated with the project.

If archaeological and/or paleontological resources are discovered during construction, a qualified archaeologist and/or paleontologist shall be retained to assess the nature and significance of the discovery.

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.



## INTRODUCTION

Duke Cultural Resources Management, LLC (DUKE CRM) is under contract to Peter Carlson, Principal Carlson Strategic Land Solutions to provide cultural and paleontological resources services for Moreno Valley Ranch Specific Plan No. 193 Amendment No. X (Project). The Moreno Valley Ranch Specific Plan boundaries generally extend from Kitching Street east to the Lake Perris State Recreation Area in Riverside County, California. The Project boundaries encompass approximately 11.64 acres and the Project is located in the southwest portion of the Specific Plan Area. The purpose of this report is to document efforts made to comply with the California Environmental Quality Act (CEQA).

### Project Description

The Applicant, Continental East Fund III, LLC, proposes to amend a previously approved 19-acre project within the Moreno Valley Ranch Specific Plan No. 193.

In 2012, the City approved a subdivision of approximately 19 acres (PA 11-0026) to build three types of residential products for a total of 216 dwelling units. Conditional Use Permit (CUP) PA11-0027 provided for 36 detached single family and 55 cluster residential units. A CUP was required because the housing was less than the minimum density established for the property's land use and zoning designations. Plot Plan PA11-0025 provided for a 125 unit multiple family apartment project with a recreation building and tot lot on approximately 7.25 acres. A variance was also approved to allow parking to encroach into street side setbacks given the unique site constraints. At that time the City reviewed the project pursuant to CEQA and adopted a Negative Declaration because the Project had no significant impacts on the environment.

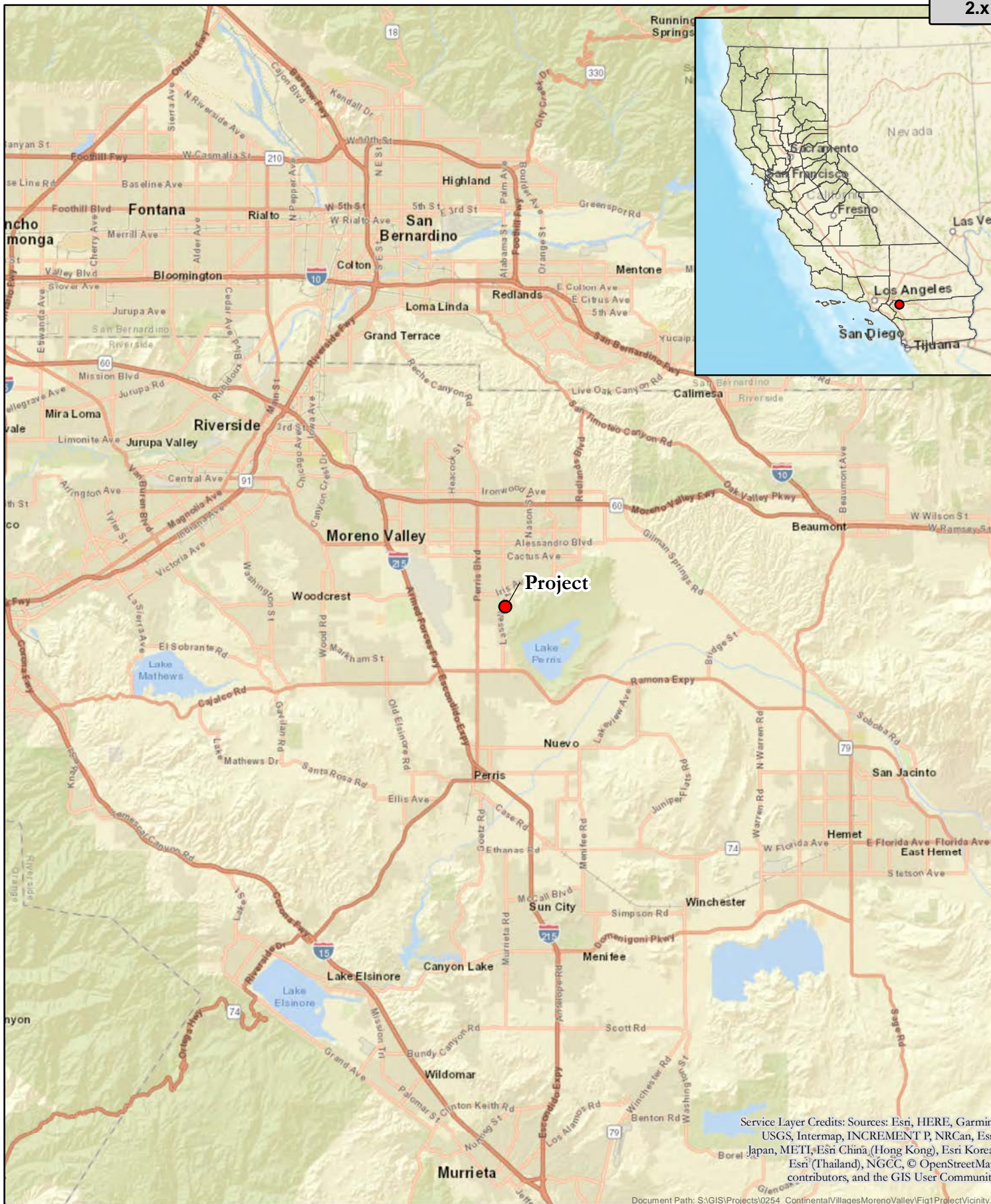
The Applicant initiated construction in 2017; rough graded the 7.25-acre portion of the site and has begun constructing the 125 unit apartment project. The remainder of the site, 11.64 acres, has been left vacant, in a previously rough graded condition. Due to a change in market conditions, the Applicant has requested an approval to modify the previous development approvals to 1) change the approved land use on 2.8 acres from High Density Residential to Neighborhood Commercial; and 2) construct multi-family housing consistent with the existing zoning requirements instead of the single family detached and cluster units previously approved.

The remaining portion of the 19-acre project is 11.64 acres and is the Project that is the subject of this report. The current Project is comprised of 2.8 acres of commercial development and 8.8 acres of high density residential development. The 7.25-acre portion of the prior approved 19 acres is already under development and is not part of the current Project.

The Applicant, Continental East Fund III, LLC, proposes to modify the previous development approvals to 1) change the approved land use on 2.8 acres (Parcel 2) from High Density Residential to Neighborhood Commercial; and 2) construct multi-family housing within Parcel 3 consistent with the existing zoning requirements instead of the single family detached and cluster units previously approved. The Applicant's proposal would require a General Plan Amendment, Zone Change, Specific Plan Amendment, Plot Plan, Tentative Parcel Map, and environmental documentation pursuant to CEQA. Grading associated with the Project includes approximately 50,000 cubic yards. Cut and fill depths are not anticipated to exceed 10 feet (GEOCON WEST, INC 2018) and cut slopes are not expected.

### Project Location

The Project is located in the City of Moreno Valley, in Riverside County, California (Figure 1). The Project is depicted on the United States Geological Survey (USGS) 7.5-Minute Topographic Map *Sunnymead* Quadrangle (Figure 2). It includes assessor parcel numbers (APN) 308-040-053 and 308-040-054 and is bounded by Lasselle Street to the west, Krameria Avenue to the south, Cahuilla Drive to the north and Lasselle Elementary School and the 7.25-acre project to the northeast (Figure 3).

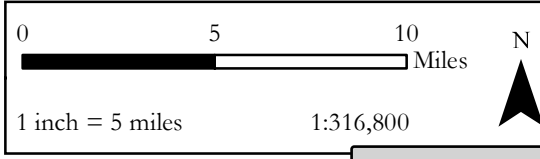


**Figure 1- Project Vicinity**  
 Moreno Valley Ranch Specific Plan No. 193  
 Amendment No. X Project  
 Moreno Valley, County of Riverside



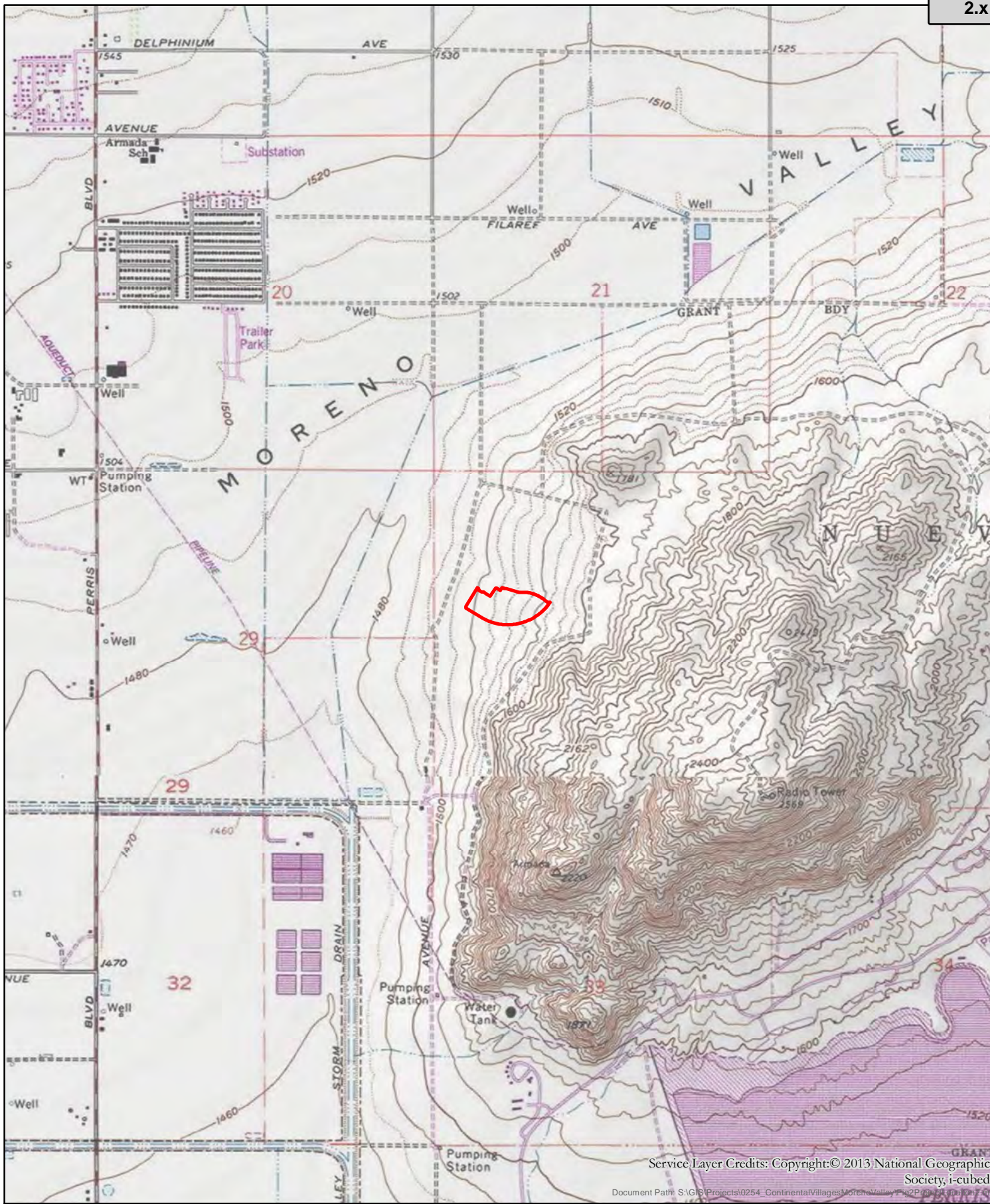
Service Layer Credits: Sources: Esri, HERE, Garmin  
 USGS, Intermap, INCREMENT P, NRCan, Esri  
 Japan, METI, Esri China (Hong Kong), Esri Korea  
 Esri (Thailand), NGCC, © OpenStreetMap  
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Attachment: Cultural Resources Report (July 2018) (3376) : The proposal includes a General Plan Amendment, Specific Plan Amendment,



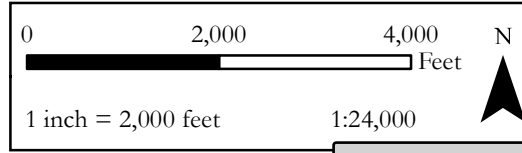


**Figure 2- Project Location**  
 Moreno Valley Ranch Specific Plan No. 193  
 Amendment No. X Project  
 Moreno Valley, County of Riverside

Sunnymead USGS  
 7.5-Min. Quadrangle



Project Boundary







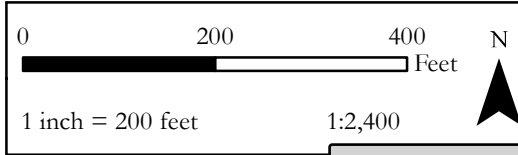


Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Figure 3- Aerial**  
 Moreno Valley Ranch Specific Plan No. 193  
 Amendment No. X Project  
 Moreno Valley, County of Riverside



-  11.64-Acre Current Project
-  19-Acre Previously Approved Project Area



## SETTING

### Natural

California is divided into 11 geomorphic provinces, each naturally defined by unique geologic and geomorphic characteristics. The Project is located in the northeast portion of the Peninsular Ranges geomorphic province which is distinguished by northwest trending mountain ranges and valleys following branches of the San Andreas Fault. The Peninsular Ranges are bound to the east by the Colorado Desert and extend north to the San Bernardino Mountains, west into the submarine continental shelf, and south to the California state line.

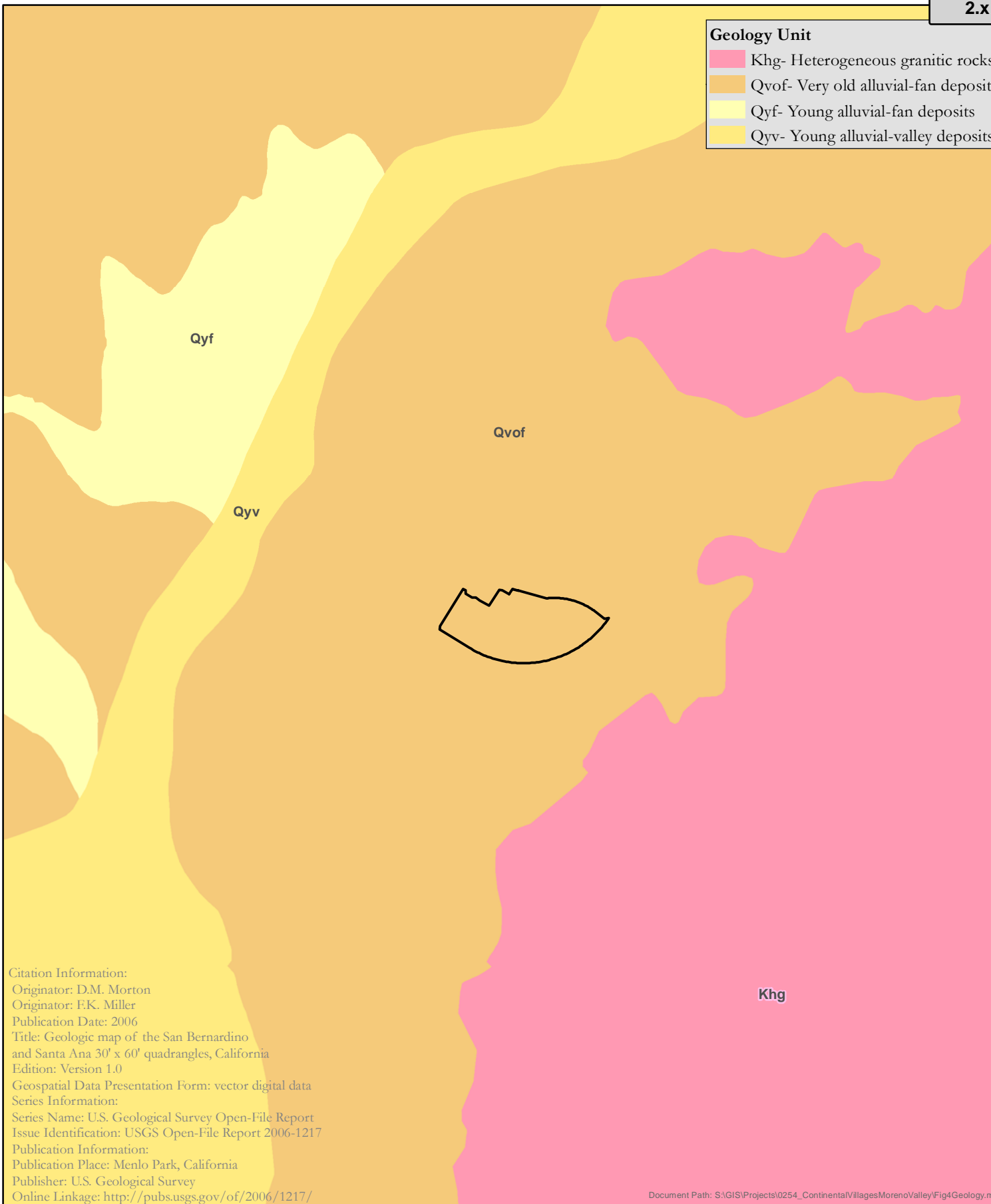
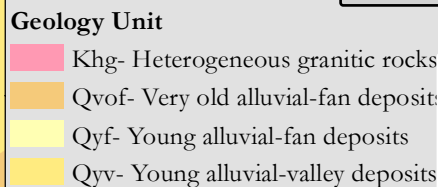
The Project is located in the northern portion of the Perris Block, a tectonically stable package of Cretaceous and older granitic and metasedimentary basement rocks from the Peninsular Ranges Batholith (Morton and Matti 2001, Springer et al. 2009). Locally, the Project is situated at the base of local highlands composed of plutonic rocks from the Perris Block (Morton and Matti 2001), on alluvial deposits that can reach up to 2,000 feet in thickness (City of Moreno Valley 2006).

The geology in the vicinity of the project has been mapped by Morton and Matti (2001) at a scale of 1:24,000 (Figure 4). A review of this map indicated that the Project is exclusively underlain by very older alluvial fan deposits (Qvofa).

#### *Very old alluvial fan deposits (Qvofa) (early Pleistocene)*

Very old alluvial fan deposits in this area are composed of slightly to well consolidated to indurated sediments, capped by moderately- to well-developed pedogenic soils (Morton and Matti, 2001). In the Project, these deposits are dominated by sand-sized sediment (arenaceous), and are sourced by the adjoining highlands to the south (Morton and Matti, 2001). These deposits underlie the entire Project.





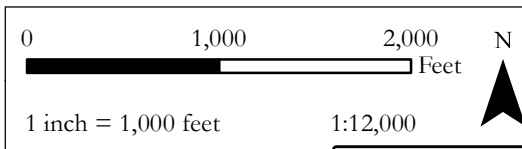
Citation Information:  
 Originator: D.M. Morton  
 Originator: F.K. Miller  
 Publication Date: 2006  
 Title: Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California  
 Edition: Version 1.0  
 Geospatial Data Presentation Form: vector digital data  
 Series Information:  
 Series Name: U.S. Geological Survey Open-File Report  
 Issue Identification: USGS Open-File Report 2006-1217  
 Publication Information:  
 Publication Place: Menlo Park, California  
 Publisher: U.S. Geological Survey  
 Online Linkage: <http://pubs.usgs.gov/of/2006/1217/>

Document Path: S:\GIS\Projects\0254\_ContinentalVillagesMorenoValley\Fig4Geology.m

**Figure 4- Geology**

Moreno Valley Ranch Specific Plan No. 193  
 Amendment No. X Project  
 Moreno Valley, County of Riverside

Project Boundary





## Cultural

### *Prehistory*

Two primary regional schemas are commonly cited in the archaeological literature for western Riverside County where the Project is located. These schemas or syntheses generalize the presence or absence of certain artifact types into explanatory frameworks of temporal chronologies and/or subsistence practices. Schemas are necessary because many archaeological sites lack absolute datable material (ex. Carbon for radiometric <sup>14</sup>C dating) and so researchers need to cross-date sites by comparison to either coastal or desert chronologies with established chronological sequences backed by absolute dates. In western Riverside County, it is thought to be the meeting ground of both coastal and inland desert schemas and neither exclusively explains prehistoric finds.

The first schema, advanced by Wallace (1955), defines four cultural horizons for the southern California coastal province, each with characteristic local variations:

- I. Early Man (~9000–8500 B.P.) is a hunting culture based on almost exclusive evidence of chipped-stone hunting materials: dart points, scrapers, choppers, and bifaces.
- II. Milling Stone (8500–4000 B.P.) reflects a change to a more sedentary, plant-collecting lifestyle as evidenced by the introduction and dominance of milling stone artifacts and a decrease in well-made projectile points.
- III. Intermediate (4000–1500 B.P.) is characterized by a larger dependency on hunting, use of the dart and atlatl, and the shift from using the mano/metate to mortar/pestle. However, knowledge of this horizon suffers from lack of knowledge about what occurred during this time, not a lack of inhabitants along the southern California coast.
- IV. Late Prehistoric (1500~200 B.P.) contains a more nuanced artifact assemblage indicative of a more complex lifestyle and an increase of population. This horizon is characterized by an increase in bow and arrow use, steatite containers, pottery, circular fish hooks, perforated stones, asphaltum, diversified bone tools, ample shell ornaments, and elaborate mortuary customs.

Warren and Crabtree (1986) employ a more ecological approach to the deserts of southern California, defining five traditions in prehistory:

- I. Lake Mojave (12000–7000 B.P.)
- II. Pinto (7000–4000 B.P.)
- III. Gypsum (4000–1500 B.P.)
- IV. Saratoga Springs (1500–800 B.P.)
- V. Shoshonean (800~200 B.P.)

Warren and Crabtree (1986) viewed cultural continuity and change in terms of various significant environmental shifts, defining the cultural ecological approach for archaeological research of the California deserts. The authors viewed changes in settlement pattern and subsistence as cultural adaptations to a changing environment, beginning with the gradual environmental warming in the late Pleistocene, the desiccation of the desert lakes during the early Holocene, the short return to pluvial conditions during the middle Holocene, and the general warming and drying trend, with periodic reversals, that continues to this day. The work by Warren and Crabtree (1986) is built upon, in part, by Warren (1980) in which he argued for a chronology based on projectile points as period markers backed by radiocarbon assays providing absolute dates.

The two schemas contrast in important ways. The units employed by Warren are “traditions,” and in contrast to Wallace (1955), traditions may be spatially restricted but display temporal continuity. For Wallace, “horizons” or “periods,” are extensive through space but restricted in time. More recent schema have been attempted to reconcile these differences.

***Early Holocene (11,600 – 7,600 BP)***

Traditional models of the prehistory of California hypothesize that its first inhabitants were the big game hunting Paleoindians who lived at the close of the last ice-age (~11,000 years before present [BP]). As the environment warmed and dried, large Ice Age fauna died out, requiring adaption by groups to survive. The western Great Basin and deserts of southern California were characterized by large pluvial (rainfall-fed) lakes, streams, marshes, and grasslands. The human response to this environment is known as the Western Pluvial Lakes Tradition (WPLT) (Moratto 1984). The WPLT is generally identified by an advanced flaked-stone industry of foliate knives/points, Silver Lake and Lake Mojave points, lanceolate bifaces, and long-stemmed points. Other flaked-stone tools include crescents, scrapers, choppers, scraper-planes, hammer stones, cores, drills, and graters. People of this period hunted diverse populations of smaller animals and collected a wide number of plants from diverse eco-zones. Importantly, this period lacks widespread evidence of milling stones, and, therefore, hard seed processing was likely not widely practiced. Sites are generally found along the shores of former pluvial lakes, marshes, and streams (Moratto 1984). The desert manifestation of the WPLT is the Lake Mojave Complex, while along the coast the WPLT is seen in the San Dieguito Complex. Along the coast, rising sea levels created bays and estuaries. Following initial settlement along the coast, groups adopted marine subsistence including fish and shellfish. These shell middens contain flaked cobble tools, metates, manos, discoidals, and flexed burials and allowed for a semi sedentary life style (Byrd and Raab 2007). Eventually, shellfish became the primary source of food, while plant gathering, hunting and fishing were less important.

The Paleocoastal Tradition (PCT) has many similarities to the WPLT but it reflects a coastal adaptation (Davis et al. 1969). PCT sites are located along bays and estuaries. Subsistence patterns indicate the eating of mollusks, sea mammals, sea birds, and fish in addition to land plants and animals. The argument for a PCT has gained momentum. This is based on a vast amount of recent research that has been conducted along the California coast and the Channel Islands (Byrd and Raab 2007). A recent study dates habitation on San Miguel Island back to ~11,300 BP (Daisy Cave), while a site on San Clemente (Eel Point) shows that a Paleocoastal Tradition was entrenched at Eel point in the early Holocene, with the hunting of seals, sea lions, and dolphins, as well as the gathering of shellfish.

***Middle Holocene (7,600 – 3,650 BP)***

The middle Holocene is a time of change and transition. As conditions continued to warm and dry, lakes and streams in the desert disappeared. This resulted in a shift in subsistence strategies, namely a shift to the gathering of plant seeds, grasses and shellfish along the coast as the primary dietary staple. Fishing and the hunting of smaller animals played a less important role in day to day activity. This shift in subsistence is what Wallace named the Millingstone Horizon (Wallace 1955) and this name has continued among archaeologists working on the coastal province of southern California. Large habitations are seen in the inland areas and considerable variability is seen along coastal occupation of southern California. Occupation revolved around seasonal and semi-sedentary movements in coastal Orange and San Diego counties. Trade networks are postulated by researchers that have dated Ollivella grooved rectangle shell beads as far north as central Oregon dating to 4900-3500 BP (Byrd and Raab 2007). Characteristics of the middle Holocene sites include ground stone artifacts (manos and metates) used for processing plant material and shellfish, flexed burial beneath rock or milling stone cairns, flaked core or cobble tools, dart points, cogstones, discoidals, and crescentics.

***Late Holocene (3,650 – 233 BP)***

During the late Holocene there was a migration of Takic speakers from the Great Basin into southern California. Sutton (2009) was able to show while Takic speakers did in fact physically migrate, linguistic, biological, and archaeological evidence indicates that by about 1,500 B.P., the Gabrielino language had become sufficiently distinct from its northern origins to be classified in a different branch of Takic. About this same time, the language was adopted by an existing Yuman group to the south that would become Luiseño (Sutton 2009:62). Characteristics of the late Holocene include the introduction of the bow and arrow, mortar and pestle, use of ceramics, and a change in mortuary behavior from inhumations to cremations in southern California. This was also a period of climatic fluctuation. Paleoenvironmental data show that periods of drought alternated with cooler and moister periods (Vellanoweth and Grenda 2002; Byrd and Raab 2007;

## DUKE CULTURAL RESOURCES MANAGEMENT

Jones et al. 2004). This resulted in dynamic regional cultural patterns with considerable local variation. Byrd and Raab (2007) suggest that foragers in southern California over-exploited high-ranked food, such as shellfish, fish, marine and land mammals, and plant remains. This led to resource depression, causing people to forage more costly resources that were more abundant.

### *Ethnography*

The Project is located within two tribal territories, the Cahuilla and the Luiseño Indians. Both are Takic speakers and descended from prehistoric populations of the region. Takic is part of the larger Uto-Aztecan language stock which migrated west from the Great Basin (Bean and Smith 1978).

Cahuilla territory included the Coachella Valley, the San Jacinto and Santa Rosa Mountain ranges. Bean and Shipek (1978) estimated that the Cahuilla numbered between 6,000 and 10,000 people at the time of Spanish Contact. Politically and ceremonially Cahuilla clans were led by a Chief or Net. The Net had charge of the sacred dance house and the sacred bundle, masut, which consisted of matting which was wrapped around items sacred to the clan such as ritual paraphernalia. Importantly, the masut was the sacred expression of each clan. A Paha, ritual assistant, is also found among other Takic speaking groups. The office of Paha varied however, as it was not always present within some of the southern-most Desert Cahuilla clans (Bean and Saubel 1972, Bean and Shipeck 1978; Hooper 1920). As other Takic speaking groups did, the Cahuilla would publically gather for the naming of children, marriage, female and male initiation ceremonies, for the ascendency of a Net, for an Eagle-Killing Ceremony and the mourning ceremony. The mourning ceremony took place as a way to collectively mourn all those that died since the previous mourning ceremony. Each person was cremated along with his or her individual possessions in a ceremony separate from the mourning ceremony. Mourning ceremonies were one of the most important ceremonies for clan in that sacred songs were sung, sacred dances were danced, and moieties exchanged food and valued goods.

Cahuilla diet emphasized acorn, Salvia islay, yucca, agave and pinyon gathering, or the gathering of mesquite, cactus, and hard seeds such as screwbean, juniper and mesquite depending upon the local environment (Bean and Saubel 1972). The Cahuilla were also observed to cultivate small quantities of corn, beans, squashes, pumpkins, melons and wheat as early as 1824 by the Romero expedition. These crops and the cultivation of them potentially made their way from the Colorado River area to the Coachella Valley. The inhabitants of the Coachella did not practice flood recessional agriculture of the Colorado River groups (Bean and Lawton 1993).

The territory of the Luiseño extended along the coast south to Agua Hedionda Lagoon, northwestward to Aliso Creek just north of San Juan Capistrano, and eastward to the Elsinore Valley and Palomar Mountain. Like other Native American groups in southern California, the Luiseño caught and collected seasonally available food resources and led a semi-sedentary lifestyle with the majority of individuals residing at the village for the entire year (Oxendine 1983:57). Luiseño villages were generally located in valley bottoms near to water. The Luiseño had a well-developed sense of ownership (White 1963:122), and their concept of property rights included the idea of private property. Property rights covered items and land owned by the village as well as items such as houses, gardens, ritual equipment, trade beads, eagle nests, and songs that were owned by individuals. Luiseño villages were politically independent and were administered by a chief, who inherited his position from his father (Bean and Shipek 1978).

Subsistence was based primarily on seeds from local grasses, manzanita, sunflower, sage, chía, and pine nuts, as well as acorns. Seeds were dried, ground, and cooked into a mush. Seasonal camps were also established along the coast and near bays and estuaries to gather shellfish and hunt waterfowl (Hudson 1971). Game animals such as deer, rabbit, jackrabbit, wood rat, mice, antelope, and many types of birds were regularly hunted (Bean and Shipek 1978). In addition, the Luiseño utilized fire for crop management and communal rabbit drives (Bean and Shipek 1978). Small seasonal habitation sites in the area would contain quantities of fire affected rock (FAR), some burned bone, and small amounts of ground and flaked stone tools. They might be found as open sites atop knolls or ridges, or in protected areas near streams, or even in rock shelters.



## DUKE CULTURAL RESOURCES MANAGEMENT

### *History*

The first Europeans to explore what would become the state of California belonged to the 1542 expedition of Juan Rodriguez Cabrillo, who sailed along and occasionally landed on the coast. Europeans are thought to have first visited portions of the interior in 1769, when Gaspar de Portola (Brown 2001) led a 62-person overland expedition from San Diego to Monterey (Cramer 1988). Two later expeditions, led by Juan Bautista de Anza in 1774 and 1775 from Sonora through southwestern Arizona and southern California, crossed the Santa Ana River at Anza Narrows in today's Santa Ana River Regional Park.

The Spanish government subsequently established missions and military outposts in San Diego in 1769 to facilitate colonization of the area and to keep rival European nations out of the area. After Mexico won independence from Spain in 1822, colonization efforts in Alta California decreased. The Spanish mission system was largely abandoned and the Mexican government bestowed land grants or ranchos to those loyal to the Mexican government including some Anglo settlers. The Mexican period (1822-1848) is largely identified with the ranchos acquired by individuals through the land grant system as well as the secularization of the missions. Mission secularization began on July 25, 1826 with a decree by Governor Jose Maria Echeandfa and was completed by 1836 after an additional decree in 1831 (Engstrand and Ward 1995).

The end of the Mexican period in California began on June 14, 1846 when a band of American settlers supported by the American explorer John C. Fremont and his team captured Mexican General Mariano Guadalupe Vallejo in a dawn raid in Sonoma (Ide 1967, Rolle 2003). The Americans raised a flag for the "California Republic" and their actions became known as the "Bear Flag Revolt." The so-called California Republic was short-lived however, as on July 7, 1846, U.S. Navy forces captured Monterey, California, where the U.S. flag was raised (Rolle 2003). On February 2, 1848, the war between the U.S. and Mexico ended with the signing of the Treaty of Guadalupe Hidalgo, which greatly expanded U.S. territory (including California) and resulted in Mexico being paid \$15 million for the land (Rolle 2003).

Although gold had been found prior to this in various parts of California, the well-publicized discovery of gold near Sutter's fort in 1848 dramatically increased the Anglo settlement of California. Despite property rights of rancho owners being secured by provisions in the Treaty of Guadalupe Hidalgo, California in the early American period experienced the transfer and subdivision of many of the ranchos as well as a shift from ranching to agriculture as the primary means of subsistence.

The Anza Expedition moved through the City of Moreno Valley in the late 1770's about a half-mile north of present-day March Air Reserve Base. U.S. settlement began in the 1850's and was an open landscape used for farming. The land was supported by Frank E. Brown's Bear Valley Land and Water Company. The City of Moreno Valley was named after Frank E. Brown, in that "*Moreno*" in Spanish, means, "brown" (Gudde 1998). The Bear Valley Land and Water Company closed in 1899 when the City of Redlands claimed eminent domain; therefore most of the population in Moreno Valley soon diminished until March Field was built in 1918. This helped to create residences within the area and by 1950's the population grew even more when the Riverside International Raceway was built.

## METHODS

Research materials, including historic maps, previous surveys, planning documents, ordinances, and published local and regional historical accounts were collected and reviewed

### **Record Search**

A cultural records search was conducted at the Eastern Information Center (EIC) on March 22, 2018 by DUKE CRM Archaeologist Alex Bulato, B.A. The EIC is part of the California Historical Resources Information System (CHRIS) and is located at the University of California, Riverside. The records search included a review of all recorded historic and prehistoric archaeological sites within a one-mile radius of the Project, as well as a review of known cultural resource survey and excavation reports. In addition, Ms. Bulato examined the California State Historic Property Data File (HPD), which includes the National Register of Historic Places (National Register), California Register of Historical Resources (California Register),

## DUKE CULTURAL RESOURCES MANAGEMENT

California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). The paleontological research conducted for the Project was conducted by Benjamin Scherzer, M.S. This included a paleontological records search through the Western Science Center (WSC) in Hemet. In addition, Mr. Scherzer performed a search of the online collections for the Natural History Museum of Los Angeles County (LACM), the San Bernardino County Museum (SBCM), the University of California Museum of Paleontology (UCMP) and San Diego Natural History Museum (SDNHM), the online Paleobiology Database (PBDB) and The Quaternary Faunal Mapping Project (FAUNMAP), and other published literature for fossil localities from similar deposits near the Project.

### Field Survey

The goal of the pedestrian survey was to identify cultural or paleontological resources that may be within the Project boundaries. The pedestrian survey covered the entire Project using 15 meter transects. Transects covered all areas within the Project which included areas of minimal disturbance, areas that had a moderate to high sensitivity for cultural resources, as well as various areas of prior disturbance. Special attention was paid to rodent burrows and erosion cuts that allowed the observation of soils below the surface. Digital photographs of the Project were taken, along with detailed field notes.

### Personnel

Mr. Duke is the Principal Archaeologist of DUKE C R M. Mr. Duke meets the professional qualifications of the Secretary of the Interior for prehistoric and historical archaeology; he is also a Registered Professional Archaeologist (RPA) who has worked in all phases of archaeology (archival research, field survey, testing and data recovery excavation, laboratory analysis, construction monitoring) since 1994. Mr. Duke holds a Master of Arts degree in Anthropology with an emphasis in archaeology from California State University, Fullerton and a Bachelor of Arts degree in Anthropology from the University of California, Santa Cruz. Mr. Duke has worked throughout southern and Northern California and parts of Arizona and Nevada. He is included on the County's list of qualified archaeologists.

Benjamin Scherzer, Master of Science, Paleontologist, holds a M.S. in Earth Sciences from Montana State University, Bozeman. He has 15 years of experience in paleontological research, field surveys, fossil salvage, laboratory identification, report preparation, and curatorial experience. Mr. Scherzer is a registered paleontologist with the Riverside County. Mr. Scherzer is a member of the Society for Vertebrate Paleontology, Geological Society of America, Society for Sedimentary Geology, and the Paleontological Society.

Curt Duke, M.A. RPA is the primary author; and Sarah Nava, B.A. and Andrew DeLeon, M.A. are contributing authors of the report. Paleontologist Benjamin Scherzer, M.S., prepared the paleontology and geology sections. Mr. Scherzer and Mr. DeLeon conducted the field survey, and Alex Bulato, B.A. conducted the record search. Mr. Duke is the Principal Investigator and oversaw completion of all tasks and reviewed this report. Please see Appendix A for staff resumes.

## RESULTS

### Background Research

#### *Cultural Resources Records Search*

On March 22, 2018, Alex Bulato conducted a records search at the EIC. There are 17 cultural reports on file within one mile of the Project which are listed in Table 1. Approximately 50 percent of the one-mile radius has been surveyed for cultural resources. One of the reports covers the Project, *Cultural Resource Survey Report on Wolfskill Ranch* (SRS 1984). This project was a large pedestrian survey that included at least 4,000 acres. The report documents 51 archaeological resources; however, none of them is near the current Project.

## DUKE CULTURAL RESOURCES MANAGEMENT

Table 1- Prior Cultural Reports within One Mile of the Project

| Report No. | Year | Author  | Title  |
|------------|------|---|--|
| RI-00137   | 1974 | James F. O'Connell, Philip J. Wilke, Thomas F. King, and Carol L. Mix                             | Perris Reservoir Archaeology, Late Prehistoric Demographic Change in Southeastern California   |
| RI-00698   | 1979 | Roger J. Desautels  | Archaeological/Paleontological Survey Report on the Proposed Lake Perris Power Plant and Bypass Project Located in the Perris Reservoir of the County of Riverside, W.O. 4-4485                          |
| RI-01665   | 1983 | Wirth Associates  | Devers-Serrano-Villa Park Transmission System Supplement to the Cultural Resources Technical Report - Public Review Document and Confidential Appendices   |
| RI-01843   | 1984 | Scientific Resource Surveys, Inc.   | Cultural Resource Survey Report on Wolfskill Ranch   |
| RI-02171   | 1987 | McCarthy, Daniel F.   | Cultural Resources Inventory for the City of Moreno Valley, Riverside County, California   |
| RI-03693   | 1991 | Foster, John M., James J. Schmidt, Carmen A. Weber, Gwendolyn R. Romani, and Roberta S. Greenwood | Cultural Resource Investigation: Inland Feeder Project, Metropolitan Water District of Southern California   |
| RI-04010   | 1996 | White, Robert S.  | An Archaeological Assessment of the 7300-Foot Perris Valley Channel Stage 1 Project, Moreno Valley, Riverside County   |
| RI-04417   | 1989 | McCarthy, Daniel F.   | Rock Art Studies at Lake Perris State Recreation Area, Riverside County, California  |
| RI-04745   | 2004 | Thal, Erika   | Letter Report: Proposed Cellular Tower Project(s) in Riverside County, California, Site Name/Number: CA-8863A/Iris   |
| RI-06140   | 2004 | Aislin-Kay, Marnie  | Letter Report: Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate SC-313-01 (El Potrero Park), Arroyo Park and Laselle Street, Moreno Valley, Riverside County, CA |
| RI-06693   | 2007 | Tang, Bai "Tom"   | Letter Report: Historical/Archaeological Resources Study: MVRWRF Bardenpho Plant Modification Project, City of Moreno Valley, Riverside County, California   |
| RI-07618   | 2007 | Tang, B. and Hogan, M.  | Identification and Evaluation of Historic Properties: Moreno Valley Regional Water Reclamation Facility Bardenpho Plant Modification Project   |
| RI-08125   | 2008 | Bonner, Wayne and Aislin-Kay, Marnie  | Letter Report: Cultural Resources Records Search Telecommunications Facility Candidate   |
| RI-08235   | 2001 | James E. Workman  | Cupules A Type of Petroglyphic Rock Art. A Study of the Pitted Boulders in the San Jacinto Wildlife Area and the Lake Perris State Recreational Area   |



## DUKE CULTURAL RESOURCES MANAGEMENT

|          |      |   |   |
|----------|------|---|---|
| RI-08802 | 2012 | Bai "Tom" Tang,<br>Michael Hogan,<br>Deirdre Encarnacion,<br>and Daniel Ballester | Phase I archaeological Assessment: Moreno Master Drainage Plan Revision   |
| RI-09413 | 2013 | Brian F. Smith and Associates Inc.  | A Phase I Cultural Resource Assessment for the Modular Logistics Center, Moreno Valley, Riverside County, California  |
| RI-09934 | 2005 | Bonner, Wayne and Aislin-Kay, Marnie  | Cultural Resource Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate RS-0058-01 (Riverside Community College), 16130 Lasselle Street, Moreno Valley, Riverside County, California |

Records from the EIC indicate that there are 17 cultural resources mapped within one mile of the Project boundary and that none are recorded within the Project. Sixteen of the cultural resources within the 1-mile search buffer are prehistoric cultural resources, and one is a 1944 army bomber "Liberator" crash historic site. All of the prehistoric cultural resources recorded within the search radius are rock features discussed in the *Cultural Resource Survey Report on Wolfskill Ranch* report (SRS 1984). The 17 cultural resources are summarized in Table 2, below.

**Table 2- Cultural Resources within One Mile of the Project**

| Primary # | Resource Type    | Resource Description   | Distance (miles) |
|-----------|------------------|--|------------------|
| 33-000715 | Prehistoric Site | Bedrock milling station                                      | 0.15 SE          |
| 33-000533 | Prehistoric Site | Milling station  | 0.3 E            |
| 33-000534 | Prehistoric Site | Milling station  | 0.3 NE           |
| 33-000531 | Prehistoric Site | Bedrock milling station                                      | 0.3 S            |
| 33-000532 | Prehistoric Site | Bedrock milling station                                      | 0.35 E           |
| 33-002829 | Prehistoric Site | Milling station  | 0.35 E           |
| 33-000535 | Prehistoric Site | Milling station  | 0.4 NE           |
| 33-000530 | Prehistoric Site | Bedrock milling station                                      | 0.55 S           |
| 33-000536 | Prehistoric Site | Milling station  | 0.6 NE           |
| 33-000538 | Prehistoric Site | Milling station  | 0.6 NE           |
| 33-002994 | Prehistoric Site | Milling station  | 0.65 N           |
| 33-000537 | Prehistoric Site | Milling station  | 0.7 NE           |
| 33-000539 | Prehistoric Site | Milling station  | 0.7 NE           |
| 33-000541 | Prehistoric Site | Bedrock milling station                                      | 0.85 NE          |
| 33-017939 | Historic Site    | Site consisting of plane debris, human remains               | 0.85 SE          |
| 33-000012 | Prehistoric Site | Site consisting of milling features, rock shelters, rock art | 0.9 S            |
| 33-000540 | Prehistoric Site | Milling station  | 0.95 NE          |

#### ***Historic Maps and Photograph Analysis***

Historic topographic maps and historic aerial photographs were examined to identify historic buildings and other features near the Project. The earliest map examined of the area is a USGS topographic map of

## DUKE CULTURAL RESOURCES MANAGEMENT

Elsinore, CA from 1901. This map shows the Project and surrounding area as entirely undeveloped; the only developments shown in the vicinity are an Indian school 3.5 miles southwest and the Southern California Railroad 3.75 miles west of the Project (U.S. Department of the Interior, U.S. Geologic Survey). The Indian school is no longer visible on a USGS topographic map of the same area from 1904; the next available topographic map is of Perris, CA from 1942, on which Highway 395 (now I-215) is now visible alongside the Southern California Railroad. This 1942 map also shows the development of March Air Force Base, then called March Field, 3.75 miles northwest of the Project by this time. USGS topographic maps from as late as 1985 show no development to the Project; residential development directly west of the Project is visible on a historic aerial photograph from 1997, meaning that the area was developed between 1985 and 1997 (Nationwide Environmental Title Research, LLC)

### ***Paleontological Resources Records Search***

On March 26, 2018 the WSC performed a paleontological records search to locate fossil localities within and in the vicinity (within a 1 mile radius) of the proposed Project. No fossil localities were documented within the Project, but did indicate that the Diamond Valley Lake Project to the south produced over 250,000 fossil specimens, representing over 105 taxa of large and small mammals, reptiles, invertebrates, and plants (Springer, et al., 2009). In addition, B. Scherzer performed a search of the online collections for the LACM, SBCM, UCMP SDNHM, PBDB and FAUNMAP, and other published literature for fossil localities from similar deposits nearby (within ~3 miles).

### ***Paleontological Sensitivity***

The Lake View Hot Springs (~3 miles away) produced remains of mammoth/mastodon, horse, and turtle (Jefferson, 1991a, b). Due to their potential to contain significant fossils, very old alluvial fan deposits are assigned a high paleontological sensitivity (Table 3 and Figure 5)).

**Table 3: Geologic Units and Their Paleontological Potential**

| Age         | Geologic Unit                                       | Fossils Present  | Paleontological Sensitivity |
|-------------|---|--|-----------------------------|
| Pleistocene | Very old alluvial fan deposits (Qvof <sub>1</sub> ) | Mammoth/mastodon, horse, large and small mammal, turtle, reptile, invertebrate, plant <sup>1</sup> | High                        |




<sup>1</sup>Jefferson, 1991a,b; McDonald, 2018

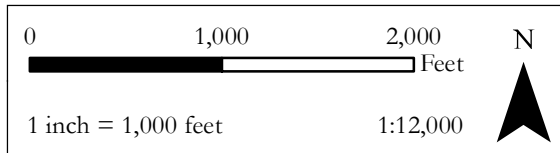


**Figure 5- Paleontological Sensitivity**

Moreno Valley Ranch Specific Plan No. 193  
Amendment No. X Project  
Moreno Valley, County of Riverside



-  Project Boundary
- Sensitivity**
-  High Below Surface
-  Low





## DUKE CULTURAL RESOURCES MANAGEMENT

### Field Survey

On April 12, 2018 a pedestrian survey of the Project (Figures 6 and 7) was conducted by DUKE CRM archaeologist Andrew DeLeon, M.A., RPA. The survey covered the entire Project using 15 meter transects. Attention was paid to the current conditions of the site in terms of disturbances. The site was heavily disturbed due to previous grading activity conducted prior to the survey. Terraced dirt lots were present throughout the site for housing foundations. Activity seems to have been on hold for some time due to weed growth covering roughly 70 percent of the ground. Patches of gravel and small stones were found throughout the site in various locales. Soil present was homogeneous brown sandy silt resulting from previous grading activity. A fence runs along the perimeter of the site. Ground visibility was approximately 45-50 percent due to weed growth and various construction materials.

Disturbances include graded terraces, modern ground disturbance, various construction equipment, and scatter of modern refuse found throughout. Modern ground disturbance consisted of two drainage channels. One channel measures approximately 3 feet wide and 300 feet long and ran east to west along the southwestern portion of the site (Figure 8). The second measures approximately 10 feet wide and 750 feet long winding from the northern center edge to the southwestern corner of the site. This drainage was covered with plastic lining and sandbags along the edges (Figure 9). Construction equipment included two storage containers on site, along with one 623E scraper that was parked. Construction materials were also found throughout the site and included wooden pallets, a cache of wrapped brick, and various plastic tubing. A scatter of modern refuse also found throughout the site. Lastly, there was a deposit of large imported boulders located near the center of the northern edge of the site (Figure 10). No cultural or paleontological resources were observed during the survey.



Figure 6: Overview Project Photo North East From Southwestern Corner of Project.



Figure 7: Overview Project Photo West, Taken From Eastern Corner of Project.



Figure 8: Photo of Drainage Channel Running East to West on Southwestern Corner of Project.



Figure 9: Photo of Drainage Channel Running From Northern Center Edge of Site to Southwestern Corner.



Figure 10: Photo of Boulder Deposit in Center of Northern Edge of Site.



Figure 11: Project Overview

## IMPACTS ANALYSIS AND RECOMMENDATIONS

This section addresses the Project's potential to impact cultural and paleontological resources.

### Paleontological Resources

Our research indicates that, although no paleontological resources are recorded within the project, there is a high sensitivity for paleontological resources in the very old alluvial fan deposits that underlie the Project. Therefore, significant and unique paleontological resources may be impacted by the project during earth disturbing activities. These impacts would be considered potentially significant. In order to reduce the potential for impacts to paleontological resources to a level that is less than significant under CEQA paleontological monitoring is recommended during ground disturbance associated with the project.

**Paleontological Monitoring** - A paleontological monitor shall be present to observe ground disturbing activities within the Project property. The monitor shall work under the direct supervision of a qualified paleontologist (B.S. /B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated experience and competence in paleontological research, fieldwork, reporting, and curation).



## DUKE CULTURAL RESOURCES MANAGEMENT

1. The qualified paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols.
2. Paleontological monitoring shall start at part-time. If no paleontological resources are discovered after half of the ground disturbance has occurred, monitoring can be reduced to spot-checking.
3. The monitor shall be empowered to temporarily halt or redirect grading efforts if paleontological resources are discovered.
4. In the event of a paleontological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area.
5. In consultation with the qualified paleontologist the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly removed and the area cleared.
6. If the discovery is significant the qualified paleontologist shall notify the applicant and the City immediately.
7. In consultation with the applicant, the qualified paleontologist shall develop a plan of mitigation which will likely include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

### Cultural Resources

DUKE CRM conducted a records search field survey and supplemental research for archaeological and historical resources. The results of this research indicate that there are no cultural resources recorded within the Project. However, there are 16 recorded prehistoric resources and one recorded historic resource within a one-mile radius of the Project. The majority of the prehistoric resources are milling station sites consisting of small numbers of milling surfaces on granitic boulders or bedrock outcrops. One site, 33-000012, is a prehistoric site consisting of milling features and rock shelters, with one rock shelter containing rock art, located 0.9 miles south of the Project. Historic site 33-017939 is a 40-acre site 0.85 miles southeast of the Project containing debris and human remains from the 1944 crash of a military plane. Based on the lack of recorded cultural resources within the Project, combined with the documented high level of prior grading at the Project DUKE CRM recommends that no archaeological and/or historical resources are likely to be impacted by the Project.

Due to the low potential to impact cultural resources, DUKE CRM does not recommend archaeological monitoring of the Project. If previously unidentified cultural materials are un-earthed during ground disturbing activity, work shall be halted in that area until a qualified archaeologist can assess the significance of the find.

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. In addition, according to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and unauthorized disturbance of Native American cemeteries is a felony (Section 7052).

If the proposed Project changes, additional efforts may be necessary.



## REFERENCES

- Bean, Lowell J., and Harry W. Lawton  
1993 Some Explanations for the Rise of Cultural Complexity in Native California with Comments on Proto-Agriculture and Agriculture. In *Before the Wilderness: Environmental Management by Native Californians*, edited by Thomas C. Blackburn and Kat Anderson, pp. 27-55. Ballena Press, Menlo Park.
- Bean, Lowell J. and Florence C. Shipek  
1978 Luiseño. In *California*, edited by Robert F. Heizer, pp.550-563. Handbook of North American Indians, Vol. 8, William C Sturtevant, general editor, Smithsonian Institution, Washington, DC.
- Bean, Lowell J. and Katherine S. Saubel  
1972 *Temalpakh (from the Earth): Cabuilla Indian Knowledge and Usage of Plants*. Malki Museum Press, Banning.
- Bean, Lowell J. and Charles R. Smith  
1978 Gabrielino. In *California*, edited by Robert F. Heizer, pp.538-549. Handbook of North American Indians, Vol. 8, William C Sturtevant, general editor, Smithsonian Institution, Washington, DC.
- Brown, Alan K.  
2001 A Description of Distant Roads. Original Journals of the First Expedition into California, 1769-1770.
- Byrd, Brian F. and L. Mark Raab  
2007 Prehistory of the Southern Bight: Models for a New Millenium. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 215-227. AltaMira Press, New York.
- City of Moreno Valley  
2006 Moreno Valley General Plan Final Program EIR, 5.6 – Geology and Soils. Electronic document, [www.moreno-valley.ca.us/city\\_hall/general-plan/06gpfinal/ieir/5\\_6-geo-soils.pdf](http://www.moreno-valley.ca.us/city_hall/general-plan/06gpfinal/ieir/5_6-geo-soils.pdf), accessed May 18, 2017.
- Cramer, Esther Ridgway  
1988 European Discovery. In *A Hundred Years of Yesterdays*, edited by Esther Cramer, et al. Orange County Centennial, Inc., Santa Ana.
- GEOCON WEST, INC.  
2018 *Geotechnical Update Investigation Continental Villages Southeast of Lasselle Street & Krameria Avenue Moreno Valley, California*. Prepared for Continental East Fund III, LLC. Murrieta, California.
- Engstrand, Iris H. W. and Mary F. Ward  
1995 Rancho Guajome: An Architectural Legacy Preserved. Electronic document, <http://www.sandiegohistory.org/journal/1995/october/archlegacy/>, accessed May 18, 2017.
- Gudde, Erwin G.  
1998 *California Place Names: The Origin and Etymology of Current Geographical Names*. 4th edition, revised by William Bright. University of California Press, Berkeley.
- Hooper, Lucile.  
1920 The Cahuilla Indians. *University of California Publications in American Archaeology and Ethnology* 16:315-380.
- Hudson, D.T.  
1971 Proto-Gabrielino Patterns of Territorial Organizations in South Coastal California. *Pacific Coast Archaeological Society Quarterly* 7(2): 49-76.

Ide, Simeon

1967 *The Conquest of California by the Bear Flag Party A Biographical Sketch of the Life of William B. Ide*. Reprinted Rio Grande Press, Glorieta. Originally published 1880, publisher and place unknown.

Jefferson, G.T.

1991a *A Catalogue of late Quaternary Vertebrates from California: Part one. Non-Marine Lower Vertebrate and Avian Taxa*: Technical Report #5. Natural History Museum of Los Angeles, Los Angeles.

1991b *A Catalogue of late Quaternary Vertebrates from California: Part two, Mammals*. Technical Report #7. Natural History Museum of Los Angeles, Los Angeles.

Jones, Terry L., Gary M. Brown, L. Mark Raab, Janet L. McVickar, W. Geoffrey Spaulding, Douglas M. Kennett, Andrew York, and Phillip L. Walker

2004 Environmental Imperatives Reconsidered: Demographic Crises in Western North America During the Medieval Climatic Anomaly. In *Prehistoric California: Archaeology and the Myth of Paradise*, edited by L. Mark Raab and Terry L. Jones, pp. 12-32. University of Utah Press, Salt Lake City.

Koerper, H. C., and C. E. Drover

1983 Chronology Building for Coastal Orange County: The Case from CA-ORA-119A. *Pacific Coast Archaeological Society Quarterly* 19(2):1-34.

McDonald, A.

2018 Re: Records Search for Continental Villages Project, City of Moreno Valley, County of Riverside: submitted to DUKE CRM, March 26.

Moratto, Michael J.

1984 *California Archaeology*. Academic Press, Inc., Orlando.

Morton, D.M., and J.C. Matti

2001 Geologic Map of the Sunnymead 7.5' Quadrangle, Riverside County, California: U.S. Geological Survey Open-File Report. Electronic document, <http://geopubs.wr.usgs.gov/open-file/of01-450>, accessed May 18, 2017.

Nationwide Environmental Title Research, LLC (NETR)

2018 Historic and modern aerial photographs. Electronic document, <http://historicaerials.com/viewer> accessed April, 2018.

Oxendine, Joan

1983 Luiseño Village During the Late Prehistoric Era. PhD. Dissertation, Department of Anthropology, University of California, Riverside.

Rolle, Andrew

2003 *California A History* (sixth edition). Harlan Davidson, Wheeling.

Springer, K.B., Scott, E., Sagebiel, J.C., and L.K. Murray

2009 The Diamond Valley Lake Local Fauna: Late Pleistocene Vertebrates from Inland Southern California. *Papers on Geology, Vertebrate Paleontology and Biostratigraphy in Honor of Michael O. Woodburne* (L.B. Albright III, ed). Museum of Northern Arizona Bulletin 65, 217-235.

Sutton, Mark Q.

2009 People and Language: Defining the Taki Expansion into Southern California. *PCAS Quarterly*, 41(2, 3) 31-93

**DUKE CULTURAL RESOURCES MANAGEMENT**

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- U.S. Department of the Interior, U.S. Geologic Survey  
2018 Historic and modern topographic maps (1947-present). Electronic document,  
<https://ngmdb.usgs.gov/topoview/> accessed April, 2018.
- Vellanoweth, Rene L. and Donn R. Grenda  
2002 Paradise or Purgatory: Environments, Past and Present. In *Islanders and Mainlanders: Prehistoric Context for the Southern California Bight*, edited by Jeffrey H. Altschul and Donn R. Grenda, pp. 67-84. SRI Press, Tucson.
- Wallace, William  
1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 2:214-230.
- Warren, Claude N.  
1980 The Desert Region. In *California Archaeology*, edited by Michael J. Moratto, pp. 339-428. Academic Press, Inc. Salinas.
- Warren, Claude N. and Robert H. Crabtree  
1986 Prehistory of the Southwestern Area. In *Great Basin*, edited by Warren L. D'Azevedo, pp. 183-193. Handbook of North American Indians, Vol. 11, William C. Sturtevant, general editor, Smithsonian Institution, Washington, DC.
- White, Raymond C.  
1963 Luiseño Social Organization. *University of California Publications in American Archaeology and Ethnology* 48:91-194.



# Appendix A

## Resumes



**Curt Duke**  
President/Archaeologist



**Expertise**

Cultural Resources Management  
California Prehistory  
Section 106 Compliance  
CEQA Compliance  
Native American Consultation

**Education**

CSU, Fullerton, M.A., Anth, 2006  
SDSU, Grad Studies, Anth, 1996/97  
UC Santa Cruz, B.A., Anth, 1994

**Professional Registrations**

RPA, No. 15969  
County of Riverside ( No. 151)  
County of Orange

**Professional Memberships**

Society for California Archaeology  
Society for American Archaeology  
Pacific Coast Archaeological Society  
Assoc. of Environmental Professionals  
Building Industry Association

**Professional Experience**

President/Archaeologist, DUKE CRM, March 2011 to present.  
Archaeologist/Principal, LSA Associates, 1997-2011.  
Archaeological Technician, SRI, 1997.  
Archaeological Technician, Petra Resources, 1997.  
Archaeological Technician, KEA Environmental, 1997.  
Archaeological Technician, Keith Companies, 1997.  
Archaeological Technician, KEA Environmental, 1997.  
Archaeological/Paleontological Technician, LSA Associates, 1996.  
Archaeological/Paleontological Technician, Petra Resources, 1996.  
Archaeological Technician, Affinis Environmental Services, 1996.  
Archaeological Technician, KEA Environmental, 1996.  
Archaeological Technician, Macko Archaeological Consulting, 1995 to 1996.  
Archaeological Technician, Heritage Resource Consultants, 1995.  
Archaeological Technician, Chambers Group, 1995.  
Archaeological Technician/Teachers Assistant, Cabrillo College, 1994  
Anthropological Laboratory Technician, UC Santa Cruz, 1994.

**Selected Project Experience**

Vantage Point Church Monitoring, Eastvale, 2018-Present  
Ventura Cnty. Transportation On-Call, Ventura Cnty, 2018-Present  
6<sup>th</sup> Street Viaduct Mission/Myers Roundabout, Los Angeles, 2018-Present  
Union Street Two-Way Protected Bikeway, Pasadena, 2017-Present  
Murrieta's Hospitality Commons, Murrieta, 2017-Present  
Pleasant Valley Turn Lanes, Camarillo, 2017  
VA WLA Master Plan, Los Angeles, 2017-Present  
Golden Avenue Bridge, Placentia, 2017  
Avenue S-8 and 40<sup>th</sup> St. E. Roundabout, Palmdale, 2017  
Soto Street Widening, Los Angeles, 2017  
SR-110 Improvements, Los Angeles, 2017  
Vanderham Monitoring, Jurupa Valley, 2017  
Diamond Valley Estates Specific Plan, Hemet, 2017  
Veterans Affairs West Los Angeles Campus Hospital Replacement, 2016-Present  
Shoemaker Bridge Replacement, Los Angeles, 2016-Present  
Spruce Goose Hangar, Playa Vista, 2016  
Duarte 3<sup>rd</sup> and Oak Residential, Duarte, 2016  
Vila Borba, Chino Hills, 2013-Present  
Skyridge Residential, Mission Viejo, 2011-Present  
Lincoln Specific Plan, Whittier, 2014  
Baker Water Treatment Plant, Lake Forest, 2014-2015  
Bryn Mawr Road Extension, Loma Linda, 2014-Present  
VA Clinic, Loma Linda, 2014-Present  
Evanston Inn, Pasadena, 2014-2016  
California Street/Highway 101, Ventura, 2014-Present  
Dhammakaya International Mediation Center, Azusa, 2013-2014  
6<sup>th</sup> Street Bridge Replacement, Los Angeles, 2013-Present  
Colton Bridges, 2013-14  
Petersen Ranch, Leona Valley, 2013-2014  
1<sup>st</sup> Street over Glendale Boulevard, Los Angeles, 2012  
City of Los Angeles, DPW, On-Call, Cultural/Paleontological Resource Services, 2008-2011  
San Fernando Road Widening, Los Angeles, 2011-121

Attachment: Cultural Resources Report (July 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment,



## Benjamin Scherzer

### Paleontologist

#### Expertise

Paleontological Resources Management  
Fossil excavation  
Fossil preparation  
Stratigraphy  
Natural gas mudlogging  
Directional drilling

#### Education

M.S., Earth Science, 2008, MSU, Bozeman, MT  
B.A., Geology/Math, 2002, Earlham College, IN

#### Professional Registrations

Paleontologist, County of Orange  
Paleontologist, County of Riverside

#### Professional Memberships

Society of Vertebrate Paleontology  
Geological Society of America  
Society for Sedimentary Geology  
American Association of Petroleum Geologists, Pacific Section

#### Publications and Professional Papers

Scherzer, B. 2017. A possible physeteroid (cetacea: odontoceti) from the Yorba member of the Puente Formation, Orange County, California: Western Association of Vertebrate Paleontology Annual Meeting: Program with Abstracts, PaleoBios, v. 34 (supplemental), p. 11.

Scherzer, B. 2016. An archaic baleen whale (Cetacea: Mysticeti) from the Vaqueros Formation, and other fossil material from the Skyridge Project, Orange County, California: 76th Annual Meeting, Society of Vertebrate Paleontology, abstracts of papers, Journal of Vertebrate Paleontology.

Scherzer, B. 2015. Miocene teleost fish from Chino Hills: preliminary results from the Vila Borba Project, San Bernardino County, California: Western Association of Vertebrate Paleontology Annual Meeting, PaleoBios, v. 32, no. 1, p. 4.

Scherzer, B., and R. Benton. 2011. An evaluation of sixteen years of paleontological visitor site reports in Badlands National Park, South Dakota: Proceedings of the 9th Conference on Fossil Resources, Brigham Young University Geology Studies, v. 49(A), p. 31.

#### Professional Experience

Paleontologist, DUKE CRM, February 2014 to present.  
Paleontologist, L&L Environmental, October 2017 to present.  
Stratigrapher, Archeological Resource Management Corporation, November 2015 to present.  
Paleontological Specialist II, San Diego Natural History Museum, October 2013 to present.  
Paleontological Specialist II, SWCA Environmental Consultants (Pasadena), March 2012 to present.  
Paleontologist, SWCA Environmental Consultants (Vernal, UT), 2011 to 2012.  
Fossil Preparator, Carter County Museum, 2010 to 2011.  
Physical Science Technician, Badlands National Park, 2010.  
Mudlogger/Geologist, Pason Systems USA, 2006 to 2009.  
Paleontological Field Assistant, ARCADIS US, 2006 to 2007.

#### Selected Project Experience

Vanderham Monitoring, Jurupa Valley, 2017-present  
Ave S-8 and 40th St Roundabout, Palmdale, 2017-present  
Gold Flora Farms, Desert Hot Springs, 2017-present  
I-5 HOV Truck Lanes, Santa Clarita, 2017-present  
Brasada Homes, San Dimas, 2017-present  
Indus Light Industrial Building, Chino Hills, 2017-present  
Murrieta's Hospitality Commons, Murrieta, 2017  
6<sup>th</sup> Street Viaduct, Los Angeles, 2017-present  
I-15 TEL, Riverside and San Bernardino Counties, 2017  
Lewis Street, Anaheim, 2017  
The Crossings, Chino Hills, 2016-2017  
Reata Glen, Mission Viejo, 2016 - present  
Greenville-Banning Channel, Costa Mesa, 2016  
Fairfield Ranch, Chino Hills, 2016  
Diamond Valley, Hemet, 2017  
Marywood Residential, Orange, 2016-2018  
Rancho Mission Viejo, Mission Viejo, 2015-present  
Santa Margarita Water District Tesoro Reservoirs, Mission Viejo, 2015  
Evanston Inn, Pasadena, 2015  
Village of Terrasa, Corona, 2015  
Sycamore to Peñasquitos 230 kV Transmission Line, San Diego, 2015  
Lakeside Temescal Valley, Temescal Valley, 2015-present  
Vila Borba, Chino Hills, CA, 2013-present  
Proposed State Route 60/Interstate 605 (SR-60/I-605) Interchange Improvement Project, Los Angeles County, 2014  
RP-Outfall Relocation, Ontario, 2014  
Serrano Ridge, Temesca Valley, 2014  
Lago Los Serranos, Chino Hills, 2014  
Vila Borba, Chino Hills, 2014-present  
Baker WTP, Lake Forest, 2014  
Skyridge Residential, Mission Viejo, 2014-present  
Willow Heights, Diamond Bar, 2014  
Pacific Highlands, San Diego, 2014  
Sol y Mar, Ranchos Palos Verdes, 2013-2014  
Mojave Solar Power, Hinkley, 2013  
Genesis Solar Energy, Blythe, 2012-13

**Sarah Nava**  
Archaeologist/GIS Specialist



**Expertise**

Cultural Resources Management  
California Prehistory  
Lab Analysis  
ArcGIS  
GPS Software  
Geographical Information Systems  
Cultural Resources Management  
California Prehistory  
Cultural Records Searches

**Education**

CSU, Long Beach, B.A., Anth, 2008  
Southwestern Comm.College, GIS  
Certification Program, 2014

**Professional Memberships**

Society for California Archaeology  
Society for American Archaeology

**Professional Experience**

Archaeologist/GIS Specialist, DUKECRM, Feb. 2017 to present  
Sr. GIS Specialist/Archaeology Technician, Sapphos Env., 2016-17  
Archaeologist/GIS Specialist, Cogstone, 2016  
Archaeological Crew Chief/GIS Technician, SRI, 2015-16  
GIS Specialist/Research Assistant, Easter Island Statue Project, 2015  
GIS Consultant, UCLA Rock Art Archive, 2015  
Archaeology/GIS Technician, Cogstone, 2011-2014

**Selected Project Experience**

- Vila Borba, Chino Hills, 2017
- Azusa Greens, Azusa, 2017
- Golden Avenue Bridge Replacement, Placentia, 2017
- Soto Street, Los Angeles, 2017
- Sativa Water District Well Replacement, Compton, 2017
- Strauss Wind Energy Project, 2016-2017
- Fair Oaks Hospital Construction, Arroyo Grande, California, 2016
- Section 110 Intensive Archaeological Inventory on Ranges at Naval Air Weapons Station (NAWS) China Lake, 2015-2016
- California State University, Long Beach Piping Project, 2016
- Olive View Medical Center, 2016
- Evaluation of 11 Prehistoric Sites on Marine Corps Base Camp Pendleton, California, 2015-2016
- Metrolink Purple Line Extension, Los Angeles, 2016
- FY14 Section 110 Archaeological Evaluations and Eligibility Investigations on Ranges at Naval Air Weapons Station, China Lake, 2015
- FY 14 Section 110 Archaeological Surveys and Site Recordation as Supplemental, Naval Air Station (NAS), NAVFAC Southwest Division, Lemoore, California, 2015
- Emergency Archaeological Data Recovery at CA-LAN-2768, Marina del Rey 2015
- Easter Island Statue Project, Santa Monica, 2015
- Metropole Vault Replacement, SCE, Avalon California, 2014.
- Pimu, Catalina Island Archaeology Project, Two Harbors, 2013-2014

Attachment: Cultural Resources Report (July 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment,

# GEOTECHNICAL UPDATE INVESTIGATION

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## CONTINENTAL VILLAGES SOUTHEAST OF LASSELLE STREET & KRAMERIA AVENUE MORENO VALLEY, CALIFORNIA



**GEOCON**  
WEST, INC.

GEOTECHNICAL  
ENVIRONMENTAL  
MATERIALS

PREPARED FOR

**CONTINENTAL EAST FUND III, LLC.  
MURRIETA, CALIFORNIA**

**MARCH 26, 2018  
PROJECT NO. T2809-22-01**





Project No. T2809-22-01  
 March 26, 2018

Continental East Fund III, LLC.  
 25467 Medical Center Drive, Suite 201  
 Murrieta, California 92562

Attention: Mr. Andrew Spousta

Subject: GEOTECHNICAL UPDATE INVESTIGATION  
 CONTINENTAL VLLAGES  
 SOUTHEAST OF LASSELLE STREET & KRAMERIA AVENUE  
 MORENO VALLEY, CALIFORNIA


Dear Mr. Spousta:

In accordance with your authorization of Geocon Proposal IE-2098 dated February 20, 2018, Geocon West, Inc. (Geocon) herein submits the results of our geotechnical update investigation for the proposed residential and commercial development. The accompanying report presents the results of our study and conclusions and recommendations pertaining to the geotechnical aspects of the proposed multi-family and commercial project. The site is considered suitable for development provided the recommendations of this report are followed.

Should you have questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON WEST, INC.

  
 Lisa A. Battiato  
 CEG 2316



  
 Chet E. Robinson  
 GE 2890



LAB:CER:JV:hd

Distribution: Addressee (email)

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## GEOTECHNICAL DUE DILIGENCE AND UPDATE INVESTIGATION

### 1. PURPOSE AND SCOPE

This report presents the results of our geotechnical update investigation for the proposed multi-family and commercial development located immediately southeast of the intersection of Lasalle Street and Krameria Avenue in the city of Moreno Valley, California (see *Vicinity Map*, Figure 1). The purpose of the investigation was to review existing geotechnical information for the site, perform subsurface exploration and, based on the conditions encountered, provide recommendations pertaining to the geotechnical aspects of developing the property with respect to the *Preliminary Site Layout* for Continental Villages prepared by Anderson Consulting Engineers, Inc.

The scope of our investigation included review of previous project reports, geologic mapping, subsurface exploration, percolation testing, laboratory testing, engineering analyses, and the preparation of this report. A summary of the information reviewed for this study is presented in the *List of References*.

The site was explored on March 1, 2018, by drilling seven small-diameter geotechnical borings to depths of 21.5 to 31.5 feet and eight percolation tests to depths of 3 to 4 feet. We utilized a CME 75 truck mounted drill rig. Percolation testing was performed on March 5, 2018. The approximate locations of the exploratory excavations are depicted on the *Geotechnical Map* (Figure 2). A detailed discussion of the field investigation, including excavation logs, is presented in *Appendix A*. Boring logs from the 2016 Geotechnical Interpretive Report by Earth Strata Geotechnical Services, Inc (ESI) are also included in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to evaluate pertinent physical and chemical soil properties. *Appendix B* presents a summary of the laboratory test results. Lab testing from the 2016 Geotechnical Interpretive Report by ESI are also included in Appendix B.

### 2. SITE AND PROJECT DESCRIPTION

The planned Continental Villages development is on approximately 11 ½ acres located immediately east of the intersection of Lasselle Street and Krameria Avenue in Moreno Valley, California. The project is located within Section 28 of Township 3 South, Range 3 West; at latitude 33.8824, longitude -117.2052. Site elevations currently range from approximately 1,521 to 1,555 feet above mean sea level (MSL). Access is currently gained from the job site entrance on Krameria Avenue.

At the time of our field investigation, the site was in a previously rough graded condition. An active jobsite trailer is present in the eastern portion of the site near the entrance. Temporary Conex storage containers are present along the southern and western areas of the site. The sub-surface storm drain from the adjacent site has been outlet to a plastic lined channel through the site to the far western end where the site has been excavated to allow drainage into a storm drain whistle.

The central and easterly portion of the site will support multi-family development and the westerly portion is planned for commercial development. The Phase I portion of the project (not part of this investigation), north of the commercial site, is currently under construction. The open land has been stripped of vegetation and covered with an erosion control coating.

Site development is planned to include a recreational center and 14 multi-family buildings with covered parking. The commercial development is currently expected to consist of a central building with parking lots surrounding the building. We expect that finish grade elevations will descend across the site from east to west. Maximum cut and fill depths (exclusive of remedial grading) are expected to be approximately 10 feet or less. Cut slopes are not expected at the site. Existing fill slopes are 15 feet high at approximately 2:1 (h:v). We expect that future fill slopes will be 15 feet or less in height at inclinations of 2:1 (h:v). Retaining walls may be utilized within the site and are expected to be 15 feet or less in height.

We expect that the buildings will be constructed of wood or light gauge steel framing with shallow foundations and concrete slab-on-grade floors. The residential buildings are expected to be three stories and the commercial structure is expected to be one story. Due to preliminary nature of the design at this time, wall and column loads were not available. It is expected that column loads for the proposed structures will be up to 100 kips, and wall loads will be up to 5 kips per linear foot. Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary.

References to elevations presented in this report are based on topography given in Google Earth applications. Geocon does not practice in the field of land surveying and is not responsible for the accuracy of such topographic information.

The locations and descriptions provided herein are based on a site reconnaissance, our field exploration, review of previously completed reports, and project information provided by the client. If project details differ significantly from those described, Geocon should be contacted for review and possible revision to this report.

### 3. BACKGROUND

Geocon reviewed aerial images of the site as part of our work. The site was vacant and undeveloped prior to 2004. It appeared to have been periodically plowed prior to grading. In 2004, the site was mass graded to a super pad concurrent with grading of the adjacent school site. The area along Lasselle including the proposed commercial site remained ungraded at that time. The site was subsequently graded into separate building pads, including the commercial site, in 2005. Since that time the subject property has remained relatively unchanged. Phase I, located west of the school and north of the proposed commercial site was re-graded in 2017 with geotechnical testing and observation provided by Earth Strata Geotechnical Services, Inc. (ESI) Phase I is currently under construction at the time of this report.

A geotechnical investigation was performed on the entire site (including Phase I) by ESI in 2016. ESI drilled 10 geotechnical borings throughout the site, performed laboratory testing and engineering analyses, and prepared their report, see *References*. ESI reported encountering 7 to 19 feet of previously placed fill over Quaternary Very Old Fan Deposits. The fill was reported as medium dense to dense overlying medium dense to dense older fan deposits. Both soil units were reported to consist of clayey to silty sands. ESI did not encounter groundwater to depths of 51.5 feet. ESI laboratory test results indicate the soil samples tests have a very low expansion potential (non-expansive); have a collapse potential for the two samples tested of 0.13 to 0.25 percent under in-situ loading; have negligible sulfate content and would not be classified as corrosive. Their boring logs are included in *Appendix A* and the laboratory test results are included in *Appendix B*.

### 4. GEOLOGIC SETTING

The site is located within the Perris Block of the Peninsular Ranges Geomorphic Province. The Perris Block is characterized by granitic highlands which display three elevated erosional surfaces surrounded by alluviated valleys. The Peninsular Ranges are bound by the Transverse Ranges (San Gabriel and San Bernardino Mountains) to the north and the Colorado Desert Geomorphic Province to the east. The Peninsular Ranges extend westward into the Pacific Ocean and southward to the tip of Baja California. Overall, the province is characterized by Cretaceous-age granitic rock and a lesser amount of Mesozoic-age metamorphic rock overlain by terrestrial and marine sediments.

Faulting within the province is typically northwest trending and includes the San Andreas, San Jacinto, Elsinore, and Newport-Inglewood faults. The site is located on the southeastern margin of the Moreno Valley, north of Lake Perris. Granitic hills that surround Lake Perris are present approximately 1,000 feet southeast of the site. The entire site is underlain by older alluvium above granitic basement rock.



## 5. GEOLOGIC MATERIALS

### 5.1 General

Based on the exploration performed by Geocon and others, the primary geologic units at the site consist of previously placed fill and Very Old Alluvial Fan Deposits above granitic basement rock. Geologic unit classification follows that of Morton and Matti (2001) from the Sunnymead Quadrangle map. The descriptions of the soil and geologic conditions are shown on the boring logs located in *Appendix A* and described herein in order of increasing age.

### 5.2 Previously Placed Fill (af)

Previously placed fill was encountered within Geocon's and other's borings within the site to depths of 4 to 22 feet. A geotechnical report of testing and observation was not available for our review. The fill consists of clay sand which was found to be medium dense to very dense, and moist. Consolidation test results indicate the fill hydrocompressed less than 0.5 percent upon wetting when loaded to the expected post grading pressures. In situ moisture and density test results indicate the samples below a depth of 3 feet are generally at or near optimum moisture contents and meet or exceed 90 percent relative compaction when compared to the maximum density/optimum moisture test results (ASTM D1557).

### 5.3 Quaternary Very Old Fan Deposits (Qvof) – Not a Mapped Unit

Very old fan deposits (older alluvium) were encountered beneath the fill and consist of silty and clayey sand with occasional layers of poorly graded sand. The soil was generally medium dense to dense and slightly moist to moist.

### 5.4 Tonalite (Kt) – Not a Mapped Unit

Tonalite comprises the hill east of the site. The rock is described as gray, medium-grained, and typically foliated. Bedrock was not encountered during our exploration and is not expected to be encountered during site grading or construction.

## 6. GEOLOGIC STRUCTURE

The geologic structure consists of an older alluvial fan surface emanating northeastward from the adjacent granitic highlands. As such, the underlying older alluvial surface likely strikes north east and dips moderately, following the topographic surface at the time of deposition, to the northwest. For the purposes of this study and due to the previously placed fill across the site, the geologic structure should be considered as a locally massive, medium dense to dense clayey sand.

## 7. GROUNDWATER

Groundwater was not encountered to maximum depths explored of 51.5 feet. There are no well records near the site located in similar geologic conditions. Based on the lack of groundwater encountered during explorations on the site and the geologic conditions, we expect groundwater is likely more than 50 feet deep at the site.

It is not uncommon for seepage conditions to develop where none previously existed due to the permeability characteristics of the geologic units encountered. During the rainy season, localized perched water conditions may develop that may require special consideration during grading operations. Groundwater elevations are dependent on seasonal precipitation, irrigation, and land use, among other factors, and vary as a result.

## 8. GEOLOGIC HAZARDS

### 8.1 Surface Fault Rupture

The numerous faults in southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on data developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (Bryant and Hart, 2007). By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years), but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a currently established State of California or Riverside County Earthquake Fault Zone for surface fault rupture hazards. No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site.

The closest active fault to the site is the San Jacinto fault located approximately 5+ miles northeast of the site. Faults within a 50-mile radius of the site are listed in Table 8.1.1. Historic earthquakes in southern California of magnitude 6.0 and greater, their magnitude, distance, and direction from the site are listed in Table 8.1.2.

**TABLE 8.1.1  
ACTIVE FAULTS WITHIN 50 MILES OF THE SITE**

| <b>Fault Name</b>                | <b>Maximum Magnitude (Mw)</b> | <b>Geometry (Slip Character)</b> | <b>Slip Rate (mm/yr)</b> | <b>Information Source</b> | <b>Distance from Site (mi)</b> | <b>Direction from Site</b> |
|----------------------------------|-------------------------------|----------------------------------|--------------------------|---------------------------|--------------------------------|----------------------------|
| San Jacinto (Casa Loma)          | 6.9                           | RL-SS                            | 12                       | a                         | 6                              | SE                         |
| San Jacinto (Claremont)          | 6.7                           | RL-SS                            | 12                       | a                         | 8                              | SE                         |
| San Andreas (San Bernardino)     | 7.5                           | RL-SS                            | 24                       | a                         | 16                             | N                          |
| Elsinore Fault (Glen Ivy)        | 6.8                           | RL-SS                            | 5                        | a                         | 17                             | W                          |
| San Gorgonio Pass                | n/a                           | THRUST                           | n/a                      | a                         | 17                             | E                          |
| Elsinore (Wildomar)              | 6.8                           | RL-SS                            | 5                        | a                         | 18                             | W                          |
| San Jacinto (Glen Helen)         | 6.7                           | RL-SS                            | 12                       | a                         | 19                             | NW                         |
| North Frontal Thrust             | 7.2                           | R                                | 1                        | a                         | 19                             | NE                         |
| North Frontal                    | 6.7                           | R                                | 0.5                      | a                         | 19                             | NE                         |
| San Jacinto (Clark)              | 7.2                           | RL-SS                            | 12                       | a                         | 23                             | SE                         |
| Chino                            | 6.7                           | RL-R-O                           | 1                        | a                         | 24                             | W                          |
| Cucamonga                        | 6.9                           | R                                | 5                        | a                         | 25                             | NW                         |
| Whittier                         | 6.8                           | RL-R-O                           | 2.5                      | a                         | 29                             | W                          |
| Pinto Mountain                   | 7.2                           | LL-SS                            | 2.5                      | a                         | 30                             | NE                         |
| San Andreas Fault (South Branch) | 7.5                           | RL-SS                            | 24                       | a                         | 30                             | E                          |
| Morongo Valley                   | 7.2                           | LL-SS                            | 2.5                      | a                         | 36                             | E                          |
| Helendale                        | 7.3                           | RL-SS                            | 0.6                      | a                         | 40                             | NE                         |
| Burnt Mountain                   | 6.5                           | RL-SS                            | 0.6                      | a                         | 46                             | E                          |
| Newport-Inglewood-Rose Canyon    | 7.1                           | RL-SS                            | 1                        | a                         | 47                             | W                          |
| Lenwood                          | 7.5                           | RL-SS                            | 0.6                      | a                         | 47                             | NE                         |

Geometry: BT = blind thrust, LL = left lateral, N = normal, O = oblique, R = reverse, RL = right lateral, SS = strike slip.

Information Sources: a = Cao, T., Bryant, W.A., Rowshandel, B., Branum, D., and Wills, C.J., 2003, The Revised 2002 California Probabilistic Seismic Hazard Maps, including Appendices A, B, and C, dated June; b = online Fault Activity Map of California website, [maps.conservation.ca.gov/cgs/fam/](http://maps.conservation.ca.gov/cgs/fam/), as of 1/2017.

n/a = data not available



**TABLE 8.1.2  
HISTORIC EARTHQUAKE EVENTS WITH RESPECT TO THE SITE**

| <b>Earthquake<br/>(Oldest to Youngest)</b> | <b>Date of Earthquake</b> | <b>Magnitude</b> | <b>Distance to<br/>Epicenter<br/>(Miles)</b> | <b>Direction<br/>to<br/>Epicenter</b> |
|--|---------------------------|------------------|--|---------------------------------------|
| San Jacinto                                | April 21, 1918            | 6.8              | 15   | SE                                    |
| Loma Linda Area                            | July 22, 1923             | 6.3              | 9  | NNW                                   |
| Long Beach                                 | March 10, 1933            | 6.4              | 47   | WSW                                   |
| Buck Ridge                                 | March 25, 1937            | 6.0              | 63   | ESE                                   |
| Imperial Valley                            | May 18, 1940              | 6.9              | 54   | ENE                                   |
| Desert Hot Springs                         | December 4, 1948          | 6.0              | 47   | E                                     |
| Arroyo Salada                              | March 19, 1954            | 6.4              | 77   | SE                                    |
| Borrego Mountain                           | April 8, 1968             | 6.5              | 83   | SE                                    |
| San Fernando                               | February 9, 1971          | 6.6              | 83   | WNW                                   |
| Joshua Tree                                | April 22, 1992            | 6.1              | 56   | E                                     |
| Landers                                    | June 28, 1992             | 7.3              | 53   | ENE                                   |
| Big Bear                                   | June 28, 1992             | 6.4              | 32   | NE                                    |
| Northridge                                 | January 17, 1994          | 6.7              | 87   | WNW                                   |
| Hector Mine                                | October 16, 1999          | 7.1              | 77   | NE                                    |

## 8.2 Liquefaction

Liquefaction typically occurs when a site is located in a zone with seismic activity, onsite soils are cohesionless/silt or clay with low plasticity, static groundwater is encountered within 50 feet of the surface, and soil relative densities are less than about 70 percent. If the four previous criteria are met, a seismic event could result in a rapid pore-water pressure increase from the earthquake-generated ground accelerations. Seismically induced settlement may occur whether the potential for liquefaction exists or not. The site is located mapped by the County of Riverside as having a low Liquefaction Potential. Based on the dense consistency of the shallow soils overlying bedrock and groundwater deeper than 50 feet, the potential for liquefaction and seismically induced settlement occurring within the site soil is considered very low.

## 8.3 Expansive Soil

The on-site soils generally consist of silty and clayey sands with. Laboratory test results indicate samples of the near surface soils exhibit a “very low” expansion potential with measured expansion indices of 2 to 4. Atterberg Limit test results indicate the plasticity index of the soils is 7 to 9 with the fine-grained component classified as low-plastic clay.

## 8.4 Collapsible Soils

Hydrocompression is the tendency of unsaturated soil structure to collapse upon wetting resulting in compression of the effected soil and the potential for distress to the overlying foundations or improvements. Potentially compressible soils underlying the site are limited to the upper 3 to 5 feet and will be removed and compacted during remedial site grading.

Soils obtained during our investigation were tested for collapse and exhibited a collapse potential of 0.2 percent to 0.7 percent when loaded to the expected post-grading pressures. The test results indicate that the site soils are generally classified as having a slight (0.1 to 2.0 percent) degree of specimen collapse when tested in accordance with ASTM D5333.

## 8.5 Landslides

We did not observe evidence of previous or incipient slope instability within the site or adjacent hillsides during our aerial photograph review or investigation. Further, no landslides have been geologically mapped on or adjacent to the site. Therefore, landslide hazard to the site is not a design consideration.

## 8.6 Rockfall

The site is located 1,000 feet from the granitic hillside with a residential subdivision in between. Rockfall hazards are not a design consideration for this project.

## 8.7 Slope Stability

Grading plans were not available at the time of this update. Based on existing grades and the proposed site usage, we expect fill slopes will be 15 feet or less at inclinations no steeper than 2:1 (h:v). Cut slopes are not expected on or adjacent to the site. In general, permanent, graded fill slopes constructed with on-site soils inclined no steeper than 2:1 (h:v) with vertical heights of 20 feet or less will possess Factors of Safety of 1.5 or greater (see Figures 3 to 5). Fill keys should be constructed in accordance with the standard grading specifications in *Appendix C*. Grading of fill slopes should be designed in accordance with the requirements of the local building codes of the City of Moreno Valley and the 2016 California Building Code (CBC).

## 8.8 Tsunamis and Seiches

A tsunami is a series of long period waves generated in the ocean by a sudden displacement of large volumes of water. Causes of tsunamis include underwater earthquakes, volcanic eruptions, or offshore slope failures. The first order driving force for locally generated tsunamis offshore southern California is expected to be tectonic deformation from large earthquakes (Legg et al., 2002). The site is located 40+ miles from the nearest coastline, with the Santa Ana Mountains lying between the site and the Pacific Ocean; therefore, the risk associated with tsunamis is not a design consideration.

A seiche is a run-up of water within a lake or embayment triggered by fault- or landslide-induced ground displacement. The site is not located downstream from Lake Skinner. Therefore, a seiche hazard from this reservoir is not a design consideration.

## 9. SITE INFILTRATION

Percolation testing was performed in accordance with the procedures in *Riverside County Flood Control and Water Conservation District LID BMP, Appendix A*. The percolation test locations are depicted on the *Geotechnical Map* (see Figure 2).

A 3-inch diameter perforated PVC pipe in silt filter sock was placed in each percolation test hole and approximately 2 inches of gravel was placed at the bottom of the PVC pipe. The test locations were pre-saturated prior to testing. Percolation testing was begun 24 hours after the holes were presaturated. Percolation data sheets are presented in *Appendix A* of this report. Calculations to convert the percolation test rate to infiltration test rates are presented in Table 9.0. Note that the Handbook requires a factor of safety of 3 be applied to the values below based on the test method used.



**TABLE 9.0  
INFILTRATION TEST RATES FOR PERCOLATION AREAS**

| Parameter                                     | P-1    | P-2    | P-3    | P-4    |
|---|--------|--------|--------|--------|
| Area  | 6      | 7      | 8      | 2      |
| Depth (inches)                                | 40.3   | 32.3   | 80.2   | 53.6   |
| Test Type                                     | Normal | Normal | Normal | Normal |
| Change in head over time: $\Delta H$ (inches) | 0.1    | 0.1    | 1.6    | 0.1    |
| Average head: $H_{avg}$ (in)                  | 29.6   | 24.9   | 14.5   | 14.7   |
| Time Interval (minutes): $\Delta t$ (minutes) | 30     | 30     | 30     | 30     |
| Radius of test hole: $r$ (inches)             | 4      | 4      | 4      | 4      |
| Tested Infiltration Rate: $I_t$ (inches/hour) | 0.01   | 0.02   | 0.4    | 0.03   |

| Parameter                                     | P-5    | P-6    | P-7    | P-8    |
|---|--------|--------|--------|--------|
| Area  | 3      | 4      | 5      | 1      |
| Depth (inches)                                | 43.4   | 51.0   | 34.4   | 44.6   |
| Test Type                                     | Normal | Normal | Normal | Normal |
| Change in head over time: $\Delta H$ (inches) | 0.1    | 0.5    | 0.6    | 0.4    |
| Average head: $H_{avg}$ (in)                  | 11.8   | 12.4   | 13.0   | 12.5   |
| Time Interval (minutes): $\Delta t$ (minutes) | 30     | 30     | 30     | 30     |
| Radius of test hole: $r$ (inches)             | 4      | 4      | 4      | 4      |
| Tested Infiltration Rate: $I_t$ (inches/hour) | 0.03   | 0.1    | 0.2    | 0.1    |

## 10. CONCLUSIONS AND RECOMMENDATIONS

### 10.1 General

- 10.1.1 No soil or geologic conditions were encountered that would preclude the development of the property as proposed, provided the recommendations of this report are followed.
- 10.1.2 Based on our investigation and available geologic information, active, potentially active, or inactive faults are not present on or trending toward the site.
- 10.1.3 The upper portion of the previously placed fill is considered unsuitable for the support of compacted fill or settlement-sensitive improvements based on the conditions as described on the boring logs and in-situ moisture and density test results. Remedial grading in the form of removal and compaction of the upper 3 to 5 feet of the previously placed fill will be required. However, deeper removals may be necessary based on the conditions encountered during grading.
- 10.1.4 Groundwater was not encountered during this field work. Standing water was observed in the temporary basin located in the western corner of the site. Although we did not encounter groundwater in the geotechnical borings, seepage and perched groundwater conditions may be encountered during the grading operations, especially during the rainy seasons.
- 10.1.5 In general, slopes should possess calculated factors of safety of at least 1.5 when graded at inclinations of 2:1(fill), or flatter with maximum fill slope heights of 20 feet.
- 10.1.6 Proper surface drainage should be maintained to prevent ponding and saturation of the fill in pad and slope areas. Recommendations for site drainage are provided herein.
- 10.1.7 Changes in the design, location or elevation of improvements, as outlined in this report, should be reviewed by this office. Once grading plans become available, they should be reviewed by this office to determine the necessity for review and possible revision of this report.

### 10.2 Soil Characteristics

- 10.2.1 The soil encountered in the field investigation are “non-expansive” (Expansion Index [EI] less than 20) as defined by 2016 California Building Code (CBC) Section 1803.5.3. Table 10.2.1 presents soil classifications based on the expansion index.

**TABLE 10.2.1  
SOIL CLASSIFICATION BASED ON EXPANSION INDEX**

| Expansion Index (EI) | Expansion Classification | 2016 CBC Expansion Classification |
|----------------------|--------------------------|-----------------------------------|
| 0 – 20               | Very Low                 | Non-Expansive                     |
| 21 – 50              | Low                      | Expansive                         |
| 51 – 90              | Medium                   |                                   |
| 91 – 130             | High                     |                                   |
| Greater Than 130     | Very High                |                                   |

- 10.2.2 The existing site soils are expected to possess a “very low” expansion potential. Additional testing for expansion potential should be performed during grading and once final grades are achieved. Further, plasticity index testing should be performed on soils with expansion indices of more than 20.
- 10.2.3 Laboratory tests performed on a sample of the site materials by ESI (2016) to evaluate the water-soluble sulfate content tests are presented in *Appendix B* and indicate that the on-site materials possess a sulfate content of 0.038 percent equating to a S0 negligible sulfate exposure to concrete structures as defined by 2016 CBC Section 1904.3 and ACI 318. Table 10.2.3 presents a summary of concrete requirements set forth by 2016 CBC Section 1904.3 and ACI 318. The presence of water-soluble sulfates is not a visually discernible characteristic; therefore, other soil samples from the site could yield different concentrations. Additionally, over time landscaping activities (i.e., addition of fertilizers and other soil nutrients) may affect the concentration.

**TABLE 10.2.3  
REQUIREMENTS FOR CONCRETE  
EXPOSED TO SULFATE-CONTAINING SOLUTIONS**

| Sulfate Exposure | Exposure Class | Water-Soluble Sulfate Percent by Weight | Cement Type         | Maximum Water to Cement Ratio by Weight | Minimum Compressive Strength (psi) |
|------------------|----------------|---|---------------------|---|------------------------------------|
| Not Applicable   | S0             | 0.00-0.10                               | --                  | --                                      | 2,500                              |
| Moderate         | S1             | 0.10-0.20                               | II                  | 0.50                                    | 4,000                              |
| Severe           | S2             | 0.20-2.00                               | V                   | 0.45                                    | 4,500                              |
| Very Severe      | S3             | > 2.00                                  | V+ Pozzolan or Slag | 0.45                                    | 4,500                              |



- 10.2.4 Based on the ESI (2016) the site soils are not classified as corrosive to metal improvements in accordance with Caltrans Corrosion Guidelines (Caltrans, 2012).

**TABLE 10.2.4  
CALTRANS CORROSION GUIDELINES**

| <b>Corrosion Exposure</b> | <b>Resistivity (ohm-cm)</b> | <b>Chloride (ppm)</b> | <b>Sulfate (ppm)</b> | <b>pH</b>   |
|---------------------------|-----------------------------|-----------------------|----------------------|-------------|
| Corrosive                 | <1,000                      | 500 or greater        | 2,000 or greater     | 5.5 or less |

- 10.2.5 Geocon does not practice in the field of corrosion engineering. Therefore, further evaluation by a corrosion engineer may be performed if improvements that could be susceptible to corrosion are planned.

### **10.3 Grading**

- 10.3.1 Grading should be performed in accordance with the *Recommended Grading Specifications* contained in *Appendix C* and the City of Moreno Valley Grading Ordinance.
- 10.3.2 Prior to commencing grading, a preconstruction conference should be held at the site with the county inspector, owner or developer, grading contractor, civil engineer, and geotechnical engineer in attendance. Special soil handling and/or the grading plans can be discussed at that time.
- 10.3.3 Site preparation should begin with the removal of deleterious material, debris and vegetation. The depth of removal should be such that material exposed in cut areas or soil to be used as fill is relatively free of organic matter. Material generated during stripping and/or site demolition should be exported from the site.
- 10.3.4 The upper 3 to 5 feet of previously placed fill within structural areas should be removed to expose previously placed fill or older alluvium with an in-situ relative compaction of 90 and 85 percent or greater, respectively. The removals should extend to a depth of at least 1 foot below the bottom of the planned foundations. The actual depth of remedial grading should be evaluated by the engineering geologist during grading operations. The bottom of the excavations should be scarified to a depth of at least 1 foot, moisture conditioned to above optimum moisture content, and compacted to 90 percent of the maximum dry density (ASTM D1557), prior to fill placement.

- 10.3.5 The upper 1 to 2 feet of previously placed fill within roadway and flatwork areas is expected to be loose and disturbed and consequently require remedial grading prior to the placement of additional fill. For estimating purposes, the upper one foot of previously placed fill should be removed below pavement and flatwork subgrade. The exposed surface should then be scarified, moisture conditioned and compacted to 90 percent of the maximum dry density at or above optimum moisture content.
- 10.3.6 The site should be brought to finish grade elevations with fill compacted in layers. Layers of fill should be no thicker than will allow for adequate bonding and compaction. Fill, including backfill and scarified ground surfaces, should be compacted to a dry density of at least 90 percent of the laboratory maximum dry density near to slightly above optimum moisture content as determined by ASTM D1557. Fill materials placed below optimum moisture content may require additional moisture conditioning prior to placing additional fill.
- 10.3.7 The fill placed within 3 feet of proposed finish grade should possess a “low” expansion potential (EI of 50 or less), where practical.
- 10.3.8 Oversized rock (i.e. greater than 6-inches in maximum dimension) could be encountered during grading. If encountered, the rock will require special handling and placement. Rocks 6 inches in maximum dimension should be placed in soil fill within the outer 3 feet of finish grade. Rocks 6 to 12 inches in maximum dimension may be placed deeper than 3 feet below finished grade elevations. Rocks 12 inches or larger in maximum dimension should be exported from the site or placed at least 10 feet below finished grades in accordance with the *Standard Grading Specifications, Appendix E*.
- 10.3.9 Import fill (if necessary) should consist of granular materials with a “low” expansion potential (EI of 50 or less), generally free of deleterious material and rock fragments larger than 6 inches, and should be compacted as recommended herein. Geocon should be notified of the import soil source and should perform laboratory testing of import soil prior to its arrival at the site to evaluate its suitability as fill material.
- 10.3.10 Fill slopes should be overbuilt at least 2 feet and cut back to design grades.
- 10.3.11 Finished slopes should be landscaped with drought-tolerant vegetation having variable root depths and requiring minimal landscape irrigation. In addition, the slopes should be drained and properly maintained to reduce erosion.

## 10.4 Earthwork Grading Factors

- 10.4.1 Estimates of shrinkage factors are based on empirical judgments comparing the material in its existing or natural state as encountered in the exploratory excavations to a compacted state. Variations in natural soil density and in compacted fill density render shrinkage value estimates very approximate. As an example, the contractor can compact the fill to a dry density of 90 percent or higher of the laboratory maximum dry density. Thus, the contractor has an approximately 10 percent range of control over the fill volume. Based on our experience and in-situ density test results with respect to maximum density/optimum moisture test results for the upper 5 feet, the shrinkage of the previously placed fill is expected to be approximately 0 to 5 percent. This estimate is for preliminary quantity estimates only. Due to the variations in the actual shrinkage/bulking factors, a balance area should be provided to accommodate variations.

## 10.5 Utility Trench Backfill

- 10.5.1 Utility trenches should be properly backfilled in accordance with the requirements of City of Moreno Valley and the latest edition of the *Standard Specifications for Public Works Construction* (Greenbook). The pipes should be bedded with well graded crushed rock or clean sands (Sand Equivalent greater than 30) to a depth of at least one foot over the pipe. The use of well graded crushed rock is only acceptable if used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of 2-sack slurry and controlled low strength material (CLSM) are also acceptable. However, consideration should be given to the possibility of differential settlement where the slurry ends and earthen backfill begins. These transitions should be minimized and additional stabilization should be considered at these transitions.
- 10.5.2 Utility excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, gravel, concrete, or geogrid.
- 10.5.3 During the rainy season, localized perched water conditions may develop above bedrock that may require special consideration during grading operations. The contractor should be prepared to mitigate seepage and perched water conditions. Groundwater, seepage, and perched water are dependent on seasonal precipitation, irrigation, and land use, among other factors, and vary as a result.



## 10.6 Seismic Design Criteria

10.6.1 The following table summarizes site-specific design criteria obtained from the 2016 California Building Code (CBC; Based on the 2015 International Building Code [IBC] and ASCE 7-10), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the computer program *U.S. Seismic Design Maps*, provided by the USGS. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.3.2 of the 2016 CBC and Table 20.3-1 of ASCE 7-10. The values presented on the following table are for the risk-targeted maximum considered earthquake ( $MCE_R$ ).

**2016 CBC SEISMIC DESIGN PARAMETERS**

| Parameter  | Value  | 2016 CBC Reference           |
|--|--------|------------------------------|
| Site Class   | D      | Section 1613.3.2             |
| $MCE_R$ Ground Motion Spectral Response Acceleration – Class B (short), $S_S$  | 1.502g | Figure 1613.3.1(1)           |
| $MCE_R$ Ground Motion Spectral Response Acceleration – Class B (1 sec), $S_1$  | 0.621g | Figure 1613.3.1(2)           |
| Site Coefficient, $F_A$  | 1.0    | Table 1613.3.3(1)            |
| Site Coefficient, $F_V$  | 1.5    | Table 1613.3.3(2)            |
| Site Class Modified $MCE_R$ Spectral Response Acceleration (short), $S_{MS}$   | 1.502g | Section 1613.3.3 (Eqn 16-37) |
| Site Class Modified $MCE_R$ Spectral Response Acceleration – (1 sec), $S_{M1}$ | 0.931g | Section 1613.3.3 (Eqn 16-38) |
| 5% Damped Design Spectral Response Acceleration (short), $S_{DS}$              | 1.002g | Section 1613.3.4 (Eqn 16-39) |
| 5% Damped Design Spectral Response Acceleration (1 sec), $S_{D1}$              | 0.621g | Section 1613.3.4 (Eqn 16-40) |

- 10.6.2 The table below presents the mapped maximum considered geometric mean ( $MCE_G$ ) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-10.

**ASCE 7-10 PEAK GROUND ACCELERATION**

| Parameter   | Value  | ASCE 7-10 Reference         |
|---|--------|-----------------------------|
| Mapped $MCE_G$ Peak Ground Acceleration, PGA                  | 0.573  | Figure 22-7                 |
| Site Coefficient, $F_{PGA}$                                   | 1.000g | Table 11.8-1                |
| Site Class Modified $MCE_G$ Peak Ground Acceleration, $PGA_M$ | 0.573g | Section 11.8.3 (Eqn 11.8-1) |

- 10.6.3 The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2016 California Building Code and ASCE 7-10, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain “Life Safety” during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.
- 10.6.4 Deaggregation of the MCE peak ground acceleration was performed using the USGS online BETA Unified Hazard Tool, 2008 Conterminous U.S. Dynamic edition. The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 7.17 magnitude event occurring at a hypocentral distance of 10.8 kilometers from the site.
- 10.6.5 Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 7.11 magnitude occurring at a hypocentral distance of 13.3 kilometers from the site.
- 10.6.6 Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

## 10.7 Foundation and Concrete Slabs-On-Grade Recommendations

10.7.1 A conventional spread foundation system may be utilized for support of the proposed structures provided foundations derive support in newly placed engineered fill.

10.7.2 The foundation recommendations presented herein are for the proposed structures following remedial grading. We separated the foundation recommendations into three categories based on either the maximum and differential fill thickness or Expansion Index. We expect most structures will be Category II due to the low expansion potential and expected geometry of the planned fill and underlying alluvial materials. However, the category may be increased to Category III where expansion potential or fill geometry dictates based on as-graded conditions. The foundation category criteria for the expected conditions are presented in Table 10.7.2. Final foundation categories will be evaluated once site grading has been completed.

**TABLE 10.7.2  
FOUNDATION CATEGORY CRITERIA**

| Foundation Category | Maximum Fill Thickness, T (Feet) | Differential Fill Thickness, D (Feet) | Expansion Index (EI) |
|---------------------|----------------------------------|---------------------------------------|----------------------|
| I                   | $T < 20$                         | $D < 10$                              | $EI \leq 50$         |
| II                  | $20 \leq T < 50$                 | $10 \leq D < 20$                      | $50 < EI \leq 90$    |
| III                 | $T \geq 50$                      | $D \geq 20$                           | $EI > 90$            |

10.7.3 Foundations for the structures may consist of either continuous strip footings and/or isolated spread footings. Conventionally reinforced continuous footings should be at least 12 inches wide, and isolated spread footings should have a minimum width of 24 inches. Footings should extend to the minimum footing embedment in Table 10.7.3. A wall/column footing dimension detail is provided on Figure 6.

**TABLE 10.7.3  
CONVENTIONAL FOUNDATION RECOMMENDATIONS BY CATEGORY**

| Foundation Category | Minimum Footing Embedment Depth (inches) | Continuous Footing Reinforcement        | Interior Slab Reinforcement                        |
|---------------------|--|---|--|
| I                   | 18                                       | Two No. 4 bars, one top and one bottom  | 6 x 6 - 10/10 welded wire mesh at slab mid-point   |
| II                  | 24                                       | Four No. 4 bars, two top and two bottom | No. 3 bars at 24 inches on center, both directions |
| III                 | 30                                       | Four No. 5 bars, two top and two bottom | No. 3 bars at 18 inches on center, both directions |



- 10.7.4 As an alternative to the conventional foundation recommendations, consideration should be given to the use of post-tensioned concrete slab and foundation systems for the support of the proposed structures. The post-tensioned systems should be designed by a structural engineer experienced in post-tensioned slab design and design criteria of the Post-Tensioning Institute (PTI) DC 10.5-12 *Standard Requirements for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive Soils* or *WRI/CRSI Design of Slab-on-Ground Foundations*, as required by the 2016 CBC Section 1808.6.2. Although this procedure was developed for expansive soil conditions, it can also be used to reduce the potential for foundation distress due to differential fill settlement. The post-tensioned design should incorporate the geotechnical parameters presented in Table 10.7.4 for the particular Foundation Category designated. The parameters presented in Table 10.7.4 are based on the guidelines presented in the PTI DC 10.5 design manual.

**TABLE 10.7.4  
POST-TENSIONED FOUNDATION SYSTEM DESIGN PARAMETERS**

| Post-Tensioning Institute (PTI)<br>DC 10.5-12 Design Parameters | Foundation Category |      |      |
|---|---------------------|------|------|
|   | I                   | II   | III  |
| Thornthwaite Index  | -20                 | -20  | -20  |
| Equilibrium Suction   | 3.9                 | 3.9  | 3.9  |
| Edge Lift Moisture Variation Distance, $e_M$ (feet)             | 5.3                 | 5.1  | 4.9  |
| Edge Lift, $y_M$ (inches)                                       | 0.61                | 1.10 | 1.58 |
| Center Lift Moisture Variation Distance, $e_M$ (feet)           | 9.0                 | 9.0  | 9.0  |
| Center Lift, $y_M$ (inches)                                     | 0.30                | 0.47 | 0.66 |

- 10.7.5 The foundations for the post-tensioned slabs should be embedded in accordance with the recommendations of the structural engineer. If a post-tensioned mat foundation system is planned, the slab should possess a thickened edge with a minimum width of 12 inches and extend below the clean sand or crushed rock layer.
- 10.7.6 If the structural engineer proposes a post-tensioned foundation design method other than the PTI DC 10.5:
- The deflection criteria presented in Table 10.7.4 are still applicable.
  - Interior stiffener beams should be used for Foundation Category II and III.
  - The width of the perimeter foundations should be at least 12 inches.
  - The perimeter footing embedment depths should be at least 12, 18, and 24 inches for Foundation Categories I, II, and III, respectively. The embedment depths should be measured from the lowest adjacent pad grade.

- 10.7.7 Our experience indicates post-tensioned slabs may be susceptible to excessive edge lift, regardless of the underlying soil conditions. Placing reinforcing steel at the bottom of the perimeter footings and the interior stiffener beams may mitigate this potential. The structural engineer should design the foundation system to reduce the potential of edge lift occurring for the proposed structures.
- 10.7.8 During the construction of the foundation system, the concrete should be placed monolithically. Under no circumstances should cold joints form between the footings/grade beams and the slab during the construction of the post-tension foundation system unless specifically designed by the structural engineer.
- 10.7.9 Category I, II, or III foundations may be designed for an allowable soil bearing pressure of 3,500 pounds per square foot (psf) (dead plus live load). This bearing pressure may be increased by one-third for transient loads due to wind or seismic forces. We estimate the total settlements under the imposed allowable loads to be up to 1 inch with differential settlements on the order of ½ inch over a horizontal distance of 40 feet.
- 10.7.10 Isolated footings, if present, should have the minimum embedment depth and width recommended above for a particular foundation category. Where this condition cannot be avoided, the isolated footings should be connected to the building foundation system with grade beams.
- 10.7.11 Slabs-on-grade that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, the concrete slab-on-grade may be

- underlain by a vapor retarder over 4 inches of clean sand (sand equivalent greater than 30), since the sand will serve as a capillary break and will minimize the potential for punctures and damage to the vapor barrier.
- 10.7.12 The bedding sand thickness should be determined by the project foundation engineer, architect, and/or developer. However, we should be contacted to provide recommendations if the bedding sand is thicker than 4 inches. Placement of 3 inches and 4 inches of sand is common practice in southern California for 5-inch and 4-inch thick slabs, respectively. The foundation engineer should provide appropriate concrete mix design criteria and curing measures that may be utilized to assure proper curing of the slab to reduce the potential for rapid moisture loss and subsequent cracking and/or slab curl.
- 10.7.13 Special subgrade presaturation is not deemed necessary prior to placing concrete; however, the exposed foundation and slab subgrade soil should be moisture conditioned, as necessary, to maintain a moist condition as would be expected in such concrete placement.
- 10.7.14 Where buildings or other improvements are planned near the top of a slope steeper than 3:1 (horizontal to vertical), special foundations and/or design considerations and possible building set backs are recommended due to the tendency for lateral soil movement to occur.
- Building footings should be deepened such that the bottom outside edge of the footing is at least 7 feet horizontally from the face of the slope.
  - Geocon should be contacted to review the pool plans and the specific site conditions to provide additional recommendations, if necessary.
  - Swimming pools located within 7 feet of the top of cut or fill slopes are not recommended. Where such a condition cannot be avoided, the portion of the swimming pool wall within 7 feet of the slope face be designed assuming that the adjacent soil provides no lateral support
  - Although other improvements, which are relatively rigid or brittle, such as concrete flatwork or masonry walls, may experience some distress if located near the top of a slope, it is generally not economical to mitigate this potential. It may be possible, however, to incorporate design measures that would permit some lateral soil movement without causing extensive distress. Geocon should be consulted for specific recommendations.
- 10.7.15 The recommendations of this report are intended to reduce the potential for cracking of slabs and foundations due to expansive soil (if present) or differential settlement of fill soil with varying thicknesses. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade placed on such conditions may still exhibit some cracking due to soil movement and/or shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics.



Their occurrence may be reduced by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

- 10.7.16 Geocon should be consulted to provide additional design parameters as required by the structural engineer.
- 10.7.17 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those expected. If unexpected soil conditions are encountered, foundation modifications may be required.
- 10.7.18 This office should be provided a copy of the final grading and foundation plans so that the recommendations presented herein can be properly reviewed and revised if necessary.

## **10.8 Exterior Concrete Flatwork**

- 10.8.1 Exterior concrete flatwork not subject to vehicular traffic should be constructed in accordance with the recommendations herein assuming the subgrade materials possess an Expansion Index of 50 or less. Subgrade soils should be compacted to 90 percent relative compaction. Slab panels should be a minimum of 4 inches thick and when in excess of 8 feet square should be reinforced with No. 3 reinforcing bars spaced 18 inches center-to-center in both directions to reduce the potential for cracking. In addition, concrete flatwork should be provided with crack control joints to reduce and/or control shrinkage cracking. Crack control spacing should be determined by the project structural engineer based upon the slab thickness and intended usage. Criteria of the American Concrete Institute (ACI) should be taken into consideration when establishing crack control spacing. Subgrade soil for exterior slabs not subjected to vehicle loads should be compacted in accordance with criteria presented in the *Grading* section prior to concrete placement. Subgrade soil should be properly compacted and the moisture content of subgrade soil should be verified prior to placing concrete. Base materials will not be required below concrete improvements.
- 10.8.2 Even with the incorporation of the recommendations of this report, the exterior concrete flatwork has a potential to experience some uplift due to expansive soil beneath grade. The steel reinforcement should overlap continuously in flatwork to reduce the potential for vertical offsets within flatwork. Additionally, flatwork should be structurally connected to the curbs, where possible, to reduce the potential for offsets between the curbs and the flatwork.

- 10.8.3 Where exterior flatwork abuts the structure at entrant or exit points, the exterior slab should be dowelled into the structure's foundation stem wall. This recommendation is intended to reduce the potential for differential elevations that could result from differential settlement or minor heave of the flatwork. Dowelling details should be designed by the project structural engineer.
- 10.8.4 The recommendations presented herein are intended to reduce the potential for cracking of exterior slabs as a result of differential movement. However, even with the incorporation of the recommendations presented herein, slabs-on-grade will still crack. The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, the use of crack control joints and proper concrete placement and curing. Crack control joints should be spaced at intervals no greater than 12 feet. Literature provided by the Portland Concrete Association (PCA) and American Concrete Institute (ACI) present recommendations for proper concrete mix, construction, and curing practices, and should be incorporated into project construction.

## 10.9 Conventional Retaining Walls

- 10.9.1 The recommendations presented herein are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 15 feet. In the event that walls higher than 15 feet or other types of walls are planned, Geocon should be consulted for additional recommendations.
- 10.9.2 Retaining walls not restrained at the top and having a level backfill surface should be designed for an active soil pressure equivalent to the pressure exerted by a fluid density of 35 pounds per cubic foot (pcf). Where the backfill will be inclined at no steeper than 2:1 (horizontal to vertical), an active soil pressure of 60 pcf is recommended. These soil pressures assume that the backfill materials within an area bounded by the wall and a 1:1 plane extending upward from the base of the wall possess an EI of 50 or less. For walls where backfill materials do not conform to the criteria herein, Geocon should be consulted for additional recommendations.
- 10.9.3 Unrestrained walls are those that are allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Where walls are restrained from movement at the top, walls with a level backfill surface should be designed for a soil pressure equivalent to the pressure exerted by a fluid density of 55 pcf.

- 10.9.4 The structural engineer should determine the seismic design category for the project in accordance with Section 1613 of the CBC. If the project possesses a seismic design category of D, E, or F, proposed retaining walls in excess of 6 feet in height should be designed with seismic lateral pressure (Section 1803.5.12 of the 2016 CBC).
- 10.9.5 A seismic load of 10 pcf should be used for design of walls that support more than 6 feet of backfill in accordance with Section 1803.5.12 of the 2016 CBC. The seismic load is applied as an equivalent fluid pressure along the height of the wall and the calculated loads result in a maximum load exerted at the base of the wall and zero at the top of the wall. This seismic load should be applied in addition to the active earth pressure. The earth pressure is based on half of two-thirds of  $PGA_M$  calculated from ASCE 7-10 Section 11.8.3.
- 10.9.6 Unrestrained walls will move laterally when backfilled and loading is applied. The amount of lateral deflection is dependent on the wall height, the type of soil used for backfill, and loads acting on the wall. The retaining walls and improvements above the retaining walls should be designed to incorporate an appropriate amount of lateral deflection as determined by the structural engineer.
- 10.9.7 Retaining walls should be provided with a drainage system adequate to prevent the buildup of hydrostatic forces and waterproofed as required by the project architect. The soil immediately adjacent to the backfilled retaining wall should be composed of free draining material completely wrapped in Mirafi 140N (or equivalent) filter fabric for a lateral distance of 1 foot for the bottom two-thirds of the height of the retaining wall. The upper one-third should be backfilled with less permeable compacted fill to reduce water infiltration. Alternatively, a drainage panel, such as a Miradrain 6000 or equivalent, can be placed along the back of the wall. A typical drain detail for each option is shown on Figure 7. The use of drainage openings through the base of the wall (weep holes) is not recommended where the seepage could be a nuisance or otherwise adversely affect the property adjacent to the base of the wall. The recommendations herein assume a properly compacted backfill (EI of 20 or less) with no hydrostatic forces or imposed surcharge load. If conditions different than those described are expected or if specific drainage details are desired, Geocon should be contacted for additional recommendations.
- 10.9.8 Wall foundations should be designed in accordance with the above foundation recommendations.



## 10.10 Lateral Loading

- 10.10.1 To resist lateral loads, a passive pressure exerted by an equivalent fluid weight of 350 pounds per cubic foot (pcf) should be used for the design of footings or shear keys poured neat against compacted fill. The allowable passive pressure assumes a horizontal surface extending at least 5 feet, or three times the surface generating the passive pressure, whichever is greater. The upper 12 inches of material in areas not protected by floor slabs or pavement should not be included in design for passive resistance.
- 10.10.2 If friction is to be used to resist lateral loads, an allowable coefficient of friction between soil and concrete of 0.40 should be used for design.

## 10.11 Swimming Pool/Spa

- 10.11.1 If swimming pools or spas are planned, the proposed swimming pool shell bottom should be designed as a free-standing structure and may derive support in newly placed engineered fill or the competent native older alluvium. We recommend that uniformity be maintained beneath the proposed swimming pools where possible. However, swimming pool foundations may derive support in engineered fill or undisturbed older alluvium.
- 10.11.2 Swimming pool foundations and walls may be designed in accordance with the *Foundation* and *Retaining Wall* sections of this report. A hydrostatic relief valve should be considered as part of the swimming pool design unless a gravity drain system can be placed beneath the pool shell.
- 10.11.3 If the proposed pool is in proximity to a proposed building, consideration should be given to construction sequence. If the proposed pool is constructed after building foundation construction, the excavation required for pool construction could remove a component of lateral support from the foundations and would therefore require shoring. Once information regarding the pool location and depth becomes available, this information should be provided to Geocon for review and possible revision of these recommendations.

## 10.12 Preliminary Pavement Recommendations

- 10.12.1 The final pavement design should be based on R-value testing of soils at subgrade. Streets should be designed in accordance with the City of Moreno Valley specifications when final Traffic Indices and R-Value test results of subgrade soil are completed. For preliminary design purposes, we used an R-value test result of 40 based on the soil classification. A value of 78 was considered for aggregate base materials for the purposes of this preliminary analysis. Pavements should meet the minimum requirement for asphalt thickness in the city of Moreno Valley. Preliminary flexible pavement sections are presented in Table 10.12.1. Geocon should be contacted if other roadway classifications and traffic indices are appropriate for the project.

**TABLE 10.12.1  
PRELIMINARY FLEXIBLE PAVEMENT SECTIONS**

| Road Classification                 | Assumed Traffic Index | Assumed Subgrade R-Value | Asphalt Concrete (inches) | Crushed Aggregate Base (inches) |
|-------------------------------------|-----------------------|--------------------------|---------------------------|---------------------------------|
| Parking Areas                       | 5.0                   | 50                       | 3.0                       | 6.0                             |
| Local Street/Interior Tract Streets | 5.5                   | 50                       | 3.0                       | 6.0                             |
| Local Street/Interior Tract Streets | 6.0                   | 50                       | 3.5                       | 6.0                             |
| Local Street/Interior Tract Streets | 6.5                   | 50                       | 3.5                       | 7.0                             |
| Collector                           | 7.0                   | 50                       | 4.0                       | 7.0                             |
| Collector                           | 7.5                   | 50                       | 4.5                       | 7.5                             |
| Collector                           | 8.0                   | 50                       | 4.5                       | 9.0                             |
| Secondary Highway                   | 8.5                   | 50                       | 5.0                       | 9.0                             |
| Major Highway                       | 9.0                   | 50                       | 5.5                       | 9.5                             |

- 10.12.2 The upper 12 inches of the subgrade soil should be compacted to a dry density of at least 95 percent of the laboratory maximum dry density near to slightly above optimum moisture content beneath pavement sections.
- 10.12.3 The crushed aggregated base and asphalt concrete materials should conform to Section 200-2.2 and Section 203-6, respectively, of the Greenbook and the latest edition of the County of Riverside Specifications. Base materials should be compacted to a dry density of at least 95 percent of the laboratory maximum dry density near to slightly above optimum moisture content. Asphalt concrete should be compacted to a density of 95 percent of the laboratory Hveem density in accordance with ASTM D 1561.

- 10.12.4 A rigid Portland cement concrete (PCC) pavement section should be placed in driveway aprons and cross gutters. We calculated the rigid pavement section in general conformance with the procedure recommended by the American Concrete Institute report ACI 330R-08 Guide for Design and Construction of Concrete Parking Lots using the parameters presented in Table 10.12.4.

**TABLE 10.12.4  
RIGID PAVEMENT DESIGN PARAMETERS**

| Design Parameter                       | Design Value |
|--|--------------|
| Modulus of subgrade reaction, k        | 150 pci      |
| Modulus of rupture for concrete, $M_R$ | 550 psi      |
| Traffic Category, TC                   | C and D      |
| Average daily truck traffic, ADTT      | 100 and 700  |

- 10.12.5 Based on the criteria presented herein, the PCC pavement sections should have a minimum thickness as presented in Table 10.12.5.

**TABLE 10.12.5  
RIGID PAVEMENT RECOMMENDATIONS**

| Location         | Portland Cement Concrete (inches) |
|------------------|-----------------------------------|
| Roadways (TC=C)  | 6.5                               |
| Bus Stops (TC=D) | 7.5                               |

- 10.12.6 The PCC pavement should be placed over subgrade soil that is compacted to a dry density of at least 95 percent of the laboratory maximum dry density near to slightly above optimum moisture content. This pavement section is based on a minimum concrete compressive strength of approximately 3,000 psi (pounds per square inch). Base material will not be required beneath concrete improvements.
- 10.12.7 A thickened edge or integral curb should be constructed on the outside of concrete slabs subjected to wheel loads. The thickened edge should be 1.2 times the slab thickness or a minimum thickness of 2 inches, whichever results in a thicker edge, and taper back to the recommended slab thickness 4 feet behind the face of the slab (e.g., a 9-inch-thick slab would have an 11-inch-thick edge). Reinforcing steel will not be necessary within the concrete for geotechnical purposes with the possible exception of dowels at construction joints as discussed herein.
- 10.12.8 In order to control the location and spread of concrete shrinkage cracks, crack-control joints (weakened plane joints) should be included in the design of the concrete pavement slab in accordance with the referenced ACI report.



10.12.9 Performance of the pavements is highly dependent on providing positive surface drainage away from the edge of the pavement. Ponding of water on or adjacent to the pavement surfaces will likely result in pavement distress and subgrade failure. Drainage from landscaped areas should be directed to controlled drainage structures. Landscape areas adjacent to the edge of asphalt pavements are not recommended due to the potential for surface or irrigation water to infiltrate the underlying permeable aggregate base and cause distress. Where such a condition cannot be avoided, consideration should be given to incorporating measures that will significantly reduce the potential for subsurface water migration into the aggregate base. If planter islands are planned, the perimeter curb should extend at least 6 inches below the level of the base materials.

### **10.13 Temporary Excavations**

10.13.1 Excavations on the order of 5 to 15 feet below the existing ground surface are expected for construction of the proposed utility improvements; and it is expected that the proposed utilities will be installed with conventional cut-and-cover methods.

10.13.2 The excavations are expected to expose previously placed fill and alluvial soils which are suitable for vertical excavations up to 5 feet where loose soils or caving sands are not present and where not surcharged by adjacent traffic or structures.

10.13.3 Vertical excavations greater than 5 feet will require sloping measures in order to provide a stable excavation. Where sufficient space is available, temporary unsurcharged embankments should be designed by the contractor's competent person in accordance with OSHA regulations.

10.13.4 Where there is insufficient space for sloped excavations, shoring or trench shields should be used to support excavations. Shoring may also be necessary where sloped excavation could remove vertical or lateral support of existing improvements, including existing utilities and adjacent structures. Recommendations for temporary shoring are provided in the following section.

10.13.5 Where sloped embankments are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. The contractor's competent person should inspect the soils exposed in the cut slopes during excavation in accordance with OSHA regulations so that modifications of the slopes can be made if variations in the soil conditions occur.

## 10.14 Shoring

- 10.14.1 Where there is insufficient space to perform sloped excavations, shoring may be implemented. It is expected that braced shoring, such as conventionally braced shields or cross-braced hydraulic shoring, will be utilized; however, the selection of the shoring system is the responsibility of the contractor. Shoring systems should be designed by a California licensed civil or structural engineer with experience in designing shoring systems.
- 10.14.2 We recommend that an equivalent fluid pressure based on the table below, be utilized for design of shoring. These pressures are based on the assumption that the shoring is supporting a level backfill and there are no hydrostatic pressures above the bottom of the excavation.

**TABLE 10.14.2  
RECOMMENDED SHORING PRESURES**

| <b>HEIGHT OF SHORED<br/>EXCAVATION<br/>(FEET)</b> | <b>EQUIVALENT FLUID PRESSURE<br/>(Pounds Per Cubic Foot)<br/>(ACTIVE PRESSURE)</b> | <b>EQUIVALENT FLUID PRESSURE<br/>(Pounds Per Cubic Foot) (AT-<br/>REST PRESSURE)</b> |
|---|--|--|
| Up to 20  | 30   | 50   |

- 10.14.3 Active pressures can only be achieved when movement in the soil (earth wall) occurs. If movement in the soil is not acceptable, such as adjacent to an existing structure or where braced shoring will be utilized the at-rest pressure should be considered for design purposes.
- 10.14.4 Additional active pressure should be added for a surcharge condition due to sloping ground, construction equipment, vehicular traffic, or adjacent structures and should be designed for each condition as the project progresses.
- 10.14.5 In addition to the recommended earth pressure, the upper ten feet of the shoring adjacent to roadways or driveway areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the shoring due to normal street traffic. If the traffic is kept back at least ten feet from the shoring, the traffic surcharge may be neglected. Higher surcharge loads may be required to account for construction equipment.
- 10.14.6 It is difficult to accurately predict the amount of deflection of a shored embankment. It should be realized that some deflection will occur. We recommend that the deflection be minimized to prevent damage to existing structures and adjacent improvements. Where public right-of-ways are present or adjacent offsite structures do not surcharge the shoring excavation, the shoring deflection should be limited to less than 1 inch at the top of the shored embankment. Where offsite structures are within the shoring surcharge area it is recommended that the beam deflection be limited to less than ½ inch at the elevation of the adjacent offsite foundation, and no deflection at all if deflections will damage existing

structures. The allowable deflection is dependent on many factors, such as the presence of structures and utilities near the top of the embankment, and will be assessed and designed by the project shoring engineer.

## **10.15 Site Drainage and Moisture Protection**

- 10.15.1 Adequate site drainage is critical to reduce the potential for differential soil movement, erosion and subsurface seepage. Under no circumstances should water be allowed to pond adjacent to footings. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2016 CBC 1804.4 or other applicable standards. In addition, surface drainage should be directed away from the top of slopes into swales or other controlled drainage devices. Roof and pavement drainage should be directed into conduits that carry runoff away from the proposed structure.
- 10.15.2 Underground utilities should be leak free. Utility and irrigation lines should be checked periodically for leaks, and detected leaks should be repaired promptly. Detrimental soil movement could occur if water is allowed to infiltrate the soil for prolonged periods of time.
- 10.15.3 Landscaping planters adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. We recommend that area drains to collect excess irrigation water and transmit it to drainage structures or impervious above-grade planter boxes be used. In addition, where landscaping is planned adjacent to the pavement, we recommend construction of a cutoff wall along the edge of the pavement that extends at least 6 inches below the bottom of the base material.
- 10.15.4 If not properly constructed, there is a potential for distress to improvements and properties located hydrologically down gradient or adjacent to infiltration areas. Factors such as the amount of water to be detained, its residence time, and soil permeability have an important effect on seepage transmission and the potential adverse impacts that may occur if the storm water management features are not properly designed and constructed. We have not performed a hydrogeology study at the site. Down-gradient and adjacent structures may be subjected to seeps, movement of foundations and slabs, or other impacts as a result of water infiltration.

## **10.16 Plan Review**

- 10.16.1 Grading, shoring and foundation plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations, if necessary.



## LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that expected herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous materials was not part of the scope of services provided by Geocon West, Inc.
2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.
3. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.
4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

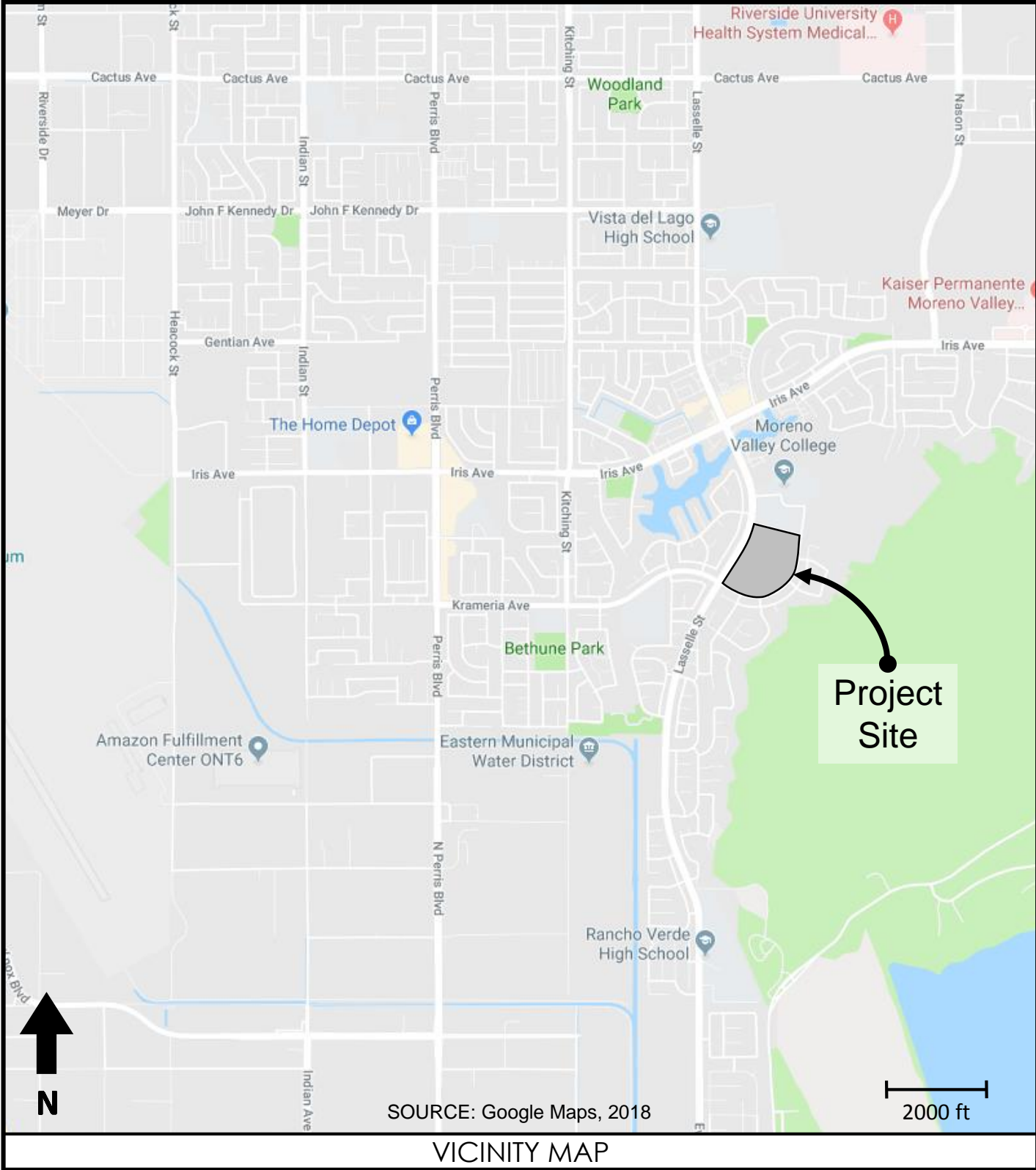
## LIST OF REFERENCES

1. Anderson Consulting Engineers, Inc., *Continental Villages Preliminary Site Layout*, undated.
2. Boore, D.M. and G.M Atkinson, *Ground-Motion Prediction for the Average Horizontal Component of PGA, PGV, and 5%-Damped PSA at Spectral Periods Between 0.01 and 10.0 S*, Earthquake Spectra, Volume 24, Issue 1, pages 99-138, February 2008.
3. California Geological Survey, 2003, *Earthquake Shaking Potential for California*, from USGS/CGS Seismic Hazards Model, CSSC No. 03-02.
4. California Geological Survey, 2002, *Seismic Shaking Hazards in California*, Based on the USGS/CGS Probabilistic Seismic Hazards Assessment (PSHA) Model, 10% probability of being exceeded in 50 years; revised April 2003; <http://redirect.conservation.ca.gov/cgs/rghm/pshamap/pshamain.html>.
5. California Department of Transportation (Caltrans), Division of Engineering Services, Materials Engineering and Testing Services, 2012, *Corrosion Guidelines, Version 2.0*, dated November.
6. Campbell, K.W. and Y. Bozorgnia, *NGA Ground Motion Model for the Geometric Mean Horizontal Component of PGA, PGV, PGD and 5% Damped Linear Elastic Response Spectra for Periods Ranging from 0.01 to 10 s*, Preprint of version submitted for publication in the NGA Special Volume of Earthquake Spectra, Volume 24, Issue 1, pages 139-171, February 2008.
7. Chiou, B.S.J., and R.R. Youngs, *A NGA Model for the Average Horizontal Component of Peak Ground Motion and Response Spectra*, preprint for article to be published in NGA Special Edition for Earthquake Spectra, Spring 2008.
8. Earth Strata Geotechnical Services, Inc., 2017, *Geotechnical Design Parameters for Keystone Retaining Wall, Proposed Residential Development, located on the Northeast Corner of Krameria Street [sic] and Lasalle [sic] Street, City of Moreno Valley, Riverside County, California*, dated January 26.
9. Earth Strata Geotechnical Services, Inc., 2016, *Geotechnical Interpretive Report, Proposed Residential Development, located on the Northeast Corner of Krameria Street [sic] and Lasalle [sic] Street, City of Moreno Valley, Riverside County, California*, dated July 15.
10. Google, 2017, Google Earth software, v. 7.1.5.1557; accessed March 20, 2018.
11. Jennings, C.W. and W.A. Bryant, 2010, *Fault Activity Map of California*, California Division of Mines and Geology Map No. 6.
12. Legg, M.R., J.C. Borrero, and C.E. Synolakis, 2003, *Evaluation of Tsunami Risk to Southern California Coastal Cities*, EERI, NEHRP Professional Fellowship Report PF2002-11, dated January.
13. Mains, Steven, 2017, *Spring 2017 Cooperative Well Measuring Program*, June.

**LIST OF REFERENCES (continued)**

14. Morton, DM and Matti, JC, 2001, *Geologic Map of the Sunnymead 7.5' Quadrangle, Riverside County, California*, Version 1.0, USGS Open File Report 01-450.
15. Riverside County GIS (RC GIS), 2015, Map My County website, [http://mmc.rivcoit.org/MMC\\_Public/Custom/disclaimer/Default.htm](http://mmc.rivcoit.org/MMC_Public/Custom/disclaimer/Default.htm); accessed September 28, 2017
16. Arulmoli, K., J.I. Baez, T.F. Blake, J. Earnest, F. Gharib, J. Goldhammer, D. Hsu, S. Kupferman, J. O'Tousa, C.R. Real, W. Reeder, E. Simantob, and T.L. Youd, 1999, *Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction Hazards in California*, Southern California Earthquake Consortium (SCEC).
17. U.S. Department of Transportation Federal Highway Administration (FHWA), 2011, LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations, Reference Manual, Publication No. FHWA-NHI-11-032, GEC No. 3, Rev 1, dated August.
18. United States Geological Survey (USGS), 2015, U.S. Seismic Design Maps website: <http://earthquake.usgs.gov/designmaps/us/application.php>; accessed March 20, 2018.
19. United Geological Survey, U.S. Seismic Design Maps web tools, Unified Hazard Tool, accessed March 20, 2018.





SOURCE: Google Maps, 2018

2000 ft

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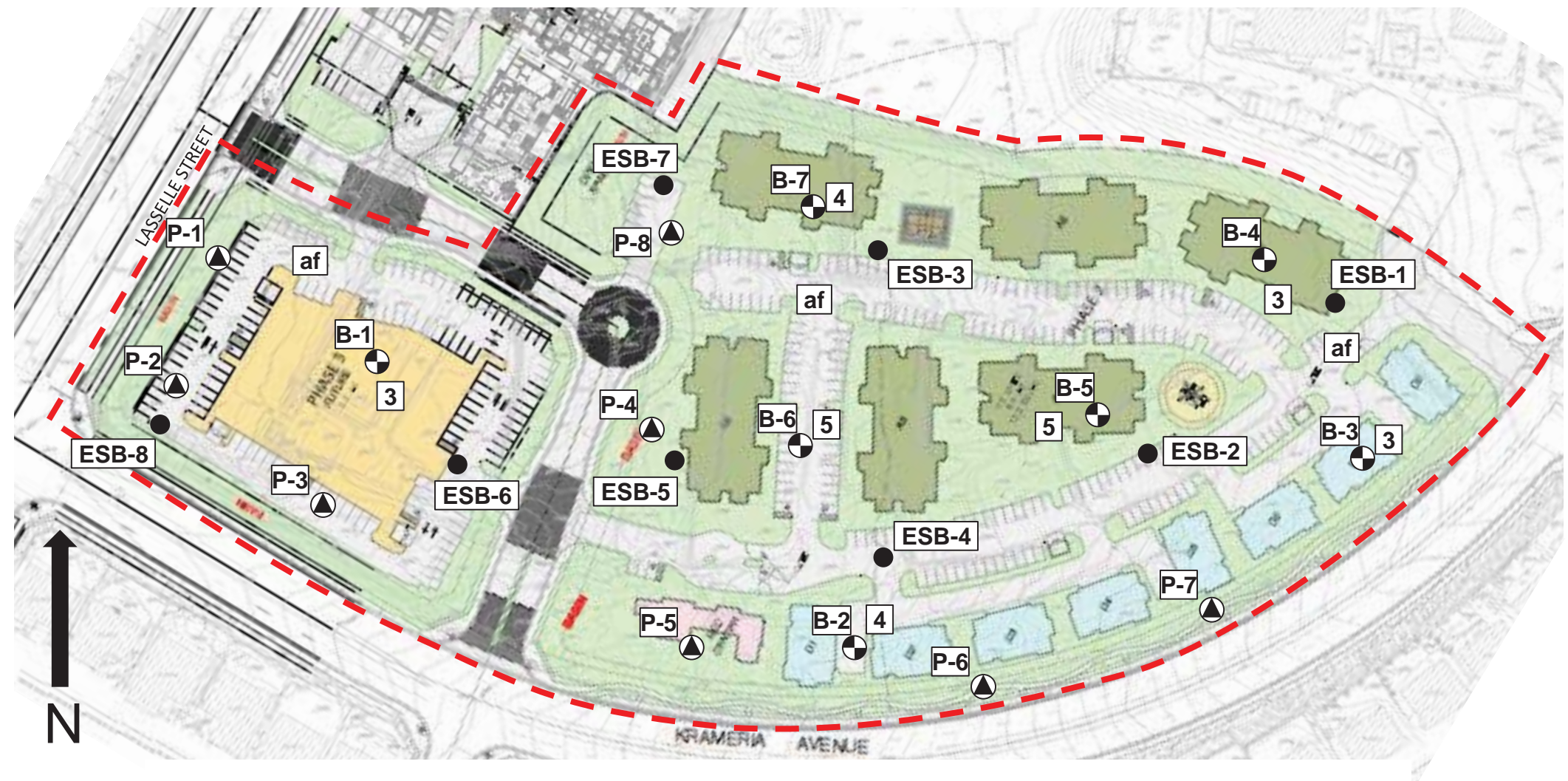


CONTINENTAL VILLAGES  
SOUTHEAST OF LASSELLE STREET &  
KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

|     |  |  |
|-----|--|--|
| AMO |  |  |
|-----|--|--|

|             |                         |        |
|-------------|-------------------------|--------|
| MARCH, 2018 | PROJECT NO. T2809-22-01 | FIG. 1 |
|-------------|-------------------------|--------|

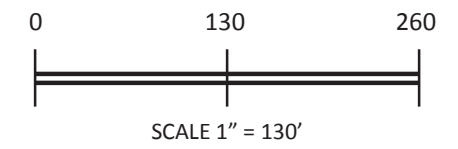
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### GEOCON LEGEND

Locations are approximate

- PROJECT BOUNDARY
- B-7** ..... GEOCON BORING LOCATION, THIS STUDY
- P-8** ..... GEOCON PERCOLATION TEST LOCATION, THIS STUDY
- ESB-8** ..... GEOTECHNICAL BORING, EARTH STRATA, 2016
- af** ..... PREVIOUSLY PLACED ARTIFICIAL FILL
- 3** ..... EXPECTED REMEDIAL REMOVAL DEPTH IN FEET



Source: Anderson Consulting Engineers, Inc., *Continental Villages, Preliminary Site Layout*; undated.

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|  |             |                         |
|--|-------------|-------------------------|
| GEOTECHNICAL MAP   |             |                         |
| CONTINENTAL VILLAGES<br>SOUTHEAST OF LASSELLE STREET &<br>KRAMERIA AVENUE<br>MORENO VALLEY, CALIFORNIA |             |                         |
| AMO  | MARCH, 2018 | PROJECT NO. T2809-22-01 |
|  |             | FIG. 2                  |

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



## ASSUMED CONDITIONS:

|                            |  |
|----------------------------|--|
| SLOPE HEIGHT               | H = 20 feet                            |
| SLOPE INCLINATION          | 2.0 : 1.0 (Horizontal : Vertical)      |
| TOTAL UNIT WEIGHT OF SOIL  | $\gamma_t = 130$ pounds per cubic foot |
| ANGLE OF INTERNAL FRICTION | $\phi = 35$ degrees                    |
| APPARENT COHESION          | C = 150 pounds per square foot         |
| NO SEEPAGE FORCES          |  |

## ANALYSIS:

|                |   |                                |   |
|----------------|---|--------------------------------|---|
| $\lambda_{cf}$ | = | $\frac{\gamma H \tan \phi}{C}$ | EQUATION (3-3), REFERENCE 1                 |
| FS             | = | $\frac{N_{cf} C}{\gamma H}$    | EQUATION (3-2), REFERENCE 1                 |
| $\lambda_{cf}$ | = | 12.1                           | CALCULATED USING EQ. (3-3)                  |
| $N_{cf}$       | = | 38                             | DETERMINED USING FIGURE 10, REFERENCE 2     |
| FS             | = | 2.2                            | FACTOR OF SAFETY CALCULATED USING EQ. (3-2) |

## REFERENCES:

- 1.....Janbu, N., Stability Analysis of Slopes with Dimensionless Parameters, Harvard Soil Mechanics Series No. 46,1954
- 2.....Janbu, N., Discussion of J.M. Bell Dimensionless Parameters for Homogeneous Earth Slpes, Journal of Soil Mechanicx and Foundation Design, No. SM6, November 1967

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CER

## SLOPE STABILITY ANALYSIS

CONTINENTAL VILLAGES  
SOUTHEAST OF LASELLE STREET &  
KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

MARCH, 2018

PROJECT NO. T2809-22-01

FIG. 3



## ASSUMED CONDITIONS:

|                            |   |
|----------------------------|---|
| SLOPE HEIGHT               | H = 20 feet                               |
| SLOPE INCLINATION          | 2.0 : 1.0 (Horizontal : Vertical)         |
| TOTAL UNIT WEIGHT OF SOIL  | $\gamma_t = 130$ pounds per cubic foot    |
| ANGLE OF INTERNAL FRICTION | $\phi = 35$ degrees                       |
| APPARENT COHESION          | C = 150 pounds per square foot            |
| PSEUDOSTATIC COEFFICIENT   | $k_h = 0.15$                              |
| PSEUDOSTATIC INCLINATION   | 1.4 : 1.0 (Horizontal : Vertical)         |
| PSEUDOSTATIC UNIT WEIGHT   | $\gamma_{ps} = 131$ pounds per cubic foot |

NO SEEPAGE FORCES

## ANALYSIS:

$$\lambda_{cf} = \frac{\gamma H \tan \phi}{C} \text{ EQUATION (3-3), REFERENCE 1}$$

$$FS = \frac{N_{cf} C}{\gamma H} \text{ EQUATION (3-2), REFERENCE 1}$$

$$\lambda_{cf} = 12.3 \text{ CALCULATED USING EQ. (3-3)}$$

$$N_{cf} = 30 \text{ DETERMINED USING FIGURE 10, REFERENCE 2}$$

$$FS = 1.7 \text{ FACTOR OF SAFETY CALCULATED USING EQ. (3-2)}$$

## REFERENCES:

- 1.....Janbu, N., Stability Analysis of Slopes with Dimensionless Parameters, Harvard Soil Mechanics Series No. 46, 1954
- 2.....Janbu, N., Discussion of J.M. Bell Dimensionless Parameters for Homogeneous Earth Slpes, Journal of Soil Mechanix and Foundation Design, No. SM6, November 1967

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SLOPE STABILITY ANALYSIS - WITH SEISMIC

CONTINENTAL VILLAGES  
SOUTHEAST OF LASELLE STREET &  
KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

MARCH, 2018

PROJECT NO. T2809-22-01

FIG. 4

## ASSUMED CONDITIONS:

|                            |   |
|----------------------------|---|
| SLOPE HEIGHT               | H = Infinte                             |
| SLOPE INCLINATION          | 2.0 : 1.0 (Horizontal : Vertical)       |
| SLOPE ANGLE                | i = 26.6 °                              |
| DEPTH OF SATURATION        | Z = 3 feet                              |
| UNIT WEIGHT OF WATER       | $\gamma_w$ = 62.4 pounds per cubic foot |
| TOTAL UNIT WEIGHT OF SOIL  | $\gamma_t$ = 130 pounds per cubic foot  |
| ANGLE OF INTERNAL FRICTION | $\phi$ = 35 degrees                     |
| APPARENT COHESION          | C = 150 pounds per square foot          |

SLOPE SATURATED TO VERTICAL DEPTH Z BELOW SLOPE FACE.  
SEEPAGE FORCES PARALLEL TO SLOPE FACE.

## ANALYSIS:

$$FS = \frac{C + (\gamma_t - \gamma_w)Z \cdot \cos^2 i \cdot \tan \phi}{\gamma_t \cdot Z \cdot \sin i \cdot \cos i} = 1.7$$

## REFERENCES:

- 1.....Haefeli, R. *The Stability of Slopes Acted Upon by Parallel Seepage*, Proc. Second International Conference, SMFE, Rotterdam, 1948, 1, 57-62.
- 2.....Skempton, A. W., and F. A. Delory, *Stability of Natural Slopes in London Clay*, Proc. Fourth International Conference, SMFE, London, 1957, 2, 378-81.

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SURFICIAL SLOPE STABILITY

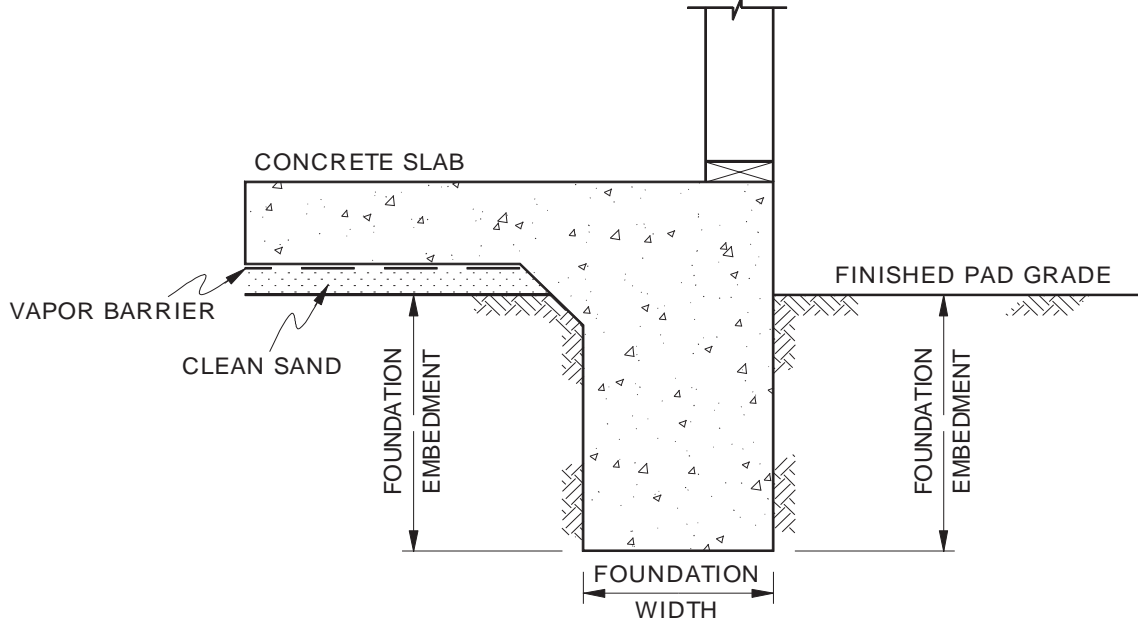
CONTINENTAL VILLAGES  
SOUTHEAST OF LASELLE STREET &  
KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

MARCH, 2018

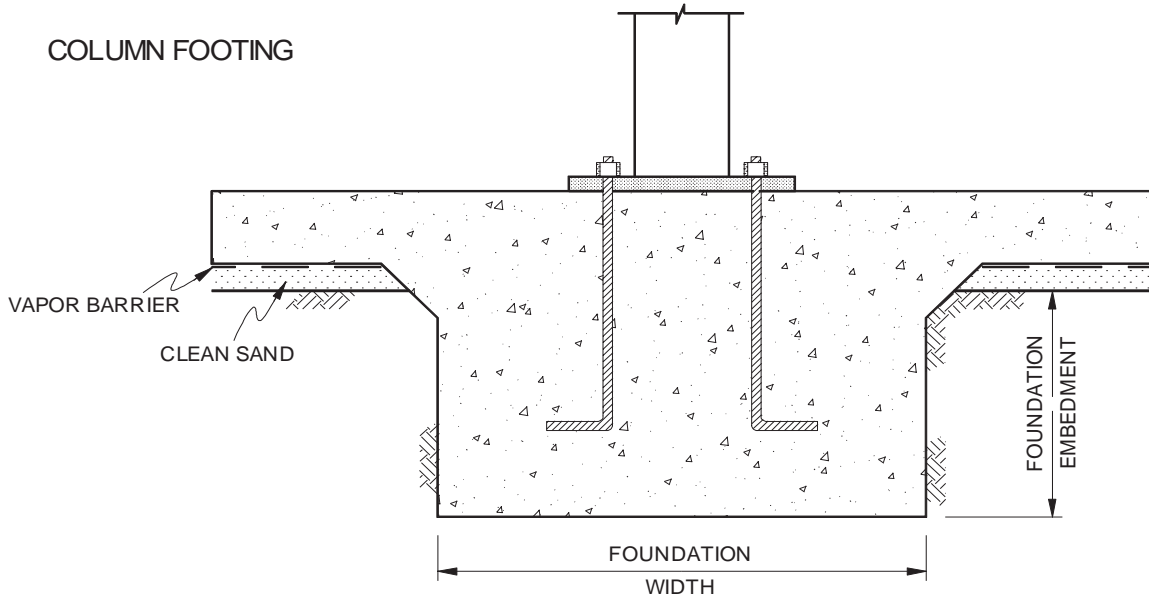
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FIG. 5

### WALL FOOTING



### COLUMN FOOTING



NOTE: SEE REPORT FOR FOUNDATION WIDTH AND DEPTH RECOMMENDATION

NO SCALE

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### WALL / COLUMN FOOTING DETAIL

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MORENO VALLEY, CALIFORNIA

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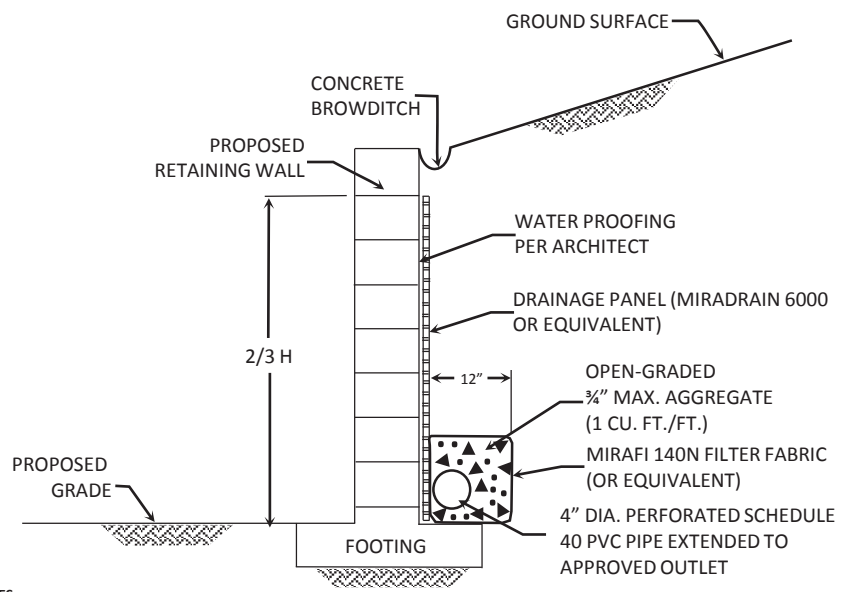
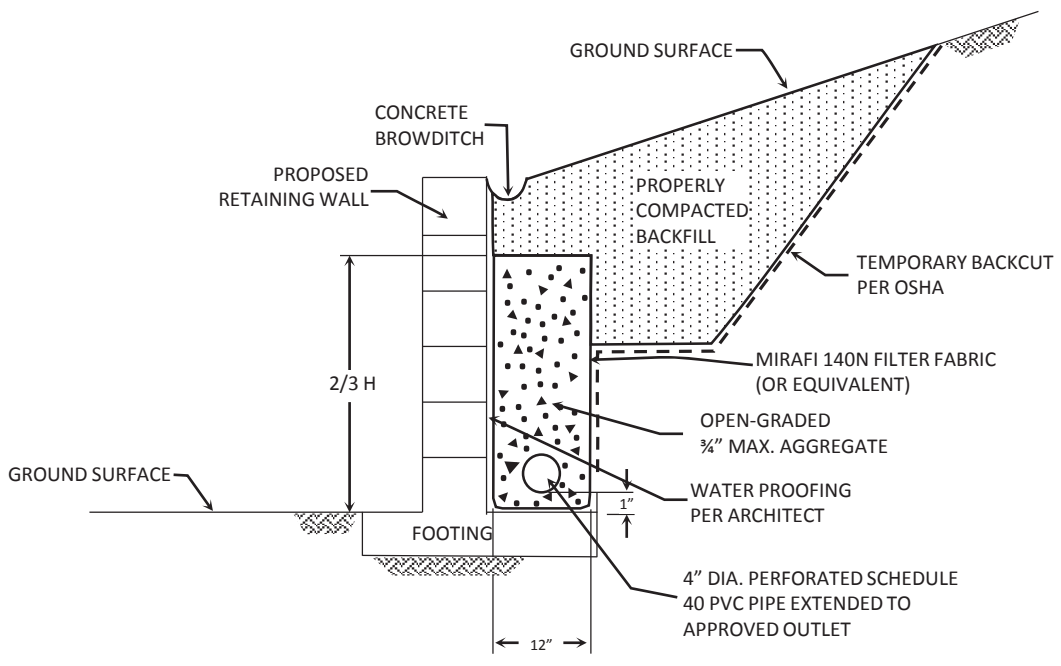
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FIG. 6

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





**NOTES:**  
 DRAIN SHOULD BE UNFORMLY SLOPED TO GRAVITY OUTLET OR TO A SUMP WHERE WATER CAN BE REMOVED BY PUMPING  
 CONCRETE BROW DITCH RECOMMENDED FOR SLOPE HEIGHTS GREATER THAN 6 FEET

NO SCALE

TYPICAL RETAINING WALL DRAIN DETAIL

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CONTINENTAL VILLAGES  
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 KRAMERIA AVENUE  
 MORENO VALLEY, CALIFORNIA

|     |  |             |                         |        |
|-----|--|-------------|-------------------------|--------|
| AMO |  | MARCH, 2018 | PROJECT NO. T2809-22-01 | FIG. 7 |
|-----|--|-------------|-------------------------|--------|

# APPENDIX

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

## APPENDIX A

### EXPLORATORY EXCAVATIONS

Geocon performed the field investigation on March 1, 2018 and percolation testing on March 5, 2018. Our subsurface exploration consisted of drilling seven geotechnical borings and eight percolation test borings. The geotechnical borings were drilled through the previously placed fill into the older alluvium to depths of 21.5 to 31.5 feet below the existing ground surface. We collected bulk and relatively undisturbed samples from the borings by driving a 3-inch O. D., California Modified Sampler into the “undisturbed” soil mass with blows from a 140-pound hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2<sup>3</sup>/<sub>8</sub>-inch inside diameter brass sampler rings to facilitate removal and testing. Relatively undisturbed samples and bulk samples of disturbed soils were transported to our laboratory for testing.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). Logs of the borings are presented on Figures A-1 through A-15. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The approximate locations of the excavations are indicated the *Geotechnical Map*, Figure 2.

Geotechnical excavation logs from previous investigations are presented in *Appendix A*. The locations of the excavations are depicted on the *Geotechnical Map*, Figure 2.

The previous boring logs are also included in this appendix.



| DEPTH IN FEET               | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING B-1</b><br>ELEV. (MSL.) <u>1527</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>                                       | PENETRATION RESISTANCE (BLOWS/FT.)  | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |     |
|-----------------------------|------------|-----------|-------------|-------------------|--|---|----------------------|----------------------|-----|
| <b>MATERIAL DESCRIPTION</b> |            |           |             |                   |  |   |                      |                      |     |
| 0                           | B-1@0-5'   |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, very dense, moist, brown; fine to coarse sand; trace gravel; micaceous   |   |                      |                      |     |
| 2                           | B-1@2.5'   |           |             |                   | -Becomes reddish brown   | 50/6"   | 128.9                | 6.5                  |     |
| 4                           | B-1@5'     |           |             |                   | -Becomes dense   | 62  | 128.1                | 7.3                  |     |
| 6                           | B-1@7.5'   |           |             |                   | -Becomes very dense  | 50/6"   | 133.1                | 6.1                  |     |
| 10                          | B-1@10'    |           |             |                   | SC   | <b>VERY OLD ALLUVIAL FAN DEPOSITS (Qvof)</b><br>Clayey SAND, dense, moist, yellowish brown; fine to coarse sand | 68                   | 134.3                | 7.9 |
| 12                          | B-1@12.5'  |           |             |                   |  | -Increase in silt and fine to medium sand   | 52                   | 126.8                | 4.9 |
| 14                          | B-1@15'    |           |             |                   | -Becomes reddish brown   | 49  | 127.3                | 7.5                  |     |
| 16                          | B-1@17.5'  |           |             |                   | -Becomes medium dense  | 44  |                      |                      |     |
| 20                          | B-1@20'    |           |             |                   | -Decrease in silt; increase in fine to coarse sand   | 40  | 130.2                | 6.5                  |     |
|                             |            |           |             |                   | Total depth 21.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Backfilled with cuttings on 03/01/2018 |   |                      |                      |     |

**Figure A-1,**  
**Log of Boring B-1, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G

|                |                             |                               |                                |
|----------------|-----------------------------|-------------------------------|--------------------------------|
| SAMPLE SYMBOLS | ... SAMPLING UNSUCCESSFUL   | ... STANDARD PENETRATION TEST | ... DRIVE SAMPLE (UNDISTURBED) |
|                | ... DISTURBED OR BAG SAMPLE | ... CHUNK SAMPLE              | ... WATER TABLE OR SEEPAGE     |







NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

| DEPTH IN FEET  | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING B-2</b><br>ELEV. (MSL.) <u>1540</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>  | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|--|------------|-----------|-------------|-------------------|---|------------------------------------|----------------------|----------------------|
| MATERIAL DESCRIPTION   |            |           |             |                   |   |                                    |                      |                      |
| 0  |            |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, very dense, moist, reddish brown; fine to coarse sand; trace gravel; micaceous  |                                    |                      |                      |
| 2  |            |           |             |                   |   |                                    |                      |                      |
| 4  |            |           |             |                   |   |                                    |                      |                      |
| 6  | B-2@5'     |           |             |                   |   | 80                                 | 122.7                | 7.5                  |
| 10   | B-2@10'    |           |             | SC                | <b>VERY OLD ALLUVIAL FAN DEPOSITS (Qvof)</b><br>Clayey SAND, medium dense, damp, yellowish brown; fine to coarse sand; micaceous<br><br>-Becomes reddish brown; fine to medium sand; some coarse sand; increase in silt |                                    |                      |                      |
| 12   |            |           |             |                   |   |                                    |                      |                      |
| 14   |            |           |             |                   |   |                                    |                      |                      |
| 16   | B-2@15'    |           |             |                   | 49  | 127.1                              | 4.3                  |                      |
| 18   |            |           |             |                   |   |                                    |                      |                      |
| 20   | B-2@20'    |           |             |                   | 61  | 128.0                              | 5.5                  |                      |
| Total depth 21.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Backfilled with cuttings on 03/01/2018 |            |           |             |                   |   |                                    |                      |                      |

**Figure A-2,**  
**Log of Boring B-2, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G

|                |   |   |  |
|----------------|---|---|--|
| SAMPLE SYMBOLS |  ... SAMPLING UNSUCCESSFUL   |  ... STANDARD PENETRATION TEST |  ... DRIVE SAMPLE (UNDISTURBED) |
|                |  ... DISTURBED OR BAG SAMPLE |  ... CHUNK SAMPLE              |  ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

| DEPTH IN FEET        | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING B-3</b><br>ELEV. (MSL.) <u>1555</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>                                       | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|----------------------|------------|-----------|-------------|-------------------|--|------------------------------------|----------------------|----------------------|
| MATERIAL DESCRIPTION |            |           |             |                   |  |                                    |                      |                      |
| 0                    |            |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, dense, moist, reddish brown; fine to coarse sand; trace gravel; micaceous  |                                    |                      |                      |
| 2                    | B-3@2.5'   |           |             |                   |  | 64                                 | 127.5                | 7.5                  |
| 4                    | B-3@5'     |           |             |                   | -Becomes very dense  | 85/11"                             | 134.4                | 5.0                  |
| 6                    |            |           |             |                   |  |                                    |                      |                      |
| 8                    | B-3@7.5'   |           |             | SC                | <b>VERY OLD ALLUVIAL FAN DEPOSITS (Qvof)</b><br>Clayey SAND, dense, damp, brown; fine to medium sand; some coarse sand; micaceous  | 47                                 | 131.0                | 8.5                  |
| 10                   | B-3@10'    |           |             |                   | -Becomes moist   | 43                                 | 125.1                | 5.7                  |
| 12                   | B-3@12.5'  |           |             | SP                | Poorly-graded SAND, medium dense, moist, yellowish brown; fine to coarse sand; micaceous   | 44                                 | 111.3                | 2.3                  |
| 14                   |            |           |             |                   |  |                                    |                      |                      |
| 16                   | B-3@15'    |           |             |                   |  | 33                                 | 121.9                | 6.8                  |
| 18                   | B-3@17.5'  |           |             | SC                | Clayey SAND, medium dense, moist, reddish brown; fine to medium sand; micaceous  | 36                                 |                      |                      |
| 20                   | B-3@20'    |           |             |                   |  | 43                                 |                      |                      |
|                      |            |           |             |                   | Total depth 21.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Backfilled with cuttings on 03/01/2018 |                                    |                      |                      |

**Figure A-3,**  
**Log of Boring B-3, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G

|                |                             |                               |                                |
|----------------|-----------------------------|-------------------------------|--------------------------------|
| SAMPLE SYMBOLS | ... SAMPLING UNSUCCESSFUL   | ... STANDARD PENETRATION TEST | ... DRIVE SAMPLE (UNDISTURBED) |
|                | ... DISTURBED OR BAG SAMPLE | ... CHUNK SAMPLE              | ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



| DEPTH IN FEET        | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING B-4</b><br>ELEV. (MSL.) <u>1553</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>                                       | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|----------------------|------------|-----------|-------------|-------------------|--|------------------------------------|----------------------|----------------------|
| MATERIAL DESCRIPTION |            |           |             |                   |  |                                    |                      |                      |
| 0                    | B-4@0-5'   |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, very dense, moist, reddish brown; fine to coarse sand; trace gravel; micaceous                                       |                                    |                      |                      |
| 2                    |            |           |             |                   |  |                                    |                      |                      |
| 4                    |            |           |             |                   |  |                                    |                      |                      |
| 6                    | B-4@5'     |           |             |                   |  |                                    | 50/6"                | 127.9                |
| 8                    |            |           |             |                   |  |                                    |                      |                      |
| 10                   | B-4@10'    |           |             | SC                | <b>VERY OLD ALLUVIAL FAN DEPOSITS (Qvof)</b><br>Clayey SAND, dense, moist, yellowish brown; fine to coarse sand; micaceous   | 55                                 | 125.8                | 2.2                  |
| 12                   |            |           |             |                   |  |                                    |                      |                      |
| 14                   |            |           |             |                   |  |                                    |                      |                      |
| 16                   | B-4@15'    |           |             |                   | -Becomes medium dense  | 37                                 | 126.1                | 2.7                  |
| 18                   |            |           |             |                   |  |                                    |                      |                      |
| 20                   | B-4@20'    |           |             |                   | -Becomes dense   | 57                                 | 120.5                | 2.3                  |
|                      |            |           |             |                   | Total depth 21.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Backfilled with cuttings on 03/01/2018 |                                    |                      |                      |

**Figure A-4,**  
**Log of Boring B-4, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G

|                |                             |                               |                                |
|----------------|-----------------------------|-------------------------------|--------------------------------|
| SAMPLE SYMBOLS | ... SAMPLING UNSUCCESSFUL   | ... STANDARD PENETRATION TEST | ... DRIVE SAMPLE (UNDISTURBED) |
|                | ... DISTURBED OR BAG SAMPLE | ... CHUNK SAMPLE              | ... WATER TABLE OR SEEPAGE     |







NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

| DEPTH IN FEET        | SAMPLE NO.          | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING B-5</b><br>ELEV. (MSL.) <u>1550</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>                                       | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|----------------------|---------------------|-----------|-------------|-------------------|--|------------------------------------|----------------------|----------------------|
| MATERIAL DESCRIPTION |                     |           |             |                   |  |                                    |                      |                      |
| 0                    |                     |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, dense, moist, brown; fine to coarse sand; trace gravel; micaceous  |                                    |                      |                      |
| 2                    |                     |           |             |                   |  |                                    |                      |                      |
| 4                    |                     |           |             |                   |  |                                    |                      |                      |
| 6                    | B-5@5'<br>B-5@5-10' |           |             |                   | -Becomes reddish brown   | 65                                 | 127.3                | 7.3                  |
| 8                    |                     |           |             |                   |  |                                    |                      |                      |
| 10                   | B-5@10'             |           |             |                   |  | 69                                 | 135.9                | 6.3                  |
| 12                   |                     |           |             |                   | -Becomes medium dense, dark brown  |                                    |                      |                      |
| 14                   |                     |           |             |                   |  |                                    |                      |                      |
| 16                   | B-5@15'             |           |             |                   |  | 36                                 | 130.9                | 7.2                  |
| 18                   |                     |           |             | SC                | <b>VERY OLD ALLUVIAL FAN DEPOSITS (Qvof)</b><br>Clayey SAND, dense, damp, yellowish brown; fine to coarse sand; micaceous  |                                    |                      |                      |
| 20                   | B-5@20'             |           |             |                   |  | 49                                 | 118.1                | 2.4                  |
|                      |                     |           |             |                   | Total depth 21.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Backfilled with cuttings on 03/01/2018 |                                    |                      |                      |

**Figure A-5,  
Log of Boring B-5, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G

|                |   |   |  |
|----------------|---|---|--|
| SAMPLE SYMBOLS |  ... SAMPLING UNSUCCESSFUL   |  ... STANDARD PENETRATION TEST |  ... DRIVE SAMPLE (UNDISTURBED) |
|                |  ... DISTURBED OR BAG SAMPLE |  ... CHUNK SAMPLE              |  ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

| DEPTH IN FEET        | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING B-6</b>   |                                  | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|----------------------|------------|-----------|-------------|-------------------|---|----------------------------------|------------------------------------|----------------------|----------------------|
|                      |            |           |             |                   | ELEV. (MSL.) <u>1538</u>  | DATE COMPLETED <u>03/01/2018</u> |                                    |                      |                      |
|                      |            |           |             |                   | EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>  |                                  |                                    |                      |                      |
| MATERIAL DESCRIPTION |            |           |             |                   |   |                                  |                                    |                      |                      |
| 0                    |            |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, dense, moist, reddish brown; fine to coarse sand; trace gravel; micaceous         |                                  |                                    |                      |                      |
| 2                    |            |           |             |                   |   |                                  |                                    |                      |                      |
| 4                    |            |           |             |                   |   |                                  |                                    |                      |                      |
| 6                    | B-6@5'     |           |             |                   |   |                                  | 75                                 | 118.5                | 9.5                  |
| 8                    |            |           |             |                   |   |                                  |                                    |                      |                      |
| 10                   | B-6@10'    |           |             |                   | -Becomes medium dense; trace clay   |                                  | 40                                 | 127.3                | 8.9                  |
| 12                   |            |           |             |                   |   |                                  |                                    |                      |                      |
| 14                   |            |           |             |                   |   |                                  |                                    |                      |                      |
| 16                   | B-6@15'    |           |             |                   | -Becomes dark brown   |                                  | 55                                 | 131.9                | 9.0                  |
| 18                   |            |           |             |                   |   |                                  |                                    |                      |                      |
| 20                   | B-6@20'    |           |             |                   |   |                                  | 61                                 | 129.6                | 6.1                  |
| 22                   |            |           |             | SC                | <b>VERY OLD ALLUVIAL FAN DEPOSITS (Qvof)</b><br>Clayey SAND, medium dense, moist, yellowish brown; fine to coarse sand; trace gravel; micaceous |                                  |                                    |                      |                      |
| 24                   |            |           |             |                   |   |                                  |                                    |                      |                      |
| 26                   | B-6@25'    |           |             |                   |   |                                  | 41                                 | 122.8                | 3.0                  |
| 28                   |            |           |             |                   |   |                                  |                                    |                      |                      |

**Figure A-6,**  
**Log of Boring B-6, Page 1 of 2**


T2809-22-01 CONTINENTAL LOGS.G

|                |                             |                               |                                |
|----------------|-----------------------------|-------------------------------|--------------------------------|
| SAMPLE SYMBOLS | ... SAMPLING UNSUCCESSFUL   | ... STANDARD PENETRATION TEST | ... DRIVE SAMPLE (UNDISTURBED) |
|                | ... DISTURBED OR BAG SAMPLE | ... CHUNK SAMPLE              | ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



| DEPTH<br>IN<br>FEET | SAMPLE<br>NO. | LITHOLOGY   | GROUNDWATER | SOIL<br>CLASS<br>(USCS) | <b>BORING B-6</b>  |                                  | PENETRATION<br>RESISTANCE<br>(BLOWS/FT.) | DRY DENSITY<br>(P.C.F.) | MOISTURE<br>CONTENT (%) |
|---------------------|---------------|---|-------------|-------------------------|--|----------------------------------|--|-------------------------|-------------------------|
|                     |               |   |             |                         | ELEV. (MSL.) <u>1538</u>   | DATE COMPLETED <u>03/01/2018</u> |  |                         |                         |
|                     |               |   |             |                         | EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>   |                                  |  |                         |                         |
|                     |               |   |             |                         | MATERIAL DESCRIPTION   |                                  |  |                         |                         |
| 30                  | B-6@30'       |  |             | SC                      | Clayey SAND, medium dense, moist, brownish red; fine to coarse sand; trace gravel; micaceous   |                                  | 46                                       | 127.7                   | 2.5                     |
|                     |               |   |             |                         | Total depth 31.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Backfilled with cuttings on 03/01/2018 |                                  |  |                         |                         |

**Figure A-6,  
Log of Boring B-6, Page 2 of 2**

T2809-22-01 CONTINENTAL LOGS.G

|                |   |  |   |
|----------------|---|--|---|
| SAMPLE SYMBOLS | <input type="checkbox"/> ... SAMPLING UNSUCCESSFUL              | <input type="checkbox"/> ... STANDARD PENETRATION TEST | <input type="checkbox"/> ... DRIVE SAMPLE (UNDISTURBED) |
|                | <input checked="" type="checkbox"/> ... DISTURBED OR BAG SAMPLE | <input type="checkbox"/> ... CHUNK SAMPLE              | <input type="checkbox"/> ... WATER TABLE OR SEEPAGE     |







NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

| DEPTH IN FEET        | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING B-7</b>  |                                  | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|----------------------|------------|-----------|-------------|-------------------|--|----------------------------------|------------------------------------|----------------------|----------------------|
|                      |            |           |             |                   | ELEV. (MSL.) <u>1536</u>   | DATE COMPLETED <u>03/01/2018</u> |                                    |                      |                      |
|                      |            |           |             |                   | EQUIPMENT <u>HOLLOW STEM AUGER</u>   |                                  | BY: <u>P. THERIAULT</u>            |                      |                      |
| MATERIAL DESCRIPTION |            |           |             |                   |  |                                  |                                    |                      |                      |
| 0                    |            |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, dense, damp, brown; fine to coarse sand; trace gravel; micaceous   |                                  |                                    |                      |                      |
| 2                    | B-7@2.5'   |           |             |                   |  |                                  | 73                                 | 104.1                | 7.4                  |
| 4                    | B-7@5'     |           |             |                   | -Becomes very dense  |                                  | 50/6"                              | 131.8                | 5.5                  |
| 6                    |            |           |             |                   |  |                                  |                                    |                      |                      |
| 8                    | B-7@7.5'   |           |             |                   |  |                                  | 83                                 | 128.9                | 9.7                  |
| 10                   | B-7@10'    |           |             |                   | -Becomes dense   |                                  | 61                                 | 133.7                | 6.9                  |
| 12                   |            |           |             |                   |  |                                  |                                    |                      |                      |
| 14                   |            |           |             |                   |  |                                  |                                    |                      |                      |
| 16                   | B-7@15'    |           |             |                   |  |                                  | 87                                 | 131.9                | 7.0                  |
| 18                   |            |           |             | SC                | <b>VERY OLD ALLUVIAL FAN DEPOSITS (Qvof)</b><br>Clayey SAND, very dense, damp, yellowish brown; fine to coarse sand; trace gravel; micaceous                                       |                                  |                                    |                      |                      |
| 20                   | B-7@20'    |           |             |                   | -Becomes medium dense  |                                  | 56                                 | 128.1                | 2.9                  |
| 22                   |            |           |             |                   |  |                                  |                                    |                      |                      |
| 24                   |            |           |             |                   |  |                                  |                                    |                      |                      |
| 26                   | B-7@25'    |           |             |                   | -Becomes reddish brown   |                                  | 50                                 | 131.6                | 4.8                  |
|                      |            |           |             |                   | Total depth 26.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Backfilled with cuttings on 03/01/2018 |                                  |                                    |                      |                      |

**Figure A-7,**  
**Log of Boring B-7, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G

|                |   |   |  |
|----------------|---|---|--|
| SAMPLE SYMBOLS |  ... SAMPLING UNSUCCESSFUL   |  ... STANDARD PENETRATION TEST |  ... DRIVE SAMPLE (UNDISTURBED) |
|                |  ... DISTURBED OR BAG SAMPLE |  ... CHUNK SAMPLE              |  ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

| DEPTH IN FEET | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING P-1</b><br>ELEV. (MSL.) <u>1519</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>   | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|---------------|------------|-----------|-------------|-------------------|--|------------------------------------|----------------------|----------------------|
| 0             |            |           |             |                   | MATERIAL DESCRIPTION   |                                    |                      |                      |
| 2             |            |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, dense, moist, dark brown; fine to coarse sand; trace gravel; micaceous   |                                    |                      |                      |
| 4             | P-1@4'     |           |             |                   |  | 75                                 |                      |                      |
|               |            |           |             |                   | Total depth 5.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Set for percolation testing; backfilled following percolation testing on 03/05/2018 |                                    |                      |                      |

Figure A-8, Log of Boring P-1, Page 1 of 1

T2809-22-01 CONTINENTAL LOGS.G

|                |                             |                               |                                |
|----------------|-----------------------------|-------------------------------|--------------------------------|
| SAMPLE SYMBOLS | ... SAMPLING UNSUCCESSFUL   | ... STANDARD PENETRATION TEST | ... DRIVE SAMPLE (UNDISTURBED) |
|                | ... DISTURBED OR BAG SAMPLE | ... CHUNK SAMPLE              | ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



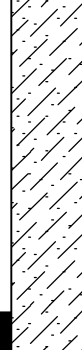
| DEPTH IN FEET | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | BORING P-2<br>ELEV. (MSL.) <u>1517</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>  |    | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|---------------|------------|-----------|-------------|-------------------|--|----|------------------------------------|----------------------|----------------------|
| 0             |            |           |             |                   | MATERIAL DESCRIPTION   |    |                                    |                      |                      |
| 2             |            |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, dense, moist, dark brown; fine to coarse sand; trace gravel; micaceous   | 61 |                                    |                      |                      |
| 4             | P-2@3'     |           |             |                   |  |    |                                    |                      |                      |
|               |            |           |             |                   | Total depth 4.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Set for percolation testing; backfilled following percolation testing on 03/05/2018 |    |                                    |                      |                      |

**Figure A-9,  
Log of Boring P-2, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G







|                |   |  |   |
|----------------|---|--|---|
| SAMPLE SYMBOLS | <input type="checkbox"/> ... SAMPLING UNSUCCESSFUL              | <input type="checkbox"/> ... STANDARD PENETRATION TEST | <input type="checkbox"/> ... DRIVE SAMPLE (UNDISTURBED) |
|                | <input checked="" type="checkbox"/> ... DISTURBED OR BAG SAMPLE | <input checked="" type="checkbox"/> ... CHUNK SAMPLE   | <input type="checkbox"/> ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.


| DEPTH<br>IN<br>FEET  | SAMPLE<br>NO. | LITHOLOGY   | GROUNDWATER | SOIL<br>CLASS<br>(USCS) | <b>BORING P-3</b>   |                                  | PENETRATION<br>RESISTANCE<br>(BLOWS/FT.) | DRY DENSITY<br>(P.C.F.) | MOISTURE<br>CONTENT (%) |
|----------------------|---------------|---|-------------|-------------------------|---|----------------------------------|--|-------------------------|-------------------------|
|                      |               |   |             |                         | ELEV. (MSL.) <u>1527</u>  | DATE COMPLETED <u>03/01/2018</u> |  |                         |                         |
|                      |               |   |             |                         | EQUIPMENT <u>HOLLOW STEM AUGER</u>  |                                  | BY: <u>P. THERIAULT</u>                  |                         |                         |
| MATERIAL DESCRIPTION |               |   |             |                         |   |                                  |  |                         |                         |
| 0                    |               |  |             | SC                      | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, very dense, moist, dark brown; fine to coarse sand; trace gravel; micaceous   |                                  |  |                         |                         |
| 2                    |               |   |             |                         |   |                                  |  |                         |                         |
| 4                    |               |   |             |                         |   |                                  |  |                         |                         |
| 6                    | P-3@7'        |   |             |                         |   |                                  | 50/5"                                    |                         |                         |
|                      |               |   |             |                         | Total depth 7.9 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Set for percolation testing; backfilled following percolation testing on<br>03/05/2018 |                                  |  |                         |                         |

**Figure A-10,**  
**Log of Boring P-3, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G







|                |   |   |  |
|----------------|---|---|--|
| SAMPLE SYMBOLS |  ... SAMPLING UNSUCCESSFUL   |  ... STANDARD PENETRATION TEST |  ... DRIVE SAMPLE (UNDISTURBED) |
|                |  ... DISTURBED OR BAG SAMPLE |  ... CHUNK SAMPLE              |  ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED.  
IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

| DEPTH IN FEET | SAMPLE NO. | LITHOLOGY   | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING P-4</b><br>ELEV. (MSL.) <u>1531</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>   | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|---------------|------------|---|-------------|-------------------|--|------------------------------------|----------------------|----------------------|
| 0             |            |   |             |                   | MATERIAL DESCRIPTION   |                                    |                      |                      |
| 2             |            |  |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, medium dense, moist, dark brown; fine to coarse sand; trace gravel; micaceous  | 32                                 |                      |                      |
| 6             | P-4@5'     |   |             |                   |  |                                    |                      |                      |
|               |            |   |             |                   | Total depth 6.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Set for percolation testing; backfilled following percolation testing on 03/05/2018 |                                    |                      |                      |

**Figure A-11,  
Log of Boring P-4, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G

|                |   |   |  |
|----------------|---|---|--|
| SAMPLE SYMBOLS |  ... SAMPLING UNSUCCESSFUL   |  ... STANDARD PENETRATION TEST |  ... DRIVE SAMPLE (UNDISTURBED) |
|                |  ... DISTURBED OR BAG SAMPLE |  ... CHUNK SAMPLE              |  ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



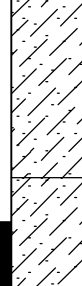

| DEPTH IN FEET | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | BORING P-5<br>ELEV. (MSL.) <u>1535</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>  |    | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|---------------|------------|-----------|-------------|-------------------|--|----|------------------------------------|----------------------|----------------------|
| 0             |            |           |             |                   | MATERIAL DESCRIPTION   |    |                                    |                      |                      |
| 2             |            |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, dense, moist, dark brown; fine to coarse sand; trace gravel; micaceous   | 65 |                                    |                      |                      |
| 4             | P-5@4'     |           |             |                   |  |    |                                    |                      |                      |
|               |            |           |             |                   | Total depth 5.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Set for percolation testing; backfilled following percolation testing on 03/05/2018 |    |                                    |                      |                      |

**Figure A-12,**  
**Log of Boring P-5, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G







|                |                             |                               |                                |
|----------------|-----------------------------|-------------------------------|--------------------------------|
| SAMPLE SYMBOLS | ... SAMPLING UNSUCCESSFUL   | ... STANDARD PENETRATION TEST | ... DRIVE SAMPLE (UNDISTURBED) |
|                | ... DISTURBED OR BAG SAMPLE | ... CHUNK SAMPLE              | ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

| DEPTH IN FEET        | SAMPLE NO. | LITHOLOGY   | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING P-6</b><br>ELEV. (MSL.) <u>1545</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>   | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|----------------------|------------|---|-------------|-------------------|--|------------------------------------|----------------------|----------------------|
| MATERIAL DESCRIPTION |            |   |             |                   |  |                                    |                      |                      |
| 0                    |            |  |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, medium dense, moist, reddish brown; fine to coarse sand; trace gravel; micaceous   |                                    |                      |                      |
| 2                    |            |   |             |                   |  |                                    |                      |                      |
| 4                    |            |   |             | SC                | <b>VERY OLD ALLUVIAL FAN DEPOSITS (Qvof)</b><br>Clayey SAND, medium dense, damp, reddish brown; fine to medium sand; some coarse sand; micaceous   |                                    |                      |                      |
| 6                    | P-6@5'     |  |             |                   |  |                                    | 44                   |                      |
|                      |            |   |             |                   | Total depth 6.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Set for percolation testing; backfilled following percolation testing on 03/05/2018 |                                    |                      |                      |

**Figure A-13,**  
**Log of Boring P-6, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G

|                |   |   |  |
|----------------|---|---|--|
| SAMPLE SYMBOLS |  ... SAMPLING UNSUCCESSFUL   |  ... STANDARD PENETRATION TEST |  ... DRIVE SAMPLE (UNDISTURBED) |
|                |  ... DISTURBED OR BAG SAMPLE |  ... CHUNK SAMPLE              |  ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

| DEPTH IN FEET | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING P-7</b><br>ELEV. (MSL.) <u>1554</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>   | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|---------------|------------|-----------|-------------|-------------------|--|------------------------------------|----------------------|----------------------|
| 0             |            |           |             |                   | MATERIAL DESCRIPTION   |                                    |                      |                      |
| 2             |            |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, very dense, moist, dark reddish brown; fine to coarse sand; few gravel; micaceous  |                                    |                      |                      |
| 4             | P-7@3'     |           |             |                   |  | 79                                 |                      |                      |
|               |            |           |             |                   | Total depth 4.5 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Set for percolation testing; backfilled following percolation testing on 03/05/2018 |                                    |                      |                      |

**Figure A-14,**  
**Log of Boring P-7, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G

|                |                             |                               |                                |
|----------------|-----------------------------|-------------------------------|--------------------------------|
| SAMPLE SYMBOLS | ... SAMPLING UNSUCCESSFUL   | ... STANDARD PENETRATION TEST | ... DRIVE SAMPLE (UNDISTURBED) |
|                | ... DISTURBED OR BAG SAMPLE | ... CHUNK SAMPLE              | ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



| DEPTH IN FEET | SAMPLE NO. | LITHOLOGY | GROUNDWATER | SOIL CLASS (USCS) | <b>BORING P-8</b><br>ELEV. (MSL.) <u>1536</u> DATE COMPLETED <u>03/01/2018</u><br>EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>P. THERIAULT</u>   |  | PENETRATION RESISTANCE (BLOWS/FT.) | DRY DENSITY (P.C.F.) | MOISTURE CONTENT (%) |
|---------------|------------|-----------|-------------|-------------------|--|--|------------------------------------|----------------------|----------------------|
| 0             |            |           |             |                   | MATERIAL DESCRIPTION   |  |                                    |                      |                      |
| 2             |            |           |             | SC                | <b>PREVIOUSLY PLACED ARTIFICIAL FILL (af)</b><br>Clayey SAND, very dense, damp, reddish brown; fine to coarse sand; trace gravel; micaceous  |  |                                    |                      |                      |
| 4             | P-8@4'     |           |             |                   |  |  | 91/11"                             |                      |                      |
|               |            |           |             |                   | Total depth 5.4 feet<br>No groundwater encountered<br>No caving<br>Penetration resistance for 140 lb. hammer falling 30" by auto-hammer<br>Set for percolation testing; backfilled following percolation testing on 03/05/2018 |  |                                    |                      |                      |

**Figure A-15,**  
**Log of Boring P-8, Page 1 of 1**

T2809-22-01 CONTINENTAL LOGS.G

|                |                             |                               |                                |
|----------------|-----------------------------|-------------------------------|--------------------------------|
| SAMPLE SYMBOLS | ... SAMPLING UNSUCCESSFUL   | ... STANDARD PENETRATION TEST | ... DRIVE SAMPLE (UNDISTURBED) |
|                | ... DISTURBED OR BAG SAMPLE | ... CHUNK SAMPLE              | ... WATER TABLE OR SEEPAGE     |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

| PERCOLATION TEST REPORT                         |          |                                     |                          |                         |                             |                               |                             |    |
|---|----------|-------------------------------------|--------------------------|-------------------------|-----------------------------|-------------------------------|-----------------------------|----|
| <b>Project Name:</b>                            |          | Moreno Valley Multi-Use Development |                          |                         | <b>Project No.:</b>         |                               | T2809-22-01                 |    |
| <b>Test Hole No.:</b>                           |          | P-1                                 | Area 6                   |                         | <b>Date Excavated:</b>      |                               | 3/1/2018                    |    |
| <b>Length of Test Pipe:</b>                     |          | 57.7 inches                         |                          |                         | <b>Soil Classification:</b> |                               | SC                          |    |
| <b>Height of Pipe above Ground:</b>             |          | 17.4 inches                         |                          |                         | <b>Presoak Date:</b>        |                               | 3/1/2018                    |    |
| <b>Depth of Test Hole:</b>                      |          | 40.3 inches                         |                          |                         | <b>Perc Test Date:</b>      |                               | 3/5/2018                    |    |
| <b>Check for Sandy Soil Criteria Tested by:</b> |          |                                     |                          | N/A                     |                             | <b>Percolation Tested by:</b> |                             | SP |
| <b>Water level measured from bottom of hole</b> |          |                                     |                          |                         |                             |                               |                             |    |
| <b>Soil Criteria: Normal</b>                    |          |                                     |                          |                         |                             |                               |                             |    |
| <b>Percolation Test</b>                         |          |                                     |                          |                         |                             |                               |                             |    |
| Reading No.                                     | Time     | Time Interval (min)                 | Total Elapsed Time (min) | Initial Water Head (in) | Final Water Head (in)       | Δ in Water Level (inches)     | Percolation Rate (min/inch) |    |
| 1   | 8:46 AM  | 40                                  | 40                       | 31.3                    | 30.6                        | 0.7                           | 55.6                        |    |
|   | 9:26 AM  |                                     |                          |                         |                             |                               |                             |    |
| 2   | 9:56 AM  | 30                                  | 70                       | 30.6                    | 30.4                        | 0.2                           | 125.0                       |    |
|   | 10:26 AM |                                     |                          |                         |                             |                               |                             |    |
| 3   | 10:26 AM | 30                                  | 100                      | 30.4                    | 30.1                        | 0.2                           | 125.0                       |    |
|   | 10:56 AM |                                     |                          |                         |                             |                               |                             |    |
| 4   | 10:56 AM | 30                                  | 130                      | 30.1                    | 30.0                        | 0.1                           | 250.0                       |    |
|   | 11:26 AM |                                     |                          |                         |                             |                               |                             |    |
| 5   | 11:26 AM | 30                                  | 160                      | 30.0                    | 30.0                        | 0.0                           | 0.0                         |    |
|   | 11:56 AM |                                     |                          |                         |                             |                               |                             |    |
| 6   | 11:56 AM | 30                                  | 190                      | 30.0                    | 29.9                        | 0.1                           | 250.0                       |    |
|   | 12:26 PM |                                     |                          |                         |                             |                               |                             |    |
| 7   | 12:26 PM | 30                                  | 220                      | 29.9                    | 29.9                        | 0.0                           | 0.0                         |    |
|   | 12:56 PM |                                     |                          |                         |                             |                               |                             |    |
| 8   | 12:56 PM | 30                                  | 250                      | 29.9                    | 29.8                        | 0.1                           | 250.0                       |    |
|   | 1:26 PM  |                                     |                          |                         |                             |                               |                             |    |
| 9   | 1:26 PM  | 30                                  | 280                      | 29.8                    | 29.8                        | 0.0                           | 0.0                         |    |
|   | 1:56 PM  |                                     |                          |                         |                             |                               |                             |    |
| 10  | 1:56 PM  | 30                                  | 310                      | 29.8                    | 29.6                        | 0.1                           | 250.0                       |    |
|   | 2:26 PM  |                                     |                          |                         |                             |                               |                             |    |
| 11  | 2:26 PM  | 30                                  | 340                      | 29.6                    | 29.6                        | 0.0                           | 0.0                         |    |
|   | 2:56 PM  |                                     |                          |                         |                             |                               |                             |    |
| 12  | 2:56 PM  | 30                                  | 370                      | 29.6                    | 29.5                        | 0.1                           | 250.0                       |    |
|   | 3:26 PM  |                                     |                          |                         |                             |                               |                             |    |
| <b>Infiltration Rate (in/hr):</b>               |          |                                     | 0.01                     |                         |                             |                               |                             |    |
| <b>Radius of test hole (in):</b>                |          |                                     | 4                        | <b>Figure A-16</b>      |                             |                               |                             |    |
| <b>Average Head (in):</b>                       |          |                                     | 29.6                     |                         |                             |                               |                             |    |

| PERCOLATION TEST REPORT                         |             |                                     |                                 |                                |                              |                                  |                                    |    |
|---|-------------|-------------------------------------|---------------------------------|--------------------------------|------------------------------|----------------------------------|------------------------------------|----|
| <b>Project Name:</b>                            |             | Moreno Valley Multi-Use Development |                                 |                                | <b>Project No.:</b>          |                                  | T2809-22-01                        |    |
| <b>Test Hole No.:</b>                           |             | P-2                                 | Area 7                          |                                | <b>Date Excavated:</b>       |                                  | 3/1/2018                           |    |
| <b>Length of Test Pipe:</b>                     |             | 54.4 inches                         |                                 |                                | <b>Soil Classification:</b>  |                                  | SC                                 |    |
| <b>Height of Pipe above Ground:</b>             |             | 22.1 inches                         |                                 |                                | <b>Presoak Date:</b>         |                                  | 3/1/2018                           |    |
| <b>Depth of Test Hole:</b>                      |             | 32.3 inches                         |                                 |                                | <b>Perc Test Date:</b>       |                                  | 3/5/2018                           |    |
| <b>Check for Sandy Soil Criteria Tested by:</b> |             |                                     |                                 | N/A                            |                              | <b>Percolation Tested by:</b>    |                                    | SP |
| <b>Water level measured from bottom of hole</b> |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Soil Criteria: Normal</b>                    |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Percolation Test</b>                         |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Reading No.</b>                              | <b>Time</b> | <b>Time Interval (min)</b>          | <b>Total Elapsed Time (min)</b> | <b>Initial Water Head (in)</b> | <b>Final Water Head (in)</b> | <b>Δ in Water Level (inches)</b> | <b>Percolation Rate (min/inch)</b> |    |
| 1   | 8:51 AM     | 37                                  | 37                              | 26.2                           | 25.7                         | 0.5                              | 77.1                               |    |
|   | 9:28 AM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 2   | 9:28 AM     | 30                                  | 67                              | 25.7                           | 25.6                         | 0.1                              | 250.0                              |    |
|   | 9:58 AM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 3   | 9:58 AM     | 30                                  | 97                              | 25.6                           | 25.4                         | 0.1                              | 250.0                              |    |
|   | 10:28 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 4   | 10:28 AM    | 30                                  | 127                             | 25.4                           | 25.4                         | 0.0                              | 0.0                                |    |
|   | 10:58 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 5   | 10:58 AM    | 30                                  | 157                             | 25.4                           | 25.3                         | 0.1                              | 250.0                              |    |
|   | 11:28 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 6   | 11:28 AM    | 30                                  | 187                             | 25.3                           | 25.2                         | 0.1                              | 250.0                              |    |
|   | 11:58 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 7   | 11:58 AM    | 30                                  | 217                             | 25.2                           | 25.2                         | 0.0                              | 0.0                                |    |
|   | 12:28 PM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 8   | 12:28 PM    | 30                                  | 247                             | 25.2                           | 25.1                         | 0.1                              | 250.0                              |    |
|   | 12:58 PM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 9   | 12:58 PM    | 30                                  | 277                             | 25.1                           | 25.1                         | 0.0                              | 0.0                                |    |
|   | 1:28 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 10  | 1:28 PM     | 30                                  | 307                             | 25.1                           | 25.0                         | 0.1                              | 250.0                              |    |
|   | 1:58 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 11  | 1:58 PM     | 30                                  | 337                             | 25.0                           | 25.0                         | 0.0                              | 0.0                                |    |
|   | 2:28 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 12  | 2:28 PM     | 30                                  | 367                             | 25.0                           | 24.8                         | 0.1                              | 250.0                              |    |
|   | 2:58 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Infiltration Rate (in/hr):</b>               |             |                                     | 0.02                            |                                |                              |                                  |                                    |    |
| <b>Radius of test hole (in):</b>                |             |                                     | 4                               |                                |                              |                                  |                                    |    |
| <b>Average Head (in):</b>                       |             |                                     | 24.9                            |                                |                              |                                  |                                    |    |
|   |             |                                     |                                 |                                |                              |                                  | <b>Figure A-17</b>                 |    |



| PERCOLATION TEST REPORT                         |             |                                     |                                 |                                |                              |                                  |                                    |    |
|---|-------------|-------------------------------------|---------------------------------|--------------------------------|------------------------------|----------------------------------|------------------------------------|----|
| <b>Project Name:</b>                            |             | Moreno Valley Multi-Use Development |                                 |                                | <b>Project No.:</b>          |                                  | T2809-22-01                        |    |
| <b>Test Hole No.:</b>                           |             | P-3                                 | Area 8                          |                                | <b>Date Excavated:</b>       |                                  | 3/1/2018                           |    |
| <b>Length of Test Pipe:</b>                     |             | 101.4 inches                        |                                 |                                | <b>Soil Classification:</b>  |                                  | SC                                 |    |
| <b>Height of Pipe above Ground:</b>             |             | 21.2 inches                         |                                 |                                | <b>Presoak Date:</b>         |                                  | 3/1/2018                           |    |
| <b>Depth of Test Hole:</b>                      |             | 80.2 inches                         |                                 |                                | <b>Perc Test Date:</b>       |                                  | 3/5/2018                           |    |
| <b>Check for Sandy Soil Criteria Tested by:</b> |             |                                     |                                 | N/A                            |                              | <b>Percolation Tested by:</b>    |                                    | SP |
| <b>Water level measured from bottom of hole</b> |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Soil Criteria: Normal</b>                    |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Percolation Test</b>                         |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Reading No.</b>                              | <b>Time</b> | <b>Time Interval (min)</b>          | <b>Total Elapsed Time (min)</b> | <b>Initial Water Head (in)</b> | <b>Final Water Head (in)</b> | <b>Δ in Water Level (inches)</b> | <b>Percolation Rate (min/inch)</b> |    |
| 1   | 9:01 AM     | 31                                  | 31                              | 28.1                           | 27.8                         | 0.2                              | 129.2                              |    |
|   | 9:32 AM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 2   | 9:32 AM     | 30                                  | 61                              | 27.8                           | 27.7                         | 0.1                              | 250.0                              |    |
|   | 10:02 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 3   | 10:02 AM    | 30                                  | 91                              | 27.7                           | 27.5                         | 0.2                              | 125.0                              |    |
|   | 10:32 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 4   | 10:32 AM    | 30                                  | 121                             | 27.5                           | 27.2                         | 0.2                              | 125.0                              |    |
|   | 11:02 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 5   | 11:02 AM    | 30                                  | 151                             | 27.2                           | 27.0                         | 0.2                              | 125.0                              |    |
|   | 11:32 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 6   | 11:32 AM    | 30                                  | 181                             | 26.3                           | 24.4                         | 1.9                              | 15.6                               |    |
|   | 12:02 PM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 7   | 12:02 PM    | 30                                  | 211                             | 24.4                           | 22.2                         | 2.2                              | 13.9                               |    |
|   | 12:32 PM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 8   | 12:32 PM    | 30                                  | 241                             | 22.2                           | 20.0                         | 2.2                              | 13.9                               |    |
|   | 1:02 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 9   | 1:02 PM     | 30                                  | 271                             | 20.0                           | 18.5                         | 1.6                              | 19.2                               |    |
|   | 1:32 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 10  | 1:32 PM     | 30                                  | 301                             | 18.5                           | 16.8                         | 1.7                              | 17.9                               |    |
|   | 2:02 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 11  | 2:02 PM     | 30                                  | 331                             | 16.8                           | 15.2                         | 1.6                              | 19.2                               |    |
|   | 2:32 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 12  | 2:32 PM     | 30                                  | 361                             | 15.2                           | 13.7                         | 1.6                              | 19.2                               |    |
|   | 3:02 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Infiltration Rate (in/hr):</b>               |             |                                     | 0.4                             |                                |                              |                                  |                                    |    |
| <b>Radius of test hole (in):</b>                |             |                                     | 4                               | <b>Figure A-18</b>             |                              |                                  |                                    |    |
| <b>Average Head (in):</b>                       |             |                                     | 14.5                            |                                |                              |                                  |                                    |    |

| PERCOLATION TEST REPORT                         |             |                                     |                                 |                                |                              |                                  |                                    |    |
|---|-------------|-------------------------------------|---------------------------------|--------------------------------|------------------------------|----------------------------------|------------------------------------|----|
| <b>Project Name:</b>                            |             | Moreno Valley Multi-Use Development |                                 |                                | <b>Project No.:</b>          |                                  | T2809-22-01                        |    |
| <b>Test Hole No.:</b>                           |             | P-4                                 | Area 2                          |                                | <b>Date Excavated:</b>       |                                  | 3/1/2018                           |    |
| <b>Length of Test Pipe:</b>                     |             | 58.4 inches                         |                                 |                                | <b>Soil Classification:</b>  |                                  | SC                                 |    |
| <b>Height of Pipe above Ground:</b>             |             | 4.8 inches                          |                                 |                                | <b>Presoak Date:</b>         |                                  | 3/1/2018                           |    |
| <b>Depth of Test Hole:</b>                      |             | 53.6 inches                         |                                 |                                | <b>Perc Test Date:</b>       |                                  | 3/5/2018                           |    |
| <b>Check for Sandy Soil Criteria Tested by:</b> |             |                                     |                                 | N/A                            |                              | <b>Percolation Tested by:</b>    |                                    | SP |
| <b>Water level measured from bottom of hole</b> |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Soil Criteria: Normal</b>                    |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Percolation Test</b>                         |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Reading No.</b>                              | <b>Time</b> | <b>Time Interval (min)</b>          | <b>Total Elapsed Time (min)</b> | <b>Initial Water Head (in)</b> | <b>Final Water Head (in)</b> | <b>Δ in Water Level (inches)</b> | <b>Percolation Rate (min/inch)</b> |    |
| 1   | 9:05 AM     | 30                                  | 30                              | 16.0                           | 15.7                         | 0.2                              | 125.0                              |    |
|   | 9:35 AM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 2   | 9:35 AM     | 30                                  | 60                              | 15.7                           | 15.6                         | 0.1                              | 250.0                              |    |
|   | 10:05 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 3   | 10:05 AM    | 30                                  | 90                              | 15.6                           | 15.5                         | 0.1                              | 250.0                              |    |
|   | 10:35 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 4   | 10:35 AM    | 30                                  | 120                             | 15.5                           | 15.5                         | 0.0                              | 0.0                                |    |
|   | 11:05 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 5   | 11:05 AM    | 30                                  | 150                             | 15.5                           | 15.4                         | 0.1                              | 250.0                              |    |
|   | 11:35 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 6   | 11:35 AM    | 30                                  | 180                             | 15.4                           | 15.2                         | 0.1                              | 250.0                              |    |
|   | 12:05 PM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 7   | 12:05 PM    | 30                                  | 210                             | 15.2                           | 15.2                         | 0.0                              | 0.0                                |    |
|   | 12:35 PM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 8   | 12:35 PM    | 30                                  | 240                             | 15.2                           | 15.1                         | 0.1                              | 250.0                              |    |
|   | 1:05 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 9   | 1:05 PM     | 30                                  | 270                             | 15.1                           | 15.0                         | 0.1                              | 250.0                              |    |
|   | 1:35 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 10  | 1:35 PM     | 30                                  | 300                             | 15.0                           | 14.9                         | 0.1                              | 250.0                              |    |
|   | 2:05 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 11  | 2:05 PM     | 30                                  | 330                             | 14.9                           | 14.8                         | 0.1                              | 250.0                              |    |
|   | 2:35 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 12  | 2:35 PM     | 30                                  | 360                             | 14.8                           | 14.6                         | 0.1                              | 250.0                              |    |
|   | 3:05 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Infiltration Rate (in/hr):</b>               |             |                                     | 0.03                            |                                |                              |                                  |                                    |    |
| <b>Radius of test hole (in):</b>                |             |                                     | 4                               | <b>Figure A-19</b>             |                              |                                  |                                    |    |
| <b>Average Head (in):</b>                       |             |                                     | 14.7                            |                                |                              |                                  |                                    |    |

| PERCOLATION TEST REPORT                         |          |                                     |                          |                         |                             |                               |                             |    |
|---|----------|-------------------------------------|--------------------------|-------------------------|-----------------------------|-------------------------------|-----------------------------|----|
| <b>Project Name:</b>                            |          | Moreno Valley Multi-Use Development |                          |                         | <b>Project No.:</b>         |                               | T2809-22-01                 |    |
| <b>Test Hole No.:</b>                           |          | P-5                                 | Area 3                   |                         | <b>Date Excavated:</b>      |                               | 3/1/2018                    |    |
| <b>Length of Test Pipe:</b>                     |          | 43.4 inches                         |                          |                         | <b>Soil Classification:</b> |                               | SC                          |    |
| <b>Height of Pipe above Ground:</b>             |          | 0.0 inches                          |                          |                         | <b>Presoak Date:</b>        |                               | 3/1/2018                    |    |
| <b>Depth of Test Hole:</b>                      |          | 43.4 inches                         |                          |                         | <b>Perc Test Date:</b>      |                               | 3/5/2018                    |    |
| <b>Check for Sandy Soil Criteria Tested by:</b> |          |                                     |                          | N/A                     |                             | <b>Percolation Tested by:</b> |                             | SP |
| <b>Water level measured from bottom of hole</b> |          |                                     |                          |                         |                             |                               |                             |    |
| <b>Soil Criteria: Normal</b>                    |          |                                     |                          |                         |                             |                               |                             |    |
| <b>Percolation Test</b>                         |          |                                     |                          |                         |                             |                               |                             |    |
| Reading No.                                     | Time     | Time Interval (min)                 | Total Elapsed Time (min) | Initial Water Head (in) | Final Water Head (in)       | Δ in Water Level (inches)     | Percolation Rate (min/inch) |    |
| 1   | 9:14 AM  | 30                                  | 30                       | 13.4                    | 13.1                        | 0.4                           | 83.3                        |    |
|   | 9:44 AM  |                                     |                          |                         |                             |                               |                             |    |
| 2   | 9:44 AM  | 30                                  | 60                       | 13.1                    | 12.8                        | 0.2                           | 125.0                       |    |
|   | 10:14 AM |                                     |                          |                         |                             |                               |                             |    |
| 3   | 10:14 AM | 30                                  | 90                       | 12.8                    | 12.7                        | 0.1                           | 250.0                       |    |
|   | 10:44 AM |                                     |                          |                         |                             |                               |                             |    |
| 4   | 10:44 AM | 30                                  | 120                      | 12.7                    | 12.6                        | 0.1                           | 250.0                       |    |
|   | 11:14 AM |                                     |                          |                         |                             |                               |                             |    |
| 5   | 11:14 AM | 30                                  | 150                      | 12.6                    | 12.6                        | 0.0                           | 0.0                         |    |
|   | 11:44 AM |                                     |                          |                         |                             |                               |                             |    |
| 6   | 11:44 AM | 30                                  | 180                      | 12.6                    | 12.5                        | 0.1                           | 250.0                       |    |
|   | 12:14 PM |                                     |                          |                         |                             |                               |                             |    |
| 7   | 12:14 PM | 30                                  | 210                      | 12.5                    | 12.4                        | 0.1                           | 250.0                       |    |
|   | 12:44 PM |                                     |                          |                         |                             |                               |                             |    |
| 8   | 12:44 PM | 30                                  | 240                      | 12.4                    | 12.2                        | 0.1                           | 250.0                       |    |
|   | 1:14 PM  |                                     |                          |                         |                             |                               |                             |    |
| 9   | 1:14 PM  | 30                                  | 270                      | 12.2                    | 12.1                        | 0.1                           | 250.0                       |    |
|   | 1:44 PM  |                                     |                          |                         |                             |                               |                             |    |
| 10  | 1:44 PM  | 30                                  | 300                      | 12.1                    | 12.0                        | 0.1                           | 250.0                       |    |
|   | 2:14 PM  |                                     |                          |                         |                             |                               |                             |    |
| 11  | 2:14 PM  | 30                                  | 330                      | 12.0                    | 11.9                        | 0.1                           | 250.0                       |    |
|   | 2:44 PM  |                                     |                          |                         |                             |                               |                             |    |
| 12  | 2:44 PM  | 30                                  | 360                      | 11.9                    | 11.8                        | 0.1                           | 250.0                       |    |
|   | 3:14 PM  |                                     |                          |                         |                             |                               |                             |    |
| <b>Infiltration Rate (in/hr):</b>               |          |                                     | 0.03                     |                         |                             |                               |                             |    |
| <b>Radius of test hole (in):</b>                |          |                                     | 4                        |                         |                             |                               |                             |    |
| <b>Average Head (in):</b>                       |          |                                     | 11.8                     |                         |                             |                               |                             |    |
|   |          |                                     |                          |                         |                             |                               | <b>Figure A-20</b>          |    |



| PERCOLATION TEST REPORT                         |             |                                     |                                 |                                |                              |                                  |                                    |    |
|---|-------------|-------------------------------------|---------------------------------|--------------------------------|------------------------------|----------------------------------|------------------------------------|----|
| <b>Project Name:</b>                            |             | Moreno Valley Multi-Use Development |                                 |                                | <b>Project No.:</b>          |                                  | T2809-22-01                        |    |
| <b>Test Hole No.:</b>                           |             | P-6                                 | Area 4                          |                                | <b>Date Excavated:</b>       |                                  | 3/1/2018                           |    |
| <b>Length of Test Pipe:</b>                     |             | 58.8 inches                         |                                 |                                | <b>Soil Classification:</b>  |                                  | SC                                 |    |
| <b>Height of Pipe above Ground:</b>             |             | 7.8 inches                          |                                 |                                | <b>Presoak Date:</b>         |                                  | 3/1/2018                           |    |
| <b>Depth of Test Hole:</b>                      |             | 51.0 inches                         |                                 |                                | <b>Perc Test Date:</b>       |                                  | 3/5/2018                           |    |
| <b>Check for Sandy Soil Criteria Tested by:</b> |             |                                     |                                 | N/A                            |                              | <b>Percolation Tested by:</b>    |                                    | SP |
| <b>Water level measured from bottom of hole</b> |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Soil Criteria: Normal</b>                    |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Percolation Test</b>                         |             |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Reading No.</b>                              | <b>Time</b> | <b>Time Interval (min)</b>          | <b>Total Elapsed Time (min)</b> | <b>Initial Water Head (in)</b> | <b>Final Water Head (in)</b> | <b>Δ in Water Level (inches)</b> | <b>Percolation Rate (min/inch)</b> |    |
| 1   | 9:18 AM     | 30                                  | 30                              | 11.0                           | 9.4                          | 1.7                              | 17.9                               |    |
|   | 9:48 AM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 2   | 9:48 AM     | 30                                  | 60                              | 12.2                           | 11.5                         | 0.7                              | 41.7                               |    |
|   | 10:18 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 3   | 10:18 AM    | 30                                  | 90                              | 12.4                           | 11.6                         | 0.7                              | 41.7                               |    |
|   | 10:48 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 4   | 10:48 AM    | 30                                  | 120                             | 11.6                           | 10.9                         | 0.7                              | 41.7                               |    |
|   | 11:18 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 5   | 11:18 AM    | 30                                  | 150                             | 12.8                           | 12.2                         | 0.6                              | 50.0                               |    |
|   | 11:48 AM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 6   | 11:48 AM    | 30                                  | 180                             | 12.2                           | 11.9                         | 0.4                              | 83.3                               |    |
|   | 12:18 PM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 7   | 12:18 PM    | 30                                  | 210                             | 11.9                           | 11.4                         | 0.5                              | 62.5                               |    |
|   | 12:48 PM    |                                     |                                 |                                |                              |                                  |                                    |    |
| 8   | 12:48 PM    | 30                                  | 240                             | 13.1                           | 12.6                         | 0.5                              | 62.5                               |    |
|   | 1:18 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 9   | 1:18 PM     | 30                                  | 270                             | 12.6                           | 12.1                         | 0.5                              | 62.5                               |    |
|   | 1:48 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 10  | 1:48 PM     | 30                                  | 300                             | 12.1                           | 11.5                         | 0.6                              | 50.0                               |    |
|   | 2:18 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 11  | 2:18 PM     | 30                                  | 330                             | 13.1                           | 12.6                         | 0.5                              | 62.5                               |    |
|   | 2:48 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| 12  | 2:48 PM     | 30                                  | 360                             | 12.6                           | 12.1                         | 0.5                              | 62.5                               |    |
|   | 3:18 PM     |                                     |                                 |                                |                              |                                  |                                    |    |
| <b>Infiltration Rate (in/hr):</b>               |             |                                     | 0.1                             |                                |                              |                                  |                                    |    |
| <b>Radius of test hole (in):</b>                |             |                                     | 4                               |                                |                              |                                  |                                    |    |
| <b>Average Head (in):</b>                       |             |                                     | 12.4                            |                                |                              |                                  |                                    |    |
|   |             |                                     |                                 |                                |                              |                                  | <b>Figure A-21</b>                 |    |

| PERCOLATION TEST REPORT                         |          |                                     |                          |                         |                             |                                  |                             |    |
|---|----------|-------------------------------------|--------------------------|-------------------------|-----------------------------|----------------------------------|-----------------------------|----|
| <b>Project Name:</b>                            |          | Moreno Valley Multi-Use Development |                          |                         | <b>Project No.:</b>         |                                  | T2809-22-01                 |    |
| <b>Test Hole No.:</b>                           |          | P-7                                 | Area 5                   |                         | <b>Date Excavated:</b>      |                                  | 3/1/2018                    |    |
| <b>Length of Test Pipe:</b>                     |          | 49.7 inches                         |                          |                         | <b>Soil Classification:</b> |                                  | SC                          |    |
| <b>Height of Pipe above Ground:</b>             |          | 15.2 inches                         |                          |                         | <b>Presoak Date:</b>        |                                  | 3/1/2018                    |    |
| <b>Depth of Test Hole:</b>                      |          | 34.4 inches                         |                          |                         | <b>Perc Test Date:</b>      |                                  | 3/5/2018                    |    |
| <b>Check for Sandy Soil Criteria Tested by:</b> |          |                                     |                          | N/A                     |                             | <b>Percolation Tested by:</b>    |                             | SP |
| <b>Water level measured from bottom of hole</b> |          |                                     |                          |                         |                             |                                  |                             |    |
| <b>Soil Criteria: Normal</b>                    |          |                                     |                          |                         |                             |                                  |                             |    |
| <b>Percolation Test</b>                         |          |                                     |                          |                         |                             |                                  |                             |    |
| Reading No.                                     | Time     | Time Interval (min)                 | Total Elapsed Time (min) | Initial Water Head (in) | Final Water Head (in)       | $\Delta$ in Water Level (inches) | Percolation Rate (min/inch) |    |
| 1   | 9:21 AM  | 30                                  | 30                       | 13.1                    | 12.1                        | 1.0                              | 31.2                        |    |
|   | 9:51 AM  |                                     |                          |                         |                             |                                  |                             |    |
| 2   | 9:51 AM  | 30                                  | 60                       | 12.1                    | 11.5                        | 0.6                              | 50.0                        |    |
|   | 10:21 AM |                                     |                          |                         |                             |                                  |                             |    |
| 3   | 10:21 AM | 30                                  | 90                       | 14.3                    | 13.7                        | 0.6                              | 50.0                        |    |
|   | 10:51 AM |                                     |                          |                         |                             |                                  |                             |    |
| 4   | 10:51 AM | 30                                  | 120                      | 13.7                    | 13.1                        | 0.6                              | 50.0                        |    |
|   | 11:21 AM |                                     |                          |                         |                             |                                  |                             |    |
| 5   | 11:21 AM | 30                                  | 150                      | 13.1                    | 12.2                        | 0.8                              | 35.7                        |    |
|   | 11:51 AM |                                     |                          |                         |                             |                                  |                             |    |
| 6   | 11:51 AM | 30                                  | 180                      | 12.2                    | 11.5                        | 0.7                              | 41.7                        |    |
|   | 12:21 PM |                                     |                          |                         |                             |                                  |                             |    |
| 7   | 12:21 PM | 30                                  | 210                      | 14.3                    | 13.7                        | 0.6                              | 50.0                        |    |
|   | 12:51 PM |                                     |                          |                         |                             |                                  |                             |    |
| 8   | 12:51 PM | 30                                  | 240                      | 13.7                    | 13.1                        | 0.6                              | 50.0                        |    |
|   | 1:21 PM  |                                     |                          |                         |                             |                                  |                             |    |
| 9   | 1:21 PM  | 30                                  | 270                      | 13.1                    | 12.5                        | 0.6                              | 50.0                        |    |
|   | 1:51 PM  |                                     |                          |                         |                             |                                  |                             |    |
| 10  | 1:51 PM  | 30                                  | 300                      | 12.5                    | 11.9                        | 0.6                              | 50.0                        |    |
|   | 2:21 PM  |                                     |                          |                         |                             |                                  |                             |    |
| 11  | 2:21 PM  | 30                                  | 330                      | 13.9                    | 13.3                        | 0.6                              | 50.0                        |    |
|   | 2:51 PM  |                                     |                          |                         |                             |                                  |                             |    |
| 12  | 2:51 PM  | 30                                  | 360                      | 13.3                    | 12.7                        | 0.6                              | 50.0                        |    |
|   | 3:21 PM  |                                     |                          |                         |                             |                                  |                             |    |
| <b>Infiltration Rate (in/hr):</b>               |          |                                     | 0.2                      |                         |                             |                                  |                             |    |
| <b>Radius of test hole (in):</b>                |          |                                     | 4                        | <b>Figure A-21</b>      |                             |                                  |                             |    |
| <b>Average Head (in):</b>                       |          |                                     | 13.0                     |                         |                             |                                  |                             |    |

| PERCOLATION TEST REPORT                         |          |                                     |                          |                         |                               |                           |                             |
|---|----------|-------------------------------------|--------------------------|-------------------------|-------------------------------|---------------------------|-----------------------------|
| <b>Project Name:</b>                            |          | Moreno Valley Multi-Use Development |                          |                         | <b>Project No.:</b>           |                           | T2809-22-01                 |
| <b>Test Hole No.:</b>                           |          | P-8                                 | Area 1                   |                         | <b>Date Excavated:</b>        |                           | 3/1/2018                    |
| <b>Length of Test Pipe:</b>                     |          | 49.2 inches                         |                          |                         | <b>Soil Classification:</b>   |                           | SC                          |
| <b>Height of Pipe above Ground:</b>             |          | 4.6 inches                          |                          |                         | <b>Presoak Date:</b>          |                           | 3/1/2018                    |
| <b>Depth of Test Hole:</b>                      |          | 44.6 inches                         |                          |                         | <b>Perc Test Date:</b>        |                           | 3/5/2018                    |
| <b>Check for Sandy Soil Criteria Tested by:</b> |          |                                     |                          | N/A                     | <b>Percolation Tested by:</b> |                           | SP                          |
| <b>Water level measured from bottom of hole</b> |          |                                     |                          |                         |                               |                           |                             |
| <b>Percolation Test</b>                         |          |                                     |                          |                         |                               |                           |                             |
| Reading No.                                     | Time     | Time Interval (min)                 | Total Elapsed Time (min) | Initial Water Head (in) | Final Water Head (in)         | Δ in Water Level (inches) | Percolation Rate (min/inch) |
| 1   | 9:10 AM  | 30                                  | 30                       | 13.6                    | 12.7                          | 0.8                       | 35.7                        |
|   | 9:40 AM  |                                     |                          |                         |                               |                           |                             |
| 2   | 9:40 AM  | 30                                  | 60                       | 12.7                    | 12.4                          | 0.4                       | 83.3                        |
|   | 10:10 AM |                                     |                          |                         |                               |                           |                             |
| 3   | 10:10 AM | 30                                  | 90                       | 12.4                    | 12.0                          | 0.4                       | 83.3                        |
|   | 10:40 AM |                                     |                          |                         |                               |                           |                             |
| 4   | 10:40 AM | 30                                  | 120                      | 13.8                    | 13.4                          | 0.4                       | 83.3                        |
|   | 11:10 AM |                                     |                          |                         |                               |                           |                             |
| 5   | 11:10 AM | 30                                  | 150                      | 13.4                    | 13.2                          | 0.2                       | 125.0                       |
|   | 11:40 AM |                                     |                          |                         |                               |                           |                             |
| 6   | 11:40 AM | 30                                  | 180                      | 13.2                    | 13.0                          | 0.2                       | 125.0                       |
|   | 12:10 PM |                                     |                          |                         |                               |                           |                             |
| 7   | 12:10 PM | 30                                  | 210                      | 13.0                    | 12.7                          | 0.2                       | 125.0                       |
|   | 12:40 PM |                                     |                          |                         |                               |                           |                             |
| 8   | 12:40 PM | 30                                  | 240                      | 12.7                    | 12.6                          | 0.1                       | 250.0                       |
|   | 1:10 PM  |                                     |                          |                         |                               |                           |                             |
| 9   | 1:10 PM  | 30                                  | 270                      | 12.6                    | 12.2                          | 0.4                       | 83.3                        |
|   | 1:40 PM  |                                     |                          |                         |                               |                           |                             |
| 10  | 1:40 PM  | 30                                  | 300                      | 12.2                    | 11.9                          | 0.4                       | 83.3                        |
|   | 2:10 PM  |                                     |                          |                         |                               |                           |                             |
| 11  | 2:10 PM  | 30                                  | 330                      | 11.9                    | 11.5                          | 0.4                       | 83.3                        |
|   | 2:40 PM  |                                     |                          |                         |                               |                           |                             |
| 12  | 2:40 PM  | 30                                  | 360                      | 12.7                    | 12.4                          | 0.4                       | 83.3                        |
|   | 3:10 PM  |                                     |                          |                         |                               |                           |                             |
| <b>Infiltration Rate (in/hr):</b>               |          |                                     | 0.1                      |                         |                               |                           |                             |
| <b>Radius of test hole (in):</b>                |          |                                     | 4                        |                         |                               |                           |                             |
| <b>Average Head (in):</b>                       |          |                                     | 12.5                     |                         |                               |                           |                             |
|   |          |                                     |                          |                         |                               |                           | <b>Figure A-23</b>          |



## Geotechnical Boring Log B-1

|                             |                                       |                       |
|-----------------------------|---------------------------------------|-----------------------|
| Date: June 7, 2011          | Project Name: Residential Development | Page: 1 of 1          |
| Project Number: 161309-11A  | Logged By: CW                         |                       |
| Drilling Company: Cal Pac   | Type of Rig: Mobile B51               |                       |
| Drive Weight (lbs): 140     | Drop (in): 30                         | Hole Diameter (in): 8 |
| Top of Hole Elevation (ft): | Hole Location: See Geotechnical Map   |                       |

| Depth (ft) | Blow Count Per Foot | Sample Number | Dry Density (pcf) | Moisture (%) | ASTM Symbol | MATERIAL DESCRIPTION   |
|------------|---------------------|---------------|-------------------|--------------|-------------|--|
| 0          |                     |               |                   |              |             | Artificial Fill, Undocumented (Afu):                           |
|            |                     |               |                   |              | SC-SM       | Silty Clayey SAND; medium brown, moist, medium dense           |
|            | 44                  | R-1           | 138.5             | 7.3          |             | dense, abundant mica   |
| 5          |                     |               |                   |              |             |  |
|            | 40                  | R-2           | 144.3             | 7.3          |             |  |
|            |                     |               |                   |              |             |  |
|            | 39                  | R-3           | 133.4             | 6.5          |             |  |
| 10         |                     |               |                   |              |             |  |
|            | 53                  | R-4           | 131.4             | 6.5          |             | very dense   |
|            |                     |               |                   |              |             | <i>Quaternary Very Old Fan Deposits (Qvof):</i>                |
|            |                     |               |                   |              | SM          | Silty SAND; light brown, slightly moist to moist, medium dense |
| 15         |                     |               |                   |              |             |  |
|            | 25                  | R-5           | 119.2             | 3.1          |             |  |
|            |                     |               |                   |              |             |  |
| 20         |                     |               |                   |              |             |  |
|            | 26                  | R-6           | 113.9             | 3.7          |             |  |
|            |                     |               |                   |              |             |  |
| 25         |                     |               |                   |              |             |  |
|            | 28                  | R-7           | 120.3             | 4.3          |             |  |
|            |                     |               |                   |              |             |  |
|            |                     |               |                   |              |             | Total Depth @ 26.5 feet  |
|            |                     |               |                   |              |             | No Groundwater   |
| 30         |                     |               |                   |              |             |  |

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## Geotechnical Boring Log B-2

|                             |                                       |                       |
|-----------------------------|---------------------------------------|-----------------------|
| Date: June 7, 2011          | Project Name: Residential Development | Page: 1 of 1          |
| Project Number: 161309-11A  | Logged By: CW                         |                       |
| Drilling Company: Cal Pac   | Type of Rig: Mobile B51               |                       |
| Drive Weight (lbs): 140     | Drop (in): 30                         | Hole Diameter (in): 8 |
| Top of Hole Elevation (ft): | Hole Location: See Geotechnical Map   |                       |

| Depth (ft) | Blow Count Per Foot | Sample Number      | Dry Density (pcf) | Moisture (%) | ASTM Symbol | MATERIAL DESCRIPTION  |
|------------|---------------------|--------------------|-------------------|--------------|-------------|---|
| 0          |                     | Bag 1<br>@<br>0-5' |                   |              |             | <b>Artificial Fill, Undocumented (Afu):</b>                               |
|            |                     |                    |                   |              | SC          | Clayey SAND; light to medium brown, medium dense, slightly moist to moist |
|            | 47                  | R-1                | 127.7             | 6.2          |             |   |
| 5          |                     |                    |                   |              |             |   |
|            | 30                  | R-2                | 124.0             | 7.1          |             |   |
|            |                     |                    |                   |              |             |   |
|            | 38                  | R-3                | 134.0             | 5.4          |             | dark brown, moist, dense  |
| 10         |                     |                    |                   |              |             |   |
|            | 35                  | R-4                | 134.5             | 6.5          |             |   |
|            |                     |                    |                   |              |             |   |
| 15         |                     |                    |                   |              |             |   |
|            | 40                  | R-5                | 126.4             | 8.0          |             |   |
|            |                     |                    |                   |              |             |   |
| 20         |                     |                    |                   |              |             | <b>Quaternary Very Old Fan Deposits (Qvof):</b>                           |
|            | 55                  | R-6                | 133.4             | 4.6          | SC          | Clayey SAND; light brown, slightly moist to moist, very dense             |
|            |                     |                    |                   |              |             |   |
|            |                     |                    |                   |              |             | <b>Total Depth @ 21.5 feet</b>  |
|            |                     |                    |                   |              |             | <b>No Groundwater</b>   |
| 25         |                     |                    |                   |              |             |   |
|            |                     |                    |                   |              |             |   |
| 30         |                     |                    |                   |              |             |   |

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## Geotechnical Boring Log B-3

|                             |                                       |                       |
|-----------------------------|---------------------------------------|-----------------------|
| Date: June 7, 2011          | Project Name: Residential Development | Page: 1 of 1          |
| Project Number: 161309-11A  | Logged By: CW                         |                       |
| Drilling Company: Cal Pac   | Type of Rig: Mobile B51               |                       |
| Drive Weight (lbs): 140     | Drop (in): 30                         | Hole Diameter (in): 8 |
| Top of Hole Elevation (ft): | Hole Location: See Geotechnical Map   |                       |

| Depth (ft) | Blow Count Per Foot | Sample Number | Dry Density (pcf) | Moisture (%) | ASTM Symbol | MATERIAL DESCRIPTION                            |
|------------|---------------------|---------------|-------------------|--------------|-------------|---|
| 0          |                     |               |                   |              |             | Artificial Fill, Undocumented (Afu):            |
|            |                     |               |                   |              | SC          | Clayey SAND; dark brown, moist, medium dense    |
|            | 23                  | R-1           | 130.2             | 7.2          |             |   |
| 5          |                     |               |                   |              |             |   |
|            | 26                  | R-2           | 128.7             | 7.4          |             |   |
|            |                     |               |                   |              |             |   |
|            | 33                  | R-3           | 135.1             | 7.4          |             | dense, some gravel                              |
| 10         |                     |               |                   |              |             |   |
|            | 37                  | R-4           | 132.2             | 8.4          |             |   |
|            |                     |               |                   |              |             |   |
| 15         |                     |               |                   |              |             | <u>Quaternary Very Old Fan Deposits (Qvof):</u> |
|            | 47                  | R-5           | 127.8             | 10.9         | SC          | Clayey SAND, light orange brown, moist, dense   |
|            |                     |               |                   |              |             |   |
| 20         |                     |               |                   |              |             |   |
|            | 46                  | R-6           | 128.8             | 6.2          |             |   |
|            |                     |               |                   |              |             |   |
|            |                     |               |                   |              |             | Total Depth @ 21.5 feet                         |
|            |                     |               |                   |              |             | No Groundwater                                  |
| 25         |                     |               |                   |              |             |   |
|            |                     |               |                   |              |             |   |
| 30         |                     |               |                   |              |             |   |

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## Geotechnical Boring Log B-4

|                             |                                       |                       |
|-----------------------------|---------------------------------------|-----------------------|
| Date: June 7, 2011          | Project Name: Residential Development | Page: 1 of 1          |
| Project Number: 161309-11A  | Logged By: CW                         |                       |
| Drilling Company: Cal Pac   | Type of Rig: Mobile B51               |                       |
| Drive Weight (lbs): 140     | Drop (in): 30                         | Hole Diameter (in): 8 |
| Top of Hole Elevation (ft): | Hole Location: See Geotechnical Map   |                       |

| Depth (ft) | Blow Count Per Foot     | Sample Number | Dry Density (pcf) | Moisture (%) | ASTM Symbol | MATERIAL DESCRIPTION  |
|------------|-------------------------|---------------|-------------------|--------------|-------------|---|
| 0          |                         |               |                   |              |             | Artificial Fill, Undocumented (Afu):                            |
|            |                         |               |                   |              | SC          | Clayey SAND; dark brown, moist, medium dense                    |
|            | 25                      | R-1           | 125.0             | 5.5          |             |   |
| 5          |                         |               |                   |              |             |   |
|            | 22                      | R-2           | 129.4             | 5.1          |             |   |
|            | 49                      | R-3           | 132.8             | 6.9          |             | dense to very dense   |
| 10         |                         |               |                   |              |             |   |
|            | 35                      | R-4           | 129.8             | 5.8          |             | medium dense  |
|            |                         |               |                   |              |             |   |
| 15         |                         |               |                   |              |             |   |
|            | 54                      | R-5           | 132.0             | 8.6          |             | dense   |
|            |                         |               |                   |              |             | <u>Quaternary Very Old Fan Deposits (Qvof):</u>                 |
|            |                         |               |                   |              | SC          | Clayey SAND; light brown, slightly moist to moist, medium dense |
| 20         |                         |               |                   |              |             |   |
|            | 31                      | R-6           | 117.3             | 3.5          |             |   |
|            | Total Depth @ 21.5 feet |               |                   |              |             |   |
|            | No Groundwater          |               |                   |              |             |   |
| 25         |                         |               |                   |              |             |   |
| 30         |                         |               |                   |              |             |   |

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## Geotechnical Boring Log B-5

|                             |                                       |                       |
|-----------------------------|---------------------------------------|-----------------------|
| Date: June 7, 2011          | Project Name: Residential Development | Page: 1 of 2          |
| Project Number: 161309-11A  | Logged By: CW                         |                       |
| Drilling Company: Cal Pac   | Type of Rig: Mobile B51               |                       |
| Drive Weight (lbs): 140     | Drop (in): 30                         | Hole Diameter (in): 8 |
| Top of Hole Elevation (ft): | Hole Location: See Geotechnical Map   |                       |

| Depth (ft) | Blow Count Per Foot | Sample Number      | Dry Density (pcf) | Moisture (%) | ASTM Symbol | MATERIAL DESCRIPTION   |
|------------|---------------------|--------------------|-------------------|--------------|-------------|--|
| 0          |                     | Bag 1<br>@<br>0-5' |                   |              |             | Artificial Fill, Undocumented (Afu):                                 |
|            |                     |                    |                   |              | SC          | Clayey SAND; dark brown and light grayish brown, moist, medium dense |
|            | 38                  | R-1                | 127.9             | 6.2          |             | dense  |
| 5          |                     |                    |                   |              |             |  |
|            | 34                  | R-2                | 128.8             | 9.0          |             |  |
|            |                     |                    |                   |              |             |  |
|            | 24                  | R-3                | 113.8             | 7.4          |             | dark brown, very moist, medium dense                                 |
| 10         |                     |                    |                   |              |             |  |
|            | 22                  | R-4                | 123.6             | 6.6          |             |  |
|            |                     |                    |                   |              |             |  |
|            |                     |                    |                   |              |             | <i>Quaternary Very Old Fan Deposits (Qvof):</i>                      |
| 15         |                     |                    |                   |              |             |  |
|            | 27                  | R-5                | 117.4             | 5.5          | SC          | Clayey SAND; orange brown, slightly moist, medium dense              |
|            |                     |                    |                   |              |             |  |
|            |                     |                    |                   |              |             |  |
| 20         |                     |                    |                   |              |             |  |
|            | 49                  | R-6                | 132.7             | 5.8          |             | dense  |
|            |                     |                    |                   |              |             |  |
|            |                     |                    |                   |              |             |  |
| 25         |                     |                    |                   |              |             |  |
|            | 31                  | R-7                | 117.0             | 3.9          |             | moderate yellow brown, medium dense                                  |
|            |                     |                    |                   |              |             |  |
| 30         |                     |                    |                   |              |             |  |

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## Geotechnical Boring Log B-5

|                             |                                       |                       |
|-----------------------------|---------------------------------------|-----------------------|
| Date: June 7, 2011          | Project Name: Residential Development | Page: 2 of 2          |
| Project Number: 161309-11A  | Logged By: CW                         |                       |
| Drilling Company: Cal Pac   | Type of Rig: Mobile B51               |                       |
| Drive Weight (lbs): 140     | Drop (in): 30                         | Hole Diameter (in): 8 |
| Top of Hole Elevation (ft): | Hole Location: See Geotechnical Map   |                       |

| Depth (ft) | Blow Count Per Foot | Sample Number | Dry Density (pcf) | Moisture (%) | ASTM Symbol | MATERIAL DESCRIPTION                                    |
|------------|---------------------|---------------|-------------------|--------------|-------------|---|
| 30         | 21                  | N-1           | -                 | 7.4          |             | dense   |
| 35         | 25                  | R-8           | 118.2             | 5.4          |             | medium dense  |
| 40         | 47                  | N-2           | -                 | 9.6          |             | very dense  |
| 45         |                     |               |                   |              |             |   |
| 50         | 24                  | N-3           | -                 | 2.9          |             |   |
|            |                     |               |                   |              | SM          | Silty SAND; light brown, slightly moist, dense          |
|            |                     |               |                   |              |             | <b>Total Depth @ 51.5 feet</b><br><b>No Groundwater</b> |
| 55         |                     |               |                   |              |             |   |
| 60         |                     |               |                   |              |             |   |

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## Geotechnical Boring Log B-6

|                             |                                       |                       |
|-----------------------------|---------------------------------------|-----------------------|
| Date: June 7, 2011          | Project Name: Residential Development | Page: 1 of 1          |
| Project Number: 161309-11A  | Logged By: CW                         |                       |
| Drilling Company: Cal Pac   | Type of Rig: Mobile B51               |                       |
| Drive Weight (lbs): 140     | Drop (in): 30                         | Hole Diameter (in): 8 |
| Top of Hole Elevation (ft): | Hole Location: See Geotechnical Map   |                       |

| Depth (ft) | Blow Count Per Foot | Sample Number | Dry Density (pcf) | Moisture (%) | ASTM Symbol | MATERIAL DESCRIPTION  |
|------------|---------------------|---------------|-------------------|--------------|-------------|---|
| 0          |                     |               |                   |              |             | Artificial Fill, Undocumented (Afu):                            |
|            |                     |               |                   |              | SC-SM       | Silty Clayey SAND; dark brown, moist, medium dense              |
|            | 34                  | R-1           | 128.9             | 5.6          |             | dense   |
| 5          |                     |               |                   |              |             |   |
|            | 31                  | R-2           | 133.8             | 6.8          |             |   |
|            |                     |               |                   |              |             |   |
|            | 31                  | R-3           | 132.5             | 4.0          |             |   |
| 10         |                     |               |                   |              |             |   |
|            | 22                  | R-4           | 110.3             | 8.1          |             | very moist, medium dense  |
|            |                     |               |                   |              |             |   |
| 15         |                     |               |                   |              |             |   |
|            | 45                  | R-5           | 133.4             | 7.4          |             | dense   |
|            |                     |               |                   |              |             |   |
| 20         |                     |               |                   |              |             | <u>Quaternary Very Old Fan Deposits (Qvof):</u>                 |
|            | 26                  | R-6           | 107.4             | 3.2          | SM          | Silty SAND; moderate yellow brown, slightly moist, medium dense |
|            |                     |               |                   |              |             |   |
|            |                     |               |                   |              |             | Total Depth @ 21.5 feet   |
|            |                     |               |                   |              |             | No Groundwater  |
| 25         |                     |               |                   |              |             |   |
|            |                     |               |                   |              |             |   |
| 30         |                     |               |                   |              |             |   |

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## Geotechnical Boring Log B-7

|                             |                                       |                       |
|-----------------------------|---------------------------------------|-----------------------|
| Date: June 7, 2011          | Project Name: Residential Development | Page: 1 of 1          |
| Project Number: 161309-11A  | Logged By: CW                         |                       |
| Drilling Company: Cal Pac   | Type of Rig: Mobile B51               |                       |
| Drive Weight (lbs): 140     | Drop (in): 30                         | Hole Diameter (in): 8 |
| Top of Hole Elevation (ft): | Hole Location: See Geotechnical Map   |                       |

| Depth (ft) | Blow Count Per Foot | Sample Number | Dry Density (pcf) | Moisture (%) | ASTM Symbol | MATERIAL DESCRIPTION   |
|------------|---------------------|---------------|-------------------|--------------|-------------|--|
| 0          |                     |               |                   |              |             | <b>Artificial Fill, Undocumented (Afu):</b>                    |
|            |                     |               |                   |              | SC          | Clayey SAND; dark brown, slightly moist, medium dense          |
|            | 51                  | R-1           | 125.0             | 4.8          |             | very dense, medium brown                                       |
| 5          |                     |               |                   |              |             |  |
|            | 44                  | R-2           | 127.7             | 5.5          |             | dense  |
|            |                     |               |                   |              |             |  |
|            | 59                  | R-3           | 138.6             | 5.4          |             | very dense   |
| 10         |                     |               |                   |              |             |  |
|            | 32                  | R-4           | 126.2             | 9.4          |             | dense  |
|            |                     |               |                   |              |             |  |
| 15         |                     |               |                   |              |             |  |
|            | 44                  | R-5           | 135.8             | 8.0          |             | dark brown, very moist   |
|            |                     |               |                   |              |             |  |
|            |                     |               |                   |              |             | <b>Quaternary Very Old Fan Deposits (Qvof):</b>                |
| 20         |                     |               |                   |              | SM          | Silty SAND; light yellow brown, slightly moist to moist, dense |
|            | 32                  | R-6           | 114.1             | 5.4          |             |  |
|            |                     |               |                   |              |             |  |
|            |                     |               |                   |              |             | <b>Total Depth @ 21.5 feet</b>                                 |
|            |                     |               |                   |              |             | <b>No Groundwater</b>  |
| 25         |                     |               |                   |              |             |  |
|            |                     |               |                   |              |             |  |
| 30         |                     |               |                   |              |             |  |

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## Geotechnical Boring Log B-8

|                             |                                       |                       |
|-----------------------------|---------------------------------------|-----------------------|
| Date: June 7, 2011          | Project Name: Residential Development | Page: 1 of 1          |
| Project Number: 161309-11A  | Logged By: CW                         |                       |
| Drilling Company: Cal Pac   | Type of Rig: Mobile B51               |                       |
| Drive Weight (lbs): 140     | Drop (in): 30                         | Hole Diameter (in): 8 |
| Top of Hole Elevation (ft): | Hole Location: See Geotechnical Map   |                       |

| Depth (ft) | Blow Count Per Foot | Sample Number | Dry Density (pcf) | Moisture (%) | ASTM Symbol | MATERIAL DESCRIPTION                                    |
|------------|---------------------|---------------|-------------------|--------------|-------------|---|
| 0          |                     |               |                   |              |             | <b>Artificial Fill, Undocumented (Afu):</b>             |
|            |                     |               |                   |              | SC          | Clayey Sand; dark brown, slightly moist to moist, loose |
|            | 35                  | R-1           | 133.0             | 7.7          |             | dense   |
| 5          | 40                  | R-2           | 134.8             | 7.5          |             |   |
|            |                     |               |                   |              |             | <b>Quaternary Very Old Fan Deposits (Qvof):</b>         |
|            | 24                  | R-3           | 120.9             | 7.0          | SC          | Clayey SAND; orange brown, moist, medium dense          |
| 10         | 25                  | R-4           | 117.2             | 3.7          | SM          | Silty SAND; whitish brown, slightly moist, medium dense |
|            |                     |               |                   |              |             |   |
|            |                     |               |                   |              | SC          | Clayey SAND; medium brown, very moist, dense            |
| 15         | 35                  | R-5           | 125.6             | 9.4          |             |   |
|            |                     |               |                   |              |             | <b>Total Depth @ 16.5 feet</b>                          |
|            |                     |               |                   |              |             | <b>No Groundwater</b>                                   |
| 20         |                     |               |                   |              |             |   |
| 25         |                     |               |                   |              |             |   |
| 30         |                     |               |                   |              |             |   |

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# APPENDIX



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## APPENDIX B

### LABORATORY TESTING

Laboratory tests were performed in general accordance with test methods of ASTM International (ASTM), California test (CT) methods or other suggested procedures. The results of the laboratory tests are summarized in Figures B-1 through B-5. The in-place dry density and moisture content of the samples tested are presented in the excavation logs in *Appendix A*.

The results of previous laboratory testing are also included in this appendix.

**SUMMARY OF LABORATORY MAXIMUM DRY DENSITY  
AND OPTIMUM MOISTURE CONTENT TEST RESULTS  
ASTM D1557**

| Sample No.  | Description                                       | Maximum Dry Density (pcf) | Optimum Moisture Content (% of dry wt.) |
|-------------|---|---------------------------|---|
| B-1 @ 0-5'  | Clayey SAND (SC) brown                            | 137.9                     | 6.3                                     |
| B-4 @ 0-5'  | Clayey SAND (SC) with trace gravel, reddish brown | 137.1                     | 6.0                                     |
| B-5 @ 5-10' | Clayey SAND (SC) with trace gravel, reddish brown | 137.1                     | 6.7                                     |

**SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS  
ASTM D4829**

| Sample No. | Moisture Content |                | After Test Dry Density (pcf) | Expansion Index |
|------------|------------------|----------------|------------------------------|-----------------|
|            | Before Test (%)  | After Test (%) |                              |                 |
| B-1 @ 0-5' | 7.5              | 11.8           | 120.4                        | 2               |
| B-4 @ 0-5' | 7.0              | 12.5           | 121.7                        | 4               |

**SUMMARY OF ATTERBERG LIMIT TEST RESULTS  
ASTM D4318**

| Sample No. | Liquid Limit | Plastic Limit | Plasticity Index | USCS |
|------------|--------------|---------------|------------------|------|
| B-1 @ 0-5' | 25           | 16            | 9                | SC   |
| B-4 @ 0-5' | 24           | 17            | 7                | SC   |

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

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KBP

**LABORATORY TEST RESULTS**

CONTINENTAL VILLAGES  
SOUTHEAST OF LASSELLE STREET  
& KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

MARCH, 2018

PROJECT NO. T2809-22-01

FIG B-1



SUMMARY OF ONE-DIMENSIONAL CONSOLIDATION (COLLAPSE) TESTS  
ASTM D2435

| Sample No. | In-situ Dry Density (pcf) | Moisture Content Before Test (%) | Final Moisture Content (%) | Axial Load with Water Added (psf) | Percent Collapse |
|------------|---------------------------|----------------------------------|----------------------------|-----------------------------------|------------------|
| B-1 @ 5'   | 128.1                     | 7.3                              | 10.2                       | 2000                              | 0.2              |
| B-3 @ 2.5' | 127.5                     | 7.5                              | 9.9                        | 2000                              | 0.7              |
| B-5 @ 5'   | 127.3                     | 7.3                              | 10.7                       | 2000                              | 0.3              |
| B-6 @ 10'  | 127.3                     | 8.9                              | 10.7                       | 2000                              | 0.2              |

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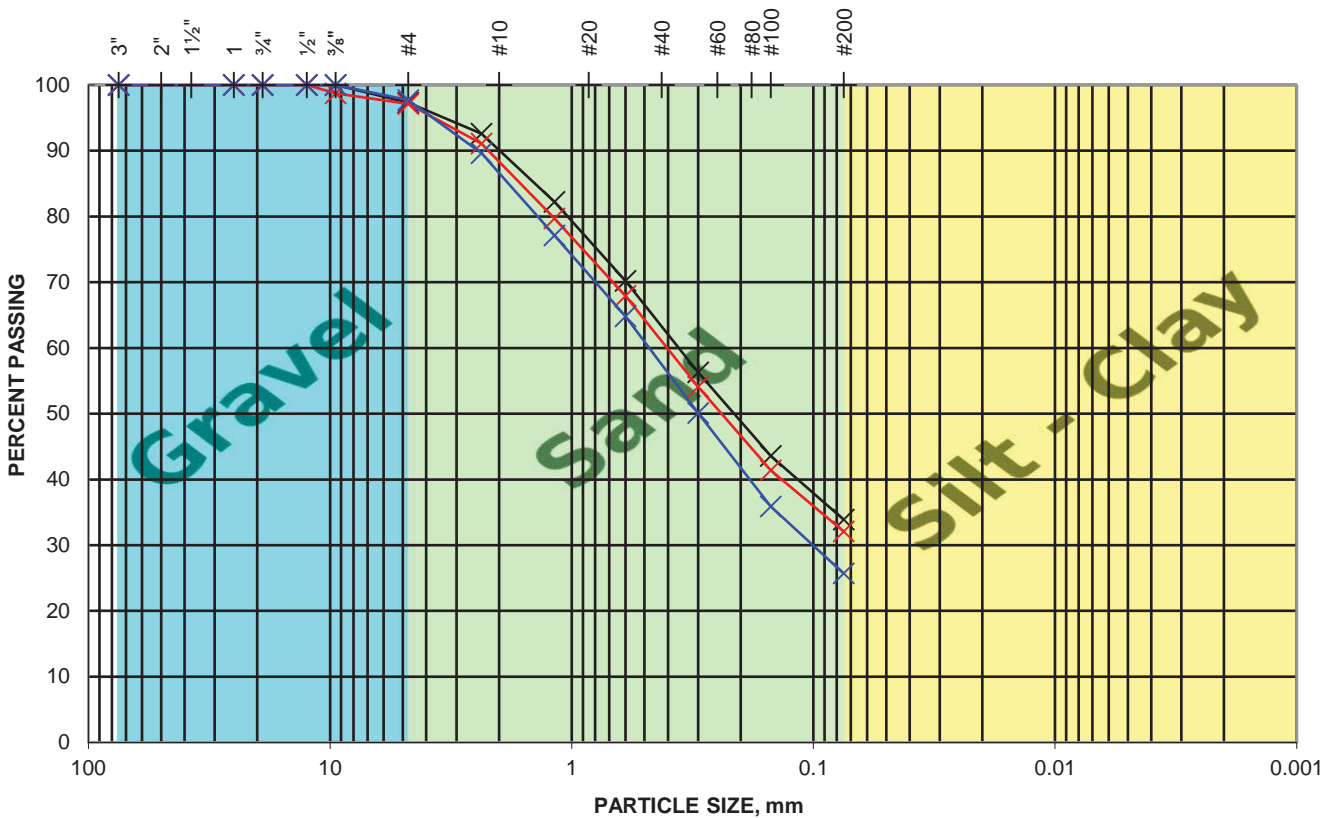
LABORATORY TEST RESULTS

CONTINENTAL VILLAGES  
SOUTHEAST OF LASSELLE STREET  
& KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

MARCH, 2018

PROJECT NO. T2809-22-01

FIG B-2



| SAMPLE ID | SAMPLE DESCRIPTION                 |
|-----------|------------------------------------|
| P-1@4'    | Clayey SAND (SC) with trace gravel |
| P-3@7'    | Clayey SAND (SC) with trace gravel |
| P-5@4'    | Clayey SAND (SC) with trace gravel |

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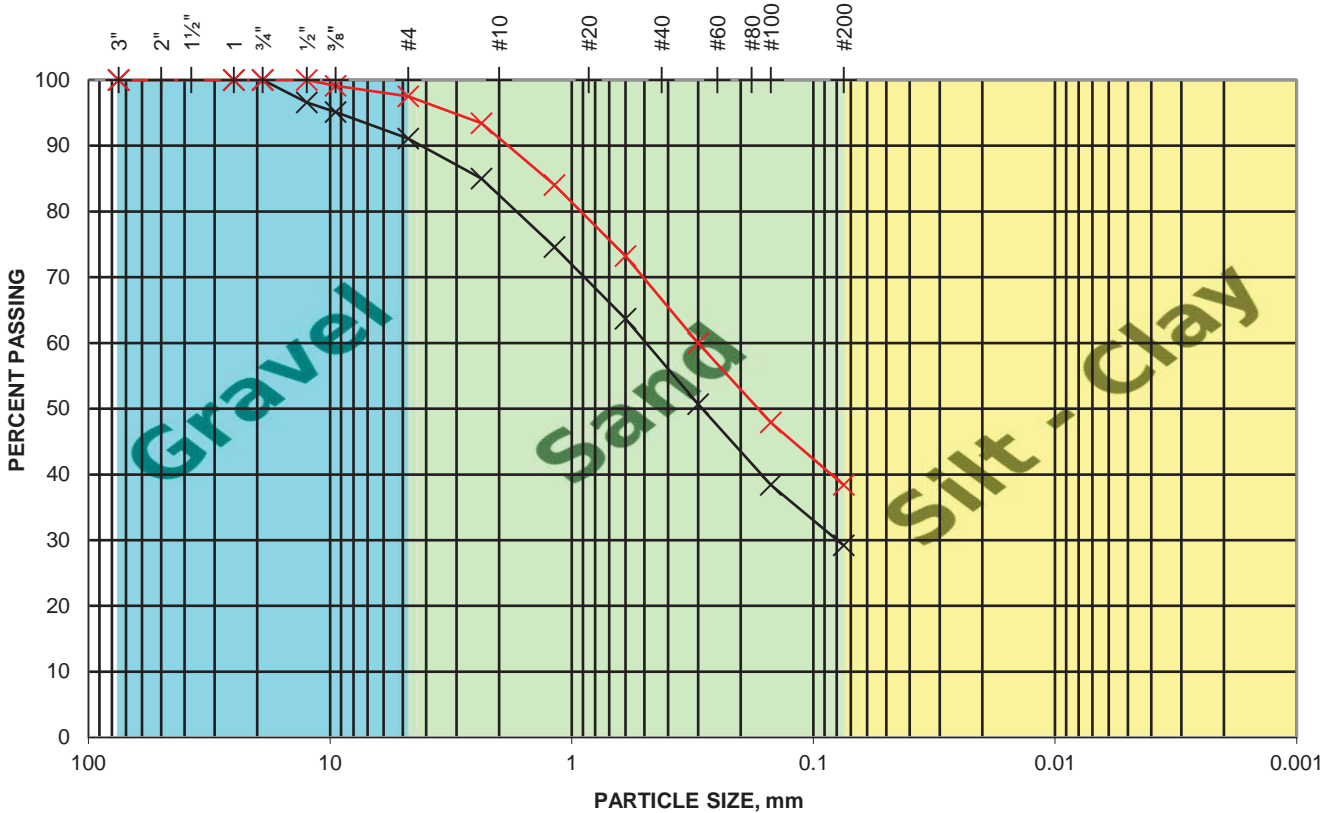
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AMO

GRAIN SIZE DISTRIBUTION

CONTINENTAL VILLAGES  
SOUTHEAST OF LASSELLE STREET  
& KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

MARCH, 2018 PROJECT NO. T2809-22-01 FIG B-3



| SAMPLE ID | SAMPLE DESCRIPTION                 |
|-----------|------------------------------------|
| P-7 @ 3'  | Clayey SAND (SC) with few gravel   |
| P-8 @ 4'  | Clayey SAND (SC) with trace gravel |

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AMO



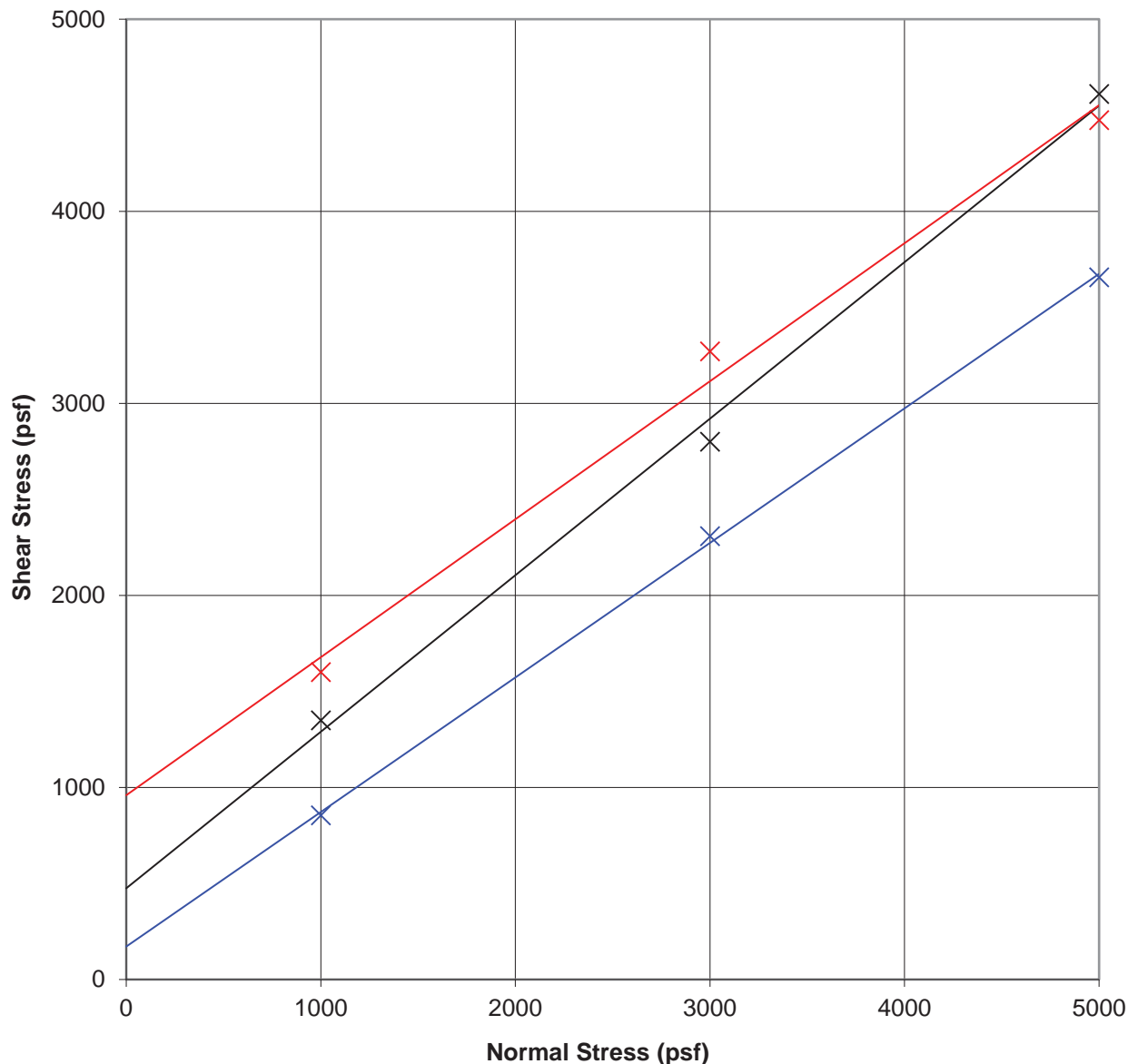
GRAIN SIZE DISTRIBUTION

CONTINENTAL VILLAGES  
SOUTHEAST OF LASSELLE STREET  
& KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

MARCH, 2018 PROJECT NO. T2809-22-01 FIG B-4

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





| SAMPLE ID  | SOIL TYPE | INITIAL DRY DENSITY (pcf) | INITIAL MOISTURE (%) | FINAL MOISTURE (%) | C (psf) | $\phi$ (deg) |
|------------|-----------|---------------------------|----------------------|--------------------|---------|--------------|
| B-2 @ 5'   | SC        | 122.7                     | 7.5                  | 12.4               | 480     | 39           |
| B-6 @ 5'   | SC        | 118.5                     | 9.5                  | 15.2               | 960     | 36           |
| B-7 @ 2.5' | SC        | 104.1                     | 7.4                  | 15.8               | 170     | 35           |

\*Sample remolded to approximately 90% of the test maximum dry density at optimum moisture content.

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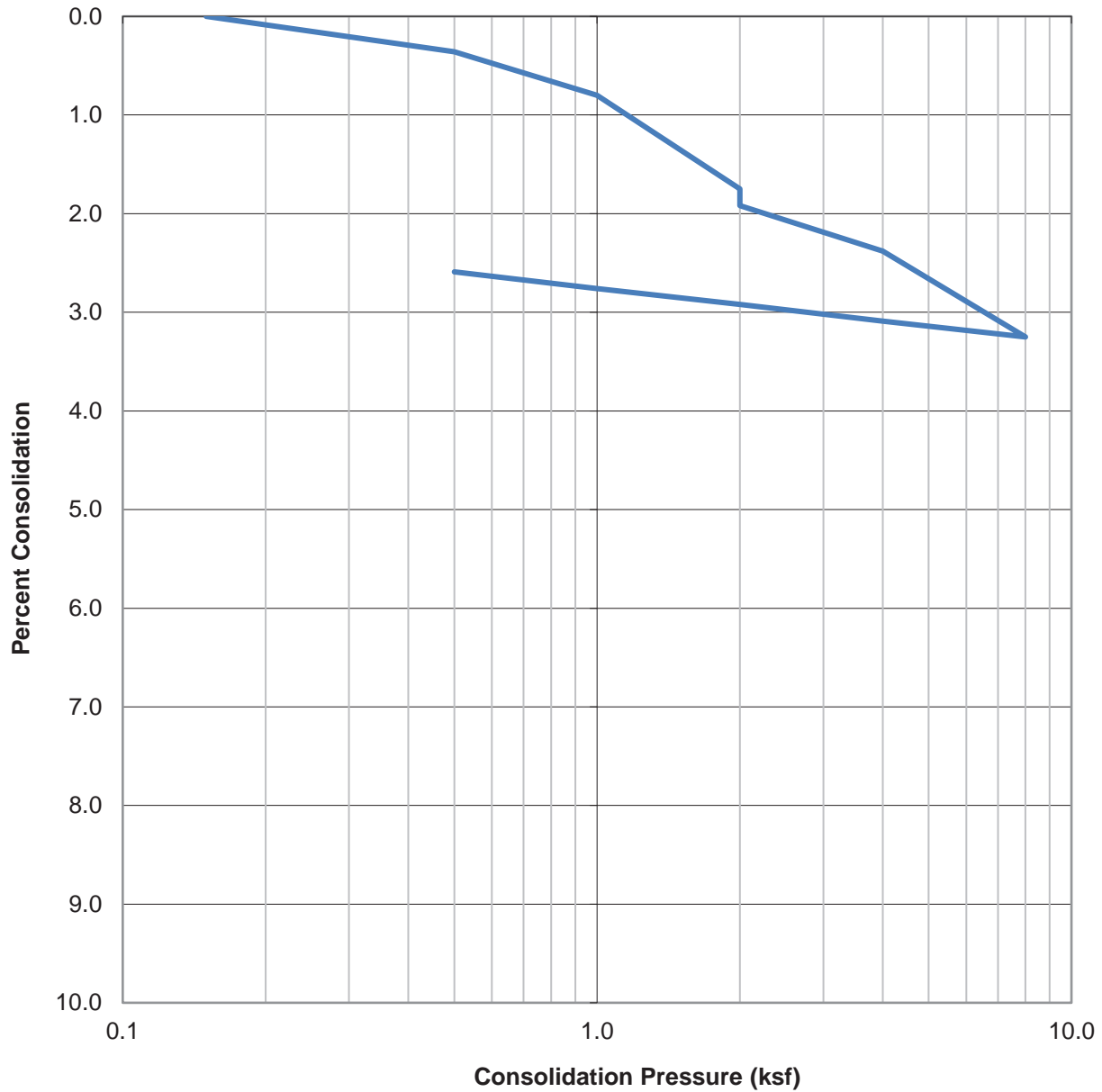


DIRECT SHEAR TEST RESULTS  
CONTINENTAL VILLAGES  
SOUTHEAST OF LASSELLE STREET  
& KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

March, 2018      PROJECT NO. T2809-22-01      FIG B-5

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

WATER ADDED AT 2 KSF



| SAMPLE ID | SOIL TYPE | DRY DENSITY (PCF) | INITIAL MOISTURE (%) | FINAL MOISTURE (%) |
|-----------|-----------|-------------------|----------------------|--------------------|
| B-1 @ 5'  | SC        | 128.1             | 7.3                  | 10.2               |

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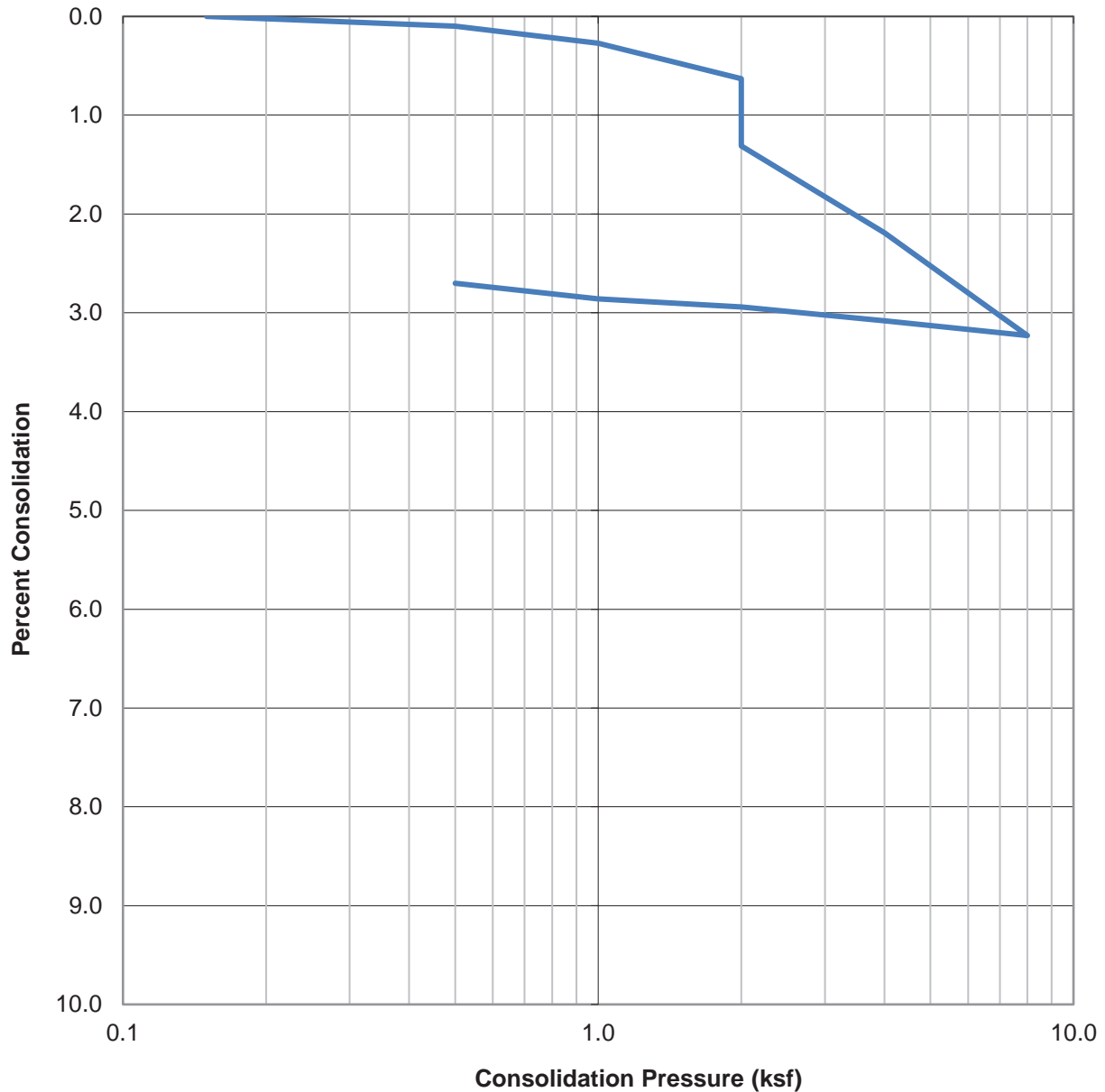
CONSOLIDATION TEST RESULTS

CONTINENTAL VILLAGES  
SOUTHEAST OF LASELLE STREET &  
KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

|             |                         |         |
|-------------|-------------------------|---------|
| MARCH, 2018 | PROJECT NO. T2809-22-01 | FIG B-6 |
|-------------|-------------------------|---------|

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

WATER ADDED AT 2 KSF



| SAMPLE ID  | SOIL TYPE | DRY DENSITY (PCF) | INITIAL MOISTURE (%) | FINAL MOISTURE (%) |
|------------|-----------|-------------------|----------------------|--------------------|
| B-3 @ 2.5' | SC        | 127.5             | 7.5                  | 9.9                |

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CONSOLIDATION TEST RESULTS

CONTINENTAL VILLAGES  
SOUTHEAST OF LASSELLE STREET  
& KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

MARCH, 2018

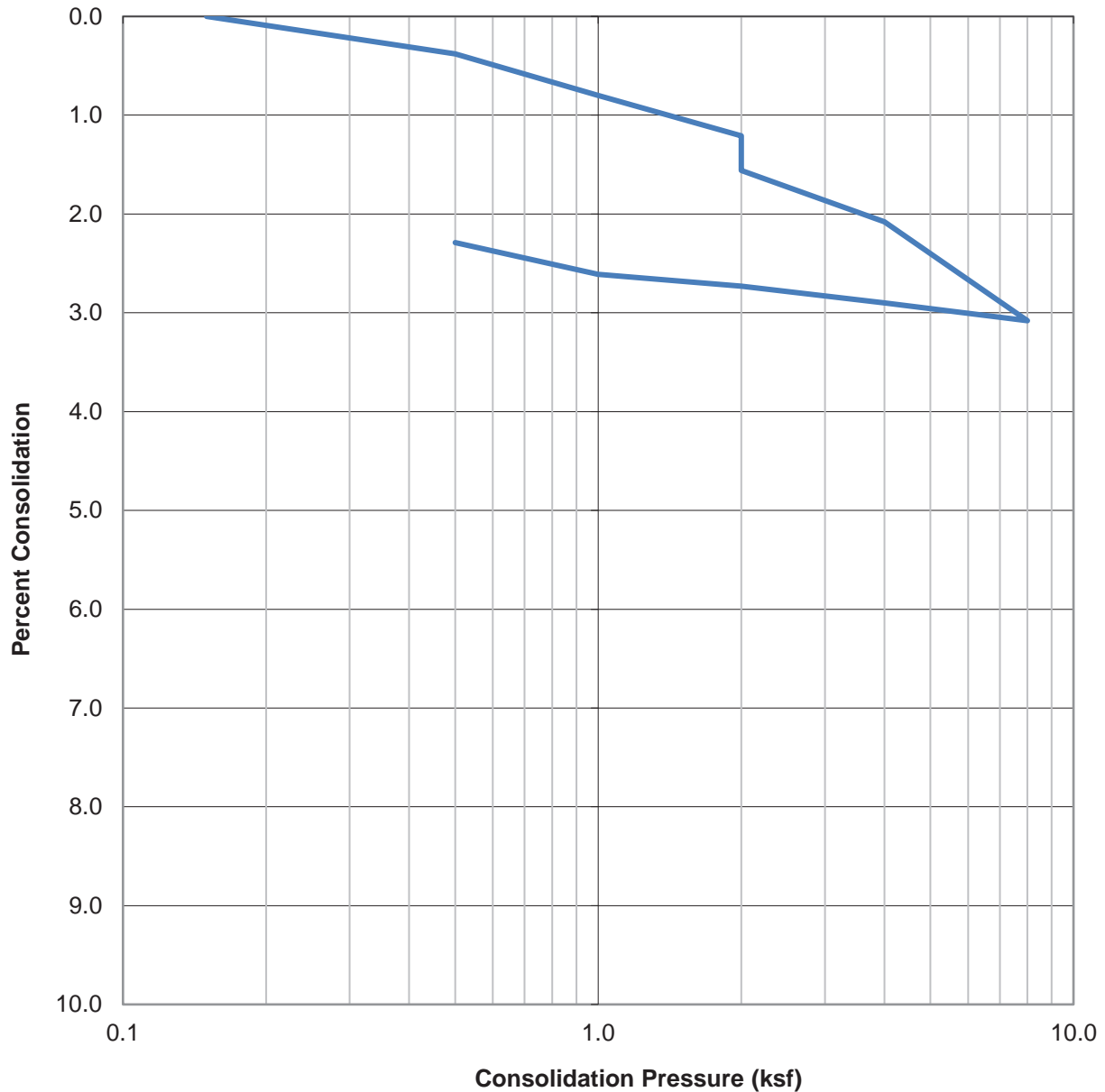
PROJECT NO. T2809-22-01

FIG B-7

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



WATER ADDED AT 2 KSF



| SAMPLE ID | SOIL TYPE | DRY DENSITY (PCF) | INITIAL MOISTURE (%) | FINAL MOISTURE (%) |
|-----------|-----------|-------------------|----------------------|--------------------|
| B-5 @ 5'  | SC        | 127.3             | 7.3                  | 10.7               |

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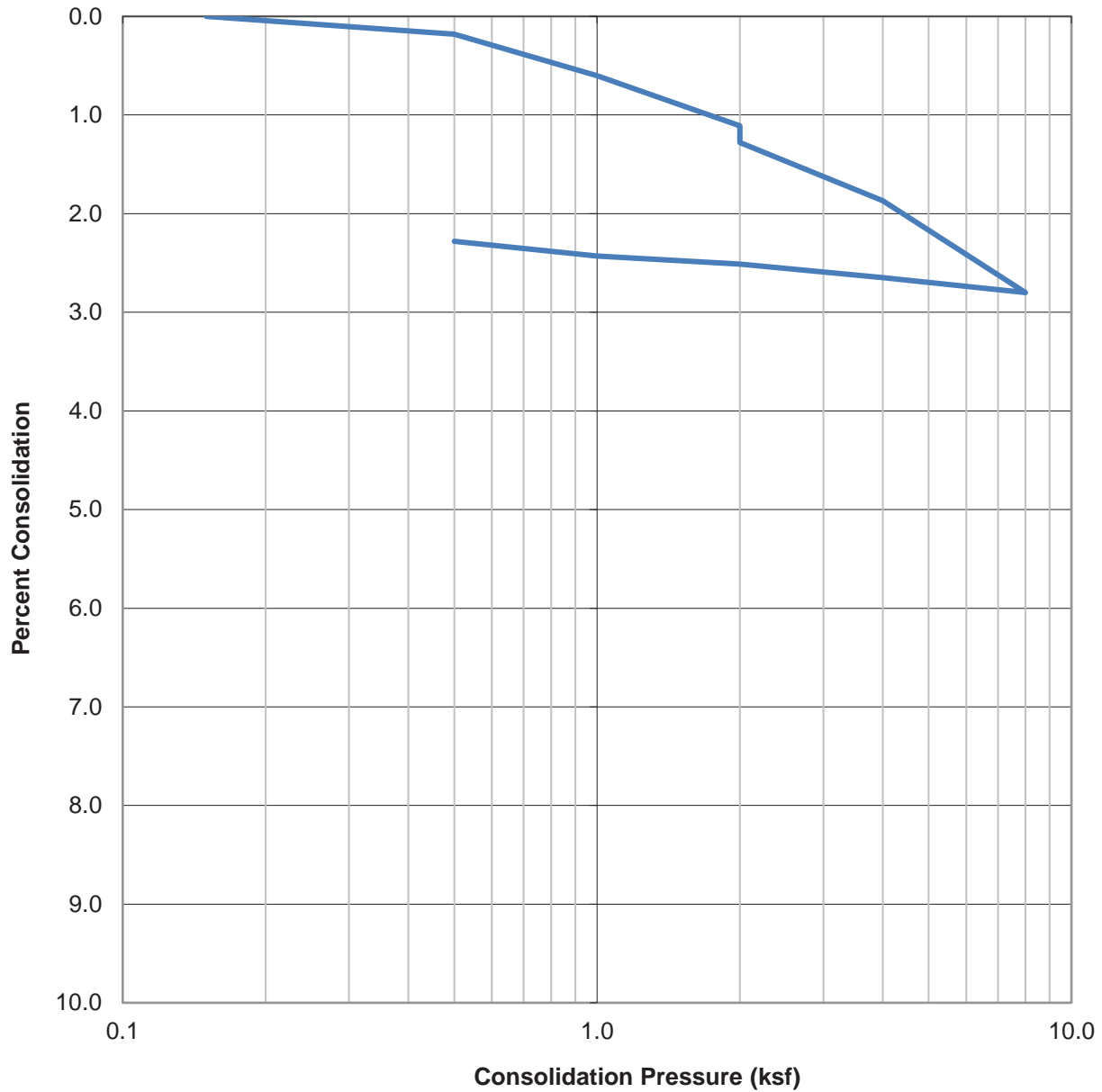
CONSOLIDATION TEST RESULTS

CONTINENTAL VILLAGES  
SOUTHEAST OF LASSELLE STREET  
& KRAMERIA AVENUE  
MORENO VALLEY, CALIFORNIA

|             |                         |         |
|-------------|-------------------------|---------|
| MARCH, 2018 | PROJECT NO. T2809-22-01 | FIG B-8 |
|-------------|-------------------------|---------|

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

WATER ADDED AT 2 KSF



| SAMPLE ID | SOIL TYPE | DRY DENSITY (PCF) | INITIAL MOISTURE (%) | FINAL MOISTURE (%) |
|-----------|-----------|-------------------|----------------------|--------------------|
| B-6 @ 10' | SC        | 127.3             | 8.9                  | 10.7               |

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| CER |  |  |
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CONSOLIDATION TEST RESULTS

CONTINENTAL VILLAGES  
SOUTHEAST OF LASSELLE STREET  
& KRAMERIA AVENUE  
MORNO VALLEY, CALIFORNIA

|             |                         |         |
|-------------|-------------------------|---------|
| MARCH, 2018 | PROJECT NO. T2809-22-01 | FIG B-9 |
|-------------|-------------------------|---------|

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

## APPENDIX C

### Laboratory Procedures and Test Results

Laboratory testing provided quantitative and qualitative data involving the relevant engineering properties of the representative earth materials selected for testing. The representative samples were tested in general accordance with American Society for Testing and Materials (ASTM) procedures and/or California Test Methods (CTM).

**Soil Classification:** Earth materials encountered during exploration were classified and logged in general accordance with the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure) of ASTM D 2488. Upon completion of laboratory testing, exploratory logs and sample descriptions were reconciled to reflect laboratory test results with regard to ASTM D 2487.

**Moisture and Density Tests:** For select samples moisture content was determined using the guidelines of ASTM D 2216 and dry density determinations were made using the guidelines of ASTM D 2937. These tests were performed on relatively undisturbed samples and the test results are presented on the exploratory logs.

**Maximum Density Tests:** The maximum dry density and optimum moisture content of representative samples were determined using the guidelines of ASTM D 1557. The test results are presented in the table below.

| SAMPLE LOCATION | MATERIAL DESCRIPTION | MAXIMUM DRY DENSITY (pcf) | OPTIMUM MOISTURE CONTENT (%) |
|-----------------|----------------------|---------------------------|------------------------------|
| B-2 @ 0-5 feet  | Clayey Sand          | 135.5                     | 9.0                          |
| B-9 @ 0-5 feet  | Clayey Sand          | 138.0                     | 7.0                          |

**Expansion Index:** The expansion potential of representative samples was evaluated using the guidelines of ASTM D 4829. The test results are presented in the table below.

| SAMPLE LOCATION | MATERIAL DESCRIPTION | EXPANSION INDEX | EXPANSION POTENTIAL |
|-----------------|----------------------|-----------------|---------------------|
| B-2 @ 0-5 feet  | Clayey Sand          | 14              | Very Low            |
| B-9 @ 0-5 feet  | Clayey Sand          | 8               | Very Low            |

**Consolidation:** Consolidation tests were performed on select, relatively undisturbed samples with the guidelines of ASTM D 2435 (California Modified).



**Collapse Potential:** Collapse potential tests were performed on select, relatively undisturbed samples using the guidelines of ASTM D 5333. The test results are presented in the table below.

| SAMPLE LOCATION | APPLIED OVERBURDEN (kg) | COLLAPSE (%) | DEGREE OF COLLAPSE |
|-----------------|-------------------------|--------------|--------------------|
| B-5 @ 10 feet   | 1                       | 0.13         | Very Low           |
| B-6 @ 10 feet   | 1                       | 0.25         | Very Low           |

Note: Positive values of collapse index represent a reduction in soil volume, while negative values represent an increase in soil volume (swelling).

**Minimum Resistivity and pH Tests:** Minimum resistivity and pH Tests of select samples were performed using the guidelines of CTM 643. The test results are presented in the table below.

| SAMPLE LOCATION | MATERIAL DESCRIPTION | pH  | MINIMUM RESISTIVITY (ohm-cm) |
|-----------------|----------------------|-----|------------------------------|
| B-2 @ 0-5 feet  | Clayey Sand          | 8.4 | 2,200                        |

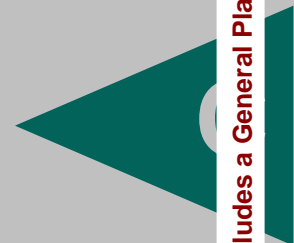
**Soluble Sulfate:** The soluble sulfate content of select samples was determined using the guidelines of CTM 417. The test results are presented in the table below.

| SAMPLE LOCATION | MATERIAL DESCRIPTION | SULFATE CONTENT (% by weight) | SULFATE EXPOSURE |
|-----------------|----------------------|-------------------------------|------------------|
| B-2 @ 0-5 feet  | Clayey Sand          | 0.038                         | Negigible        |

**Chloride Content:** Chloride content of select samples was determined using the guidelines of CTM 422. The test results are presented in the table below.

| SAMPLE LOCATION | MATERIAL DESCRIPTION | CHLORIDE CONTENT (ppm) |
|-----------------|----------------------|------------------------|
| B-2 @ 0-5 feet  | Clayey Sand          | ND                     |

# APPENDIX



**APPENDIX C**  
**RECOMMENDED GRADING SPECIFICATIONS**  
**FOR**  
**CONTINENTAL VILLAGES**  
**SOUTHEAST OF LASSELLE STREET &**  
**KRAMERIA AVENUE**  
**MORENO VALLEY, CALIFORNIA**  
**PROJECT NO. T2809-22-01**

Attachment: Preliminary Geotechnical Evaluation (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



## RECOMMENDED GRADING SPECIFICATIONS

### 1. GENERAL

- 1.1 These Recommended Grading Specifications shall be used in conjunction with the Geotechnical Report for the project prepared by Geocon. The recommendations contained in the text of the Geotechnical Report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict.
- 1.2 Prior to the commencement of grading, a geotechnical consultant (Consultant) shall be employed for the purpose of observing earthwork procedures and testing the fills for substantial conformance with the recommendations of the Geotechnical Report and these specifications. The Consultant should provide adequate testing and observation services so that they may assess whether, in their opinion, the work was performed in substantial conformance with these specifications. It shall be the responsibility of the Contractor to assist the Consultant and keep them apprised of work schedules and changes so that personnel may be scheduled accordingly.
- 1.3 It shall be the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and the approved grading plans. If, in the opinion of the Consultant, unsatisfactory conditions such as questionable soil materials, poor moisture condition, inadequate compaction, and/or adverse weather result in a quality of work not in conformance with these specifications, the Consultant will be empowered to reject the work and recommend to the Owner that grading be stopped until the unacceptable conditions are corrected.

### 2. DEFINITIONS

- 2.1 **Owner** shall refer to the owner of the property or the entity on whose behalf the grading work is being performed and who has contracted with the Contractor to have grading performed.
- 2.2 **Contractor** shall refer to the Contractor performing the site grading work.
- 2.3 **Civil Engineer** or **Engineer of Work** shall refer to the California licensed Civil Engineer or consulting firm responsible for preparation of the grading plans, surveying and verifying as-graded topography.
- 2.4 **Consultant** shall refer to the soil engineering and engineering geology consulting firm retained to provide geotechnical services for the project.

- 2.5 **Soil Engineer** shall refer to a California licensed Civil Engineer retained by the Owner, who is experienced in the practice of geotechnical engineering. The Soil Engineer shall be responsible for having qualified representatives on-site to observe and test the Contractor's work for conformance with these specifications.
- 2.6 **Engineering Geologist** shall refer to a California licensed Engineering Geologist retained by the Owner to provide geologic observations and recommendations during the site grading.
- 2.7 **Geotechnical Report** shall refer to a soil report (including all addenda) which may include a geologic reconnaissance or geologic investigation that was prepared specifically for the development of the project for which these Recommended Grading Specifications are intended to apply.

### 3. MATERIALS

- 3.1 Materials for compacted fill shall consist of any soil excavated from the cut areas or imported to the site that, in the opinion of the Consultant, is suitable for use in construction of fills. In general, fill materials can be classified as *soil* fills, *soil-rock* fills or *rock* fills, as defined below.
- 3.1.1 **Soil fills** are defined as fills containing no rocks or hard lumps greater than 12 inches in maximum dimension and containing at least 40 percent by weight of material smaller than  $\frac{3}{4}$  inch in size.
- 3.1.2 **Soil-rock fills** are defined as fills containing no rocks or hard lumps larger than 4 feet in maximum dimension and containing a sufficient matrix of soil fill to allow for proper compaction of soil fill around the rock fragments or hard lumps as specified in Paragraph 6.2. **Oversize rock** is defined as material greater than 12 inches.
- 3.1.3 **Rock fills** are defined as fills containing no rocks or hard lumps larger than 3 feet in maximum dimension and containing little or no fines. Fines are defined as material smaller than  $\frac{3}{4}$  inch in maximum dimension. The quantity of fines shall be less than approximately 20 percent of the rock fill quantity.
- 3.2 Material of a perishable, spongy, or otherwise unsuitable nature as determined by the Consultant shall not be used in fills.
- 3.3 Materials used for fill, either imported or on-site, shall not contain hazardous materials as defined by the California Code of Regulations, Title 22, Division 4, Chapter 30, Articles 9

and 10; 40CFR; and any other applicable local, state or federal laws. The Consultant shall not be responsible for the identification or analysis of the potential presence of hazardous materials. However, if observations, odors or soil discoloration cause Consultant to suspect the presence of hazardous materials, the Consultant may request from the Owner the termination of grading operations within the affected area. Prior to resuming grading operations, the Owner shall provide a written report to the Consultant indicating that the suspected materials are not hazardous as defined by applicable laws and regulations.

- 3.4 The outer 15 feet of *soil-rock* fill slopes, measured horizontally, should be composed of properly compacted *soil* fill materials approved by the Consultant. *Rock* fill may extend to the slope face, provided that the slope is not steeper than 2:1 (horizontal:vertical) and a soil layer no thicker than 12 inches is track-walked onto the face for landscaping purposes. This procedure may be utilized provided it is acceptable to the governing agency, Owner and Consultant.
- 3.5 Samples of soil materials to be used for fill should be tested in the laboratory by the Consultant to determine the maximum density, optimum moisture content, and, where appropriate, shear strength, expansion, and gradation characteristics of the soil.
- 3.6 During grading, soil or groundwater conditions other than those identified in the Geotechnical Report may be encountered by the Contractor. The Consultant shall be notified immediately to evaluate the significance of the unanticipated condition

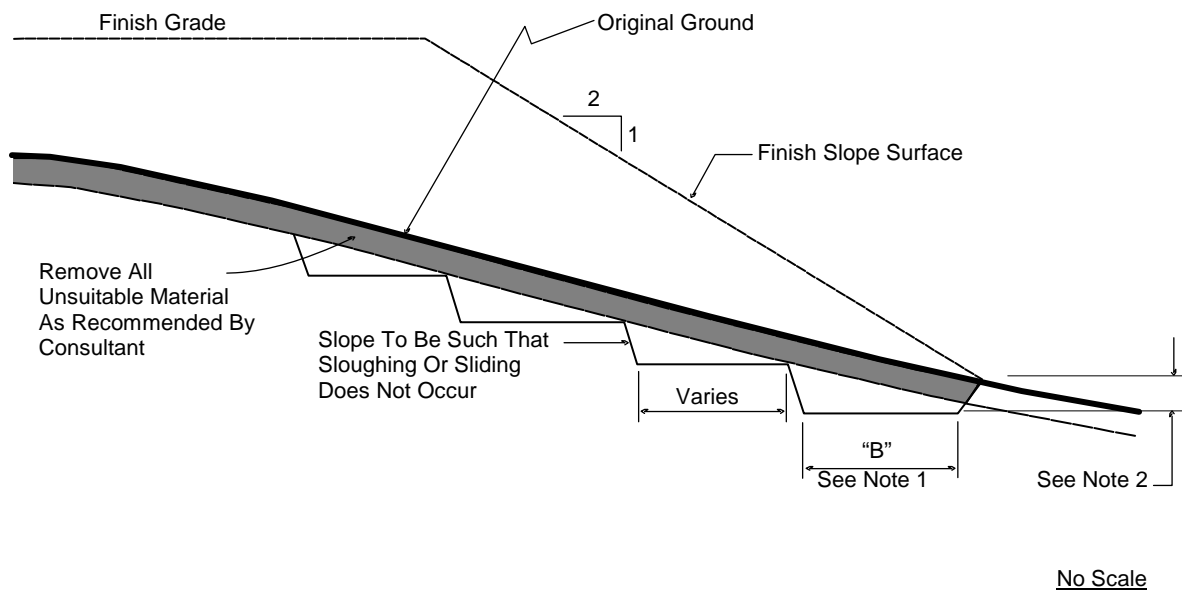
#### **4. CLEARING AND PREPARING AREAS TO BE FILLED**

- 4.1 Areas to be excavated and filled shall be cleared and grubbed. Clearing shall consist of complete removal above the ground surface of trees, stumps, brush, vegetation, man-made structures, and similar debris. Grubbing shall consist of removal of stumps, roots, buried logs and other unsuitable material and shall be performed in areas to be graded. Roots and other projections exceeding 1½ inches in diameter shall be removed to a depth of 3 feet below the surface of the ground. Borrow areas shall be grubbed to the extent necessary to provide suitable fill materials.
- 4.2 Asphalt pavement material removed during clearing operations should be properly disposed at an approved off-site facility or in an acceptable area of the project evaluated by Geocon and the property owner. Concrete fragments that are free of reinforcing steel may be placed in fills, provided they are placed in accordance with Section 6.2 or 6.3 of this document.



- 4.3 After clearing and grubbing of organic matter and other unsuitable material, loose or porous soils shall be removed to the depth recommended in the Geotechnical Report. The depth of removal and compaction should be observed and approved by a representative of the Consultant. The exposed surface shall then be plowed or scarified to a minimum depth of 6 inches and until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment to be used.
- 4.4 Where the slope ratio of the original ground is steeper than 5:1 (horizontal:vertical), or where recommended by the Consultant, the original ground should be benched in accordance with the following illustration.

#### TYPICAL BENCHING DETAIL



- DETAIL NOTES:
- (1) Key width "B" should be a minimum of 10 feet, or sufficiently wide to permit complete coverage with the compaction equipment used. The base of the key should be graded horizontal, or inclined slightly into the natural slope.
  - (2) The outside of the key should be below the topsoil or unsuitable surficial material and at least 2 feet into dense formational material. Where hard rock is exposed in the bottom of the key, the depth and configuration of the key may be modified as approved by the Consultant.

- 4.5 After areas to receive fill have been cleared and scarified, the surface should be moisture conditioned to achieve the proper moisture content, and compacted as recommended in Section 6 of these specifications.

## 5. COMPACTION EQUIPMENT

- 5.1 Compaction of *soil* or *soil-rock* fill shall be accomplished by sheepsfoot or segmented-steel wheeled rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers, or other types of acceptable compaction equipment. Equipment shall be of such a design that it will be capable of compacting the *soil* or *soil-rock* fill to the specified relative compaction at the specified moisture content.
- 5.2 Compaction of *rock* fills shall be performed in accordance with Section 6.3.

## 6. PLACING, SPREADING AND COMPACTION OF FILL MATERIAL

- 6.1 *Soil* fill, as defined in Paragraph 3.1.1, shall be placed by the Contractor in accordance with the following recommendations:
- 6.1.1 *Soil* fill shall be placed by the Contractor in layers that, when compacted, should generally not exceed 8 inches. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to obtain uniformity of material and moisture in each layer. The entire fill shall be constructed as a unit in nearly level lifts. Rock materials greater than 12 inches in maximum dimension shall be placed in accordance with Section 6.2 or 6.3 of these specifications.
- 6.1.2 In general, the *soil* fill shall be compacted at a moisture content at or above the optimum moisture content as determined by ASTM D 1557.
- 6.1.3 When the moisture content of *soil* fill is below that specified by the Consultant, water shall be added by the Contractor until the moisture content is in the range specified.
- 6.1.4 When the moisture content of the *soil* fill is above the range specified by the Consultant or too wet to achieve proper compaction, the *soil* fill shall be aerated by the Contractor by blading/mixing, or other satisfactory methods until the moisture content is within the range specified.
- 6.1.5 After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted by the Contractor to a relative compaction of at least 90 percent. Relative compaction is defined as the ratio (expressed in percent) of the in-place dry density of the compacted fill to the maximum laboratory dry density as determined in accordance with ASTM D 1557. Compaction shall be continuous over the entire area, and compaction equipment shall make sufficient passes so that the specified minimum relative compaction has been achieved throughout the entire fill.

- 6.1.6 Where practical, soils having an Expansion Index greater than 50 should be placed at least 3 feet below finish pad grade and should be compacted at a moisture content generally 2 to 4 percent greater than the optimum moisture content for the material.
- 6.1.7 Properly compacted *soil* fill shall extend to the design surface of fill slopes. To achieve proper compaction, it is recommended that fill slopes be over-built by at least 3 feet and then cut to the design grade. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.
- 6.1.8 As an alternative to over-building of slopes, slope faces may be back-rolled with a heavy-duty loaded sheepsfoot or vibratory roller at maximum 4-foot fill height intervals. Upon completion, slopes should then be track-walked with a D-8 dozer or similar equipment, such that a dozer track covers all slope surfaces at least twice.
- 6.2 *Soil-rock* fill, as defined in Paragraph 3.1.2, shall be placed by the Contractor in accordance with the following recommendations:
- 6.2.1 Rocks larger than 12 inches but less than 4 feet in maximum dimension may be incorporated into the compacted *soil* fill, but shall be limited to the area measured 15 feet minimum horizontally from the slope face and 5 feet below finish grade or 3 feet below the deepest utility, whichever is deeper.
- 6.2.2 Rocks or rock fragments up to 4 feet in maximum dimension may either be individually placed or placed in windrows. Under certain conditions, rocks or rock fragments up to 10 feet in maximum dimension may be placed using similar methods. The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved by the Consultant prior to placement.
- 6.2.3 For individual placement, sufficient space shall be provided between rocks to allow for passage of compaction equipment.
- 6.2.4 For windrow placement, the rocks should be placed in trenches excavated in properly compacted *soil* fill. Trenches should be approximately 5 feet wide and 4 feet deep in maximum dimension. The voids around and beneath rocks should be filled with approved granular soil having a Sand Equivalent of 30 or greater and should be compacted by flooding. Windrows may also be placed utilizing an "open-face" method in lieu of the trench procedure, however, this method should first be approved by the Consultant.



- 6.2.5 Windrows should generally be parallel to each other and may be placed either parallel to or perpendicular to the face of the slope depending on the site geometry. The minimum horizontal spacing for windrows shall be 12 feet center-to-center with a 5-foot stagger or offset from lower courses to next overlying course. The minimum vertical spacing between windrow courses shall be 2 feet from the top of a lower windrow to the bottom of the next higher windrow.
- 6.2.6 Rock placement, fill placement and flooding of approved granular soil in the windrows should be continuously observed by the Consultant.
- 6.3 *Rock* fills, as defined in Section 3.1.3, shall be placed by the Contractor in accordance with the following recommendations:
- 6.3.1 The base of the *rock* fill shall be placed on a sloping surface (minimum slope of 2 percent). The surface shall slope toward suitable subdrainage outlet facilities. The *rock* fills shall be provided with subdrains during construction so that a hydrostatic pressure buildup does not develop. The subdrains shall be permanently connected to controlled drainage facilities to control post-construction infiltration of water.
- 6.3.2 *Rock* fills shall be placed in lifts not exceeding 3 feet. Placement shall be by rock trucks traversing previously placed lifts and dumping at the edge of the currently placed lift. Spreading of the *rock* fill shall be by dozer to facilitate *seating* of the rock. The *rock* fill shall be watered heavily during placement. Watering shall consist of water trucks traversing in front of the current rock lift face and spraying water continuously during rock placement. Compaction equipment with compactive energy comparable to or greater than that of a 20-ton steel vibratory roller or other compaction equipment providing suitable energy to achieve the required compaction or deflection as recommended in Paragraph 6.3.3 shall be utilized. The number of passes to be made should be determined as described in Paragraph 6.3.3. Once a *rock* fill lift has been covered with *soil* fill, no additional *rock* fill lifts will be permitted over the *soil* fill.
- 6.3.3 Plate bearing tests, in accordance with ASTM D 1196, may be performed in both the compacted *soil* fill and in the *rock* fill to aid in determining the required minimum number of passes of the compaction equipment. If performed, a minimum of three plate bearing tests should be performed in the properly compacted *soil* fill (minimum relative compaction of 90 percent). Plate bearing tests shall then be performed on areas of *rock* fill having two passes, four passes and six passes of the compaction equipment, respectively. The number of passes required for the *rock* fill shall be determined by comparing the results of the plate bearing tests for the *soil* fill and the *rock* fill and by evaluating the deflection

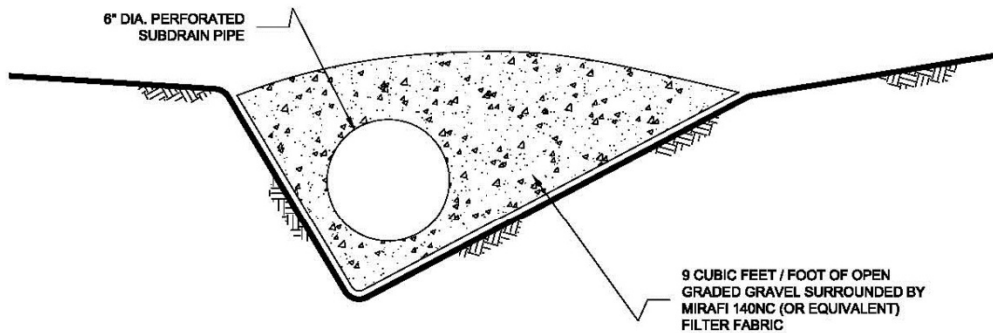
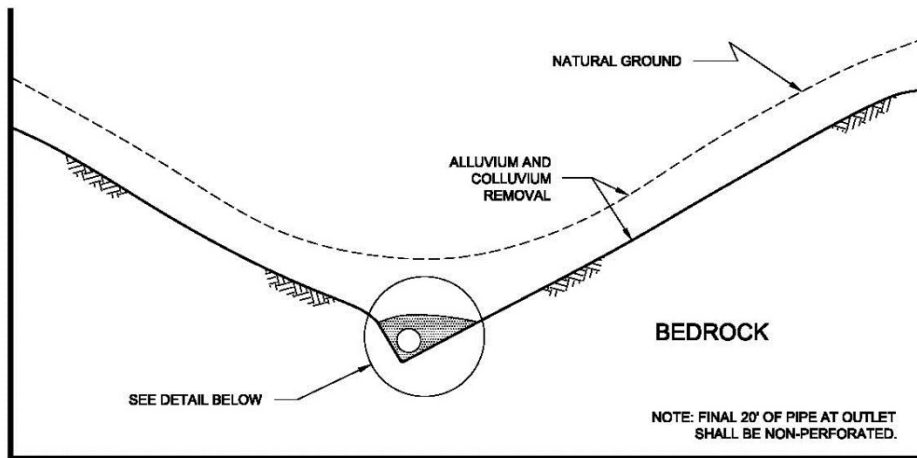
variation with number of passes. The required number of passes of the compaction equipment will be performed as necessary until the plate bearing deflections are equal to or less than that determined for the properly compacted *soil* fill. In no case will the required number of passes be less than two.

- 6.3.4 A representative of the Consultant should be present during *rock* fill operations to observe that the minimum number of “passes” have been obtained, that water is being properly applied and that specified procedures are being followed. The actual number of plate bearing tests will be determined by the Consultant during grading.
- 6.3.5 Test pits shall be excavated by the Contractor so that the Consultant can state that, in their opinion, sufficient water is present and that voids between large rocks are properly filled with smaller rock material. In-place density testing will not be required in the *rock* fills.
- 6.3.6 To reduce the potential for “piping” of fines into the *rock* fill from overlying *soil* fill material, a 2-foot layer of graded filter material shall be placed above the uppermost lift of *rock* fill. The need to place graded filter material below the *rock* should be determined by the Consultant prior to commencing grading. The gradation of the graded filter material will be determined at the time the *rock* fill is being excavated. Materials typical of the *rock* fill should be submitted to the Consultant in a timely manner, to allow design of the graded filter prior to the commencement of *rock* fill placement.
- 6.3.7 *Rock* fill placement should be continuously observed during placement by the Consultant.

## 7. SUBDRAINS

- 7.1 The geologic units on the site may have permeability characteristics and/or fracture systems that could be susceptible under certain conditions to seepage. The use of canyon subdrains may be necessary to mitigate the potential for adverse impacts associated with seepage conditions. Canyon subdrains with lengths in excess of 500 feet or extensions of existing offsite subdrains should use 8-inch-diameter pipes. Canyon subdrains less than 500 feet in length should use 6-inch-diameter pipes.

TYPICAL CANYON DRAIN DETAIL



NOTES:

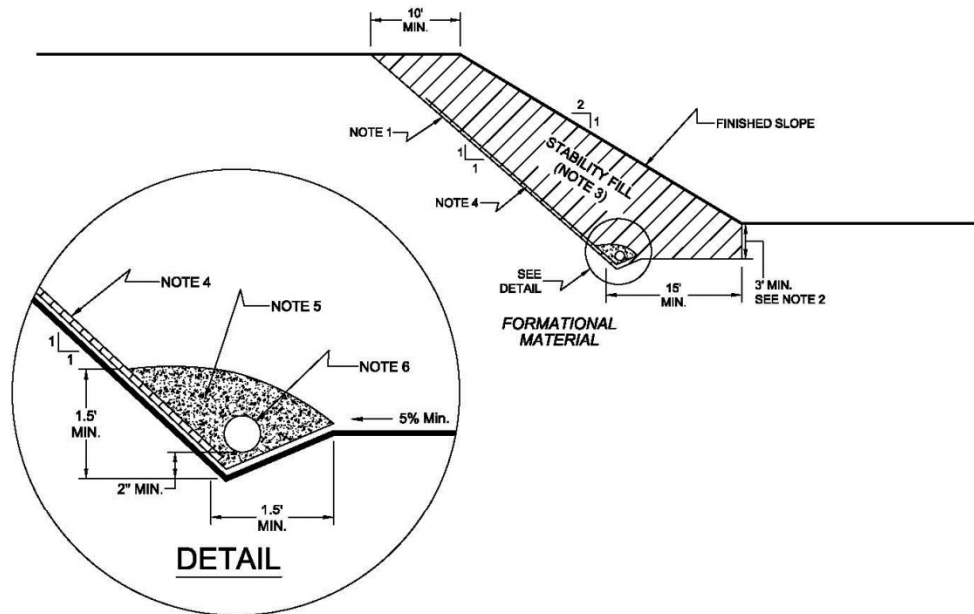
- 1.....8-INCH DIAMETER, SCHEDULE 80 PVC PERFORATED PIPE FOR FILLS IN EXCESS OF 100-FEET IN DEPTH OR A PIPE LENGTH OF LONGER THAN 500 FEET.
- 2.....6-INCH DIAMETER, SCHEDULE 40 PVC PERFORATED PIPE FOR FILLS LESS THAN 100-FEET IN DEPTH OR A PIPE LENGTH SHORTER THAN 500 FEET.

NO SCALE

7.2 Slope drains within stability fill keyways should use 4-inch-diameter (or larger) pipes.



## TYPICAL STABILITY FILL DETAIL

**NOTES:**

- 1.....EXCAVATE BACKCUT AT 1:1 INCLINATION (UNLESS OTHERWISE NOTED).
- 2.....BASE OF STABILITY FILL TO BE 3 FEET INTO FORMATIONAL MATERIAL, SLOPING A MINIMUM 5% INTO SLOPE.
- 3.....STABILITY FILL TO BE COMPOSED OF PROPERLY COMPACTED GRANULAR SOIL.
- 4.....CHIMNEY DRAINS TO BE APPROVED PREFABRICATED CHIMNEY DRAIN PANELS (MIRADRAIN G200N OR EQUIVALENT) SPACED APPROXIMATELY 20 FEET CENTER TO CENTER AND 4 FEET WIDE. CLOSER SPACING MAY BE REQUIRED IF SEEPAGE IS ENCOUNTERED.
- 5.....FILTER MATERIAL TO BE 3/4-INCH, OPEN-GRADED CRUSHED ROCK ENCLOSED IN APPROVED FILTER FABRIC (MIRAFI 140NC).
- 6.....COLLECTOR PIPE TO BE 4-INCH MINIMUM DIAMETER, PERFORATED, THICK-WALLED PVC SCHEDULE 40 OR EQUIVALENT, AND SLOPED TO DRAIN AT 1 PERCENT MINIMUM TO APPROVED OUTLET.

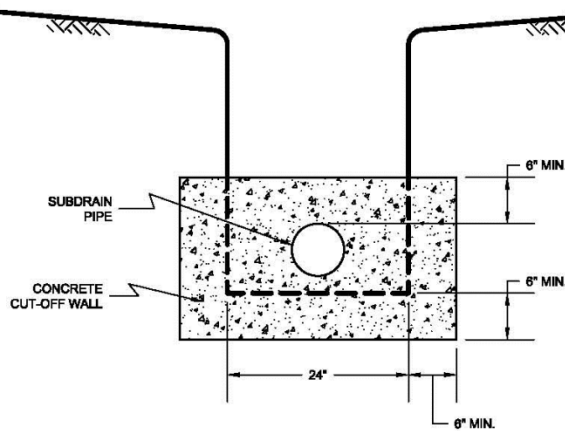
NO SCALE

- 7.3 The actual subdrain locations will be evaluated in the field during the remedial grading operations. Additional drains may be necessary depending on the conditions observed and the requirements of the local regulatory agencies. Appropriate subdrain outlets should be evaluated prior to finalizing 40-scale grading plans.
- 7.4 *Rock fill or soil-rock fill* areas may require subdrains along their down-slope perimeters to mitigate the potential for buildup of water from construction or landscape irrigation. The subdrains should be at least 6-inch-diameter pipes encapsulated in gravel and filter fabric. *Rock fill* drains should be constructed using the same requirements as canyon subdrains.

7.5 Prior to outletting, the final 20-foot segment of a subdrain that will not be extended during future development should consist of non-perforated drainpipe. At the non-perforated/perforated interface, a seepage cutoff wall should be constructed on the downslope side of the pipe.

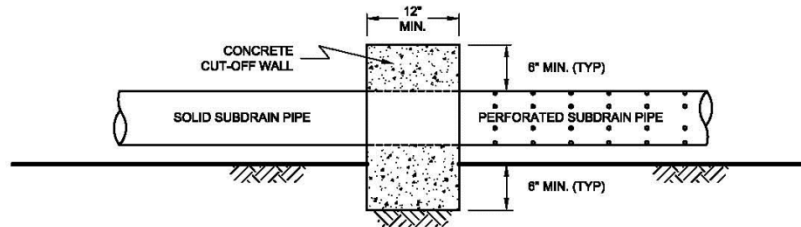
TYPICAL CUT OFF WALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW

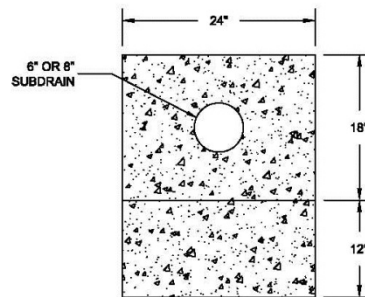


NO SCALE

7.6 Subdrains that discharge into a natural drainage course or open space area should be provided with a permanent headwall structure.

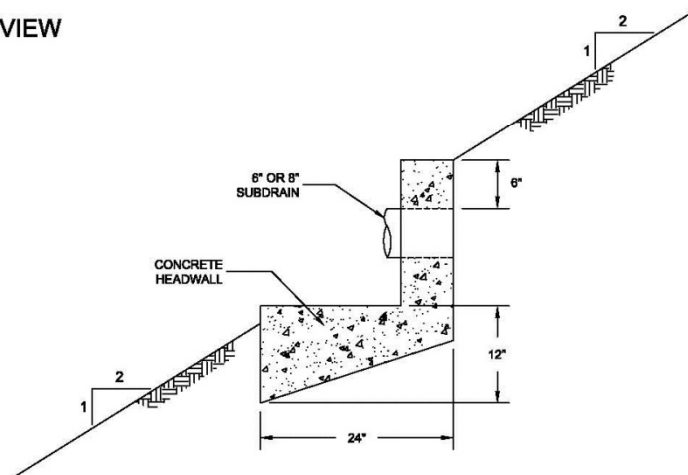
## TYPICAL HEADWALL DETAIL

## FRONT VIEW



NO SCALE

## SIDE VIEW



NOTE: HEADWALL SHOULD OUTLET AT TOE OF FILL SLOPE  
OR INTO CONTROLLED SURFACE DRAINAGE

NO SCALE

- 7.7 The final grading plans should show the location of the proposed subdrains. After completion of remedial excavations and subdrain installation, the project civil engineer should survey the drain locations and prepare an “as-built” map showing the drain locations. The final outlet and connection locations should be determined during grading operations. Subdrains that will be extended on adjacent projects after grading can be placed on formational material and a vertical riser should be placed at the end of the subdrain. The grading contractor should consider videoing the subdrains shortly after burial to check proper installation and functionality. The contractor is responsible for the performance of the drains.



## 8. OBSERVATION AND TESTING

- 8.1 The Consultant shall be the Owner's representative to observe and perform tests during clearing, grubbing, filling, and compaction operations. In general, no more than 2 feet in vertical elevation of *soil* or *soil-rock* fill should be placed without at least one field density test being performed within that interval. In addition, a minimum of one field density test should be performed for every 2,000 cubic yards of *soil* or *soil-rock* fill placed and compacted.
- 8.2 The Consultant should perform a sufficient distribution of field density tests of the compacted *soil* or *soil-rock* fill to provide a basis for expressing an opinion whether the fill material is compacted as specified. Density tests shall be performed in the compacted materials below any disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof is below that specified, the particular layer or areas represented by the test shall be reworked until the specified density has been achieved.
- 8.3 During placement of *rock* fill, the Consultant should observe that the minimum number of passes have been obtained per the criteria discussed in Section 6.3.3. The Consultant should request the excavation of observation pits and may perform plate bearing tests on the placed *rock* fills. The observation pits will be excavated to provide a basis for expressing an opinion as to whether the *rock* fill is properly seated and sufficient moisture has been applied to the material. When observations indicate that a layer of *rock* fill or any portion thereof is below that specified, the affected layer or area shall be reworked until the *rock* fill has been adequately seated and sufficient moisture applied.
- 8.4 A settlement monitoring program designed by the Consultant may be conducted in areas of *rock* fill placement. The specific design of the monitoring program shall be as recommended in the Conclusions and Recommendations section of the project Geotechnical Report or in the final report of testing and observation services performed during grading.
- 8.5 We should observe the placement of subdrains, to check that the drainage devices have been placed and constructed in substantial conformance with project specifications.
- 8.6 Testing procedures shall conform to the following Standards as appropriate:

### 8.6.1 Soil and Soil-Rock Fills:

- 8.6.1.1 Field Density Test, ASTM D 1556, *Density of Soil In-Place By the Sand-Cone Method.*

- 8.6.1.2 Field Density Test, Nuclear Method, ASTM D 6938, *Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth)*.
- 8.6.1.3 Laboratory Compaction Test, ASTM D 1557, *Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Pound Hammer and 18-Inch Drop*.
- 8.6.1.4. Expansion Index Test, ASTM D 4829, *Expansion Index Test*.

## 9. PROTECTION OF WORK

- 9.1 During construction, the Contractor shall properly grade all excavated surfaces to provide positive drainage and prevent ponding of water. Drainage of surface water shall be controlled to avoid damage to adjoining properties or to finished work on the site. The Contractor shall take remedial measures to prevent erosion of freshly graded areas until such time as permanent drainage and erosion control features have been installed. Areas subjected to erosion or sedimentation shall be properly prepared in accordance with the Specifications prior to placing additional fill or structures.
- 9.2 After completion of grading as observed and tested by the Consultant, no further excavation or filling shall be conducted except in conjunction with the services of the Consultant.

## 10. CERTIFICATIONS AND FINAL REPORTS

- 10.1 Upon completion of the work, Contractor shall furnish Owner a certification by the Civil Engineer stating that the lots and/or building pads are graded to within 0.1 foot vertically of elevations shown on the grading plan and that all tops and toes of slopes are within 0.5 foot horizontally of the positions shown on the grading plans. After installation of a section of subdrain, the project Civil Engineer should survey its location and prepare an *as-built* plan of the subdrain location. The project Civil Engineer should verify the proper outlet for the subdrains and the Contractor should ensure that the drain system is free of obstructions.
- 10.2 The Owner is responsible for furnishing a final as-graded soil and geologic report satisfactory to the appropriate governing or accepting agencies. The as-graded report should be prepared and signed by a California licensed Civil Engineer experienced in geotechnical engineering and by a California Certified Engineering Geologist, indicating that the geotechnical aspects of the grading were performed in substantial conformance with the Specifications or approved changes to the Specifications.



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## **Continental Villages GREENHOUSE GAS ANALYSIS CITY OF MORENO VALLEY**

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NOVEMBER 16, 2018

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## LIST OF ABBREVIATED TERMS

|                      |   |
|----------------------|---|
| (1)                  | Reference   |
| ARB                  | California Air Resources Board                        |
| AQIA                 | Air Quality Impact Analysis                           |
| CAA                  | Federal Clean Air Act                                 |
| CalEEMod             | California Emissions Estimator Model                  |
| CalEPA               | California Environmental Protection Agency            |
| CAPCOA               | California Air Pollution Control Officers Association |
| CARB                 | California Air Resource Board                         |
| CAT                  | Climate Action Team                                   |
| CBSC                 | California Building Standards Commission              |
| CEC                  | California Energy Commission                          |
| CCR                  | California Code of Regulations                        |
| CEQA                 | California Environmental Quality Act                  |
| CFC                  | Chlorofluorocarbons                                   |
| CFR                  | Code of Federal Regulations                           |
| CH <sub>4</sub>      | Methane   |
| CO                   | Carbon Monoxide                                       |
| CO <sub>2</sub>      | Carbon Dioxide  |
| CO <sub>2</sub> e    | Carbon Dioxide Equivalent                             |
| CPUC                 | California Public Utilities Commission                |
| EPA                  | Environmental Protection Agency                       |
| EPS                  | Emission Performance Standard                         |
| GCC                  | Global Climate Change                                 |
| GHGA                 | Greenhouse Gas Analysis                               |
| GWP                  | Global Warming Potential                              |
| HFC                  | Hydrofluorocarbons                                    |
| LCA                  | Life-Cycle Analysis                                   |
| MMs                  | Mitigation Measures                                   |
| MMTCO <sub>2</sub> e | Million Metric Ton of Carbon Dioxide Equivalent       |
| MTCO <sub>2</sub> e  | Metric Ton of Carbon Dioxide Equivalent               |
| N <sub>2</sub> O     | Nitrogen Dioxide                                      |
| NIOSH                | National Institute for Occupational Safety and Health |
| NO <sub>x</sub>      | Oxides of Nitrogen                                    |
| PFC                  | Perfluorocarbons                                      |
| PM <sub>10</sub>     | Particulate Matter 10 microns in diameter or less     |
| PM <sub>2.5</sub>    | Particulate Matter 2.5 microns in diameter or less    |

---

|         |  |
|---------|--|
| PPM     | Parts Per Million                                      |
| Project | Continental Villages                                   |
| RTP     | Regional Transportation Plan                           |
| SB      | Senate Bill  |
| SCAG    | Southern California Association of Governments         |
| SCAQMD  | South Coast Air Quality Management District            |
| UNFCCC  | United Nations' Framework Convention on Climate Change |
| VOC     | Volatile Organic Compounds                             |

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## EXECUTIVE SUMMARY

The results of this *Continental Villages Greenhouse Gas Analysis* are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1). Table ES-1 shows the findings of significance for each potential greenhouse gas impact under CEQA for the Project.

**TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS (PROJECT)**

| Analysis   | Report Section | Significance Findings        |            |
|--|----------------|------------------------------|------------|
|  |                | Unmitigated                  | Mitigated  |
| GHG Impact #1: The Project would not generate direct or indirect greenhouse gas emission that would result in a significant impact on the environment.                           | 3.7            | <i>Less Than Significant</i> | <i>n/a</i> |
| GHG Impact #2: The Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. | 3.7            | <i>Less Than Significant</i> | <i>n/a</i> |

# 1 INTRODUCTION

This report presents the results of the greenhouse gas analysis (GHGA) prepared by Urban Crossroads, Inc., for the proposed Brodiaea Commerce Center (“Project”). The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of greenhouse gas (GHG) impacts as a result of constructing and operating the proposed Project.

## 1.1 SITE LOCATION

The proposed Continental Villages site is located on the northeast corner of Lasselle Street and Krameria Avenue in the City of Moreno Valley, as shown on Exhibit 1-A. Existing uses in the Project study area include existing residential homes northwest, south, and east of the Project site, the Lasselle Elementary School north of the Project site, and future residential uses, currently under construction, north of the Project site.

## 1.2 PROJECT DESCRIPTION

The Project is proposed to consist of up to 112 apartments/duplexes and 21,000 square feet of commercial retail use, as shown on Exhibit 1-B. The Project is anticipated to have an Opening Year of 2020<sup>1</sup>.

## 1.3 REGULATORY REQUIREMENTS

The Project would be required to comply with all mandates imposed by the State of California and the South Coast Air Quality Management District aimed at the reduction of air quality emissions. Those that are applicable to the Project and that would assist in the reduction of greenhouse gas emissions are:

- Global Warming Solutions Act of 2006 (AB32) (2)
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (SB 375) (3)
- Paveley Fuel Efficiency Standards (AB1493). Establishes fuel efficiency ratings for new vehicles (4).
- Title 24 California Code of Regulations (California Building Code). Establishes energy efficiency requirements for new construction (5).
- Title 20 California Code of Regulations (Appliance Energy Efficiency Standards). Establishes energy efficiency requirements for appliances (6).

<sup>1</sup> The Traffic Impact Analysis (TIA) prepared for the Project evaluates an Opening Year of 2023 since the City of Moreno Valley traffic study guidelines require the Opening Year to be a minimum of 5 years from baseline (2018) conditions. Utilizing a 2020 Opening Year for purposes of this AQIA would generate more emissions than if the Project utilized a 2023 Opening Year consistent with the traffic study because as the analysis year increases, vehicle emission factors would decrease as a result of emissions regulations becoming more stringent. Utilizing a 2020 Opening Year for purposes of the AQIA herein represents a conservative estimate of emissions compared to if a 2023 Opening Year, consistent with the traffic study, were utilized.

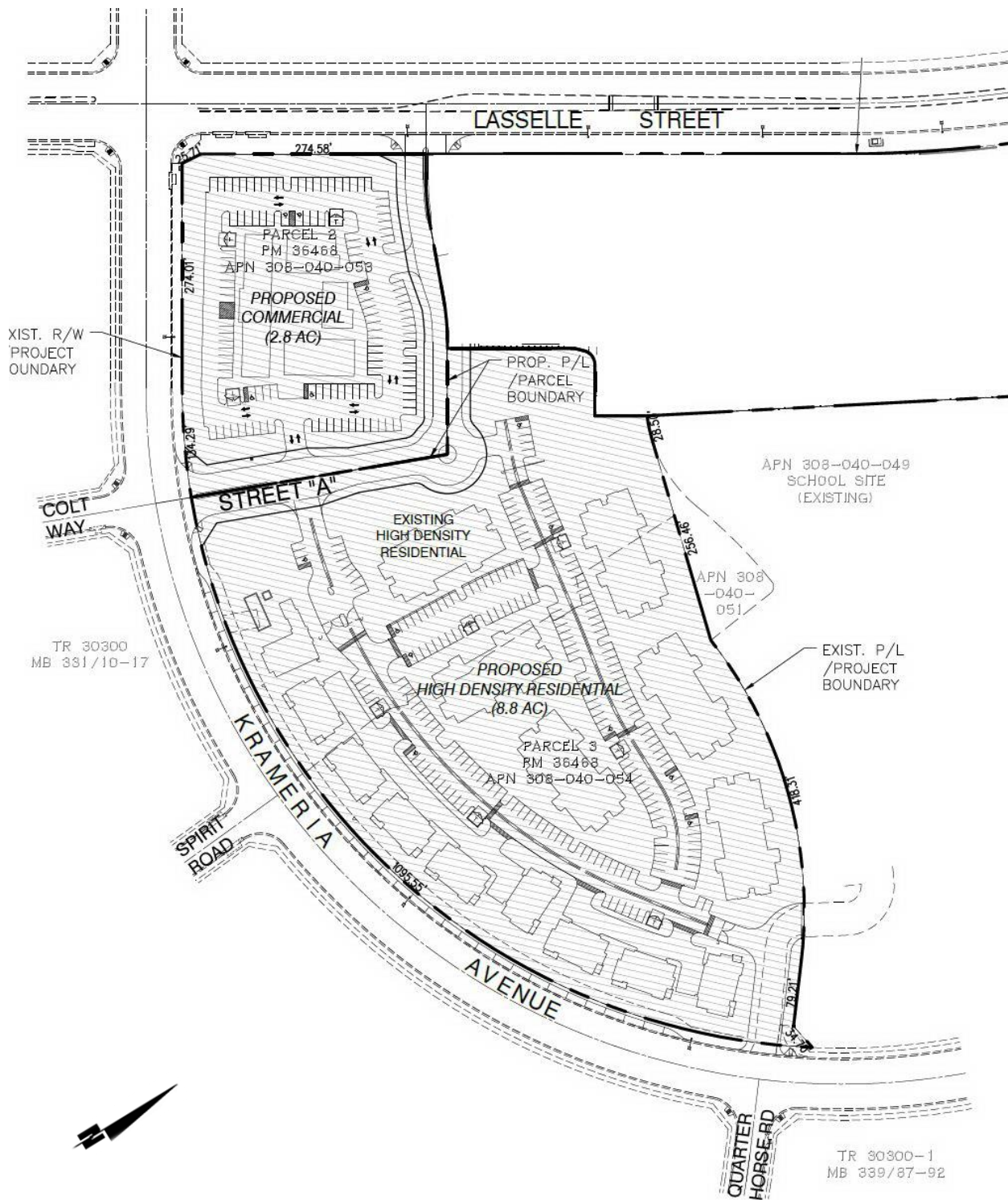
EXHIBIT 1-A: LOCATION MAP



Attachment: Greenhouse Gas Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change



EXHIBIT 1-B: SITE PLAN



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- Title 17 California Code of Regulations (Low Carbon Fuel Standard). Requires carbon content of fuel sold in California to be 10% less by 2020 (7).
- California Water Conservation in Landscaping Act of 2006 (AB1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent by January 1, 2010 to ensure efficient landscapes in new development and reduced water waste in existing landscapes (8).
- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (9).
- Renewable Portfolio Standards (SB 1078). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20 percent by 2010 and 33 percent by 2020 (10).

Promulgated regulations that will affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, the Pavley Standards, Low Carbon Fuel Standards, and Renewable Portfolio Standards (RPS) will be in effect for the AB 32 target year of 2020, and therefore are accounted for in the Project's emission calculations.

#### **1.4 CONSTRUCTION AND OPERATIONAL-SOURCE AIR POLLUTANT EMISSIONS MITIGATION MEASURES**

The Project would not result in any significant impacts during construction and operational activity. Therefore, no mitigation measures are required.

## 2 CLIMATE CHANGE SETTING

### 2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. GCC is currently one of the most controversial environmental issues in the United States, and much debate exists within the scientific community about whether or not GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred in the past over the course of thousands or millions of years. These historical changes to the earth's climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases in the earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of greenhouse gases resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in this GHGA cannot generate enough greenhouse gas emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of greenhouse gases combined with the cumulative increase of all other sources of greenhouse gases, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 3.0 will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

### 2.2 GREENHOUSE GAS EMISSIONS INVENTORIES

#### *Global*

Worldwide anthropogenic (human) GHG emissions are tracked by the Intergovernmental Panel on Climate Change for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2016. For the Year 2016, the sum of these emissions totaled approximately 28,747,554 Gg CO<sub>2</sub>e<sup>2</sup> (11) (12). The GHG emissions in more recent years may differ from the inventories presented in Table 2-1; however, the data is representative of currently available inventory data.

<sup>2</sup> The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2016 data, the UNFCCC data for the most recent year were used. United Nations Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China were taken in 2012, while the most recent GHG emissions for India were taken in 2010.



**TABLE 2-1: TOP GHG PRODUCER COUNTRIES AND THE EUROPEAN UNION**<sup>3</sup>

| Emitting Countries                   | GHG Emissions (Gg CO <sub>2</sub> e) |
|--------------------------------------|--------------------------------------|
| China                                | 11,895,765                           |
| United States                        | 6,511,302                            |
| European Union (28 member countries) | 4,291,252                            |
| India                                | 2,643,817                            |
| Russian Federation                   | 2,100,850                            |
| Japan                                | 1,304,568                            |
| <b>Total</b>                         | <b>28,747,554</b>                    |

### *United States*

As noted in Table 2-1, the United States, as a single country, was the number two producer of GHG emissions in 2016. The primary greenhouse gas emitted by human activities in the United States was CO<sub>2</sub>, representing approximately 81.6 percent of total greenhouse gas emissions in the US. Carbon dioxide from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 93.5 percent of the CO<sub>2</sub> emissions (13).

### *State of California*

CARB compiles GHG inventories for the State of California. Based upon the 2018 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2016 greenhouse gas emissions inventory, California emitted 429.4 MMTCO<sub>2</sub>e including emissions resulting from imported electrical power in 2015 (14).

## **2.3 GLOBAL CLIMATE CHANGE DEFINED**

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO<sub>2</sub> (carbon dioxide), N<sub>2</sub>O (nitrous oxide), CH<sub>4</sub> (methane), hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as greenhouse gases. Greenhouse gases are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural greenhouse gas effect, the earth's average temperature would be approximately 61° Fahrenheit (F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

Although California's rate of growth of greenhouse gas emissions is slowing, the state is still a substantial contributor to the U.S. emissions inventory total. In 2004, California is estimated to

<sup>3</sup> Used <http://unfccc.int> data for Annex I countries. Consulted the CAIT Climate Data Explorer in <http://www.wri.org> site to reference Non-Annex I countries such as China and India.

have produced 492 million gross metric tons of CO<sub>2</sub>e greenhouse gas emissions. Despite a population increase of 16 percent between 1990 and 2004, California has significantly slowed the rate of growth of greenhouse gas emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls (15).

## 2.4 GREENHOUSE GASES

For the purposes of this analysis, emissions of carbon dioxide, methane, and nitrous oxide were evaluated (see Table 3-1 later in this report) because these gasses are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

Water Vapor: Water vapor (H<sub>2</sub>O) is the most abundant, important, and variable greenhouse gas in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change.

As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to ‘hold’ more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a “positive feedback loop.” The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth’s surface and heat it up).

There are no human health effects from water vapor itself; however, when some pollutants come in contact with water vapor, they can dissolve and the water vapor can then act as a pollutant-carrying agent. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include: evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.

Carbon Dioxide: Carbon dioxide (CO<sub>2</sub>) is an odorless and colorless GHG. Outdoor levels of carbon dioxide are not high enough to result in negative health effects. Carbon dioxide is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and

wood. Carbon dioxide is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (16).

Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO<sub>2</sub> concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Left unchecked, the concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (17).

Methane: Methane (CH<sub>4</sub>) is an extremely effective absorber of radiation, although its atmospheric concentration is less than carbon dioxide and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs. Exposure to high levels of methane can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate

Methane has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropogenic sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide: Nitrous oxide (N<sub>2</sub>O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (18).

Concentrations of nitrous oxide also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). Nitrous oxide is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. Nitrous oxide can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction.

Chlorofluorocarbons: Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C<sub>2</sub>H<sub>6</sub>) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs are no longer being used; therefore, it is not likely that health effects would be experienced. Nonetheless, in confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.



CFCs have no natural source, but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons: Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the greenhouse gases, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 ( $\text{CHF}_3$ ), HFC-134a ( $\text{CF}_3\text{CH}_2\text{F}$ ), and HFC-152a ( $\text{CH}_3\text{CHF}_2$ ). Prior to 1990, the only significant emissions were of HFC-23. HFC-134a emissions are increasing due to its use as a refrigerant. The U.S. EPA estimates that concentrations of HFC-23 and HFC-134a are now about 10 parts per trillion (ppt) each; and that concentrations of HFC-152a are about 1 ppt (19). No health effects are known to result from exposure to HFCs, which are manmade for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons: Perfluorocarbons (PFCs) have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane ( $\text{CF}_4$ ) and hexafluoroethane ( $\text{C}_2\text{F}_6$ ). The U.S. EPA estimates that concentrations of  $\text{CF}_4$  in the atmosphere are over 70 ppt.

No health effects are known to result from exposure to PFCs. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur Hexafluoride: Sulfur hexafluoride ( $\text{SF}_6$ ) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest global warming potential (GWP) of any gas evaluated (23,900). The U.S. EPA indicates that concentrations in the 1990s were about 4 ppt. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Nitrogen Trifluoride: Nitrogen trifluoride ( $\text{NF}_3$ ) is a colorless gas with a distinctly moldy odor.  $\text{NF}_3$  is used in industrial processes and is produced in the manufacture of semiconductors and LCD (Liquid Crystal Display) panels, and types of solar panels and chemical lasers. The World Resources Institute (WRI) indicates that  $\text{NF}_3$  has a 100-year GWP of 17,200 (20).

Long-term or repeated exposure may effect the liver and kidneys and may cause fluorosis (21).

Greenhouse gases have varying GWP values; GWP values represent the potential of a gas to trap heat in the atmosphere. Carbon dioxide is utilized as the reference gas for GWP, and thus has a GWP of 1.

The atmospheric lifetime and GWP of selected greenhouse gases are summarized at Table 2-2. As shown in the table below, GWP for the Second Assessment Report (SAR), the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for carbon dioxide to 23,900 for sulfur hexafluoride and GWP for the IPCC's 4<sup>th</sup> Assessment Report (AR4) range from 1 for carbon dioxide to 22,800 for sulfur hexafluoride.

**TABLE 2-2: GLOBAL WARMING POTENTIAL AND ATMOSPHERIC LIFETIME OF SELECT GHGS**

| Gas                                    | Atmospheric Lifetime (years) | Global Warming Potential (100 year time horizon) |   |
|--|------------------------------|--|---|
|  |                              | Second Assessment Report (SAR)                   | 4 <sup>th</sup> Assessment Report (AR4) |
| Carbon Dioxide                         | 50-200                       | 1  | 1                                       |
| Methane                                | 12 ± 3                       | 21   | 25                                      |
| Nitrous Oxide                          | 114                          | 310  | 298                                     |
| HFC-23                                 | 270                          | 11,700   | 14,800                                  |
| HFC-134a                               | 14                           | 1,300  | 1,430                                   |
| HFC-152a                               | 1.4                          | 140  | 124                                     |
| Sulfur Hexafluoride (SF <sub>6</sub> ) | 3,200                        | 23,900   | 22,800                                  |

Source: Table 2.14 of the IPCC Fourth Assessment Report, 2007

## 2.5 EFFECTS OF CLIMATE CHANGE IN CALIFORNIA

### *Public Health*

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35 percent under the lower warming range (3-5.5°F) to 75 to 85 percent under the medium warming range (5.5-8°F). In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario (8-10.5°F), there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

### *Water Resources*

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

### *Agriculture*

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25 percent of the water supply they need. Although higher CO<sub>2</sub> levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone (O<sub>3</sub>) pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts.

In addition, continued global climate change could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued global climate change could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.



### *Forests and Landscapes*

Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90 percent due to decreased precipitation.

Moreover, continued global climate change has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of global climate change.

### *Rising Sea Levels*

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

## **2.6 HUMAN HEALTH EFFECTS**

The potential health effects related directly to the emissions of carbon dioxide, methane, and nitrous oxide as they relate to development projects, such as the proposed Project, are still being debated in the scientific community. Their cumulative effects to global climate change have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (22). Exhibit 2-A presents the potential impacts of global warming.

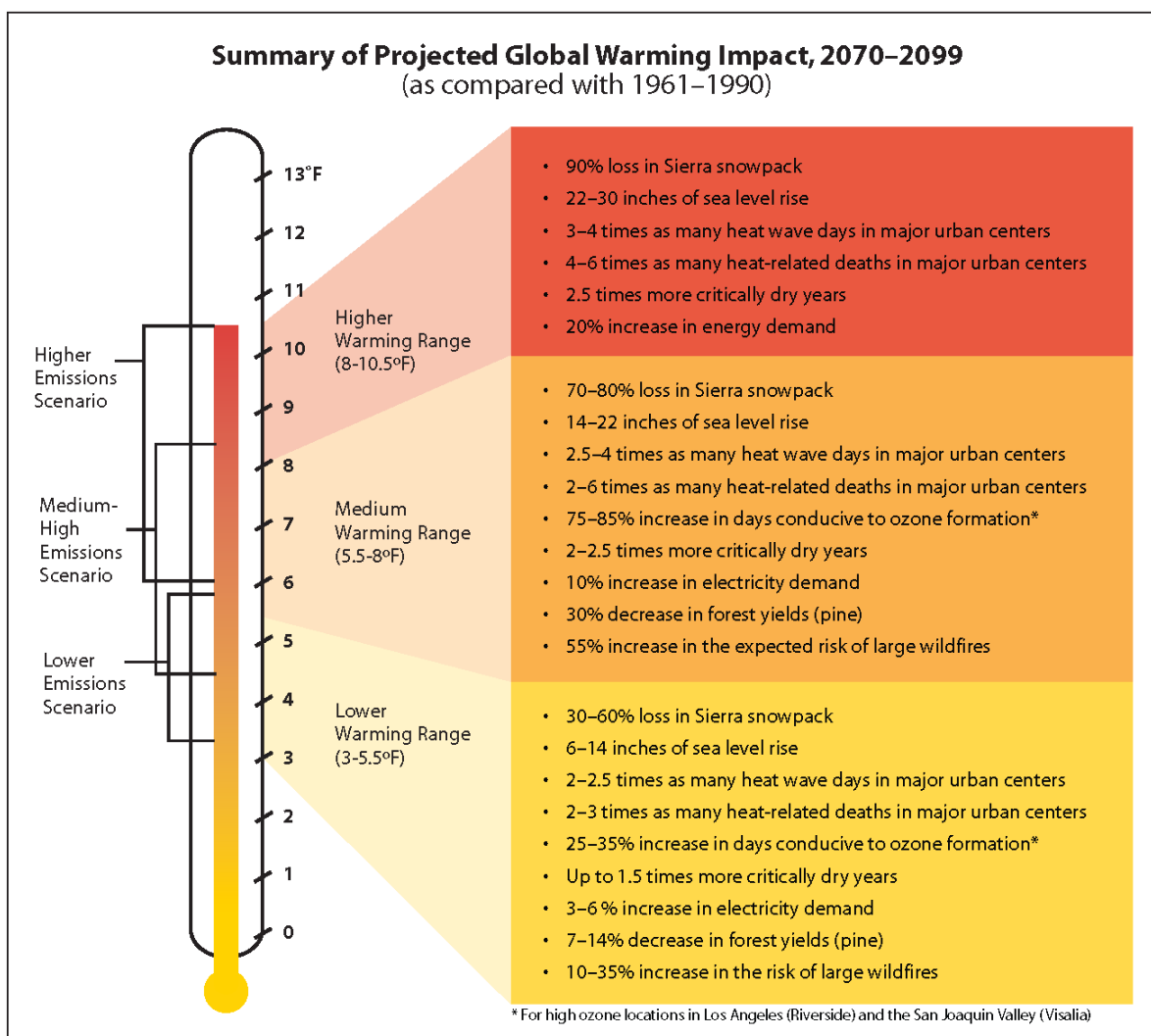
Specific health effects associated with directly emitted GHG emissions are as follows:

Water Vapor: There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

Carbon Dioxide: According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of carbon dioxide can result in health effects such as: headaches, dizziness,

restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of carbon dioxide in the earth's atmosphere are estimated to be approximately 370 parts per million (ppm), the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (23).

#### EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT



**Methane:** Methane is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to high levels of methane can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate (24).

**Nitrous Oxide:** Nitrous Oxide is often referred to as laughing gas; it is a colorless greenhouse gas. The health effects associated with exposure to elevated concentrations of nitrous oxide include

dizziness, euphoria, slight hallucinations, and in extreme cases of elevated concentrations nitrous oxide can also cause brain damage (25).

Fluorinated Gases: High concentrations of fluorinated gases can also result in adverse health effects such as asphyxiation, dizziness, headache, cardiovascular disease, cardiac disorders, and in extreme cases, increased mortality (23).

Aerosols: The health effects of aerosols are similar to that of other fine particulate matter. Thus, aerosols can cause elevated respiratory and cardiovascular diseases, as well as increased mortality (26).

Nitrogen Trifluoride: Long-term or repeated exposure may effect the liver and kidneys and may cause fluorosis (21).

## 2.7 REGULATORY SETTING

### INTERNATIONAL

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

**Intergovernmental Panel on Climate Change.** In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

**United Nations Framework Convention on Climate Change (Convention).** On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

**International Climate Change Treaties.** The Kyoto Protocol is an international agreement linked to the Convention. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of five percent against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of “common but differentiated responsibilities.”

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average



temperature increase to no more than 2°C above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014 more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the United Nations. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the U.N. Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties, or COP 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make “nationally determined contributions” (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and “progress made in implementing and achieving” their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they will “represent a progression” beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing \$100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address “loss and damage” resulting from climate change, which explicitly will not “involve or provide a basis for any liability or compensation;”
- Require parties engaging in international emissions trading to avoid “double counting;” and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country’s NDC (C2ES 2015a) (27).

On June 2, 2017 President Donald Trump announced his intention to withdraw from the Paris Agreement. It should be noted that under the terms of the agreement, the United States cannot formally announce its resignation until November 4, 2019. Subsequently, withdrawal would be effective one year after notification in 2020.

## NATIONAL

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

**GHG Endangerment.** In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the Supreme Court found that four GHGs, including carbon dioxide, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act. The Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section “Clean Vehicles” below. After a lengthy legal challenge, the U.S. Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator’s findings (28).

**Clean Vehicles.** Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA and the Department of Transportation’s National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon

dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the National Highway Safety Administration issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012 (EPA 2012c). The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of carbon dioxide (CO<sub>2</sub>) in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10-percent reduction for gasoline vehicles and a 15 percent reduction for diesel vehicles by the 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions from the 2014 to 2018 model years.

As of September 2018, the EPA has proposed amendments to the 2012 light-duty vehicle GHG regulations. This amendment would revise two technical errors related to compliance credit calculations. The first revision addresses how auto manufacturers calculate credits for optional advanced technology incentives while the second corrects the equation for calculating certain types of off-cycle credits. The proposed amendments would clarify the calculation methodology in the regulations and would take effect once the final rule becomes effective.

**Mandatory Reporting of GHGs.** The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.

**New Source Review.** The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule “tailors” the requirements of these Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:



This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

**Standards of Performance for GHG Emissions for New Stationary Sources: Electric Utility Generating Units.** As required by a settlement agreement, the EPA proposed new performance standards for emissions of carbon dioxide for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts would be required to meet an output-based standard of 1,000 pounds of carbon dioxide per megawatt-hour, based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016, the U.S. Supreme Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO2 standards.

**Cap and Trade.** Cap and trade refers to a policy tool where emissions are limited to a certain amount and can be traded, or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the NO<sub>x</sub> Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no federal GHG cap and trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap and trade.

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps carbon dioxide emissions from power plants, auctions carbon dioxide emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap and trade system January 1, 2014, and joint offset auctions took place in 2015 (C2ES 2015). California's Cap and Trade Program is discussed below.

**SmartWay Program.** The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of four components (EPA 2014):

1. SmartWay Transport Partnership: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.
2. SmartWay Technology Program: A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.
3. SmartWay Vehicles: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.
4. SmartWay International Interests: Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared towards reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all heavy-duty trucks will have to comply with the ARB GHG Regulation that is designed with the SmartWay Program in mind, to reduce GHG emissions by making them more fuel-efficient. For instance, in 2015, 53 foot or longer dry vans or refrigerated trailers equipped with a combination of SmartWay-verified low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain a total of 10 percent or more fuel savings over traditional trailers.

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined the following types of technologies provide fuel saving and/or emission reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies – less idling of the engine when it is not needed would reduce fuel consumption.
- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.
- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel will eventually slow down because of this resistance.
- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., which would reduce emissions.
- Federal excise tax exemptions.

## CALIFORNIA

### Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark Assembly Bill (AB 32) California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

**AB 32.** The California State Legislature enacted AB 32, which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. “GHGs” as defined under AB 32 include carbon dioxide, methane, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The California Air Resources Board (ARB) is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

ARB approved the 1990 GHG emissions level of 427 MMTCO<sub>2</sub>e on December 6, 2007 (ARB 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO<sub>2</sub>e. Emissions in 2020 in a “business as usual” (BAU) scenario were estimated to be 596 MMTCO<sub>2</sub>e, which do not account for reductions from AB 32 regulations (ARB 2008). At that level, a 28.4 percent reduction was required to achieve the 427 million MTCO<sub>2</sub>e 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 million MTCO<sub>2</sub>e. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (ARB 2010).

#### **PROGRESS IN ACHIEVING AB 32 TARGETS AND REMAINING REDUCTIONS REQUIRED**

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by ARB for 2000 through 2012 (ARB 2014a). The State has achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target.

- 1990: 427 million MTCO<sub>2</sub>e (AB 32 2020 target)
- 2000: 463 million MTCO<sub>2</sub>e (an average 8 percent reduction needed to achieve 1990 base)
- 2010: 450 million MTCO<sub>2</sub>e (an average 5 percent reduction needed to achieve 1990 base)



ARB has also made substantial progress in achieving its goal of achieving 1990 emissions levels by 2020. As described earlier in this section, ARB revised the 2020 BAU inventory forecast to account for new lower growth projections, which resulted in a new lower reduction from BAU to achieve the 1990 base. The previous reduction from 2020 BAU needed to achieve 1990 levels was 28.4 percent and the latest reduction from 2020 BAU is 21.7 percent.

- 2020: 545 million MTCO<sub>2e</sub> BAU (an average 21.7 percent reduction from BAU needed to achieve 1990 base)

**ARB Scoping Plan.** ARB’s Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State’s emissions to 1990 levels by the year 2020 to comply with AB 32 (ARB 2008). The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California’s clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State’s long-term commitment to AB 32 implementation.

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California’s climate change strategy. The Update shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California’s climate change priorities and activities for the next several years. The Update does not set new targets for the State but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050 (ARB 2014).

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the amount of reductions California must achieve to return to the 1990 emissions level by 2020 as required by AB 32. The no-action scenario is known as “business-as-

usual” or BAU. The ARB originally defined the BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the Scoping Plan.

As part of CEQA compliance for the Scoping Plan, ARB prepared a Supplemental Functional Equivalent Document (FED) in 2011. The FED included an updated 2020 BAU emissions inventory projection based on current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. ARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the state’s average emissions from 2006–2008. The new BAU estimate includes emission reductions for the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the Low Carbon Fuels Standard. In addition, ARB factored into the 2020 BAU inventory emissions reductions associated with 33 percent Renewable Energy Portfolio Standard (RPS) for electricity generation. The updated BAU estimate of 507 MMTCO<sub>2e</sub> by 2020 requires a reduction of 80 MMTCO<sub>2e</sub>, or a 16 percent reduction below the estimated BAU levels to return to 1990 levels (i.e., 427 MMTCO<sub>2e</sub>) by 2020.

In order to provide a BAU reduction that is consistent with the original definition in the Scoping Plan and with threshold definitions used in thresholds adopted by lead agencies for CEQA purposes and many climate action plans, the updated inventory without regulations was also included in the Supplemental FED. The ARB 2020 BAU projection for GHG emissions in California was originally estimated to be 596 MMTCO<sub>2e</sub>. The updated ARB 2020 BAU projection in the Supplemental FED is 545 MMTCO<sub>2e</sub>. Considering the updated BAU estimate of 545 MMTCO<sub>2e</sub> by 2020, ARB estimates a 21.7 percent reduction below the estimated statewide BAU levels is necessary to return to 1990 emission levels (i.e., 427 MMTCO<sub>2e</sub>) by 2020, instead of the approximate 28.4 percent BAU reduction previously reported under the original Climate Change Scoping Plan (2008).

### 2017 Climate Change Scoping Plan Update

In November 2017, ARB released the final 2017 Scoping Plan Update, which identifies the State’s post-2020 reduction strategy. The 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by Senate Bill 32 (SB 32). Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and much cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce methane emissions from agricultural and other wastes.

The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO<sub>2e</sub> for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.

California’s climate strategy will require contributions from all sectors of the economy, including the land base, and will include enhanced focus on zero- and near-zero-emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and

other lands. Requirements for direct GHG reductions at refineries will further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California’s local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZEV buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementing SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20 percent reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California’s land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Scoping Plan also identifies local governments as essential partners in achieving the State’s long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 MTCO<sub>2e</sub> or less per capita by 2030 and 2 MTCO<sub>2e</sub> or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidenced-based bright-line numeric thresholds—consistent with the Scoping Plan and the State’s long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible; or, a performance-based metric using a climate action plan or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory and supported by ARB, California, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that GHG emissions through 2020 could range from 317 to 415 MTCO<sub>2e</sub> per year, “indicating that existing state policies will likely allow California to meet its target [of 2020 levels under AB 32].” CALGAPS also showed that by 2030, emissions could range from 211 to 428 MTCO<sub>2e</sub> per year, indicating that “even if all modeled policies are not implemented, reductions



could be sufficient to reduce emissions 40 percent below the 1990 level [of SB 32].” CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State’s 80 percent reduction goal by 2050, various combinations of policies could allow California’s cumulative emissions to remain very low through 2050 (29) (30).

**Senate Bill 32.** On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion bill, Assembly Bill (AB) 197. SB 32 requires the state to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80 percent below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that ARB not only responds to the Governor, but also the Legislature (31) (32).

**Cap and Trade Program.** The Scoping Plan identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to ARB, a cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap will be able to trade permits to emit GHGs within the overall limit.

ARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. See Title 17 of the California Code of Regulations (CCR) §§ 95800 to 96023). The Cap-and-Trade Program is designed to reduce GHG emissions from major sources (deemed “covered entities”) by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32’s emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the program’s duration.

Covered entities that emit more than 25,000 MTCO<sub>2e</sub> per year must comply with the Cap-and-Trade Program. Triggering of the 25,000 MTCO<sub>2e</sub> per year “inclusion threshold” is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or “MRR”).

Under the Cap-and-Trade Program, ARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender “compliance instruments” (30) for each MTCO<sub>2e</sub> of GHG they emit. There also are requirements to surrender compliance instruments covering 30 percent of the prior year’s compliance obligation by November of each year. For example, in November 2014, a covered entity was required to submit compliance instruments to cover 30 percent of its 2013 GHG emissions.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by ARB in the First Update:

The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative (ARB 2014).

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the “capped sectors.” Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap. The Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by ARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures (ARB 2014).

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly,

GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program.

The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of GHG emissions from CEQA projects associated with vehicle-miles traveled (VMT) are covered by the Cap-and-Trade Program (ARB 2015) (33).

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the Program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions.<sup>4</sup>

**SB 375 - the Sustainable Communities and Climate Protection Act of 2008.** Passing the Senate on August 30, 2008, Senate Bill (SB) 375 was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck

<sup>4</sup> On March 17, 2011, the San Francisco Superior Court issued a final decision in *Association of Irrigated Residents v. California Air Resources Board* (Case No. CPF-09-509562). While the Court upheld the validity of the ARB Scoping Plan for the implementation of AB 32, the Court enjoined ARB from further rulemaking under AB 32 until ARB amends its CEQA environmental review of the Scoping Plan to address the flaws identified by the Court. On May 23, 2011, ARB filed an appeal. On June 24, 2011, the Court of Appeal granted ARB's petition staying the trial court's order pending consideration of the appeal. In the interest of informed decision-making, on June 13, 2011, ARB released the expanded alternatives analysis in a draft Supplement to the AB 32 Scoping Plan Functional Equivalent Document. The ARB Board approved the Scoping Plan and the CEQA document on August 24, 2011.



trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the ARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the mitigation measures required by an applicable prior environmental document.

**AB 1493 Pavley Regulations and Fuel Efficiency Standards.** California AB 1493, enacted on July 22, 2002, required ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the U.S. District Court for the District of Columbia in 2011.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in about a 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

**SB 350— Clean Energy and Pollution Reduction Act of 2015.** In October 2015, the legislature approved and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly-owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

#### EXECUTIVE ORDERS RELATED TO GHG EMISSIONS

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

**Executive Order S-3-05.** Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

**Executive Order S-01-07 – Low Carbon Fuel Standard.** The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the Executive Order established a Low Carbon Fuel Standard and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

The Low Carbon Fuel Standard was challenged in the U.S. District Court in Fresno in 2011. The court's ruling issued on December 29, 2011, included a preliminary injunction against ARB's implementation of the rule. The Ninth Circuit Court of Appeals stayed the injunction on April 23, 2012, pending final ruling on appeal, allowing ARB to continue to implement and enforce the regulation. The Ninth Circuit Court's decision, filed September 18, 2013, vacated the preliminary injunction. In essence, the court held that Low Carbon Fuel Standards adopted by ARB were not in conflict with federal law. On August 8, 2013, the Fifth District Court of Appeal (California) ruled ARB failed to comply with CEQA and the Administrative Procedure Act (APA) when adopting

regulations for Low Carbon Fuel Standards. In a partially published opinion, the Court of Appeal reversed the trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of ARB approving Low Carbon Fuel Standards (LCFS) regulations promulgated to reduce GHG emissions. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while ARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity (low-CI) fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. On November 16, 2015 the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1 2016.

**Executive Order S-13-08.** Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the Order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

**Executive Order B-30-15.** On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 and directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO<sub>2</sub> equivalent (MMCO<sub>2</sub>e). The Order also requires the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable for local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

#### CALIFORNIA REGULATIONS AND BUILDING CODES

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.



**Title 20 Appliance Efficiency Standards.** California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2012).

**Title 24 Energy Efficiency Standards and California Green Building Standards.** California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 version of Title 24 was adopted by the California Energy Commission (CEC) and became effective on January 1, 2017 and is applicable to the Project.

The CEC indicates that the 2016 Title 24 standards will reduce energy consumption by 5 percent for nonresidential buildings above that achieved by the 2013 Title 24 (CEC 2015).

California Code of Regulations, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2011, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent update consisting of the 2016 California Green Building Code Standards that became effective January 1, 2017. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances and defers to them as the ruling guidance provided they establish a minimum 65 percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy, which is generally enforced by the local building official. CALGreen requires:

- Short-term bicycle parking. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).
- Designated parking. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).

- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling (5.410.1).
- Construction waste. A minimum 65 percent diversion of construction and demolition waste from landfills, increasing voluntarily to 80 percent for new homes and commercial projects (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).
- Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods:
  - The installation of water-conserving fixtures (5.303.3) or
  - Using nonpotable water systems (5.303.4).
- Water use savings. 20 percent mandatory reduction of indoor water use with voluntary goal standards for 30, 35 and 40 percent reductions (5.303.2, A5303.2.3 [nonresidential]).
- Water meters. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day (5.303.1).
- Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).
- Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard (5.404).
- Building commissioning. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

**Model Water Efficient Landscape Ordinance.** The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881, the Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-7-7) 2020 mandate are expected upon compliance with the ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed Department of Water Resources (DWR) to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015 effective December 15, 2015. New development projects that include landscape areas of 500 square feet or more are subject to the Ordinance. The update requires:

- More efficient irrigation systems;
- Incentives for graywater usage;
- Improvements in on-site stormwater capture;
- Limiting the portion of landscapes that can be planted with high water use plants; and
- Reporting requirements for local agencies.

**ARB Refrigerant Management Program.** ARB adopted a regulation in 2009 to reduce refrigerant GHG emissions from stationary sources through refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, reporting and recordkeeping, and proper refrigerant cylinder use, sale, and disposal. The regulation is set forth in sections 95380 to 95398 of Title 17,

California Code of Regulations. The rules implementing the regulation establish a limit on statewide GHG emissions from stationary facilities with refrigeration systems with more than 50 pounds of a high GWP refrigerant. The refrigerant management program is designed to (1) reduce emissions of high-GWP GHG refrigerants from leaky stationary, non-residential refrigeration equipment; (2) reduce emissions from the installation and servicing of refrigeration and air-conditioning appliances using high-GWP refrigerants; and (3) verify GHG emission reductions.

**Tractor-Trailer GHG Regulation.** The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers, or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

**Phase 1 and 2 Heavy-Duty Vehicle GHG Standards.** ARB has adopted a new regulation for greenhouse gas (GHG) emissions from heavy-duty trucks and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the U.S. EPA rule for new trucks and engines nationally. Existing heavy-duty vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer Greenhouse Gas Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. In September 2011, the U.S. EPA adopted their new rule for heavy-duty trucks and engines. The U.S. EPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements begin with model year (MY) 2014 with stringency levels increasing through MY 2018. The rule organizes truck compliance into three groupings, which include a) heavy-duty pickups and vans; b) vocational vehicles; and c) combination tractors. The U.S. EPA rule does not regulate trailers.

ARB staff has worked jointly with the U.S. Environmental Protection Agency (U.S. EPA) and the National Highway Traffic Safety Administration (NHTSA) on the next phase of federal greenhouse gas (GHG) emission standards for medium- and heavy-duty vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later model year heavy-duty vehicles, including trailers.

U.S. EPA and NHTSA issued a Notice of Proposed Rulemaking for Phase 2 in June 2015 and published the final rule in October 2016. On February 8, 2018 the Board approved, with direction to staff to make additional 15-day changes, the proposed Phase 2 standards. Final approval and OAL action is expected to be completed by the end of 2018.

**SB 97 and the CEQA Guidelines Update.** Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of



Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a).” Section 21097 was also added to the Public Resources Code. It provided CEQA protection until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA.

On April 13, 2009, the Office of Planning and Research submitted to the Secretary for Natural Resources its recommended amendments to the CEQA Guidelines for addressing GHG emissions. On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting these amendments pursuant to Public Resources Code section 21083.05. Following a 55-day public comment period and two public hearings, the Natural Resources Agency proposed revisions to the text of the proposed Guidelines amendments. The Natural Resources Agency transmitted the adopted amendments and the entire rulemaking file to the Office of Administrative Law on December 31, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

A new section, CEQA Guidelines Section 15064.4, was added to assist agencies in determining the significance of GHG emissions. The new section allows agencies the discretion to determine whether a quantitative or qualitative analysis is best for a particular project. However, little guidance is offered on the crucial next step in this assessment process—how to determine whether the project’s estimated GHG emissions are significant or cumulatively considerable.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts, respectively. GHG mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project’s incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions are cumulatively considerable.

Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of GHG Reduction Plans. Compliance with such plans can support a determination that a project’s cumulative effect is not cumulatively considerable, according to Section 15183.5(b).

In addition, the amendments revised Appendix F of the CEQA Guidelines, which focuses on Energy Conservation. The sample environmental checklist in Appendix G was amended to include GHG questions.

## REGIONAL

The project is within the Southern California Air Basin (SoCAB), which is under the jurisdiction of the SCAQMD.

### South Coast Air Quality Management District

SCAQMD is the agency responsible for air quality planning and regulation in the SoCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SoCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold, that could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
  - Residential and Commercial land use: 3,000 MTCO<sub>2e</sub> per year
  - Industrial land use: 10,000 MTCO<sub>2e</sub> per year
  - Based on land use type: residential: 3,500 MTCO<sub>2e</sub> per year; commercial: 1,400 MTCO<sub>2e</sub> per year; or mixed use: 3,000 MTCO<sub>2e</sub> per year
- Tier 4 has the following options:
  - Option 1: Reduce BAU emissions by a certain percentage; this percentage is currently undefined.

- Option 2: Early implementation of applicable AB 32 Scoping Plan measures
- Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO<sub>2</sub>e/SP/year for projects and 6.6 MTCO<sub>2</sub>e/SP/year for plans;
- Option 3, 2035 target: 3.0 MTCO<sub>2</sub>e/SP/year for projects and 4.1 MTCO<sub>2</sub>e/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's interim thresholds used the Executive Order S-3-05 year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap carbon dioxide concentrations at 450 ppm, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the Project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009 includes the following rules:

- Rule 2700 defines terms and post global warming potentials.
- Rule 2701, SoCal Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

## 2.8 CITY OF MORENO VALLEY GENERAL PLAN MEASURES

Although the City of Moreno Valley General Plan does not identify specific GHG or climate change policies or goal, a number of the measures identified in the General Plan's Air Quality Element act to reduce or control criteria pollutant emissions and peripherally reduce GHG emissions. The proposed Project has been evaluated for consistency with the City's General Plan Air Quality Element, as shown on Table 2-3.

**TABLE 2-3: CITY OF MORENO VALLEY GENERAL PLAN CONSISTENCY**

|   |  |
|---|--|
| <b>Objective 6.6:</b> Promote land use patterns that reduce daily automotive trips and reduce trip distance for work, shopping, school, and recreation. | <b>Consistent.</b> <i>The Project site is providing employment opportunities to Moreno Valley and the surrounding area.</i>  |
| <b>Objective 6.7:</b> Reduce mobile and stationary source air pollutant emissions.  | <b>Consistent.</b> <i>The Project site is located proximate to existing and proposed major roadways, acting to generally reduce vehicle trip lengths, thereby reducing mobile source emissions. The Project will further reduce mobile source emissions by creating local employment opportunities, reducing commuter vehicle miles traveled (VMT) within the region. Additionally, the Project will implement energy efficient designs and operational programs meeting or surpassing California Code of Regulations (CCR) Title 24 Building Standards,</i> |



|  |   |
|--|---|
|  | <i>including but not limited to compliance with or betterment of, energy conservation requirements identified at CCR Title 24, Part 6, Energy Code. Energy efficient designs and programs implemented by the Project reduce resources consumption with correlating reductions in stationary-source emissions.</i> |
| <b>Policy 6.7.5:</b> Require grading activities to comply with South Coast Air Quality Management District’s Rule 403 regarding the control of fugitive dust.                              | <b>Consistent.</b> <i>The Project will be required to implement fugitive dust control measures consistent with SCAQMD Rule 403.</i>   |
| <b>Policy 6.7.6:</b> Require building construction to comply with the energy conservation requirements of Title 24 of the California Administrative Code [California Code of Regulations]. | <b>Consistent.</b> <i>Pursuant to City and State Building Code requirements, the Project will meet or surpass applicable CCR Title 24 energy conservation requirements.</i>   |

Source: City of Moreno Valley General Plan, Safety Element

## 2.9 CITY OF MORENO VALLEY ENERGY EFFICIENCY AND CLIMATE ACTION STRATEGY

The City of Moreno Valley released an Energy Efficiency and Climate Action Strategy (CAS) as well as a Greenhouse Gas Analysis for public review on May 8, 2012. The documents were approved on October 9, 2012. The CAS identifies ways that the City can reduce energy and water consumption and greenhouse gas emissions as an organization (its employees and the operation of its facilities) and outlines the actions that the City can encourage and community members can employ to reduce their own energy and water consumption and greenhouse gas emissions. The policies in the document are to reduce greenhouse gas emissions in 2010 by 15 percent by 2020. The following consists of an analysis of project consistency with the policies in the CAS.

- R2-T1: Land Use Based Trips and VMT Reduction Policies. Encourage the development of Transit Priority Projects along High-Quality Transit Corridors identified in the SCAG Sustainable Communities Plan, to allow a reduction in vehicle miles traveled.

Project consistency: Not applicable.

- R2-T3: Employment-Based Trip Reductions. Require a Transportation Demand Management (TDM) program for new development to reduce automobile travel by encouraging ride-sharing, carpooling, and alternative modes of transportation.

Project consistency: The Project will encourage carpooling and provide information to employees on the use of public transit.

- R2-E1: New Construction Residential Energy Efficiency Requirements. Require energy efficient design for all new residential buildings to be 10 percent beyond the current Title 24 standards. (Reach Code)

Project consistency: Consistent; the project will comply with the City of Moreno Valley’s New Construction Requirements.

- R2-E2: New Construction Residential Renewable Energy. Facilitate the use of renewable energy (such as solar (photovoltaic) panels or small wind turbines) for new residential developments. Alternative approach would be the purchase of renewable energy resources offsite.

Project consistency: Consistent; the project will comply with the City of Moreno Valley’s New Construction Residential Renewable Energy Requirements.

- R2-E5: New Construction Commercial Energy Efficiency Requirements. Require energy efficient design for all new commercial buildings to be 10% beyond the 2008 Title 24 standards (which were in effect at the time the CAP was adopted). (Reach Code)

Project consistency: Not applicable.
- R3-E1: Energy Efficient Development, and Renewable Energy Deployment Facilitation and Streamlining. Updating of codes and zoning requirements and guidelines to further implement green building practices. This could include incentives for energy efficient projects.

Project consistency: Not applicable on a project-level.
- R3-L2: Heat Island Plan. Develop measures that address “heat islands.” Potential measures include using strategically placed shade trees, using paving materials with a Solar Reflective Index of at least 29, an open grid pavement system, or covered parking.

Project consistency: Consistent; the Project will comply with the City of Moreno Valley’s landscaping requirements.
- R2-W1: Water Use Reduction Initiative. Consider adopting a per capita water use reduction goal, which mandates the reduction of water use of 20 percent per capita with requirements applicable to new development and with cooperative support of the water agencies.

Project consistency: Consistent. California Green Building Standards Code, Chapter 5, Division 5.3, Section 5.303.2 requires that indoor water use be reduced by 20 percent. Section 5.304.3 requires irrigation controllers and sensors.
- R3-W1: Water Efficiency Training and Education. Work with EMWD and local water companies to implement a public information and education program that promotes water conservation.

Project consistency: Not applicable at a project-level.
- R2-S1: City Diversion Program. For Solid Waste, consider a target of increasing the waste diverted from the landfill to a total of 75 percent by 2020.

Project consistency: Consistent; the Project will comply with the City of Moreno Valley’s citywide goal of solid waste reduction. Additionally, the Project will be compliant with the City of Moreno Valley’s Municipal Code 8.80.030 by implementing a Waste Management Plan.

## 2.10 DISCUSSION ON ESTABLISHMENT OF SIGNIFICANCE THRESHOLDS

The City of Moreno Valley has not adopted its own numeric threshold of significance for determining impacts with respect to greenhouse gas (GHG) emissions. A screening threshold of 3,000 MTCO<sub>2e</sub> per year to determine if additional analysis is required is an acceptable approach for small projects. This approach is a widely accepted screening threshold used by the County of Riverside (34) and numerous cities in the South Coast Air Basin and is based on the South Coast Air Quality Management District (SCAQMD) staff’s proposed GHG screening threshold for stationary source emissions for non-industrial projects, as described in the SCAQMD’s *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* (“SCAQMD Interim GHG Threshold”). The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required (35). As noted by the SCAQMD:

“...the...screening level for stationary sources is based on an emission capture rate of 90 percent for all new or Projects...the policy objective of [SCAQMD’s] recommended interim GHG significance threshold proposal is to achieve an emission capture rate of 90 percent

of all new or modified stationary source projects. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that [SCAQMD] staff estimates that these GHG emissions would account for slightly less than one percent of future 2050 statewide GHG emissions target (85 [MMTCO<sub>2</sub>e/yr]). In addition, these small projects may be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory. Finally, these small sources are already subject to [Best Available Control Technology] (BACT) for criteria pollutants and are more likely to be single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility.” (35)

Thus, and based on guidance from the SCAQMD, if a non-industrial project would emit GHGs less than 3,000 MTCO<sub>2</sub>e per year, the project is not considered a substantial GHG emitter and the GHG impact is less than significant, requiring no additional analysis and no mitigation. On the other hand, if a non-industrial project would emit GHGs in excess of 3,000 MTCO<sub>2</sub>e per year, then the project could be considered a substantial GHG emitter, requiring additional analysis and potential mitigation.

As previously discussed, a screening threshold of 3,000 MTCO<sub>2</sub>e per year is an acceptable approach for small projects to determine if additional analysis is required and is therefore applied for this Project.



### 3 PROJECT GREENHOUSE GAS IMPACT

#### 3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant greenhouse gas impact. The significance of these potential impacts is described in the following section.

#### 3.2 CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ESTIMATE GHG EMISSIONS

On October 17, 2017, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2016.3.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO<sub>x</sub>, SO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (36). Accordingly, the latest version of CalEEMod™ has been used for this Project to determine greenhouse gas emissions. Output from the model runs for both construction and operational activity are provided in Appendix 3.1. The CalEEMod model includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water.

#### 3.3 CONSTRUCTION AND OPERATIONAL LIFE-CYCLE ANALYSIS NOT REQUIRED

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time (37). Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the project development, infrastructure and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time, an LCA would be extremely speculative and thus has not been prepared.

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood or documented, and would be challenging to mitigate (38). Additionally, the science to calculate life cycle emissions is not yet established or well defined; therefore, SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis.

#### 3.4 PROJECT RELATED GREENHOUSE GAS EMISSIONS

##### 3.4.1 CONSTRUCTION EMISSIONS

Construction activities associated with the Project would result in emissions of CO<sub>2</sub> and CH<sub>4</sub> from construction activities. The report *Continental Villages Air Quality Impact Analysis Report*, Urban Crossroads, Inc. (2018) contains detailed information regarding construction activity (39).

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total greenhouse gas emissions for the construction activities, dividing it by a 30-year project life then adding that number to the annual operational phase GHG emissions (40). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions.

### 3.5 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O from the following primary sources:

- Building Energy Use (combustion emissions associated with natural gas and electricity)
- Water Supply, Treatment, and Distribution
- Solid Waste
- Mobile Source Emissions

#### 3.5.1 AREA SOURCE EMISSIONS

##### Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod model.

##### Hearths/Fireplaces

GHG emissions would result from the combustion of wood or biomass and are considered biogenic emissions of CO<sub>2</sub>. The emissions associated with use of hearths/fireplaces were calculated based on assumptions provided in the CalEEMod model. The Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development. In order to account for the requirements of this Rule, the unmitigated CalEEMod model estimates were adjusted to remove wood burning stoves and fireplaces. As the project is required to comply with SCAQMD Rule 445, the removal of wood burning stoves and fireplaces is not considered "mitigation" although it must be identified as such in CalEEMod in order to treat the case appropriately.

#### 3.5.2 ENERGY SOURCE EMISSIONS

##### Combustion Emissions Associated with Natural Gas and Electricity

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO<sub>2</sub> and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a

building, the building energy use emissions do not include street lighting<sup>5</sup>. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Unless otherwise noted, CalEEMod default parameters were used.

### 3.5.3 MOBILE SOURCE EMISSIONS

#### Vehicles

Project mobile source air quality impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. The Project-related operational air quality impacts are derived primarily from vehicle trips generated by the Project. Trip characteristics available from the report, *Continental Villages Traffic Impact Analysis* (Urban Crossroads, Inc. 2018) were utilized in this analysis (41). The proposed Project is anticipated to generate a net total of 2,056 trip-ends per day with 215 net AM peak hour trips and 167 net PM peak hour trips.

It should be noted that due to the Project's proposed retail land use and the location of the Project to other residential land uses within a 1 to 2-mile radius of the Project site, and other fast-food and gasoline stations located in the project vicinity, an average trip length for customers of 3 miles was used in the assessment as opposed to the 8.4-mile model default trip length value. Additionally, 96% of all trips are assumed to be customer trips, 3% of all trips are assumed to be workers, and 1% of all trips are assumed to be other trips.

### 3.5.4 SOLID WASTE

Residential and commercial land uses will result in the generation and disposal of solid waste. A large percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. CalEEMod default parameters were used to estimate GHG emissions associated with the disposal of solid waste for the Project scenario.

### 3.5.5 WATER SUPPLY, TREATMENT AND DISTRIBUTION

Indirect GHG emissions result from the production of electricity used to convey, treat and distribute water and wastewater. The amount of electricity required to convey, treat and distribute water depends on the volume of water as well as the sources of the water. Unless otherwise noted, CalEEMod™ default parameters were used.

## 3.6 EMISSIONS SUMMARY

The annual GHG emissions associated with the operation of the proposed Project are estimated to be 2,649.11 MTCO<sub>2e</sub> per year as summarized in Table 3-1. Direct and indirect operational emissions associated with the Project are compared with the SCAQMD threshold of significance

<sup>5</sup> The CalEEMod emissions inventory model does not include indirect emission related to street lighting. Indirect emissions related to street lighting are expected to be negligible and cannot be accurately quantified at this time as there is insufficient information as to the number and type of street lighting that would occur.



for small land use projects, which is 3,000 MTCO<sub>2</sub>e per year (42). As shown, the proposed Project would result in a less than significant impact with respect to GHG emissions.

**TABLE 3-1: PROJECT GREENHOUSE GAS EMISSIONS (ANNUAL)**

| Emission Source   | Emissions (metric tons per year) |                 |                  |                         |
|---|----------------------------------|-----------------|------------------|-------------------------|
|   | CO <sub>2</sub>                  | CH <sub>4</sub> | N <sub>2</sub> O | Total CO <sub>2</sub> E |
| Annual construction-related emissions amortized over 30 years | 39.85                            | 0.01            | 0.00             | 40.03                   |
| Area  | 28.80                            | 2.40E-03        | 4.90E-04         | 29.00                   |
| Energy  | 379.97                           | 0.01            | 4.18E-03         | 381.56                  |
| Mobile Sources  | 2,088.78                         | 0.16            | 0.00             | 2,092.88                |
| Waste   | 14.93                            | 0.88            | 0.00             | 37.00                   |
| Water Usage   | 59.20                            | 0.29            | 7.29E-03         | 68.64                   |
| <b>Total CO<sub>2</sub>E (All Sources)</b>                    | <b>2,649.11</b>                  |                 |                  |                         |
| <b>Screening Threshold (CO<sub>2</sub>E)</b>                  | <b>3,000</b>                     |                 |                  |                         |
| <b>Threshold Exceeded?</b>                                    | <b>NO</b>                        |                 |                  |                         |

### 3.7 GREENHOUSE GAS EMISSIONS FINDINGS AND RECOMMENDATIONS

***GHG Impact #1: The Project would not generate direct or indirect greenhouse gas emission that would result in a significant impact on the environment.***

The City of Moreno Valley does not have an adopted threshold of significance for GHG emissions. For CEQA purposes, the City has discretion to select an appropriate significance criterion, based on substantial evidence. A screening threshold of 3,000 MTCO<sub>2</sub>e per year to determine if additional analysis is required is an acceptable approach for small projects. This approach is a widely accepted screening threshold used by the County of Riverside (34) and numerous cities in the South Coast Air Basin and is based on the South Coast Air Quality Management District (SCAQMD) staff's proposed GHG screening threshold for stationary source emissions for non-industrial projects, as described in the SCAQMD's *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* ("SCAQMD Interim GHG Threshold").

Thus, and based on guidance from the SCAQMD, if a non-industrial project would emit GHGs less than 3,000 MTCO<sub>2</sub>e per year, the project is not considered a substantial GHG emitter and the GHG impact is less than significant, requiring no additional analysis and no mitigation. On the other hand, if a non-industrial project would emit GHGs in excess of 3,000 MTCO<sub>2</sub>e per year, then the project could be considered a substantial GHG emitter, requiring additional analysis and potential mitigation.

The Project will result in approximately 556.23 MTCO<sub>2</sub>e per year from construction, area, energy, waste, and water usage. In addition, the Project has the potential to result in an additional 2,092.88 MTCO<sub>2</sub>e per year from mobile sources if the assumption is made that all of the vehicle trips to and from the Project are "new" trips resulting from the development of the Project. As shown on Table 3-1 (previously presented), the Project has the potential to generate a total of

approximately 2,649.11 MTCO<sub>2</sub>e per year. As such, the Project would not exceed the SCAQMD's numeric threshold of 3,000 MTCO<sub>2</sub>e if it were applied. Thus, the Project would not have the potential to result in a cumulatively considerable impact with respect to GHG emissions.

***GHG Impact #2: The Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.***

The Project's consistency with AB 32 and SB 32 are discussed below.

### **2008 CARB Scoping Plan Consistency**

AB 32 requires California to reduce its GHG emissions by approximately 28.5% when compared to GHG emissions produced under a Business as Usual scenario (2). CARB identified reduction measures to achieve this goal as set forth in the CARB Scoping Plan.

The Project would generate GHG emissions from a variety of sources which would all emit Carbon CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. GHGs could also be indirectly generated by incremental electricity consumption and waste generation from the Project.

As stated previously, the CARB Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32. The CARB Scoping Plan recommendations serve as statewide measures to reduce GHG emissions levels. The Project would be consistent with the applicable measures established in the Scoping Plan, as shown in Table 3-2.

**TABLE 3-2: PROJECT CONSISTENCY WITH SCOPING PLAN GREENHOUSE GAS EMISSION REDUCTION**

| Number | Scoping Plan Measure   | Remarks  |
|--------|--|--|
| T-1    | Pavley Motor Vehicle Standards (AB 1493)   | Residents would purchase vehicles in compliance with incumbent CARB vehicle standards  |
| H-4    | Limit High GWP Use in Consumer Products  | Residents would use consumer products that would comply with the incumbent regulations   |
| H-1    | Motor Vehicle Air Conditioning Systems – Reduction from Non-Professional Servicing | Residents would be prohibited from performing air conditioning repairs and required to use professional servicing.                       |
| T-4    | Tire Pressure Program  | Motor vehicles driven by residents would maintain proper tire pressure when vehicles are serviced.                                       |
| T-2    | Low Carbon Fuel Standard   | Motor vehicles driven by residents would use fuels that are compliant with incumbent standards.  |
| W-1    | Water Use Efficiency   | Development proposals within the Project site would implement measures to minimize water use and maximize efficiency.                    |
| GB-1   | Green Buildings  | Development proposals within the Project site would be constructed in compliance with incumbent state or local green building standards. |
| H-5    | Air Conditioning Refrigerant Leak Test During Vehicle Smog Check                   | Motor vehicles driven by residents, employees, and customers would comply with the leak test requirements during smog checks.            |
| E-1    | Energy Efficiency Measures (Electricity)   | The Project would comply with incumbent electrical energy efficiency standards   |

| Number | Scoping Plan Measure                                 | Remarks   |
|--------|--|---|
| CR-1   | Energy Efficiency (Natural Gas)                      | Development proposals within the Project site would comply with incumbent natural gas energy efficiency standards |
| GB-1   | Greening New Residential and Commercial Construction | Development proposals within the Project site would comply with incumbent green building standards                |
| GB-1   | Greening Existing Homes and Commercial Buildings     | Development proposals within the Project site would meet retrofit standards as they become effective.             |

### **SB32/2017 Scoping Plan Consistency**

Senate Bill 32 (SB 32) requires the state to reduce statewide greenhouse gas emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide greenhouse gas reduction target of 80% below 1990 levels by 2050 (31) (32).

According to research conducted by the Lawrence Berkeley National Laboratory and supported by the CARB, California, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. (29) (30).

The Project reduces its GHG emissions to the maximum extent feasible as discussed in this document. Additionally, the project applicant would not actively interfere with any future County-mandated, state-mandated, or federally-mandated retrofit obligations enacted or promulgated to legally require development County-wide, state-wide, or nation-wide to assist in meeting state-adopted greenhouse gas emissions reduction targets, including that established under Executive Order S-3-05, Executive Order B-30-15, or SB 32.

The Project does not interfere with the state's implementation of (i) Executive Order B-30-15 and SB 32's target of reducing statewide GHG emissions to 40% below 1990 levels by 2030 or (ii) Executive Order S-3-05's target of reducing statewide GHG emissions to 80% below 1990 levels by 2050 because it does not interfere with the state's implementation of GHG reduction plans described in the CARB's Updated Scoping Plan, including the state providing for 12,000 MW of renewable distributed generation by 2020, the California Building Commission mandating net zero energy homes in the building code after 2020, or existing building retrofits under AB 758. Therefore, the project's impacts on greenhouse gas emissions in the 2030 and 2050 horizon years are less than significant.

The 2017 Scoping Plan builds on the 2008 Scoping Plan in order to achieve the 40 percent reduction from 1990 levels by 2030. Major elements of the 2017 Scoping Plan framework that will achieve the GHG reductions include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZEV buses and trucks. When adopted, this measure would apply to all trucks accessing the Project site. This may include providing incentives for existing truck retrofits or new trucks purchased by the building operators to be ZEV. As such, this measure has the potential to expedite the Project's implementation of ZEVs through incentives.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030). When adopted, this measure would apply to all fuel purchased and used by the Project in the state.
- Implementing SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030. When adopted, this measure would apply when electricity is provided to the Project by a utility company.



- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks. When adopted, this measure would apply to all trucks accessing the Project site, this may include existing trucks or new trucks that are part of the statewide goods movement sector.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030. When adopted, the Project would be required to comply with this measure and reduce SLPS accordingly.
- Continued implementation of SB 375. The Project is not within the purview of SB 375 and would therefore not conflict with this measure.
- Post-2020 Cap-and-Trade Program that includes declining caps. When adopted, the Project would be required to comply with the Cap-and-Trade Program if it generates emissions from sectors covered by Cap-and-Trade.
- 20 percent reduction in GHG emissions from refineries by 2030. When adopted, the Project would be required to comply with this measure if it were to utilize any fuel from refineries.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink. This is a statewide measure that would not apply to the Project.

As shown above, the Project would not conflict with any of the 2017 Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project.

Further, as discussed above the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030.

#### **City of Moreno Valley Climate Action Plan Consistency**

The City of Moreno Valley adopted its CAP in October 2012. The measures identified in the CAP represent the City's actions to achieve the GHG reduction targets of AB 32 for target year 2020. Local measures included in the CAP include:

- R2-T1: Land Use Based Trips and VMT Reduction Policies. Encourage the development of Transit Priority Projects along High Quality Transit Corridors identified in the SCAG Sustainable Communities Plan, to allow a reduction in vehicle miles traveled.
- R2-T3: Employment-Based Trip Reductions. Require a Transportation Demand Management (TDM) program for new development to reduce automobile travel by encouraging ride-sharing, carpooling, and alternative modes of transportation.
- R2-E1: New Construction Residential Energy Efficiency Requirements. Require energy efficient design for all new residential buildings to be 10% beyond the current Title 24 standards. (Reach Code)
- R2-E2: New Construction Residential Renewable Energy. Facilitate the use of renewable energy (such as solar (photovoltaic) panels or small wind turbines) for new residential developments. Alternative approach would be the purchase of renewable energy resources offsite.
- R2-E5: New Construction Commercial Energy Efficiency Requirements. Require energy efficient design for all new commercial buildings to be 10% beyond the current Title 24 standards. (Reach Code)

- R3-E1: Energy Efficient Development, and Renewable Energy Deployment Facilitation and Streamlining. Updating of codes and zoning requirements and guidelines to further implement green building practices. This could include incentives for energy efficient projects.
- R3-L2: Heat Island Plan. Develop measures that address “heat islands.” Potential measures include using strategically placed shade trees, using paving materials with a Solar Reflective Index of at least 29, an open grid pavement system, or covered parking.
- R2-W1: Water Use Reduction Initiative. Consider adopting a per capita water use reduction goal which mandates the reduction of water use of 20 percent per capita with requirements applicable to new development and with cooperative support of the water agencies.
- R3-W1: Water Efficiency Training and Education. Work with EMWD and local water companies to implement a public information and education program that promotes water conservation.
- R2-S1: City Diversion Program. For Solid Waste, consider a target of increasing the waste diverted from the landfill to a total of 75% by 2020. (43)

The proposed project would not conflict with these local strategies. Additionally, the proposed project is consistent with state and regional strategies, listed in the CAP. Further, the proposed project is subject to California Building Code requirements. New buildings must achieve the 2016 Building and Energy Efficiency Standards and the 2016 California Green Building Standards requirements, which include water conservation measures. Overall, the proposed project overall would not conflict with the City of Moreno Valley CAP and impacts would be less than significant. No mitigation measures are necessary.

## 4 REFERENCES

1. **State of California.** *California Environmental Quality Act, Appendix G.* 2016.
2. **Air Resources Board.** Assembly Bill 32: Global Warming Solutions Act. [Online] 2006. [Cited: November 13, 2013.] <http://www.arb.ca.gov/cc/ab32/ab32.htm>.
3. —. Sustainable Communities. [Online] 2008. [Cited: November 13, 2013.] <http://www.arb.ca.gov/cc/sb375/sb375.htm>.
4. —. Clean Car Standards - Pavley, Assembly Bill 1493. [Online] September 24, 2009. [Cited: November 13, 2013.] <http://www.arb.ca.gov/cc/ccms/ccms.htm>.
5. **Building Standards Commission.** California Building Standards Code (Title 24, California Code of Regulations). [Online] [Cited: 13 2013, November.] <http://www.bsc.ca.gov/codes.aspx>.
6. **California Energy Commission.** California Code of Regulations, TITLE 20, Division 2. [Online] September 3, 2013. [Cited: November 13, 2013.] <http://www.energy.ca.gov/reports/title20/index.html>.
7. **Air Resources Board.** Title 17 - California Code of Regulation. [Online] 2010. [Cited: November 13, 2013.] <http://www.arb.ca.gov/regs/regs-17.htm>.
8. **Department of Water Resources.** Updated Model Water Efficient Landscape Ordinance AB 1881. [Online] 2006. [Cited: November 13, 2013.] [http://www.water.ca.gov/wateruseefficiency/landscapeordinance/updatedOrd\\_history.cfm](http://www.water.ca.gov/wateruseefficiency/landscapeordinance/updatedOrd_history.cfm).
9. **California Energy Commission.** SB 1368 Emission Performance Standards. [Online] September 29, 2006. [Cited: November 13, 2013.] [http://www.energy.ca.gov/emission\\_standards/](http://www.energy.ca.gov/emission_standards/).
10. —. Renewables Portfolio Standard (RPS) . [Online] 2002. [Cited: November 13, 2013.] <http://www.energy.ca.gov/portfolio/>.
11. **United Nations.** GHG Profiles - Annex I. [Online] [http://di.unfccc.int/ghg\\_profile\\_annex1](http://di.unfccc.int/ghg_profile_annex1).
12. —. GHG Profiles - Non-Annex I. [Online] [http://di.unfccc.int/ghg\\_profile\\_non\\_annex1](http://di.unfccc.int/ghg_profile_non_annex1).
13. **Environmental Protection Agency.** Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2016. [Online] 2018. [https://www.epa.gov/sites/production/files/2018-01/documents/2018\\_complete\\_report.pdf](https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf).
14. **Air Resources Board.** California Greenhouse Gas Emission Inventory -2016 Edition. [Online] June 17, 2016. <http://www.arb.ca.gov/cc/inventory/data/data.htm>.
15. **World Resources Institute.** Climate Analysis Indicator Tool (CAIT). [Online] <http://cait.wri.org>.
16. *The Carbon Cycle and Climate Change.* **Bennington, Bret J.** 1, s.l. : Brooks/Cole. ISBN 1 3: 978-0-495-73855-8.
17. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report.* **International Panel on Climate Change.** 4, 2007.
18. *Occupational Safety and Health Guideline for Nitrous Oxide.* **U.S. Department of Labor.**
19. **Environmental Protection Agency.** Overview of Greenhouse Gases. [Online] [Cited: September 17, 2014.] <http://www.epa.gov/highgwp/scientific.html>.
20. **World Resources Institute.** Nitrogen Trifluoride Now Required in GHG Protocol Greenhouse Gas Emissions Inventory. [Online] May 22, 2013. <https://www.wri.org/blog/2013/05/nitrogen-trifluoride-now-required-ghg-protocol-greenhouse-gas-emissions-inventories>.



21. **Centers for Disease Control and Prevention.** Nitrogen Trifluoride. [Online] 2015. <https://www.cdc.gov/niosh/ipcsneng/neng1234.html>.
22. **American Lung Association.** Climate Change. [Online] 2013. [Cited: November 13, 2013.] <http://www.lung.org/associations/states/california/advocacy/climate-change/>.
23. **The National Institute for Occupational Safety and Health.** [Online] [Cited: November 13, 2013.] <http://www.cdc.gov/niosh/>.
24. **U.S. National Library of Medicine.** Methane. [Online] <https://toxtown.nlm.nih.gov/chemicals-and-contaminants/methane>.
25. **Occupational Health and Safety Administration.** [Online] [Cited: November 13, 2013.] <https://www.osha.gov/>.
26. **Hardin, Mary and Kahn, Ralph.** Aerosols & Climate Change. *Earth Observatory.* [Online] <http://earthobservatory.nasa.gov/Features/Aerosols/>.
27. **Center for Climate and Energy Solutions (C2ES).** Outcomes of the U.N. Climate Change Conference. *Center for Climate and Energy Solutions (C2ES).* [Online] 2015a. [Cited: April 19, 2016.] <http://www.c2es.org/international/negotiations/cop21-paris/summary>.
28. **Agency, United States Environmental Protection.** Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act. *United States Environmental Protection Agency.* [Online] <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean>.
29. **Lawrence Berkeley National Laboratory.** California's Policies Can Significantly Cut Greenhouse Gas Emissions through 2030. *Lawrence Berkeley National Laboratory.* [Online] January 22, 2015. <http://newscenter.lbl.gov/2015/01/22/californias-policies-can-significantly-cut-greenhouse-gas-emissions-2030/>.
30. **Ernest Orlando Lawrence Berkeley National Laboratory.** Modeling California policy impacts on greenhouse gas emissions. [Online] 2015. <https://eetd.lbl.gov/sites/all/files/lbnl-7008e.pdf>.
31. **California Legislative Information.** Senate Bill No. 32. [Online] September 8, 2016. [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160SB32](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32).
32. **Policy Matters Journal: A Student Publication from the Goldman School of Public Policy.** New California Emissions Targets Spell Next Step in the State's Fight against Climate Change. [Online] September 1, 2016. <http://www.policymattersjournal.org/sb32.html>.
33. **California Air Resources Board (ARB).** Cap and Trade Overview. *California Air Resources Board.* [Online] [Cited: May 10, 2016.] [http://www.arb.ca.gov/cc/capandtrade/guidance/cap\\_trade\\_overview.pdf](http://www.arb.ca.gov/cc/capandtrade/guidance/cap_trade_overview.pdf).
34. **County of Riverside.** *Greenhouse Gas Emissions Screening Tables.* San Bernardino : Atkins, 2012.
35. **South Coast Air Quality Management District.** Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. [Online] <http://www.aqmd.gov/hb/2008/December/081231a.htm>.
36. **California Air Pollution Control Officers Association (CAPCOA).** California Emissions Estimator Model (CalEEMod). [Online] September 2016. [www.caleemod.com](http://www.caleemod.com).
37. **California Natural Resources Agency.** Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97. [Online] December 2009.
38. *Minutes for the GHG CEQA Significance.* **South Coast Air Quality Management District.** 2008.

39. **Urban Crossroads, Inc.** *Continental Villages Air Quality Impact Analysis Report*. 2018.
40. **South Coast Air Quality Management District.** *Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group #13*. [Powerpoint] Diamond Bar : s.n., 2009.
41. **Urban Crossroads, Inc.** *Continental Villages Traffic Impact Analysis*. 2018.
42. **South Coast Air Quality Management District.** Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. [Online] [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-8/ghg-meeting-8-minutes.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-8/ghg-meeting-8-minutes.pdf?sfvrsn=2).
43. **City of Moreno Valley.** *City of Moreno Valley Climate Action Plan*. City of Moreno Valley : s.n., 2012.

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Attachment: Greenhouse Gas Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change



## 5 CERTIFICATION

The contents of this GHGA represent an accurate depiction of the greenhouse gas impacts associated with the proposed Continental Villages Project. The information contained in this greenhouse gas report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

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Master of Science in Environmental Studies  
 California State University, Fullerton • May, 2010

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 University of California, Irvine • June, 2006

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AEP – Association of Environmental Planners  
 AWMA – Air and Waste Management Association  
 ASTM – American Society for Testing and Materials

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Environmental Site Assessment – American Society for Testing and Materials • June, 2013  
 Planned Communities and Urban Infill – Urban Land Institute • June, 2011  
 Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008  
 Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007  
 AB2588 Regulatory Standards – Trinity Consultants • November, 2006  
 Air Dispersion Modeling – Lakes Environmental • June, 2006

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Attachment: Greenhouse Gas Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change

## APPENDIX 3.1:

### CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS



Continental Village (Operations) - Riverside-South Coast County, Annual

**Continental Village (Operations)  
Riverside-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses                | Size   | Metric        | Lot Acreage | Floor Surface Area | Population |
|--------------------------|--------|---------------|-------------|--------------------|------------|
| Parking Lot              | 593.00 | Space         | 5.30        | 237,200.00         | 0          |
| Apartments Low Rise      | 112.00 | Dwelling Unit | 5.48        | 132,472.00         | 320        |
| Regional Shopping Center | 21.00  | 1000sqft      | 0.87        | 21,000.00          | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.4   | <b>Precipitation Freq (Days)</b> | 28    |
| <b>Climate Zone</b>            | 10                         |                                |       | <b>Operational Year</b>          | 2020  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 702.44                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.029 | <b>N2O Intensity (lb/MWhr)</b>   | 0.006 |

**1.3 User Entered Comments & Non-Default Data**

Attachment: Greenhouse Gas Report (Nov 2018) (3376 : The proposal includes a General Plan

Continental Village (Operations) - Riverside-South Coast County, Annual

Project Characteristics -

Land Use - Total Project Area is 11.64 acres.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates are based on information provided in the the TIA by Urban Crossroads (2018).

Woodstoves - Rule 445

Mobile Land Use Mitigation -

Attachment: Greenhouse Gas Report (Nov 2018) (3376 : The proposal includes a General Plan

Continental Village (Operations) - Riverside-South Coast County, Annual

| Table Name           | Column Name                | Default Value | New Value  |
|----------------------|----------------------------|---------------|------------|
| tblConstructionPhase | NumDays                    | 10.00         | 1.00       |
| tblFireplaces        | NumberGas                  | 95.20         | 112.00     |
| tblFireplaces        | NumberNoFireplace          | 11.20         | 0.00       |
| tblFireplaces        | NumberWood                 | 5.60          | 0.00       |
| tblLandUse           | LandUseSquareFeet          | 112,000.00    | 132,472.00 |
| tblLandUse           | LotAcreage                 | 5.34          | 5.30       |
| tblLandUse           | LotAcreage                 | 7.00          | 5.48       |
| tblLandUse           | LotAcreage                 | 0.48          | 0.87       |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 3.00          | 0.00       |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 4.00          | 0.00       |
| tblVehicleTrips      | CC_TL                      | 8.40          | 3.00       |
| tblVehicleTrips      | CC_TTP                     | 64.70         | 96.00      |
| tblVehicleTrips      | CNW_TTP                    | 19.00         | 1.00       |
| tblVehicleTrips      | CW_TTP                     | 16.30         | 3.00       |
| tblVehicleTrips      | PB_TP                      | 11.00         | 34.00      |
| tblVehicleTrips      | PR_TP                      | 54.00         | 31.00      |
| tblVehicleTrips      | ST_TR                      | 7.16          | 8.14       |
| tblVehicleTrips      | ST_TR                      | 49.97         | 89.15      |
| tblVehicleTrips      | SU_TR                      | 6.07          | 6.28       |
| tblVehicleTrips      | SU_TR                      | 25.24         | 89.15      |
| tblVehicleTrips      | WD_TR                      | 6.59          | 7.32       |
| tblVehicleTrips      | WD_TR                      | 42.70         | 89.15      |
| tblWoodstoves        | NumberCatalytic            | 5.60          | 0.00       |
| tblWoodstoves        | NumberNoncatalytic         | 5.60          | 0.00       |

Attachment: Greenhouse Gas Report (Nov 2018) (3376) : The proposal includes a General Plan

2.0 Emissions Summary



Continental Village (Operations) - Riverside-South Coast County, Annual

**2.1 Overall Construction**

**Unmitigated Construction**

|         | ROG     | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|---------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Year    | tons/yr |        |        |        |               |              |            |                |               |             | MT/yr    |           |           |        |        |        |
| 2019    | 0.0000  | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Maximum | 0.0000  | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**Mitigated Construction**

|         | ROG     | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e   |
|---------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|--------|
| Year    | tons/yr |        |        |        |               |              |            |                |               |             | MT/yr    |           |           |        |        |        |
| 2019    | 0.0000  | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Maximum | 0.0000  | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      | 0.0000   | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00      | 0.00      | 0.00 | 0.00 | 0.00 |

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| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|----------|--|--|
|         |            | Highest  |  |  |

**2.2 Overall Operational**  
**Unmitigated Operational**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2       | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr          |                   |                   |               |               |                   |
| Area         | 0.6631        | 0.0367        | 1.1766        | 2.1000e-004   |               | 8.2800e-003   | 8.2800e-003   |                | 8.2800e-003   | 8.2800e-003   | 0.0000         | 28.7973           | 28.7973           | 2.4000e-003   | 4.9000e-004   | 29.0041           |
| Energy       | 9.6600e-003   | 0.0827        | 0.0361        | 5.3000e-004   |               | 6.6700e-003   | 6.6700e-003   |                | 6.6700e-003   | 6.6700e-003   | 0.0000         | 379.9739          | 379.9739          | 0.0136        | 4.1800e-003   | 381.5593          |
| Mobile       | 0.7114        | 5.5463        | 6.1025        | 0.0225        | 1.4306        | 0.0205        | 1.4511        | 0.3833         | 0.0193        | 0.4027        | 0.0000         | 2,088.7835        | 2,088.7835        | 0.1639        | 0.0000        | 2,092.8812        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 14.9341        | 0.0000            | 14.9341           | 0.8826        | 0.0000        | 36.9985           |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 2.8086         | 56.3880           | 59.1966           | 0.2908        | 7.2900e-003   | 68.6398           |
| <b>Total</b> | <b>1.3842</b> | <b>5.6656</b> | <b>7.3153</b> | <b>0.0232</b> | <b>1.4306</b> | <b>0.0355</b> | <b>1.4660</b> | <b>0.3833</b>  | <b>0.0343</b> | <b>0.4176</b> | <b>17.7426</b> | <b>2,553.9427</b> | <b>2,571.6853</b> | <b>1.3533</b> | <b>0.0120</b> | <b>2,609.0829</b> |

Attachment: Greenhouse Gas Report (Nov 2018) (3376) : The proposal includes a General Plan

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2.2 Overall Operational

Mitigated Operational

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2       | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr          |                   |                   |               |               |                   |
| Area         | 0.6631        | 0.0367        | 1.1766        | 2.1000e-004   |               | 8.2800e-003   | 8.2800e-003   |                | 8.2800e-003   | 8.2800e-003   | 0.0000         | 28.7973           | 28.7973           | 2.4000e-003   | 4.9000e-004   | 29.0041           |
| Energy       | 9.6600e-003   | 0.0827        | 0.0361        | 5.3000e-004   |               | 6.6700e-003   | 6.6700e-003   |                | 6.6700e-003   | 6.6700e-003   | 0.0000         | 379.9739          | 379.9739          | 0.0136        | 4.1800e-003   | 381.5593          |
| Mobile       | 0.7114        | 5.5463        | 6.1025        | 0.0225        | 1.4306        | 0.0205        | 1.4511        | 0.3833         | 0.0193        | 0.4027        | 0.0000         | 2,088.7835        | 2,088.7835        | 0.1639        | 0.0000        | 2,092.8812        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 14.9341        | 0.0000            | 14.9341           | 0.8826        | 0.0000        | 36.9985           |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 2.8086         | 56.3880           | 59.1966           | 0.2908        | 7.2900e-003   | 68.6398           |
| <b>Total</b> | <b>1.3842</b> | <b>5.6656</b> | <b>7.3153</b> | <b>0.0232</b> | <b>1.4306</b> | <b>0.0355</b> | <b>1.4660</b> | <b>0.3833</b>  | <b>0.0343</b> | <b>0.4176</b> | <b>17.7426</b> | <b>2,553.9427</b> | <b>2,571.6853</b> | <b>1.3533</b> | <b>0.0120</b> | <b>2,609.0829</b> |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name       | Phase Type       | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|------------------|------------------|------------|----------|---------------|----------|-------------------|
| 1            | Site Preparation | Site Preparation | 3/1/2019   | 3/1/2019 | 5             | 1        |                   |

Acres of Grading (Site Preparation Phase): 0

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**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 5.3**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name       | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Rubber Tired Dozers       | 0      | 8.00        | 247         | 0.40        |
| Site Preparation | Tractors/Loaders/Backhoes | 0      | 8.00        | 97          | 0.37        |

**Trips and VMT**

| Phase Name       | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Site Preparation | 0                       | 0.00               | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

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**3.2 Site Preparation - 2019**

**Unmitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category      | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Fugitive Dust |               |               |               |               | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Off-Road      | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

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**3.2 Site Preparation - 2019**

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category      | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Fugitive Dust |               |               |               |               | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Off-Road      | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**4.0 Operational Detail - Mobile**

Attachment: Greenhouse Gas Report (Nov 2018) (3376) : The proposal includes a General Plan



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4.1 Mitigation Measures Mobile

|             | ROG     | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2  | Total CO2  | CH4    | N2O    | CO2e       |
|-------------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|--------|------------|
| Category    | tons/yr |        |        |        |               |              |            |                |               |             | MT/yr    |            |            |        |        |            |
| Mitigated   | 0.7114  | 5.5463 | 6.1025 | 0.0225 | 1.4306        | 0.0205       | 1.4511     | 0.3833         | 0.0193        | 0.4027      | 0.0000   | 2,088.7835 | 2,088.7835 | 0.1639 | 0.0000 | 2,092.8812 |
| Unmitigated | 0.7114  | 5.5463 | 6.1025 | 0.0225 | 1.4306        | 0.0205       | 1.4511     | 0.3833         | 0.0193        | 0.4027      | 0.0000   | 2,088.7835 | 2,088.7835 | 0.1639 | 0.0000 | 2,092.8812 |

4.2 Trip Summary Information

| Land Use                 | Average Daily Trip Rate |          |          | Unmitigated | Mitigated  |
|--------------------------|-------------------------|----------|----------|-------------|------------|
|                          | Weekday                 | Saturday | Sunday   | Annual VMT  | Annual VMT |
| Apartments Low Rise      | 819.84                  | 911.68   | 703.36   | 2,789,489   | 2,789,489  |
| Parking Lot              | 0.00                    | 0.00     | 0.00     |             |            |
| Regional Shopping Center | 1,872.15                | 1,872.15 | 1872.15  | 956,898     | 956,898    |
| Total                    | 2,691.99                | 2,783.83 | 2,575.51 | 3,746,387   | 3,746,387  |

4.3 Trip Type Information

| Land Use                 | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|--------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Low Rise      | 14.70      | 5.90       | 8.70        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| Parking Lot              | 16.60      | 8.40       | 6.90        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |
| Regional Shopping Center | 16.60      | 3.00       | 6.90        | 3.00       | 96.00      | 1.00        | 31             | 35       | 34      |

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4.4 Fleet Mix

| Land Use                 | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Low Rise      | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |
| Parking Lot              | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |
| Regional Shopping Center | 0.538064 | 0.038449 | 0.184390 | 0.122109 | 0.017402 | 0.005339 | 0.017250 | 0.067711 | 0.001365 | 0.001213 | 0.004629 | 0.000959 | 0.001120 |

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

|                         | ROG         | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e     |
|-------------------------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|----------|
| Category                | tons/yr     |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |          |
| Electricity Mitigated   |             |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 284.4012  | 284.4012  | 0.0117      | 2.4300e-003 | 285.4187 |
| Electricity Unmitigated |             |        |        |             |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      | 0.0000   | 284.4012  | 284.4012  | 0.0117      | 2.4300e-003 | 285.4187 |
| NaturalGas Mitigated    | 9.6600e-003 | 0.0827 | 0.0361 | 5.3000e-004 |               | 6.6700e-003  | 6.6700e-003 |                | 6.6700e-003   | 6.6700e-003 | 0.0000   | 95.5727   | 95.5727   | 1.8300e-003 | 1.7500e-003 | 96.1406  |
| NaturalGas Unmitigated  | 9.6600e-003 | 0.0827 | 0.0361 | 5.3000e-004 |               | 6.6700e-003  | 6.6700e-003 |                | 6.6700e-003   | 6.6700e-003 | 0.0000   | 95.5727   | 95.5727   | 1.8300e-003 | 1.7500e-003 | 96.1406  |

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**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                          | NaturalGas Use | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------------------|----------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| Land Use                 | kBTU/yr        | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |                    |                |
| Apartments Low Rise      | 1.74434e+006   | 9.4100e-003        | 0.0804        | 0.0342        | 5.1000e-004        |               | 6.5000e-003        | 6.5000e-003        |                | 6.5000e-003        | 6.5000e-003        | 0.0000        | 93.0848        | 93.0848        | 1.7800e-003        | 1.7100e-003        | 93.6380        |
| Parking Lot              | 0              | 0.0000             | 0.0000        | 0.0000        | 0.0000             |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Regional Shopping Center | 46620          | 2.5000e-004        | 2.2900e-003   | 1.9200e-003   | 1.0000e-005        |               | 1.7000e-004        | 1.7000e-004        |                | 1.7000e-004        | 1.7000e-004        | 0.0000        | 2.4878         | 2.4878         | 5.0000e-005        | 5.0000e-005        | 2.5026         |
| <b>Total</b>             |                | <b>9.6600e-003</b> | <b>0.0827</b> | <b>0.0361</b> | <b>5.2000e-004</b> |               | <b>6.6700e-003</b> | <b>6.6700e-003</b> |                | <b>6.6700e-003</b> | <b>6.6700e-003</b> | <b>0.0000</b> | <b>95.5727</b> | <b>95.5727</b> | <b>1.8300e-003</b> | <b>1.7600e-003</b> | <b>96.1406</b> |

**Mitigated**

|                          | NaturalGas Use | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------------------|----------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| Land Use                 | kBTU/yr        | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |                    |                |
| Apartments Low Rise      | 1.74434e+006   | 9.4100e-003        | 0.0804        | 0.0342        | 5.1000e-004        |               | 6.5000e-003        | 6.5000e-003        |                | 6.5000e-003        | 6.5000e-003        | 0.0000        | 93.0848        | 93.0848        | 1.7800e-003        | 1.7100e-003        | 93.6380        |
| Parking Lot              | 0              | 0.0000             | 0.0000        | 0.0000        | 0.0000             |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Regional Shopping Center | 46620          | 2.5000e-004        | 2.2900e-003   | 1.9200e-003   | 1.0000e-005        |               | 1.7000e-004        | 1.7000e-004        |                | 1.7000e-004        | 1.7000e-004        | 0.0000        | 2.4878         | 2.4878         | 5.0000e-005        | 5.0000e-005        | 2.5026         |
| <b>Total</b>             |                | <b>9.6600e-003</b> | <b>0.0827</b> | <b>0.0361</b> | <b>5.2000e-004</b> |               | <b>6.6700e-003</b> | <b>6.6700e-003</b> |                | <b>6.6700e-003</b> | <b>6.6700e-003</b> | <b>0.0000</b> | <b>95.5727</b> | <b>95.5727</b> | <b>1.8300e-003</b> | <b>1.7600e-003</b> | <b>96.1406</b> |

Attachment: Greenhouse Gas Report (Nov 2018) (3376) : The proposal includes a General Plan



Continental Village (Operations) - Riverside-South Coast County, Annual

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

|                          | Electricity Use | Total CO2       | CH4           | N2O                | CO2e            |
|--------------------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Land Use                 | kWh/yr          | MT/yr           |               |                    |                 |
| Apartments Low Rise      | 544349          | 173.4413        | 7.1600e-003   | 1.4800e-003        | 174.0618        |
| Parking Lot              | 83020           | 26.4520         | 1.0900e-003   | 2.3000e-004        | 26.5466         |
| Regional Shopping Center | 265230          | 84.5080         | 3.4900e-003   | 7.2000e-004        | 84.8103         |
| <b>Total</b>             |                 | <b>284.4012</b> | <b>0.0117</b> | <b>2.4300e-003</b> | <b>285.4187</b> |

**Mitigated**

|                          | Electricity Use | Total CO2       | CH4           | N2O                | CO2e            |
|--------------------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Land Use                 | kWh/yr          | MT/yr           |               |                    |                 |
| Apartments Low Rise      | 544349          | 173.4413        | 7.1600e-003   | 1.4800e-003        | 174.0618        |
| Parking Lot              | 83020           | 26.4520         | 1.0900e-003   | 2.3000e-004        | 26.5466         |
| Regional Shopping Center | 265230          | 84.5080         | 3.4900e-003   | 7.2000e-004        | 84.8103         |
| <b>Total</b>             |                 | <b>284.4012</b> | <b>0.0117</b> | <b>2.4300e-003</b> | <b>285.4187</b> |

**6.0 Area Detail**

Attachment: Greenhouse Gas Report (Nov 2018) (3376) : The proposal includes a General Plan

Continental Village (Operations) - Riverside-South Coast County, Annual

6.1 Mitigation Measures Area

|             | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O         | CO2e    |
|-------------|---------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-------------|---------|
| Category    | tons/yr |        |        |             |               |              |             |                |               |             | MT/yr    |           |           |             |             |         |
| Mitigated   | 0.6631  | 0.0367 | 1.1766 | 2.1000e-004 |               | 8.2800e-003  | 8.2800e-003 |                | 8.2800e-003   | 8.2800e-003 | 0.0000   | 28.7973   | 28.7973   | 2.4000e-003 | 4.9000e-004 | 29.0041 |
| Unmitigated | 0.6631  | 0.0367 | 1.1766 | 2.1000e-004 |               | 8.2800e-003  | 8.2800e-003 |                | 8.2800e-003   | 8.2800e-003 | 0.0000   | 28.7973   | 28.7973   | 2.4000e-003 | 4.9000e-004 | 29.0041 |

Attachment: Greenhouse Gas Report (Nov 2018) (3376) : The proposal includes a General Plan

Continental Village (Operations) - Riverside-South Coast County, Annual

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|-----------------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| SubCategory           | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |                    |                |
| Architectural Coating | 0.0545        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Consumer Products     | 0.5699        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Hearth                | 2.7200e-003   | 0.0232        | 9.8800e-003   | 1.5000e-004        |               | 1.8800e-003        | 1.8800e-003        |                | 1.8800e-003        | 1.8800e-003        | 0.0000        | 26.8954        | 26.8954        | 5.2000e-004        | 4.9000e-004        | 27.0552        |
| Landscaping           | 0.0360        | 0.0135        | 1.1667        | 6.0000e-005        |               | 6.4000e-003        | 6.4000e-003        |                | 6.4000e-003        | 6.4000e-003        | 0.0000        | 1.9019         | 1.9019         | 1.8800e-003        | 0.0000             | 1.9490         |
| <b>Total</b>          | <b>0.6631</b> | <b>0.0367</b> | <b>1.1766</b> | <b>2.1000e-004</b> |               | <b>8.2800e-003</b> | <b>8.2800e-003</b> |                | <b>8.2800e-003</b> | <b>8.2800e-003</b> | <b>0.0000</b> | <b>28.7973</b> | <b>28.7973</b> | <b>2.4000e-003</b> | <b>4.9000e-004</b> | <b>29.0041</b> |

Attachment: Greenhouse Gas Report (Nov 2018) (3376) : The proposal includes a General Plan



Continental Village (Operations) - Riverside-South Coast County, Annual

**6.2 Area by SubCategory**

**Mitigated**

|                       | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|-----------------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| SubCategory           | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |                    |                |
| Architectural Coating | 0.0545        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Consumer Products     | 0.5699        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Hearth                | 2.7200e-003   | 0.0232        | 9.8800e-003   | 1.5000e-004        |               | 1.8800e-003        | 1.8800e-003        |                | 1.8800e-003        | 1.8800e-003        | 0.0000        | 26.8954        | 26.8954        | 5.2000e-004        | 4.9000e-004        | 27.0552        |
| Landscaping           | 0.0360        | 0.0135        | 1.1667        | 6.0000e-005        |               | 6.4000e-003        | 6.4000e-003        |                | 6.4000e-003        | 6.4000e-003        | 0.0000        | 1.9019         | 1.9019         | 1.8800e-003        | 0.0000             | 1.9490         |
| <b>Total</b>          | <b>0.6631</b> | <b>0.0367</b> | <b>1.1766</b> | <b>2.1000e-004</b> |               | <b>8.2800e-003</b> | <b>8.2800e-003</b> |                | <b>8.2800e-003</b> | <b>8.2800e-003</b> | <b>0.0000</b> | <b>28.7973</b> | <b>28.7973</b> | <b>2.4000e-003</b> | <b>4.9000e-004</b> | <b>29.0041</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Attachment: Greenhouse Gas Report (Nov 2018) (3376) : The proposal includes a General Plan

Continental Village (Operations) - Riverside-South Coast County, Annual

|             | Total CO2 | CH4    | N2O         | CO2e    |
|-------------|-----------|--------|-------------|---------|
| Category    | MT/yr     |        |             |         |
| Mitigated   | 59.1966   | 0.2908 | 7.2900e-003 | 68.6398 |
| Unmitigated | 59.1966   | 0.2908 | 7.2900e-003 | 68.6398 |

7.2 Water by Land Use

Unmitigated

|                          | Indoor/Outdoor Use | Total CO2      | CH4           | N2O                | CO2e           |
|--------------------------|--------------------|----------------|---------------|--------------------|----------------|
| Land Use                 | Mgal               | MT/yr          |               |                    |                |
| Apartments Low Rise      | 7.29725 / 4.60044  | 48.8747        | 0.2397        | 6.0100e-003        | 56.6589        |
| Parking Lot              | 0 / 0              | 0.0000         | 0.0000        | 0.0000             | 0.0000         |
| Regional Shopping Center | 1.55552 / 0.953385 | 10.3219        | 0.0511        | 1.2800e-003        | 11.9809        |
| <b>Total</b>             |                    | <b>59.1966</b> | <b>0.2908</b> | <b>7.2900e-003</b> | <b>68.6398</b> |

Continental Village (Operations) - Riverside-South Coast County, Annual

7.2 Water by Land Use

Mitigated

|                          | Indoor/Outdoor Use | Total CO2      | CH4           | N2O                | CO2e           |
|--------------------------|--------------------|----------------|---------------|--------------------|----------------|
| Land Use                 | Mgal               | MT/yr          |               |                    |                |
| Apartments Low Rise      | 7.29725 / 4.60044  | 48.8747        | 0.2397        | 6.0100e-003        | 56.6589        |
| Parking Lot              | 0 / 0              | 0.0000         | 0.0000        | 0.0000             | 0.0000         |
| Regional Shopping Center | 1.55552 / 0.953385 | 10.3219        | 0.0511        | 1.2800e-003        | 11.9809        |
| <b>Total</b>             |                    | <b>59.1966</b> | <b>0.2908</b> | <b>7.2900e-003</b> | <b>68.6398</b> |

8.0 Waste Detail

8.1 Mitigation Measures Waste

Attachment: Greenhouse Gas Report (Nov 2018) (3376) : The proposal includes a General Plan



Continental Village (Operations) - Riverside-South Coast County, Annual

**Category/Year**

|             | Total CO2 | CH4    | N2O    | CO2e    |
|-------------|-----------|--------|--------|---------|
|             | MT/yr     |        |        |         |
| Mitigated   | 14.9341   | 0.8826 | 0.0000 | 36.9985 |
| Unmitigated | 14.9341   | 0.8826 | 0.0000 | 36.9985 |

**8.2 Waste by Land Use**

**Unmitigated**

|                          | Waste Disposed | Total CO2      | CH4           | N2O           | CO2e           |
|--------------------------|----------------|----------------|---------------|---------------|----------------|
| Land Use                 | tons           | MT/yr          |               |               |                |
| Apartments Low Rise      | 51.52          | 10.4581        | 0.6181        | 0.0000        | 25.9095        |
| Parking Lot              | 0              | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Regional Shopping Center | 22.05          | 4.4760         | 0.2645        | 0.0000        | 11.0890        |
| <b>Total</b>             |                | <b>14.9340</b> | <b>0.8826</b> | <b>0.0000</b> | <b>36.9985</b> |

Attachment: Greenhouse Gas Report (Nov 2018) (3376 : The proposal includes a General Plan

Continental Village (Operations) - Riverside-South Coast County, Annual

**8.2 Waste by Land Use**

**Mitigated**

|                          | Waste Disposed | Total CO2      | CH4           | N2O           | CO2e           |
|--------------------------|----------------|----------------|---------------|---------------|----------------|
| Land Use                 | tons           | MT/yr          |               |               |                |
| Apartments Low Rise      | 51.52          | 10.4581        | 0.6181        | 0.0000        | 25.9095        |
| Parking Lot              | 0              | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Regional Shopping Center | 22.05          | 4.4760         | 0.2645        | 0.0000        | 11.0890        |
| <b>Total</b>             |                | <b>14.9340</b> | <b>0.8826</b> | <b>0.0000</b> | <b>36.9985</b> |

**9.0 Operational Offroad**

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|----------------|--------|----------------|-----------------|---------------|-----------|
|----------------|--------|----------------|-----------------|---------------|-----------|

**User Defined Equipment**

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

Attachment: Greenhouse Gas Report (Nov 2018) (3376 : The proposal includes a General Plan

Continental Village (Operations) - Riverside-South Coast County, Annual

## 11.0 Vegetation

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Attachment: Greenhouse Gas Report (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change



**PHASE I ENVIRONMENTAL SITE ASSESSMENT**

Continental Village  
Moreno Valley, California

Submitted to

**Carlson Strategic Land Solutions**  
San Juan Capistrano, California

Prepared for

**CARLSON STRATEGIC LAND SOLUTIONS**  
27134A Paseo Espada Suite 323  
San Juan Capistrano, CA 92675

Prepared by

**GROUP DELTA CONSULTANTS, INC.**  
32 Mauchly, Suite B  
Irvine, California 92618  
GDC Project No. EN324

March 29, 2018



# GROUP DELTA

**Carlson Strategic Land Solutions**  
27134A Paseo Espada Suite 323  
San Juan Capistrano, CA 92675

March 29, 2018  
Project No. EN324

Attention: Peter K. Carlson  
President

SUBJECT: Phase I Environmental Site Assessment (ESA)  
Continental Village  
Northeast corner of Krameria Ave. and Lasselle St.  
Moreno Valley, California

Dear Mr. Carlson:

Group Delta Consultants, Inc. is pleased to submit to Carlson Strategic Land Solutions this Phase I Environmental Site Assessment report for the proposed Continental Village development located in Moreno Valley, California. This report discusses our project purpose, scope of work, execution of work, conclusions, and recommendations for the site. This Environmental Site Assessment was performed in general accordance with our proposal/authorization on February 23, 2018.

We appreciate your selection of Group Delta Consultants for this project and look forward to assisting you further on this and other projects. If you have any questions, please do not hesitate to contact us.

Should you have any questions regarding this report, please feel free to call us at (949) 450-2100.

Sincerely,  
**GROUP DELTA CONSULTANTS, INC.**

Glenn Burks, Ph.D., P.E.  
Principal, Director of Environmental Services

Jerry Sherman  
Hazardous Materials Service Mgr.



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Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

## PHASE I ENVIRONMENTAL SITE ASSESSMENT CONTINENTAL VILLAGE

### EXECUTIVE SUMMARY

Carlson Strategic Land Solutions (herein referred to as Client) has engaged Group Delta Consultants, Inc. (GDC) to perform a Phase I Environmental Site Assessment (ESA) for a 10.7-acre site located on the northwest corner of Krameria Ave. and Lasselle St. (Site) in Moreno Valley, California 92555. The Site is identified by the Riverside County Assessor's Parcel Number (APN) 308-040-050, and is currently under consideration for residential development. The Site is currently undeveloped.

This Phase I ESA was performed in accordance with the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Designation E1527-13. This version of the ASTM standard complies with the Federal All Appropriate Inquiry (AAI) rule (40 Code of Federal Regulations [CFR] Part 312 – Standards and Practices for All Appropriate Inquiries). The purpose of the Phase I ESA is to review, evaluate, and document present and past land use and practices, and visually examine Site conditions to identify Recognized Environmental Conditions (RECs). The Phase I ESA included a Site reconnaissance, observation of adjacent properties, environmental regulatory agency records review, review of available historic documents, and an interview.

A Site reconnaissance was performed on March 20, 2018 as part of the ESA to observe current conditions throughout the Site. No observations of environmental concern were observed during the Site reconnaissance. No RECs were identified as a result of the Site reconnaissance.

Group Delta interviewed Mr. Andrew Spousta with Continental East Development, Inc. regarding knowledge of the Site on March 26, 2018. Mr. Spousta stated to his knowledge that no hazardous waste use, illicit dumping, or unauthorized releases have occurred at the Property.

This assessment also included a review of available federal and state data reported by Environmental Data Resources (EDR), available regulatory agency environmental records, and available site history and records. The review did not identify any RECs for the Site. The review also included properties in the vicinity of the Site. Records indicated listed locations within ½ mile of the Site as listed in the EDR report. However, based on type of regulatory listing, regulatory status of the cases, and/or location with respect to regional groundwater flow, the likelihood of Site contamination from an off-site source is considered low.

The information procured during this investigation was used to identify, to the extent practical and within the limitations of the Scope, RECs associated with the Site due to current or past land use. This assessment has revealed no evidence of RECs in association with the Site.

No further assessment appears warranted at this time.



## 1.0 INTRODUCTION

### 1.1 Background and Project Description

Carlson Strategic Land Solutions (herein referred to as Client) has engaged Group Delta Consultants, Inc. (GDC) to perform a Phase I Environmental Site Assessment (ESA) for a 10.7-acre site located on the northeast corner of Krameria Ave. and Lasselle St. (Site) in Moreno Valley, California 92555. The Site is identified by the Riverside County Assessor's Parcel Numbers (APN's) 308-040-050, and is currently under consideration for residential development. The Site is undeveloped.

### 1.2 Purpose

The purpose of the Phase I ESA is to review, evaluate, and document present and past land uses and practices, and visually examine Site conditions in order to identify Recognized Environmental Conditions (RECs). A REC is defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The REC term does not include *de minimis* conditions that generally do not present a threat to human health or the environment, and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

### 1.3 Detailed Scope of Work

GDC has interpreted American Society for Testing and Materials (ASTM) E1527-13 as the guidance document and used its provisions to the extent deemed appropriate for this report. In general, the scope of work included:

- Review of available information to describe the general geology and hydrogeology at the Site and adjacent areas;
- Search of regulatory records regarding possible hazardous material handling, spills, storage, or production at the Site or in its vicinity;
- Review of on-line available data including databases maintained by the Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB);
- Perform agency records review of available files from the South Coast Air Quality Management District, Riverside County Department of Environmental Health, Department of Transportation Pipeline and Hazardous Materials Administration (PHMSA) National Pipeline Mapping System (NPMS), and Division of Oil, Gas, and Geothermal Resources (DOGGR) for onsite wells;
- Review of historic aerial photographs, historic topographic maps, Sanborn® fire maps, City Directories, and a radius map database search provided by Environmental Data Resources, Inc. (EDR);

- Reconnaissance of the Site and the immediately surrounding area to identify indicators of the existence of hazardous materials or RECs;
- Interview of an owner representative for the Site;
- Development of conclusions and findings, and;
- Preparation of a report describing the assessment and presenting the results and findings.

A statement of interpretive limitations is contained in Section 1.5 of the report.

#### 1.4 Significant Assumptions

As stated in the previous section, this ESA was conducted in general accordance with ASTM E1527-13 to the extent deemed appropriate. This was done to identify and analyze environmental conditions that constitute existing, past, or potential environmental risks associated with the Site. Performance in accord with this standard is intended to reduce, but not eliminate uncertainty with respect to the potential for RECs associated with the Site.

#### 1.5 Limitations and Exceptions

This ESA report is intended for the sole use of the Client and on the specific project identified. Our services have been performed under mutually agreed-upon terms and conditions. If other parties wish to rely on this report, please have them contact us so that a mutual understanding and agreement of the terms and conditions for our services can be established prior to their use and reliance of this report and the information it contains.

The findings and opinions presented are relative to the dates of our Site work and should not be relied on to represent conditions at substantially later dates. The opinions included herein are based on information obtained during the study and our experience. If additional information becomes available, which might impact our environmental findings, we request the opportunity to review the information, reassess the potential conditions, and modify our opinions, if warranted.

Although this assessment has attempted to identify the potential for environmental impacts to the Site, potential sources of contamination may have escaped detection due to: (1) the limited scope of this assessment, (2) the inaccuracy of public records, and/or (3) the presence of undetected or unreported environmental incidents.

It was not within the scope of this assessment to address issues not included in ASTM E1527-13 (such as radon, lead in drinking water, naturally-occurring hazardous materials or vegetation, endangered species, wetlands, etc.). Furthermore, it was not the purpose of this study to determine the degree or extent of contamination, if any, at the Site.

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar conditions, by reputable environmental consultants practicing in this or

similar localities. No other warranty, expressed or implied, is made regarding the professional information in this report.

### **1.6 Special Terms and Conditions**

All appropriate inquiry (AAI) into the prior uses of the Site was made in accordance with good commercial and customary practices to identify and analyze RECs constituting existing, past or potential environmental conditions in connection with the Site.

There are no special terms and conditions that apply to the preparation of this report.

### **1.7 User Reliance**

This assessment was performed at the request of the Client, utilizing methods and procedures consistent with good commercial or customary practices designed to conform to acceptable industry standards. The assessment and conclusions presented in this report represent the best professional judgment of the Environmental Professional based on the conditions that existed during the assessment and the information and data available to us during the course of this assignment.

Factual information regarding operations and conditions provided by the Client, owner, or their representative has been assumed to be correct and complete.

The report may be distributed and relied upon by the Client, its successors and assigns. Reliance on the information and conclusions presented in this report by any other party or parties is not authorized without the written consent of GDC.



## 2.0 SITE DESCRIPTION

### 2.1 Location and Legal Description of the Site

The Site comprises 10.7 acres and is located on the northeast corner of Krameria Ave. and Lasselle St. (Site) in Moreno Valley, California 92555. The Site is identified by the Riverside County Assessor's Parcel Number (APN) 308-040-050, and is currently under consideration for residential development. The Site is undeveloped.

A complete legal description of the Site is contained in the Preliminary Title Report provided by the Client. The Preliminary Title Report is presented as Appendix A.

### 2.2 Site and Vicinity General Characteristics

The west portion of the Site, Phase 4 of development, is square in shape and approximately 2.3 acres. The east portion of the Site, Phase 2 of development, is triangular and approximately 8.4 acres. The Site is currently undeveloped. The parcel is rough graded with little vegetation present.

The Site is bordered on the west by Lasselle Street on the south and east by Krameria Avenue and to the north by new construction (Phase 1 of development) and Lasselle Elementary School. The Site's vicinity is generally characterized by residential developments intermixed with a shopping center, a church, condominiums, schools, and Lake Perris Recreational Facility.

### 2.3 Current Use of the Site

The Site is composed of undeveloped graded land.

Photographic documentation of the Site is provided in Appendix B.

### 2.4 Physical Setting

The Site is located at an elevation of approximately 1,550 feet. The presumed flow direction of surface water is east to west towards a flood control channel located approximately 1,900 feet to the west of the Site.

A man-made lake is located approximately 900 feet to the northwest of the Site. Terri Peak, Mount Russell, and Lake Perris are all east of the Site.

### 2.5 Current Uses of Adjacent Properties

The properties to the north include Phase 1 of development and Lasselle Elementary School, the properties to the south, east, and west of the Site are residential developments.

### **3.0 USER PROVIDED INFORMATION**

#### **3.1 Title Records**

#### **3.2 Environmental Liens or Activity and Other Use Limitations (AUL)**

No reports of environmental liens or AULs were provided by the User during this ESA or identified in the title report.

#### **3.3 Owner/Occupant Interviews**

##### **3.3.1 Current Owners**

Group Delta interviewed Mr. Andrew Spousta with Continental East Development, Inc. regarding knowledge of the Site on March 26, 2018. According to Mr. Spousta, the current owner of the Site has owned the site since approximately 2013. According to Mr. Spousta, the Site has undergone multiple grading configurations, but has never been developed. Mr. Spousta stated to his knowledge that no hazardous waste use, illicit dumping, or unauthorized releases have occurred at the Property.

##### **3.3.2 Previous Owners**

The previous owner of the Site was not identified during this Phase I ESA.

#### **3.4 Reason for Performing ESA**

The purpose of the ESA is to identify apparent and potential sources of contamination for the Site that, by their association or proximity to the Site, could represent an REC. This report can serve to identify environmental conditions at the Site that may impact the proposed project and may permit the User to satisfy one of the requirements to qualify for the bona fide prospective purchaser limitations on Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) liability (42 U.S.C. §9601). It was not the purpose of this study to determine the degree or extent of contamination, if any, but rather to identify the potential for contamination or environmental concern.

#### **3.5 Review of Existing Site Reports**

The User provided reporting prepared for the Site. A summary of study reports provided to Group Delta is as follows:

1. Negative Declaration, November 2012

After review of documents provided by the User, no issues of environmental concern were noted.

## 4.0 ENVIRONMENTAL DATA SEARCH

### 4.1 Database Information on the Site and the Adjacent Properties

#### 4.1.1 Standard Environmental Record Sources for the Site and Vicinity

GDC conducted a review of reasonably ascertainable environmental regulatory agency databases to identify known or suspected environmental concerns or RECs that may be associated with the Site. A search of readily available environmental records was obtained from EDR of Shelton, Connecticut (Appendix C). The purpose of the regulatory database report review was to evaluate to the extent possible whether prior activities, processes, operations, or actions on the Site, adjoining properties, and nearby locations have the potential to adversely impact the environmental integrity of the Site, are suspected sources of environmental contamination, or present RECs for the Site. The regulatory database report provides information regarding current operations and prior regulatory listings for the Site and previous owners and/or operators on the Site. The presence or absence of information about the Site does not necessarily mean that there are or are not environmental issues associated with the Site.

The regulatory database report includes a list of government databases searched, a statistical profile listing the number of properties within ASTM Standard Practice specified search radii, selected detailed information from environmental regulatory agency databases, and a map illustrating the identified properties, sites, or facilities of interest.

The regulatory database report provides a mechanism to evaluate a relatively large number of environmental regulatory agency databases and eliminate many properties, sites, operations, and/or facilities that have a low potential of adversely impacting the Site. However, it should be noted that the information included in the regulatory database report is not necessarily all-inclusive and environmental regulatory agency files may have been purged by public officials prior to release to the public. In addition, mapping errors may not reflect actual distances and directions between the Site and the properties, sites, operations, and/or facilities listed in the regulatory database report.

The regulatory database report includes information from federal, state, local, military, and tribal environmental regulatory agency databases.

#### 4.1.2 Site Records

The property was not identified on any databases in the EDR regulatory database report.

#### 4.1.3 Vicinity Records Search

Multiple sites were listed in the EDR database radius search for the project area. The radius search area included the project limits and a one-mile radius from the project limits. Numerous



properties within this search area were listed on the EDR database and were found not to pose a hazardous waste impact based on the following criteria, or a combination thereof:

- The regulatory case status of the property is identified as completed and closed;
- The type of media affected was identified as soil only;
- The release was in nominal amounts or concentrations as to not present a hazardous waste impact concern to the project;
- The listing was identified on low-hazardous risk databases (i.e., underground storage tank [UST] HAZNET, small quantity generator databases) with no reported spills, cleanups, or violations;
- The property is identified on a low-hazardous risk database as receiving one or more violations, but the nature of violations received was associated with financial, administrative, or record-keeping practices only;
- The distance of the listing to project limits is great enough that it does not present a hazardous waste impact concern to the project, and/or;
- The listing is down-gradient or cross-gradient from the project limits.

Based on these criteria, these listings are not considered an environmental concern to the project and were not evaluated further.

Table 1 provides a summary of properties in the vicinity of the site identified on high-hazardous risk databases (identify which databases of concern they are listed on here in parentheses) in the EDR regulatory database report. Table X includes the operating business name and address associated with the listing; Map ID number of the listing; associated database(s) on which the listing occurs; and a summary of information pertaining to the listing. For a determination of whether the given listing is a REC or AOC to the project, refer to Section 4.3.2 – Local Department Records.

**Table 1: Site Vicinity Findings**

| <b>Environmental Atlas Findings – Site Vicinity Findings</b>  |
|---|
| <b>Lasselle Elementary School, Krameria Avenue, Moreno Valley, CA</b>   |
| Map Key Number 1  |
| EDR Listing of Concern and Associated Databases: Envirostor/Schools   |
| The property is located upgradient of the site to the immediate north. DTSC conducted an assessment prior to the school being constructed. Previous property use is identified as agricultural. The database report states that no contaminants were found on the property in 2003. |

A copy of the Radius Search Map is provided in Appendix C.

## 4.2 Historical Use Information on the Site and Adjoining Properties

GDC reviewed available historical information to ascertain the historical uses of the Site and the adjoining properties. Reviewed information included Sanborn insurance maps, historic aerial photographs, historic topographic maps, and city directories.

### 4.2.1 Sanborn Map Review

GDC reviewed a certified Sanborn map report prepared by EDR. After a complete search of the Sanborn Library and fire insurance maps by EDR, fire insurance maps of the target property were not found.

A copy of the Sanborn search findings is provided in Appendix C of this report.

### 4.2.2 Historical Aerial Photography and Topographic Map Review

Aerial photographs and historical topographic maps of the Site and adjoining properties were provided by EDR and reviewed to identify historical land development. Photographs and historical topographic maps dating between 1901 and 2012 were reviewed. Table 2 summarizes the results of the aerial photograph and topographic map review. Copies of the aerial photographs and topographic maps provided by EDR are included as Appendix C.

**Table 2: Summary of Historical Review**

| Table 2<br>Summary of Historical Review |                               |  |  |
|---|-------------------------------|--|--|
| Year                                    | Source and Scale              | Summary  |  |
| 1901 through 1941                       | Topographic Map<br>30-minute  | Due to the scale of the maps from 1901 through 1941, no inferences regarding land use for the Site, adjacent properties, or surrounding vicinity could be ascertained. |  |
| 1942 through 1943                       | Aerial Photographs<br>1:500   | The Site appears to be undeveloped/agriculture.  | Adjacent properties are undeveloped/agriculture.   |
| 1944 through 1953                       | Topographic Maps<br>15-minute | The Site appears to be undeveloped.<br>Perris Boulevard appears west of the Site.  |  |
| 1954 through 1967                       | Aerial Photographs<br>1:500   | The Site appears to be undeveloped/agriculture.<br><br>A school was constructed to the northwest of the Site.  | Adjacent properties appeared to be the following:<br>North: No changes were noted from the previous mapped year<br>South: No changes were noted from the previous mapped year<br>East: No changes were noted from the previous mapped year |

|                   |                          |  |   |
|-------------------|--------------------------|--|---|
|                   |                          |  | West: No changes were noted from the previous mapped year   |
| 1968 through 1973 | Aerial Photographs 1:500 | The Site appears to be undeveloped/agriculture.<br><br>The surrounding vicinity appeared to consist of a mix of a trailer park, some residences and pump stations. | Adjacent properties appeared to be the following:<br>North: No changes were noted from the previous mapped year<br>South: The gas station appeared to be replaced with a strip mall<br>East: No changes were noted from the previous mapped year<br>West: No changes were noted from the previous mapped year |
| 1974 through 1980 | Aerial Photographs 1:500 | The Site appears to be undeveloped/agriculture.<br><br>The surrounding vicinity appeared to consist of a mix of a trailer park, some residences and pump stations. | Adjacent properties appeared to be the following:<br>North: No changes were noted from the previous mapped year<br>South: No changes were noted from the previous mapped year<br>East: No changes were noted from the previous mapped year<br>West: No changes were noted from the previous mapped year       |
| 1980 through 2012 | Aerial Photographs 1:500 | The Site appears to be undeveloped<br><br>The surrounding vicinity appeared to consist of new streets residences and a school                                      | Adjacent properties appeared to be the following:<br>North: School, residential<br>South: Residential<br>East: Residential<br>West: Residential   |

Representative aerial photographs and topographic maps are included in Appendix C.

#### 4.2.3 City Directory Report

The EDR City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. City directories generally include listings of residents or businesses organized both alphabetically and alphanumerically by street names and street addresses and are prepared for many urban and suburban areas of the United States dating back to the early 1900s.

GDC reviewed the city directory search prepared by EDR. The search was performed for the Site and the adjacent properties. According to the city directory, the vicinity of the Site was mainly comprised of residences as early as 1997. Other businesses identified within the Site vicinity include churches and schools. No businesses that would present an environmental concern to the subject Site were identified. No RECs were identified as a result of the review of the EDR City Directory Report.



The city directory search results prepared by EDR are presented in Appendix C.

## 5.0 REGULATORY AGENCY RECORDS

### 5.1 Online Available Records

#### 5.1.1 Department of Toxic Substances Control (DTSC)

GDC reviewed available files of the State of California DTSC published on the internet records database Envirostor. The purpose of this search was to identify any evidence of unauthorized releases of hazardous materials to the surface, subsurface soil, and/or groundwater. The Site was not identified on the Envirostor database.

Lasselle Elementary School, located upgradient of the site to the immediate north is listed on the Envirostor database. DTSC conducted an assessment of the property prior to the school being constructed. The database states the property was used for dry farm grain or grass cover crops, indicating the possibility for limited pesticide application, if any. DTSC concluded that neither a release of hazardous material that would pose a threat to human health or the environment under unrestricted land use, was indicated at the property. Further environmental investigation beyond a Phase I ESA was not required by DTSC prior to school construction.

#### 5.1.2 State Water Resources Control Board (SWRCB)

GDC reviewed available files through the online GeoTracker database maintained by the California SWRCB. GeoTracker maintains files related to UST facilities, LUSTs, site clean-ups, disposal sites, wells, and information related to hazardous materials and/or waste. The Site is not listed in the GeoTracker database, and no cases within 0.5 miles of the Site are listed. No RECs were identified as a result of the GeoTracker database review.

#### 5.1.3 Division of Oil, Gas, and Geothermal Resources (DOGGR)

GDC reviewed mapping available on the DOGGR website for oil and gas wells on or in the vicinity of the Project. The mapping did not include any oil and gas wells on, or within 1500 feet of the Site. No RECs were identified as a result of the DOGGR database review.

#### 5.1.4 Office of California State Fire Marshall

GDC reviewed available files through the online National Pipeline Mapping System (NPMS) database maintained by the Office of California State Fire Marshal. NPMS is a Geographic Information System (GIS) database of pipeline information for the specific intent of emergency response. The database does not include natural gas lines or liquefied natural gas facilities.

No pipelines were mapped on or within 1500 feet of the Site. No RECs were identified as a result of the NPMS database review.

## 5.2 Local Department Records

We requested available records from the following two local agencies:

1. Riverside County Department of Environmental Health
2. South Coast Air Quality Management District

### 5.2.1 Riverside County Department of Environmental Health (DEH)

Riverside County DEH requires a property address to search for records. Historically, the property has not had an address. It is assumed no records exist at the DEH.

### 5.2.2 South Coast Air Quality Management District (SCAQMD)

A search for the Site and its vicinity was conducted on the SCAQMD online Facility Information Detail (FIND) database. According to the SCAQMD, no records for the Site are on file with the agency.



## 6.0 SITE RECONNAISSANCE

### 6.1 Methodology and Limiting Conditions

A site reconnaissance was performed on March 20, 2018 by Jack Packwood of Group Delta. The Site was observed by traversing The Site by foot while noting evidence of environmental conditions. The Site was accessed from the northeastern portion of the Site.

The purpose of the Site reconnaissance was to observe the present Site use and conditions as they relate to the possible presence of potentially hazardous substances and petroleum products. In addition, adjoining properties and roads were visually observed from the Site to identify land uses and the potential presence of structures, operations, activities, or environmental conditions that may involve the use, treatment, storage, disposal, or generation of hazardous wastes and/or petroleum products that may pose an environmental concern to the Site. Photographic documentation of the reconnaissance is included in Appendix B.

### 6.2 General Site Setting

The Site is mostly vacant, but has undergone rough grading. Some materials storage and stormwater best management practices were observed. The developer appears to be preparing for construction activities onsite.

### 6.3 Adjacent Properties Site Observations

The properties adjacent to the Site were observed from the Site to assess if they had potential to present RECs for the Site.

An elementary school is located north-adjacent to the Site, and single- and multi-family residential developments are located to the east, south, and west. All properties adjacent to the Site were well-maintained and did not appear to be of environmental concern.

### 6.4 Site Visit Findings

The following observations were made during the suite reconnaissance:

- The Site has been sprayed with soil stabilizer as erosion control and stormwater best management practices are in place throughout the Site.
- A construction trailer has been placed in the northeast corner of the Site.
- Staging of construction materials including some equipment, pipe and fittings, shipping containers, hardscape material, and blocks was observed throughout the Site.
- A concrete wash-out was observed onsite.
- Stormwater discharges from Lasselle Elementary School onto the Site and traverses the Site in a visqueen-lined channel.

- Pooled stormwater was observed due to the recent rains.
- Oil was observed dripping from grading equipment and drip pans were observed to be damaged and full of extraneous material. Stained soil was observed. This is considered a *de minimis* environmental condition.

## 7.0 SIGNIFICANT DATA GAPS

### 7.1 Data Gaps

In general, a Data Gap is the inability to gather information as prescribed in the ASTM Standard Practice despite good faith efforts. This may include, but not be limited to, a lack of historical information, inability to interview knowledgeable individuals, or inspect portions of the Site.

No data gaps were encountered during this assessment.

### 7.2 Data Failures

The objective of reviewing historical information is to identify all obvious uses of the Site from first developed use or 1940, whichever is earlier, in order to identify the likelihood of previous uses resulting in a recognized environmental condition(s). Generally, a Data Failure is when all obvious uses of the site cannot be determined despite gathering and reviewing all of the standard historical sources that are reasonably ascertainable. A historical source is considered reasonably ascertainable if it is (1) publicly available, (2) obtainable within a reasonable period of time and at a reasonable cost, and (3) practically reviewable.

The Site uses were identified back to 1901. Therefore, data failure was not encountered during the course of this assessment.



## 8.0 FINDINGS AND CONCLUSIONS

GDC has performed a Phase I ESA for Carlson Strategic Land Solutions for a 10.7-acre Site located on the northwest corner of Krameria Ave. and Lasselle St. in Moreno Valley, California. This ESA was conducted in general accordance with the scope of work, under guidance provided by the ASTM E1527-13 standard, and in a manner generally consistent with the agreement between the Client and GDC for this type of report.

The information procured during this investigation was used to identify, to the extent practical and within the limitations of the Scope, RECs associated with the Site due to current or past land use. No RECs were identified during this assessment.

The Site was historically used for agriculture, reportedly for dry farm grain or grass cover crops. However, the residual pesticides are not considered a potential environmental concern for the Site. First, the type of farming is associated with limited or no pesticide usage. Second, DTSC conducted an assessment of the elementary school site immediately north of the property that has the same history as the Site and concluded that neither a release of hazardous material that would pose a threat to human health or the environment under unrestricted land use, was indicated at the property. Last, the Site has been rough graded on multiple occasions; and therefore, any original topsoil has been dispersed and/or diluted on multiple occasions.

## 9.0 OPINIONS

We have performed a Phase I ESA of the subject Site in accordance with the scope of work and limitations of ASTM E1527-13. The information procured during this investigation was used to identify, to the extent practical and within the limitations of the Scope, RECs associated with the Site due to current or past land use. This assessment has revealed no evidence of RECs at the Site. No further assessment appears warranted at this time.

## 10.0 DEVIATIONS

There were no deviations to the ASTM Standard Practice associated with the preparation and development of this Phase I ESA.



## 11.0 REFERENCES

California Department of Toxic Substances Control, EnviroStor Database, March 26, 2018.  
[www.envirostor.dtsc.ca.gov](http://www.envirostor.dtsc.ca.gov).

Department of Transportation, National Pipeline Mapping System, March 26, 2018.  
<https://www.npms.phmsa.dot.gov/PublicViewer/>,

Environmental Data Resources, Inc., The EDR Radius Map Report with GeoCheck dated March 14, 2018.

Environmental Data Resources, Inc., Certified Sanborn Map Report dated March 14, 2018.

Environmental Data Resources, Inc., Historical Topographic Map Report dated March 14, 2018.

Environmental Data Resources, Inc., The EDR-City Directory Image Report dated March 14, 2018.

Environmental Data Resources, Inc. Aerial Photo Decade Package dated March 14, 2018.

Google Maps, <http://maps.google.com>

Office of California State Fire Marshal, March 26, 2018.  
[http://osfm.fire.ca.gov/pipeline/pipeline\\_mapping.php](http://osfm.fire.ca.gov/pipeline/pipeline_mapping.php).

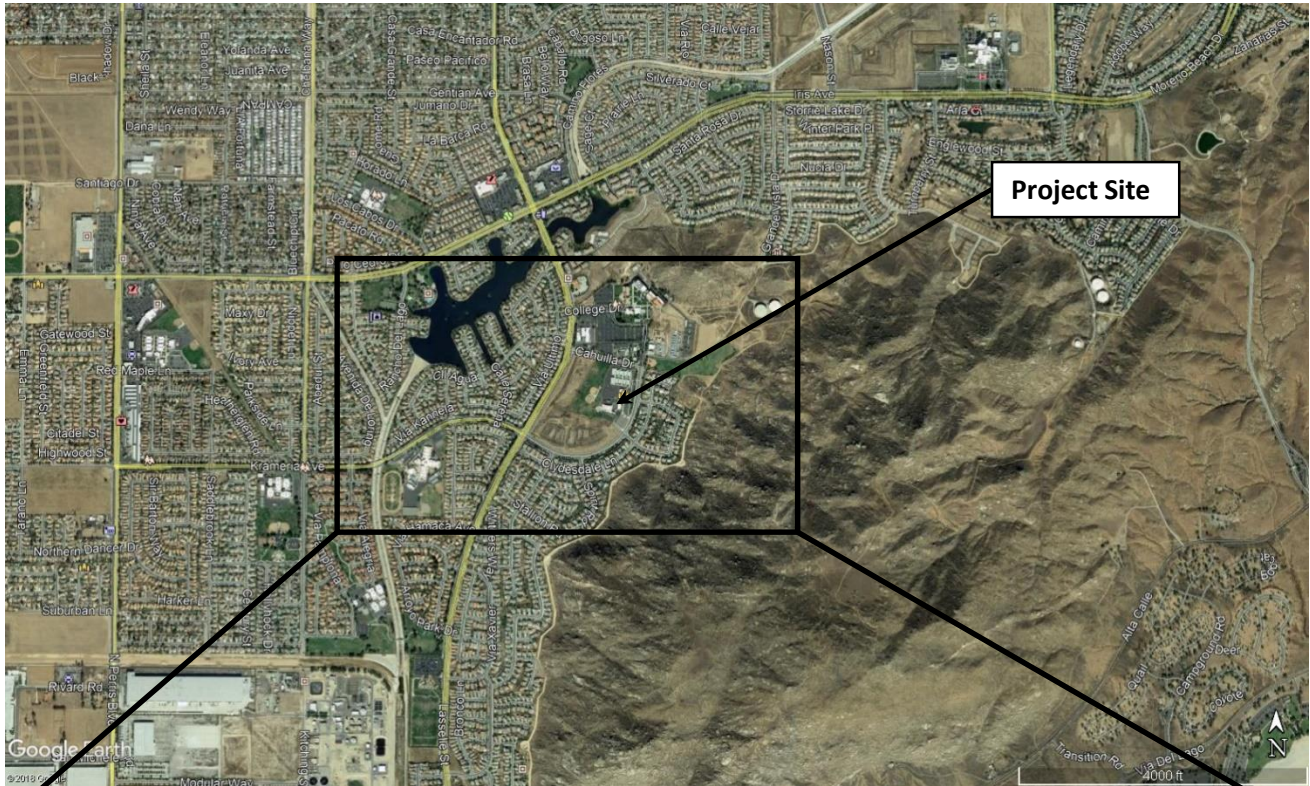
State of California, Division of Oil, Gas, and Geothermal Resources, March 26, 2018.  
<http://www.consrv.ca.gov/DOG/index.htm>.

State Water Resources Control Board, GeoTracker Database, March 26, 2018.  
<http://geotracker.waterboards.ca.gov/>.

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**FIGURES**





Reference: Google Earth



GDC Project No. EN324

**Project Location Map**

Phase I Environmental Site Assessment  
Krameria Ave and Lasselle Street  
Moreno Valley, CA

Figure 1

\*Locations are approximate



**APPENDIX A**  
**PRELIMINARY TITLE REPORT**

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*First American Title*

## **First American Title Company**

**1250 Corona Pointe Court, Ste 200  
Corona, CA 92879**

Andrew Spousta  
Continental East Development, Inc.  
25467 Medical Center Drive  
Murrieta, CA 92563

|                     |                                |
|---------------------|--------------------------------|
| Customer Reference: | APN: 308-040-050               |
| Order Number:       | NHSC-5628427 (tc)              |
| Title Officer:      | Terrell Crutchfield            |
| Phone:              | (951)256-5879                  |
| Fax No.:            | (866)558-2872                  |
| E-Mail:             | tcrutchfield@firstam.com       |
| Owner:              | Continental East Fund III, LLC |

### **PRELIMINARY REPORT**

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Exhibit A attached. *The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties.* Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Exhibit A. Copies of the policy forms should be read. They are available from the office which issued this report.

**Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.**

**It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.**

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of January 22, 2018 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

To Be Determined

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

Continental East Fund III, LLC, a California limited liability company

The estate or interest in the land hereinafter described or referred to covered by this Report is:

A fee.

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2018-2019, a lien not yet due or payable.
2. General and special taxes and assessments for the fiscal year 2017-2018.
 

|                     |                      |
|---------------------|----------------------|
| First Installment:  | \$12,131.10, PAID    |
| Penalty:            | \$0.00               |
| Second Installment: | \$12,131.10, PAYABLE |
| Penalty:            | \$0.00               |
| Tax Rate Area:      | 021-400              |
| A. P. No.:          | 308-040-050-8        |
3. The lien of special tax assessed pursuant to Chapter 2.5 commencing with Section 53311 of the California Government Code for Community Facilities District 87-1, as disclosed by Notice of Special Tax Lien recorded May 12, 1994 as Instrument Nos. [196245](#) and [196247](#), both of Official Records.
4. The lien of special tax assessed pursuant to Chapter 2.5 commencing with Section 53311 of the California Government Code for Community Facilities District 87-1, as disclosed by Notice of Special Tax Lien recorded April 29, 1998 as Instrument No. [167732](#) of Official Records.



5. The lien of special tax assessed pursuant to Chapter 2.5 commencing with Section 53311 of the California Government Code for Community Facilities District 98-1, as disclosed by Notice of Special Tax Lien recorded June 9, 1998 as Instrument No. [234797](#) of Official Records.
6. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.
7. The effect of a Development Agreement between the City of Moreno Valley and the Robert P. Warmington Co., Relative to the Development known as Moreno Valley Ranch recorded August 14 1987 as Instrument No. [236665](#), of Official Records of Riverside County, California.

Documents declaring a modification of said Development Agreement, recorded October 5, 1988, as Instrument No. [289200](#) and August 14, 1987, as Instrument No. [236666](#), both of Official Records of Riverside County, California.

The effect of an Assignment of Development Agreement and Assumption Agreement executed August 23, 1991 by and between the Warmington Company, a California Corporation and Warmington Moreno Valley Ranch Land Fund, a California Limited Partnership, recorded August 30, 1991 as Instrument No. [302684](#), of Official Records of Riverside County, California.

The effect of an Assignment of Development Agreement executed August 31, 1992 by and between the Warmington Moreno Valley Ranch Land Fund, a California Limited Partnership and the Resolution Trust Corporation, as Conservator for Oak Tree Federal Savings Bank, recorded October 28, 1992 as Instrument No. [408431](#), of Official Records of Riverside County, California.

8. The effect of a Resolution of the Eastern Municipal Water District executed July 20, 1988 by the Warmington Company and Eastern Municipal Water District, recorded August 2, 1988, as Instrument No. [216014](#), of Official Records of Riverside County, California.
9. The effect of a Resolution recorded August 24, 1988, as Instrument No. [241108](#), of Official Records of Riverside County, California, which recites among other things that said land lies within Improvement District No. U-22 of the Eastern Municipal Water District.
10. An easement shown or dedicated on Parcel Map 22701, [Book 159, Pages 3 through 14](#) of Parcel Maps. In Favor of the City of Moreno Valley.  
For: Drainage and flowage purposes and incidental purposes.

(Affects Parcel 2)

11. An easement for a perpetual easement and right of way for public highway including public utility and public service facilities and incidental purposes, recorded October 25, 1990 as Instrument No. [391594](#) of Official Records.  
In Favor of: The City of Moreno Valley, a Municipal Corporation  
Affects: Lot A
12. The effect of Resolution No. 1482.5 executed June 3, 1992 by Eastern Municipal Water District, recorded June 9, 1992, as Instrument No. [208420](#), of Official Records of Riverside County, California.

13. The effect of a Declaration of Covenants Regarding Waiver of Defenses Against the Formation of Val Verde Unified School District Community Facilities District No. 98-1 and Defenses to Levy of Special Tax, recorded July 29, 1998, as Instrument No. [314089](#), of Official Records.
14. The terms and provisions contained in the document entitled "Moreno Valley Ranch Second Amended Development Agreement" recorded October 15, 1999 as Instrument No. [99-458252](#) of Official Records.
15. The terms and provisions contained in the document entitled "Assignment and Assumption of Development Agreement" recorded May 15, 2002 as Instrument No. [02-256290](#) of Official Records.
16. The terms and provisions contained in the document entitled "Agreement for Park Improvements" recorded May 1, 2003 as Instrument No. [2003-310344](#) of Official Records.
17. Any lien, assessment, and/or violation or enforcement of any law, ordinance, permit or governmental regulation arising from the document entitled Notice of Code Violation Non Compliance recorded September 28, 2012 as Instrument No. [2012-0464257](#) of Official Records.
18. Any lien, assessment, and/or violation or enforcement of any law, ordinance, permit or governmental regulation arising from the document entitled Notice of Code Violation Non Compliance recorded July 12, 2013 as Instrument No. [2013-0337011](#) of Official Records.
19. Any lien, assessment, and/or violation or enforcement of any law, ordinance, permit or governmental regulation arising from the document entitled Notice of Code Violation Non Compliance recorded July 17, 2014 as Instrument No. [2014-0266424](#) of Official Records.
20. The following matters shown or disclosed by the filed or recorded map referred to in the legal description:
 

City Finance & Conveyance Code 9.14.065

A future map for development purposes must be processed and recorded in order for any development on the site to occur.

Parcel Map No. 36468 does not create a legal building site. Further applications are necessary to develop this property.

Parcel Map No. 36468 does not remove any development requirements set forth with approval of PA 15-0025, which must be satisfied with continued development of the property.
21. An easement shown or dedicated on Parcel Map 36468, [Book 243, Pages 27 through 29](#) of Parcel Maps.
 

For: public street and public utility and incidental purposes.

(Affects Lot A)

22. An easement shown or dedicated on Parcel Map 36468, [Book 243, Pages 27 through 29](#) of Parcel Maps. In Favor of Moreno Valley Utility.  
For: rights of ingress and egress for the purpose of operation, maintenance, facility repair, and meter reading and incidental purposes.

The location of the easement cannot be determined from record information.

THE ABOVE OFFER OF DEDICATION WASN'T ACCEPTED ON SAID PARCEL MAP.

23. Water rights, claims or title to water, whether or not shown by the public records.

**Prior to the issuance of any policy of title insurance, the Company will require:**

24. With respect to Continental East Fund III, LLC, a California limited liability company:
- a. A copy of its operating agreement and any amendments thereto;
  - b. If it is a California limited liability company, that a certified copy of its articles of organization (LLC-1) and any certificate of correction (LLC-11), certificate of amendment (LLC-2), or restatement of articles of organization (LLC-10) be recorded in the public records;
  - c. If it is a foreign limited liability company, that a certified copy of its application for registration (LLC-5) be recorded in the public records;
  - d. With respect to any deed, deed of trust, lease, subordination agreement or other document or instrument executed by such limited liability company and presented for recordation by the Company or upon which the Company is asked to rely, that such document or instrument be executed in accordance with one of the following, as appropriate:
    - (i) If the limited liability company properly operates through officers appointed or elected pursuant to the terms of a written operating agreement, such document must be executed by at least two duly elected or appointed officers, as follows: the chairman of the board, the president or any vice president, and any secretary, assistant secretary, the chief financial officer or any assistant treasurer;
    - (ii) If the limited liability company properly operates through a manager or managers identified in the articles of organization and/or duly elected pursuant to the terms of a written operating agreement, such document must be executed by at least two such managers or by one manager if the limited liability company properly operates with the existence of only one manager.
  - e. Other requirements which the Company may impose following its review of the material required herein and other information which the Company may require



**INFORMATIONAL NOTES**

Note: The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than the certain dollar amount set forth in any applicable arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. If you desire to review the terms of the policy, including any arbitration clause that may be included, contact the office that issued this Commitment or Report to obtain a sample of the policy jacket for the policy that is to be issued in connection with your transaction.

The map attached, if any, may or may not be a survey of the land depicted hereon. First American expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

### LEGAL DESCRIPTION

Real property in the City of Moreno Valley, County of Riverside, State of California, described as follows:

PARCELS 1, 2 AND 3 OF PARCEL MAP NO. 36468, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP FILED IN [BOOK 243, PAGES 27 THROUGH 29](#) OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 308-040-050-8



***NOTICE***

Section 12413.1 of the California Insurance Code, effective January 1, 1990, requires that any title insurance company, underwritten title company, or controlled escrow company handling funds in an escrow or sub-escrow capacity, wait a specified number of days after depositing funds, before recording any documents in connection with the transaction or disbursing funds. This statute allows for funds deposited by wire transfer to be disbursed the same day as deposit. In the case of cashier's checks or certified checks, funds may be disbursed the next day after deposit. In order to avoid unnecessary delays of three to seven days, or more, please use wire transfer, cashier's checks, or certified checks whenever possible.



**EXHIBIT A**  
**LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (BY POLICY TYPE)**

**CLTA STANDARD COVERAGE POLICY – 1990**  
**EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
- (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
  - (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
  - (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
  - (c) resulting in no loss or damage to the insured claimant;
  - (d) attaching or created subsequent to Date of Policy; or
  - (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable doing business laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.  
Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public, records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

**CLTA/ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE (12-02-13)**  
EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
  - a. building;
  - b. zoning;
  - c. land use;
  - d. improvements on the Land;
  - e. land division; and
  - f. environmental protection.

This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
  - a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
  - b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
  - c. that result in no loss to You; or
  - d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
  - a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
  - b. in streets, alleys, or waterways that touch the Land.

This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.
8. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
9. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

**LIMITATIONS ON COVERED RISKS**

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:

For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

|                  | <u>Your Deductible Amount</u>   | <u>Our Maximum Dollar Limit of Liability</u> |
|------------------|---|--|
| Covered Risk 16: | 1% of Policy Amount Shown in Schedule A or \$2,500<br>(whichever is less) | \$10,000                                     |
| Covered Risk 18: | 1% of Policy Amount Shown in Schedule A or \$5,000<br>(whichever is less) | \$25,000                                     |
| Covered Risk 19: | 1% of Policy Amount Shown in Schedule A or \$5,000<br>(whichever is less) | \$25,000                                     |
| Covered Risk 21: | 1% of Policy Amount Shown in Schedule A or \$2,500<br>(whichever is less) | \$5,000                                      |

**2006 ALTA LOAN POLICY (06-17-06)**

## EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
  - (i) the occupancy, use, or enjoyment of the Land;
  - (ii) the character, dimensions, or location of any improvement erected on the Land;

- (iii) the subdivision of land; or
- (iv) environmental protection;

or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.

2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
  - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
  - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
  - (c) resulting in no loss or damage to the Insured Claimant;
  - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
  - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
  - (a) a fraudulent conveyance or fraudulent transfer, or
  - (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage :

#### EXCEPTIONS FROM COVERAGE

[Except as provided in Schedule B - Part II, [t[or T]his policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:

#### [PART I

[The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage :

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

#### PART II

In addition to the matters set forth in Part I of this Schedule, the Title is subject to the following matters, and the Company insures against loss or damage sustained in the event that they are not subordinate to the lien of the Insured Mortgage:]

### 2006 ALTA OWNER'S POLICY (06-17-06)

#### EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to

- (i) the occupancy, use, or enjoyment of the Land;
- (ii) the character, dimensions, or location of any improvement erected on the Land;
- (iii) the subdivision of land; or
- (iv) environmental protection;

or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.

2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
  - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
  - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
  - (c) resulting in no loss or damage to the Insured Claimant;
  - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 or 10); or
  - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
  - (a) a fraudulent conveyance or fraudulent transfer, or
  - (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

#### EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of: [The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the Public Records.
7. [Variable exceptions such as taxes, easements, CC&R's, etc. shown here.]

#### ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (07-26-10)

#### EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
  - (i) the occupancy, use, or enjoyment of the Land;
  - (ii) the character, dimensions, or location of any improvement erected on the Land;
  - (iii) the subdivision of land; or
  - (iv) environmental protection;

or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.

(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d),



- 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
  - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
  - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
  - (c) resulting in no loss or damage to the Insured Claimant;
  - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
  - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.
9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
  - (a) a fraudulent conveyance or fraudulent transfer, or
  - (b) a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.
10. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
11. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.



## First American Title

### Privacy Information

#### We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our subsidiaries we have adopted this Privacy Policy to govern the use and handling of your personal information.

#### Applicability

This Privacy Policy governs our use of the information that you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its Fair Information Values.

#### Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

#### Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

#### Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

#### Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's Fair Information Values. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

#### Information Obtained Through Our Web Site

First American Financial Corporation is sensitive to privacy issues on the Internet. We believe it is important you know how we treat the information about you we receive on the Internet.

In general, you can visit First American or its affiliates' Web sites on the World Wide Web without telling us who you are or revealing any information about yourself. Our Web servers collect the domain names, not the e-mail addresses, of visitors. This information is aggregated to measure the number of visits, average time spent on the site, pages viewed and similar information. First American uses this information to measure the use of our site and to develop ideas to improve the content of our site.

There are times, however, when we may need information from you, such as your name and email address. When information is needed, we will use our best efforts to let you know at the time of collection how we will use the personal information. Usually, the personal information we collect is used only by us to respond to your inquiry, process an order or allow you to access specific account/profile information. If you choose to share any personal information with us, we will only use it in accordance with the policies outlined above.

#### Business Relationships

First American Financial Corporation's site and its affiliates' sites may contain links to other Web sites. While we try to link only to sites that share our high standards and respect for privacy, we are not responsible for the content or the privacy practices employed by other sites.

#### Cookies

Some of First American's Web sites may make use of "cookie" technology to measure site activity and to customize information to your personal tastes. A cookie is an element of data that a Web site can send to your browser, which may then store the cookie on your hard drive.

[FirstAm.com](http://FirstAm.com) uses stored cookies. The goal of this technology is to better serve you when visiting our site, save you time when you are here and to provide you with a more meaningful and productive Web site experience.

#### Fair Information Values

**Fairness** We consider consumer expectations about their privacy in all our businesses. We only offer products and services that assure a favorable balance between consumer benefits and consumer privacy.

**Public Record** We believe that an open public record creates significant value for society, enhances consumer choice and creates consumer opportunity. We actively support an open public record and emphasize its importance and contribution to our economy.

**Use** We believe we should behave responsibly when we use information about a consumer in our business. We will obey the laws governing the collection, use and dissemination of data.

**Accuracy** We will take reasonable steps to help assure the accuracy of the data we collect, use and disseminate. Where possible, we will take reasonable steps to correct inaccurate information. When, as with the public record, we cannot correct inaccurate information, we will take all reasonable steps to assist consumers in identifying the source of the erroneous data so that the consumer can secure the required corrections.

**Education** We endeavor to educate the users of our products and services, our employees and others in our industry about the importance of consumer privacy. We will instruct our employees on our fair information values and on the responsible collection and use of data. We will encourage others in our industry to collect and use information in a responsible manner.

**Security** We will maintain appropriate facilities and systems to protect against unauthorized access to and corruption of the data we maintain.

**APPENDIX B**  
**SITE PHOTOGRAPHS**

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Site Photographs

|              |                     |             |       |       |   |    |  |
|--------------|---------------------|-------------|-------|-------|---|----|--|
| PROJECT NAME | Continental Village | PROJECT No. | EN324 | SHEET | 1 | OF |  |
|--------------|---------------------|-------------|-------|-------|---|----|--|



|                             |                               |      |         |
|-----------------------------|-------------------------------|------|---------|
| PROJECT PHOTOGRAPHIC NUMBER |                               | 1    |         |
| DESCRIPTION                 | Northeast corner facing south |      |         |
|                             |                               |      |         |
| PHOTOGRAPHED BY             | JP                            | DATE | 3-20-18 |



|                             |                                  |      |         |
|-----------------------------|----------------------------------|------|---------|
| PROJECT PHOTOGRAPHIC NUMBER |                                  | 2    |         |
| DESCRIPTION                 | Middle of the Site facing north. |      |         |
|                             |                                  |      |         |
| PHOTOGRAPHED BY             | JP                               | DATE | 3-20-18 |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal



Site Photographs

|              |                     |             |       |       |   |    |  |
|--------------|---------------------|-------------|-------|-------|---|----|--|
| PROJECT NAME | Continental Village | PROJECT No. | EN324 | SHEET | 2 | OF |  |
|--------------|---------------------|-------------|-------|-------|---|----|--|



|                             |   |      |         |
|-----------------------------|---|------|---------|
| PROJECT PHOTOGRAPHIC NUMBER | 3   |      |         |
| DESCRIPTION                 | Southwest corner of Site facing east. View of pool, equipment, and stormwater conveyance. |      |         |
| PHOTOGRAPHED BY             | JP  | DATE | 3-20-18 |



|                             |                                     |      |         |
|-----------------------------|-------------------------------------|------|---------|
| PROJECT PHOTOGRAPHIC NUMBER | 4                                   |      |         |
| DESCRIPTION                 | Stormwater conveyance through Site. |      |         |
| PHOTOGRAPHED BY             | JP                                  | DATE | 3-20-18 |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal

|              |                     |             |       |       |   |    |  |
|--------------|---------------------|-------------|-------|-------|---|----|--|
| PROJECT NAME | Continental Village | PROJECT No. | EN324 | SHEET | 3 | OF |  |
|--------------|---------------------|-------------|-------|-------|---|----|--|



|                             |  |      |         |
|-----------------------------|--|------|---------|
| PROJECT PHOTOGRAPHIC NUMBER |  | 5    |         |
| DESCRIPTION                 | Phase 1 construction to the north of the Site. |      |         |
|                             |  |      |         |
| PHOTOGRAPHED BY             | JP   | DATE | 3-20-18 |

|                             |                                     |      |         |
|-----------------------------|-------------------------------------|------|---------|
| PROJECT PHOTOGRAPHIC NUMBER |                                     | 6    |         |
| DESCRIPTION                 | Damaged drip pans and stained soil. |      |         |
|                             |                                     |      |         |
| PHOTOGRAPHED BY             | JP                                  | DATE | 3-20-18 |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal

**APPENDIX C**

**ENVIRONMENTAL DATA RESOURCES, INC. REPORT  
(RADIUS SEARCH MAP, SANBORN MAPS, AERIAL PHOTOGRAPHS,  
TOPOGRAPHIC MAPS, & CITY DIRECTORIES)**

---

**Continental Village**

Krameria Ave and Lasselle Street  
Moreno Valley, CA 92555

Inquiry Number: 5219776.2s  
March 14, 2018

**The EDR Radius Map™ Report with GeoCheck®**



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
www.edrnet.com

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



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*Thank you for your business.*  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

KRAMERIA AVE AND LASSELLE STREET  
MORENO VALLEY, CA 92555

#### COORDINATES

|                                |                               |
|--------------------------------|-------------------------------|
| Latitude (North):              | 33.8830390 - 33° 52' 58.94"   |
| Longitude (West):              | 117.2051120 - 117° 12' 18.40" |
| Universal Transverse Mercator: | Zone 11                       |
| UTM X (Meters):                | 481032.0                      |
| UTM Y (Meters):                | 3749012.5                     |
| Elevation:                     | 1538 ft. above sea level      |

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

|                      |                       |
|----------------------|-----------------------|
| Target Property Map: | 5641326 SUNNYMEAD, CA |
| Version Date:        | 2012                  |
| South Map:           | 5641330 PERRIS, CA    |
| Version Date:        | 2012                  |

### AERIAL PHOTOGRAPHY IN THIS REPORT

|                         |          |
|-------------------------|----------|
| Portions of Photo from: | 20140603 |
| Source:                 | USDA     |

MAPPED SITES SUMMARY

Target Property Address:  
KRAMERIA AVE AND LASSELLE STREET  
MORENO VALLEY, CA 92555

Click on Map ID to see full detail.

| MAP ID | SITE NAME            | ADDRESS              | DATABASE ACRONYMS    | RELATIVE ELEVATION | DIST (ft. & DIRECTIO |
|--------|----------------------|----------------------|----------------------|--------------------|----------------------|
| 1      | LASSELLE ELEMENTARY  | CAHUILLA STREET/KRAM | ENVIROSTOR, SCH      | Higher             | 389, 0.074,          |
| 2      | CDF-MORENO VALLEY FI | 16110 LASSELLE ST    | AST                  | Lower              | 1083, 0.209          |
| A3     | MARCH AFB - POORMAN  |                      | FUDS                 | Higher             | 1186, 0.229          |
| A4     | MARCH AFB - POORMAN  | 2 MILES EAST OF MARC | RESPONSE, ENVIROSTOR | Higher             | 1189, 0.229          |
| 5      | REPLANET LLC         | 25900 IRIS AVE       | SWRCY, HAZNET        | Lower              | 2380, 0.45           |
| 6      | POORMAN GUNNERY RANG |                      | UXO                  | Lower              | 3020, 0.572          |
| 7      | RED MAPLE SCHOOL SIT | RED MAPLE LANE/EBONY | ENVIROSTOR, SCH      | Lower              | 4422, 0.837          |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

## EXECUTIVE SUMMARY

### TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

### STANDARD ENVIRONMENTAL RECORDS

#### ***Federal NPL site list***

NPL\_ \_ \_ \_ \_ National Priority List  
 Proposed NPL\_ \_ \_ \_ \_ Proposed National Priority List Sites  
 NPL LIENS\_ \_ \_ \_ \_ Federal Superfund Liens

#### ***Federal Delisted NPL site list***

Delisted NPL\_ \_ \_ \_ \_ National Priority List Deletions

#### ***Federal CERCLIS list***

FEDERAL FACILITY\_ \_ \_ \_ \_ Federal Facility Site Information listing  
 SEMS\_ \_ \_ \_ \_ Superfund Enterprise Management System

#### ***Federal CERCLIS NFRAP site list***

SEMS-ARCHIVE\_ \_ \_ \_ \_ Superfund Enterprise Management System Archive

#### ***Federal RCRA CORRACTS facilities list***

CORRACTS\_ \_ \_ \_ \_ Corrective Action Report

#### ***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF\_ \_ \_ \_ \_ RCRA - Treatment, Storage and Disposal

#### ***Federal RCRA generators list***

RCRA-LQG\_ \_ \_ \_ \_ RCRA - Large Quantity Generators  
 RCRA-SQG\_ \_ \_ \_ \_ RCRA - Small Quantity Generators  
 RCRA-CESQG\_ \_ \_ \_ \_ RCRA - Conditionally Exempt Small Quantity Generator

#### ***Federal institutional controls / engineering controls registries***

LUCIS\_ \_ \_ \_ \_ Land Use Control Information System  
 US ENG CONTROLS\_ \_ \_ \_ \_ Engineering Controls Sites List



## EXECUTIVE SUMMARY

US INST CONTROL\_ \_ \_ \_ \_ Sites with Institutional Controls

### **Federal ERNS list**

ERNS\_ \_ \_ \_ \_ Emergency Response Notification System

### **State and tribal landfill and/or solid waste disposal site lists**

SWF/LF\_ \_ \_ \_ \_ Solid Waste Information System

### **State and tribal leaking storage tank lists**

LUST\_ \_ \_ \_ \_ Geotracker's Leaking Underground Fuel Tank Report

INDIAN LUST\_ \_ \_ \_ \_ Leaking Underground Storage Tanks on Indian Land

SLIC\_ \_ \_ \_ \_ Statewide SLIC Cases

### **State and tribal registered storage tank lists**

FEMA UST\_ \_ \_ \_ \_ Underground Storage Tank Listing

UST\_ \_ \_ \_ \_ Active UST Facilities

INDIAN UST\_ \_ \_ \_ \_ Underground Storage Tanks on Indian Land

### **State and tribal voluntary cleanup sites**

VCP\_ \_ \_ \_ \_ Voluntary Cleanup Program Properties

INDIAN VCP\_ \_ \_ \_ \_ Voluntary Cleanup Priority Listing

### **State and tribal Brownfields sites**

BROWNFIELDS\_ \_ \_ \_ \_ Considered Brownfields Sites Listing

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### **Local Brownfield lists**

US BROWNFIELDS\_ \_ \_ \_ \_ A Listing of Brownfields Sites

### **Local Lists of Landfill / Solid Waste Disposal Sites**

WMUDS/SWAT\_ \_ \_ \_ \_ Waste Management Unit Database

HAULERS\_ \_ \_ \_ \_ Registered Waste Tire Haulers Listing

INDIAN ODL\_ \_ \_ \_ \_ Report on the Status of Open Dumps on Indian Lands

DEBRIS REGION 9\_ \_ \_ \_ \_ Torres Martinez Reservation Illegal Dump Site Locations

ODL\_ \_ \_ \_ \_ Open Dump Inventory

IHS OPEN DUMPS\_ \_ \_ \_ \_ Open Dumps on Indian Land

### **Local Lists of Hazardous waste / Contaminated Sites**

US HIST CDL\_ \_ \_ \_ \_ Delisted National Clandestine Laboratory Register

HIST Cal-Sites\_ \_ \_ \_ \_ Historical Calsites Database

CDL\_ \_ \_ \_ \_ Clandestine Drug Labs

Toxic Pits\_ \_ \_ \_ \_ Toxic Pits Cleanup Act Sites

US CDL\_ \_ \_ \_ \_ National Clandestine Laboratory Register

### **Local Lists of Registered Storage Tanks**

SWEEPS UST\_ \_ \_ \_ \_ SWEEPS UST Listing

## EXECUTIVE SUMMARY

HIST UST\_ . . . . . Hazardous Substance Storage Container Database  
 CA FID UST\_ . . . . . Facility Inventory Database

### **Local Land Records**

LIENS\_ . . . . . Environmental Liens Listing  
 LIENS 2\_ . . . . . CERCLA Lien Information  
 DEED\_ . . . . . Deed Restriction Listing

### **Records of Emergency Release Reports**

HMIRS\_ . . . . . Hazardous Materials Information Reporting System  
 CHMIRS\_ . . . . . California Hazardous Material Incident Report System  
 LDS\_ . . . . . Land Disposal Sites Listing  
 MCS\_ . . . . . Military Cleanup Sites Listing  
 SPILLS 90\_ . . . . . SPILLS 90 data from FirstSearch

### **Other Ascertainable Records**

RCRA NonGen / NLR\_ . . . . . RCRA - Non Generators / No Longer Regulated  
 DOD\_ . . . . . Department of Defense Sites  
 SCRDRYCLEANERS\_ . . . . . State Coalition for Remediation of Drycleaners Listing  
 US FIN ASSUR\_ . . . . . Financial Assurance Information  
 EPA WATCH LIST\_ . . . . . EPA WATCH LIST  
 2020 COR ACTION\_ . . . . . 2020 Corrective Action Program List  
 TSCA\_ . . . . . Toxic Substances Control Act  
 TRIS\_ . . . . . Toxic Chemical Release Inventory System  
 SSTS\_ . . . . . Section 7 Tracking Systems  
 ROD\_ . . . . . Records Of Decision  
 RMP\_ . . . . . Risk Management Plans  
 RAATS\_ . . . . . RCRA Administrative Action Tracking System  
 PRP\_ . . . . . Potentially Responsible Parties  
 PADS\_ . . . . . PCB Activity Database System  
 ICIS\_ . . . . . Integrated Compliance Information System  
 FTTS\_ . . . . . FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)  
 MLTS\_ . . . . . Material Licensing Tracking System  
 COAL ASH DOE\_ . . . . . Steam-Electric Plant Operation Data  
 COAL ASH EPA\_ . . . . . Coal Combustion Residues Surface Impoundments List  
 PCB TRANSFORMER\_ . . . . . PCB Transformer Registration Database  
 RADINFO\_ . . . . . Radiation Information Database  
 HIST FTTS\_ . . . . . FIFRA/TSCA Tracking System Administrative Case Listing  
 DOT OPS\_ . . . . . Incident and Accident Data  
 CONSENT\_ . . . . . Superfund (CERCLA) Consent Decrees  
 INDIAN RESERV\_ . . . . . Indian Reservations  
 FUSRAP\_ . . . . . Formerly Utilized Sites Remedial Action Program  
 UMTRA\_ . . . . . Uranium Mill Tailings Sites  
 LEAD SMELTERS\_ . . . . . Lead Smelter Sites  
 US AIRS\_ . . . . . Aerometric Information Retrieval System Facility Subsystem  
 US MINES\_ . . . . . Mines Master Index File  
 ABANDONED MINES\_ . . . . . Abandoned Mines  
 FINDS\_ . . . . . Facility Index System/Facility Registry System  
 ECHO\_ . . . . . Enforcement & Compliance History Information  
 DOCKET HWC\_ . . . . . Hazardous Waste Compliance Docket Listing  
 FUELS PROGRAM\_ . . . . . EPA Fuels Program Registered Listing

## EXECUTIVE SUMMARY

|                              |   |
|------------------------------|---|
| CA BOND EXP. PLAN_ _ _ _     | Bond Expenditure Plan                             |
| Cortese_ _ _ _ _             | "Cortese" Hazardous Waste & Substances Sites List |
| CUPA Listings_ _ _ _ _       | CUPA Resources List                               |
| DRYCLEANERS_ _ _ _ _         | Cleaner Facilities                                |
| EMI_ _ _ _ _                 | Emissions Inventory Data                          |
| ENF_ _ _ _ _                 | Enforcement Action Listing                        |
| Financial Assurance_ _ _ _ _ | Financial Assurance Information Listing           |
| HAZNET_ _ _ _ _              | Facility and Manifest Data                        |
| ICE_ _ _ _ _                 | ICE   |
| HIST CORTESE_ _ _ _ _        | Hazardous Waste & Substance Site List             |
| HWP_ _ _ _ _                 | EnviroStor Permitted Facilities Listing           |
| HWT_ _ _ _ _                 | Registered Hazardous Waste Transporter Database   |
| MINES_ _ _ _ _               | Mines Site Location Listing                       |
| MWMP_ _ _ _ _                | Medical Waste Management Program Listing          |
| NPDES_ _ _ _ _               | NPDES Permits Listing                             |
| PEST LIC_ _ _ _ _            | Pesticide Regulation Licenses Listing             |
| PROC_ _ _ _ _                | Certified Processors Database                     |
| Notify 65_ _ _ _ _           | Proposition 65 Records                            |
| UIC_ _ _ _ _                 | UIC Listing                                       |
| WASTEWATER PITS_ _ _ _ _     | Oil Wastewater Pits Listing                       |
| WDS_ _ _ _ _                 | Waste Discharge System                            |
| WIP_ _ _ _ _                 | Well Investigation Program Case List              |

### EDR HIGH RISK HISTORICAL RECORDS

#### ***EDR Exclusive Records***

|                           |   |
|---------------------------|---|
| EDR MGP_ _ _ _ _          | EDR Proprietary Manufactured Gas Plants |
| EDR Hist Auto_ _ _ _ _    | EDR Exclusive Historical Auto Stations  |
| EDR Hist Cleaner_ _ _ _ _ | EDR Exclusive Historical Cleaners       |

### EDR RECOVERED GOVERNMENT ARCHIVES

#### ***Exclusive Recovered Govt. Archives***

|                   |   |
|-------------------|---|
| RGA LF_ _ _ _ _   | Recovered Government Archive Solid Waste Facilities List      |
| RGA LUST_ _ _ _ _ | Recovered Government Archive Leaking Underground Storage Tank |

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

## EXECUTIVE SUMMARY

### STANDARD ENVIRONMENTAL RECORDS

#### **State- and tribal - equivalent NPL**

RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the RESPONSE list, as provided by EDR, has revealed that there is 1 RESPONSE site within approximately 1 mile of the target property.

| <u>Equal/Higher Elevation</u>  | <u>Address</u>              | <u>Direction / Distance</u>    | <u>Map ID</u> | <u>Page</u> |
|--|-----------------------------|--------------------------------|---------------|-------------|
| <b>MARCH AFB - POORMAN</b><br>Database: RESPONSE, Date of Government Version: 10/30/2017<br>Status: No Further Action<br>Facility Id: 80001100 | <b>2 MILES EAST OF MARC</b> | <b>S 1/8 - 1/4 (0.225 mi.)</b> | <b>A4</b>     | <b>12</b>   |

#### **State- and tribal - equivalent CERCLIS**

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 10/30/2017 has revealed that there are 3 ENVIROSTOR sites within approximately 1 mile of the target property.

| <u>Equal/Higher Elevation</u>  | <u>Address</u>              | <u>Direction / Distance</u>    | <u>Map ID</u> | <u>Page</u> |
|--|-----------------------------|--------------------------------|---------------|-------------|
| <b>LASSELLE ELEMENTARY</b><br>Facility Id: 33010087<br>Status: No Action Required  | <b>CAHUILLA STREET/KRAM</b> | <b>NE 0 - 1/8 (0.074 mi.)</b>  | <b>1</b>      | <b>8</b>    |
| <b>MARCH AFB - POORMAN</b><br>Facility Id: 80001100<br>Status: No Further Action   | <b>2 MILES EAST OF MARC</b> | <b>S 1/8 - 1/4 (0.225 mi.)</b> | <b>A4</b>     | <b>12</b>   |
| <u>Lower Elevation</u>   | <u>Address</u>              | <u>Direction / Distance</u>    | <u>Map ID</u> | <u>Page</u> |
| <b>RED MAPLE SCHOOL SIT</b><br>Facility Id: 33010052<br>Status: No Action Required | <b>RED MAPLE LANE/EBONY</b> | <b>W 1/2 - 1 (0.837 mi.)</b>   | <b>7</b>      | <b>17</b>   |



## EXECUTIVE SUMMARY

### ***State and tribal registered storage tank lists***

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, and dated 07/06/2016 has revealed that there is 1 AST site within approximately 0.25 miles of the target property.

| <u>Lower Elevation</u> | <u>Address</u>    | <u>Direction / Distance</u> | <u>Map ID</u> | <u>Page</u> |
|------------------------|-------------------|-----------------------------|---------------|-------------|
| CDF-MORENO VALLEY FI   | 16110 LASSELLE ST | N 1/8 - 1/4 (0.205 mi.)     | 2             | 10          |

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### ***Local Lists of Landfill / Solid Waste Disposal Sites***

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 12/11/2017 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

| <u>Lower Elevation</u>                       | <u>Address</u>        | <u>Direction / Distance</u>      | <u>Map ID</u> | <u>Page</u> |
|--|-----------------------|----------------------------------|---------------|-------------|
| <b>REPLANET LLC</b><br>Cert Id: RC177902.001 | <b>25900 IRIS AVE</b> | <b>NNW 1/4 - 1/2 (0.451 mi.)</b> | <b>5</b>      | <b>15</b>   |

#### ***Local Lists of Hazardous waste / Contaminated Sites***

SCH: This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category. depending on the level of threat to public health and safety or the environment they pose.

A review of the SCH list, as provided by EDR, and dated 10/30/2017 has revealed that there is 1 SCH site within approximately 0.25 miles of the target property.

| <u>Equal/Higher Elevation</u>   | <u>Address</u>              | <u>Direction / Distance</u>   | <u>Map ID</u> | <u>Page</u> |
|---|-----------------------------|-------------------------------|---------------|-------------|
| <b>LASSELLE ELEMENTARY</b><br>Facility Id: 33010087<br>Status: No Action Required | <b>CAHUILLA STREET/KRAM</b> | <b>NE 0 - 1/8 (0.074 mi.)</b> | <b>1</b>      | <b>8</b>    |

#### ***Other Ascertainable Records***

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 01/31/2015 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

## EXECUTIVE SUMMARY

| <u>Equal/Higher Elevation</u> | <u>Address</u> | <u>Direction / Distance</u> | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|----------------|-----------------------------|---------------|-------------|
| MARCH AFB - POORMAN           |                | S 1/8 - 1/4 (0.225 mi.)     | A3            | 11          |

UXO: A listing of unexploded ordnance site locations

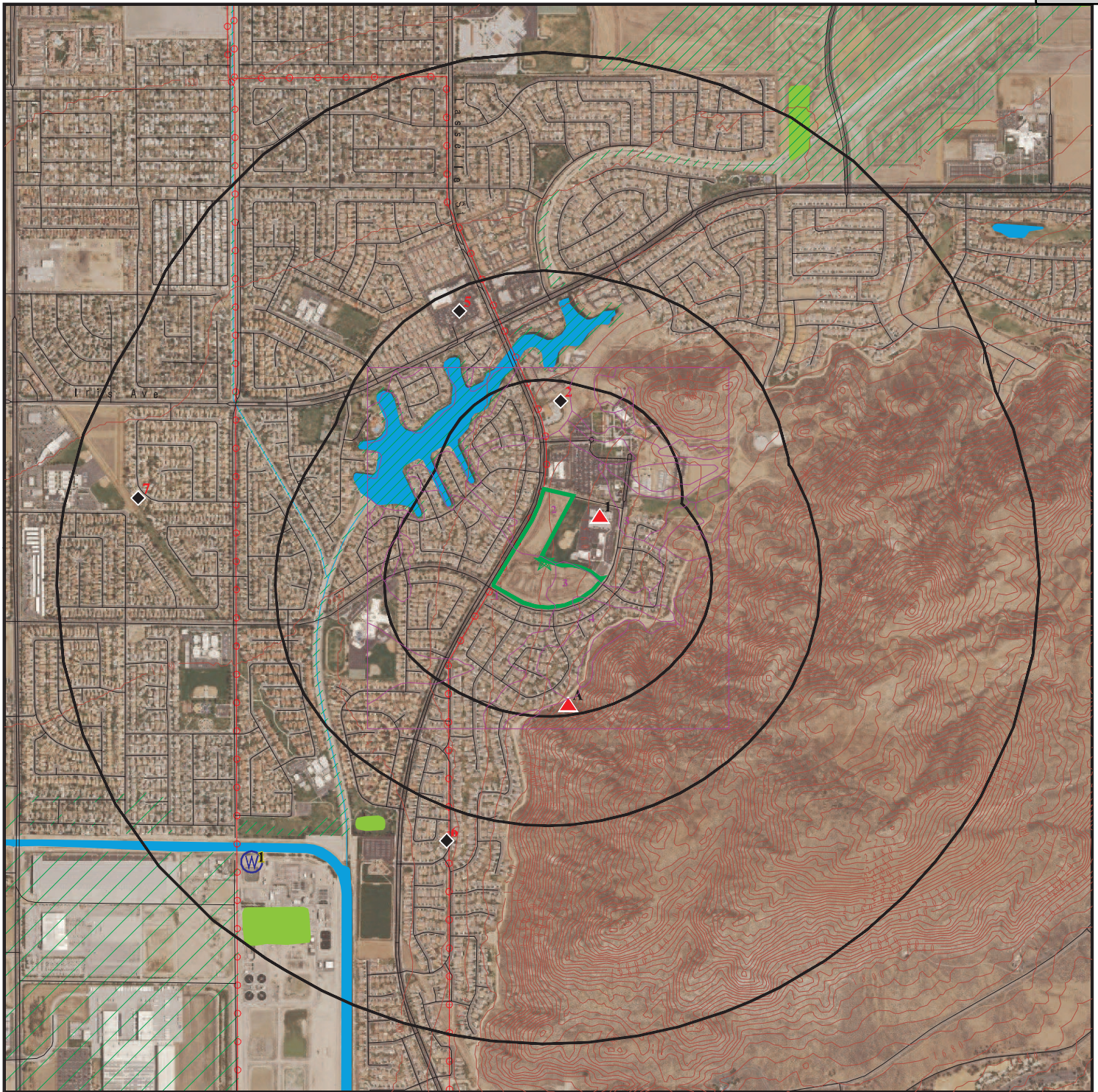
A review of the UXO list, as provided by EDR, and dated 09/30/2016 has revealed that there is 1 UXO site within approximately 1 mile of the target property.















| <u>Lower Elevation</u> | <u>Address</u> | <u>Direction / Distance</u> | <u>Map ID</u> | <u>Page</u> |
|------------------------|----------------|-----------------------------|---------------|-------------|
| POORMAN GUNNERY RANG   |                | SSW 1/2 - 1 (0.572 mi.)     | 6             | 17          |

## EXECUTIVE SUMMARY

There were no unmapped sites in this report.





-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  National Priority List Sites
-  Dept. Defense Sites
-  Indian Reservations BIA
-  Power transmission lines
-  100-year flood zone
-  500-year flood zone
-  National Wetland Inventory
-  State Wetlands
-  Upgradient Area
-  Areas of Concern



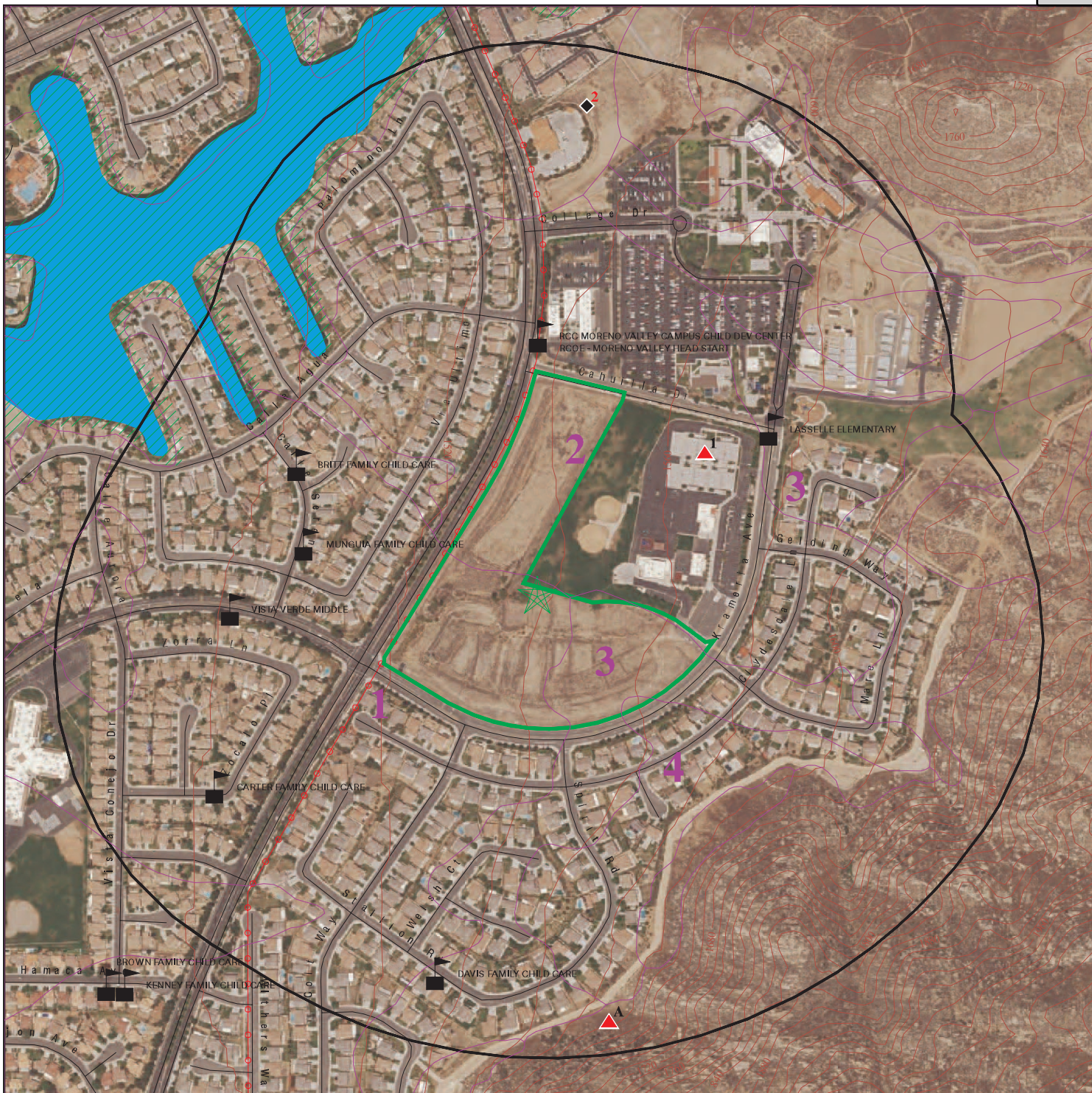
This report includes Interactive Map Layers display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Continental Village  
 ADDRESS: Krameria Ave and Lasselle Street  
 Moreno Valley CA 92555  
 LAT/LONG: 33.883039 / 117.205112

CLIENT: Group Delta Consultants  
 CONTACT: Jack Packwood  
 INQUIRY #: 5219776.2s  
 DATE: March 14, 2018 3:24 pm

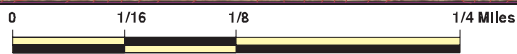
**Packet Pg. 868**





- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern



This report includes Interactive Map Layers display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Continental Village  
 ADDRESS: Krameria Ave and Lasselle Street  
 Moreno Valley CA 92555  
 LAT/LONG: 33.883039 / 117.205112

CLIENT: Group Delta Consultants  
 CONTACT: Jack Packwood  
 INQUIRY #: 5219776.2S  
 DATE: March 14, 2018 3:25 pm



## MAP FINDINGS SUMMARY

| Database   | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|--|-------------------------|-----------------|-------|-----------|-----------|---------|-----|---------------|
| <b>STANDARD ENVIRONMENTAL RECORDS</b>  |                         |                 |       |           |           |         |     |               |
| <b><i>Federal NPL site list</i></b>  |                         |                 |       |           |           |         |     |               |
| NPL  | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| Proposed NPL   | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| NPL LIENS  | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| <b><i>Federal Delisted NPL site list</i></b>                                   |                         |                 |       |           |           |         |     |               |
| Delisted NPL   | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| <b><i>Federal CERCLIS list</i></b>   |                         |                 |       |           |           |         |     |               |
| FEDERAL FACILITY   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| SEMS   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b><i>Federal CERCLIS NFRAP site list</i></b>                                  |                         |                 |       |           |           |         |     |               |
| SEMS-ARCHIVE   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b><i>Federal RCRA CORRACTS facilities list</i></b>                            |                         |                 |       |           |           |         |     |               |
| CORRACTS   | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| <b><i>Federal RCRA non-CORRACTS TSD facilities list</i></b>                    |                         |                 |       |           |           |         |     |               |
| RCRA-TSDF  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b><i>Federal RCRA generators list</i></b>                                     |                         |                 |       |           |           |         |     |               |
| RCRA-LQG   | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| RCRA-SQG   | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| RCRA-CESQG   | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| <b><i>Federal institutional controls / engineering controls registries</i></b> |                         |                 |       |           |           |         |     |               |
| LUCIS  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| US ENG CONTROLS  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| US INST CONTROL  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b><i>Federal ERNS list</i></b>  |                         |                 |       |           |           |         |     |               |
| ERNS   | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| <b><i>State- and tribal - equivalent NPL</i></b>                               |                         |                 |       |           |           |         |     |               |
| RESPONSE   | 1.000                   |                 | 0     | 1         | 0         | 0       | NR  | 1             |
| <b><i>State- and tribal - equivalent CERCLIS</i></b>                           |                         |                 |       |           |           |         |     |               |
| ENVIROSTOR   | 1.000                   |                 | 1     | 1         | 0         | 1       | NR  | 3             |
| <b><i>State and tribal landfill and/or solid waste disposal site lists</i></b> |                         |                 |       |           |           |         |     |               |
| SWF/LF   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b><i>State and tribal leaking storage tank lists</i></b>                      |                         |                 |       |           |           |         |     |               |
| LUST   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |

## MAP FINDINGS SUMMARY

| Database  | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|-------------------------|-----------------|-------|-----------|-----------|---------|-----|---------------|
| INDIAN LUST   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| SLIC  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>State and tribal registered storage tank lists</b>       |                         |                 |       |           |           |         |     |               |
| FEMA UST  | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| UST   | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| AST   | 0.250                   |                 | 0     | 1         | NR        | NR      | NR  | 1             |
| INDIAN UST  | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| <b>State and tribal voluntary cleanup sites</b>             |                         |                 |       |           |           |         |     |               |
| VCP   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| INDIAN VCP  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>State and tribal Brownfields sites</b>                   |                         |                 |       |           |           |         |     |               |
| BROWNFIELDS   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>ADDITIONAL ENVIRONMENTAL RECORDS</b>                     |                         |                 |       |           |           |         |     |               |
| <b>Local Brownfield lists</b>                               |                         |                 |       |           |           |         |     |               |
| US BROWNFIELDS  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>Local Lists of Landfill / Solid Waste Disposal Sites</b> |                         |                 |       |           |           |         |     |               |
| WMUDS/SWAT  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| SWRCY   | 0.500                   |                 | 0     | 0         | 1         | NR      | NR  | 1             |
| HAULERS   | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| INDIAN ODI  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| DEBRIS REGION 9   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| ODI   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| IHS OPEN DUMPS  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>Local Lists of Hazardous waste / Contaminated Sites</b>  |                         |                 |       |           |           |         |     |               |
| US HIST CDL   | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| HIST Cal-Sites  | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| SCH   | 0.250                   |                 | 1     | 0         | NR        | NR      | NR  | 1             |
| CDL   | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| Toxic Pits  | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| US CDL  | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| <b>Local Lists of Registered Storage Tanks</b>              |                         |                 |       |           |           |         |     |               |
| SWEEPS UST  | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| HIST UST  | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| CA FID UST  | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| <b>Local Land Records</b>                                   |                         |                 |       |           |           |         |     |               |
| LIENS   | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| LIENS 2   | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| DEED  | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>Records of Emergency Release Reports</b>                 |                         |                 |       |           |           |         |     |               |
| HMIRS   | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |

## MAP FINDINGS SUMMARY

| Database                           | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|------------------------------------|-------------------------|-----------------|-------|-----------|-----------|---------|-----|---------------|
| CHMIRS                             | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| LDS                                | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| MCS                                | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| SPILLS 90                          | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| <b>Other Ascertainable Records</b> |                         |                 |       |           |           |         |     |               |
| RCRA NonGen / NLR                  | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| FUDS                               | 1.000                   |                 | 0     | 1         | 0         | 0       | NR  | 1             |
| DOD                                | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| SCRD DRYCLEANERS                   | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| US FIN ASSUR                       | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| EPA WATCH LIST                     | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| 2020 COR ACTION                    | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| TSCA                               | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| TRIS                               | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| SSTS                               | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| ROD                                | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| RMP                                | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| RAATS                              | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| PRP                                | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| PADS                               | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| ICIS                               | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| FTTS                               | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| MLTS                               | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| COAL ASH DOE                       | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| COAL ASH EPA                       | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| PCB TRANSFORMER                    | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| RADINFO                            | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| HIST FTTS                          | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| DOT OPS                            | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| CONSENT                            | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| INDIAN RESERV                      | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| FUSRAP                             | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| UMTRA                              | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| LEAD SMELTERS                      | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| US AIRS                            | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| US MINES                           | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| ABANDONED MINES                    | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| FINDS                              | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| UXO                                | 1.000                   |                 | 0     | 0         | 0         | 1       | NR  | 1             |
| ECHO                               | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| DOCKET HWC                         | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| FUELS PROGRAM                      | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| CA BOND EXP. PLAN                  | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| Cortese                            | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| CUPA Listings                      | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| DRYCLEANERS                        | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| EMI                                | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| ENF                                | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| Financial Assurance                | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| HAZNET                             | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |



## MAP FINDINGS SUMMARY

| Database        | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|-----------------|-------------------------|-----------------|-------|-----------|-----------|---------|-----|---------------|
| ICE             | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| HIST CORTESE    | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| HWP             | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| HWT             | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| MINES           | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| MWMP            | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |
| NPDES           | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| PEST LIC        | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| PROC            | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| Notify 65       | 1.000                   |                 | 0     | 0         | 0         | 0       | NR  | 0             |
| UIC             | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| WASTEWATER PITS | 0.500                   |                 | 0     | 0         | 0         | NR      | NR  | 0             |
| WDS             | 0.001                   |                 | 0     | NR        | NR        | NR      | NR  | 0             |
| WIP             | 0.250                   |                 | 0     | 0         | NR        | NR      | NR  | 0             |

### EDR HIGH RISK HISTORICAL RECORDS

#### *EDR Exclusive Records*

|                  |       |  |   |    |    |    |    |   |
|------------------|-------|--|---|----|----|----|----|---|
| EDR MGP          | 1.000 |  | 0 | 0  | 0  | 0  | NR | 0 |
| EDR Hist Auto    | 0.125 |  | 0 | NR | NR | NR | NR | 0 |
| EDR Hist Cleaner | 0.125 |  | 0 | NR | NR | NR | NR | 0 |

### EDR RECOVERED GOVERNMENT ARCHIVES

#### *Exclusive Recovered Govt. Archives*

|          |       |  |   |    |    |    |    |   |
|----------|-------|--|---|----|----|----|----|---|
| RGA LF   | 0.001 |  | 0 | NR | NR | NR | NR | 0 |
| RGA LUST | 0.001 |  | 0 | NR | NR | NR | NR | 0 |

|             |  |   |   |   |   |   |   |   |
|-------------|--|---|---|---|---|---|---|---|
| - Totals -- |  | 0 | 2 | 4 | 1 | 2 | 0 | 9 |
|-------------|--|---|---|---|---|---|---|---|

#### NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

1  
NE  
< 1/8  
0.074 mi.  
389 ft.

**LASSELLE ELEMENTARY SCHOOL**  
**CAHUILLA STREET/KRAMERIA AVENUE**  
**MORENO VALLEY, CA 92555**

**ENVIROSTOR** **S118756718**  
**SCH** **N/A**

**Relative:**  
**Higher**  
**Actual:**  
**1566 ft.**

ENVIROSTOR:  
Facility ID: 33010087  
Status: No Action Required  
Status Date: 10/28/2003  
Site Code: 404475  
Site Type: School Investigation  
Site Type Detailed: School  
Acres: 12  
NPL: NO  
Regulatory Agencies: DTSC  
Lead Agency: DTSC  
Program Manager: Not reported  
Supervisor: Shahir Haddad  
Division Branch: Southern California Schools & Brownfields Outreach  
Assembly: 61  
Senate: 31  
Special Program: Not reported  
Restricted Use: NO  
Site Mgmt Req: NONE SPECIFIED  
Funding: School District  
Latitude: 33.88460  
Longitude: -117.2029  
APN: NONE SPECIFIED  
Past Use: AGRICULTURAL - ROW CROPS  
Potential COC: NONE SPECIFIED No Contaminants found  
Confirmed COC: NONE SPECIFIED  
Potential Description: NMA  
Alias Name: LASSELLE ELEMENTARY SCHOOL  
Alias Type: Alternate Name  
Alias Name: VAL VERDE UNIFIED SCHOOL DISTRICT  
Alias Type: Alternate Name  
Alias Name: VAL VERDE USD-LASSELLE ELEMENTARY SCHOOL  
Alias Type: Alternate Name  
Alias Name: 404475  
Alias Type: Project Code (Site Code)  
Alias Name: 33010087  
Alias Type: Envirostor ID Number

Completed Info:  
Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Phase 1  
Completed Date: 10/28/2003  
Comments: Not reported  
  
Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Cost Recovery Closeout Memo  
Completed Date: 10/28/2003  
Comments: Not reported  
  
Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Inspections/Visit (Non LUR)

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**LASSELLE ELEMENTARY SCHOOL (Continued)**

**S118756718**

Completed Date: 09/04/2003  
Comments: Not reported

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

SCH:

Facility ID: 33010087  
Site Type: School Investigation  
Site Type Detail: School  
Site Mgmt. Req.: NONE SPECIFIED  
Acres: 12  
National Priorities List: NO  
Cleanup Oversight Agencies: DTSC  
Lead Agency: DTSC  
Lead Agency Description: \* DTSC  
Project Manager: Not reported  
Supervisor: Shahir Haddad  
Division Branch: Southern California Schools & Brownfields Outreach  
Site Code: 404475  
Assembly: 61  
Senate: 31  
Special Program Status: Not reported  
Status: No Action Required  
Status Date: 10/28/2003  
Restricted Use: NO  
Funding: School District  
Latitude: 33.88460  
Longitude: -117.2029  
APN: NONE SPECIFIED  
Past Use: AGRICULTURAL - ROW CROPS  
Potential COC: NONE SPECIFIED, No Contaminants found  
Confirmed COC: NONE SPECIFIED  
Potential Description: NMA  
Alias Name: LASSELLE ELEMENTARY SCHOOL  
Alias Type: Alternate Name  
Alias Name: VAL VERDE UNIFIED SCHOOL DISTRICT  
Alias Type: Alternate Name  
Alias Name: VAL VERDE USD-LASSELLE ELEMENTARY SCHOOL  
Alias Type: Alternate Name  
Alias Name: 404475  
Alias Type: Project Code (Site Code)  
Alias Name: 33010087  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Phase 1

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**LASSELLE ELEMENTARY SCHOOL (Continued)**

**S118756718**

Completed Date: 10/28/2003  
 Comments: Not reported

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Cost Recovery Closeout Memo  
 Completed Date: 10/28/2003  
 Comments: Not reported

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Site Inspections/Visit (Non LUR)  
 Completed Date: 09/04/2003  
 Comments: Not reported

Future Area Name: Not reported  
 Future Sub Area Name: Not reported  
 Future Document Type: Not reported  
 Future Due Date: Not reported  
 Schedule Area Name: Not reported  
 Schedule Sub Area Name: Not reported  
 Schedule Document Type: Not reported  
 Schedule Due Date: Not reported  
 Schedule Revised Date: Not reported

**2**  
**North**  
**1/8-1/4**  
**0.205 mi.**  
**1083 ft.**

**CDF-MORENO VALLEY FIRE STATION #91**  
**16110 LASSELLE ST**  
**MORENO VALLEY, CA 92555**

**AST A100418574**  
**N/A**

**Relative:**  
**Lower**  
**Actual:**  
**1529 ft.**

AST:  
 Certified Unified Program Agencies: Not reported  
 Owner: County of Riverside/CDF  
 Total Gallons: Not reported  
 CERSID: 10323727  
 Facility ID: Not reported  
 Business Name: CDF-Moreno Valley Fire Station #91  
 Phone: 9519242714  
 Fax: Not reported  
 Mailing Address: 210 W San Jacinto  
 Mailing Address City: Perris  
 Mailing Address State: CA  
 Mailing Address Zip Code: 92570  
 Operator Name: County of Riverside/CDF  
 Operator Phone: 9519242714  
 Owner Phone: 9519242714  
 Owner Mail Address: 210 W San Jacinto  
 Owner State: CA  
 Owner Zip Code: 92570  
 Owner Country: United States  
 Property Owner Name: Not reported  
 Property Owner Phone: Not reported  
 Property Owner Mailing Address: Not reported  
 Property Owner City: Not reported  
 Property Owner Stat : Not reported  
 Property Owner Zip Code: Not reported  
 Property Owner Country: Not reported

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Site

Database(s)

EDR ID Number  
 EPA ID Number

**CDF-MORENO VALLEY FIRE STATION #91 (Continued)**

A100418574

EPAID: Not reported

**A3**  
 South  
 1/8-1/4  
 0.225 mi.  
 1186 ft.

**MARCH AFB - POORMAN GUNNERY RANGE**

**FUDS** 1009484262  
 N/A

**MORENO VALLEY, CA**

**Site 1 of 2 in cluster A**

**Relative:**  
 Higher  
**Actual:**  
 1597 ft.

FUDS:  
 EPA Region: 09  
 Congressional District: 41  
 FUDS Number: J09CA7400  
 State: CA  
 Facility Name: MARCH AFB - POORMAN GUNNERY RANGE  
 Fiscal Year: 2013  
 City: MORENO VALLEY  
 Federal Facility ID: CA9799FA427  
 Telephone: 213-452-3920  
 INST ID: 63136  
 County: RIVERSIDE  
 RAB: Not reported  
 \*\*CORPS\_DIST\*\*: Los Angeles District (SPL)  
 NPL Status: Not reported  
 CTC: 59.799999999999997  
 Current Owner: Not reported  
 Future Prog: Not reported  
 Description: he U.S. Army Air Corps acquired 162.84 acres by lease from a private party on 8 May 1944. A total of 3.04 acres were acquired by license from three private individuals between October 1944 and January 1945. Total acquisition was 165.88 acres. The site is located in Moreno Valley in Riverside County, California, approximately 1 mile northwest of Lake Perris. The property is largely undeveloped, but a small portion has been incorporated into a local park and housing development.  
 Current Program: Not reported  
 History: Based on documentation, the range was used as a range and included a platform for the following types of practice: A-GC gun mount, Sperry ball turret, Emerson nose turret, machine gun, and Martin upper with steel sighting support. he lease for the 162.84 acres was terminated on 1 December 1946. The three licenses were terminated on 7 September 1946 and 7 October 1946. Currently, the property is largely undeveloped. A small portion of the former range is now part of a local park and the Del Rey housing development.  
 Latitude Degree: 33  
 Latitude Minute: 52  
 Latitude Second: 26  
 Latitude Direction: N  
 Longitude Degree: -117  
 Longitude Minute: 13  
 Longitude Second: 32  
 Longitude Direction: E  
 FUDS:  
 Inst ID: 63136  
 FUDS Number: J09CA7400  
 Facility Name: MARCH AFB - POORMAN GUNNERY RANGE  
 \*\*PHASE\*\*: 4  
 \*\*ARC\*\*: Y

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**MARCH AFB - POORMAN GUNNERY RANGE (Continued)**

1009484262

\*\*DIST\*\*:  
\*\*MMRP\*\*:  
\*\*MRA ID\*\*:

SPL  
Y  
J09CA740001R01

FUDS:

Inst ID: 63136  
FUDS Number: J09CA7400  
Facility Name: MARCH AFB - POORMAN GUNNERY RANGE  
\*\*PHASE\*\*:  
Site ID: 01  
\*\*DIST\*\*:  
\*\*MMRP\*\*:  
\*\*MRA ID\*\*:  
\*\*PROJ NO\*\*:

4  
SPL  
Y  
J09CA740001R01  
J09CA740001

**A4**  
**South**  
**1/8-1/4**  
**0.225 mi.**  
**1189 ft.**

**MARCH AFB - POORMAN GUNNERY RANGE**  
**2 MILES EAST OF MARCH AIR RESERVE BASE NEAR LAKE PERRIS, IN**  
**MORENO VALLEY, CA 92555**

**RESPONSE** S110711878  
**ENVIROSTOR** N/A

Site 2 of 2 in cluster A

**Relative:**  
**Higher**  
**Actual:**  
**1598 ft.**

RESPONSE:  
Facility ID: 80001100  
Site Type: State Response  
Site Type Detail: FUDS  
Acres: 640  
National Priorities List: NO  
Cleanup Oversight Agencies: SMBRP  
Lead Agency Description: DTSC - Site Cleanup Program  
Project Manager: Daniel Cordero  
Supervisor: Manny Alonzo  
Division Branch: Cleanup Cypress  
Site Code: Not reported  
Site Mgmt. Req.: NONE SPECIFIED  
Assembly: 61  
Senate: 31  
Special Program Status: Not reported  
Status: No Further Action  
Status Date: 03/05/2012  
Restricted Use: NO  
Funding: DERA  
Latitude: 33.87833  
Longitude: -117.2041  
APN: NONE SPECIFIED  
Past Use: FIRING RANGE - SMALL ARMS ETC...  
Potential COC : Explosives (UXO, MEC Lead Copper and compounds)  
Confirmed COC: 30013-NO 30011-NO 30156-NO  
Potential Description: SOIL  
Alias Name: March AFB - Poorman Gunnery Range  
Alias Type: Alternate Name  
Alias Name: CA99799FA42700  
Alias Type: Federal Facility ID  
Alias Name: J09CA7400  
Alias Type: INPR  
Alias Name: 80001100  
Alias Type: Envirostor ID Number

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MARCH AFB - POORMAN GUNNERY RANGE (Continued)**

**S110711878**

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Inventory Project Report (INPR)  
Completed Date: 01/20/2000  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 06/22/2010  
Comments: Approval letter sent, awaiting final document.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Workplan  
Completed Date: 07/06/2010  
Comments: DTSC concurred with document as submitted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Assessment/Site Inspection Report (PA/SI)  
Completed Date: 03/05/2012  
Comments: Not reported

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

ENVIROSTOR:

Facility ID: 80001100  
Status: No Further Action  
Status Date: 03/05/2012  
Site Code: Not reported  
Site Type: State Response  
Site Type Detailed: FUDS  
Acres: 640  
NPL: NO  
Regulatory Agencies: SMBRP  
Lead Agency: SMBRP  
Program Manager: Daniel Cordero  
Supervisor: Manny Alonzo  
Division Branch: Cleanup Cypress  
Assembly: 61  
Senate: 31  
Special Program: Not reported  
Restricted Use: NO  
Site Mgmt Req: NONE SPECIFIED  
Funding: DERA  
Latitude: 33.87833

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MARCH AFB - POORMAN GUNNERY RANGE (Continued)**

**S110711878**

Longitude: -117.2041  
 APN: NONE SPECIFIED  
 Past Use: FIRING RANGE - SMALL ARMS ETC...  
 Potential COC: Explosives (UXO, MEC Lead Copper and compounds)  
 Confirmed COC: 30013-NO 30011-NO 30156-NO  
 Potential Description: SOIL  
 Alias Name: March AFB - Poorman Gunnery Range  
 Alias Type: Alternate Name  
 Alias Name: CA99799FA42700  
 Alias Type: Federal Facility ID  
 Alias Name: J09CA7400  
 Alias Type: INPR  
 Alias Name: 80001100  
 Alias Type: Envirostor ID Number

Completed Info:  
 Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Inventory Project Report (INPR)  
 Completed Date: 01/20/2000  
 Comments: Not reported

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Other Report  
 Completed Date: 06/22/2010  
 Comments: Approval letter sent, awaiting final document.

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Preliminary Endangerment Assessment Workplan  
 Completed Date: 07/06/2010  
 Comments: DTSC concurred with document as submitted.

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Preliminary Assessment/Site Inspection Report (PA/SI)  
 Completed Date: 03/05/2012  
 Comments: Not reported

Future Area Name: Not reported  
 Future Sub Area Name: Not reported  
 Future Document Type: Not reported  
 Future Due Date: Not reported  
 Schedule Area Name: Not reported  
 Schedule Sub Area Name: Not reported  
 Schedule Document Type: Not reported  
 Schedule Due Date: Not reported  
 Schedule Revised Date: Not reported

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Site

Database(s)

EDR ID Number  
 EPA ID Number

**5**            **REPLANET LLC**  
**NNW**        **25900 IRIS AVE**  
**1/4-1/2**      **MORENO VALLEY, CA 92551**  
**0.451 mi.**  
**2380 ft.**

**SWRCY**    **S107136967**  
**HAZNET**    **N/A**

**Relative:**  
**Lower**  
**Actual:**  
**1492 ft.**

SWRCY:  
 Reg Id: 177902  
 Cert Id: RC177902.001  
 Mailing Address: 800 N Haven Ave Suite 120  
 Mailing City: Ontario  
 Mailing State: CA  
 Mailing Zip Code: 91764  
 Website: http://www.replanet.com  
 Email: jennifer.june@replanet.com  
 Phone Number: (877) 737-5263  
 Grand Father: N  
 Rural: N  
 Operation Begin Date: 01/31/2013  
 Aluminium: Y  
 Glass: Y  
 Plastic: Y  
 Bimetal: Y  
 Agency: N/A  
 Monday Hours Of Operation: 9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm  
 Tuesday Hours Of Operation: 9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm  
 Wednesday Hours Of Operation: 9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm  
 Thursday Hours Of Operation: 9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm  
 Friday Hours Of Operation: 9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm  
 Saturday Hours Of Operation: 9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm  
 Sunday Hours Of Operation: 9:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm  
 Organization ID: 151891  
 Organization Name: rePlanet LLC

HAZNET:  
 envid: S107136967  
 Year: 2015  
 GEPAID: CAL000334463  
 Contact: CHERYL SKALICKY  
 Telephone: 9097335288  
 Mailing Name: Not reported  
 Mailing Address: PO BOX 150  
 Mailing City,St,Zip: SAN BERNARDINO, CA 924020000  
 Gen County: Riverside  
 TSD EPA ID: CAD028409019  
 TSD County: Los Angeles  
 Waste Category: Pharmaceutical waste  
 Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)  
 Tons: 0.0025  
 Cat Decode: Not reported  
 Method Decode: Not reported  
 Facility County: Riverside

envid: S107136967  
 Year: 2014  
 GEPAID: CAL000334463  
 Contact: CHERYL SKALICKY  
 Telephone: 9097335288

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

## MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**REPLANET LLC (Continued)****S107136967**

Mailing Name: Not reported  
Mailing Address: PO BOX 150  
Mailing City,St,Zip: SAN BERNARDINO, CA 924020000  
Gen County: Riverside  
TSD EPA ID: CAD028409019  
TSD County: Los Angeles  
Waste Category: Pharmaceutical waste  
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery  
(H010-H129) Or (H131-H135)  
Tons: 0.005  
Cat Decode: Not reported  
Method Decode: Not reported  
Facility County: Riverside

envid: S107136967  
Year: 2013  
GEPaid: CAL000334463  
Contact: CHERYL SKALICKY  
Telephone: 9097335288  
Mailing Name: Not reported  
Mailing Address: PO BOX 150  
Mailing City,St,Zip: SAN BERNARDINO, CA 924020000  
Gen County: Riverside  
TSD EPA ID: CAD028409019  
TSD County: Los Angeles  
Waste Category: Not reported  
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery  
(H010-H129) Or (H131-H135)  
Tons: 0.004  
Cat Decode: Not reported  
Method Decode: Not reported  
Facility County: Not reported

envid: S107136967  
Year: 2013  
GEPaid: CAL000334463  
Contact: CHERYL SKALICKY  
Telephone: 9097335288  
Mailing Name: Not reported  
Mailing Address: PO BOX 150  
Mailing City,St,Zip: SAN BERNARDINO, CA 924020000  
Gen County: Riverside  
TSD EPA ID: CAD059494310  
TSD County: Santa Clara  
Waste Category: Not reported  
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery  
(H010-H129) Or (H131-H135)  
Tons: 0.0034  
Cat Decode: Not reported  
Method Decode: Not reported  
Facility County: Not reported

MAP FINDINGS

Map ID Direction Distance Elevation Site Database(s) EDR ID Number EPA ID Number

**6** **POORMAN GUNNERY RANGE** **UXO** **1018150515**  
**SSW**  
**1/2-1** **MORENO VALLEY, CA** **N/A**  
**0.572 mi.**  
**3020 ft.**

**Relative:** UXO:  
**Lower** DoD Component: FUDS  
**Actual:** Installation Name: MARCH AFB - POORMAN GUNNERY RANGE  
**1496 ft.** Facility Address 2: Not reported  
 Site ID: 010EW  
 Site Type: Small Arms Range  
 Latitude: 33.873798  
 Longitude: -117.209000

**7** **RED MAPLE SCHOOL SITE** **ENVIROSTOR** **S118756706**  
**West** **RED MAPLE LANE/EBONY AVENUE** **SCH** **N/A**  
**1/2-1** **MORENO VALLEY, CA 92551**

**Relative:** ENVIROSTOR:  
**Lower** Facility ID: 33010052  
**Actual:** Status: No Action Required  
**1493 ft.** Status Date: 11/29/2001  
 Site Code: 404298  
 Site Type: School Investigation  
 Site Type Detailed: School  
 Acres: 13.76  
 NPL: NO  
 Regulatory Agencies: DTSC  
 Lead Agency: DTSC  
 Program Manager: Not reported  
 Supervisor: Shahir Haddad  
 Division Branch: Southern California Schools & Brownfields Outreach  
 Assembly: 61  
 Senate: 31  
 Special Program: Not reported  
 Restricted Use: NO  
 Site Mgmt Req: NONE SPECIFIED  
 Funding: School District  
 Latitude: 33.88519  
 Longitude: -117.2213  
 APN: NONE SPECIFIED  
 Past Use: AGRICULTURAL - ROW CROPS  
 Potential COC: NONE SPECIFIED No Contaminants found  
 Confirmed COC: NONE SPECIFIED  
 Potential Description: NMA  
 Alias Name: RED MAPLE SCHOOL SITE (PROPOSED)  
 Alias Type: Alternate Name  
 Alias Name: VAL VERDE UNIFIED SCHOOL DISTRICT  
 Alias Type: Alternate Name  
 Alias Name: VAL VERDE USD-RED MAPLE ELEM  
 Alias Type: Alternate Name  
 Alias Name: VAL VERDE USD-RED MAPLE PROPERTY  
 Alias Type: Alternate Name  
 Alias Name: 404295  
 Alias Type: Project Code (Site Code)  
 Alias Name: 404298  
 Alias Type: Project Code (Site Code)

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

## MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**RED MAPLE SCHOOL SITE (Continued)****S118756706**

Alias Name: 33010052  
Alias Type: Envirostor ID Number

## Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Phase 1  
Completed Date: 11/29/2001  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Inspections/Visit (Non LUR)  
Completed Date: 11/08/2001  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Cost Recovery Closeout Memo  
Completed Date: 11/03/2005  
Comments: Two CRU Memos completed for Site Codes 404295 & 404298.

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

## SCH:

Facility ID: 33010052  
Site Type: School Investigation  
Site Type Detail: School  
Site Mgmt. Req.: NONE SPECIFIED  
Acres: 13.76  
National Priorities List: NO  
Cleanup Oversight Agencies: DTSC  
Lead Agency: DTSC  
Lead Agency Description: \* DTSC  
Project Manager: Not reported  
Supervisor: Shahir Haddad  
Division Branch: Southern California Schools & Brownfields Outreach  
Site Code: 404298  
Assembly: 61  
Senate: 31  
Special Program Status: Not reported  
Status: No Action Required  
Status Date: 11/29/2001  
Restricted Use: NO  
Funding: School District  
Latitude: 33.88519  
Longitude: -117.2213  
APN: NONE SPECIFIED



Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RED MAPLE SCHOOL SITE (Continued)**

**S118756706**

Past Use: AGRICULTURAL - ROW CROPS  
 Potential COC: NONE SPECIFIED, No Contaminants found  
 Confirmed COC: NONE SPECIFIED  
 Potential Description: NMA  
 Alias Name: RED MAPLE SCHOOL SITE (PROPOSED)  
 Alias Type: Alternate Name  
 Alias Name: VAL VERDE UNIFIED SCHOOL DISTRICT  
 Alias Type: Alternate Name  
 Alias Name: VAL VERDE USD-RED MAPLE ELEM  
 Alias Type: Alternate Name  
 Alias Name: VAL VERDE USD-RED MAPLE PROPERTY  
 Alias Type: Alternate Name  
 Alias Name: 404295  
 Alias Type: Project Code (Site Code)  
 Alias Name: 404298  
 Alias Type: Project Code (Site Code)  
 Alias Name: 33010052  
 Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Phase 1  
 Completed Date: 11/29/2001  
 Comments: Not reported

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Site Inspections/Visit (Non LUR)  
 Completed Date: 11/08/2001  
 Comments: Not reported

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Cost Recovery Closeout Memo  
 Completed Date: 11/03/2005  
 Comments: Two CRU Memos completed for Site Codes 404295 & 404298.

Future Area Name: Not reported  
 Future Sub Area Name: Not reported  
 Future Document Type: Not reported  
 Future Due Date: Not reported  
 Schedule Area Name: Not reported  
 Schedule Sub Area Name: Not reported  
 Schedule Document Type: Not reported  
 Schedule Due Date: Not reported  
 Schedule Revised Date: Not reported

Count: 0 records.

ORPHAN SUMMARY

| City           | EDR ID | Site Name | Site Address | Zip | Database(s) |
|----------------|--------|-----------|--------------|-----|-------------|
| NO SITES FOUND |        |           |              |     |             |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

## STANDARD ENVIRONMENTAL RECORDS

### ***Federal NPL site list***

#### NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

|   |  |
|---|--|
| Date of Government Version: 12/11/2017  | Source: EPA                            |
| Date Data Arrived at EDR: 12/22/2017    | Telephone: N/A                         |
| Date Made Active in Reports: 01/05/2018 | Last EDR Contact: 02/06/2018           |
| Number of Days to Update: 14            | Next Scheduled EDR Contact: 04/16/2018 |
|   | Data Release Frequency: Quarterly      |

#### NPL Site Boundaries

##### Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)  
Telephone: 202-564-7333

EPA Region 1  
Telephone 617-918-1143

EPA Region 6  
Telephone: 214-655-6659

EPA Region 3  
Telephone 215-814-5418

EPA Region 7  
Telephone: 913-551-7247

EPA Region 4  
Telephone 404-562-8033

EPA Region 8  
Telephone: 303-312-6774

EPA Region 5  
Telephone 312-886-6686

EPA Region 9  
Telephone: 415-947-4246

EPA Region 10  
Telephone 206-553-8665

#### Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

|   |  |
|---|--|
| Date of Government Version: 12/11/2017  | Source: EPA                            |
| Date Data Arrived at EDR: 12/22/2017    | Telephone: N/A                         |
| Date Made Active in Reports: 01/05/2018 | Last EDR Contact: 02/06/2018           |
| Number of Days to Update: 14            | Next Scheduled EDR Contact: 05/21/2018 |
|   | Data Release Frequency: Quarterly      |

#### NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

|   |   |
|---|---|
| Date of Government Version: 10/15/1991  | Source: EPA                               |
| Date Data Arrived at EDR: 02/02/1994    | Telephone: 202-564-4267                   |
| Date Made Active in Reports: 03/30/1994 | Last EDR Contact: 08/15/2011              |
| Number of Days to Update: 56            | Next Scheduled EDR Contact: 11/28/2011    |
|   | Data Release Frequency: No Update Planned |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## **Federal Delisted NPL site list**

### Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

|   |  |
|---|--|
| Date of Government Version: 12/11/2017  | Source: EPA                            |
| Date Data Arrived at EDR: 12/22/2017    | Telephone: N/A                         |
| Date Made Active in Reports: 01/05/2018 | Last EDR Contact: 02/06/2018           |
| Number of Days to Update: 14            | Next Scheduled EDR Contact: 04/16/2018 |
|   | Data Release Frequency: Quarterly      |

## **Federal CERCLIS list**

### FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

|   |   |
|---|---|
| Date of Government Version: 11/07/2016  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 01/05/2017    | Telephone: 703-603-8704                 |
| Date Made Active in Reports: 04/07/2017 | Last EDR Contact: 01/05/2018            |
| Number of Days to Update: 92            | Next Scheduled EDR Contact: 04/16/2018  |
|   | Data Release Frequency: Varies          |

### SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

|   |  |
|---|--|
| Date of Government Version: 12/11/2017  | Source: EPA                            |
| Date Data Arrived at EDR: 12/22/2017    | Telephone: 800-424-9346                |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 02/06/2018           |
| Number of Days to Update: 21            | Next Scheduled EDR Contact: 04/30/2018 |
|   | Data Release Frequency: Quarterly      |

## **Federal CERCLIS NFRAP site list**

### SEMS-ARCHIVE: Superfund Enterprise Management System Archive



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

|   |  |
|---|--|
| Date of Government Version: 12/11/2017  | Source: EPA                            |
| Date Data Arrived at EDR: 12/22/2017    | Telephone: 800-424-9346                |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 02/06/2018           |
| Number of Days to Update: 21            | Next Scheduled EDR Contact: 04/30/2018 |
|   | Data Release Frequency: Quarterly      |

### **Federal RCRA CORRACTS facilities list**

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

|   |  |
|---|--|
| Date of Government Version: 12/11/2017  | Source: EPA                            |
| Date Data Arrived at EDR: 12/26/2017    | Telephone: 800-424-9346                |
| Date Made Active in Reports: 02/09/2018 | Last EDR Contact: 01/19/2018           |
| Number of Days to Update: 45            | Next Scheduled EDR Contact: 04/09/2018 |
|   | Data Release Frequency: Quarterly      |

### **Federal RCRA non-CORRACTS TSD facilities list**

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

|   |   |
|---|---|
| Date of Government Version: 12/11/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 12/26/2017    | Telephone: (415) 495-8895               |
| Date Made Active in Reports: 02/09/2018 | Last EDR Contact: 01/19/2018            |
| Number of Days to Update: 45            | Next Scheduled EDR Contact: 04/09/2018  |
|   | Data Release Frequency: Quarterly       |

### **Federal RCRA generators list**

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

|   |   |
|---|---|
| Date of Government Version: 12/11/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 12/26/2017    | Telephone: (415) 495-8895               |
| Date Made Active in Reports: 02/09/2018 | Last EDR Contact: 01/19/2018            |
| Number of Days to Update: 45            | Next Scheduled EDR Contact: 04/09/2018  |
|   | Data Release Frequency: Quarterly       |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

|   |   |
|---|---|
| Date of Government Version: 12/11/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 12/26/2017    | Telephone: (415) 495-8895               |
| Date Made Active in Reports: 02/09/2018 | Last EDR Contact: 01/19/2018            |
| Number of Days to Update: 45            | Next Scheduled EDR Contact: 04/09/2018  |
|   | Data Release Frequency: Quarterly       |

## RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

|   |   |
|---|---|
| Date of Government Version: 12/11/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 12/26/2017    | Telephone: (415) 495-8895               |
| Date Made Active in Reports: 02/09/2018 | Last EDR Contact: 01/19/2018            |
| Number of Days to Update: 45            | Next Scheduled EDR Contact: 04/09/2018  |
|   | Data Release Frequency: Quarterly       |

## ***Federal institutional controls / engineering controls registries***

### LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

|   |  |
|---|--|
| Date of Government Version: 05/22/2017  | Source: Department of the Navy         |
| Date Data Arrived at EDR: 06/13/2017    | Telephone: 843-820-7326                |
| Date Made Active in Reports: 09/15/2017 | Last EDR Contact: 02/09/2018           |
| Number of Days to Update: 94            | Next Scheduled EDR Contact: 05/28/2018 |
|   | Data Release Frequency: Varies         |

### US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

|   |   |
|---|---|
| Date of Government Version: 11/13/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 11/27/2017    | Telephone: 703-603-0695                 |
| Date Made Active in Reports: 02/09/2018 | Last EDR Contact: 02/27/2018            |
| Number of Days to Update: 74            | Next Scheduled EDR Contact: 06/11/2018  |
|   | Data Release Frequency: Varies          |

### US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

|   |   |
|---|---|
| Date of Government Version: 11/13/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 11/27/2017    | Telephone: 703-603-0695                 |
| Date Made Active in Reports: 02/09/2018 | Last EDR Contact: 02/27/2018            |
| Number of Days to Update: 74            | Next Scheduled EDR Contact: 06/11/2018  |
|   | Data Release Frequency: Varies          |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## **Federal ERNS list**

### ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/18/2017  
Date Data Arrived at EDR: 09/21/2017  
Date Made Active in Reports: 10/13/2017  
Number of Days to Update: 22

Source: National Response Center, United States Coast Guard  
Telephone: 202-267-2180  
Last EDR Contact: 01/19/2018  
Next Scheduled EDR Contact: 04/09/2018  
Data Release Frequency: Quarterly

## **State- and tribal - equivalent NPL**

### RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 10/30/2017  
Date Data Arrived at EDR: 10/31/2017  
Date Made Active in Reports: 12/15/2017  
Number of Days to Update: 45

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400  
Last EDR Contact: 01/31/2018  
Next Scheduled EDR Contact: 05/14/2018  
Data Release Frequency: Quarterly

## **State- and tribal - equivalent CERCLIS**

### ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 10/30/2017  
Date Data Arrived at EDR: 10/31/2017  
Date Made Active in Reports: 12/15/2017  
Number of Days to Update: 45

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400  
Last EDR Contact: 01/31/2018  
Next Scheduled EDR Contact: 05/14/2018  
Data Release Frequency: Quarterly

## **State and tribal landfill and/or solid waste disposal site lists**

### SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/13/2017  
Date Data Arrived at EDR: 11/14/2017  
Date Made Active in Reports: 12/07/2017  
Number of Days to Update: 23

Source: Department of Resources Recycling and Recovery  
Telephone: 916-341-6320  
Last EDR Contact: 02/14/2018  
Next Scheduled EDR Contact: 05/28/2018  
Data Release Frequency: Quarterly

## **State and tribal leaking storage tank lists**

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

|   |   |
|---|---|
| Date of Government Version: 09/09/2003  | Source: California Regional Water Quality Control Board Lahontan Region (6) |
| Date Data Arrived at EDR: 09/10/2003    | Telephone: 530-542-5572   |
| Date Made Active in Reports: 10/07/2003 | Last EDR Contact: 09/12/2011  |
| Number of Days to Update: 27            | Next Scheduled EDR Contact: 12/26/2011                                      |
|   | Data Release Frequency: No Update Planned                                   |

## LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

|   |  |
|---|--|
| Date of Government Version: 03/01/2001  | Source: California Regional Water Quality Control Board San Diego Region (9) |
| Date Data Arrived at EDR: 04/23/2001    | Telephone: 858-637-5595  |
| Date Made Active in Reports: 05/21/2001 | Last EDR Contact: 09/26/2011   |
| Number of Days to Update: 28            | Next Scheduled EDR Contact: 01/09/2012                                       |
|   | Data Release Frequency: No Update Planned                                    |

## LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

|   |   |
|---|---|
| Date of Government Version: 12/11/2017  | Source: State Water Resources Control Board |
| Date Data Arrived at EDR: 12/12/2017    | Telephone: see region list                  |
| Date Made Active in Reports: 01/11/2018 | Last EDR Contact: 12/12/2018                |
| Number of Days to Update: 30            | Next Scheduled EDR Contact: 03/26/2018      |
|   | Data Release Frequency: Quarterly           |

## LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

|   |   |
|---|---|
| Date of Government Version: 02/26/2004  | Source: California Regional Water Quality Control Board Colorado River Basin Region (7) |
| Date Data Arrived at EDR: 02/26/2004    | Telephone: 760-776-8943   |
| Date Made Active in Reports: 03/24/2004 | Last EDR Contact: 08/01/2011  |
| Number of Days to Update: 27            | Next Scheduled EDR Contact: 11/14/2011  |
|   | Data Release Frequency: No Update Planned   |

## LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

|   |   |
|---|---|
| Date of Government Version: 06/07/2005  | Source: California Regional Water Quality Control Board Victorville Branch Office (6) |
| Date Data Arrived at EDR: 06/07/2005    | Telephone: 760-241-7365   |
| Date Made Active in Reports: 06/29/2005 | Last EDR Contact: 09/12/2011  |
| Number of Days to Update: 22            | Next Scheduled EDR Contact: 12/26/2011  |
|   | Data Release Frequency: No Update Planned   |

## LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

|   |  |
|---|--|
| Date of Government Version: 02/14/2005  | Source: California Regional Water Quality Control Board Santa Ana Region (8) |
| Date Data Arrived at EDR: 02/15/2005    | Telephone: 909-782-4496  |
| Date Made Active in Reports: 03/28/2005 | Last EDR Contact: 08/15/2011   |
| Number of Days to Update: 41            | Next Scheduled EDR Contact: 11/28/2011                                       |
|   | Data Release Frequency: Varies   |

## LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/01/2008  
 Date Data Arrived at EDR: 07/22/2008  
 Date Made Active in Reports: 07/31/2008  
 Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)  
 Telephone: 916-464-4834  
 Last EDR Contact: 07/01/2011  
 Next Scheduled EDR Contact: 10/17/2011  
 Data Release Frequency: No Update Planned

## LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004  
 Date Data Arrived at EDR: 09/07/2004  
 Date Made Active in Reports: 10/12/2004  
 Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)  
 Telephone: 213-576-6710  
 Last EDR Contact: 09/06/2011  
 Next Scheduled EDR Contact: 12/19/2011  
 Data Release Frequency: No Update Planned

## LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003  
 Date Data Arrived at EDR: 05/19/2003  
 Date Made Active in Reports: 06/02/2003  
 Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)  
 Telephone: 805-542-4786  
 Last EDR Contact: 07/18/2011  
 Next Scheduled EDR Contact: 10/31/2011  
 Data Release Frequency: No Update Planned

## LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004  
 Date Data Arrived at EDR: 10/20/2004  
 Date Made Active in Reports: 11/19/2004  
 Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)  
 Telephone: 510-622-2433  
 Last EDR Contact: 09/19/2011  
 Next Scheduled EDR Contact: 01/02/2012  
 Data Release Frequency: Quarterly

## LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001  
 Date Data Arrived at EDR: 02/28/2001  
 Date Made Active in Reports: 03/29/2001  
 Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)  
 Telephone: 707-570-3769  
 Last EDR Contact: 08/01/2011  
 Next Scheduled EDR Contact: 11/14/2011  
 Data Release Frequency: No Update Planned

## INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/14/2017  
 Date Data Arrived at EDR: 07/27/2017  
 Date Made Active in Reports: 10/06/2017  
 Number of Days to Update: 71

Source: EPA Region 1  
 Telephone: 617-918-1313  
 Last EDR Contact: 01/23/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Varies

## INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/14/2017  
 Date Data Arrived at EDR: 07/27/2017  
 Date Made Active in Reports: 10/06/2017  
 Number of Days to Update: 71

Source: EPA Region 7  
 Telephone: 913-551-7003  
 Last EDR Contact: 01/23/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

|   |  |
|---|--|
| Date of Government Version: 05/01/2017  | Source: EPA Region 8                   |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 303-312-6271                |
| Date Made Active in Reports: 10/13/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 78            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

## INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

|   |   |
|---|---|
| Date of Government Version: 04/13/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 415-972-3372                 |
| Date Made Active in Reports: 10/13/2017 | Last EDR Contact: 01/23/2018            |
| Number of Days to Update: 78            | Next Scheduled EDR Contact: 05/07/2018  |
|   | Data Release Frequency: Varies          |

## INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

|   |  |
|---|--|
| Date of Government Version: 04/25/2017  | Source: EPA Region 10                  |
| Date Data Arrived at EDR: 11/07/2017    | Telephone: 206-553-2857                |
| Date Made Active in Reports: 12/08/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 31            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

## INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

|   |  |
|---|--|
| Date of Government Version: 04/26/2017  | Source: EPA, Region 5                  |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 312-886-7439                |
| Date Made Active in Reports: 10/13/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 78            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

## INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

|   |  |
|---|--|
| Date of Government Version: 10/14/2016  | Source: EPA Region 4                   |
| Date Data Arrived at EDR: 01/27/2017    | Telephone: 404-562-8677                |
| Date Made Active in Reports: 05/05/2017 | Last EDR Contact: 01/19/2018           |
| Number of Days to Update: 98            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Semi-Annually  |

## INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

|   |  |
|---|--|
| Date of Government Version: 04/24/2017  | Source: EPA Region 6                   |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 214-665-6597                |
| Date Made Active in Reports: 10/06/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 71            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

## SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

|   |   |
|---|---|
| Date of Government Version: 12/11/2017  | Source: State Water Resources Control Board |
| Date Data Arrived at EDR: 12/12/2017    | Telephone: 866-480-1028                     |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 12/12/2018                |
| Number of Days to Update: 31            | Next Scheduled EDR Contact: 03/26/2018      |
|   | Data Release Frequency: Varies              |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003  
 Date Data Arrived at EDR: 04/07/2003  
 Date Made Active in Reports: 04/25/2003  
 Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)  
 Telephone: 707-576-2220  
 Last EDR Contact: 08/01/2011  
 Next Scheduled EDR Contact: 11/14/2011  
 Data Release Frequency: No Update Planned

## SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004  
 Date Data Arrived at EDR: 10/20/2004  
 Date Made Active in Reports: 11/19/2004  
 Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)  
 Telephone: 510-286-0457  
 Last EDR Contact: 09/19/2011  
 Next Scheduled EDR Contact: 01/02/2012  
 Data Release Frequency: Quarterly

## SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006  
 Date Data Arrived at EDR: 05/18/2006  
 Date Made Active in Reports: 06/15/2006  
 Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)  
 Telephone: 805-549-3147  
 Last EDR Contact: 07/18/2011  
 Next Scheduled EDR Contact: 10/31/2011  
 Data Release Frequency: Semi-Annually

## SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004  
 Date Data Arrived at EDR: 11/18/2004  
 Date Made Active in Reports: 01/04/2005  
 Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)  
 Telephone: 213-576-6600  
 Last EDR Contact: 07/01/2011  
 Next Scheduled EDR Contact: 10/17/2011  
 Data Release Frequency: Varies

## SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005  
 Date Data Arrived at EDR: 04/05/2005  
 Date Made Active in Reports: 04/21/2005  
 Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)  
 Telephone: 916-464-3291  
 Last EDR Contact: 09/12/2011  
 Next Scheduled EDR Contact: 12/26/2011  
 Data Release Frequency: Semi-Annually

## SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005  
 Date Data Arrived at EDR: 05/25/2005  
 Date Made Active in Reports: 06/16/2005  
 Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch  
 Telephone: 619-241-6583  
 Last EDR Contact: 08/15/2011  
 Next Scheduled EDR Contact: 11/28/2011  
 Data Release Frequency: Semi-Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004  
 Date Data Arrived at EDR: 09/07/2004  
 Date Made Active in Reports: 10/12/2004  
 Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region  
 Telephone: 530-542-5574  
 Last EDR Contact: 08/15/2011  
 Next Scheduled EDR Contact: 11/28/2011  
 Data Release Frequency: No Update Planned

## SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004  
 Date Data Arrived at EDR: 11/29/2004  
 Date Made Active in Reports: 01/04/2005  
 Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region  
 Telephone: 760-346-7491  
 Last EDR Contact: 08/01/2011  
 Next Scheduled EDR Contact: 11/14/2011  
 Data Release Frequency: No Update Planned

## SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008  
 Date Data Arrived at EDR: 04/03/2008  
 Date Made Active in Reports: 04/14/2008  
 Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)  
 Telephone: 951-782-3298  
 Last EDR Contact: 09/12/2011  
 Next Scheduled EDR Contact: 12/26/2011  
 Data Release Frequency: Semi-Annually

## SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007  
 Date Data Arrived at EDR: 09/11/2007  
 Date Made Active in Reports: 09/28/2007  
 Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)  
 Telephone: 858-467-2980  
 Last EDR Contact: 08/08/2011  
 Next Scheduled EDR Contact: 11/21/2011  
 Data Release Frequency: Annually

## **State and tribal registered storage tank lists**

### FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017  
 Date Data Arrived at EDR: 05/30/2017  
 Date Made Active in Reports: 10/13/2017  
 Number of Days to Update: 136

Source: FEMA  
 Telephone: 202-646-5797  
 Last EDR Contact: 01/09/2018  
 Next Scheduled EDR Contact: 04/23/2018  
 Data Release Frequency: Varies

### UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/11/2017  
 Date Data Arrived at EDR: 12/12/2017  
 Date Made Active in Reports: 01/17/2018  
 Number of Days to Update: 36

Source: SWRCB  
 Telephone: 916-341-5851  
 Last EDR Contact: 12/12/2017  
 Next Scheduled EDR Contact: 03/26/2018  
 Data Release Frequency: Semi-Annually



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

|   |  |
|---|--|
| Date of Government Version: 07/06/2016  | Source: California Environmental Protection Agency |
| Date Data Arrived at EDR: 07/12/2016    | Telephone: 916-327-5092                            |
| Date Made Active in Reports: 09/19/2016 | Last EDR Contact: 12/26/2017                       |
| Number of Days to Update: 69            | Next Scheduled EDR Contact: 04/09/2018             |
|   | Data Release Frequency: Quarterly                  |

## INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

|   |  |
|---|--|
| Date of Government Version: 04/14/2017  | Source: EPA, Region 1                  |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 617-918-1313                |
| Date Made Active in Reports: 10/06/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 71            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

## INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

|   |  |
|---|--|
| Date of Government Version: 04/24/2017  | Source: EPA Region 6                   |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 214-665-7591                |
| Date Made Active in Reports: 12/08/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 134           | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

## INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

|   |  |
|---|--|
| Date of Government Version: 05/02/2017  | Source: EPA Region 7                   |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 913-551-7003                |
| Date Made Active in Reports: 10/06/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 71            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

## INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

|   |  |
|---|--|
| Date of Government Version: 10/14/2016  | Source: EPA Region 4                   |
| Date Data Arrived at EDR: 01/27/2017    | Telephone: 404-562-9424                |
| Date Made Active in Reports: 05/05/2017 | Last EDR Contact: 01/19/2018           |
| Number of Days to Update: 98            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Semi-Annually  |

## INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

|   |  |
|---|--|
| Date of Government Version: 04/26/2017  | Source: EPA Region 5                   |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 312-886-6136                |
| Date Made Active in Reports: 10/06/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 71            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

|   |  |
|---|--|
| Date of Government Version: 04/13/2017  | Source: EPA Region 9                   |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 415-972-3368                |
| Date Made Active in Reports: 10/13/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 78            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

## INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

|   |  |
|---|--|
| Date of Government Version: 04/25/2017  | Source: EPA Region 10                  |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 206-553-2857                |
| Date Made Active in Reports: 10/13/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 78            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

## INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

|   |  |
|---|--|
| Date of Government Version: 05/01/2017  | Source: EPA Region 8                   |
| Date Data Arrived at EDR: 07/27/2017    | Telephone: 303-312-6137                |
| Date Made Active in Reports: 10/13/2017 | Last EDR Contact: 01/23/2018           |
| Number of Days to Update: 78            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

### **State and tribal voluntary cleanup sites**

#### INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

|   |  |
|---|--|
| Date of Government Version: 03/20/2008  | Source: EPA, Region 7                  |
| Date Data Arrived at EDR: 04/22/2008    | Telephone: 913-551-7365                |
| Date Made Active in Reports: 05/19/2008 | Last EDR Contact: 04/20/2009           |
| Number of Days to Update: 27            | Next Scheduled EDR Contact: 07/20/2009 |
|   | Data Release Frequency: Varies         |

#### INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

|   |  |
|---|--|
| Date of Government Version: 07/27/2015  | Source: EPA, Region 1                  |
| Date Data Arrived at EDR: 09/29/2015    | Telephone: 617-918-1102                |
| Date Made Active in Reports: 02/18/2016 | Last EDR Contact: 12/20/2017           |
| Number of Days to Update: 142           | Next Scheduled EDR Contact: 04/09/2018 |
|   | Data Release Frequency: Varies         |

#### VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

|   |  |
|---|--|
| Date of Government Version: 10/30/2017  | Source: Department of Toxic Substances Control |
| Date Data Arrived at EDR: 10/31/2017    | Telephone: 916-323-3400                        |
| Date Made Active in Reports: 12/15/2017 | Last EDR Contact: 01/31/2018                   |
| Number of Days to Update: 45            | Next Scheduled EDR Contact: 05/14/2018         |
|   | Data Release Frequency: Quarterly              |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ***State and tribal Brownfields sites***

### **BROWNFIELDS: Considered Brownfields Sites Listing**

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/22/2017  
 Date Data Arrived at EDR: 12/26/2017  
 Date Made Active in Reports: 01/31/2018  
 Number of Days to Update: 36

Source: State Water Resources Control Board  
 Telephone: 916-323-7905  
 Last EDR Contact: 12/26/2017  
 Next Scheduled EDR Contact: 04/09/2018  
 Data Release Frequency: Quarterly

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Brownfield lists***

#### **US BROWNFIELDS: A Listing of Brownfields Sites**

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 01/19/2018  
 Date Data Arrived at EDR: 01/19/2018  
 Date Made Active in Reports: 02/09/2018  
 Number of Days to Update: 21

Source: Environmental Protection Agency  
 Telephone: 202-566-2777  
 Last EDR Contact: 01/19/2018  
 Next Scheduled EDR Contact: 04/02/2018  
 Data Release Frequency: Semi-Annually

### ***Local Lists of Landfill / Solid Waste Disposal Sites***

#### **WMUDS/SWAT: Waste Management Unit Database**

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000  
 Date Data Arrived at EDR: 04/10/2000  
 Date Made Active in Reports: 05/10/2000  
 Number of Days to Update: 30

Source: State Water Resources Control Board  
 Telephone: 916-227-4448  
 Last EDR Contact: 01/31/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: No Update Planned

#### **SWRCY: Recycler Database**

A listing of recycling facilities in California.

Date of Government Version: 12/11/2017  
 Date Data Arrived at EDR: 12/12/2017  
 Date Made Active in Reports: 01/17/2018  
 Number of Days to Update: 36

Source: Department of Conservation  
 Telephone: 916-323-3836  
 Last EDR Contact: 12/12/2017  
 Next Scheduled EDR Contact: 03/26/2018  
 Data Release Frequency: Quarterly

#### **HAULERS: Registered Waste Tire Haulers Listing**

A listing of registered waste tire haulers.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/30/2017  
 Date Data Arrived at EDR: 05/31/2017  
 Date Made Active in Reports: 08/15/2017  
 Number of Days to Update: 76

Source: Integrated Waste Management Board  
 Telephone: 916-341-6422  
 Last EDR Contact: 02/09/2018  
 Next Scheduled EDR Contact: 02/26/2018  
 Data Release Frequency: Varies

## INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998  
 Date Data Arrived at EDR: 12/03/2007  
 Date Made Active in Reports: 01/24/2008  
 Number of Days to Update: 52

Source: Environmental Protection Agency  
 Telephone: 703-308-8245  
 Last EDR Contact: 01/30/2018  
 Next Scheduled EDR Contact: 05/14/2018  
 Data Release Frequency: Varies

## ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985  
 Date Data Arrived at EDR: 08/09/2004  
 Date Made Active in Reports: 09/17/2004  
 Number of Days to Update: 39

Source: Environmental Protection Agency  
 Telephone: 800-424-9346  
 Last EDR Contact: 06/09/2004  
 Next Scheduled EDR Contact: N/A  
 Data Release Frequency: No Update Planned

## DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009  
 Date Data Arrived at EDR: 05/07/2009  
 Date Made Active in Reports: 09/21/2009  
 Number of Days to Update: 137

Source: EPA, Region 9  
 Telephone: 415-947-4219  
 Last EDR Contact: 01/22/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: No Update Planned

## IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014  
 Date Data Arrived at EDR: 08/06/2014  
 Date Made Active in Reports: 01/29/2015  
 Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service  
 Telephone: 301-443-1452  
 Last EDR Contact: 02/02/2018  
 Next Scheduled EDR Contact: 05/14/2018  
 Data Release Frequency: Varies

## **Local Lists of Hazardous waste / Contaminated Sites**

### US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 01/19/2018  
 Date Data Arrived at EDR: 01/24/2018  
 Date Made Active in Reports: 02/09/2018  
 Number of Days to Update: 16

Source: Drug Enforcement Administration  
 Telephone: 202-307-1000  
 Last EDR Contact: 02/27/2018  
 Next Scheduled EDR Contact: 06/11/2018  
 Data Release Frequency: No Update Planned

### HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/08/2005  
 Date Data Arrived at EDR: 08/03/2006  
 Date Made Active in Reports: 08/24/2006  
 Number of Days to Update: 21

Source: Department of Toxic Substance Control  
 Telephone: 916-323-3400  
 Last EDR Contact: 02/23/2009  
 Next Scheduled EDR Contact: 05/25/2009  
 Data Release Frequency: No Update Planned

## SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 10/30/2017  
 Date Data Arrived at EDR: 10/31/2017  
 Date Made Active in Reports: 12/15/2017  
 Number of Days to Update: 45

Source: Department of Toxic Substances Control  
 Telephone: 916-323-3400  
 Last EDR Contact: 01/31/2018  
 Next Scheduled EDR Contact: 05/14/2018  
 Data Release Frequency: Quarterly

## CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2017  
 Date Data Arrived at EDR: 08/18/2017  
 Date Made Active in Reports: 09/21/2017  
 Number of Days to Update: 34

Source: Department of Toxic Substances Control  
 Telephone: 916-255-6504  
 Last EDR Contact: 02/22/2018  
 Next Scheduled EDR Contact: 04/23/2018  
 Data Release Frequency: Varies

## TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995  
 Date Data Arrived at EDR: 08/30/1995  
 Date Made Active in Reports: 09/26/1995  
 Number of Days to Update: 27

Source: State Water Resources Control Board  
 Telephone: 916-227-4364  
 Last EDR Contact: 01/26/2009  
 Next Scheduled EDR Contact: 04/27/2009  
 Data Release Frequency: No Update Planned

## US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 01/09/2018  
 Date Data Arrived at EDR: 01/24/2018  
 Date Made Active in Reports: 02/09/2018  
 Number of Days to Update: 16

Source: Drug Enforcement Administration  
 Telephone: 202-307-1000  
 Last EDR Contact: 02/27/2018  
 Next Scheduled EDR Contact: 06/11/2018  
 Data Release Frequency: Quarterly

## Local Lists of Registered Storage Tanks

### SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/01/1994  
 Date Data Arrived at EDR: 07/07/2005  
 Date Made Active in Reports: 08/11/2005  
 Number of Days to Update: 35

Source: State Water Resources Control Board  
 Telephone: N/A  
 Last EDR Contact: 06/03/2005  
 Next Scheduled EDR Contact: N/A  
 Data Release Frequency: No Update Planned

## UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 11/27/2017  
 Date Data Arrived at EDR: 11/29/2017  
 Date Made Active in Reports: 12/18/2017  
 Number of Days to Update: 19

Source: Department of Public Health  
 Telephone: 707-463-4466  
 Last EDR Contact: 02/22/2018  
 Next Scheduled EDR Contact: 06/11/2018  
 Data Release Frequency: Annually

## HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990  
 Date Data Arrived at EDR: 01/25/1991  
 Date Made Active in Reports: 02/12/1991  
 Number of Days to Update: 18

Source: State Water Resources Control Board  
 Telephone: 916-341-5851  
 Last EDR Contact: 07/26/2001  
 Next Scheduled EDR Contact: N/A  
 Data Release Frequency: No Update Planned

## CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994  
 Date Data Arrived at EDR: 09/05/1995  
 Date Made Active in Reports: 09/29/1995  
 Number of Days to Update: 24

Source: California Environmental Protection Agency  
 Telephone: 916-341-5851  
 Last EDR Contact: 12/28/1998  
 Next Scheduled EDR Contact: N/A  
 Data Release Frequency: No Update Planned

## Local Land Records

### LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 11/30/2017  
 Date Data Arrived at EDR: 12/01/2017  
 Date Made Active in Reports: 01/11/2018  
 Number of Days to Update: 41

Source: Department of Toxic Substances Control  
 Telephone: 916-323-3400  
 Last EDR Contact: 02/28/2018  
 Next Scheduled EDR Contact: 06/18/2018  
 Data Release Frequency: Varies

### LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 12/11/2017  
 Date Data Arrived at EDR: 12/22/2017  
 Date Made Active in Reports: 01/12/2018  
 Number of Days to Update: 21

Source: Environmental Protection Agency  
 Telephone: 202-564-6023  
 Last EDR Contact: 02/06/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Semi-Annually

### DEED: Deed Restriction Listing

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

|   |  |
|---|--|
| Date of Government Version: 02/08/2018  | Source: DTSC and SWRCB                 |
| Date Data Arrived at EDR: 02/08/2018    | Telephone: 916-323-3400                |
| Date Made Active in Reports: 02/08/2018 | Last EDR Contact: 03/06/2018           |
| Number of Days to Update: 0             | Next Scheduled EDR Contact: 06/18/2018 |
|   | Data Release Frequency: Semi-Annually  |

## **Records of Emergency Release Reports**

### HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

|   |   |
|---|---|
| Date of Government Version: 09/21/2017  | Source: U.S. Department of Transportation |
| Date Data Arrived at EDR: 09/21/2017    | Telephone: 202-366-4555                   |
| Date Made Active in Reports: 10/13/2017 | Last EDR Contact: 01/19/2018              |
| Number of Days to Update: 22            | Next Scheduled EDR Contact: 04/09/2018    |
|   | Data Release Frequency: Quarterly         |

### CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

|   |  |
|---|--|
| Date of Government Version: 05/09/2017  | Source: Office of Emergency Services   |
| Date Data Arrived at EDR: 07/26/2017    | Telephone: 916-845-8400                |
| Date Made Active in Reports: 09/21/2017 | Last EDR Contact: 02/20/2018           |
| Number of Days to Update: 57            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Varies         |

### LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

|   |   |
|---|---|
| Date of Government Version: 12/11/2017  | Source: State Water Quality Control Board |
| Date Data Arrived at EDR: 12/12/2017    | Telephone: 866-480-1028                   |
| Date Made Active in Reports: 01/11/2018 | Last EDR Contact: 12/12/2018              |
| Number of Days to Update: 30            | Next Scheduled EDR Contact: 03/26/2018    |
|   | Data Release Frequency: Quarterly         |

### MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

|   |   |
|---|---|
| Date of Government Version: 12/11/2017  | Source: State Water Resources Control Board |
| Date Data Arrived at EDR: 12/12/2017    | Telephone: 866-480-1028                     |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 12/12/2018                |
| Number of Days to Update: 31            | Next Scheduled EDR Contact: 03/26/2018      |
|   | Data Release Frequency: Quarterly           |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

|   |   |
|---|---|
| Date of Government Version: 06/06/2012  | Source: FirstSearch                       |
| Date Data Arrived at EDR: 01/03/2013    | Telephone: N/A                            |
| Date Made Active in Reports: 02/22/2013 | Last EDR Contact: 01/03/2013              |
| Number of Days to Update: 50            | Next Scheduled EDR Contact: N/A           |
|   | Data Release Frequency: No Update Planned |

## Other Ascertainable Records

### RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

|   |   |
|---|---|
| Date of Government Version: 12/11/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 12/26/2017    | Telephone: (415) 495-8895               |
| Date Made Active in Reports: 02/09/2018 | Last EDR Contact: 01/19/2018            |
| Number of Days to Update: 45            | Next Scheduled EDR Contact: 04/09/2018  |
|   | Data Release Frequency: Quarterly       |

### FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

|   |  |
|---|--|
| Date of Government Version: 01/31/2015  | Source: U.S. Army Corps of Engineers   |
| Date Data Arrived at EDR: 07/08/2015    | Telephone: 202-528-4285                |
| Date Made Active in Reports: 10/13/2015 | Last EDR Contact: 02/21/2018           |
| Number of Days to Update: 97            | Next Scheduled EDR Contact: 06/04/2018 |
|   | Data Release Frequency: Varies         |

### DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

|   |  |
|---|--|
| Date of Government Version: 12/31/2005  | Source: USGS                           |
| Date Data Arrived at EDR: 11/10/2006    | Telephone: 888-275-8747                |
| Date Made Active in Reports: 01/11/2007 | Last EDR Contact: 10/13/2017           |
| Number of Days to Update: 62            | Next Scheduled EDR Contact: 01/22/2018 |
|   | Data Release Frequency: Semi-Annually  |

### FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

|   |  |
|---|--|
| Date of Government Version: 12/31/2005  | Source: U.S. Geological Survey         |
| Date Data Arrived at EDR: 02/06/2006    | Telephone: 888-275-8747                |
| Date Made Active in Reports: 01/11/2007 | Last EDR Contact: 10/11/2017           |
| Number of Days to Update: 339           | Next Scheduled EDR Contact: 01/22/2018 |
|   | Data Release Frequency: N/A            |

### SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

|   |   |
|---|---|
| Date of Government Version: 01/01/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 02/03/2017    | Telephone: 615-532-8599                 |
| Date Made Active in Reports: 04/07/2017 | Last EDR Contact: 02/16/2018            |
| Number of Days to Update: 63            | Next Scheduled EDR Contact: 05/28/2018  |
|   | Data Release Frequency: Varies          |

## US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

|   |   |
|---|---|
| Date of Government Version: 01/11/2018  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 01/19/2018    | Telephone: 202-566-1917                 |
| Date Made Active in Reports: 03/02/2018 | Last EDR Contact: 01/19/2018            |
| Number of Days to Update: 42            | Next Scheduled EDR Contact: 04/09/2018  |
|   | Data Release Frequency: Quarterly       |

## EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

|   |   |
|---|---|
| Date of Government Version: 08/30/2013  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 03/21/2014    | Telephone: 617-520-3000                 |
| Date Made Active in Reports: 06/17/2014 | Last EDR Contact: 01/31/2018            |
| Number of Days to Update: 88            | Next Scheduled EDR Contact: 05/21/2018  |
|   | Data Release Frequency: Quarterly       |

## 2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

|   |   |
|---|---|
| Date of Government Version: 04/22/2013  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 03/03/2015    | Telephone: 703-308-4044                 |
| Date Made Active in Reports: 03/09/2015 | Last EDR Contact: 02/08/2018            |
| Number of Days to Update: 6             | Next Scheduled EDR Contact: 05/21/2018  |
|   | Data Release Frequency: Varies          |

## TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

|   |  |
|---|--|
| Date of Government Version: 12/31/2016  | Source: EPA                            |
| Date Data Arrived at EDR: 06/21/2017    | Telephone: 202-260-5521                |
| Date Made Active in Reports: 01/05/2018 | Last EDR Contact: 12/22/2017           |
| Number of Days to Update: 198           | Next Scheduled EDR Contact: 04/02/2018 |
|   | Data Release Frequency: Every 4 Years  |

## TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

|   |  |
|---|--|
| Date of Government Version: 12/31/2016  | Source: EPA                            |
| Date Data Arrived at EDR: 01/10/2018    | Telephone: 202-566-0250                |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 02/23/2018           |
| Number of Days to Update: 2             | Next Scheduled EDR Contact: 06/04/2018 |
|   | Data Release Frequency: Annually       |

## SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

|   |  |
|---|--|
| Date of Government Version: 12/31/2009  | Source: EPA                            |
| Date Data Arrived at EDR: 12/10/2010    | Telephone: 202-564-4203                |
| Date Made Active in Reports: 02/25/2011 | Last EDR Contact: 01/25/2018           |
| Number of Days to Update: 77            | Next Scheduled EDR Contact: 05/07/2018 |
|   | Data Release Frequency: Annually       |

## ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

|   |  |
|---|--|
| Date of Government Version: 12/11/2017  | Source: EPA                            |
| Date Data Arrived at EDR: 12/22/2017    | Telephone: 703-416-0223                |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 03/09/2018           |
| Number of Days to Update: 21            | Next Scheduled EDR Contact: 06/18/2018 |
|   | Data Release Frequency: Annually       |

## RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

|   |   |
|---|---|
| Date of Government Version: 11/02/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 11/17/2017    | Telephone: 202-564-8600                 |
| Date Made Active in Reports: 12/08/2017 | Last EDR Contact: 01/19/2018            |
| Number of Days to Update: 21            | Next Scheduled EDR Contact: 05/07/2018  |
|   | Data Release Frequency: Varies          |

## RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

|   |   |
|---|---|
| Date of Government Version: 04/17/1995  | Source: EPA                               |
| Date Data Arrived at EDR: 07/03/1995    | Telephone: 202-564-4104                   |
| Date Made Active in Reports: 08/07/1995 | Last EDR Contact: 06/02/2008              |
| Number of Days to Update: 35            | Next Scheduled EDR Contact: 09/01/2008    |
|   | Data Release Frequency: No Update Planned |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

|   |  |
|---|--|
| Date of Government Version: 10/25/2013  | Source: EPA                            |
| Date Data Arrived at EDR: 10/17/2014    | Telephone: 202-564-6023                |
| Date Made Active in Reports: 10/20/2014 | Last EDR Contact: 02/06/2018           |
| Number of Days to Update: 3             | Next Scheduled EDR Contact: 05/21/2018 |
|   | Data Release Frequency: Quarterly      |

## PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

|   |  |
|---|--|
| Date of Government Version: 06/01/2017  | Source: EPA                            |
| Date Data Arrived at EDR: 06/09/2017    | Telephone: 202-566-0500                |
| Date Made Active in Reports: 10/13/2017 | Last EDR Contact: 01/12/2018           |
| Number of Days to Update: 126           | Next Scheduled EDR Contact: 04/23/2018 |
|   | Data Release Frequency: Annually       |

## ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

|   |   |
|---|---|
| Date of Government Version: 11/18/2016  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 11/23/2016    | Telephone: 202-564-2501                 |
| Date Made Active in Reports: 02/10/2017 | Last EDR Contact: 01/09/2018            |
| Number of Days to Update: 79            | Next Scheduled EDR Contact: 04/23/2018  |
|   | Data Release Frequency: Quarterly       |

## FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

|   |   |
|---|---|
| Date of Government Version: 04/09/2009  | Source: EPA/Office of Prevention, Pesticides and Toxic Substances |
| Date Data Arrived at EDR: 04/16/2009    | Telephone: 202-566-1667   |
| Date Made Active in Reports: 05/11/2009 | Last EDR Contact: 08/18/2017                                      |
| Number of Days to Update: 25            | Next Scheduled EDR Contact: 12/04/2017                            |
|   | Data Release Frequency: Quarterly                                 |

## FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

|   |  |
|---|--|
| Date of Government Version: 04/09/2009  | Source: EPA                            |
| Date Data Arrived at EDR: 04/16/2009    | Telephone: 202-566-1667                |
| Date Made Active in Reports: 05/11/2009 | Last EDR Contact: 08/18/2017           |
| Number of Days to Update: 25            | Next Scheduled EDR Contact: 12/04/2017 |
|   | Data Release Frequency: Quarterly      |

## MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

|   |  |
|---|--|
| Date of Government Version: 08/30/2016  | Source: Nuclear Regulatory Commission  |
| Date Data Arrived at EDR: 09/08/2016    | Telephone: 301-415-7169                |
| Date Made Active in Reports: 10/21/2016 | Last EDR Contact: 01/19/2018           |
| Number of Days to Update: 43            | Next Scheduled EDR Contact: 05/21/2018 |
|   | Data Release Frequency: Quarterly      |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

|   |  |
|---|--|
| Date of Government Version: 12/31/2005  | Source: Department of Energy           |
| Date Data Arrived at EDR: 08/07/2009    | Telephone: 202-586-8719                |
| Date Made Active in Reports: 10/22/2009 | Last EDR Contact: 03/09/2018           |
| Number of Days to Update: 76            | Next Scheduled EDR Contact: 06/18/2018 |
|   | Data Release Frequency: Varies         |

## COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

|   |   |
|---|---|
| Date of Government Version: 07/01/2014  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 09/10/2014    | Telephone: N/A                          |
| Date Made Active in Reports: 10/20/2014 | Last EDR Contact: 03/06/2018            |
| Number of Days to Update: 40            | Next Scheduled EDR Contact: 06/18/2018  |
|   | Data Release Frequency: Varies          |

## PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

|   |   |
|---|---|
| Date of Government Version: 05/24/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 11/30/2017    | Telephone: 202-566-0517                 |
| Date Made Active in Reports: 12/15/2017 | Last EDR Contact: 01/26/2018            |
| Number of Days to Update: 15            | Next Scheduled EDR Contact: 05/07/2018  |
|   | Data Release Frequency: Varies          |

## RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

|   |   |
|---|---|
| Date of Government Version: 10/02/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 10/05/2017    | Telephone: 202-343-9775                 |
| Date Made Active in Reports: 10/13/2017 | Last EDR Contact: 01/04/2018            |
| Number of Days to Update: 8             | Next Scheduled EDR Contact: 04/16/2018  |
|   | Data Release Frequency: Quarterly       |

## HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

|   |   |
|---|---|
| Date of Government Version: 10/19/2006  | Source: Environmental Protection Agency   |
| Date Data Arrived at EDR: 03/01/2007    | Telephone: 202-564-2501                   |
| Date Made Active in Reports: 04/10/2007 | Last EDR Contact: 12/17/2007              |
| Number of Days to Update: 40            | Next Scheduled EDR Contact: 03/17/2008    |
|   | Data Release Frequency: No Update Planned |

## HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/19/2006  
 Date Data Arrived at EDR: 03/01/2007  
 Date Made Active in Reports: 04/10/2007  
 Number of Days to Update: 40

Source: Environmental Protection Agency  
 Telephone: 202-564-2501  
 Last EDR Contact: 12/17/2008  
 Next Scheduled EDR Contact: 03/17/2008  
 Data Release Frequency: No Update Planned

## DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012  
 Date Data Arrived at EDR: 08/07/2012  
 Date Made Active in Reports: 09/18/2012  
 Number of Days to Update: 42

Source: Department of Transportation, Office of Pipeline Safety  
 Telephone: 202-366-4595  
 Last EDR Contact: 01/19/2018  
 Next Scheduled EDR Contact: 05/14/2018  
 Data Release Frequency: Varies

## CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/30/2017  
 Date Data Arrived at EDR: 11/10/2017  
 Date Made Active in Reports: 01/12/2018  
 Number of Days to Update: 63

Source: Department of Justice, Consent Decree Library  
 Telephone: Varies  
 Last EDR Contact: 01/04/2018  
 Next Scheduled EDR Contact: 04/02/2018  
 Data Release Frequency: Varies

## BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015  
 Date Data Arrived at EDR: 02/22/2017  
 Date Made Active in Reports: 09/28/2017  
 Number of Days to Update: 218

Source: EPA/NTIS  
 Telephone: 800-424-9346  
 Last EDR Contact: 02/23/2018  
 Next Scheduled EDR Contact: 06/04/2018  
 Data Release Frequency: Biennially

## INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014  
 Date Data Arrived at EDR: 07/14/2015  
 Date Made Active in Reports: 01/10/2017  
 Number of Days to Update: 546

Source: USGS  
 Telephone: 202-208-3710  
 Last EDR Contact: 01/09/2018  
 Next Scheduled EDR Contact: 04/23/2018  
 Data Release Frequency: Semi-Annually

## FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016  
 Date Data Arrived at EDR: 12/27/2016  
 Date Made Active in Reports: 02/17/2017  
 Number of Days to Update: 52

Source: Department of Energy  
 Telephone: 202-586-3559  
 Last EDR Contact: 01/19/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Varies

## UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

|   |  |
|---|--|
| Date of Government Version: 06/23/2017  | Source: Department of Energy           |
| Date Data Arrived at EDR: 10/11/2017    | Telephone: 505-845-0011                |
| Date Made Active in Reports: 11/03/2017 | Last EDR Contact: 02/23/2018           |
| Number of Days to Update: 23            | Next Scheduled EDR Contact: 06/04/2018 |
|   | Data Release Frequency: Varies         |

## LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

|   |   |
|---|---|
| Date of Government Version: 01/09/2018  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 02/06/2018    | Telephone: 703-603-8787                 |
| Date Made Active in Reports: 03/02/2018 | Last EDR Contact: 02/06/2018            |
| Number of Days to Update: 24            | Next Scheduled EDR Contact: 05/21/2018  |
|   | Data Release Frequency: Varies          |

## LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

|   |   |
|---|---|
| Date of Government Version: 04/05/2001  | Source: American Journal of Public Health |
| Date Data Arrived at EDR: 10/27/2010    | Telephone: 703-305-6451                   |
| Date Made Active in Reports: 12/02/2010 | Last EDR Contact: 12/02/2009              |
| Number of Days to Update: 36            | Next Scheduled EDR Contact: N/A           |
|   | Data Release Frequency: No Update Planned |

## US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

|   |  |
|---|--|
| Date of Government Version: 10/12/2016  | Source: EPA                            |
| Date Data Arrived at EDR: 10/26/2016    | Telephone: 202-564-2496                |
| Date Made Active in Reports: 02/03/2017 | Last EDR Contact: 09/26/2017           |
| Number of Days to Update: 100           | Next Scheduled EDR Contact: 01/08/2018 |
|   | Data Release Frequency: Annually       |

## US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

|   |  |
|---|--|
| Date of Government Version: 10/12/2016  | Source: EPA                            |
| Date Data Arrived at EDR: 10/26/2016    | Telephone: 202-564-2496                |
| Date Made Active in Reports: 02/03/2017 | Last EDR Contact: 09/26/2017           |
| Number of Days to Update: 100           | Next Scheduled EDR Contact: 01/08/2018 |
|   | Data Release Frequency: Annually       |

## US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

|   |  |
|---|--|
| Date of Government Version: 10/29/2017  | Source: Department of Labor, Mine Safety and Health Administration |
| Date Data Arrived at EDR: 11/28/2017    | Telephone: 303-231-5959  |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 02/28/2018                                       |
| Number of Days to Update: 45            | Next Scheduled EDR Contact: 06/11/2018                             |
|   | Data Release Frequency: Semi-Annually                              |

## US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

|   |  |
|---|--|
| Date of Government Version: 12/05/2005  | Source: USGS                           |
| Date Data Arrived at EDR: 02/29/2008    | Telephone: 703-648-7709                |
| Date Made Active in Reports: 04/18/2008 | Last EDR Contact: 03/02/2018           |
| Number of Days to Update: 49            | Next Scheduled EDR Contact: 06/11/2018 |
|   | Data Release Frequency: Varies         |

## US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

|   |  |
|---|--|
| Date of Government Version: 04/14/2011  | Source: USGS                           |
| Date Data Arrived at EDR: 06/08/2011    | Telephone: 703-648-7709                |
| Date Made Active in Reports: 09/13/2011 | Last EDR Contact: 03/02/2018           |
| Number of Days to Update: 97            | Next Scheduled EDR Contact: 06/11/2018 |
|   | Data Release Frequency: Varies         |

## ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

|   |  |
|---|--|
| Date of Government Version: 09/25/2017  | Source: Department of Interior         |
| Date Data Arrived at EDR: 09/26/2017    | Telephone: 202-208-2609                |
| Date Made Active in Reports: 10/20/2017 | Last EDR Contact: 03/07/2018           |
| Number of Days to Update: 24            | Next Scheduled EDR Contact: 06/25/2018 |
|   | Data Release Frequency: Quarterly      |

## FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

|   |  |
|---|--|
| Date of Government Version: 07/23/2017  | Source: EPA                            |
| Date Data Arrived at EDR: 09/06/2017    | Telephone: (415) 947-8000              |
| Date Made Active in Reports: 09/15/2017 | Last EDR Contact: 02/23/2018           |
| Number of Days to Update: 9             | Next Scheduled EDR Contact: 06/18/2018 |
|   | Data Release Frequency: Quarterly      |

## ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

|   |   |
|---|---|
| Date of Government Version: 01/13/2018  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 01/19/2018    | Telephone: 202-564-2280                 |
| Date Made Active in Reports: 03/02/2018 | Last EDR Contact: 03/07/2018            |
| Number of Days to Update: 42            | Next Scheduled EDR Contact: 06/18/2018  |
|   | Data Release Frequency: Quarterly       |

## UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

|   |  |
|---|--|
| Date of Government Version: 09/30/2016  | Source: Department of Defense          |
| Date Data Arrived at EDR: 10/31/2017    | Telephone: 703-704-1564                |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 01/02/2018           |
| Number of Days to Update: 73            | Next Scheduled EDR Contact: 04/30/2018 |
|   | Data Release Frequency: Varies         |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

|   |   |
|---|---|
| Date of Government Version: 06/27/2017  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 11/21/2017    | Telephone: 202-564-0527                 |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 03/02/2018            |
| Number of Days to Update: 52            | Next Scheduled EDR Contact: 06/11/2018  |
|   | Data Release Frequency: Varies          |

## FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

|   |  |
|---|--|
| Date of Government Version: 11/20/2017  | Source: EPA                            |
| Date Data Arrived at EDR: 11/20/2017    | Telephone: 800-385-6164                |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 02/21/2018           |
| Number of Days to Update: 53            | Next Scheduled EDR Contact: 06/04/2018 |
|   | Data Release Frequency: Quarterly      |

## CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

|   |   |
|---|---|
| Date of Government Version: 01/01/1989  | Source: Department of Health Services     |
| Date Data Arrived at EDR: 07/27/1994    | Telephone: 916-255-2118                   |
| Date Made Active in Reports: 08/02/1994 | Last EDR Contact: 05/31/1994              |
| Number of Days to Update: 6             | Next Scheduled EDR Contact: N/A           |
|   | Data Release Frequency: No Update Planned |

## CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

|   |   |
|---|---|
| Date of Government Version: 02/08/2018  | Source: CAL EPA/Office of Emergency Information |
| Date Data Arrived at EDR: 02/08/2018    | Telephone: 916-323-3400                         |
| Date Made Active in Reports: 02/08/2018 | Last EDR Contact: 02/08/2018                    |
| Number of Days to Update: 0             | Next Scheduled EDR Contact: 04/09/2018          |
|   | Data Release Frequency: Quarterly               |

## DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

|   |   |
|---|---|
| Date of Government Version: 08/02/2017  | Source: Department of Toxic Substance Control |
| Date Data Arrived at EDR: 08/08/2017    | Telephone: 916-327-4498                       |
| Date Made Active in Reports: 10/16/2017 | Last EDR Contact: 02/28/2018                  |
| Number of Days to Update: 69            | Next Scheduled EDR Contact: 06/18/2018        |
|   | Data Release Frequency: Annually              |

## EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

|   |  |
|---|--|
| Date of Government Version: 12/31/2015  | Source: California Air Resources Board |
| Date Data Arrived at EDR: 03/21/2017    | Telephone: 916-322-2990                |
| Date Made Active in Reports: 08/15/2017 | Last EDR Contact: 12/22/2017           |
| Number of Days to Update: 147           | Next Scheduled EDR Contact: 04/02/2018 |
|   | Data Release Frequency: Varies         |



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

|   |   |
|---|---|
| Date of Government Version: 11/01/2017  | Source: State Water Resources Control Board |
| Date Data Arrived at EDR: 11/03/2017    | Telephone: 916-445-9379                     |
| Date Made Active in Reports: 12/07/2017 | Last EDR Contact: 01/22/2018                |
| Number of Days to Update: 34            | Next Scheduled EDR Contact: 05/07/2018      |
|   | Data Release Frequency: Varies              |

## Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

|   |  |
|---|--|
| Date of Government Version: 10/23/2017  | Source: Department of Toxic Substances Control |
| Date Data Arrived at EDR: 10/24/2017    | Telephone: 916-255-3628                        |
| Date Made Active in Reports: 12/15/2017 | Last EDR Contact: 01/22/2018                   |
| Number of Days to Update: 52            | Next Scheduled EDR Contact: 05/07/2018         |
|   | Data Release Frequency: Varies                 |

## Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

|   |  |
|---|--|
| Date of Government Version: 11/14/2017  | Source: California Integrated Waste Management Board |
| Date Data Arrived at EDR: 11/17/2017    | Telephone: 916-341-6066                              |
| Date Made Active in Reports: 12/18/2017 | Last EDR Contact: 02/08/2018                         |
| Number of Days to Update: 31            | Next Scheduled EDR Contact: 05/28/2018               |
|   | Data Release Frequency: Varies                       |

## HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

|   |  |
|---|--|
| Date of Government Version: 12/31/2016  | Source: California Environmental Protection Agency |
| Date Data Arrived at EDR: 07/12/2017    | Telephone: 916-255-1136                            |
| Date Made Active in Reports: 10/17/2017 | Last EDR Contact: 01/08/2018                       |
| Number of Days to Update: 97            | Next Scheduled EDR Contact: 04/23/2018             |
|   | Data Release Frequency: Annually                   |

## ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

|   |  |
|---|--|
| Date of Government Version: 11/20/2017  | Source: Department of Toxic Substances Control |
| Date Data Arrived at EDR: 11/20/2017    | Telephone: 877-786-9427                        |
| Date Made Active in Reports: 12/27/2017 | Last EDR Contact: 02/21/2018                   |
| Number of Days to Update: 37            | Next Scheduled EDR Contact: 06/04/2018         |
|   | Data Release Frequency: Quarterly              |

## HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSTATES]. This listing is no longer updated by the state agency.

|   |  |
|---|--|
| Date of Government Version: 04/01/2001  | Source: Department of Toxic Substances Control |
| Date Data Arrived at EDR: 01/22/2009    | Telephone: 916-323-3400                        |
| Date Made Active in Reports: 04/08/2009 | Last EDR Contact: 01/22/2009                   |
| Number of Days to Update: 76            | Next Scheduled EDR Contact: N/A                |
|   | Data Release Frequency: No Update Planned      |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

|   |  |
|---|--|
| Date of Government Version: 11/20/2017  | Source: Department of Toxic Substances Control |
| Date Data Arrived at EDR: 11/20/2017    | Telephone: 916-323-3400                        |
| Date Made Active in Reports: 12/27/2017 | Last EDR Contact: 02/21/2018                   |
| Number of Days to Update: 37            | Next Scheduled EDR Contact: 06/04/2018         |
|   | Data Release Frequency: Quarterly              |

## HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

|   |  |
|---|--|
| Date of Government Version: 01/08/2018  | Source: Department of Toxic Substances Control |
| Date Data Arrived at EDR: 01/09/2018    | Telephone: 916-440-7145                        |
| Date Made Active in Reports: 02/06/2018 | Last EDR Contact: 01/09/2018                   |
| Number of Days to Update: 28            | Next Scheduled EDR Contact: 04/23/2018         |
|   | Data Release Frequency: Quarterly              |

## MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

|   |  |
|---|--|
| Date of Government Version: 12/11/2017  | Source: Department of Conservation     |
| Date Data Arrived at EDR: 12/12/2017    | Telephone: 916-322-1080                |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 12/12/2017           |
| Number of Days to Update: 31            | Next Scheduled EDR Contact: 03/26/2018 |
|   | Data Release Frequency: Quarterly      |

## MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

|   |  |
|---|--|
| Date of Government Version: 11/29/2017  | Source: Department of Public Health    |
| Date Data Arrived at EDR: 12/05/2017    | Telephone: 916-558-1784                |
| Date Made Active in Reports: 01/16/2018 | Last EDR Contact: 03/06/2018           |
| Number of Days to Update: 42            | Next Scheduled EDR Contact: 06/18/2018 |
|   | Data Release Frequency: Varies         |

## NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

|   |   |
|---|---|
| Date of Government Version: 11/13/2017  | Source: State Water Resources Control Board |
| Date Data Arrived at EDR: 11/14/2017    | Telephone: 916-445-9379                     |
| Date Made Active in Reports: 12/07/2017 | Last EDR Contact: 02/14/2018                |
| Number of Days to Update: 23            | Next Scheduled EDR Contact: 05/28/2018      |
|   | Data Release Frequency: Quarterly           |

## PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

|   |  |
|---|--|
| Date of Government Version: 12/04/2017  | Source: Department of Pesticide Regulation |
| Date Data Arrived at EDR: 12/05/2017    | Telephone: 916-445-4038                    |
| Date Made Active in Reports: 01/16/2018 | Last EDR Contact: 03/05/2018               |
| Number of Days to Update: 42            | Next Scheduled EDR Contact: 06/18/2018     |
|   | Data Release Frequency: Quarterly          |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 12/11/2017  
 Date Data Arrived at EDR: 12/12/2017  
 Date Made Active in Reports: 01/16/2018  
 Number of Days to Update: 35

Source: Department of Conservation  
 Telephone: 916-323-3836  
 Last EDR Contact: 12/12/2017  
 Next Scheduled EDR Contact: 03/26/2018  
 Data Release Frequency: Quarterly

## NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/14/2017  
 Date Data Arrived at EDR: 12/15/2017  
 Date Made Active in Reports: 01/16/2018  
 Number of Days to Update: 32

Source: State Water Resources Control Board  
 Telephone: 916-445-3846  
 Last EDR Contact: 12/13/2017  
 Next Scheduled EDR Contact: 04/02/2018  
 Data Release Frequency: No Update Planned

## UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 12/11/2017  
 Date Data Arrived at EDR: 12/12/2017  
 Date Made Active in Reports: 01/17/2018  
 Number of Days to Update: 36

Source: Department of Conservation  
 Telephone: 916-445-2408  
 Last EDR Contact: 12/12/2017  
 Next Scheduled EDR Contact: 03/26/2018  
 Data Release Frequency: Varies

## WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board's review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 04/15/2015  
 Date Data Arrived at EDR: 04/17/2015  
 Date Made Active in Reports: 06/23/2015  
 Number of Days to Update: 67

Source: RWQCB, Central Valley Region  
 Telephone: 559-445-5577  
 Last EDR Contact: 01/12/2018  
 Next Scheduled EDR Contact: 04/23/2018  
 Data Release Frequency: Varies

## WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007  
 Date Data Arrived at EDR: 06/20/2007  
 Date Made Active in Reports: 06/29/2007  
 Number of Days to Update: 9

Source: State Water Resources Control Board  
 Telephone: 916-341-5227  
 Last EDR Contact: 02/15/2018  
 Next Scheduled EDR Contact: 06/04/2018  
 Data Release Frequency: Quarterly

## WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009  
 Date Data Arrived at EDR: 07/21/2009  
 Date Made Active in Reports: 08/03/2009  
 Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board  
 Telephone: 213-576-6726  
 Last EDR Contact: 12/19/2017  
 Next Scheduled EDR Contact: 04/09/2018  
 Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## EDR HIGH RISK HISTORICAL RECORDS

### ***EDR Exclusive Records***

#### EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

|                                  |   |
|----------------------------------|---|
| Date of Government Version: N/A  | Source: EDR, Inc.                         |
| Date Data Arrived at EDR: N/A    | Telephone: N/A                            |
| Date Made Active in Reports: N/A | Last EDR Contact: N/A                     |
| Number of Days to Update: N/A    | Next Scheduled EDR Contact: N/A           |
|                                  | Data Release Frequency: No Update Planned |

#### EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

|                                  |                                 |
|----------------------------------|---------------------------------|
| Date of Government Version: N/A  | Source: EDR, Inc.               |
| Date Data Arrived at EDR: N/A    | Telephone: N/A                  |
| Date Made Active in Reports: N/A | Last EDR Contact: N/A           |
| Number of Days to Update: N/A    | Next Scheduled EDR Contact: N/A |
|                                  | Data Release Frequency: Varies  |

#### EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

|                                  |                                 |
|----------------------------------|---------------------------------|
| Date of Government Version: N/A  | Source: EDR, Inc.               |
| Date Data Arrived at EDR: N/A    | Telephone: N/A                  |
| Date Made Active in Reports: N/A | Last EDR Contact: N/A           |
| Number of Days to Update: N/A    | Next Scheduled EDR Contact: N/A |
|                                  | Data Release Frequency: Varies  |

## EDR RECOVERED GOVERNMENT ARCHIVES

### ***Exclusive Recovered Govt. Archives***

#### RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A  
 Date Data Arrived at EDR: 07/01/2013  
 Date Made Active in Reports: 01/13/2014  
 Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery  
 Telephone: N/A  
 Last EDR Contact: 06/01/2012  
 Next Scheduled EDR Contact: N/A  
 Data Release Frequency: Varies

## RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A  
 Date Data Arrived at EDR: 07/01/2013  
 Date Made Active in Reports: 12/30/2013  
 Number of Days to Update: 182

Source: State Water Resources Control Board  
 Telephone: N/A  
 Last EDR Contact: 06/01/2012  
 Next Scheduled EDR Contact: N/A  
 Data Release Frequency: Varies

## COUNTY RECORDS

### ALAMEDA COUNTY:

#### Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2018  
 Date Data Arrived at EDR: 01/11/2018  
 Date Made Active in Reports: 02/22/2018  
 Number of Days to Update: 42

Source: Alameda County Environmental Health Services  
 Telephone: 510-567-6700  
 Last EDR Contact: 01/04/2018  
 Next Scheduled EDR Contact: 04/23/2018  
 Data Release Frequency: Semi-Annually

#### Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/11/2017  
 Date Data Arrived at EDR: 10/12/2017  
 Date Made Active in Reports: 11/08/2017  
 Number of Days to Update: 27

Source: Alameda County Environmental Health Services  
 Telephone: 510-567-6700  
 Last EDR Contact: 01/22/2018  
 Next Scheduled EDR Contact: 04/24/2017  
 Data Release Frequency: Semi-Annually

### AMADOR COUNTY:

#### CUPA Facility List

Cupa Facility List

Date of Government Version: 12/08/2017  
 Date Data Arrived at EDR: 12/12/2017  
 Date Made Active in Reports: 12/27/2017  
 Number of Days to Update: 15

Source: Amador County Environmental Health  
 Telephone: 209-223-6439  
 Last EDR Contact: 02/28/2018  
 Next Scheduled EDR Contact: 06/18/2018  
 Data Release Frequency: Varies

### BUTTE COUNTY:

#### CUPA Facility Listing

Cupa facility list.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/21/2017  
 Date Data Arrived at EDR: 04/25/2017  
 Date Made Active in Reports: 08/09/2017  
 Number of Days to Update: 106

Source: Public Health Department  
 Telephone: 530-538-7149  
 Last EDR Contact: 01/04/2018  
 Next Scheduled EDR Contact: 04/23/2018  
 Data Release Frequency: No Update Planned

## CALVERAS COUNTY:

### CUPA Facility Listing Cupa Facility Listing

Date of Government Version: 08/31/2017  
 Date Data Arrived at EDR: 09/05/2017  
 Date Made Active in Reports: 11/08/2017  
 Number of Days to Update: 64

Source: Calveras County Environmental Health  
 Telephone: 209-754-6399  
 Last EDR Contact: 12/20/2017  
 Next Scheduled EDR Contact: 10/09/2017  
 Data Release Frequency: Quarterly

## COLUSA COUNTY:

### CUPA Facility List Cupa facility list.

Date of Government Version: 08/07/2017  
 Date Data Arrived at EDR: 08/08/2017  
 Date Made Active in Reports: 10/16/2017  
 Number of Days to Update: 69

Source: Health & Human Services  
 Telephone: 530-458-0396  
 Last EDR Contact: 02/14/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Semi-Annually

## CONTRA COSTA COUNTY:

### Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/20/2017  
 Date Data Arrived at EDR: 11/29/2017  
 Date Made Active in Reports: 01/19/2018  
 Number of Days to Update: 51

Source: Contra Costa Health Services Department  
 Telephone: 925-646-2286  
 Last EDR Contact: 01/29/2018  
 Next Scheduled EDR Contact: 05/14/2018  
 Data Release Frequency: Semi-Annually

## DEL NORTE COUNTY:

### CUPA Facility List Cupa Facility list

Date of Government Version: 10/31/2017  
 Date Data Arrived at EDR: 11/01/2017  
 Date Made Active in Reports: 11/14/2017  
 Number of Days to Update: 13

Source: Del Norte County Environmental Health Division  
 Telephone: 707-465-0426  
 Last EDR Contact: 01/29/2018  
 Next Scheduled EDR Contact: 05/14/2018  
 Data Release Frequency: Varies

## EL DORADO COUNTY:

### CUPA Facility List CUPA facility list.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/04/2017  
 Date Data Arrived at EDR: 12/06/2017  
 Date Made Active in Reports: 12/27/2017  
 Number of Days to Update: 21

Source: El Dorado County Environmental Management Department  
 Telephone: 530-621-6623  
 Last EDR Contact: 01/29/2018  
 Next Scheduled EDR Contact: 05/14/2018  
 Data Release Frequency: Varies

## FRESNO COUNTY:

### CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/03/2017  
 Date Data Arrived at EDR: 10/06/2017  
 Date Made Active in Reports: 11/15/2017  
 Number of Days to Update: 40

Source: Dept. of Community Health  
 Telephone: 559-445-3271  
 Last EDR Contact: 02/22/2018  
 Next Scheduled EDR Contact: 04/16/2018  
 Data Release Frequency: Semi-Annually

## GLENN COUNTY:

### CUPA Facility List

Cupa facility list

Date of Government Version: 10/25/2017  
 Date Data Arrived at EDR: 10/27/2017  
 Date Made Active in Reports: 11/15/2017  
 Number of Days to Update: 19

Source: Glenn County Air Pollution Control District  
 Telephone: 830-934-6500  
 Last EDR Contact: 01/22/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Varies

## HUMBOLDT COUNTY:

### CUPA Facility List

CUPA facility list.

Date of Government Version: 08/03/2017  
 Date Data Arrived at EDR: 08/08/2017  
 Date Made Active in Reports: 01/16/2017  
 Number of Days to Update: 69

Source: Humboldt County Environmental Health  
 Telephone: N/A  
 Last EDR Contact: 02/05/2018  
 Next Scheduled EDR Contact: 06/04/2018  
 Data Release Frequency: Semi-Annually

## IMPERIAL COUNTY:

### CUPA Facility List

Cupa facility list.

Date of Government Version: 10/23/2017  
 Date Data Arrived at EDR: 10/24/2017  
 Date Made Active in Reports: 11/15/2017  
 Number of Days to Update: 22

Source: San Diego Border Field Office  
 Telephone: 760-339-2777  
 Last EDR Contact: 01/22/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Varies

## INYO COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA Facility List

Cupa facility list.

Date of Government Version: 06/08/2017  
 Date Data Arrived at EDR: 06/09/2017  
 Date Made Active in Reports: 08/04/2017  
 Number of Days to Update: 56

Source: Inyo County Environmental Health Services  
 Telephone: 760-878-0238  
 Last EDR Contact: 02/14/2018  
 Next Scheduled EDR Contact: 06/04/2018  
 Data Release Frequency: Varies

## KERN COUNTY:

### Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

Date of Government Version: 11/02/2017  
 Date Data Arrived at EDR: 11/07/2017  
 Date Made Active in Reports: 12/20/2017  
 Number of Days to Update: 43

Source: Kern County Environment Health Services Department  
 Telephone: 661-862-8700  
 Last EDR Contact: 02/01/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Quarterly

## KINGS COUNTY:

### CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 11/14/2017  
 Date Data Arrived at EDR: 11/17/2017  
 Date Made Active in Reports: 12/15/2017  
 Number of Days to Update: 5

Source: Kings County Department of Public Health  
 Telephone: 559-584-1411  
 Last EDR Contact: 02/28/2018  
 Next Scheduled EDR Contact: 06/04/2018  
 Data Release Frequency: Varies

## LAKE COUNTY:

### CUPA Facility List

Cupa facility list

Date of Government Version: 11/09/2017  
 Date Data Arrived at EDR: 11/10/2017  
 Date Made Active in Reports: 11/15/2017  
 Number of Days to Update: 5

Source: Lake County Environmental Health  
 Telephone: 707-263-1164  
 Last EDR Contact: 01/16/2018  
 Next Scheduled EDR Contact: 04/30/2018  
 Data Release Frequency: Varies

## LASSEN COUNTY:

### CUPA Facility List

Cupa facility list

Date of Government Version: 07/24/2017  
 Date Data Arrived at EDR: 07/26/2017  
 Date Made Active in Reports: 10/16/2017  
 Number of Days to Update: 82

Source: Lassen County Environmental Health  
 Telephone: 530-251-8528  
 Last EDR Contact: 01/22/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Varies

## LOS ANGELES COUNTY:



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009  
 Date Data Arrived at EDR: 03/31/2009  
 Date Made Active in Reports: 10/23/2009  
 Number of Days to Update: 206

Source: EPA Region 9  
 Telephone: 415-972-3178  
 Last EDR Contact: 12/13/2017  
 Next Scheduled EDR Contact: 04/02/2018  
 Data Release Frequency: No Update Planned

## HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/11/2017  
 Date Data Arrived at EDR: 10/12/2017  
 Date Made Active in Reports: 10/17/2017  
 Number of Days to Update: 5

Source: Department of Public Works  
 Telephone: 626-458-3517  
 Last EDR Contact: 01/04/2018  
 Next Scheduled EDR Contact: 04/23/2018  
 Data Release Frequency: Semi-Annually

## List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/16/2018  
 Date Data Arrived at EDR: 01/16/2018  
 Date Made Active in Reports: 02/14/2018  
 Number of Days to Update: 29

Source: La County Department of Public Works  
 Telephone: 818-458-5185  
 Last EDR Contact: 01/16/2018  
 Next Scheduled EDR Contact: 04/30/2018  
 Data Release Frequency: Varies

## City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2017  
 Date Data Arrived at EDR: 04/21/2017  
 Date Made Active in Reports: 10/09/2017  
 Number of Days to Update: 171

Source: Engineering & Construction Division  
 Telephone: 213-473-7869  
 Last EDR Contact: 01/10/2018  
 Next Scheduled EDR Contact: 04/30/2018  
 Data Release Frequency: Varies

## Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/01/2018  
 Date Data Arrived at EDR: 01/17/2018  
 Date Made Active in Reports: 02/14/2018  
 Number of Days to Update: 28

Source: Community Health Services  
 Telephone: 323-890-7806  
 Last EDR Contact: 01/17/2018  
 Next Scheduled EDR Contact: 04/30/2018  
 Data Release Frequency: Annually

## City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017  
 Date Data Arrived at EDR: 04/19/2017  
 Date Made Active in Reports: 05/10/2017  
 Number of Days to Update: 21

Source: City of El Segundo Fire Department  
 Telephone: 310-524-2236  
 Last EDR Contact: 01/10/2018  
 Next Scheduled EDR Contact: 04/30/2018  
 Data Release Frequency: Semi-Annually

## City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/09/2017  
 Date Data Arrived at EDR: 03/10/2017  
 Date Made Active in Reports: 05/03/2017  
 Number of Days to Update: 54

Source: City of Long Beach Fire Department  
 Telephone: 562-570-2563  
 Last EDR Contact: 01/22/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/04/2018  
 Date Data Arrived at EDR: 01/05/2018  
 Date Made Active in Reports: 01/18/2018  
 Number of Days to Update: 13

Source: City of Torrance Fire Department  
 Telephone: 310-618-2973  
 Last EDR Contact: 01/04/2018  
 Next Scheduled EDR Contact: 04/23/2018  
 Data Release Frequency: Semi-Annually

## MADERA COUNTY:

### CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 10/26/2017  
 Date Data Arrived at EDR: 10/27/2017  
 Date Made Active in Reports: 11/06/2017  
 Number of Days to Update: 10

Source: Madera County Environmental Health  
 Telephone: 559-675-7823  
 Last EDR Contact: 02/14/2018  
 Next Scheduled EDR Contact: 06/04/2018  
 Data Release Frequency: Varies

## MARIN COUNTY:

### Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 01/02/2018  
 Date Data Arrived at EDR: 01/05/2018  
 Date Made Active in Reports: 01/17/2018  
 Number of Days to Update: 12

Source: Public Works Department Waste Management  
 Telephone: 415-473-6647  
 Last EDR Contact: 01/02/2018  
 Next Scheduled EDR Contact: 04/16/2018  
 Data Release Frequency: Semi-Annually

## MERCED COUNTY:

### CUPA Facility List

CUPA facility list.

Date of Government Version: 01/11/2018  
 Date Data Arrived at EDR: 01/12/2018  
 Date Made Active in Reports: 02/08/2018  
 Number of Days to Update: 27

Source: Merced County Environmental Health  
 Telephone: 209-381-1094  
 Last EDR Contact: 02/14/2018  
 Next Scheduled EDR Contact: 06/04/2018  
 Data Release Frequency: Varies

## MONO COUNTY:

### CUPA Facility List

CUPA Facility List

Date of Government Version: 11/21/2017  
 Date Data Arrived at EDR: 11/27/2017  
 Date Made Active in Reports: 12/27/2017  
 Number of Days to Update: 30

Source: Mono County Health Department  
 Telephone: 760-932-5580  
 Last EDR Contact: 02/22/2018  
 Next Scheduled EDR Contact: 06/11/2018  
 Data Release Frequency: Varies

## MONTEREY COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 01/09/2018  
 Date Data Arrived at EDR: 01/11/2018  
 Date Made Active in Reports: 01/31/2018  
 Number of Days to Update: 20

Source: Monterey County Health Department  
 Telephone: 831-796-1297  
 Last EDR Contact: 02/20/2018  
 Next Scheduled EDR Contact: 06/04/2018  
 Data Release Frequency: Varies

## NAPA COUNTY:

### Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017  
 Date Data Arrived at EDR: 01/11/2017  
 Date Made Active in Reports: 03/02/2017  
 Number of Days to Update: 50

Source: Napa County Department of Environmental Management  
 Telephone: 707-253-4269  
 Last EDR Contact: 02/22/2018  
 Next Scheduled EDR Contact: 06/11/2018  
 Data Release Frequency: No Update Planned

### Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 11/22/2017  
 Date Data Arrived at EDR: 11/27/2017  
 Date Made Active in Reports: 12/19/2017  
 Number of Days to Update: 22

Source: Napa County Department of Environmental Management  
 Telephone: 707-253-4269  
 Last EDR Contact: 02/22/2018  
 Next Scheduled EDR Contact: 06/11/2018  
 Data Release Frequency: No Update Planned

## NEVADA COUNTY:

### CUPA Facility List

CUPA facility list.

Date of Government Version: 11/02/2017  
 Date Data Arrived at EDR: 11/07/2017  
 Date Made Active in Reports: 11/15/2017  
 Number of Days to Update: 8

Source: Community Development Agency  
 Telephone: 530-265-1467  
 Last EDR Contact: 01/29/2018  
 Next Scheduled EDR Contact: 05/14/2018  
 Data Release Frequency: Varies

## ORANGE COUNTY:

### List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 11/02/2017  
 Date Data Arrived at EDR: 11/09/2017  
 Date Made Active in Reports: 12/07/2017  
 Number of Days to Update: 28

Source: Health Care Agency  
 Telephone: 714-834-3446  
 Last EDR Contact: 02/05/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Annually

### List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/02/2017  
 Date Data Arrived at EDR: 11/09/2017  
 Date Made Active in Reports: 12/15/2017  
 Number of Days to Update: 36

Source: Health Care Agency  
 Telephone: 714-834-3446  
 Last EDR Contact: 02/05/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

|   |  |
|---|--|
| Date of Government Version: 11/02/2017  | Source: Health Care Agency             |
| Date Data Arrived at EDR: 11/07/2017    | Telephone: 714-834-3446                |
| Date Made Active in Reports: 12/19/2017 | Last EDR Contact: 02/07/2018           |
| Number of Days to Update: 42            | Next Scheduled EDR Contact: 05/21/2018 |
|   | Data Release Frequency: Quarterly      |

## PLACER COUNTY:

### Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

|   |   |
|---|---|
| Date of Government Version: 12/08/2017  | Source: Placer County Health and Human Services |
| Date Data Arrived at EDR: 12/12/2017    | Telephone: 530-745-2363                         |
| Date Made Active in Reports: 01/31/2018 | Last EDR Contact: 03/06/2018                    |
| Number of Days to Update: 50            | Next Scheduled EDR Contact: 06/18/2018          |
|   | Data Release Frequency: Semi-Annually           |

## PLUMAS COUNTY:

### CUPA Facility List

Plumas County CUPA Program facilities.

|   |  |
|---|--|
| Date of Government Version: 10/23/2017  | Source: Plumas County Environmental Health |
| Date Data Arrived at EDR: 11/03/2017    | Telephone: 530-283-6355                    |
| Date Made Active in Reports: 11/15/2017 | Last EDR Contact: 01/22/2018               |
| Number of Days to Update: 12            | Next Scheduled EDR Contact: 05/07/2018     |
|   | Data Release Frequency: Varies             |

## RIVERSIDE COUNTY:

### Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

|   |  |
|---|--|
| Date of Government Version: 10/11/2017  | Source: Department of Environmental Health |
| Date Data Arrived at EDR: 10/12/2017    | Telephone: 951-358-5055                    |
| Date Made Active in Reports: 11/09/2017 | Last EDR Contact: 12/15/2017               |
| Number of Days to Update: 28            | Next Scheduled EDR Contact: 04/02/2018     |
|   | Data Release Frequency: Quarterly          |

### Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

|   |  |
|---|--|
| Date of Government Version: 10/12/2017  | Source: Department of Environmental Health |
| Date Data Arrived at EDR: 10/12/2017    | Telephone: 951-358-5055                    |
| Date Made Active in Reports: 11/08/2017 | Last EDR Contact: 12/15/2017               |
| Number of Days to Update: 27            | Next Scheduled EDR Contact: 04/02/2018     |
|   | Data Release Frequency: Quarterly          |

## SACRAMENTO COUNTY:

### Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/02/2017  
 Date Data Arrived at EDR: 01/03/2018  
 Date Made Active in Reports: 02/05/2018  
 Number of Days to Update: 33

Source: Sacramento County Environmental Management  
 Telephone: 916-875-8406  
 Last EDR Contact: 01/03/2018  
 Next Scheduled EDR Contact: 04/16/2018  
 Data Release Frequency: Quarterly

## Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/02/2017  
 Date Data Arrived at EDR: 01/03/2018  
 Date Made Active in Reports: 02/14/2018  
 Number of Days to Update: 42

Source: Sacramento County Environmental Management  
 Telephone: 916-875-8406  
 Last EDR Contact: 01/03/2018  
 Next Scheduled EDR Contact: 04/16/2018  
 Data Release Frequency: Quarterly

## SAN BENITO COUNTY:

### CUPA Facility List

Cupa facility list

Date of Government Version: 11/01/2017  
 Date Data Arrived at EDR: 11/03/2017  
 Date Made Active in Reports: 11/17/2017  
 Number of Days to Update: 14

Source: San Benito County Environmental Health  
 Telephone: N/A  
 Last EDR Contact: 02/15/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Varies

## SAN BERNARDINO COUNTY:

### Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 11/30/2017  
 Date Data Arrived at EDR: 12/01/2017  
 Date Made Active in Reports: 01/16/2018  
 Number of Days to Update: 46

Source: San Bernardino County Fire Department Hazardous Materials Division  
 Telephone: 909-387-3041  
 Last EDR Contact: 02/05/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Quarterly

## SAN DIEGO COUNTY:

### Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 12/04/2017  
 Date Data Arrived at EDR: 12/05/2017  
 Date Made Active in Reports: 01/11/2018  
 Number of Days to Update: 37

Source: Hazardous Materials Management Division  
 Telephone: 619-338-2268  
 Last EDR Contact: 03/07/2018  
 Next Scheduled EDR Contact: 06/18/2018  
 Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015  
 Date Data Arrived at EDR: 11/07/2015  
 Date Made Active in Reports: 01/04/2016  
 Number of Days to Update: 58

Source: Department of Health Services  
 Telephone: 619-338-2209  
 Last EDR Contact: 02/01/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Varies

## Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010  
 Date Data Arrived at EDR: 06/15/2010  
 Date Made Active in Reports: 07/09/2010  
 Number of Days to Update: 24

Source: San Diego County Department of Environmental Health  
 Telephone: 619-338-2371  
 Last EDR Contact: 02/28/2018  
 Next Scheduled EDR Contact: 06/18/2018  
 Data Release Frequency: No Update Planned

## SAN FRANCISCO COUNTY:

### Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008  
 Date Data Arrived at EDR: 09/19/2008  
 Date Made Active in Reports: 09/29/2008  
 Number of Days to Update: 10

Source: Department Of Public Health San Francisco County  
 Telephone: 415-252-3920  
 Last EDR Contact: 02/01/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Quarterly

### Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/02/2017  
 Date Data Arrived at EDR: 11/07/2017  
 Date Made Active in Reports: 12/19/2017  
 Number of Days to Update: 42

Source: Department of Public Health  
 Telephone: 415-252-3920  
 Last EDR Contact: 02/28/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Quarterly

## SAN JOAQUIN COUNTY:

### San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 12/20/2017  
 Date Data Arrived at EDR: 12/21/2017  
 Date Made Active in Reports: 02/01/2018  
 Number of Days to Update: 42

Source: Environmental Health Department  
 Telephone: N/A  
 Last EDR Contact: 12/13/2017  
 Next Scheduled EDR Contact: 04/02/2018  
 Data Release Frequency: Semi-Annually

## SAN LUIS OBISPO COUNTY:

### CUPA Facility List

Cupa Facility List.

Date of Government Version: 11/16/2017  
 Date Data Arrived at EDR: 11/17/2017  
 Date Made Active in Reports: 12/18/2017  
 Number of Days to Update: 31

Source: San Luis Obispo County Public Health Department  
 Telephone: 805-781-5596  
 Last EDR Contact: 02/15/2018  
 Next Scheduled EDR Contact: 06/04/2018  
 Data Release Frequency: Varies

## SAN MATEO COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

|   |   |
|---|---|
| Date of Government Version: 12/12/2017  | Source: San Mateo County Environmental Health Services Division |
| Date Data Arrived at EDR: 12/14/2017    | Telephone: 650-363-1921   |
| Date Made Active in Reports: 01/11/2018 | Last EDR Contact: 03/07/2018                                    |
| Number of Days to Update: 28            | Next Scheduled EDR Contact: 06/25/2018                          |
|   | Data Release Frequency: Annually                                |

## Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

|   |   |
|---|---|
| Date of Government Version: 12/12/2017  | Source: San Mateo County Environmental Health Services Division |
| Date Data Arrived at EDR: 12/14/2017    | Telephone: 650-363-1921   |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 03/07/2018                                    |
| Number of Days to Update: 29            | Next Scheduled EDR Contact: 06/25/2018                          |
|   | Data Release Frequency: Semi-Annually                           |

## SANTA BARBARA COUNTY:

### CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

|   |   |
|---|---|
| Date of Government Version: 09/08/2011  | Source: Santa Barbara County Public Health Department |
| Date Data Arrived at EDR: 09/09/2011    | Telephone: 805-686-8167                               |
| Date Made Active in Reports: 10/07/2011 | Last EDR Contact: 02/15/2018                          |
| Number of Days to Update: 28            | Next Scheduled EDR Contact: 06/04/2018                |
|   | Data Release Frequency: Varies                        |

## SANTA CLARA COUNTY:

### Cupa Facility List

Cupa facility list

|   |  |
|---|--|
| Date of Government Version: 11/14/2017  | Source: Department of Environmental Health |
| Date Data Arrived at EDR: 11/16/2017    | Telephone: 408-918-1973                    |
| Date Made Active in Reports: 01/04/2018 | Last EDR Contact: 02/15/2018               |
| Number of Days to Update: 49            | Next Scheduled EDR Contact: 06/04/2018     |
|   | Data Release Frequency: Varies             |

### HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

|   |   |
|---|---|
| Date of Government Version: 03/29/2005  | Source: Santa Clara Valley Water District |
| Date Data Arrived at EDR: 03/30/2005    | Telephone: 408-265-2600                   |
| Date Made Active in Reports: 04/21/2005 | Last EDR Contact: 03/23/2009              |
| Number of Days to Update: 22            | Next Scheduled EDR Contact: 06/22/2009    |
|   | Data Release Frequency: No Update Planned |

### LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

|   |  |
|---|--|
| Date of Government Version: 03/03/2014  | Source: Department of Environmental Health |
| Date Data Arrived at EDR: 03/05/2014    | Telephone: 408-918-3417                    |
| Date Made Active in Reports: 03/18/2014 | Last EDR Contact: 02/22/2018               |
| Number of Days to Update: 13            | Next Scheduled EDR Contact: 06/11/2018     |
|   | Data Release Frequency: Annually           |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

|   |  |
|---|--|
| Date of Government Version: 11/01/2017  | Source: City of San Jose Fire Department |
| Date Data Arrived at EDR: 11/03/2017    | Telephone: 408-535-7694                  |
| Date Made Active in Reports: 12/07/2017 | Last EDR Contact: 02/01/2018             |
| Number of Days to Update: 34            | Next Scheduled EDR Contact: 05/21/2018   |
|   | Data Release Frequency: Annually         |

## SANTA CRUZ COUNTY:

### CUPA Facility List

CUPA facility listing.

|   |  |
|---|--|
| Date of Government Version: 01/21/2017  | Source: Santa Cruz County Environmental Health |
| Date Data Arrived at EDR: 02/22/2017    | Telephone: 831-464-2761                        |
| Date Made Active in Reports: 05/23/2017 | Last EDR Contact: 02/15/2018                   |
| Number of Days to Update: 30            | Next Scheduled EDR Contact: 06/04/2018         |
|   | Data Release Frequency: Varies                 |

## SHASTA COUNTY:

### CUPA Facility List

Cupa Facility List.

|   |   |
|---|---|
| Date of Government Version: 06/15/2017  | Source: Shasta County Department of Resource Management |
| Date Data Arrived at EDR: 06/19/2017    | Telephone: 530-225-5789                                 |
| Date Made Active in Reports: 08/09/2017 | Last EDR Contact: 02/15/2018                            |
| Number of Days to Update: 51            | Next Scheduled EDR Contact: 06/04/2018                  |
|   | Data Release Frequency: Varies                          |

## SOLANO COUNTY:

### Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

|   |  |
|---|--|
| Date of Government Version: 12/14/2017  | Source: Solano County Department of Environmental Management |
| Date Data Arrived at EDR: 12/15/2017    | Telephone: 707-784-6770                                      |
| Date Made Active in Reports: 01/12/2018 | Last EDR Contact: 02/28/2018                                 |
| Number of Days to Update: 28            | Next Scheduled EDR Contact: 06/18/2018                       |
|   | Data Release Frequency: Quarterly                            |

### Underground Storage Tanks

Underground storage tank sites located in Solano county.

|   |  |
|---|--|
| Date of Government Version: 12/14/2017  | Source: Solano County Department of Environmental Management |
| Date Data Arrived at EDR: 12/15/2017    | Telephone: 707-784-6770                                      |
| Date Made Active in Reports: 01/18/2018 | Last EDR Contact: 02/28/2018                                 |
| Number of Days to Update: 34            | Next Scheduled EDR Contact: 06/18/2018                       |
|   | Data Release Frequency: Quarterly                            |

## SONOMA COUNTY:

### Cupa Facility List

Cupa Facility list



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/20/2017  
 Date Data Arrived at EDR: 12/21/2017  
 Date Made Active in Reports: 01/31/2018  
 Number of Days to Update: 41

Source: County of Sonoma Fire & Emergency Services Department  
 Telephone: 707-565-1174  
 Last EDR Contact: 12/19/2017  
 Next Scheduled EDR Contact: 04/09/2018  
 Data Release Frequency: Varies

## Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/04/2018  
 Date Data Arrived at EDR: 01/09/2018  
 Date Made Active in Reports: 02/06/2018  
 Number of Days to Update: 28

Source: Department of Health Services  
 Telephone: 707-565-6565  
 Last EDR Contact: 01/04/2018  
 Next Scheduled EDR Contact: 04/09/2018  
 Data Release Frequency: Quarterly

## STANISLAUS COUNTY:

### CUPA Facility List

Cupa facility list

Date of Government Version: 11/01/2017  
 Date Data Arrived at EDR: 11/10/2017  
 Date Made Active in Reports: 11/16/2017  
 Number of Days to Update: 6

Source: Stanislaus County Department of Environmental Protection  
 Telephone: 209-525-6751  
 Last EDR Contact: 01/16/2018  
 Next Scheduled EDR Contact: 04/30/2018  
 Data Release Frequency: Varies

## SUTTER COUNTY:

### Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 12/01/2017  
 Date Data Arrived at EDR: 12/04/2017  
 Date Made Active in Reports: 12/19/2017  
 Number of Days to Update: 15

Source: Sutter County Department of Agriculture  
 Telephone: 530-822-7500  
 Last EDR Contact: 02/28/2018  
 Next Scheduled EDR Contact: 06/18/2018  
 Data Release Frequency: Semi-Annually

## TEHAMA COUNTY:

### CUPA Facility List

Cupa facilities

Date of Government Version: 11/16/2017  
 Date Data Arrived at EDR: 11/17/2017  
 Date Made Active in Reports: 12/18/2017  
 Number of Days to Update: 31

Source: Tehama County Department of Environmental Health  
 Telephone: 530-527-8020  
 Last EDR Contact: 02/01/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Varies

## TRINITY COUNTY:

### CUPA Facility List

Cupa facility list

Date of Government Version: 10/23/2017  
 Date Data Arrived at EDR: 10/24/2017  
 Date Made Active in Reports: 11/16/2017  
 Number of Days to Update: 23

Source: Department of Toxic Substances Control  
 Telephone: 760-352-0381  
 Last EDR Contact: 01/22/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Varies

## TULARE COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA Facility List

Cupa program facilities

Date of Government Version: 09/27/2017  
 Date Data Arrived at EDR: 09/28/2017  
 Date Made Active in Reports: 10/16/2017  
 Number of Days to Update: 18

Source: Tulare County Environmental Health Services Division  
 Telephone: 559-624-7400  
 Last EDR Contact: 03/06/2018  
 Next Scheduled EDR Contact: 05/21/2018  
 Data Release Frequency: Varies

## TUOLUMNE COUNTY:

### CUPA Facility List

Cupa facility list

Date of Government Version: 10/24/2017  
 Date Data Arrived at EDR: 10/25/2017  
 Date Made Active in Reports: 11/16/2017  
 Number of Days to Update: 22

Source: Divison of Environmental Health  
 Telephone: 209-533-5633  
 Last EDR Contact: 01/22/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Varies

## VENTURA COUNTY:

### Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 09/26/2017  
 Date Data Arrived at EDR: 10/25/2017  
 Date Made Active in Reports: 12/07/2017  
 Number of Days to Update: 43

Source: Ventura County Environmental Health Division  
 Telephone: 805-654-2813  
 Last EDR Contact: 01/22/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Quarterly

### Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011  
 Date Data Arrived at EDR: 12/01/2011  
 Date Made Active in Reports: 01/19/2012  
 Number of Days to Update: 49

Source: Environmental Health Division  
 Telephone: 805-654-2813  
 Last EDR Contact: 12/26/2017  
 Next Scheduled EDR Contact: 04/16/2018  
 Data Release Frequency: Annually

### Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008  
 Date Data Arrived at EDR: 06/24/2008  
 Date Made Active in Reports: 07/31/2008  
 Number of Days to Update: 37

Source: Environmental Health Division  
 Telephone: 805-654-2813  
 Last EDR Contact: 02/08/2018  
 Next Scheduled EDR Contact: 05/28/2018  
 Data Release Frequency: Quarterly

### Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 09/26/2017  
 Date Data Arrived at EDR: 10/25/2017  
 Date Made Active in Reports: 12/07/2017  
 Number of Days to Update: 43

Source: Ventura County Resource Management Agency  
 Telephone: 805-654-2813  
 Last EDR Contact: 01/22/2018  
 Next Scheduled EDR Contact: 05/07/2018  
 Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

|   |  |
|---|--|
| Date of Government Version: 11/27/2017  | Source: Environmental Health Division  |
| Date Data Arrived at EDR: 12/13/2017    | Telephone: 805-654-2813                |
| Date Made Active in Reports: 01/19/2018 | Last EDR Contact: 12/11/2017           |
| Number of Days to Update: 37            | Next Scheduled EDR Contact: 03/26/2018 |
|   | Data Release Frequency: Quarterly      |

## YOLO COUNTY:

### Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

|   |  |
|---|--|
| Date of Government Version: 01/02/2018  | Source: Yolo County Department of Health |
| Date Data Arrived at EDR: 01/09/2018    | Telephone: 530-666-8646                  |
| Date Made Active in Reports: 01/19/2018 | Last EDR Contact: 01/02/2018             |
| Number of Days to Update: 10            | Next Scheduled EDR Contact: 04/16/2018   |
|   | Data Release Frequency: Annually         |

## YUBA COUNTY:

### CUPA Facility List

CUPA facility listing for Yuba County.

|   |   |
|---|---|
| Date of Government Version: 11/08/2017  | Source: Yuba County Environmental Health Department |
| Date Data Arrived at EDR: 11/10/2017    | Telephone: 530-749-7523                             |
| Date Made Active in Reports: 11/16/2017 | Last EDR Contact: 01/29/2018                        |
| Number of Days to Update: 6             | Next Scheduled EDR Contact: 05/14/2018              |
|   | Data Release Frequency: Varies                      |

## OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

### CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

|   |   |
|---|---|
| Date of Government Version: 11/11/2017  | Source: Department of Energy & Environmental Protection |
| Date Data Arrived at EDR: 11/14/2017    | Telephone: 860-424-3375                                 |
| Date Made Active in Reports: 12/18/2017 | Last EDR Contact: 02/14/2018                            |
| Number of Days to Update: 34            | Next Scheduled EDR Contact: 05/28/2018                  |
|   | Data Release Frequency: No Update Planned               |

### NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

|   |  |
|---|--|
| Date of Government Version: 12/31/2016  | Source: Department of Environmental Protection |
| Date Data Arrived at EDR: 04/11/2017    | Telephone: N/A                                 |
| Date Made Active in Reports: 07/27/2017 | Last EDR Contact: 01/05/2018                   |
| Number of Days to Update: 107           | Next Scheduled EDR Contact: 04/23/2018         |
|   | Data Release Frequency: Annually               |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2017  
 Date Data Arrived at EDR: 01/31/2018  
 Date Made Active in Reports: 03/09/2018  
 Number of Days to Update: 37

Source: Department of Environmental Conservation  
 Telephone: 518-402-8651  
 Last EDR Contact: 01/31/2018  
 Next Scheduled EDR Contact: 05/14/2018  
 Data Release Frequency: Quarterly

## PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016  
 Date Data Arrived at EDR: 07/25/2017  
 Date Made Active in Reports: 09/25/2017  
 Number of Days to Update: 62

Source: Department of Environmental Protection  
 Telephone: 717-783-8990  
 Last EDR Contact: 01/16/2018  
 Next Scheduled EDR Contact: 04/30/2018  
 Data Release Frequency: Annually

## RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013  
 Date Data Arrived at EDR: 06/19/2015  
 Date Made Active in Reports: 07/15/2015  
 Number of Days to Update: 26

Source: Department of Environmental Management  
 Telephone: 401-222-2797  
 Last EDR Contact: 02/21/2018  
 Next Scheduled EDR Contact: 06/04/2018  
 Data Release Frequency: Annually

## WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016  
 Date Data Arrived at EDR: 04/13/2017  
 Date Made Active in Reports: 07/14/2017  
 Number of Days to Update: 92

Source: Department of Natural Resources  
 Telephone: N/A  
 Last EDR Contact: 03/08/2018  
 Next Scheduled EDR Contact: 06/25/2018  
 Data Release Frequency: Annually

## Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

## Electric Power Transmission Line Data

Source: PennWell Corporation

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

## AHA Hospitals:

Source: American Hospital Association, Inc.  
 Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

## Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services  
 Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

## Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

## Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

## Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

**Flood Zone Data:** This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

## State Wetlands Data: Wetland Inventory

Source: Department of Fish & Game

Telephone: 916-445-0411

## Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

## STREET AND ADDRESS INFORMATION

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## GEOCHECK<sup>®</sup> - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

CONTINENTAL VILLAGE  
KRAMERIA AVE AND LASSELLE STREET  
MORENO VALLEY, CA 92555

### TARGET PROPERTY COORDINATES

|                               |                              |
|-------------------------------|------------------------------|
| Latitude (North):             | 33.883039 - 33° 52' 58.94"   |
| Longitude (West):             | 117.205112 - 117° 12' 18.40" |
| Universal Tranverse Mercator: | Zone 11                      |
| UTM X (Meters):               | 481032.0                     |
| UTM Y (Meters):               | 3749012.5                    |
| Elevation:                    | 1538 ft. above sea level     |

### USGS TOPOGRAPHIC MAP

|                      |                       |
|----------------------|-----------------------|
| Target Property Map: | 5641326 SUNNYMEAD, CA |
| Version Date:        | 2012                  |
| South Map:           | 5641330 PERRIS, CA    |
| Version Date:        | 2012                  |

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

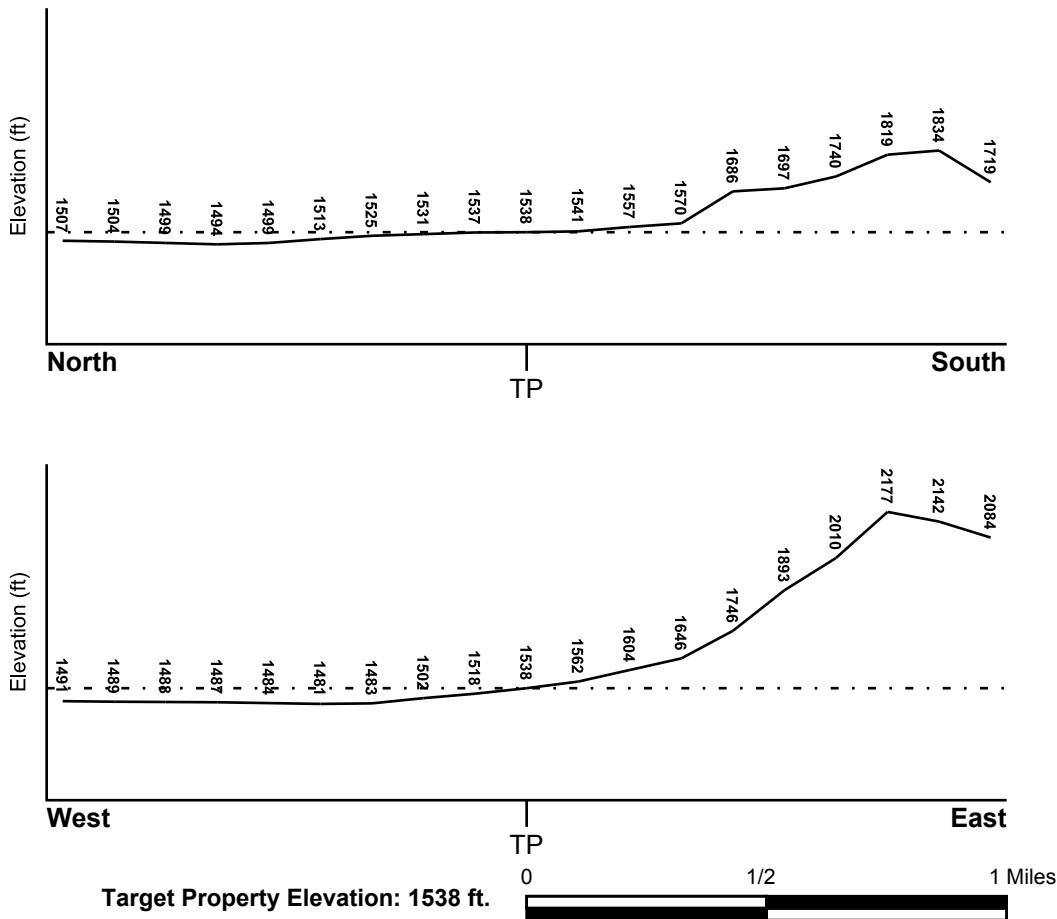
**TOPOGRAPHIC INFORMATION**

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**TARGET PROPERTY TOPOGRAPHY**

General Topographic Gradient: General WNW

**SURROUNDING TOPOGRAPHY: ELEVATION PROFILES**



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

### **FEMA FLOOD ZONE**

|   |                         |
|---|-------------------------|
| <u>Flood Plain Panel at Target Property</u> | <u>FEMA Source Type</u> |
| 06065C0765G                                 | FEMA FIRM Flood data    |
| <u>Additional Panels in search area:</u>    | <u>FEMA Source Type</u> |
| 06065C1430H                                 | FEMA FIRM Flood data    |

### **NATIONAL WETLAND INVENTORY**

|                                    |  |
|------------------------------------|--|
| <u>NWI Quad at Target Property</u> | <u>NWI Electronic Data Coverage</u>            |
| NOT AVAILABLE                      | YES - refer to the Overview Map and Detail Map |

### HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

#### ***Site-Specific Hydrogeological Data\*:***

|                |            |
|----------------|------------|
| Search Radius: | 1.25 miles |
| Status:        | Not found  |

### **AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| <u>MAP ID</u> | <u>LOCATION FROM TP</u> | <u>GENERAL DIRECTION GROUNDWATER FLOW</u> |
|---------------|-------------------------|---|
| Not Reported  |                         |   |

\* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.



## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

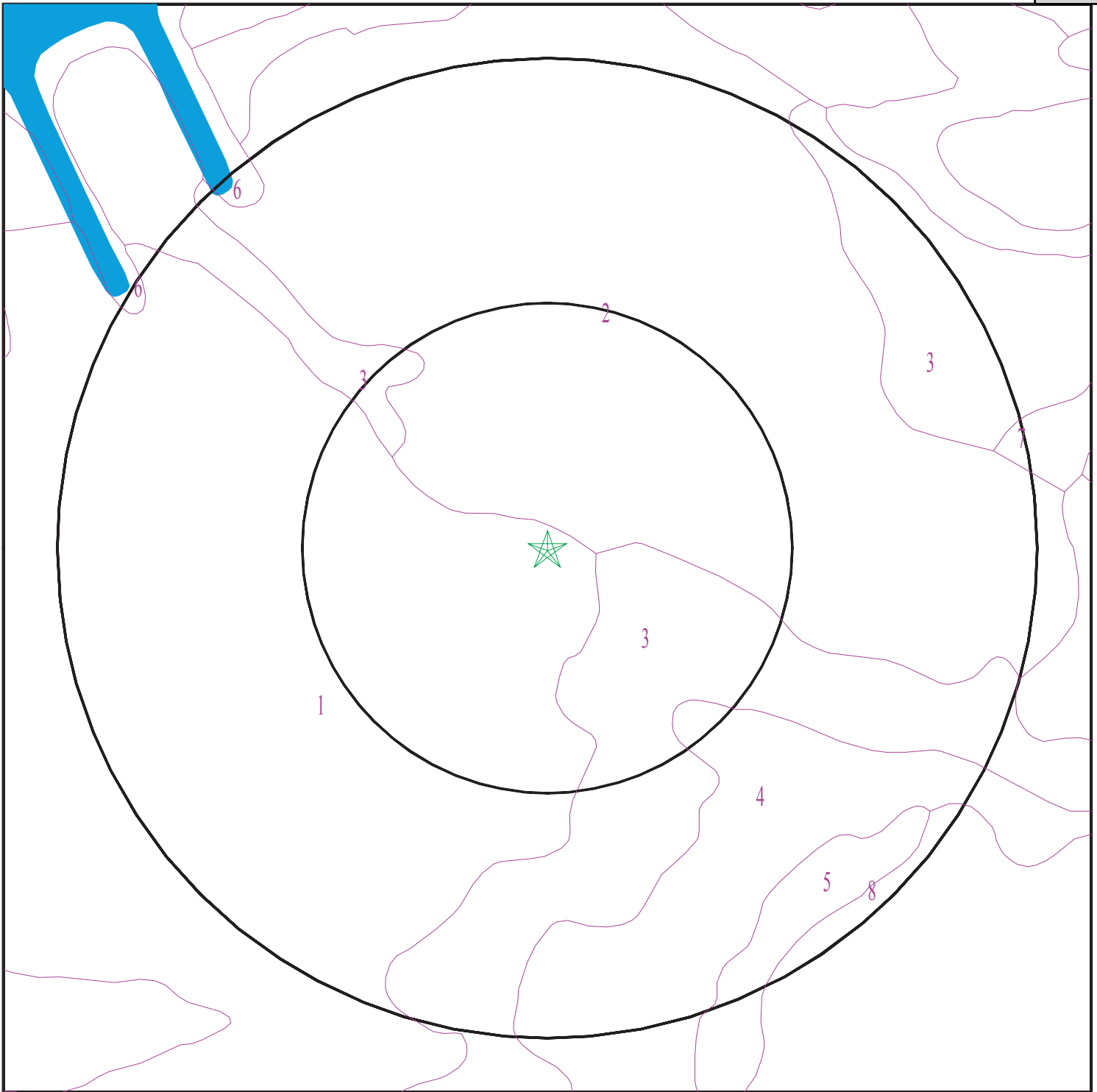
#### **ROCK STRATIGRAPHIC UNIT**

|         |   |
|---------|---|
| Era:    | Mesozoic  |
| System: | Cretaceous  |
| Series: | Cretaceous granitic rocks                             |
| Code:   | Kg <i>(decoded above as Era, System &amp; Series)</i> |

#### **GEOLOGIC AGE IDENTIFICATION**

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

SITE NAME: Continental Village  
 ADDRESS: Krameria Ave and Lasselle Street  
 Moreno Valley CA 92555  
 LAT/LONG: 33.883039 / 117.205112

CLIENT: Group Delta Consultants  
 CONTACT: Jack Packwood  
 INQUIRY #: 5219776.2s  
 DATE: March 14, 2018 3:25 pm

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

#### Soil Map ID: 1

Soil Component Name: GREENFIELD

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information |           |           |                    |   |   |  |                      |
|------------------------|-----------|-----------|--------------------|---|---|--|----------------------|
| Layer                  | Boundary  |           | Soil Texture Class | Classification  |   | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH)   |
|                        | Upper     | Lower     |                    | AASHTO Group  | Unified Soil  |  |                      |
| 1                      | 0 inches  | 25 inches | sandy loam         | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.              | Max: 42<br>Min: 14                           | Max: 7.8<br>Min: 6.1 |
| 2                      | 25 inches | 42 inches | fine sandy loam    | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.              | Max: 42<br>Min: 14                           | Max: 7.8<br>Min: 6.1 |
| 3                      | 42 inches | 59 inches | loam               | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.                   | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt. | Max: 14<br>Min: 4                            | Max: 7.8<br>Min: 6.1 |

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information |           |           |                                     |   |  |   |                      |
|------------------------|-----------|-----------|-------------------------------------|---|--|---|----------------------|
| Layer                  | Boundary  |           | Soil Texture Class                  | Classification  |  | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH)   |
|                        | Upper     | Lower     |                                     | AASHTO Group  | Unified Soil   |   |                      |
| 4                      | 59 inches | 72 inches | stratified loamy sand to sandy loam | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 42<br>Min: 14                              | Max: 8.4<br>Min: 6.6 |

### Soil Map ID: 2

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information |          |           |                    |   |   |   |                      |
|------------------------|----------|-----------|--------------------|---|---|---|----------------------|
| Layer                  | Boundary |           | Soil Texture Class | Classification  |   | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH)   |
|                        | Upper    | Lower     |                    | AASHTO Group  | Unified Soil  |   |                      |
| 1                      | 0 inches | 7 inches  | sandy loam         | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.  | Max: 14<br>Min: 4                               | Max: 7.3<br>Min: 5.6 |
| 2                      | 7 inches | 16 inches | fine sandy loam    | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.                   | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay.<br>FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt. | Max: 14<br>Min: 4                               | Max: 7.3<br>Min: 6.1 |



## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information |           |           |                     |   |   |  |                      |
|------------------------|-----------|-----------|---------------------|---|---|--|----------------------|
| Layer                  | Boundary  |           | Soil Texture Class  | Classification  |   | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH)   |
|                        | Upper     | Lower     |                     | AASHTO Group  | Unified Soil  |  |                      |
| 3                      | 16 inches | 68 inches | sandy clay loam     | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.                   | COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.   | Max: 4<br>Min: 1.4                           | Max: 7.3<br>Min: 6.1 |
| 4                      | 68 inches | 74 inches | gravelly sandy loam | Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.<br>COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 4<br>Min: 1.4                           | Max: 8.4<br>Min: 6.6 |

### Soil Map ID: 3

Soil Component Name: HANFORD

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information |          |          |                    |   |  |  |                      |
|------------------------|----------|----------|--------------------|---|--|--|----------------------|
| Layer                  | Boundary |          | Soil Texture Class | Classification  |  | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH)   |
|                        | Upper    | Lower    |                    | AASHTO Group  | Unified Soil   |  |                      |
| 1                      | 0 inches | 7 inches | coarse sandy loam  | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 42<br>Min: 14                           | Max: 7.8<br>Min: 5.6 |

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information |           |           |  |   |  |  |                      |
|------------------------|-----------|-----------|--|---|--|--|----------------------|
| Layer                  | Boundary  |           | Soil Texture Class                         | Classification  |  | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH)   |
|                        | Upper     | Lower     |  | AASHTO Group  | Unified Soil   |  |                      |
| 2                      | 7 inches  | 40 inches | fine sandy loam                            | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.                   | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 42<br>Min: 14                           | Max: 7.8<br>Min: 5.6 |
| 3                      | 40 inches | 59 inches | stratified loamy sand to coarse sandy loam | Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                          | Max: 7.8<br>Min: 5.6 |

### Soil Map ID: 4

Soil Component Name: HANFORD

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information |          |          |                    |   |  |  |                      |
|------------------------|----------|----------|--------------------|---|--|--|----------------------|
| Layer                  | Boundary |          | Soil Texture Class | Classification  |  | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH)   |
|                        | Upper    | Lower    |                    | AASHTO Group  | Unified Soil   |  |                      |
| 1                      | 0 inches | 7 inches | coarse sandy loam  | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 42<br>Min: 14                           | Max: 7.8<br>Min: 5.6 |

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information |           |           |  |   |  |  |                      |
|------------------------|-----------|-----------|--|---|--|--|----------------------|
| Layer                  | Boundary  |           | Soil Texture Class                         | Classification  |  | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH)   |
|                        | Upper     | Lower     |  | AASHTO Group  | Unified Soil   |  |                      |
| 2                      | 7 inches  | 40 inches | fine sandy loam                            | Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.                   | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 42<br>Min: 14                           | Max: 7.8<br>Min: 5.6 |
| 3                      | 40 inches | 59 inches | stratified loamy sand to coarse sandy loam | Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                          | Max: 7.8<br>Min: 5.6 |

### Soil Map ID: 5

Soil Component Name: VISTA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information |          |           |                    |   |  |  |                      |
|------------------------|----------|-----------|--------------------|---|--|--|----------------------|
| Layer                  | Boundary |           | Soil Texture Class | Classification  |  | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH)   |
|                        | Upper    | Lower     |                    | AASHTO Group  | Unified Soil   |  |                      |
| 1                      | 0 inches | 14 inches | coarse sandy loam  | Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 42<br>Min: 14                           | Max: 7.3<br>Min: 5.6 |

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information |           |           |                    |   |  |   |                      |
|------------------------|-----------|-----------|--------------------|---|--|---|----------------------|
| Layer                  | Boundary  |           | Soil Texture Class | Classification  |  | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH)   |
|                        | Upper     | Lower     |                    | AASHTO Group  | Unified Soil   |   |                      |
| 2                      | 14 inches | 24 inches | coarse sandy loam  | Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 42<br>Min: 14                              | Max: 7.3<br>Min: 5.6 |
| 3                      | 24 inches | 27 inches | weathered bedrock  | Not reported  | Not reported   | Max: 0.42<br>Min: 0                             | Max: Min:            |

### Soil Map ID: 6

Soil Component Name: Water

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class:  
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

### Soil Map ID: 7

Soil Component Name: GORGONIO

Soil Surface Texture: stratified gravelly loamy sand to gravelly loamy fine sand

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat excessively drained



## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information |           |           |  |   |  |  |                      |
|------------------------|-----------|-----------|--|---|--|--|----------------------|
| Layer                  | Boundary  |           | Soil Texture Class   | Classification  |  | Saturated hydraulic conductivity micro m/sec | Soil Reaction (pH)   |
|                        | Upper     | Lower     |  | AASHTO Group  | Unified Soil   |  |                      |
| 1                      | 14 inches | 59 inches | stratified gravelly loamy sand to gravelly loamy fine sand | Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                          | Max: 7.3<br>Min: 5.6 |
| 2                      | 0 inches  | 14 inches | loamy sand   | Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                          | Max: 7.3<br>Min: 5.6 |

### Soil Map ID: 8

Soil Component Name: ROCKLAND

Soil Surface Texture: unweathered bedrock

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:  
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information |          |           |                     |                |              |   |                    |
|------------------------|----------|-----------|---------------------|----------------|--------------|---|--------------------|
| Layer                  | Boundary |           | Soil Texture Class  | Classification |              | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH) |
|                        | Upper    | Lower     |                     | AASHTO Group   | Unified Soil |   |                    |
| 1                      | 0 inches | 59 inches | unweathered bedrock | Not reported   | Not reported | Max:<br>Min:                                    | Max: Min:          |

### LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

### WELL SEARCH DISTANCE INFORMATION

| <u>DATABASE</u>  | <u>SEARCH DISTANCE (miles)</u> |
|------------------|--------------------------------|
| Federal USGS     | 1.000                          |
| Federal FRDS PWS | Nearest PWS within 0.001 miles |
| State Database   | 1.000                          |

### FEDERAL USGS WELL INFORMATION

| <u>MAP ID</u>  | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|----------------|----------------|-------------------------|
| No Wells Found |                |                         |

### FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

| <u>MAP ID</u>       | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|---------------------|----------------|-------------------------|
| No PWS System Found |                |                         |

Note: PWS System location is not always the same as well location.

### STATE DATABASE WELL INFORMATION

| <u>MAP ID</u> | <u>WELL ID</u>  | <u>LOCATION FROM TP</u> |
|---------------|-----------------|-------------------------|
| 1             | CADW60000009876 | 1/2 - 1 Mile SW         |



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



SITE NAME: Continental Village  
 ADDRESS: Krameria Ave and Lasselle Street  
 Moreno Valley CA 92555  
 LAT/LONG: 33.883039 / 117.205112

CLIENT: Group Delta Consultants  
 CONTACT: Jack Packwood  
 INQUIRY #: 5219776.2s  
 DATE: March 14, 2018 3:25 pm

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database

EDR ID Number

**1**  
**SW**  
**1/2 - 1 Mile**  
**Lower**

CA WELLS

CADW60000009876

Objectid: 9876  
 Latitude: 33.873089  
 Longitude: -117.216774  
 Site code: 338731N1172168W001  
 State well numbe: 03S03W32B001S  
 Local well name: 'EMWD25515'  
 Well use id: 1  
 Well use descrip: Observation  
 County id: 33  
 County name: Riverside  
 Basin code: '8-5'  
 Basin desc: San Jacinto  
 Dwr region id: 80238  
 Dwr region: Southern Region Office  
 Site id: CADW60000009876



## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

**AREA RADON INFORMATION**

State Database: CA Radon

Radon Test Results

| Zipcode | Num Tests | > 4 pCi/L |
|---------|-----------|-----------|
| 92555   | 4         | 0         |

Federal EPA Radon Zone for RIVERSIDE County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.
- : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
- : Zone 3 indoor average level < 2 pCi/L.

---

Federal Area Radon Information for RIVERSIDE COUNTY, CA

Number of sites tested: 12

| Area                    | Average Activity | % <4 pCi/L | % 4-20 pCi/L | % >20 pCi/L |
|-------------------------|------------------|------------|--------------|-------------|
| Living Area - 1st Floor | 0.117 pCi/L      | 100%       | 0%           | 0%          |
| Living Area - 2nd Floor | 0.450 pCi/L      | 100%       | 0%           | 0%          |
| Basement                | 1.700 pCi/L      | 100%       | 0%           | 0%          |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

### USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

### Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

**Flood Zone Data:** This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

### State Wetlands Data: Wetland Inventory

Source: Department of Fish & Game

Telephone: 916-445-0411

## HYDROGEOLOGIC INFORMATION

### AQUIFLOW<sup>R</sup> Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

### Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

### SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

### FEDERAL WATER WELLS

#### PWS: Public Water Systems

Source: EPA/Office of Drinking Water  
Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water  
Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

#### USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

### STATE RECORDS

#### Water Well Database

Source: Department of Water Resources  
Telephone: 916-651-9648

#### California Drinking Water Quality Database

Source: Department of Public Health  
Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

## OTHER STATE DATABASE INFORMATION

#### California Oil and Gas Well Locations

Source: Department of Conservation  
Telephone: 916-323-1779  
Oil and Gas well locations in the state.

### RADON

#### State Database: CA Radon

Source: Department of Health Services  
Telephone: 916-324-2208  
Radon Database for California

#### Area Radon Information

Source: USGS  
Telephone: 703-356-4020  
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

#### EPA Radon Zones

Source: EPA  
Telephone: 703-356-4020  
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

## PHYSICAL SETTING SOURCE RECORDS SEARCHED

### OTHER

Airport Landing Facilities: Private and public use landing facilities  
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater  
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

### STREET AND ADDRESS INFORMATION

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**Continental Village**

Krameria Ave and Lasselle Street  
Moreno Valley, CA 92555

Inquiry Number: 5219776.5  
March 16, 2018

# The EDR-City Directory Image Report

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### SECTION

Executive Summary

Findings

City Directory Images

***Thank you for your business.***

Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

### DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

### RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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Data by

**infoUSA**<sup>®</sup>

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### RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

| <u>Year</u> | <u>Target Street</u>                | <u>Cross Street</u>      | <u>Source</u>                |
|-------------|-------------------------------------|--------------------------|------------------------------|
| 2014        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | EDR Digital Archive          |
| 2010        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | EDR Digital Archive          |
| 2005        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | EDR Digital Archive          |
| 2000        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | EDR Digital Archive          |
| 1995        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | EDR Digital Archive          |
| 1992        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | EDR Digital Archive          |
| 1985        | <input type="checkbox"/>            | <input type="checkbox"/> | Haines Criss-Cross Directory |
| 1980        | <input type="checkbox"/>            | <input type="checkbox"/> | Haines Criss-Cross Directory |
| 1975        | <input type="checkbox"/>            | <input type="checkbox"/> | Haines Criss-Cross Directory |

## FINDINGS

### TARGET PROPERTY STREET

Krameria Ave and Lasselle Street  
Moreno Valley, CA 92555

| <u>Year</u>               | <u>CD Image</u> | <u>Source</u>                |                             |
|---------------------------|-----------------|------------------------------|-----------------------------|
| <b><u>KRAMERIA ST</u></b> |                 |                              |                             |
| 2014                      | pg A1           | EDR Digital Archive          |                             |
| 2010                      | pg A3           | EDR Digital Archive          |                             |
| 2005                      | pg A5           | EDR Digital Archive          |                             |
| 2000                      | pg A7           | EDR Digital Archive          |                             |
| 1995                      | pg A9           | EDR Digital Archive          |                             |
| 1992                      | pg A11          | EDR Digital Archive          |                             |
| 1985                      | -               | Haines Criss-Cross Directory | Street not listed in Source |
| 1980                      | -               | Haines Criss-Cross Directory | Street not listed in Source |
| 1975                      | -               | Haines Criss-Cross Directory | Street not listed in Source |

### LASSELLE ST

|      |        |                              |                             |
|------|--------|------------------------------|-----------------------------|
| 2014 | pg A2  | EDR Digital Archive          |                             |
| 2010 | pg A4  | EDR Digital Archive          |                             |
| 2005 | pg A6  | EDR Digital Archive          |                             |
| 2000 | pg A8  | EDR Digital Archive          |                             |
| 1995 | pg A10 | EDR Digital Archive          |                             |
| 1992 | pg A12 | EDR Digital Archive          |                             |
| 1985 | -      | Haines Criss-Cross Directory | Street not listed in Source |
| 1980 | -      | Haines Criss-Cross Directory | Street not listed in Source |
| 1975 | -      | Haines Criss-Cross Directory | Street not listed in Source |



## FINDINGS

### CROSS STREETS

No Cross Streets Identified

## City Directory Images

**KRAMERIA ST 2014**

|       |                           |
|-------|---------------------------|
| 25390 | VAL VERDE UNIFIED SCH DIS |
| 25777 | VAL VERDE UNIFIED SCH DIS |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





**KRAMERIA ST 2010**

|       |                           |
|-------|---------------------------|
| 25390 | VAL VERDE UNIFIED SCH DIS |
| 25777 | VAL VERDE UNIFIED SCH DIS |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

**LASSELLE ST 2010**

- 15730 CRYSTAL CLEAR AND CLEAN
- 15750 WELLBAUM WILLIAM EUGENE
- 15780 AARON CAPITAL INC  
FOXFIRE LLC
- 15850 CHAMBERS GARY
- 15870 HUDSON, DEIDRE
- 15874 BECK, REX G  
HARPER, OATHER L
- 15880 BRACKINS, SANDRA  
CHANCE, JERRY L  
KYLES, KENNETH W  
SALDANA, STELLA
- 15886 BUSCH, JOAN  
SU, HSIAO L
- 15892 ESTRADA, ROBERT C  
ODEN, DONALD R  
PAGE, EULANDA L
- 15898 BANKSTON, ANTHONY  
DANIELY, B  
MENDOZA, SHERRY L  
NORIEGA, OSWALDO F
- 15904 CANNON, JAMAAL E  
PAYAN, LILIAN  
SS ENTERTAINMENT  
WALLACE, MONIQUE Y
- 15910 BONAFEDE, RHONDA  
HALL, LAWRENCE  
JONES, BRANDY
- 15916 HENDERSON, RICHARD
- 16110 RIVERSIDE COUNTY OF
- 16130 BARNES & NOBLE COLLEGE  
BARNHART DOUGLAS E INC  
MORENO VALLEY CAMPUS LIBRARY  
RIVERSIDE CMNTY COLLEGE DST
- 17750 VAL VERDE UNIFIED SCH DIS

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**KRAMERIA ST 2005**

|       |                              |
|-------|------------------------------|
| 25390 | VAL VERDE UNIFIED SCHOOL DST |
| 25777 | VAL VERDE UNIFIED SCHOOL DST |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

**LASSELLE ST 2005**

15760 FRESH AND CLEAN  
 16110 RIVERSIDE COUNTY OF  
 16130 BARNES NBLE CLLEGE BOOKSELLERS  
 MORENO VALLEY CAMPUS LIBRARY  
 RIVERSIDE CMNTY COLLEGE DST  
 17750 VAL VERDE UNIFIED SCHOOL DST

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



**KRAMERIA ST 2000**

|       |                              |
|-------|------------------------------|
| 25390 | VAL VERDE UNIFIED SCHOOL DST |
| 25777 | VAL VERDE UNIFIED SCHOOL DST |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

**LASSELLE ST 2000**

|       |                              |
|-------|------------------------------|
| 16130 | MORENA VALLEY CAMPUS LIBR    |
|       | RIVERSIDE CMNTY COLLEGE DST  |
| 17750 | VAL VERDE UNIFIED SCHOOL DST |

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

**KRAMERIA ST 1995**

25390 MARY MCLEOD BETHUNE MIDDLE SCH  
25777 VISTA VERDE MIDDLE SCHOOL

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



-

**LASSELLE ST 1995**

17750 RANCHO VERDE HIGH SCHOOL

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



**KRAMERIA ST 1992**

25390 MARY MCLEOD BETHUNE MIDDLE SCH

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

**LASSELLE ST 1992**

17750 RANCHO VERDE HIGH SCHOOL

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

Continental Village  
Krameria Ave and Lasselle Street  
Moreno Valley, CA 92555

Inquiry Number: 5219776.3  
March 14, 2018

## Certified Sanborn® Map Report



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

03/14/18

**Certified Sanborn® Map Report****Site Name:**

Continental Village  
Krameria Ave and Lasselle Str  
Moreno Valley, CA 92555  
EDR Inquiry # 5219776.3

**Client Name:**

Group Delta Consultants  
1035 S. Milliken Ave Suite G  
Ontario, CA 91761  
Contact: Jack Packwood



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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

**Certified Sanborn Results:**

**Certification #** 78DB-4391-A4D0

**PO #** EN324

**Project** Continental Village

**UNMAPPED PROPERTY**

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.



Sanborn® Library search results

Certification #: 78DB-4391-A4D0

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

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Continental Village  
Krameria Ave and Lasselle Street  
Moreno Valley, CA 92555

Inquiry Number: 5219776.4

March 14, 2018

## EDR Historical Topo Map Report with QuadMatch



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

# EDR Historical Topo Map Report

03/14/18

2.aa

**Site Name:**

Continental Village  
Krameria Ave and Lasselle Str  
Moreno Valley, CA 92555  
EDR Inquiry # 5219776.4

**Client Name:**

Group Delta Consultants  
1035 S. Milliken Ave Suite G  
Ontario, CA 91761  
Contact: Jack Packwood



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Group Delta Consultants were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

**Search Results:****Coordinates:**

|                 |                     |                      |                                |
|-----------------|---------------------|----------------------|--------------------------------|
| <b>P.O.#</b>    | EN324               | <b>Latitude:</b>     | 33.883039 33° 52' 59" North    |
| <b>Project:</b> | Continental Village | <b>Longitude:</b>    | -117.205112 -117° 12' 18" West |
|                 |                     | <b>UTM Zone:</b>     | Zone 11 North                  |
|                 |                     | <b>UTM X Meters:</b> | 481032.41                      |
|                 |                     | <b>UTM Y Meters:</b> | 3749206.62                     |
|                 |                     | <b>Elevation:</b>    | 1538.61' above sea level       |

**Maps Provided:**

2012  
1979, 1980  
1973  
1967  
1953  
1943  
1942  
1901

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## Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 2012 Source Sheets



Perris  
2012  
7.5-minute, 24000



Sunnymead  
2012  
7.5-minute, 24000

### 1979, 1980 Source Sheets



Perris  
1979  
7.5-minute, 24000  
Aerial Photo Revised 1978



Sunnymead  
1980  
7.5-minute, 24000  
Aerial Photo Revised 1978

### 1973 Source Sheets



Sunnymead  
1973  
7.5-minute, 24000  
Aerial Photo Revised 1973



Perris  
1973  
7.5-minute, 24000  
Aerial Photo Revised 1973

### 1967 Source Sheets



Sunnymead  
1967  
7.5-minute, 24000  
Aerial Photo Revised 1966



Perris  
1967  
7.5-minute, 24000  
Aerial Photo Revised 1966

**Topo Sheet Key**

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

**1953 Source Sheets**



Perris  
1953  
7.5-minute, 24000  
Aerial Photo Revised 1951



Sunnymead  
1953  
7.5-minute, 24000  
Aerial Photo Revised 1951

**1943 Source Sheets**



PERRIS  
1943  
15-minute, 62500

**1942 Source Sheets**



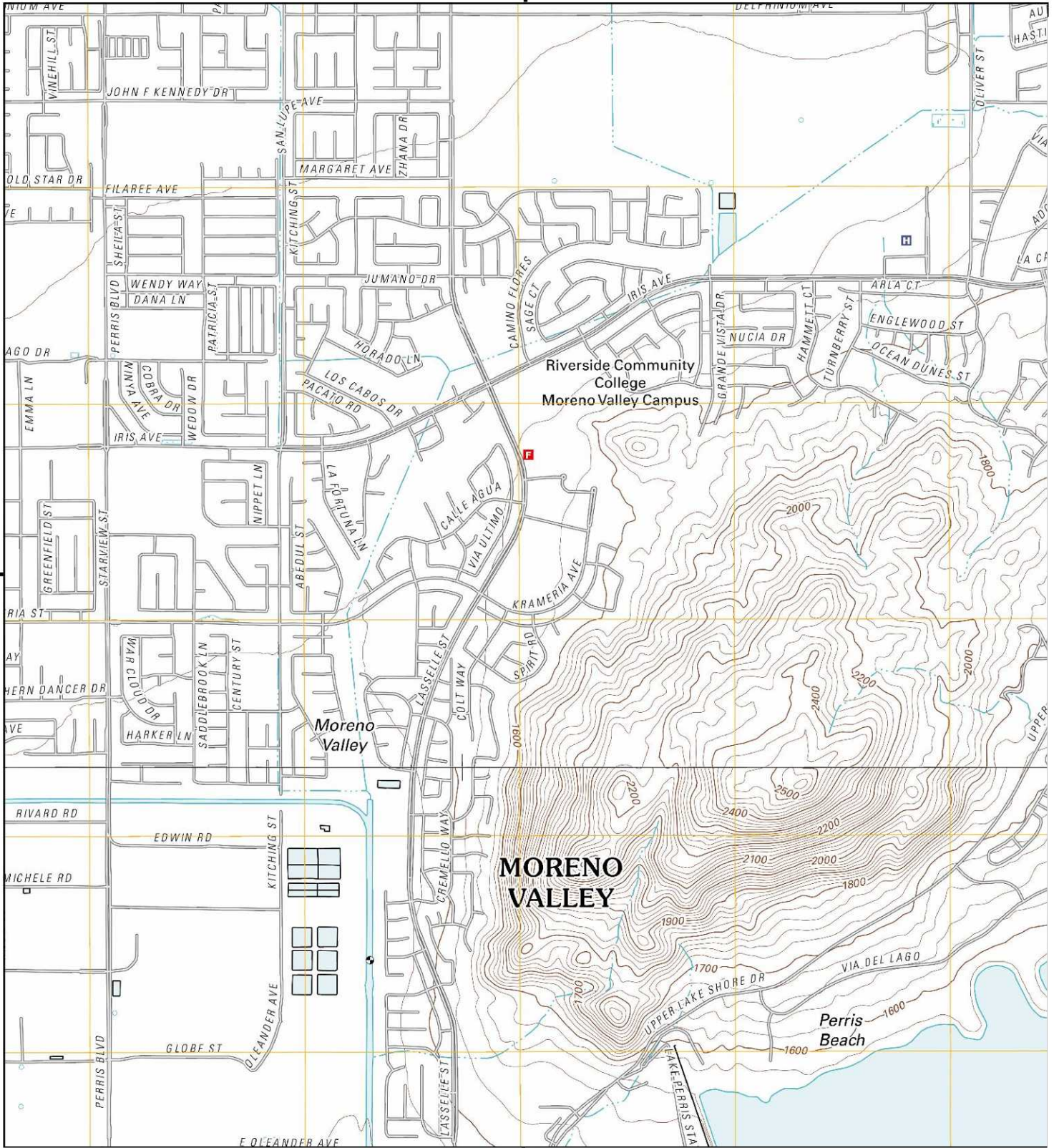
Perris  
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15-minute, 62500  
Aerial Photo Revised 1939

**1901 Source Sheets**

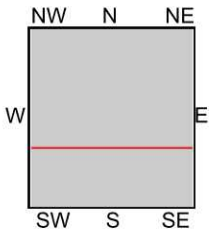
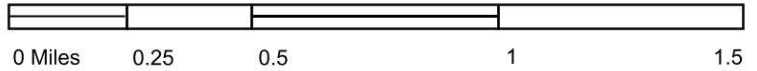


Elsinore  
1901  
30-minute, 125000





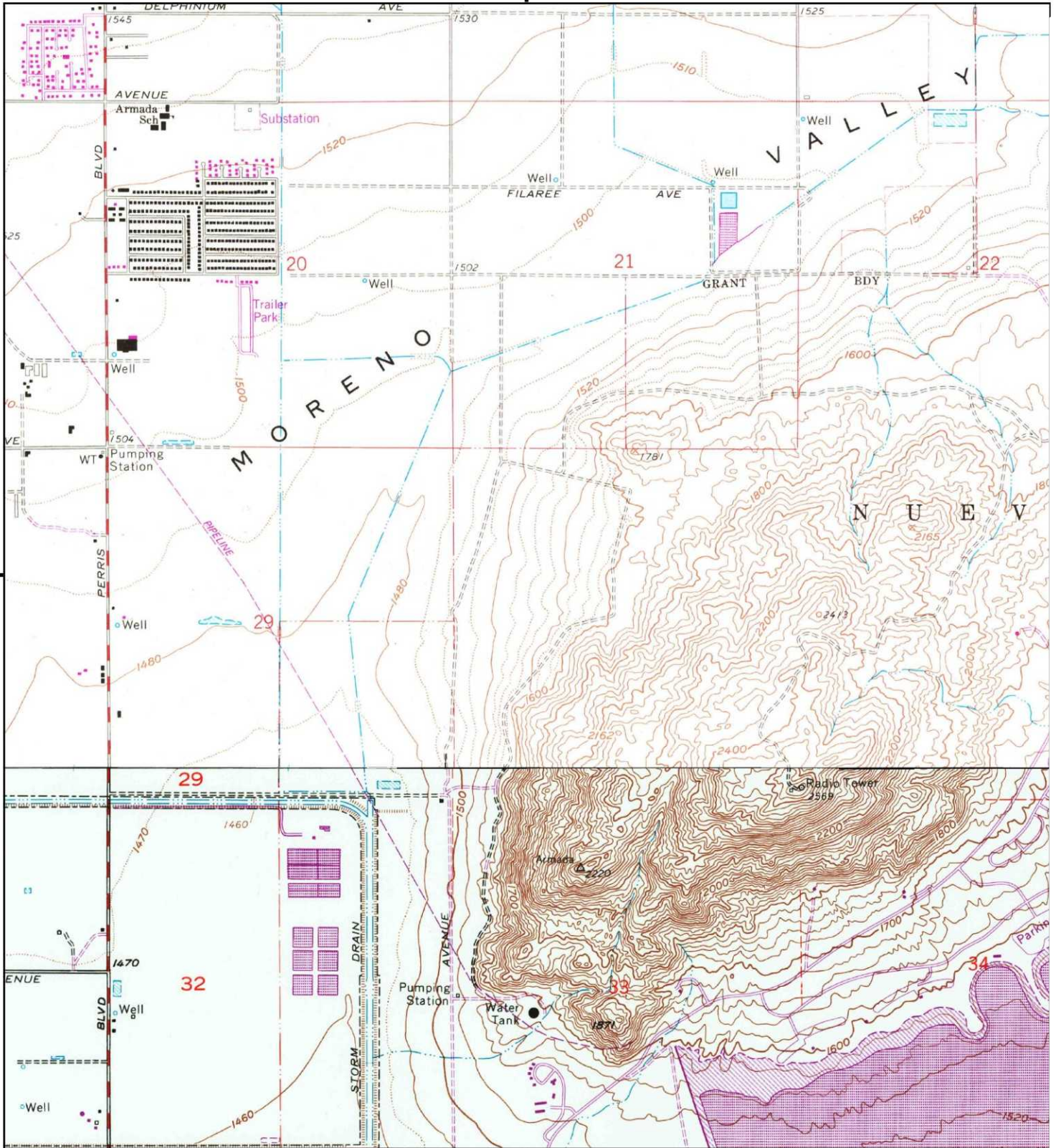
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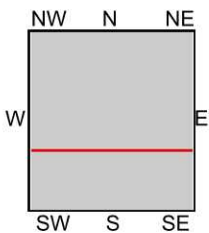
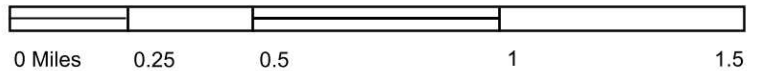
TP, Sunnymead, 2012, 7.5-minute  
S, Perris, 2012, 7.5-minute

SITE NAME: Continental Village  
ADDRESS: Krameria Ave and Lasselle Street  
Moreno Valley, CA 92555  
CLIENT: Group Delta Consultants





This report includes information from the following map sheet(s).

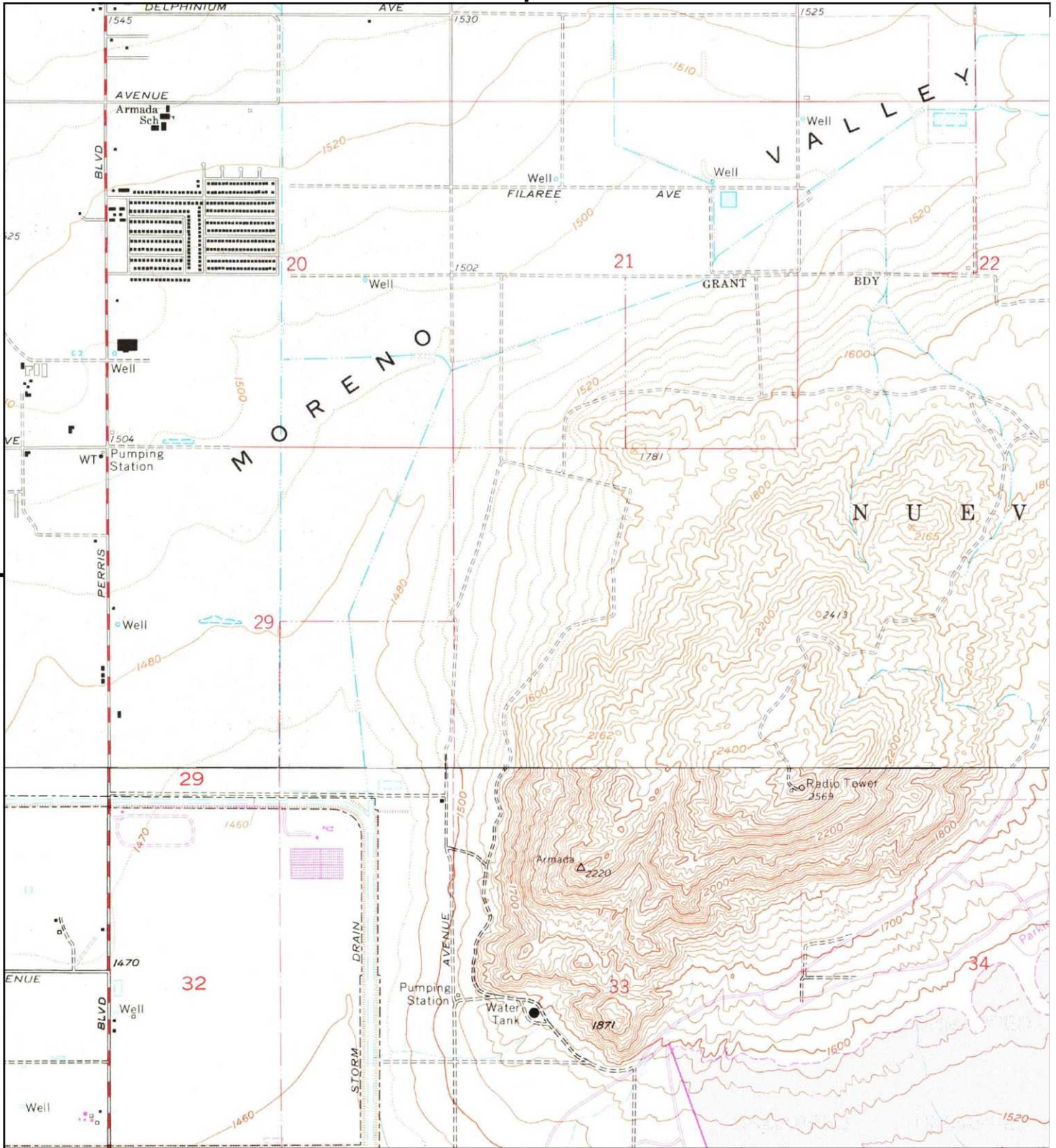


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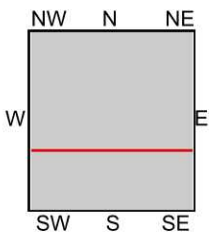
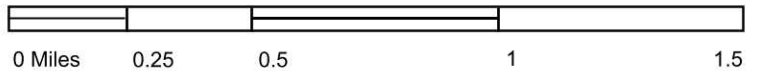
**SITE NAME:** Continental Village  
**ADDRESS:** Krameria Ave and Lasselle Street  
Moreno Valley, CA 92555  
**CLIENT:** Group Delta Consultants

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This report includes information from the following map sheet(s).



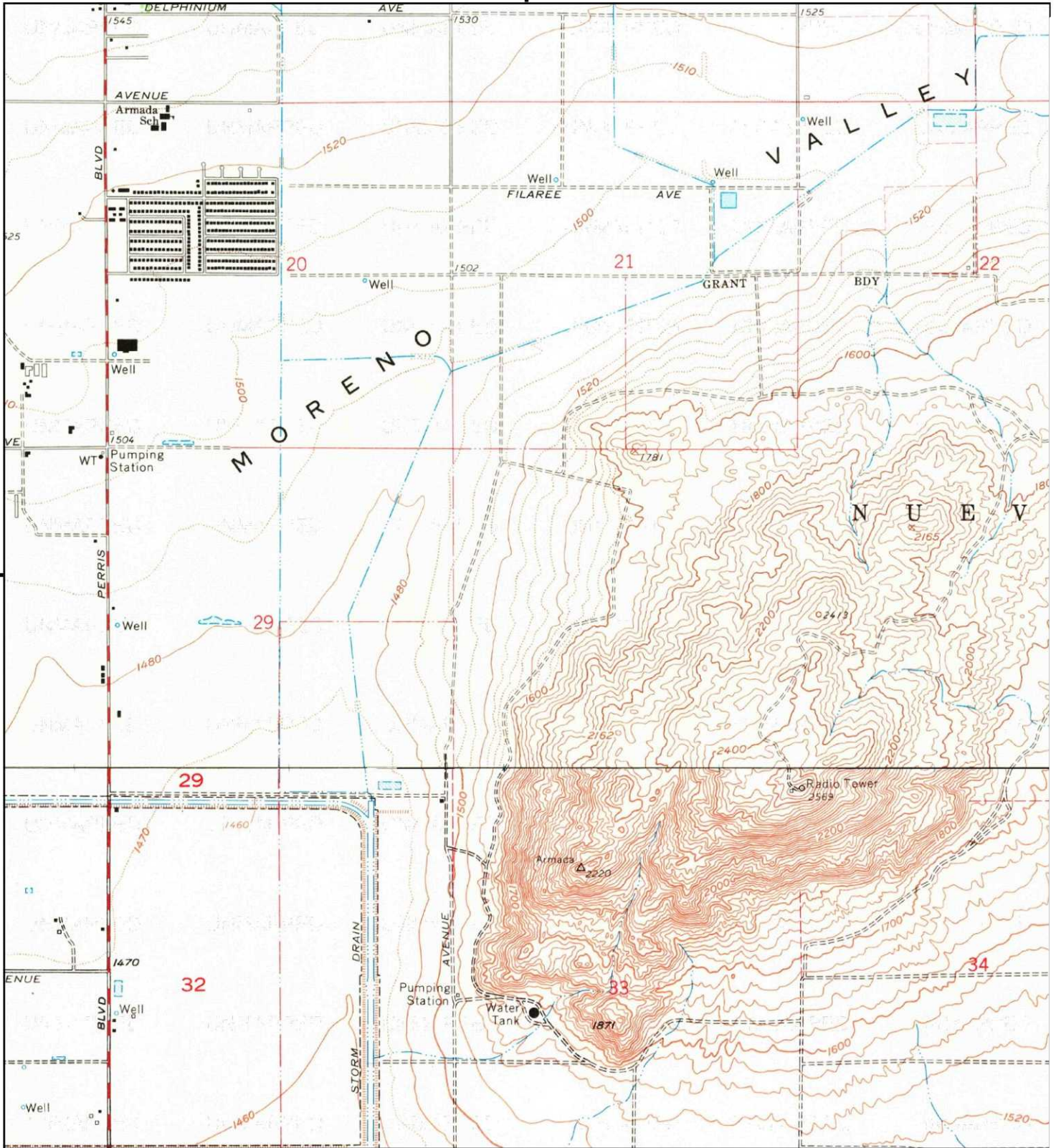
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**SITE NAME:** Continental Village  
**ADDRESS:** Krameria Ave and Lassen Street  
Moreno Valley, CA 92555  
**CLIENT:** Group Delta Consultants

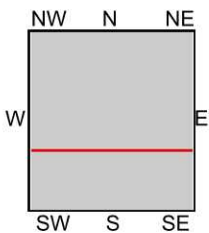
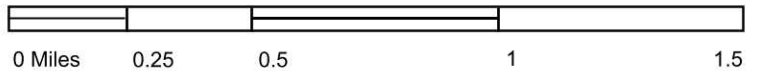
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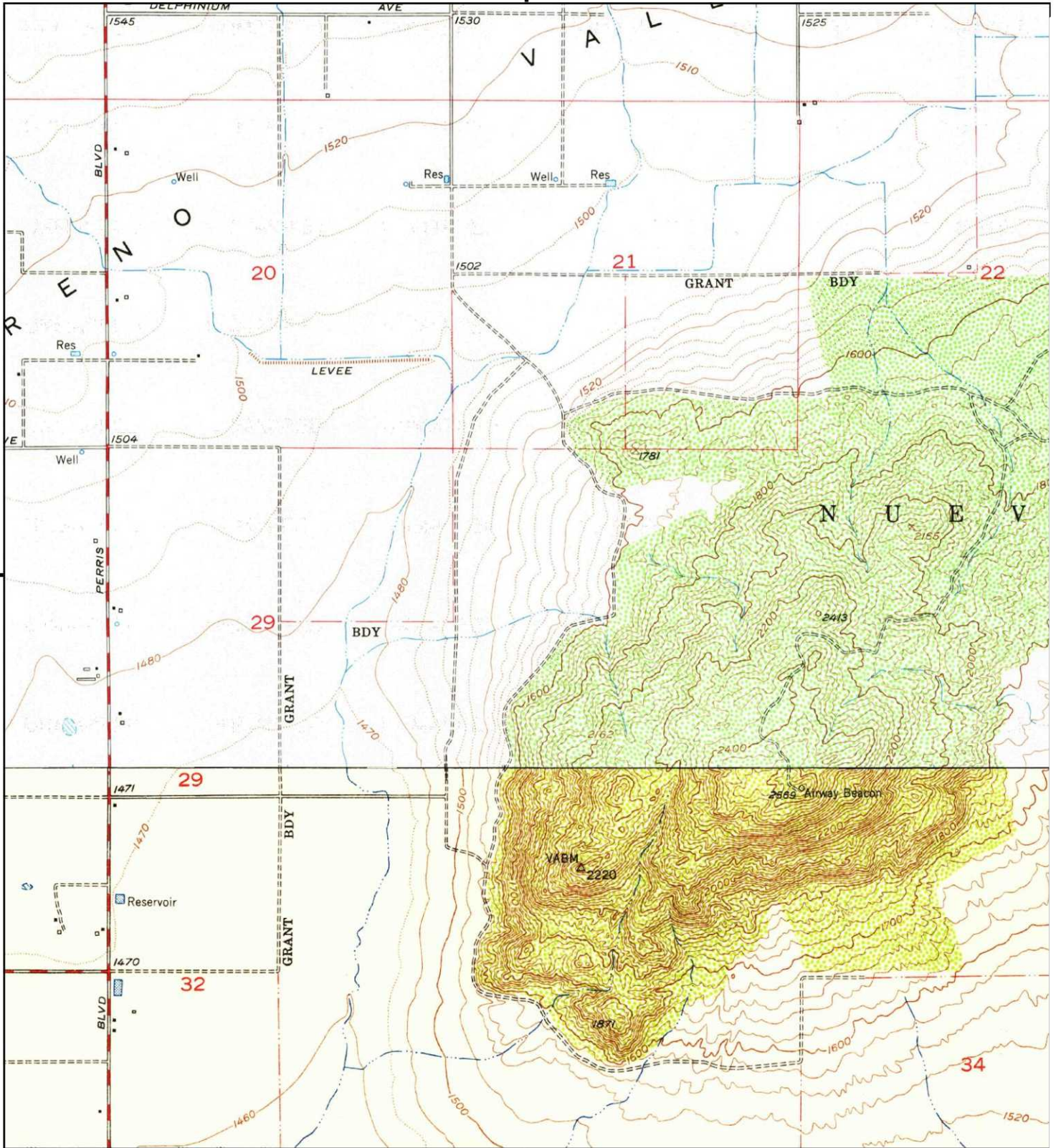


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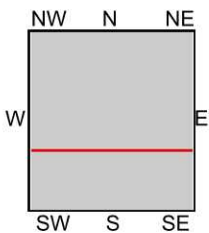
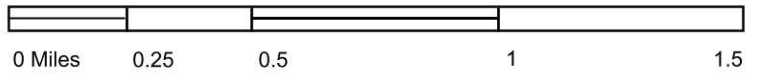
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ADDRESS: Krameria Ave and Lasselle Street  
Moreno Valley, CA 92555  
CLIENT: Group Delta Consultants

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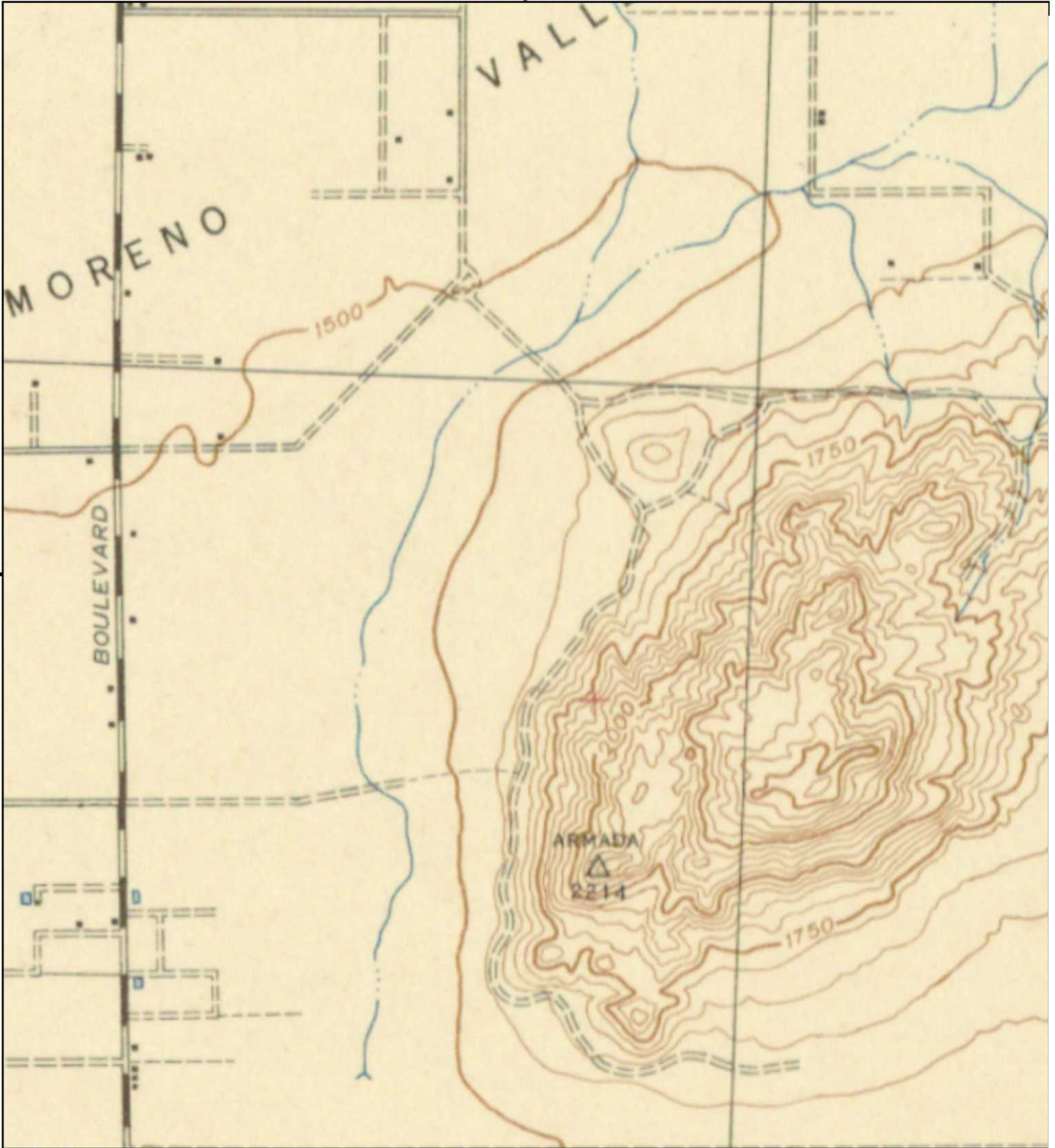


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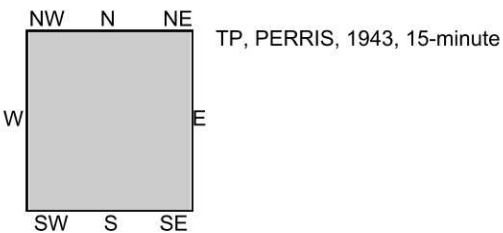
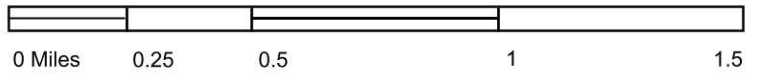
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CLIENT: Group Delta Consultants

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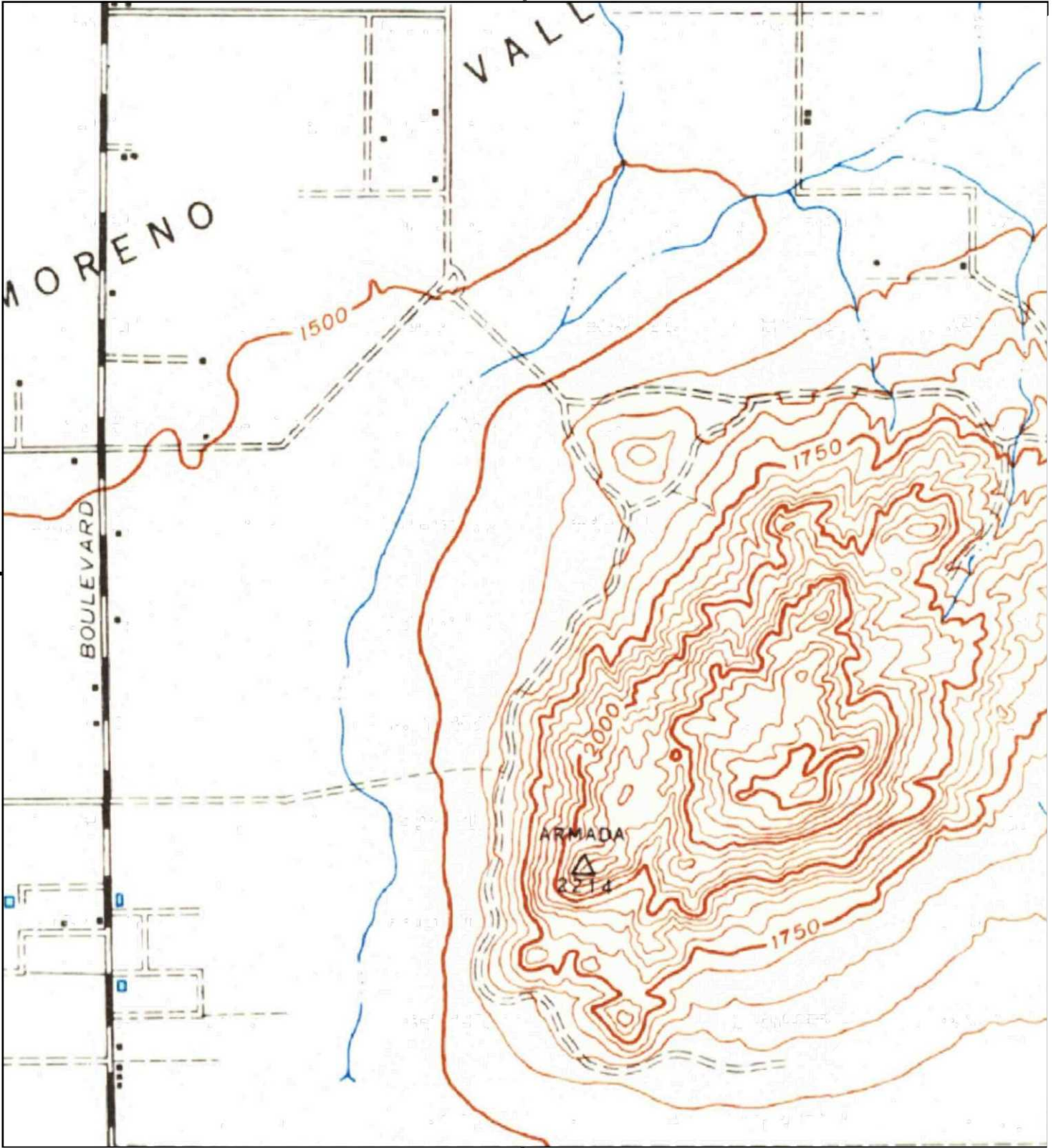


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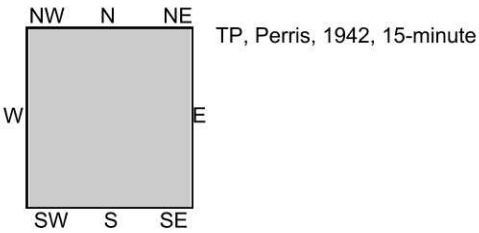
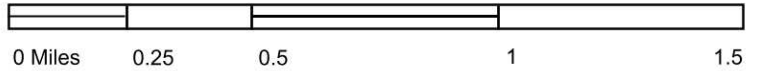


SITE NAME: Continental Village  
 ADDRESS: Krameria Ave and Lasselle Street  
 Moreno Valley, CA 92555  
 CLIENT: Group Delta Consultants

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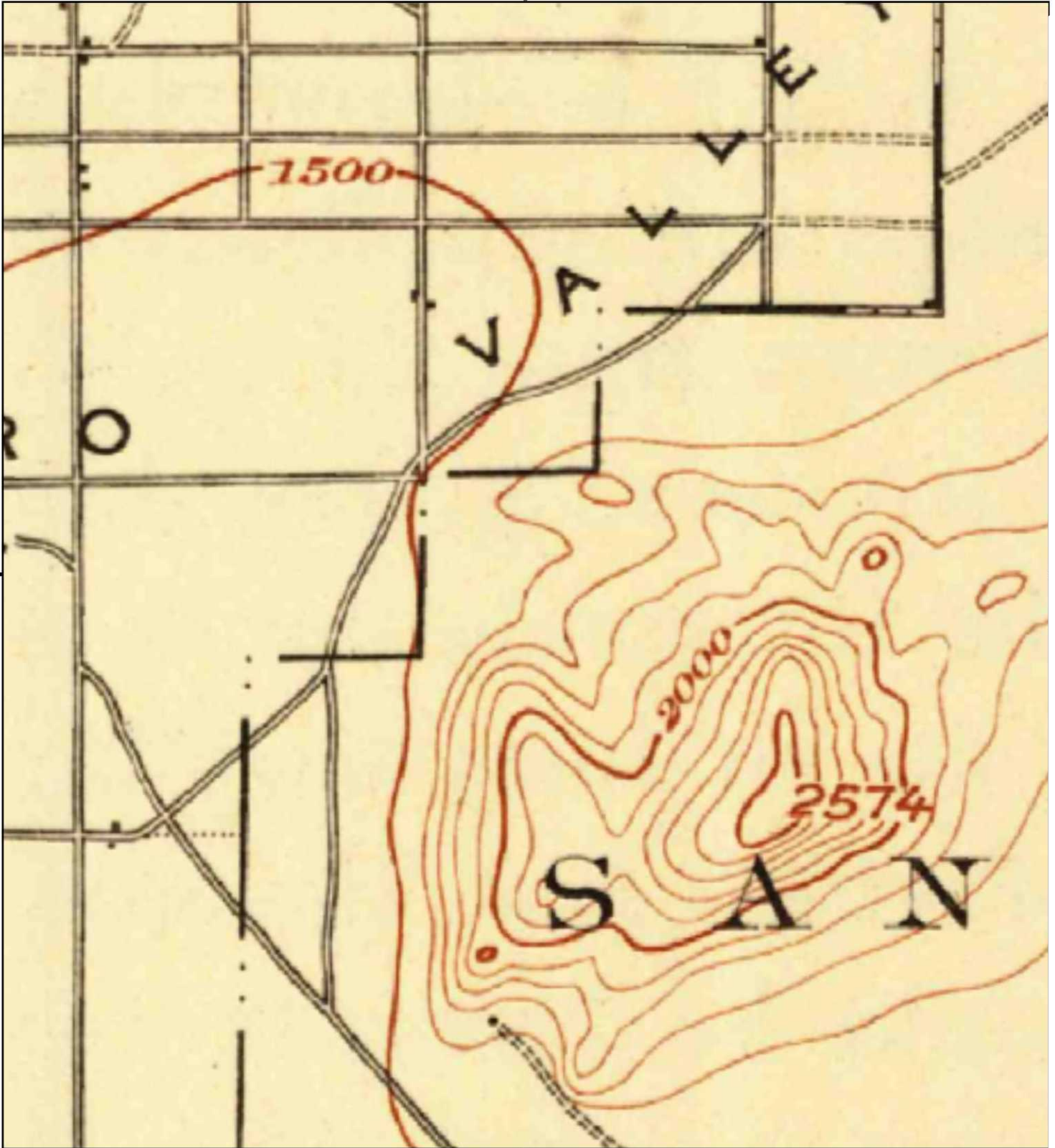
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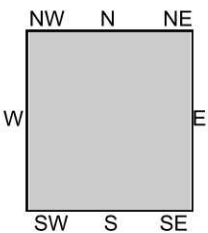
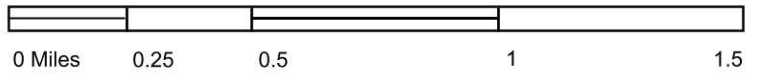
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 ADDRESS: Krameria Ave and Lasselle Street  
 Moreno Valley, CA 92555  
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This report includes information from the following map sheet(s).



TP, Elsinore, 1901, 30-minute

SITE NAME: Continental Village  
 ADDRESS: Krameria Ave and Lasselle Street  
 Moreno Valley, CA 92555  
 CLIENT: Group Delta Consultants

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan



**Continental Village**

Krameria Ave and Lasselle Street

Moreno Valley, CA 92555

Inquiry Number: 5219776.9

March 15, 2018

**The EDR Aerial Photo Decade Package**



6 Armstrong Road, 4th floor  
Shelton, CT 06484  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

## EDR Aerial Photo Decade Package

**Site Name:**

Continental Village  
Krameria Ave and Lasselle Str  
Moreno Valley, CA 92555  
EDR Inquiry # 5219776.9

**Client Name:**

Group Delta Consultants  
1035 S. Milliken Ave Suite G  
Ontario, CA 91761  
Contact: Jack Packwood



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**Search Results:**

| <u>Year</u> | <u>Scale</u> | <u>Details</u>                  | <u>Source</u> |
|-------------|--------------|---------------------------------|---------------|
| 2014        | 1"=500'      | Flight Year: 2014               | USDA/NAIP     |
| 2010        | 1"=500'      | Flight Year: 2010               | USDA/NAIP     |
| 2006        | 1"=500'      | Flight Year: 2006               | USDA/NAIP     |
| 2002        | 1"=500'      | Acquisition Date: June 06, 2002 | USGS/DOQQ     |
| 1997        | 1"=500'      | Flight Date: October 16, 1997   | USGS          |
| 1989        | 1"=500'      | Flight Date: August 15, 1989    | USDA          |
| 1985        | 1"=500'      | Flight Date: July 28, 1985      | USDA          |
| 1978        | 1"=500'      | Flight Date: September 20, 1978 | USDA          |
| 1967        | 1"=500'      | Flight Date: May 15, 1967       | USDA          |
| 1961        | 1"=500'      | Flight Date: June 14, 1961      | USDA          |
| 1953        | 1"=500'      | Flight Date: August 28, 1953    | USDA          |
| 1949        | 1"=500'      | Flight Date: May 08, 1949       | USDA          |
| 1938        | 1"=500'      | Flight Date: January 01, 1938   | USDA          |

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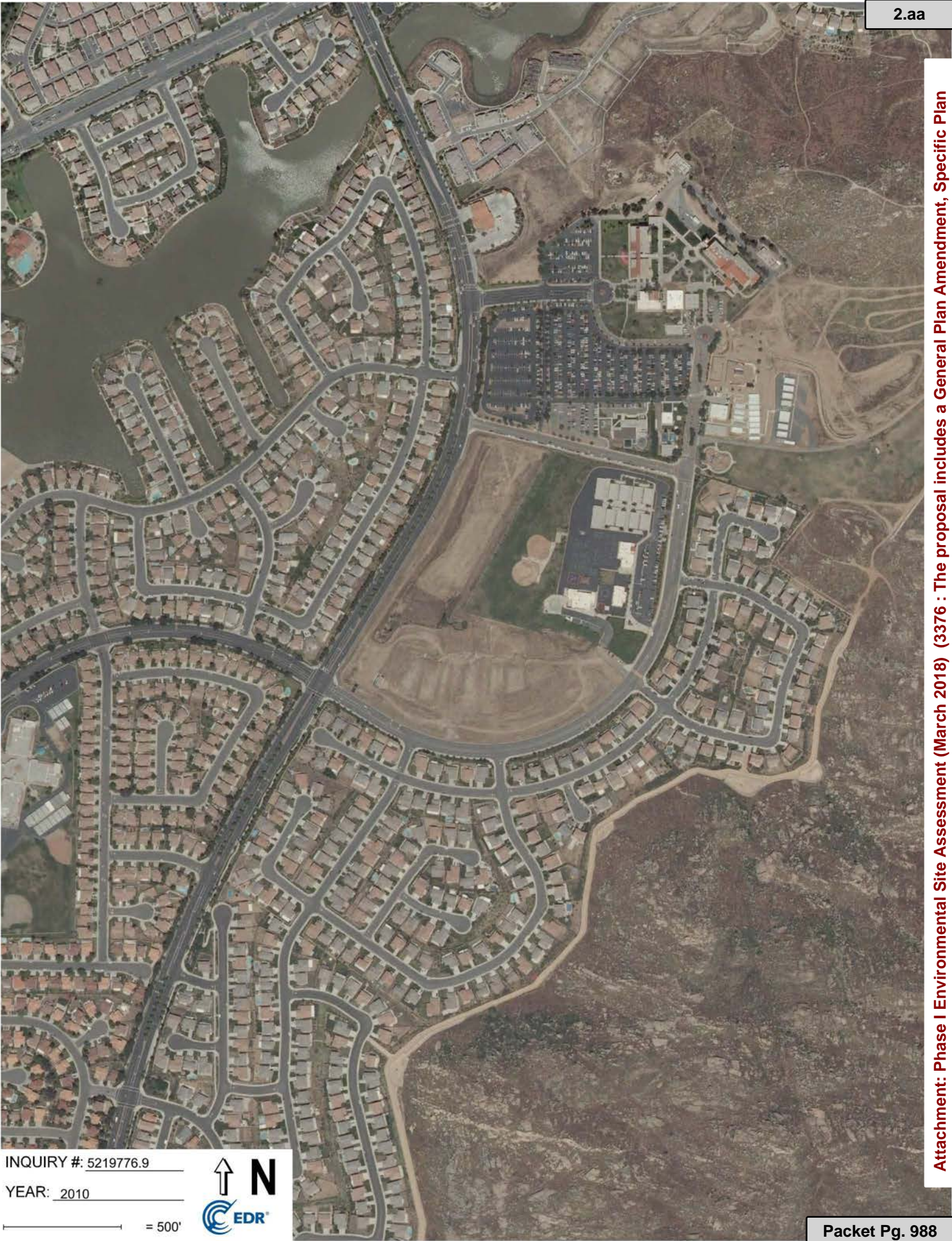
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YEAR: 2014

— = 500'







INQUIRY #: 5219776.9

YEAR: 2010

— = 500'



Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





INQUIRY #: 5219776.9

YEAR: 2006

— = 500'



Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





INQUIRY #: 5219776.9

YEAR: 2002

— = 500'



Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





INQUIRY #: 5219776.9

YEAR: 1997

— = 500'



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INQUIRY #: 5219776.9

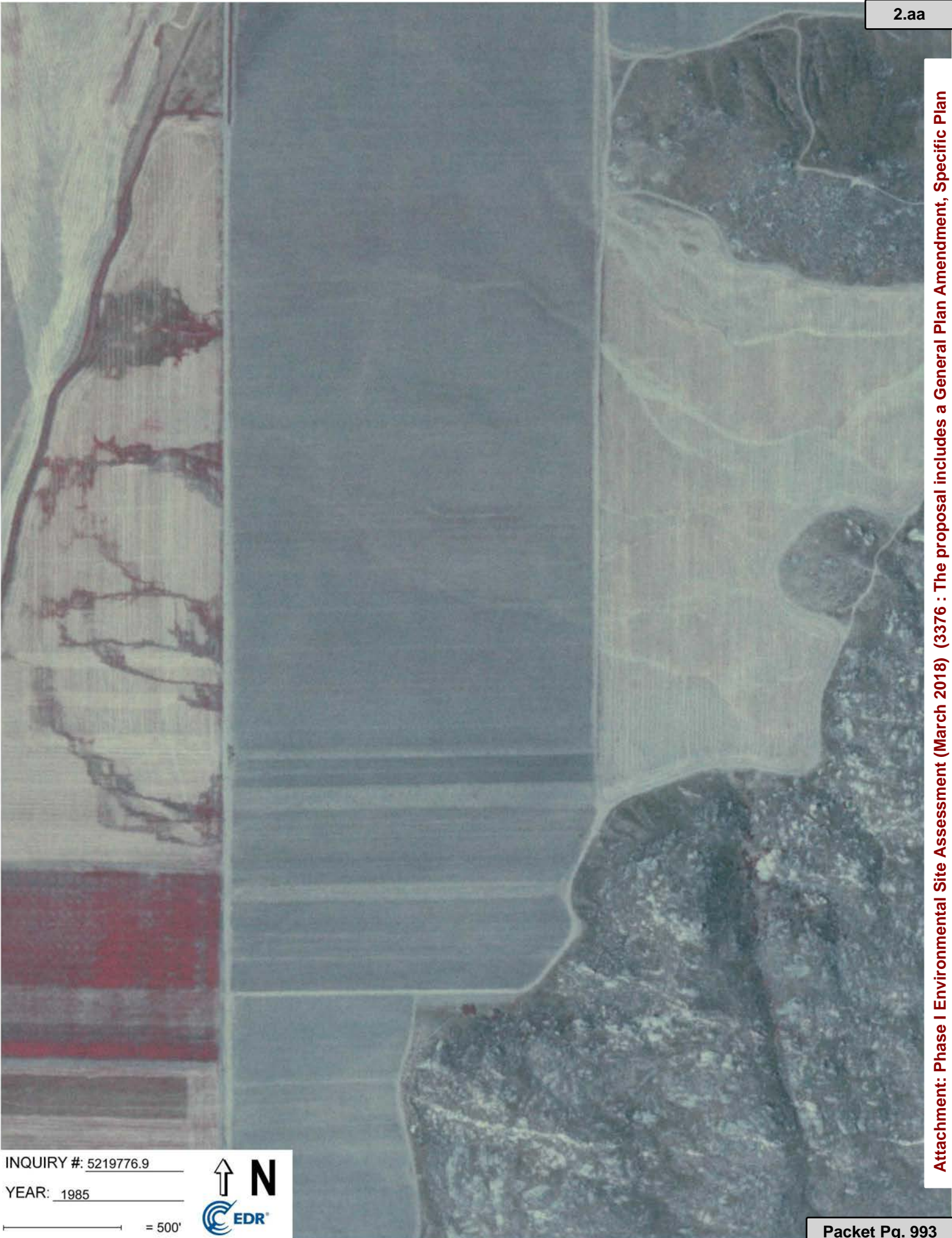
YEAR: 1989

— = 500'



Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





INQUIRY #: 5219776.9

YEAR: 1985

— = 500'







Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

INQUIRY #: 5219776.9

YEAR: 1978

\_\_\_\_\_ = 500'







INQUIRY #: 5219776.9

YEAR: 1967

—|— = 500'



Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





INQUIRY #: 5219776.9

YEAR: 1961

— = 500'



Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan





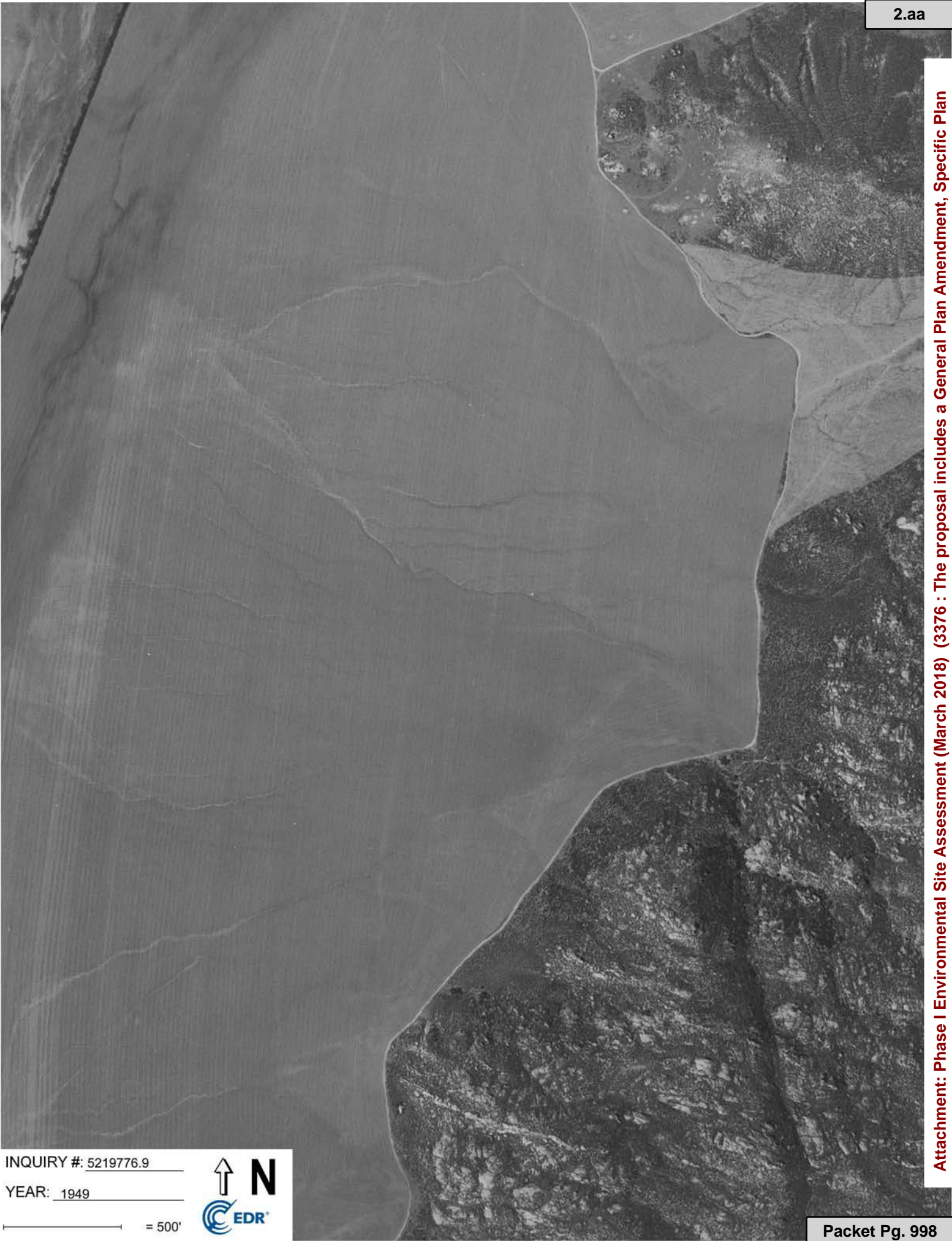
Attachment: Phase I Environmental Site Assessment (March 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan

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YEAR: 1953

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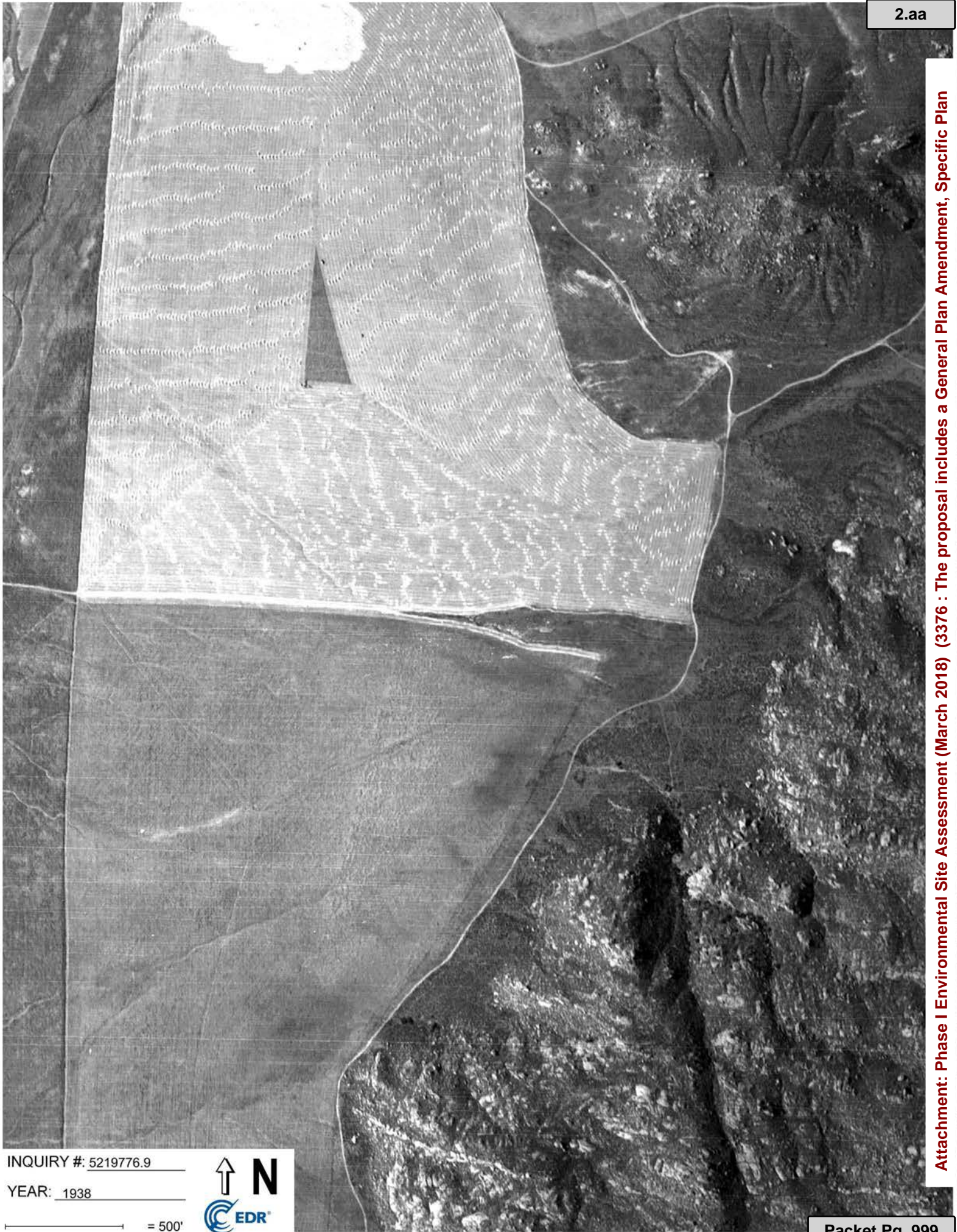
INQUIRY #: 5219776.9

YEAR: 1949

— = 500'







INQUIRY #: 5219776.9

YEAR: 1938

— = 500'





---

# Continental Villages

## NOISE IMPACT ANALYSIS

### CITY OF MORENO VALLEY

PREPARED BY:

Bill Lawson, PE, INCE  
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(949) 336-5979

Alex Wolfe, INCE  
awolfe@urbanxroads.com  
(949) 336-5977

NOVEMBER 19, 2018

---

11577-04 Noise Study

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of





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## LIST OF ABBREVIATED TERMS

|                  |   |
|------------------|---|
| (1)              | Reference                                     |
| ADT              | Average Daily Traffic                         |
| ANSI             | American National Standards Institute         |
| Calveno          | California Vehicle Noise                      |
| CEQA             | California Environmental Quality Act          |
| CNEL             | Community Noise Equivalent Level              |
| dba              | A-weighted decibels                           |
| EPA              | Environmental Protection Agency               |
| FHWA             | Federal Highway Administration                |
| FTA              | Federal Transit Administration                |
| Hz               | Hertz   |
| I-215            | Interstate 215                                |
| INCE             | Institute of Noise Control Engineering        |
| L <sub>eq</sub>  | Equivalent continuous (average) sound level   |
| L <sub>max</sub> | Maximum level measured over the time interval |
| L <sub>min</sub> | Minimum level measured over the time interval |
| mph              | Miles per hour                                |
| OPR              | Office of Planning and Research               |
| PPV              | Peak particle velocity                        |
| Project          | Continental Villages                          |
| REMEL            | Reference Energy Mean Emission Level          |
| RMS              | Root-mean-square                              |
| VdB              | Vibration Decibels                            |

## EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures, if any, for the proposed Continental Villages development (“Project”). The Project site is located on the northeast corner of Lasselle Street and Krameria Avenue in the City of Moreno Valley. The Project is proposed to consist of up to 112 apartments/duplexes and 21,000 square feet of commercial retail use. This study has been prepared to satisfy the City of Moreno Valley noise standards, and identifies thresholds of significance based on guidance in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

### OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 11 roadway segments surrounding the Project site were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in *Continental Villages Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (2) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Opening Year 2023, and Horizon Year 2040 traffic conditions. The analysis shows that the unmitigated Project-related traffic noise level increases under all traffic scenarios will be *less than significant*.

### ON-SITE TRAFFIC NOISE ANALYSIS

A noise impact analysis has been completed to determine the noise exposure levels that would result from off-site traffic noise sources, and to identify potential noise mitigation measures, if any, that would achieve acceptable Project exterior and interior noise levels. The primary source of traffic noise affecting the Project site is anticipated to be from Lasselle Street and Krameria Avenue. The Project will also experience some background traffic noise impacts from the Project’s internal parking lot, however, due to the lower traffic volume and speeds of vehicles transiting on these roadways, traffic noise from these roadways will not make a significant contribution to the noise environment at the Project site.

### EXTERIOR NOISE LEVELS

The future unmitigated on-site traffic noise levels at the residential building façades are shown to approach 59.8 dBA CNEL and represent *normally acceptable* exterior noise levels for residential home land use. (3) Further, Project interior noise levels are analyzed herein to identify the necessary interior noise reduction measures, if any, to satisfy the City of Moreno Valley General Plan Noise Element 45 dBA CNEL interior noise level standard.

## INTERIOR NOISE LEVELS

This noise study evaluates the interior noise levels at the Project building based on the City of Moreno Valley 45 dBA CNEL residential interior noise level standard. The Project buildings are shown to require a Noise Reduction (NR) of up to 14.8 dBA and a windows-closed condition requiring a means of mechanical ventilation (e.g. air conditioning). To meet the City of Moreno Valley 45 dBA CNEL interior noise standards the following on-site standard construction measures are required:

- Windows/Glass Doors: All units require windows and sliding glass doors that have well-fitted, well-weather-stripped assemblies, and minimum sound transmission class (STC) ratings of 27.
- Exterior Doors (Non-Glass): All exterior doors shall be well weather-stripped and have well-sealed perimeter gaps to achieve minimum sound transmission class (STC) ratings of 27. (4)
- Exterior Walls: At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.
- Roof: Roof sheathing of wood construction shall be per manufacturer's specification or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer's specification or well-sealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic space.
- Ventilation: Arrangements for any habitable room shall be such that any exterior door or window can be kept closed when the room is in use and still receive circulated air. A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code.

Based on the results of this analysis, the Project will satisfy the 45 dBA CNEL interior noise level standard with standard building construction. Exhibit ES-A shows the on-site recommendations.

## OPERATIONAL NOISE ANALYSIS

Using reference noise levels to represent the expected noise sources from the Continental Villages site, this analysis estimates the Project-related stationary-source noise levels at nearby sensitive receiver locations. The normal activities associated with the proposed Continental Villages are anticipated to include roof-top air conditioning units, residential entry gate activity, residential and commercial parking lot vehicle movements, and outdoor pool/spa activity. The operational noise analysis shows that the Project-related stationary-source noise levels due to the roof-top air conditioning units, residential entry gate activity, residential and commercial parking lot vehicle movements, and outdoor pool/spa activity will satisfy the City of Moreno Valley noise level standards at 200 feet from the property line of the noise source (Project site) and at all nearby receiver locations.

In addition, this analysis demonstrates that the Project will contribute *less than significant* operational noise level contributions to the existing ambient noise environment during the daytime and nighttime hours at all of the sensitive receiver locations. Therefore, the operational noise level impacts associated with the proposed Project activities, such as the roof-top air conditioning units, residential entry gate activity, residential and commercial parking lot vehicle movements, and outdoor pool/spa activity, will be *less than significant*.

### CONSTRUCTION NOISE ANALYSIS

Construction-related noise impacts are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site when certain activities occur at the closest point to the nearby receiver locations from primary Project construction activity. Using sample reference noise levels to represent the planned construction activities of the Continental Villages site, this analysis estimates the Project-related construction noise levels at nearby receiver locations. Based on the analysis, the Project-related short-term construction noise levels are shown to satisfy the City of Moreno Valley Municipal Code 60 dBA  $L_{eq}$  daytime noise level threshold at noise-sensitive receiver locations with the planned temporary construction noise attenuation measures (Project Design Features). To reduce the Project construction noise levels at the adjacent receiver locations, R2 and R6, the Project Design Features (PDFs) include noise attenuation measures in the form of a minimum 10-foot high temporary noise barrier at the Project site boundary for the future residential uses represented by R6, and a 50-foot buffer for large mobile equipment (greater than 80,000 pounds) for both R2 and R6, as shown on Exhibit ES-B. The construction noise PDFs are outlined below. With the PDFs identified herein, the noise impact due to Project construction is considered a *less than significant* impact.

### CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from temporary Project construction activities would cause only intermittent, localized intrusion. The analysis shows that the unmitigated Project-construction vibration levels will remain below the Federal Transit Administration (FTA) 80 VdB threshold at the nearby receiver locations, and are therefore, considered a *less than significant* impact.

Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating at the Project site perimeter.



## CONSTRUCTION NOISE PROJECT DESIGN FEATURES

The following PDFs are included in the Project design to reduce construction noise and vibration levels produced by the construction equipment to the nearby sensitive land uses.

- If R6 represents occupied residential use at the time of Project construction, install a minimum 10-foot high temporary construction noise barrier at the Project's site boundary adjacent to sensitive receiver location R6, shown on Exhibit ES-B, for the duration of Project construction. The noise control barriers must have a solid face from top to bottom. The noise control barrier must meet the minimum height and be constructed as follows:
  - The temporary noise barrier shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts. Example photos are provided in Appendix 11.2.;
  - The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired;
  - The noise control barrier and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity.
- Large mobile equipment (greater than or equal to 80,000 pounds) (5) shall not be used within 50 feet of receiver locations R2 and R6 if occupied at the time of Project construction, as shown on Exhibit ES-B. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used within this area during Project construction.
- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that Project construction activities shall comply with the City of Moreno Valley Municipal Code requirements. (6)
- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site during all Project construction (i.e., to the western center).
- The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

## SUMMARY OF SIGNIFICANCE FINDINGS

The results of this Continental Villages Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact before and after any required mitigation measures.

TABLE ES-1: SUMMARY OF SIGNIFICANCE FINDINGS

| Analysis               | Report Section | Significance Findings        |           |
|------------------------|----------------|------------------------------|-----------|
|                        |                | Unmitigated                  | Mitigated |
| Off-Site Traffic Noise | 7              | <i>Less Than Significant</i> | -         |
| On-Site Traffic Noise  | 8              | <i>Less Than Significant</i> | -         |
| Operational Noise      | 10             | <i>Less Than Significant</i> | -         |
| Construction Noise     | 11             | <i>Less Than Significant</i> | -         |
| Construction Vibration |                | <i>Less Than Significant</i> | -         |

EXHIBIT ES-A: SUMMARY OF ON-SITE RECOMMENDATIONS



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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

# 1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Continental Villages (“Project”). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, describes the local regulatory setting, provides the study methods and procedures for traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational and short-term construction noise impacts.

## 1.1 SITE LOCATION

The proposed Continental Villages site is located on the northeast corner of Lasselle Street and Krameria Avenue in the City of Moreno Valley, as shown on Exhibit 1-A. Existing uses in the Project study area include existing residential homes northwest, south, and east of the Project site, the Lasselle Elementary School north of the Project site, and future residential uses, currently under construction, north of the Project site.

## 1.2 PROJECT DESCRIPTION

The Project is proposed to consist of up to 112 apartments/duplexes and 21,000 square feet of commercial retail use, as shown on Exhibit 1-B. The on-site Project-related noise sources are expected to include: roof-top air conditioning units, residential entry gate activity, residential and commercial parking lot vehicle movements, and outdoor pool/spa activity.

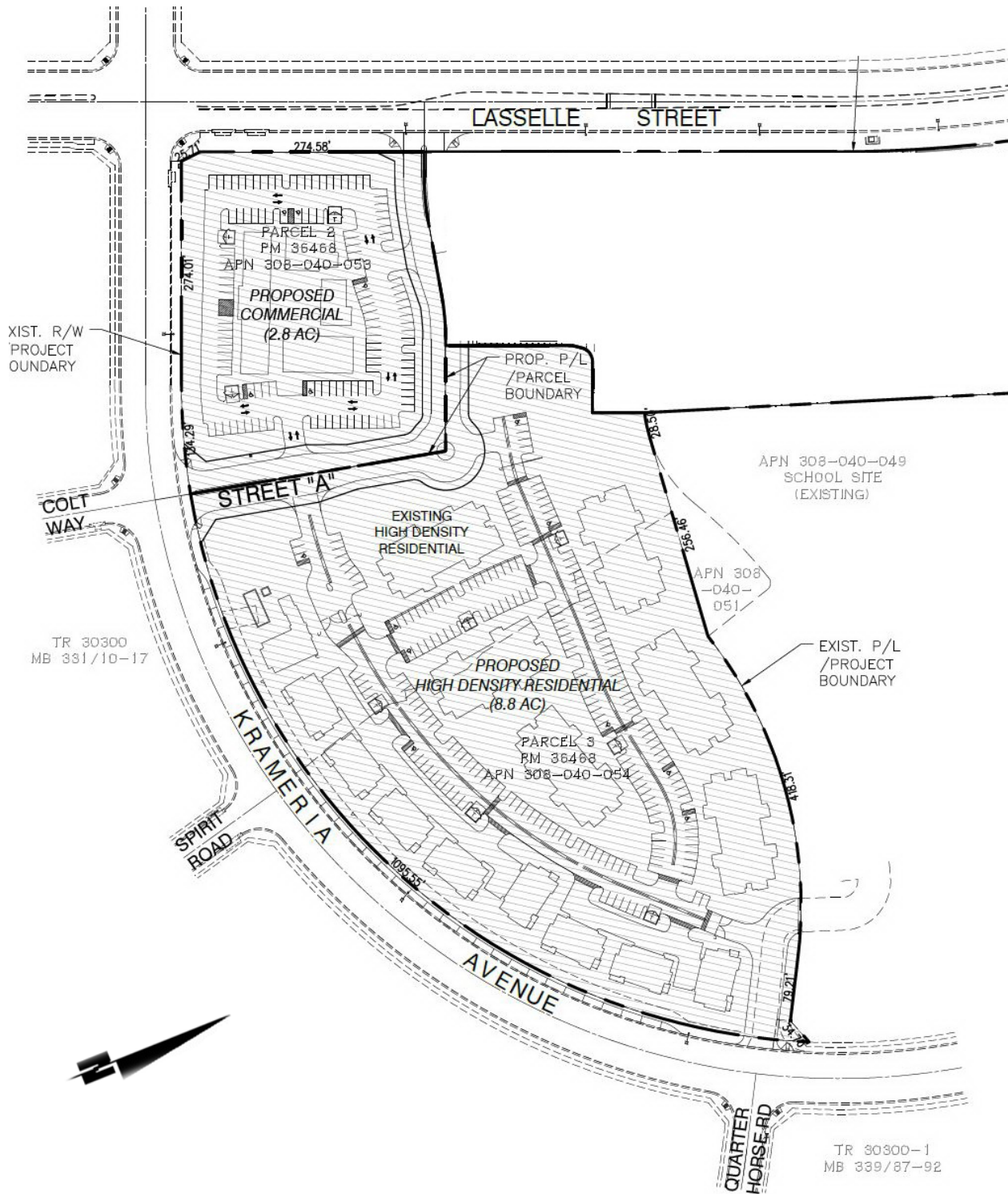
EXHIBIT 1-A: LOCATION MAP



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EXHIBIT 1-B: SITE PLAN



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## 2 FUNDAMENTALS

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

**EXHIBIT 2-A: TYPICAL NOISE LEVELS**

| <b>COMMON OUTDOOR ACTIVITIES</b>                  | <b>COMMON INDOOR ACTIVITIES</b>             | <b>A - WEIGHTED SOUND LEVEL dBA</b> | <b>SUBJECTIVE LOUDNESS</b>      | <b>EFFECTS OF NOISE</b>    |
|---|---|-------------------------------------|---------------------------------|----------------------------|
| THRESHOLD OF PAIN                                 |   | 140                                 | <b>INTOLERABLE OR DEAFENING</b> | <b>HEARING LOSS</b>        |
| NEAR JET ENGINE                                   |   | 130                                 |                                 |                            |
|   |   | 120                                 |                                 |                            |
| JET FLY-OVER AT 300m (1000 ft)                    | ROCK BAND                                   | 110                                 |                                 |                            |
| LOUD AUTO HORN                                    |   | 100                                 | <b>VERY NOISY</b>               | <b>SPEECH INTERFERENCE</b> |
| GAS LAWN MOWER AT 1m (3 ft)                       |   | 90                                  |                                 |                            |
| DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph) | FOOD BLENDER AT 1m (3 ft)                   | 80                                  | <b>LOUD</b>                     |                            |
| NOISY URBAN AREA, DAYTIME                         | VACUUM CLEANER AT 3m (10 ft)                | 70                                  |                                 |                            |
| HEAVY TRAFFIC AT 90m (300 ft)                     | NORMAL SPEECH AT 1m (3 ft)                  | 60                                  | <b>MODERATE</b>                 | <b>SLEEP DISTURBANCE</b>   |
| QUIET URBAN DAYTIME                               | LARGE BUSINESS OFFICE                       | 50                                  |                                 |                            |
| QUIET URBAN NIGHTTIME                             | THEATER, LARGE CONFERENCE ROOM (BACKGROUND) | 40                                  | <b>FAINT</b>                    | <b>NO EFFECT</b>           |
| QUIET SUBURBAN NIGHTTIME                          | LIBRARY                                     | 30                                  |                                 |                            |
| QUIET RURAL NIGHTTIME                             | BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND) | 20                                  |                                 |                            |
|   | BROADCAST/RECORDING STUDIO                  | 10                                  | <b>VERY FAINT</b>               |                            |
| LOWEST THRESHOLD OF HUMAN HEARING                 | LOWEST THRESHOLD OF HUMAN HEARING           | 0                                   |                                 |                            |

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

### 2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (7) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 100 feet, which can cause serious discomfort. (8) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

## 2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level ( $L_{eq}$ ). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level ( $L_{eq}$ ) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the “average” noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Day-Night Average Noise Level (LDN) and the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The LDN and CNEL are weighted averages of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The LDN time of day corrections include the addition of 10 decibels to dBA  $L_{eq}$  sound levels at night between 10:00 p.m. and 7:00 a.m. The CNEL time of day corrections require the addition of 5 decibels to dBA  $L_{eq}$  sound levels in the evening from 7:00 p.m. to 10:00 p.m., in addition to the corrections for the LDN. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. LDN and CNEL do not represent the actual sound level heard at any particular time, but rather represent the total sound exposure. The City of Moreno Valley relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources, and therefore, this analysis uses the CNEL noise level to apply the more conservative evening hour corrections to the 24-hour noise levels.

## 2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

### 2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (7)

### 2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (9)

### 2.3.3 ATMOSPHERIC EFFECTS

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (7)

### 2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an “out of sight, out of mind” effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby resident. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure. (9)

## 2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for a particular observation point or receptor by controlling the noise source, transmission path, receptor, or all three. This concept is known as the source-path-receptor concept. In general, noise control measures can be applied to any and all of these three elements.

## 2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receptor.



Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (9)

## 2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (10)

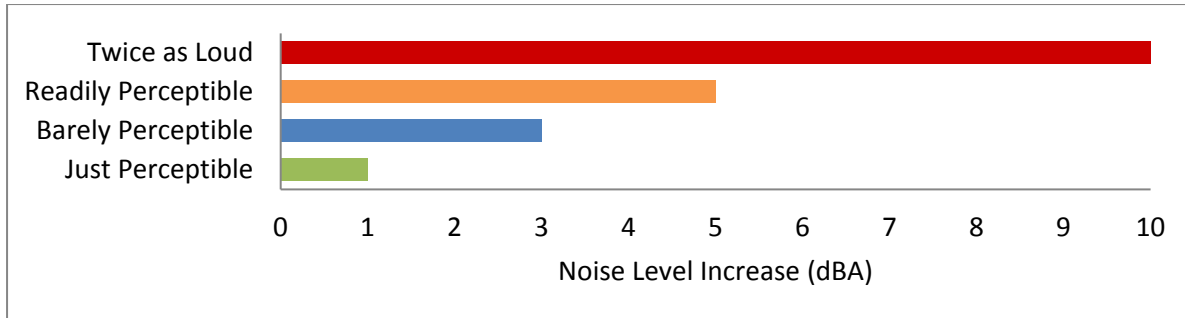
## 2.7 COMMUNITY RESPONSE TO NOISE

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon each individual's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (11) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (11)

Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (9)

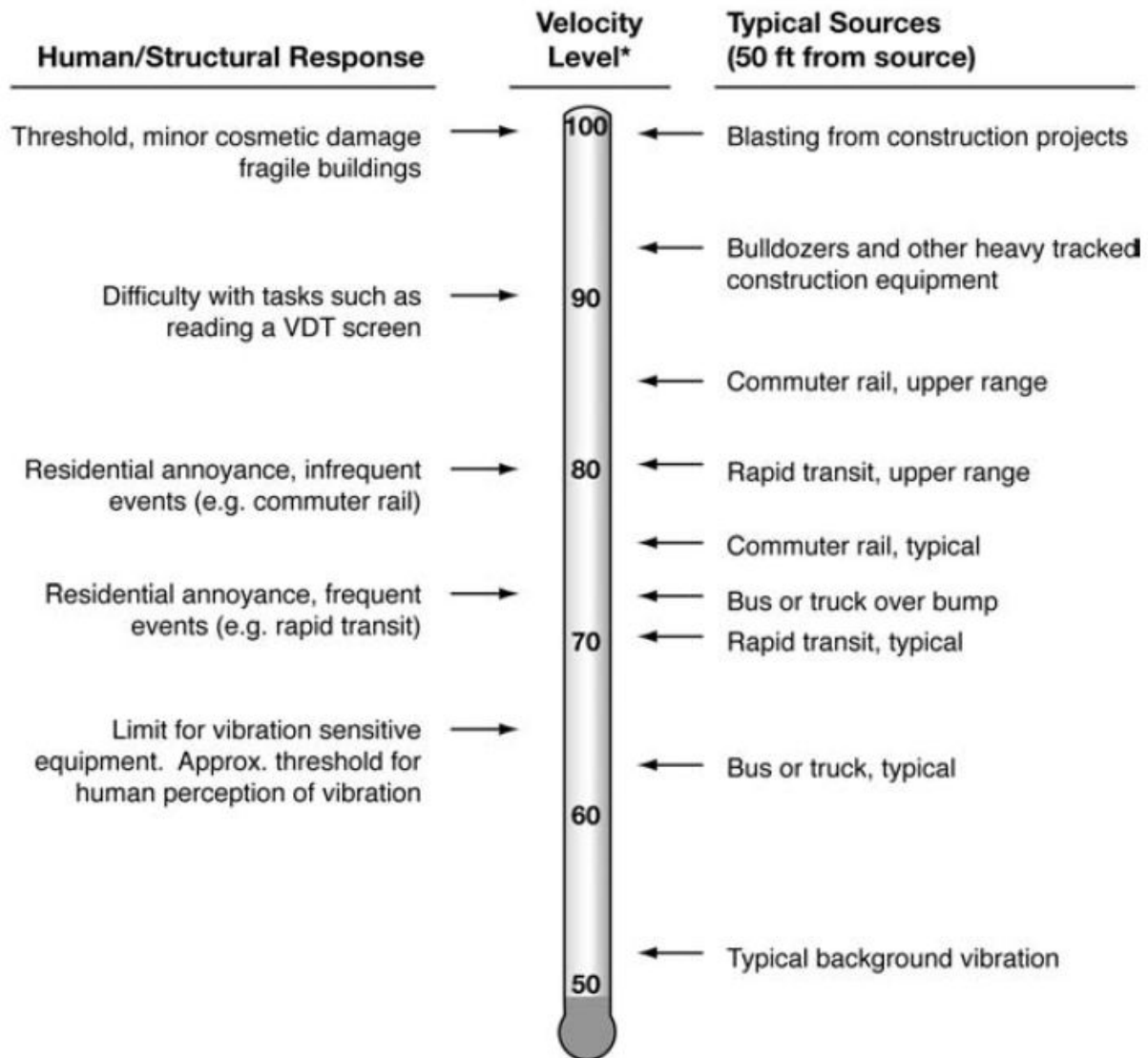
**EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION****2.8 VIBRATION**

According to the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment* (12), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (VdB) serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.

EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION



\* RMS Vibration Velocity Level in VdB relative to 10<sup>-6</sup> inches/second

Source: Federal Transit Administration (FTA) Transit Noise Impact and Vibration Assessment.

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

### 3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains fairly constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

#### 3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research (OPR). (3) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels.*

#### 3.2 STATE OF CALIFORNIA GREEN BUILDING STANDARDS CODE

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

#### 3.3 CITY OF MORENO VALLEY GENERAL PLAN

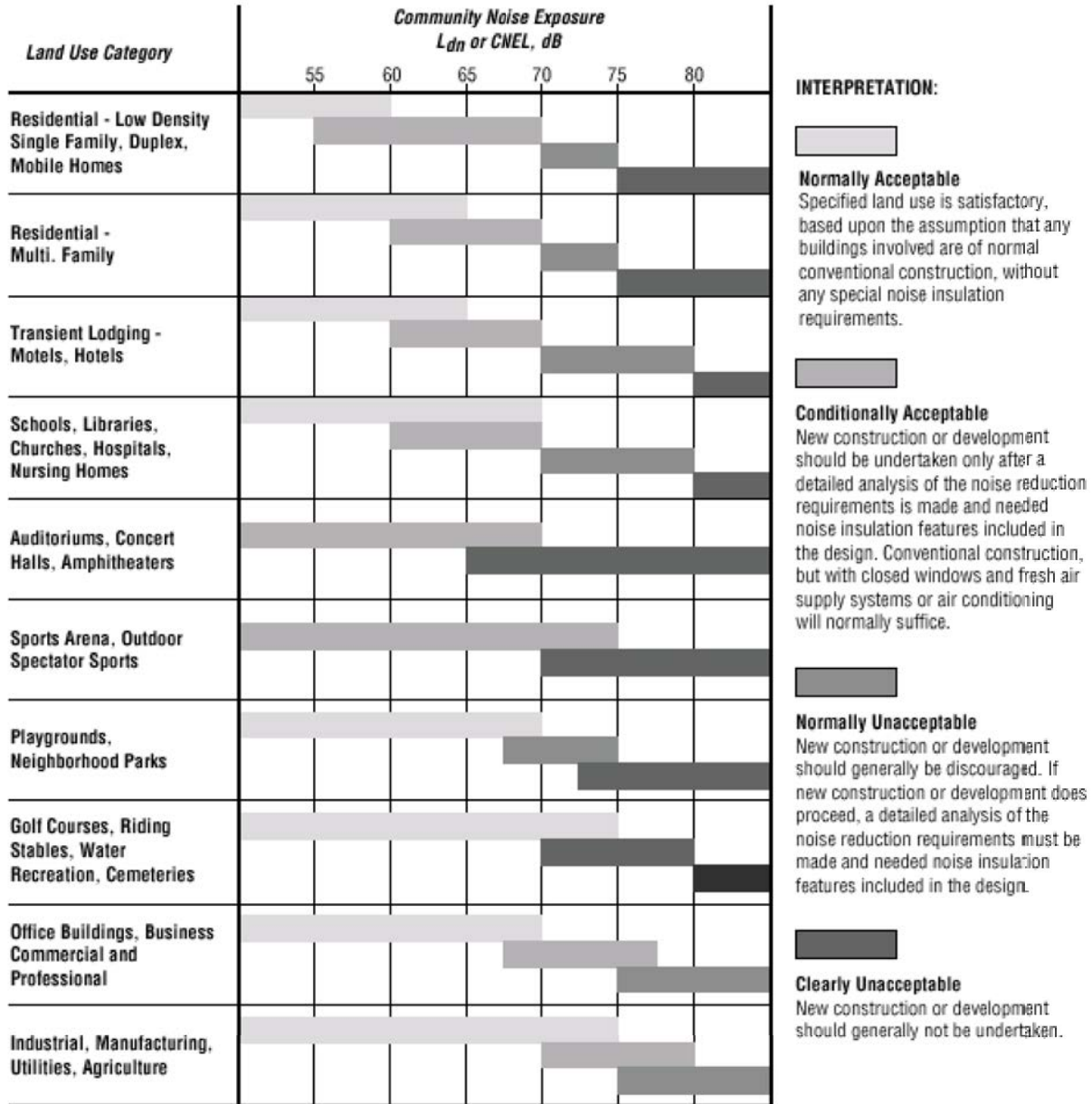
The City of Moreno Valley Noise Element typically provides the standards for land use compatibility for community noise exposure. However, the City of Moreno Valley General Plan does not include a noise element or specific transportation-related noise standards. Rather, noise is considered in the Environmental Safety section of the General Plan Safety Element. (13) While the General Plan provides background and noise fundamentals, it does not identify criteria to assess the impacts associated with off-site transportation-related noise impacts. Therefore, for this analysis, the transportation noise criteria are derived from standards contained in the California Office of Planning and Research (OPR) *General Plan Guidelines*.



The OPR land use/noise compatibility standards are used by many California cities and counties and specify the maximum noise levels allowable for new developments impacted by transportation noise sources. The OPR land use/noise compatibility criteria, found in Figure 2 of the *General Plan Guidelines, Appendix C: Noise Element Guidelines*, identify the criteria for residential uses such as the Project, as shown on Exhibit 3-A. When the unmitigated exterior noise levels approach 65 dBA CNEL Project land use is considered *normally acceptable*. With exterior noise levels range from 60 to 70 dBA CNEL, residential uses are considered *conditionally acceptable*, and with exterior noise levels greater than 70 dBA CNEL, they are considered *normally unacceptable*. For *normally unacceptable* land use, *new construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.* (3)

The purpose of the transportation noise criteria is to protect, create, and maintain an environment free from noise and vibration that may jeopardize the health or welfare of sensitive receptors, or degrade quality of life. City General Policies (City of Moreno Valley General Plan, pp.9-31, 9-32) act to ensure that when exterior noise levels exceed 65 dBA CNEL at sensitive receptors, mitigation is provided to ensure that interior noise levels of 45 dBA CNEL are maintained. General Plan Policies in this regard are consistent with, and support, the California Building Code interior noise standards.

**EXHIBIT 3-A: LAND USE NOISE COMPATIBILITY CRITERIA**



Source: OPR General Plan Guidelines, Appendix C: Noise Element Guidelines, Figure 2.

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

### 3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Continental Villages Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, residential entry gate activity, residential and commercial parking lot vehicle movements, and outdoor pool/spa activity are typically evaluated against standards established under a City's Municipal Code.

The City of Moreno Valley Municipal Code, Chapter 11.80 *Noise Regulation*, provides performance standards and noise control guidelines for determining and mitigating non-transportation or stationary-source noise impacts from operations at private properties. The City of Moreno Valley Municipal Code defines *Maximum Sound Levels (in dB(A)) for Source Land Uses* in Table 11.80.030-2 for *Residential* and *Commercial* land uses. As defined by the Municipal Code, Section 11.80.020 *Definitions*, *Residential* land use means *all uses of land primarily for dwelling units, as well as hospitals, schools, colleges and universities, and places of religious assembly.* (6) For the purpose of this analysis, the Continental Villages Project is considered *Residential* land use. Based on this standard, the operational noise level limits for residential land use, from Table 11.80.030-2, of 60 dBA  $L_{eq}$  during the daytime (8:00 a.m. to 10:00 p.m.) hours and 55 dBA  $L_{eq}$  during the nighttime (10:01 p.m. to 7:59 a.m.) hours shall apply to the operational noise from the Project.

Further, Section 11.80.030 (C) *Prohibited Acts, Nonimpulsive Sound Decibel Limits*, states: *No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any nonimpulsive sound which exceeds the limits set forth for the source land use category (as defined in Section 11.80.020) in Table 11.80.030-2 when measured at a distance of two hundred (200) feet or more from the real property line of the source of the sound, if the sound occurs on a privately owned property...* (6) Therefore, at a distance of 200 feet from the property line, the Project's operational noise levels shall not exceed the 60 dBA  $L_{eq}$  daytime and 50 dBA  $L_{eq}$  nighttime noise level standards for residential land uses, as shown on Table 3-1.

The City of Moreno Valley Municipal Code also identifies continuous sound level limits in Table 11.80.030-1 based on the Center for Disease Control and Prevention and the National Institute for Occupational Safety and Health (NIOSH) noise exposure guidelines. A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The City of Moreno Valley noise level threshold starts at 90 dBA for more than eight hours per day, and for every increase, the exposure time is reduced. The City of Moreno Valley identifies noise level thresholds of 92 dBA for more than 6 hours per day, 95 dBA for more than 4 hour per day, 97 dBA for more than 3 hours per day, and up to 100 dBA for more than 2 hours per day. However, this noise study uses the more restrictive City of Moreno Valley noise level limits identified on Table 11.80.030-2 for source land uses in the Municipal Code, shown on Table 3-1 of this report, to evaluate the potential operational noise levels due to the operation of the Project.

**TABLE 3-1: OPERATIONAL NOISE STANDARDS AT 200 FEET FROM THE SOURCE**

| Jurisdiction                       | Source Land Use | Time Period                        | Maximum Noise Level for Source Land Uses @ 200' (dBA L <sub>eq</sub> ) <sup>2</sup> |
|------------------------------------|-----------------|------------------------------------|---|
| City of Moreno Valley <sup>1</sup> | Residential     | Daytime (8:00 a.m. - 10:00 p.m.)   | 60  |
|                                    |                 | Nighttime (10:01 p.m. - 7:59 a.m.) | 55  |

<sup>1</sup> Source: City of Moreno Valley Municipal Code, Chapter 11.80 Noise Regulation, Table 11.80.030-2 Maximum Sound Levels (in dB(A)) for Source Land Uses when measured at a distance of 200 feet from the property line of the source land use (Appendix 3.1).

<sup>2</sup> L<sub>eq</sub> represents a steady state sound level containing the same total energy as a time varying signal over a given sample period.

### 3.5 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of the Continental Villages site, noise from construction activities are typically evaluated against standards established under a City's Municipal Code. The Municipal Code noise standards for construction are described below for the City of Moreno Valley to determine the potential noise impacts at nearby receiver locations. The construction-related noise standards are shown on Table 3-2.

The Municipal Code noise standards for construction are described below for the City of Moreno Valley to determine the potential noise impacts at nearby sensitive receiver locations. As a subset of its stationary-source noise regulations, the City Municipal Code establishes permitted hours of construction activity. More specifically, Municipal Code Section 11.80.030 (D) (7), *Construction and Demolition*, provides the following:

*No person shall operate, or cause operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between the hours of eight p.m. and seven a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee.*

Therefore, based on the Section 11.80.030 (D) (7) construction regulations, a construction-related *noise disturbance* occurs if Project construction activity occurs outside of the permitted hours. However, for this analysis, the stationary-source noise level limits of 60 dBA L<sub>eq</sub> (daytime) for residential uses, and 65 dBA L<sub>eq</sub> (daytime) for commercial uses are used as appropriate thresholds for the land uses (e.g. residential homes and office buildings, respectively) in the Project study area. In addition, grading operations shall be limited to the hours identified in Section 8.21.050 (O) of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 8:00 a.m. to 4:00 p.m. on weekends and holidays or as approved by the City Engineer. The City of Moreno Valley construction noise standards are shown on Table 3-2 and included in Appendix 3.1. As previously discussed in Section 3.4, the construction noise level threshold used in this noise study represents a conservative approach, since it is more restrictive than the continuous sound level limits of Table 11.80.030-1 of the City of Moreno Valley Municipal Code.



TABLE 3-2: CONSTRUCTION NOISE STANDARDS FROM THE SOURCE LAND USE

| Jurisdiction                       | Permitted Hours of Construction Activity   | Construction Noise Level Standards (dBA L <sub>eq</sub> ) <sup>2</sup> |            |
|------------------------------------|--|--|------------|
|                                    |  | Residential  | Commercial |
| City of Moreno Valley <sup>1</sup> | General Activity: 7:00 a.m. to 8:00 p.m. on any day. Grading is limited to 7:00 a.m. to 6:00 p.m. Monday to Friday; 8:00 a.m. to 4:00 p.m. on weekends and holidays. | 60   | 65         |

<sup>1</sup> Source: City of Moreno Valley Municipal Code, Section 11.80.030 (D) (7) and Section 8.21.050 (O) (Appendix 3.1).

<sup>2</sup> Acceptable threshold for determining the relative significance of short-term Project construction noise levels, based on the City of Moreno Valley stationary noise standards by land use type.

"Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.

### 3.6 VIBRATION STANDARDS

The City of Moreno Valley has not identified or adopted specific vibration level standards. However, the United States Department of Transportation Federal Transit Administration (FTA) provides guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines allow 80 VdB for residential uses and buildings where people normally sleep. (12) Operational and construction activities can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. Large bulldozers and loaded trucks can cause perceptible vibration levels proximate receptors. The FTA guidelines of 80 VdB for sensitive land uses provide a substantiated basis for determining the relative significance of potential Project-related vibration impacts due to on-site operational and construction activities.

## 4 SIGNIFICANCE CRITERIA

The following significance criteria are based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

- A. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- B. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
- C. A substantial permanent increase in ambient noise levels in the Project vicinity above existing levels without the proposed Project; or
- D. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above noise levels existing without the proposed Project.
- E. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the Project area to excessive noise levels.
- F. For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

While the CEQA Guidelines and the City of Moreno Valley General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts under CEQA Guideline A, they do not define the levels at which increases are considered substantial for use under Guidelines B, C, and D. CEQA Guidelines E and F apply to nearby public and private airports, if any, and the Project's land use compatibility.

The Project site is not located within two miles of a public airport or within an airport land use plan; nor is the Project within the vicinity of a private airstrip. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant*, and no further noise analysis is conducted in relation to Guidelines E and F.

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels and the location of noise-sensitive receivers in order to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant*. (14)

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment.

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise (FICON) (15) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (i.e., CNEL) or energy average noise level (i.e.,  $L_{eq}$ ).

For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. According to the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. Table 4-1 below provides a summary of the potential noise impact significance criteria, based on guidance from FICON.

**TABLE 4-1: SIGNIFICANCE OF NOISE IMPACTS AT NOISE-SENSITIVE RECEIVERS**

| Without Project Noise Level | Potential Significant Impact |
|-----------------------------|------------------------------|
| < 60 dBA                    | 5 dBA or more                |
| 60 - 65 dBA                 | 3 dBA or more                |
| > 65 dBA                    | 1.5 dBA or more              |

Federal Interagency Committee on Noise (FICON), 1992.

## 4.1 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-2 shows the significance criteria summary matrix.

### OFF-SITE TRAFFIC NOISE

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):
  - are less than 60 dBA CNEL and the Project creates a *readily perceptible* 5 dBA CNEL or greater Project-related noise level increase; or
  - range from 60 to 65 dBA CNEL and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project-related noise level increase; or
  - already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL (FICON, 1992).

### ON-SITE TRAFFIC NOISE

- If the on-site traffic noise levels exceed the 70 dBA CNEL *normally unacceptable* land use compatibility criteria and interior noise levels exceed 45 dBA CNEL (Figure 2 of the OPR *General Plan Guidelines, Appendix C: Noise Element Guidelines*).

### OPERATIONAL NOISE

- If Project-related operational (stationary source) noise levels:
  - exceed the 60 dBA  $L_{eq}$  daytime or 55 dBA  $L_{eq}$  nighttime noise level standards at 200 feet from the property line of the noise source (City of Moreno Valley Municipal Code, Table 11.80.030-2); or
  - exceed the 60 dBA  $L_{eq}$  daytime or 55 dBA  $L_{eq}$  nighttime noise level standards at residential receivers in the City of Moreno Valley (City of Moreno Valley Municipal Code, Table 11.80.030-2).
- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
  - are less than 60 dBA  $L_{eq}$  and the Project creates a *readily perceptible* 5 dBA  $L_{eq}$  or greater Project-related noise level increase; or
  - range from 60 to 65 dBA  $L_{eq}$  and the Project creates a *barely perceptible* 3 dBA  $L_{eq}$  or greater Project-related noise level increase; or
  - already exceed 65 dBA  $L_{eq}$ , and the Project creates a community noise level increase of greater than 1.5 dBA  $L_{eq}$  (FICON, 1992).

### CONSTRUCTION NOISE AND VIBRATION

- If Project-related construction activities:
  - create noise levels at sensitive residential receivers in the City of Moreno Valley which exceed the short-term daytime construction noise level threshold of 60 dBA  $L_{eq}$  at noise-sensitive residential receiver locations or 65 dBA  $L_{eq}$  at non-noise-sensitive commercial receiver locations, or the continuous noise level limit of 90 dBA  $L_{eq}$  at any land use (based on the City of Moreno Valley Municipal Code, Table 11.80.030-2 noise level limits, and the Table 11.80.030-1 continuous noise level limits).



- If short-term project generated construction source vibration levels could exceed the FTA maximum acceptable vibration standard of 80 vibration decibels (VdB) at noise-sensitive receiver locations.

TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

| Analysis         | Receiving Land Use           | Condition(s)  | Significance Criteria                      |                        |
|------------------|------------------------------|---|--|------------------------|
|                  |                              |   | Daytime                                    | Nighttime              |
| Off-Site Traffic | Noise-Sensitive <sup>1</sup> | if ambient is < 60 dBA CNEL                               | ≥ 5 dBA CNEL Project increase              |                        |
|                  |                              | if ambient is 60 - 65 dBA CNEL                            | ≥ 3 dBA CNEL Project increase              |                        |
|                  |                              | if ambient is > 65 dBA CNEL                               | ≥ 1.5 dBA CNEL Project increase            |                        |
| On-Site Traffic  | Noise-Sensitive              | Exterior Noise Level Compatibility Criteria               | See Exhibit 3-A.                           |                        |
|                  |                              | Interior Noise Level Standard                             | 45 dBA CNEL                                |                        |
| Operational      | Noise-Sensitive              | At 200' from the property line of the source <sup>2</sup> | 60 dBA L <sub>eq</sub>                     | 55 dBA L <sub>eq</sub> |
|                  |                              | At residential land use <sup>2</sup>                      | 60 dBA L <sub>eq</sub>                     | 55 dBA L <sub>eq</sub> |
|                  |                              | if ambient is < 60 dBA L <sub>eq</sub> <sup>1</sup>       | ≥ 5 dBA L <sub>eq</sub> Project increase   |                        |
|                  |                              | if ambient is 60 - 65 dBA L <sub>eq</sub> <sup>1</sup>    | ≥ 3 dBA L <sub>eq</sub> Project increase   |                        |
|                  |                              | if ambient is > 65 dBA L <sub>eq</sub> <sup>1</sup>       | ≥ 1.5 dBA L <sub>eq</sub> Project increase |                        |
|                  |                              | Vibration Level Threshold <sup>3</sup>                    | 80 VdB                                     | n/a                    |
| Construction     | Noise-Sensitive              | At residential land use <sup>2</sup>                      | 60 dBA L <sub>eq</sub>                     | n/a                    |
|                  |                              | At commercial land use <sup>2</sup>                       | 65 dBA L <sub>eq</sub>                     | n/a                    |
|                  |                              | At any land use   | 90 dBA L <sub>eq</sub>                     | n/a                    |
|                  |                              | Vibration Level Threshold <sup>3</sup>                    | 80 VdB                                     | n/a                    |

<sup>1</sup> Source: FICON, 1992.

<sup>2</sup> Source: City of Moreno Valley Municipal Code, Chapter 11.80 Noise Regulation (Appendix 3.1).

<sup>3</sup> Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

"Daytime" = 8:00 a.m. - 10:00 p.m.; "Nighttime" = 10:01 p.m. - 7:59 a.m.

## 5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, four 24-hour noise level measurements were taken at potential receiver locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, August 15<sup>th</sup>, 2018. Appendix 5.1 includes study area photos.

### 5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (16)

### 5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources.* (7) Further, FTA guidance states, *that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community.* (12)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (12) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby

sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

### 5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels ( $L_{eq}$ ). The equivalent sound level ( $L_{eq}$ ) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (8:00 a.m. to 10:00 p.m.) and nighttime (10:01 p.m. to 7:59 a.m.) noise levels at each noise level measurement location consistent with the City of Moreno Valley Municipal Code. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels adjacent to the Project site boundaries on Quarter Horse Road near Lasselle Elementary School. The noise level measurements collected show an overall 24-hour exterior noise level of 58.2 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 53.1 dBA  $L_{eq}$  with an average nighttime noise level of 52.5 dBA  $L_{eq}$ .
- Location L2 represents the noise levels south of the Project site across Krameria Avenue near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 62.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 58.1 dBA  $L_{eq}$  with an average nighttime noise level of 57.4 dBA  $L_{eq}$ .
- Location L3 represents the noise levels southwest of the Project site on Krameria Avenue, adjacent to existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 64.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 61.0 dBA  $L_{eq}$  with an average nighttime noise level of 58.9 dBA  $L_{eq}$ .
- Location L4 represents the noise levels west of the Project site across Lasselle Street near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 72.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 68.4 dBA  $L_{eq}$  with an average nighttime noise level of 64.9 dBA  $L_{eq}$ .

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum,  $L_1$ ,  $L_2$ ,  $L_5$ ,  $L_8$ ,  $L_{25}$ ,  $L_{50}$ ,  $L_{90}$ ,  $L_{95}$ , and  $L_{99}$  percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network. This includes the auto and heavy truck activities near the noise level measurement locations. The 24-hour existing noise level measurements are shown on Table 5-1.

TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

| Location <sup>1</sup> | Distance to Project Boundary (Feet) | Description  | Energy Average Noise Level (dBA L <sub>eq</sub> ) <sup>2</sup> |           | CNEL |
|-----------------------|-------------------------------------|--|--|-----------|------|
|                       |                                     |  | Daytime  | Nighttime |      |
| L1                    | 0'                                  | Located adjacent to the Project site boundaries on Quarter Horse Road near Lasselle Elementary School. | 53.1   | 52.5      | 58.2 |
| L2                    | 85'                                 | Located south of the Project site across Krameria Avenue near existing residential homes.              | 58.1   | 57.4      | 62.5 |
| L3                    | 90'                                 | Located southwest of the Project site on Krameria Avenue, adjacent to existing residential homes.      | 61.0   | 58.9      | 64.5 |
| L4                    | 125'                                | Located west of the Project site across Lasselle Street near existing residential homes.               | 68.4   | 64.9      | 72.5 |

<sup>1</sup> See Exhibit 5-A for the noise level measurement locations.

<sup>2</sup> Energy (logarithmic) average hourly levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2. "Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.



EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



LEGEND:

▲ Noise Measurement Locations

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

## 6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment.

### 6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (17) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (18) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

#### 6.1.1 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 11 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Moreno Valley General Plan Circulation Element, and the posted vehicle speeds. For this analysis, soft site conditions are used to analyze the traffic noise impacts within the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Caltrans' research has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model as used in this off-site traffic noise analysis. (19)

The Existing, Opening Year 2023, and Horizon Year 2040 average daily traffic volumes used for this study are presented on Table 6-2 and are provided by *Continental Villages Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (2) Table 6-3 presents the time of day vehicle splits and Table 6-4 presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

| ID | Roadway      | Segment          | Adjacent Land Use <sup>1</sup> | Distance From Centerline To Nearest Adjacent Land Use (Feet) <sup>2</sup> | Vehicle Speed (mph) <sup>3</sup> |
|----|--------------|------------------|--------------------------------|---|----------------------------------|
| 1  | Kitching St. | n/o Krameria Av. | Residential                    | 44'   | 45                               |
| 2  | Lasselle St. | n/o Iris Av.     | Residential/Commercial         | 50'   | 50                               |
| 3  | Lasselle St. | s/o Iris Av.     | Residential                    | 50'   | 45                               |
| 4  | Lasselle St. | s/o Cahuilla Dr. | Residential                    | 50'   | 50                               |
| 5  | Lasselle St. | s/o Krameria Av. | Residential                    | 50'   | 50                               |
| 6  | Iris Av.     | w/o Lasselle St. | Residential/Commercial         | 67'   | 50                               |
| 7  | Iris Av.     | e/o Lasselle St. | Residential/Commercial         | 67'   | 50                               |
| 8  | Krameria Av. | w/o Kitching St. | Residential                    | 44'   | 35                               |
| 9  | Krameria Av. | e/o Kitching St. | Residential                    | 44'   | 35                               |
| 10 | Krameria Av. | e/o Lasselle St. | Residential                    | 44'   | 35                               |
| 11 | Krameria Av. | e/o Colt Wy.     | Residential                    | 44'   | 35                               |

<sup>1</sup> Source: Google Earth aerial imagery and the City of Moreno Valley General Plan Land Use Map.

<sup>2</sup> Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Element.

<sup>3</sup> Source: Continental Villages Traffic Impact Analysis prepared by Urban Crossroads, Inc.

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

| ID | Roadway      | Segment          | Average Daily Traffic (1,000's) <sup>1</sup> |              |                   |              |                   |              |
|----|--------------|------------------|--|--------------|-------------------|--------------|-------------------|--------------|
|    |              |                  | Existing                                     |              | Opening Year 2023 |              | Horizon Year 2040 |              |
|    |              |                  | Without Project                              | With Project | Without Project   | With Project | Without Project   | With Project |
| 1  | Kitching St. | n/o Krameria Av. | 6.9  | 7.1          | 7.7               | 7.9          | 20.0              | 20.2         |
| 2  | Lasselle St. | n/o Iris Av.     | 25.7   | 26.0         | 32.1              | 32.4         | 35.3              | 35.7         |
| 3  | Lasselle St. | s/o Iris Av.     | 32.1   | 33.0         | 37.7              | 38.6         | 41.4              | 42.4         |
| 4  | Lasselle St. | s/o Cahuilla Dr. | 25.4   | 26.3         | 29.8              | 30.6         | 32.7              | 33.6         |
| 5  | Lasselle St. | s/o Krameria Av. | 31.9   | 32.4         | 36.6              | 37.1         | 40.2              | 40.7         |
| 6  | Iris Av.     | w/o Lasselle St. | 26.1   | 26.4         | 31.1              | 31.4         | 34.2              | 34.5         |
| 7  | Iris Av.     | e/o Lasselle St. | 33.1   | 33.4         | 42.1              | 42.4         | 46.3              | 46.6         |
| 8  | Krameria Av. | w/o Kitching St. | 9.8  | 10.1         | 12.4              | 12.6         | 13.6              | 13.9         |
| 9  | Krameria Av. | e/o Kitching St. | 9.2  | 9.9          | 11.7              | 12.3         | 12.9              | 13.5         |
| 10 | Krameria Av. | e/o Lasselle St. | 5.6  | 6.8          | 6.7               | 7.9          | 7.3               | 8.5          |
| 11 | Krameria Av. | e/o Colt Wy.     | 4.3  | 4.5          | 5.0               | 5.2          | 5.5               | 5.7          |

<sup>1</sup> Source: Continental Villages Traffic Impact Analysis prepared by Urban Crossroads, Inc.

**TABLE 6-3: TIME OF DAY VEHICLE SPLITS**

| Vehicle Type  | Time of Day Splits <sup>1</sup> |         |           | Total of Time of Day Splits |
|---------------|---------------------------------|---------|-----------|-----------------------------|
|               | Daytime                         | Evening | Nighttime |                             |
| Autos         | 77.50%                          | 12.90%  | 9.60%     | 100.00%                     |
| Medium Trucks | 84.80%                          | 4.90%   | 10.30%    | 100.00%                     |
| Heavy Trucks  | 86.50%                          | 2.70%   | 10.80%    | 100.00%                     |

<sup>1</sup> Source: Typical Southern California vehicle mix.

"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

**TABLE 6-4: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)**

| Classification            | Total % Traffic Flow |               |              | Total   |
|---------------------------|----------------------|---------------|--------------|---------|
|                           | Autos                | Medium Trucks | Heavy Trucks |         |
| All Roadways <sup>1</sup> | 97.42%               | 1.84%         | 0.74%        | 100.00% |

<sup>1</sup> Source: Typical Southern California vehicle mix.

### 6.1.2 ON-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

The on-site roadway parameters including the ADT volumes used for this analysis are presented on Table 6-5. Based on the City of Moreno Valley General Plan Environmental Impact Report, Lasselle Street is classified as a 4-lane Arterial, and Krameria Avenue is classified as a 4-lane Minor Arterial. (20) To predict the future on-site noise environment at the Project site, Horizon Year 2040 with Project ADT volumes were obtained from the *Traffic Impact Analysis*. The traffic volumes shown on Table 6-1 reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify potential mitigation measures (if any) that address the worst-case future conditions. For the purposes of this analysis, soft site conditions were used to analyze the on-site traffic noise impacts for the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (19)

As previously described, Table 6-3 presents the time of day vehicle splits and Table 6-4 presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.



TABLE 6-5: ON-SITE ROADWAY PARAMETERS

| Roadway      | Lanes | Classification <sup>1</sup> | Design Capacity Volume <sup>2</sup> | Speed Limit (mph) <sup>2</sup> | Site Conditions |
|--------------|-------|-----------------------------|-------------------------------------|--------------------------------|-----------------|
| Lasselle St. | 4     | Arterial                    | 33,800                              | 50                             | Soft            |
| Krameria Av. | 4     | Minor Arterial              | 5,700                               | 35                             | Soft            |

<sup>1</sup> Source: City of Moreno Valley General Plan Environmental Impact Report, Section 5.2 Traffic/Circulation, Tables 5.2-5 to 5.2-7.

<sup>2</sup> Horizon Year 2040 with Project Traffic Volumes (Exhibit 7-2) from the Continental Villages Traffic Impact Analysis prepared by Urban Crossroads, Inc.

To predict the future noise environment at the residential buildings within the Project site, coordinate information was collected to identify the noise transmission path between the noise source and receiver. The coordinate information is based on the Project site plan showing the plotting of the building in relationship to Lasselle Street and Krameria Avenue. The exterior noise level impacts at the first-floor building facade were placed five feet above the pad elevation, with second-floor receiver locations at 14 feet.

## 6.2 VIBRATION ASSESSMENT

This analysis focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 6-6. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation:  $L_{VdB}(D) = L_{VdB}(25 \text{ ft}) - 30\log(D/25)$

**TABLE 6-6: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT**

| Equipment       | Vibration Decibels (VdB)<br>at 25 feet <sup>1</sup> |
|-----------------|---|
| Small bulldozer | 58  |
| Jackhammer      | 79  |
| Loaded Trucks   | 86  |
| Large bulldozer | 87  |

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

## 7 OFF-SITE TRAFFIC NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *Continental Villages Traffic Impact Analysis*. (2) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

- Existing Conditions Without / With Project: This scenario refers to the existing present-day noise conditions without and with the proposed Project.
- Opening Year 2023 Without / With Buildout of the Project: This scenario refers to Year 2023 noise conditions without and with Buildout of the proposed Project. This scenario includes all cumulative projects identified in the *Traffic Impact Analysis*.
- Horizon Year 2040 Without / With Project: This scenario refers to the background noise conditions at future Year 2040 without and with the proposed Project. This scenario corresponds to 2040 conditions, and includes all cumulative projects identified in the *Traffic Impact Analysis*.

### 7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 and 7-6 present a summary of the exterior traffic noise levels, without barrier attenuation, for the study area roadway segments analyzed from the without Project to the with Project conditions under Existing, Opening Year 2023, and Horizon Year 2040 conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.



TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

| ID | Road         | Segment          | Adjacent Land Use <sup>1</sup> | CNEL at Nearest Adjacent Land Use (dBA) <sup>2</sup> | Distance to Contour from Centerline (Feet) |             |             |
|----|--------------|------------------|--------------------------------|--|--|-------------|-------------|
|    |              |                  |                                |  | 70 dBA CNEL                                | 65 dBA CNEL | 60 dBA CNEL |
| 1  | Kitching St. | n/o Krameria Av. | Residential                    | 66.9   | RW   | 59          | 127         |
| 2  | Lasselle St. | n/o Iris Av.     | Residential/Commercial         | 72.5   | 74   | 159         | 343         |
| 3  | Lasselle St. | s/o Iris Av.     | Residential                    | 72.4   | 72   | 155         | 333         |
| 4  | Lasselle St. | s/o Cahuilla Dr. | Residential                    | 72.5   | 73   | 158         | 340         |
| 5  | Lasselle St. | s/o Krameria Av. | Residential                    | 73.5   | 85   | 184         | 396         |
| 6  | Iris Av.     | w/o Lasselle St. | Residential/Commercial         | 71.4   | 83   | 179         | 385         |
| 7  | Iris Av.     | e/o Lasselle St. | Residential/Commercial         | 72.4   | 97   | 209         | 451         |
| 8  | Krameria Av. | w/o Kitching St. | Residential                    | 65.7   | RW   | 49          | 106         |
| 9  | Krameria Av. | e/o Kitching St. | Residential                    | 65.5   | RW   | 47          | 102         |
| 10 | Krameria Av. | e/o Lasselle St. | Residential                    | 63.3   | RW   | RW          | 73          |
| 11 | Krameria Av. | e/o Colt Wy.     | Residential                    | 62.2   | RW   | RW          | 61          |

<sup>1</sup> Source: Google Earth aerial imagery and the City of Moreno Valley General Plan Land Use Map.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

| ID | Road         | Segment          | Adjacent Land Use <sup>1</sup> | CNEL at Nearest Adjacent Land Use (dBA) <sup>2</sup> | Distance to Contour from Centerline (Feet) |             |             |
|----|--------------|------------------|--------------------------------|--|--|-------------|-------------|
|    |              |                  |                                |  | 70 dBA CNEL                                | 65 dBA CNEL | 60 dBA CNEL |
| 1  | Kitching St. | n/o Krameria Av. | Residential                    | 67.0   | RW   | 60          | 130         |
| 2  | Lasselle St. | n/o Iris Av.     | Residential/Commercial         | 72.6   | 74   | 160         | 345         |
| 3  | Lasselle St. | s/o Iris Av.     | Residential                    | 72.5   | 73   | 158         | 339         |
| 4  | Lasselle St. | s/o Cahuilla Dr. | Residential                    | 72.6   | 75   | 162         | 348         |
| 5  | Lasselle St. | s/o Krameria Av. | Residential                    | 73.5   | 86   | 186         | 400         |
| 6  | Iris Av.     | w/o Lasselle St. | Residential/Commercial         | 71.4   | 84   | 180         | 388         |
| 7  | Iris Av.     | e/o Lasselle St. | Residential/Commercial         | 72.5   | 98   | 210         | 453         |
| 8  | Krameria Av. | w/o Kitching St. | Residential                    | 65.9   | RW   | 50          | 108         |
| 9  | Krameria Av. | e/o Kitching St. | Residential                    | 65.8   | RW   | 50          | 107         |
| 10 | Krameria Av. | e/o Lasselle St. | Residential                    | 64.2   | RW   | RW          | 83          |
| 11 | Krameria Av. | e/o Colt Wy.     | Residential                    | 62.4   | RW   | RW          | 63          |

<sup>1</sup> Source: Google Earth aerial imagery and the City of Moreno Valley General Plan Land Use Map.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: OPENING YEAR 2023 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

| ID | Road         | Segment          | Adjacent Land Use <sup>1</sup> | CNEL at Nearest Adjacent Land Use (dBA) <sup>2</sup> | Distance to Contour from Centerline (Feet) |             |             |
|----|--------------|------------------|--------------------------------|--|--|-------------|-------------|
|    |              |                  |                                |  | 70 dBA CNEL                                | 65 dBA CNEL | 60 dBA CNEL |
| 1  | Kitching St. | n/o Krameria Av. | Residential                    | 67.4   | RW   | 63          | 137         |
| 2  | Lasselle St. | n/o Iris Av.     | Residential/Commercial         | 73.5   | 86   | 184         | 397         |
| 3  | Lasselle St. | s/o Iris Av.     | Residential                    | 73.1   | 80   | 172         | 371         |
| 4  | Lasselle St. | s/o Cahuilla Dr. | Residential                    | 73.2   | 81   | 176         | 378         |
| 5  | Lasselle St. | s/o Krameria Av. | Residential                    | 74.1   | 93   | 201         | 434         |
| 6  | Iris Av.     | w/o Lasselle St. | Residential/Commercial         | 72.1   | 93   | 201         | 432         |
| 7  | Iris Av.     | e/o Lasselle St. | Residential/Commercial         | 73.5   | 114  | 246         | 529         |
| 8  | Krameria Av. | w/o Kitching St. | Residential                    | 66.8   | RW   | 58          | 124         |
| 9  | Krameria Av. | e/o Kitching St. | Residential                    | 66.5   | RW   | 56          | 120         |
| 10 | Krameria Av. | e/o Lasselle St. | Residential                    | 64.1   | RW   | RW          | 83          |
| 11 | Krameria Av. | e/o Colt Wy.     | Residential                    | 62.8   | RW   | RW          | 68          |

<sup>1</sup> Source: Google Earth aerial imagery and the City of Moreno Valley General Plan Land Use Map.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-4: OPENING YEAR 2023 WITH PROJECT CONDITIONS NOISE CONTOURS

| ID | Road         | Segment          | Adjacent Land Use <sup>1</sup> | CNEL at Nearest Adjacent Land Use (dBA) <sup>2</sup> | Distance to Contour from Centerline (Feet) |             |             |
|----|--------------|------------------|--------------------------------|--|--|-------------|-------------|
|    |              |                  |                                |  | 70 dBA CNEL                                | 65 dBA CNEL | 60 dBA CNEL |
| 1  | Kitching St. | n/o Krameria Av. | Residential                    | 67.5   | RW   | 65          | 139         |
| 2  | Lasselle St. | n/o Iris Av.     | Residential/Commercial         | 73.5   | 86   | 186         | 400         |
| 3  | Lasselle St. | s/o Iris Av.     | Residential                    | 73.2   | 81   | 175         | 377         |
| 4  | Lasselle St. | s/o Cahuilla Dr. | Residential                    | 73.3   | 83   | 179         | 385         |
| 5  | Lasselle St. | s/o Krameria Av. | Residential                    | 74.1   | 94   | 203         | 438         |
| 6  | Iris Av.     | w/o Lasselle St. | Residential/Commercial         | 72.2   | 94   | 202         | 435         |
| 7  | Iris Av.     | e/o Lasselle St. | Residential/Commercial         | 73.5   | 115  | 247         | 532         |
| 8  | Krameria Av. | w/o Kitching St. | Residential                    | 66.8   | RW   | 58          | 126         |
| 9  | Krameria Av. | e/o Kitching St. | Residential                    | 66.7   | RW   | 57          | 124         |
| 10 | Krameria Av. | e/o Lasselle St. | Residential                    | 64.8   | RW   | RW          | 92          |
| 11 | Krameria Av. | e/o Colt Wy.     | Residential                    | 63.0   | RW   | RW          | 70          |

<sup>1</sup> Source: Google Earth aerial imagery and the City of Moreno Valley General Plan Land Use Map.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.



TABLE 7-5: HORIZON YEAR 2040 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

| ID | Road         | Segment          | Adjacent Land Use <sup>1</sup> | CNEL at Nearest Adjacent Land Use (dBA) <sup>2</sup> | Distance to Contour from Centerline (Feet) |             |             |
|----|--------------|------------------|--------------------------------|--|--|-------------|-------------|
|    |              |                  |                                |  | 70 dBA CNEL                                | 65 dBA CNEL | 60 dBA CNEL |
| 1  | Kitching St. | n/o Krameria Av. | Residential                    | 71.5   | 56   | 120         | 258         |
| 2  | Lasselle St. | n/o Iris Av.     | Residential/Commercial         | 73.9   | 91   | 197         | 423         |
| 3  | Lasselle St. | s/o Iris Av.     | Residential                    | 73.5   | 85   | 183         | 395         |
| 4  | Lasselle St. | s/o Cahuilla Dr. | Residential                    | 73.6   | 87   | 187         | 402         |
| 5  | Lasselle St. | s/o Krameria Av. | Residential                    | 74.5   | 99   | 214         | 462         |
| 6  | Iris Av.     | w/o Lasselle St. | Residential/Commercial         | 72.6   | 99   | 214         | 461         |
| 7  | Iris Av.     | e/o Lasselle St. | Residential/Commercial         | 73.9   | 121  | 262         | 564         |
| 8  | Krameria Av. | w/o Kitching St. | Residential                    | 67.2   | RW   | 61          | 132         |
| 9  | Krameria Av. | e/o Kitching St. | Residential                    | 66.9   | RW   | 59          | 128         |
| 10 | Krameria Av. | e/o Lasselle St. | Residential                    | 64.5   | RW   | RW          | 87          |
| 11 | Krameria Av. | e/o Colt Wy.     | Residential                    | 63.2   | RW   | RW          | 72          |

<sup>1</sup> Source: Google Earth aerial imagery and the City of Moreno Valley General Plan Land Use Map.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-6: HORIZON YEAR 2040 WITH PROJECT CONDITIONS NOISE CONTOURS

| ID | Road         | Segment          | Adjacent Land Use <sup>1</sup> | CNEL at Nearest Adjacent Land Use (dBA) <sup>2</sup> | Distance to Contour from Centerline (Feet) |             |             |
|----|--------------|------------------|--------------------------------|--|--|-------------|-------------|
|    |              |                  |                                |  | 70 dBA CNEL                                | 65 dBA CNEL | 60 dBA CNEL |
| 1  | Kitching St. | n/o Krameria Av. | Residential                    | 71.6   | 56   | 121         | 260         |
| 2  | Lasselle St. | n/o Iris Av.     | Residential/Commercial         | 74.0   | 92   | 198         | 427         |
| 3  | Lasselle St. | s/o Iris Av.     | Residential                    | 73.6   | 86   | 186         | 401         |
| 4  | Lasselle St. | s/o Cahuilla Dr. | Residential                    | 73.7   | 88   | 190         | 410         |
| 5  | Lasselle St. | s/o Krameria Av. | Residential                    | 74.5   | 100  | 216         | 466         |
| 6  | Iris Av.     | w/o Lasselle St. | Residential/Commercial         | 72.6   | 100  | 215         | 463         |
| 7  | Iris Av.     | e/o Lasselle St. | Residential/Commercial         | 73.9   | 122  | 263         | 566         |
| 8  | Krameria Av. | w/o Kitching St. | Residential                    | 67.3   | RW   | 62          | 134         |
| 9  | Krameria Av. | e/o Kitching St. | Residential                    | 67.1   | RW   | 61          | 132         |
| 10 | Krameria Av. | e/o Lasselle St. | Residential                    | 65.1   | RW   | 45          | 97          |
| 11 | Krameria Av. | e/o Colt Wy.     | Residential                    | 63.4   | RW   | RW          | 74          |

<sup>1</sup> Source: Google Earth aerial imagery and the City of Moreno Valley General Plan Land Use Map.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

## 7.2 EXISTING CONDITION PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-1 presents the Existing without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 62.2 to 73.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions will range from 62.4 to 73.5 dBA CNEL. As shown on Table 7-7 the Project will generate a noise level increase of up to 0.8 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Existing with Project conditions at the land uses adjacent to roadways conveying Project traffic.

**TABLE 7-7: EXISTING CONDITION OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS**

| ID | Road         | Segment          | Adjacent Land Use <sup>1</sup> | CNEL at Adjacent Land Use (dBA) <sup>2</sup> |              |                  | Threshold Exceeded? <sup>3</sup> |
|----|--------------|------------------|--------------------------------|--|--------------|------------------|----------------------------------|
|    |              |                  |                                | No Project                                   | With Project | Project Addition |                                  |
| 1  | Kitching St. | n/o Krameria Av. | Residential                    | 66.9   | 67.0         | 0.1              | No                               |
| 2  | Lasselle St. | n/o Iris Av.     | Residential/Commercial         | 72.5   | 72.6         | 0.1              | No                               |
| 3  | Lasselle St. | s/o Iris Av.     | Residential                    | 72.4   | 72.5         | 0.1              | No                               |
| 4  | Lasselle St. | s/o Cahuilla Dr. | Residential                    | 72.5   | 72.6         | 0.2              | No                               |
| 5  | Lasselle St. | s/o Krameria Av. | Residential                    | 73.5   | 73.5         | 0.1              | No                               |
| 6  | Iris Av.     | w/o Lasselle St. | Residential/Commercial         | 71.4   | 71.4         | 0.0              | No                               |
| 7  | Iris Av.     | e/o Lasselle St. | Residential/Commercial         | 72.4   | 72.5         | 0.0              | No                               |
| 8  | Krameria Av. | w/o Kitching St. | Residential                    | 65.7   | 65.9         | 0.1              | No                               |
| 9  | Krameria Av. | e/o Kitching St. | Residential                    | 65.5   | 65.8         | 0.3              | No                               |
| 10 | Krameria Av. | e/o Lasselle St. | Residential                    | 63.3   | 64.2         | 0.8              | No                               |
| 11 | Krameria Av. | e/o Colt Wy.     | Residential                    | 62.2   | 62.4         | 0.2              | No                               |

<sup>1</sup> Source: Google Earth aerial imagery and the City of Moreno Valley General Plan Land Use Map.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

<sup>3</sup> Significance Criteria (Section 4).

### 7.3 OPENING YEAR 2023 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-3 presents the Opening Year 2023 without Project conditions CNEL noise levels which are expected to range from 62.8 to 74.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows the Opening Year 2023 with Project conditions will range from 63.0 to 74.1 dBA CNEL. As shown on Table 7-8 the Project will generate a noise level increase of up to 0.7 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Opening Year 2023 with Project conditions at the land uses adjacent to roadways conveying Project traffic.

**TABLE 7-8: OPENING YEAR 2023 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS**

| ID | Road         | Segment          | Adjacent Land Use <sup>1</sup> | CNEL at Adjacent Land Use (dBA) <sup>1</sup> |              |                  | Threshold Exceeded? <sup>2</sup> |
|----|--------------|------------------|--------------------------------|--|--------------|------------------|----------------------------------|
|    |              |                  |                                | No Project                                   | With Project | Project Addition |                                  |
| 1  | Kitching St. | n/o Krameria Av. | Residential                    | 67.4   | 67.5         | 0.1              | No                               |
| 2  | Lasselle St. | n/o Iris Av.     | Residential/Commercial         | 73.5   | 73.5         | 0.0              | No                               |
| 3  | Lasselle St. | s/o Iris Av.     | Residential                    | 73.1   | 73.2         | 0.1              | No                               |
| 4  | Lasselle St. | s/o Cahuilla Dr. | Residential                    | 73.2   | 73.3         | 0.1              | No                               |
| 5  | Lasselle St. | s/o Krameria Av. | Residential                    | 74.1   | 74.1         | 0.1              | No                               |
| 6  | Iris Av.     | w/o Lasselle St. | Residential/Commercial         | 72.1   | 72.2         | 0.0              | No                               |
| 7  | Iris Av.     | e/o Lasselle St. | Residential/Commercial         | 73.5   | 73.5         | 0.0              | No                               |
| 8  | Krameria Av. | w/o Kitching St. | Residential                    | 66.8   | 66.8         | 0.1              | No                               |
| 9  | Krameria Av. | e/o Kitching St. | Residential                    | 66.5   | 66.7         | 0.2              | No                               |
| 10 | Krameria Av. | e/o Lasselle St. | Residential                    | 64.1   | 64.8         | 0.7              | No                               |
| 11 | Krameria Av. | e/o Colt Wy.     | Residential                    | 62.8   | 63.0         | 0.2              | No                               |

<sup>1</sup> Source: Google Earth aerial imagery and the City of Moreno Valley General Plan Land Use Map.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

<sup>3</sup> Significance Criteria (Section 4).



## 7.4 HORIZON YEAR 2040 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-5 presents the Horizon Year 2040 without Project conditions CNEL noise levels are expected to range from 63.2 to 74.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows the Horizon Year 2040 with Project conditions will range from 63.4 to 74.5 dBA CNEL. As shown on Table 7-9 the Project will generate a noise level increase of up to 0.7 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Horizon Year 2040 with Project conditions at the land uses adjacent to roadways conveying Project traffic.

**TABLE 7-9: HORIZON YEAR 2040 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS**

| ID | Road         | Segment          | Adjacent Land Use <sup>1</sup> | CNEL at Adjacent Land Use (dBA) <sup>1</sup> |              |                  | Threshold Exceeded? <sup>2</sup> |
|----|--------------|------------------|--------------------------------|--|--------------|------------------|----------------------------------|
|    |              |                  |                                | No Project                                   | With Project | Project Addition |                                  |
| 1  | Kitching St. | n/o Krameria Av. | Residential                    | 71.5   | 71.6         | 0.0              | No                               |
| 2  | Lasselle St. | n/o Iris Av.     | Residential/Commercial         | 73.9   | 74.0         | 0.0              | No                               |
| 3  | Lasselle St. | s/o Iris Av.     | Residential                    | 73.5   | 73.6         | 0.1              | No                               |
| 4  | Lasselle St. | s/o Cahuilla Dr. | Residential                    | 73.6   | 73.7         | 0.1              | No                               |
| 5  | Lasselle St. | s/o Krameria Av. | Residential                    | 74.5   | 74.5         | 0.1              | No                               |
| 6  | Iris Av.     | w/o Lasselle St. | Residential/Commercial         | 72.6   | 72.6         | 0.0              | No                               |
| 7  | Iris Av.     | e/o Lasselle St. | Residential/Commercial         | 73.9   | 73.9         | 0.0              | No                               |
| 8  | Krameria Av. | w/o Kitching St. | Residential                    | 67.2   | 67.3         | 0.1              | No                               |
| 9  | Krameria Av. | e/o Kitching St. | Residential                    | 66.9   | 67.1         | 0.2              | No                               |
| 10 | Krameria Av. | e/o Lasselle St. | Residential                    | 64.5   | 65.1         | 0.7              | No                               |
| 11 | Krameria Av. | e/o Colt Wy.     | Residential                    | 63.2   | 63.4         | 0.2              | No                               |

<sup>1</sup> Source: Google Earth aerial imagery and the City of Moreno Valley General Plan Land Use Map.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

<sup>3</sup> Significance Criteria (Section 4).

## 8 ON-SITE TRAFFIC NOISE IMPACTS

A noise impact analysis has been completed to determine the noise exposure levels that would result from off-site traffic noise sources, and to identify potential noise mitigation measures that would achieve acceptable Project exterior and interior noise levels. The primary source of traffic noise affecting the Project site is anticipated to be from Lasselle Street and Krameria Avenue. The Project will also experience some background traffic noise impacts from the Project's internal parking lot, however, due to the lower traffic volume and speeds of vehicles transiting on these roadways, traffic noise from these roadways will not make a significant contribution to the noise environment at the Project site.

### 8.1 EXTERIOR NOISE ANALYSIS

Using the FHWA traffic noise prediction model, and the parameters outlined in Section 6, the expected future exterior noise levels are calculated at the building façades. Table 8-1 presents a summary of future exterior noise levels at the first-floor receiver locations. The on-site traffic noise level analysis indicates that the unmitigated exterior noise levels will approach 59.8 dBA CNEL. The on-site traffic noise analysis calculations are provided in Appendix 8.1.

As shown on Table 8-1, future unmitigated on-site traffic noise levels are shown to approach 59.8 dBA CNEL and represent *normally acceptable* exterior noise levels for residential land use. (13) Therefore, no exterior noise mitigation is required. Further, Project interior noise levels are analyzed herein to identify the necessary interior noise reduction measures, if any, to satisfy the City of Moreno Valley General Plan Noise Element 45 dBA CNEL interior noise level standard.

**TABLE 8-1: UNMITIGATED EXTERIOR TRAFFIC NOISE LEVELS**

| Building        | Roadway      | Unmitigated Noise Level (dBA CNEL) | Threshold (dBA CNEL) | Land Use Compatibility     |
|-----------------|--------------|------------------------------------|----------------------|----------------------------|
| West Buildings  | Lasselle St. | 58.2                               | < 65 dBA CNEL        | <i>Normally Acceptable</i> |
| South Buildings | Krameria Av. | 59.3                               | < 65 dBA CNEL        | <i>Normally Acceptable</i> |
| East Buildings  | Krameria Av. | 59.8                               | < 65 dBA CNEL        | <i>Normally Acceptable</i> |

## 8.2 INTERIOR NOISE ANALYSIS

To ensure that the interior noise levels comply with the City of Moreno Valley interior noise level standards, future noise levels were calculated at the first and second-floor building façades.

### 8.2.1 NOISE REDUCTION METHODOLOGY

The interior noise level is the difference between the predicted exterior noise level at the building facade and the noise reduction of the structure. Typical building construction will provide a Noise Reduction (NR) of approximately 12 dBA with "windows open" and a minimum 25 dBA noise reduction with "windows closed." (9; 21) However, sound leaks, cracks and openings within the window assembly can greatly diminish its effectiveness in reducing noise. Several methods are used to improve interior noise reduction, including: (1) weather-stripped solid core exterior doors; (2) upgraded dual glazed windows; (3) mechanical ventilation/air conditioning; and (4) exterior wall/roof assemblies free of cut outs or openings.

### 8.2.2 INTERIOR NOISE LEVEL ASSESSMENT

Tables 8-2 and 8-3 show that units within the Project buildings will require a windows-closed condition and a means of mechanical ventilation (e.g. air conditioning). Table 8-2 shows that the future exterior noise levels at the first-floor building façade are expected to approach 59.8 dBA CNEL. The first-floor interior noise level analysis shows that the City of Moreno Valley 45 dBA CNEL interior noise level standard can be satisfied using standard windows and sliding glass doors with minimum STC ratings of 27. Table 8-3 shows that the future exterior noise levels at the second-floor building façade are expected to approach 59.7 dBA CNEL. The second-floor interior noise level analysis shows that the City of Moreno Valley 45 dBA CNEL interior noise level standard can be satisfied using standard windows and sliding glass doors with minimum STC ratings of 27.

**TABLE 8-2: FIRST-FLOOR INTERIOR NOISE IMPACTS (CNEL)**

| Building        | Roadway      | Noise Level at Façade <sup>1</sup> | Required Interior NR <sup>2</sup> | Estimated Interior NR <sup>3</sup> | Upgraded Windows <sup>4</sup> | Interior Noise Level <sup>5</sup> | Threshold | Threshold Exceeded? |
|-----------------|--------------|------------------------------------|-----------------------------------|------------------------------------|-------------------------------|-----------------------------------|-----------|---------------------|
| West Buildings  | Lasselle St. | 58.2                               | 13.2                              | 25                                 | No                            | 33.2                              | 45        | No                  |
| South Buildings | Krameria Av. | 59.3                               | 14.3                              | 25                                 | No                            | 34.3                              | 45        | No                  |
| East Buildings  | Krameria Av. | 59.8                               | 14.8                              | 25                                 | No                            | 34.8                              | 45        | No                  |

<sup>1</sup> Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).

<sup>2</sup> Noise reduction to satisfy the interior noise standard of 45 dBA CNEL.

<sup>3</sup> Minimum interior noise reduction with standard building construction.

<sup>4</sup> Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?

<sup>5</sup> Estimated interior noise level with minimum STC rating for all windows.

"NR" = Noise Reduction

TABLE 8-3: SECOND-FLOOR INTERIOR NOISE IMPACTS (CNEL)

| Building        | Roadway      | Noise Level at Façade <sup>1</sup> | Required Interior NR <sup>2</sup> | Estimated Interior NR <sup>3</sup> | Upgraded Windows <sup>4</sup> | Interior Noise Level <sup>5</sup> | Threshold | Threshold Exceeded? |
|-----------------|--------------|------------------------------------|-----------------------------------|------------------------------------|-------------------------------|-----------------------------------|-----------|---------------------|
| West Buildings  | Lasselle St. | 58.2                               | 13.2                              | 25                                 | No                            | 33.2                              | 45        | No                  |
| South Buildings | Krameria Av. | 59.2                               | 14.2                              | 25                                 | No                            | 34.2                              | 45        | No                  |
| East Buildings  | Krameria Av. | 59.7                               | 14.7                              | 25                                 | No                            | 34.7                              | 45        | No                  |

<sup>1</sup> Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).

<sup>2</sup> Noise reduction to satisfy the interior noise standard of 45 dBA CNEL.

<sup>3</sup> Minimum interior noise reduction with standard building construction.

<sup>4</sup> Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?

<sup>5</sup> Estimated interior noise level with minimum STC rating for all windows.

"NR" = Noise Reduction



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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

## 9 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following six receiver locations, as shown on Exhibit 9-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Noise-sensitive receivers near the Project site include existing residential homes, Lasselle Elementary School, and future residential homes currently under construction, as described below. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

- R1: Located approximately 202 feet north of the Project site, R1 represents an existing baseball diamond and bleachers within Lasselle Elementary School. A 24-hour noise level measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents an existing Lasselle Elementary School classroom building at roughly 109 feet north of the Project site. A 24-hour noise level measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing residential homes located south of the Project site at approximately 133 feet. A 24-hour noise level measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R4: Located approximately 123 feet south of the Project site, R4 represents the existing residential homes south of Krameria Avenue. A 24-hour noise level measurement was taken near this location, L3, to describe the existing ambient noise environment.
- R5: Location R5 represents existing residential homes at roughly 148 feet west of the Project site. A 24-hour noise level measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents the future residential homes currently under construction northwest of the Project site at approximately 30 feet. A 24-hour noise level measurement, L4, is used to describe the existing ambient noise environment at this location.

EXHIBIT 9-A: RECEIVER LOCATIONS



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND:

- Receiver Locations
- Distance from receiver to Project site boundary (in feet)
- Existing Barrier
- Existing Barrier Height (in feet)

## 10 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 9, resulting from operation of the proposed Continental Villages Project. Exhibit 10-A identifies the representative receiver locations and noise source locations used to assess the operational noise levels.

### 10.1 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 10-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the roof-top air conditioning units, residential entry gate activity, residential and commercial parking lot vehicle movements, and outdoor pool/spa activity all operating continuously. These noise level impacts will likely vary throughout the day.

#### 10.1.1 ROOF-TOP AIR CONDITIONING UNITS

To assess the noise levels created by the roof-top air conditioning units at the Project site, reference noise levels measurements were taken at the Santee Walmart on July 27<sup>th</sup>, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe a mechanical roof-top air conditioning unit on the roof of an existing Walmart store, with additional units operating in the background. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. Using a uniform reference distance of 50 feet, the reference noise level is 57.2 dBA  $L_{eq}$ . The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. The noise attenuation provided by a parapet wall is not reflected in this reference noise level measurement.

#### 10.1.2 RESIDENTIAL ENTRY GATE ACTIVITY

A reference noise level measurement was collected on Wednesday, November 29<sup>th</sup>, 2017, by Urban Crossroads, Inc. at entry gate to the Oak Glen Apartments residential community in the City of Irvine. The reference noise level measurement represents multiple noise sources which produced a reference noise level of 54.0 dBA  $L_{eq}$  at the uniform reference distance of 50 feet. The noise sources associated with the reference entry gate activity measurement include residential entry and exit gates opening and closing, cars and trucks driving over the metal gate tracks, keypad code entry, and phone ringing and people talking over the entrance intercom. Entry gate activities are conservatively anticipated to operate for 60 minutes per hour.



### 10.1.3 PARKING LOT VEHICLE MOVEMENTS (RESIDENTIAL)

To determine the noise levels associated with a residential apartment community parking lot, Urban Crossroads collected reference noise level measurements at the Windemere Apartment community in the City of Riverside on August 24<sup>th</sup>, 2016. The reference 1-hour noise level measurement is based on the peak hour of activity over a total measurement duration of 24-hours and indicates that the parking lot vehicle movements generates noise levels of 40.8 dBA  $L_{eq}$  at a normalized distance of 50 feet. The residential parking lot noise levels are mainly due to cars pulling in and out of spaces and residents going to and from their apartment homes, and includes horns honking in the parking lot. Noise associated with parking lot vehicle movements is expected during the typical daytime, and nighttime conditions for the entire hour (60 minutes).

### 10.1.4 PARKING LOT VEHICLE MOVEMENTS (COMMERCIAL)

To determine the noise levels associated with commercial parking lot vehicle movements, Urban Crossroads collected reference noise level measurements at the Laguna Niguel Walmart located at 27470 Alicia Parkway on May 30, 2012. The 15-minute noise level measurement indicates that the parking lot vehicle movements generates noise levels of 45.1 dBA  $L_{eq}$  at a normalized distance of 50 feet. The parking lot noise levels are mainly due to cars pulling in and out of spaces, car alarms sounding, and customers moving shopping carts. Noise associated with parking lot vehicle movements is expected during the typical daytime, and nighttime conditions for the entire hour (60 minutes).

### 10.1.5 OUTDOOR POOL/SPA ACTIVITY

To represent the noise levels associated with pool activities, Urban Crossroads collected a reference noise level measurement on July 5<sup>th</sup>, 2017 at the Covenant Hill Clubhouse Pool in the unincorporated community of Ladera Ranch in the County of Orange. The measured reference noise level at the uniform 50-foot reference distance is 51.0 dBA  $L_{eq}$  for pool activity. The pool activity noise levels include kids playing, running, screaming, splashing, playing with a ball, and parents talking. Noise associated with pool activities is expected to occur for the entire hour (60 minutes).

TABLE 10-1: REFERENCE NOISE LEVEL MEASUREMENTS

| Noise Source   | Duration<br>(hh:mm:ss) | Ref.<br>Distance<br>(Feet) | Noise<br>Source<br>Height<br>(Feet) | Hourly<br>Activity<br>(Mins) <sup>6</sup> | Reference Noise<br>Level (dBA L <sub>eq</sub> ) |              |
|--|------------------------|----------------------------|-------------------------------------|---|---|--------------|
|  |                        |                            |                                     |   | @ Ref.<br>Dist.                                 | @ 50<br>Feet |
| Roof-Top Air Conditioning Unit <sup>1</sup>            | 96:00:00               | 5'                         | 5'                                  | 39  | 77.2  | 57.2         |
| Residential Entry Gate Activity <sup>2</sup>           | 00:04:00               | 40'                        | 5'                                  | 60  | 55.9  | 54.0         |
| Residential Parking Lot Vehicle Movements <sup>3</sup> | 01:00:00               | 10'                        | 5'                                  | 60  | 51.3  | 40.8         |
| Commercial Parking Lot Vehicle Movements <sup>4</sup>  | 00:15:00               | 5'                         | 5'                                  | 60  | 60.1  | 45.1         |
| Outdoor Pool/Spa Activity <sup>5</sup>                 | 00:10:00               | 5'                         | 4'                                  | 60  | 71.0  | 51.0         |

<sup>1</sup> As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.

<sup>2</sup> As measured by Urban Crossroads, Inc. on 11/29/2017 at the entry gate to the Oak Glen Apartment community in the City of Irvine.

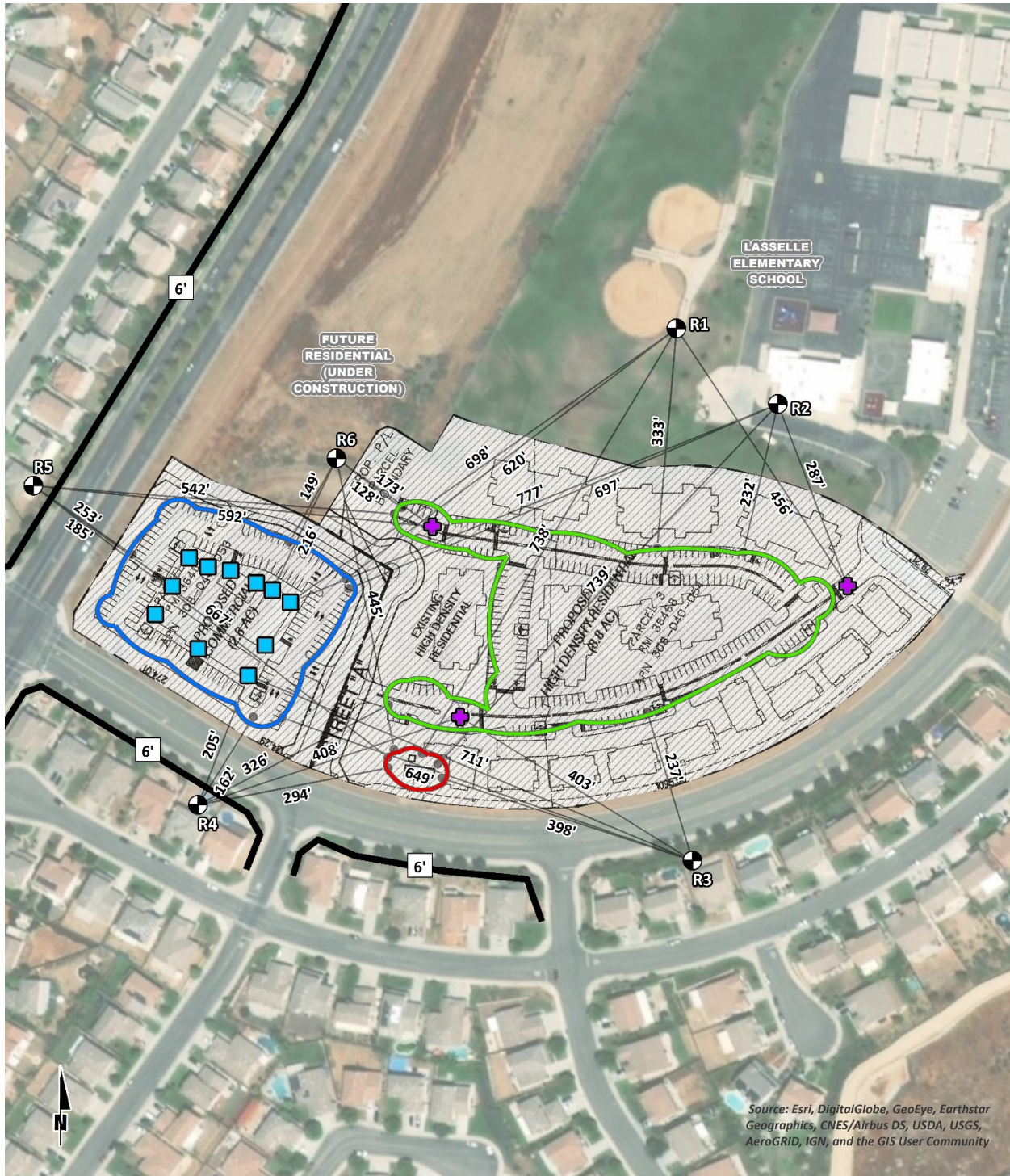
<sup>3</sup> As measured by Urban Crossroads, Inc. on 8/24/2016 in the parking lot of the Windemere Apartment community in the City of Riverside.

<sup>4</sup> As measured by Urban Crossroads, Inc. on 5/30/2012 at the Laguna Niguel Walmart located at 27470 Alicia Parkway.

<sup>5</sup> As measured by Urban Crossroads, Inc. on 7/5/2017 at the Covenant Hill Clubhouse pool in the unincorporated community of Ladera Ranch in the County of Orange.

<sup>6</sup> Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site based on the reference noise level measurement activity.

EXHIBIT 10-A: OPERATIONAL NOISE SOURCE LOCATIONS



LEGEND:

- Receiver Locations
- Roof-Top Air Conditioning Unit
- Outdoor Pool/Spa Activity
- Existing Barrier Height (in feet)
- Residential Entry Gate
- Residential Parking Lot Vehicle Movements
- Commercial Parking Lot Vehicle Movements
- Existing Barrier
- Distance from receiver to noise source (in feet)

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



## 10.2 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include roof-top air conditioning units, residential entry gate activity, residential and commercial parking lot vehicle movements, and outdoor pool/spa activity, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 10-2 presents the combined total operational noise level projections at 200 feet consistent with the City of Moreno Valley Municipal Code. The Project operational noise levels at 200 feet are estimated at 47.0 dBA  $L_{eq}$ . Based on the results of this analysis, the Project operational noise levels associated with the Continental Villages will satisfy the City of Moreno Valley Municipal Code 60 dBA  $L_{eq}$  daytime and 55 dBA  $L_{eq}$  nighttime exterior noise level standards at 200 feet from the source land use.

**TABLE 10-2: OPERATIONAL NOISE LEVEL PROJECTIONS AT 200 FEET**

| Noise Source                              | Ref. Noise Level (dBA $L_{eq}$ ) | Ref. Distance (Feet) | Distance Atten. @ 200' (dBA $L_{eq}$ ) <sup>1</sup> | Hourly Activity (Mins.) <sup>2</sup> | Hourly Activity Adjustment (dBA $L_{eq}$ ) | Noise Level @ 200' (dBA $L_{eq}$ ) |
|---|----------------------------------|----------------------|---|--------------------------------------|--|------------------------------------|
| Roof-Top Air Conditioning Unit            | 77.2                             | 5'                   | -32.0   | 39                                   | -1.9                                       | 43.3                               |
| Residential Entry Gate Activity           | 55.9                             | 40'                  | -14.0   | 60                                   | 0.0  | 41.9                               |
| Residential Parking Lot Vehicle Movements | 51.3                             | 10'                  | -19.5   | 60                                   | 0.0  | 31.8                               |
| Commercial Parking Lot Vehicle Movements  | 60.1                             | 5'                   | -24.0   | 60                                   | 0.0  | 36.1                               |
| Outdoor Pool/Spa Activity                 | 71.0                             | 5'                   | -32.0   | 60                                   | 0.0  | 39.0                               |
| <b>Combined Noise Level:</b>              |                                  |                      |   |                                      |  | 47.0                               |

<sup>1</sup> Drop off rate of 6 dBA per doubling of distance from point sources and 4.5 dBA per doubling of distance from line sources.

<sup>2</sup> Anticipated duration (minutes within the hour) of noise activity during peak hourly conditions expected at the Project site.

Table 10-3 indicates that the unmitigated hourly noise levels associated with the Continental Villages Project at the nearby sensitive receiver locations are expected to range from 38.3 to 47.0 dBA  $L_{eq}$ . The Project-related operational noise levels, as shown on Table 10-3, will satisfy the City of Moreno Valley 60 dBA  $L_{eq}$  daytime and 55 dBA  $L_{eq}$  nighttime exterior noise level standards at all nearby sensitive receiver locations. The operational noise level calculations are included in Appendix 10.1.



TABLE 10-3: UNMITIGATED OPERATIONAL NOISE LEVEL PROJECTIONS AT RECEIVER LOCATIONS

| Receiver Location <sup>1</sup> | Land Use    | Noise Levels by Noise Source (dBA L <sub>eq</sub> ) <sup>2</sup> |                                 |   |  |                           | Combined Operational Noise Levels (dBA L <sub>eq</sub> ) <sup>3</sup> | Threshold Exceeded? <sup>4</sup>  |                                     |
|--------------------------------|-------------|--|---------------------------------|---|--|---------------------------|---|-----------------------------------|-------------------------------------|
|                                |             | Roof-Top Air Conditioning Unit                                   | Residential Entry Gate Activity | Residential Parking Lot Vehicle Movements | Commercial Parking Lot Vehicle Movements | Outdoor Pool/Spa Activity |   | Daytime (60 dBA L <sub>eq</sub> ) | Nighttime (55 dBA L <sub>eq</sub> ) |
| R1                             | School      | 32.4   | 34.8                            | 28.5                                      | 28.7                                     | 27.6                      | 38.3  | No                                | n/a                                 |
| R2                             | School      | 31.5   | 38.8                            | 30.8                                      | 27.9                                     | 27.6                      | 40.6  | No                                | n/a                                 |
| R3                             | Residential | 32.2   | 35.8                            | 30.7                                      | 28.4                                     | 33.0                      | 39.7  | No                                | No                                  |
| R4                             | Residential | 43.0   | 35.7                            | 28.6                                      | 37.4                                     | 35.6                      | 45.3  | No                                | No                                  |
| R5                             | Residential | 41.2   | 32.5                            | 25.3                                      | 36.6                                     | 28.5                      | 43.1  | No                                | No                                  |
| R6                             | Future Res. | 42.6   | 43.2                            | 34.7                                      | 38.0                                     | 32.0                      | 47.0  | No                                | No                                  |

<sup>1</sup> See Exhibit 10-A for the receiver and noise source locations.

<sup>2</sup> Reference noise sources as shown on Table 10-1.

<sup>3</sup> Calculations for each noise source are provided in Appendix 10.1.

<sup>4</sup> Do the Project operational noise levels exceed the standards (Table 3-1)?

"n/a" = school uses do not represent sensitive receiver locations during the nighttime hours when they are unoccupied.

### 10.3 PROJECT OPERATIONAL NOISE CONTRIBUTION

To describe the Project operational noise level contributions, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (7) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \dots + 10^{SPLn/10}]$$

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describe the Project noise level contributions to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the ambient daytime and nighttime conditions are presented on Tables 10-4 and 10-5.

As indicated on Tables 10-4 and 10-5, the Project will contribute a daytime operational noise level increase of up to 0.2 dBA L<sub>eq</sub> and a nighttime operational noise level increase of up to 0.3 dBA L<sub>eq</sub> at the sensitive receiver locations. Since the Project-related operational noise level contributions will satisfy the significance criteria discussed in Section 4, the increases at the sensitive receiver locations will be *less than significant*.

**TABLE 10-4: PROJECT DAYTIME OPERATIONAL NOISE LEVEL CONTRIBUTIONS**

| Receiver Location <sup>1</sup> | Total Project Operational Noise Level <sup>2</sup> | Measurement Location <sup>3</sup> | Reference Ambient Noise Levels <sup>4</sup> | Combined Project and Ambient <sup>5</sup> | Project Increase <sup>6</sup> | Threshold <sup>7</sup> | Threshold Exceeded? <sup>7</sup> |
|--------------------------------|--|-----------------------------------|---|---|-------------------------------|------------------------|----------------------------------|
| R1                             | 38.3   | L1                                | 53.1  | 53.2                                      | 0.1                           | 5.0                    | No                               |
| R2                             | 40.6   | L1                                | 53.1  | 53.3                                      | 0.2                           | 5.0                    | No                               |
| R3                             | 39.7   | L2                                | 58.1  | 58.2                                      | 0.1                           | 5.0                    | No                               |
| R4                             | 45.3   | L3                                | 61.0  | 61.1                                      | 0.1                           | 3.0                    | No                               |
| R5                             | 43.1   | L4                                | 68.4  | 68.4                                      | 0.0                           | 1.5                    | No                               |
| R6                             | 47.0   | L4                                | 68.4  | 68.4                                      | 0.0                           | 1.5                    | No                               |

<sup>1</sup> See Exhibit 10-A for the sensitive receiver locations.

<sup>2</sup> Total Project operational noise levels as shown on Table 10-3.

<sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>4</sup> Observed daytime ambient noise levels as shown on Table 5-1.

<sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>7</sup> Significance Criteria as defined in Section 4.

**TABLE 10-5: PROJECT NIGHTTIME OPERATIONAL NOISE LEVEL CONTRIBUTIONS**

| Receiver Location <sup>1</sup> | Total Project Operational Noise Level <sup>2</sup> | Measurement Location <sup>3</sup> | Reference Ambient Noise Levels <sup>4</sup> | Combined Project and Ambient <sup>5</sup> | Project Increase <sup>6</sup> | Threshold <sup>7</sup> | Threshold Exceeded? <sup>7</sup> |
|--------------------------------|--|-----------------------------------|---|---|-------------------------------|------------------------|----------------------------------|
| R1                             | 38.3   | L1                                | 52.5  | 52.7                                      | 0.2                           | 5.0                    | No                               |
| R2                             | 40.6   | L1                                | 52.5  | 52.8                                      | 0.3                           | 5.0                    | No                               |
| R3                             | 39.7   | L2                                | 57.4  | 57.5                                      | 0.1                           | 5.0                    | No                               |
| R4                             | 45.3   | L3                                | 58.9  | 59.1                                      | 0.2                           | 5.0                    | No                               |
| R5                             | 43.1   | L4                                | 64.9  | 64.9                                      | 0.0                           | 3.0                    | No                               |
| R6                             | 47.0   | L4                                | 64.9  | 65.0                                      | 0.1                           | 3.0                    | No                               |

<sup>1</sup> See Exhibit 10-A for the sensitive receiver locations.

<sup>2</sup> Total Project operational noise levels as shown on Table 10-3.

<sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>4</sup> Observed nighttime ambient noise levels as shown on Table 5-1.

<sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>7</sup> Significance Criteria as defined in Section 4.

<sup>8</sup> Office and school uses do not represent sensitive receiver locations during the nighttime hours when they are unoccupied.

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

## 11 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 11-A shows the construction noise source locations in relation to the nearby receiver locations previously described in Section 9.

### 11.1 CONSTRUCTION NOISE LEVELS

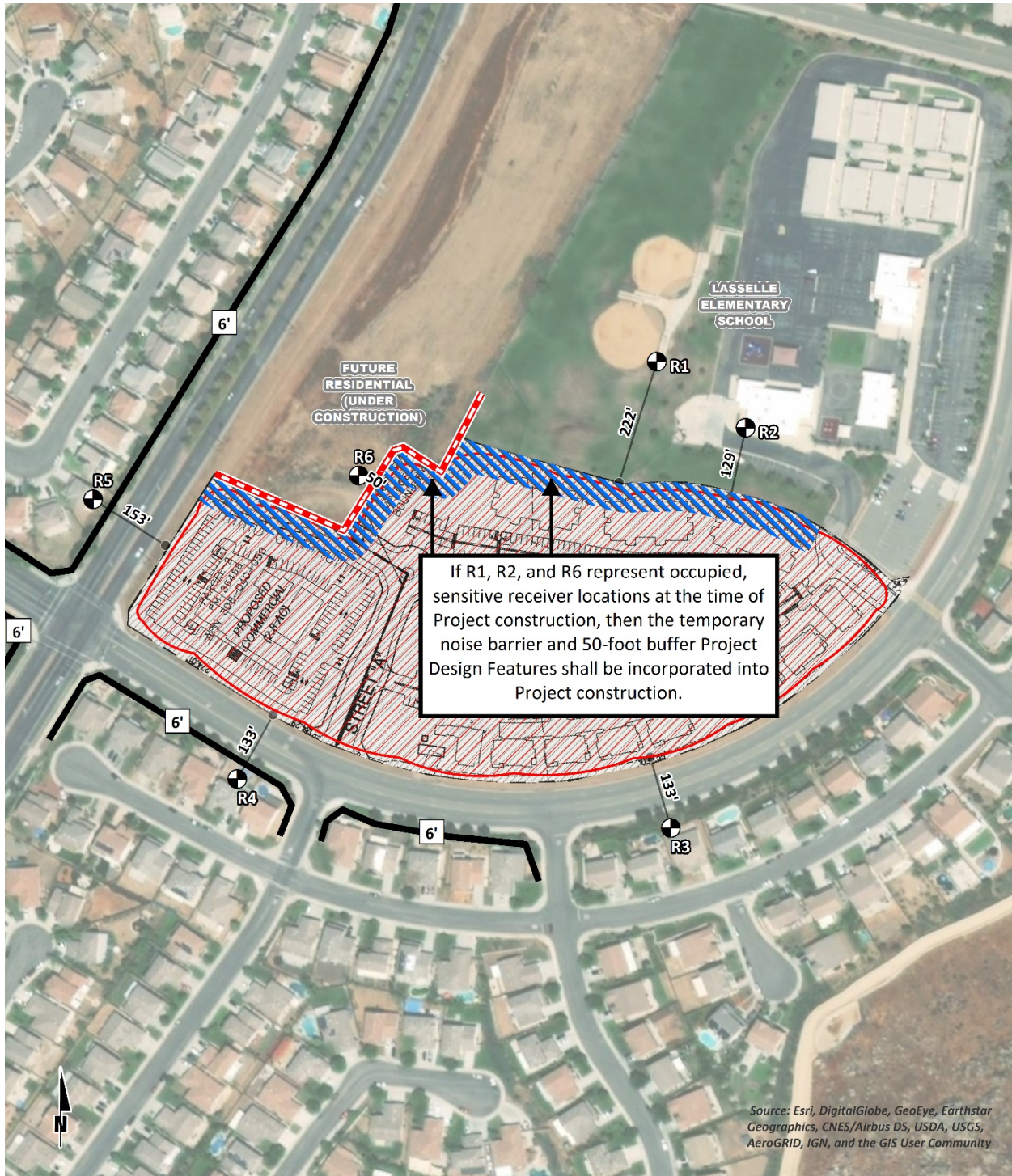
Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers and portable generators that when combined can reach high levels. The number and mix of construction equipment is expected to occur in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating








This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to in excess of 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver. The construction stages are based on the *Continental Villages Air Quality Impact Analysis* prepared by Urban Crossroads, Inc. (22)



EXHIBIT 11-A: CONSTRUCTION NOISE SOURCE LOCATIONS



LEGEND:

-  Receiver
-  Construction
-  10-foot high (minimum) temporary noise barrier
-  50-foot buffer for large mobile equipment (> 80,000 lbs)
-  Existing Barrier Height (in feet)
-  Distance from receiver to construction activity (in feet)
-  Existing

## 11.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 11-1 provides a summary of the construction reference noise level measurements. Since the reference noise levels were collected at varying distances of 30 feet and 50 feet, all construction noise level measurements presented on Table 11-1 have been adjusted for consistency to describe a common reference distance of 50 feet.

**TABLE 11-1: CONSTRUCTION REFERENCE NOISE LEVELS**

| ID | Noise Source   | Duration (h:mm:ss) | Reference Distance From Source (Feet) | Reference Noise Levels @ Reference Distance (dBA $L_{eq}$ ) | Reference Noise Levels @ 50 Feet (dBA $L_{eq}$ ) <sup>4</sup> |
|----|--|--------------------|---------------------------------------|---|---|
| 1  | Truck Pass-Bys & Dozer Activity <sup>1</sup>             | 0:01:15            | 30'                                   | 63.6  | 59.2  |
| 2  | Dozer Activity <sup>1</sup>                              | 0:01:00            | 30'                                   | 68.6  | 64.2  |
| 3  | Construction Vehicle Maintenance Activities <sup>2</sup> | 0:01:00            | 30'                                   | 71.9  | 67.5  |
| 4  | Foundation Trenching <sup>2</sup>                        | 0:01:01            | 30'                                   | 72.6  | 68.2  |
| 5  | Rough Grading Activities <sup>2</sup>                    | 0:05:00            | 30'                                   | 77.9  | 73.5  |
| 6  | Framing <sup>2</sup>                                     | 0:02:00            | 30'                                   | 66.7  | 62.3  |
| 7  | Concrete Mixer Truck Movements <sup>3</sup>              | 0:01:00            | 50'                                   | 71.2  | 71.2  |
| 8  | Concrete Paver Activities <sup>3</sup>                   | 0:01:00            | 30'                                   | 70.0  | 65.6  |
| 9  | Concrete Mixer Pour & Paving Activities <sup>3</sup>     | 0:01:00            | 30'                                   | 70.3  | 65.9  |
| 10 | Concrete Mixer Backup Alarms & Air Brakes <sup>3</sup>   | 0:00:20            | 50'                                   | 71.6  | 71.6  |
| 11 | Concrete Mixer Pour Activities <sup>3</sup>              | 1:00:00            | 50'                                   | 67.7  | 67.7  |

<sup>1</sup>As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.

<sup>2</sup>As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.

<sup>3</sup>Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.

<sup>4</sup>Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

### 11.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels, calculations of the Project construction noise level impacts at the nearby receiver locations were completed. Tables 11-2 to 11-6 present the short-term construction noise levels for each stage of construction, without accounting for the noise attenuation measures included in the Project Design Features (PDFs). Table 11-7 provides a summary of the construction noise levels by stage at the noise receiver locations. Based on the stages of construction, the noise levels associated with the proposed Project are expected to create temporarily high noise levels at the nearby receiver locations. To assess the peak construction noise levels, this analysis shows the highest noise impacts when the equipment with the highest reference noise level is operating at the closest point from the primary construction activity to each receiver location.

**TABLE 11-2: SITE PREPARATION EQUIPMENT NOISE LEVELS**

| Reference Construction Activity <sup>1</sup>                     | Reference Noise Level @ 50 Feet (dBA L <sub>eq</sub> ) |
|--|--|
| Truck Pass-Bys & Dozer Activity                                  | 59.2   |
| Dozer Activity   | 64.2   |
| Highest Reference Noise Level at 50 Feet (dBA L <sub>eq</sub> ): | 64.2   |

| Receiver Location | Distance to Construction Activity (Feet) <sup>2</sup> | Distance Attenuation (dBA L <sub>eq</sub> ) <sup>3</sup> | Calculated Noise Barrier Attenuation (dBA L <sub>eq</sub> ) <sup>4</sup> | Construction Noise Level (dBA L <sub>eq</sub> ) |
|-------------------|---|--|--|---|
| R1                | 222'  | -12.9  | -5.7   | 45.5  |
| R2                | 129'  | -8.2   | -5.2   | 50.7  |
| R3                | 133'  | -8.5   | -10.5  | 45.2  |
| R4                | 133'  | -8.5   | -5.6   | 50.1  |
| R5                | 153'  | -9.7   | -4.9   | 49.5  |
| R6                | 50'   | 0.0  | 0.0  | 64.2  |

<sup>1</sup> Reference construction noise level measurements taken by Urban Crossroads, Inc.

<sup>2</sup> Distance from the nearest point of construction activity to the nearest receiver.

<sup>3</sup> Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

<sup>4</sup> Calculated barrier attenuation (if any) from existing barriers in the Project study area (Appendix 11.1).

TABLE 11-3: GRADING EQUIPMENT NOISE LEVELS

| Reference Construction Activity <sup>1</sup>                     | Reference Noise Level @ 50 Feet (dBA L <sub>eq</sub> ) |
|--|--|
| Truck Pass-Bys & Dozer Activity                                  | 59.2   |
| Dozer Activity   | 64.2   |
| Rough Grading Activities   | 73.5   |
| Highest Reference Noise Level at 50 Feet (dBA L <sub>eq</sub> ): | 73.5   |

| Receiver Location | Distance to Construction Activity (Feet) <sup>2</sup> | Distance Attenuation (dBA L <sub>eq</sub> ) <sup>3</sup> | Calculated Noise Barrier Attenuation (dBA L <sub>eq</sub> ) <sup>4</sup> | Construction Noise Level (dBA L <sub>eq</sub> ) |
|-------------------|---|--|--|---|
| R1                | 222'  | -12.9  | -5.7   | 54.8  |
| R2                | 129'  | -8.2   | -5.2   | 60.0  |
| R3                | 133'  | -8.5   | -10.5  | 54.5  |
| R4                | 133'  | -8.5   | -5.6   | 59.4  |
| R5                | 153'  | -9.7   | -4.9   | 58.8  |
| R6                | 50'   | 0.0  | 0.0  | 73.5  |

<sup>1</sup> Reference construction noise level measurements taken by Urban Crossroads, Inc.

<sup>2</sup> Distance from the nearest point of construction activity to the nearest receiver.

<sup>3</sup> Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

<sup>4</sup> Calculated barrier attenuation (if any) from existing barriers in the Project study area (Appendix 11.1).



**TABLE 11-4: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS**

| Reference Construction Activity <sup>1</sup>                     | Reference Noise Level @ 50 Feet (dBA L <sub>eq</sub> ) |
|--|--|
| Construction Vehicle Maintenance Activities                      | 67.5   |
| Foundation Trenching   | 68.2   |
| Framing  | 62.3   |
| Highest Reference Noise Level at 50 Feet (dBA L <sub>eq</sub> ): | 68.2   |

| Receiver Location | Distance to Construction Activity (Feet) <sup>2</sup> | Distance Attenuation (dBA L <sub>eq</sub> ) <sup>3</sup> | Calculated Noise Barrier Attenuation (dBA L <sub>eq</sub> ) <sup>4</sup> | Construction Noise Level (dBA L <sub>eq</sub> ) |
|-------------------|---|--|--|---|
| R1                | 222'  | -12.9  | -5.7   | 49.5  |
| R2                | 129'  | -8.2   | -5.2   | 54.7  |
| R3                | 133'  | -8.5   | -10.5  | 49.2  |
| R4                | 133'  | -8.5   | -5.6   | 54.1  |
| R5                | 153'  | -9.7   | -4.9   | 53.5  |
| R6                | 50'   | 0.0  | 0.0  | 68.2  |

<sup>1</sup> Reference construction noise level measurements taken by Urban Crossroads, Inc.

<sup>2</sup> Distance from the nearest point of construction activity to the nearest receiver.

<sup>3</sup> Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

<sup>4</sup> Calculated barrier attenuation (if any) from existing barriers in the Project study area (Appendix 11.1).

TABLE 11-5: PAVING EQUIPMENT NOISE LEVELS

| Reference Construction Activity <sup>1</sup>                     | Reference Noise Level @ 50 Feet (dBA L <sub>eq</sub> ) |
|--|--|
| Concrete Mixer Truck Movements                                   | 71.2   |
| Concrete Paver Activities  | 65.6   |
| Concrete Mixer Pour & Paving Activities                          | 65.9   |
| Concrete Mixer Backup Alarms & Air Brakes                        | 71.6   |
| Concrete Mixer Pour Activities                                   | 67.7   |
| Highest Reference Noise Level at 50 Feet (dBA L <sub>eq</sub> ): | 71.6   |

| Receiver Location | Distance to Construction Activity (Feet) <sup>2</sup> | Distance Attenuation (dBA L <sub>eq</sub> ) <sup>3</sup> | Calculated Noise Barrier Attenuation (dBA L <sub>eq</sub> ) <sup>4</sup> | Construction Noise Level (dBA L <sub>eq</sub> ) |
|-------------------|---|--|--|---|
| R1                | 222'  | -12.9  | -5.7   | 53.0  |
| R2                | 129'  | -8.2   | -5.2   | 58.2  |
| R3                | 133'  | -8.5   | -10.5  | 52.6  |
| R4                | 133'  | -8.5   | -5.6   | 57.5  |
| R5                | 153'  | -9.7   | -4.9   | 57.0  |
| R6                | 50'   | 0.0  | 0.0  | 71.6  |

<sup>1</sup> Reference construction noise level measurements taken by Urban Crossroads, Inc.

<sup>2</sup> Distance from the nearest point of construction activity to the nearest receiver.

<sup>3</sup> Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

<sup>4</sup> Calculated barrier attenuation (if any) from existing barriers in the Project study area (Appendix 11.1).

TABLE 11-6: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS

| Reference Construction Activity <sup>1</sup>                     | Reference Noise Level @ 50 Feet (dBA L <sub>eq</sub> ) |
|--|--|
| Framing  | 62.3   |
| Highest Reference Noise Level at 50 Feet (dBA L <sub>eq</sub> ): | 62.3   |

| Receiver Location | Distance to Construction Activity (Feet) <sup>2</sup> | Distance Attenuation (dBA L <sub>eq</sub> ) <sup>3</sup> | Calculated Noise Barrier Attenuation (dBA L <sub>eq</sub> ) <sup>4</sup> | Construction Noise Level (dBA L <sub>eq</sub> ) |
|-------------------|---|--|--|---|
| R1                | 222'  | -12.9  | -5.7   | 43.6  |
| R2                | 129'  | -8.2   | -5.2   | 48.8  |
| R3                | 133'  | -8.5   | -10.5  | 43.3  |
| R4                | 133'  | -8.5   | -5.6   | 48.2  |
| R5                | 153'  | -9.7   | -4.9   | 47.6  |
| R6                | 50'   | 0.0  | 0.0  | 62.3  |

<sup>1</sup> Reference construction noise level measurements taken by Urban Crossroads, Inc.

<sup>2</sup> Distance from the nearest point of construction activity to the nearest receiver.

<sup>3</sup> Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

<sup>4</sup> Calculated barrier attenuation (if any) from existing barriers in the Project study area (Appendix 11.1).

## 11.4 CONSTRUCTION NOISE THRESHOLDS OF SIGNIFICANCE

The construction noise analysis shows that the highest construction noise levels will occur when equipment is operating at the closest point from primary construction activity to each sensitive receiver location. As shown on Table 11-7, the construction noise levels without Project Design Features are expected to range from 43.3 to 73.5 dBA L<sub>eq</sub> at the nearby receiver locations.

With the planned temporary construction noise attenuation measures as a part of the Project Design Features (PDFs), the construction noise levels at the potentially impacted receiver locations will approach 59.4 dBA L<sub>eq</sub> which will satisfy the 60 dBA L<sub>eq</sub> threshold for noise-sensitive receiver locations, as shown on Table 11-7. Therefore, the noise impact due to Project construction is considered a *less than significant* impact with the planned PDFs. The PDFs include a minimum 10-foot high temporary noise barrier at the Project site boundary for the future residential uses represented by R6, and a 50-foot buffer for large mobile equipment (greater than 80,000 pounds) for both R2 and R6, as shown on Exhibit 11-A.

The construction noise analysis presents a conservative approach with the highest noise-level-producing equipment for each stage of Project construction operating at the closest point from primary construction activity to the nearby sensitive receiver locations. This scenario is unlikely to occur during typical construction activities and likely overstates the construction noise levels which will be experienced at each receiver location. With the construction noise PDFs identified in this noise study, shown on Exhibit 11-A, the worst-case construction noise levels at the nearby residential receivers would be reduced.

The noise attenuation provided through temporary noise barriers depends on many factors including cost, wind loading, the location of the receiver, and the ability to place barriers such that the line-of-sight of the receiver is blocked to the noise source, among others. This analysis assumes a temporary noise barrier constructed using frame-mounted materials such as vinyl acoustic curtains or quilted blankets attached to the construction site perimeter fence. Appendix 11.1 includes the construction noise level calculations without and with the temporary noise barriers. Sample temporary noise barrier photos are provided in Appendix 11.2 for reference.



**TABLE 11-7: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY WITH PDFS (DBA L<sub>Eq</sub>)**

| Receiver Location | Distance to Receiver (Feet) | Land Use    | Threshold | Highest Const. Noise Levels Without PDFs | Attenuation from PDFs <sup>1</sup> |                | Const. Noise Levels With PDFs <sup>2</sup> | Threshold Exceeded? <sup>3</sup> |
|-------------------|-----------------------------|-------------|-----------|--|------------------------------------|----------------|--|----------------------------------|
|                   |                             |             |           |  | Temporary Noise Barriers           | 50-Foot Buffer |  |                                  |
| R1                | 222'                        | School      | 60        | 54.8                                     | -                                  | -1.8           | 53.1                                       | No                               |
| R2                | 129'                        | School      | 60        | 60.0                                     | -                                  | -2.8           | 57.2                                       | No                               |
| R3                | 133'                        | Residential | 60        | 54.5                                     | -                                  | -              | 54.5                                       | No                               |
| R4                | 133'                        | Residential | 60        | 59.4                                     | -                                  | -              | 59.4                                       | No                               |
| R5                | 153'                        | Residential | 60        | 58.8                                     | -                                  | -              | 58.8                                       | No                               |
| R6                | 50'                         | Future Res. | 60        | 73.5                                     | -8.0                               | -6.0           | 59.4                                       | No                               |

<sup>1</sup> Temporary noise barrier attenuation calculations provided in Appendix 11.1. Additional distance attenuation provided by the 50-foot buffer zone.

<sup>2</sup> Construction noise levels with Project Design Features for each receiver location, based on the highest construction noise levels shown on Table 11-7.

<sup>3</sup> Do the construction noise levels exceed the applicable construction noise level threshold?

"PDFs" = Project Design Features



## 11.5 CONSTRUCTION VIBRATION IMPACTS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. The proposed Project's construction activities most likely to cause vibration impacts are:

- **Heavy Construction Equipment:** Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage.
- **Trucks:** Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration. Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-6 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 11-8 presents the expected Project related vibration levels at the nearby receiver locations.

Based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration with a reference level of 87 VdB at 25 feet. At distances ranging from 50 to 222 feet from primary Project construction activities, construction vibration levels are expected to range from 29.5 to 78.0 VdB, as shown on Table 11-8. Using the construction vibration assessment methods provided by the FTA, Project construction vibration levels are shown to remain below the FTA 80 VdB threshold the nearby sensitive receiver locations, and therefore, is considered a *less than significant* impact.

Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating at the Project site perimeter.

TABLE 11-8: UNMITIGATED CONSTRUCTION EQUIPMENT VIBRATION LEVELS

| Receiver Location <sup>1</sup> | Distance to Construction Activity (Feet) | Receiver Vibration Levels (VdB) <sup>2</sup> |            |               |                 |                         | Threshold Exceeded? <sup>3</sup> |
|--------------------------------|--|--|------------|---------------|-----------------|-------------------------|----------------------------------|
|                                |  | Small Bulldozer                              | Jackhammer | Loaded Trucks | Large Bulldozer | Highest Vibration Level |                                  |
| R1                             | 222'                                     | 29.5   | 50.5       | 57.5          | 58.5            | 58.5                    | No                               |
| R2                             | 129'                                     | 36.6   | 57.6       | 64.6          | 65.6            | 65.6                    | No                               |
| R3                             | 133'                                     | 36.2   | 57.2       | 64.2          | 65.2            | 65.2                    | No                               |
| R4                             | 133'                                     | 36.2   | 57.2       | 64.2          | 65.2            | 65.2                    | No                               |
| R5                             | 153'                                     | 34.4   | 55.4       | 62.4          | 63.4            | 63.4                    | No                               |
| R6                             | 50'                                      | 49.0   | 70.0       | 77.0          | 78.0            | 78.0                    | No                               |

<sup>1</sup> Noise receiver locations are shown on Exhibit 11-A.

<sup>2</sup> Based on the Vibration Source Levels of Construction Equipment included on Table 6-6.

<sup>3</sup> Does the peak vibration exceed the FTA maximum acceptable vibration standard of 80 VdB?

## 11 REFERENCES

1. **State of California.** *California Environmental Quality Act, Appendix G.* 2018.
2. **Urban Crossroads, Inc.** *Continental Villages Traffic Impact Analysis.* November 2018.
3. **Office of Planning and Research.** *State of California General Plan Guidelines.* 2017.
4. **Harris, Cyril M.** *Noise Control in Buildings.* s.l. : McGraw-Hill, Inc., 1994.
5. **Caterpillar.** *Caterpillar Performance Handbook.* January 2017.
6. **City of Moreno Valley.** *Municipal Code, Chapter 11.80 Noise Regulation.*
7. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
8. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
9. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* June, 1995.
10. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
11. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
12. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment.* May 2006. FTA-VA-90-1003-06.
13. **City of Moreno Valley.** *General Plan Safety Element.* October 2006.
14. **California Court of Appeal.** *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; - Cal.Rptr.3d, October 2008.
15. **Federal Interagency Committee on Noise.** *Federal Agency Review of Selected Airport Noise Analysis Issues.* August 1992.
16. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
17. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
18. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.
19. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
20. **City of Moreno Valley.** *General Plan Environmental Impact Report.* July 2006.
21. **California Department of Transportation.** *Traffic Noise Analysis Protocol.* May 2011.
22. **Urban Crossroads, Inc.** *Continental Villages Air Quality Impact Analysis.* October 2018.



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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

## 12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Continental Villages Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5979.

Bill Lawson, P.E., INCE  
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### EDUCATION

Master of Science in Civil and Environmental Engineering  
California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning  
California Polytechnic State University, San Luis Obispo • June, 1992

### PROFESSIONAL REGISTRATIONS

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009  
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012  
PTP – Professional Transportation Planner • May, 2007 – May, 2013  
INCE – Institute of Noise Control Engineering • March, 2004

### PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America  
ITE – Institute of Transportation Engineers

### PROFESSIONAL CERTIFICATIONS

Certified Acoustical Consultant – County of Orange • February, 2011  
FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**APPENDIX 3.1:**

**CITY OF MORENO VALLEY MUNICIPAL CODE**

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Chapter 11. 80 N OISE REGULATION

11. 80. 010 Legislative findings.

It is found and declared that:

- A. Excessive sound within the limits of the city is a condition which has existed for some time, and the amount and intensity of such sound is increasing.
- B. Such excessive sound is a detriment to the public health, safety, and welfare and quality of life of the residents of the city.
- C. The necessity in the public interest for the provisions and prohibitions hereinafter contained and enacted is declared as a matter of legislative determination and public policy, and it is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuance of and for the purpose of securing and promoting the public health, safety, welfare and quality of life of the city and its inhabitants. (Ord. 740 § 1.2, 2007)

11. 80. 020 Definitions.

For purposes of this chapter, certain words and phrases used herein are defined as follows:

- “A-weighted sound level” means the sound pressure level in decibels as measured with a sound level meter using the A-weighting network. The unit of measurement is the dB(A).
  - “Commercial” means all uses of land not otherwise classified as residential, as defined in this section.
  - “Construction” means any site preparation, and/or any assembly, erection, repair, or alteration, excluding demolition, of any structure, or improvements to real property.
  - “Continuous airborne sound” means sound that is measured by the slow-response setting of a meter manufactured to the specifications of ANSI Section 1.4-1983 (R2006) “Specification for Sound Level Meters,” or its successor.
  - “Daytime” means eight a.m. to ten p.m. the same day.
  - “Decibel” (dB) means a unit for measuring the amplitude of sound, equal to twenty (20) times the logarithm to the base ten (10) of the ratio of the pressure of the sound measured to the reference pressure, which is twenty (20) microPascals (twenty (20) microNewtons per square meter.)
  - “Demolition” means any dismantling, intentional destruction or removal of structures or other improvements to real property.
  - “Disturb” means to interrupt, interfere with, or hinder the enjoyment of peace or quiet or the normal listening activities or the sleep, rest or mental concentration of the hearer.
  - “Emergency” means any occurrence or set of circumstances involving actual or imminent physical trauma or significant property damage which necessitates immediate action. Economic loss alone shall not constitute an emergency. It shall be the burden of an alleged violator to prove an “emergency.”
  - “Emergency work” means any work made necessary to restore property to a safe condition following an emergency, or to protect persons or property threatened by an imminent emergency, to the extent such work is, in fact, necessary to protect persons or property from exposure to imminent danger or damage.
  - “Frequency” means the number of complete oscillation cycles per unit of time.
  - “Impulsive sound” means sound of short duration, usually less than one second, with an abrupt onset and rapid decay. Examples of sources of impulsive sound include explosions, drop forge impacts, and discharge of firearms.
  - “Nighttime” means 10:01 p.m. to 7:59 a.m. the following day.
  - “Noise disturbance” means any sound which:
    1. Disturbs a reasonable person of normal sensitivities;
    2. Exceeds the sound level limits set forth in this chapter; or
    3. Is plainly audible as defined in this section. Where no specific distance is set forth for the determination of audibility, references to noise disturbance shall be deemed to mean plainly audible at a distance of two hundred (200) feet from the real property line of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if the sound occurs on public right of way, public space or other publicly owned property.
  - “Person” means any person, person’s firm, association, copartnership, joint venture, corporation, or any entity public or private in nature.
  - “Plainly audible” means that the sound or noise produced or reproduced by any particular source, can be clearly distinguished from ambient noise by a person using his/her normal hearing faculties.
  - “Public right-of-way” means any street, avenue, boulevard, sidewalk, bike path or alley, or similar place normally accessible to the public which is owned or controlled by a governmental entity.
  - “Public space” means any park, recreational or community facility, or lot which contains at least one building that is open to the general public during its hours of operation.
  - “Residential” means all uses of land primarily for dwelling units, as well as hospitals, schools, colleges and universities, and places of religious assembly.
  - “Sound” means an oscillation in pressure, particle displacement, particle velocity or other physical parameter, in a medium with internal forces that causes compression and rarefaction of that medium capable of producing an auditory impression. The description of sound may include any characteristic of such sound, including duration, intensity and frequency.
  - “Sound level” means the weighted sound pressure level as measured in dB(A) by a sound level meter and as specified in American National Standards Institute (ANSI) specifications for sound-level meters (ANSI Section 1.4-1971 (R1976)). If the frequency weighting employed is not indicated, the A-weighting shall apply.
  - “Sound level meter” means an instrument, demonstrably capable of accurately measuring sound levels as defined above.
- All technical definitions not defined above shall be in accordance with applicable publications and standards of the American National Standards Institute (ANSI). (Ord. 740 § 1.2, 2007)

11. 80. 030 Prohibited acts.

- A. General Prohibition. It is unlawful and a violation of this chapter to maintain, make, cause, or allow the making of any sound that causes a noise disturbance, as defined in Section [11.80.020](#).
- B. Sound causing permanent hearing loss.
  1. Sound level limits. Based on statistics from the Center for Disease Control and Prevention and the National Institute for Occupational Safety and Health, Table 1 and Table 1-A specify sound level limits which, if exceeded, will have a high probability of producing permanent hearing loss in anyone in the area where the sound levels are being exceeded. No sound shall be permitted within the city which exceeds the parameters set forth in Tables 11.80.030-1 and 11.80.030-1-A of this chapter:

Table 11.80.030-1  
MAXIMUM CONTINUOUS SOUND LEVELS\*

| Duration per Day | Sound level [db(A)] |
|------------------|---------------------|
| Continuous Hours |                     |
| 8                | 90                  |
| 6                | 92                  |

|      |     |
|------|-----|
| 4    | 95  |
| 3    | 97  |
| 2    | 100 |
| 1.5  | 102 |
| 1    | 105 |
| 0.5  | 110 |
| 0.25 | 115 |

\* When the daily sound exposure is composed of two or more periods of sound exposure at different levels, the combined effect of all such periods shall constitute a violation of this section if the sum of the percent of allowed period of sound exposure at each level exceeds 100 percent

Table 11.80.030-1A  
MAXIMUM IMPULSIVE SOUND  
LEVELS

| Number of Repetitions per 24-Hour Period | Sound level [dB(A)] |
|--|---------------------|
| 1  | 145                 |
| 10                                       | 135                 |
| 100                                      | 125                 |

2. Exemptions. No violation shall exist if the only persons exposed to sound levels in excess of those listed in Tables 11.80.030-1 and 11.80.030-1A are exposed as a result of:

- a. Trespass;
- b. Invitation upon private property by the person causing or permitting the sound; or
- c. Employment by the person or a contractor of the person causing or permitting the sound.

C. Nonimpulsive Sound Decibel Limits. No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any nonimpulsive sound which exceeds the limits set forth for the source land use category (as defined in Section 11.80.020) in Table 11.80.030-2 when measured at a distance of two hundred (200) feet or more from the real property line of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if the sound occurs on public right-of-way, public space or other publicly owned property. Any source of sound in violation of this subsection shall be deemed prima facie to be a noise disturbance.

Table 11.80.030-2  
MAXIMUM SOUND LEVELS (IN dB(A)) FOR SOURCE LAND USES

| Residential |           | Commercial |           |
|-------------|-----------|------------|-----------|
| Daytime     | Nighttime | Daytime    | Nighttime |
| 60          | 55        | 65         | 60        |

D. Specific Prohibitions. In addition to the general prohibitions set out in subsection A of this section, and unless otherwise exempted by this chapter, the following specific acts, or the causing or permitting thereof, are regulated as follows:

1. Motor Vehicles. No person shall operate or cause to be operated a public or private motor vehicle, or combination of vehicles towed by a motor vehicle, that creates a sound exceeding the sound level limits in Table 11.80.030-2 when the vehicle(s) are not otherwise subject to noise regulations provided for by the California [Vehicle Code](#).
2. Radios, Televisions, Electronic Audio Equipment, Musical Instruments or Similar Devices from a Stationary Source. No person shall operate, play or permit the operation or playing of any radio, tape player, television, electronic audio equipment, musical instrument, sound amplifier or other mechanical or electronic sound making device that produces, reproduces or amplifies sound in such a manner as to create a noise disturbance. However, this subsection shall not apply to any use or activity exempted in subsection E of this section and any use or activity for which a special permit has been issued pursuant to Section [11.80.040](#).
3. Radios, Electronic Audio Equipment, or Similar Devices from a Mobile Source Such as a Motor Vehicle. Sound amplification or reproduction equipment on or in a motor vehicle is subject to regulation in accordance with the California [Vehicle Code](#) when upon the public right-of-way. When upon public space or publicly owned property other than the public right-of-way or upon private property open to the public, sound amplification or reproduction equipment shall not be operated in such a manner that it is plainly audible at a distance of fifty (50) feet in any direction from the vehicle.
4. Portable, Hand-Held Music or Sound Amplification or Reproduction Equipment. Such equipment shall not be operated on a public right-of-way, public space or other publicly owned property in such a manner as to be plainly audible at a distance of fifty (50) feet in any direction from the operator.
5. Loudspeakers and Public Address Systems.
  - a. Except as permitted by Section [11.80.040](#), no person shall operate, or permit the operation of, any loudspeaker, public address system or similar device, for any commercial purpose:
    1. Which produces, reproduces or amplifies sound in such a manner as to create a noise disturbance; or
    2. During nighttime hours on a public right-of-way, public space or other publicly owned property.
  - b. No person shall operate, or permit the operation of, any loudspeaker, public address system or similar device, for any noncommercial purpose, during nighttime hours in such a manner as to create a noise disturbance.
6. Animals. No person shall own, possess or harbor an animal or bird that howls, barks, meows, squawks, or makes other sounds that:
  - a. Create a noise disturbance;
  - b. Are of frequent or continued duration for ten (10) or more consecutive minutes and are plainly audible at a distance of fifty (50) feet from the real property line of the source of the sound; or
  - c. Are intermittent for a period of thirty (30) or more minutes and are plainly audible at a distance of fifty (50) feet from the real property line of the source of the sound.
7. Construction and Demolition. No person shall operate or cause the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of eight p.m. and seven a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee. This section shall not apply to the use of power tools as provided in subsection (D)(9) of this section.
8. Emergency Signaling Devices. No person shall intentionally sound or permit the sounding outdoors of any fire, burglar or civil defense alarm, siren or whistle, or similar stationary emergency signaling device, except for emergency purposes or for testing as follows:
  - a. Testing of a stationary emergency signaling device shall not occur between seven p.m. and seven a.m. the following day;
  - b. Testing of a stationary emergency signaling device shall use only the minimum cycle test time, in no case to exceed sixty (60) seconds;
  - c. Testing of a complete emergency signaling system, including the functioning of the signaling device and the personnel response to the signaling device, shall not occur more than once in each calendar month. Such testing shall only occur only on weekdays between seven a.m. and seven p.m. and shall be exempt from the time limit specified in subsection (D)(8)(2) of this

section.

9. Power Tools. No person shall operate or permit the operation of any mechanically, electrically or gasoline motor-driven tool during nighttime hours so as to cause a noise disturbance across a residential real property boundary.

10. Pumps, Air Conditioners, Air-Handling Equipment and Other Continuously Operating Equipment. Notwithstanding the general prohibitions of subsection a of this section, no person shall operate or permit the operation of any pump, air conditioning, air-handling or other continuously operating motorized equipment in a state of disrepair or in a manner which otherwise creates a noise disturbance distinguishable from normal operating sounds.

E. Exemptions. The following uses and activities shall be exempt from the sound level regulations except the maximum sound levels provided in Tables 11.80.030-1 and 11.80.030-1A:

1. Sounds resulting from any authorized emergency vehicle when responding to an emergency call or acting in time of an emergency.
  2. Sounds resulting from emergency work as defined in Section [11.80.020](#)
  3. Any aircraft operated in conformity with, or pursuant to, federal law, federal air regulations and air traffic control instruction used pursuant to and within the duly adopted federal air regulations; and any aircraft operating under technical difficulties in any kind of distress, under emergency orders of air traffic control, or being operated pursuant to and subsequent to the declaration of an emergency under federal air regulations.
  4. All sounds coming from the normal operations of interstate motor and rail carriers, to the extent that local regulation of sound levels of such vehicles has been preempted by the Noise Control Act of 1972 (42 U.S.C. § 4901 et seq.) or other applicable federal laws or regulations
  5. Sounds from the operation of motor vehicles, to the extent they are regulated by the California [Vehicle Code](#).
  6. Any constitutionally protected noncommercial speech or expression conducted within or upon a any public right-of-way, public space or other publicly owned property constituting an open or a designated public forum in compliance with any applicable reasonable time, place and manner restrictions on such speech or expression or otherwise pursuant to legal authority.
  7. Sounds produced at otherwise lawful and permitted city-sponsored events, organized sporting events, school assemblies, school playground activities, by permitted fireworks, and by permitted parades on public right-of-way, public space or other publicly owned property.
  8. An event for which a temporary use permit or special event permit has been issued under other provisions of this code, where the provisions of Section [11.80.040](#) are met, the permit granted expressly grants an exemption from specific standards contained in this chapter, and the permittee and all persons under the permittee's reasonable control actually comply with all conditions of such permit. Violation of any condition of such a permit related to sound or sound equipment shall be a violation of this chapter and punishable as such.
- F. Nothing in this chapter shall be construed to limit, modify or repeal any other regulation elsewhere in this code relating to the regulation of noise sources, nor shall any such other regulation be read to permit the emission of noise in violation of any provision of this chapter. (Ord. 740 § 1.2, 2007)

#### 11.80.040 Special provisions for temporary use and special event permits.

The exemption by permit set forth in Section [11.80.030\(E\)\(8\)](#) shall be subject to the following requirements and conditions:

- A. The permit application shall include the name, address and telephone number of the permit applicant; the date, hours and location for which the permit is requested; and the nature of the event or activity. It shall also specify the types of sounds and/or sound equipment to be permitted, the proposed duration of such sound, the specific standards from which the sound is to be exempted, and the reasons for each requested exemption.
- B. The permit shall be issued provided the proposed activity meets the requirements of this section and the issuing official determines that the sound to be emitted at the event as proposed would not be detrimental to the public health, safety or welfare, that the event cannot reasonably achieve its legitimate aims and purposes without the exemption and that the sound levels proposed will not unreasonably damage the peace and quiet enjoyment of the lawful users of surrounding properties, nor constitute a public nuisance.
- C. The official issuing the permit may prescribe any reasonable conditions or requirements he/she deems necessary to minimize noise disturbances upon the community or the surrounding neighborhood, and/or to protect the health, safety or welfare of the public, including participants in the permitted event, including use of mufflers, screens or other sound-attenuating devices.
- D. Any permit granted must be in writing and shall contain all conditions upon which the permit shall be effective.
- E. No more than six events requiring a sound limit exemption may be held at any particular location upon privately owned or controlled property per calendar year, provided further that the number of events shall not exceed the number permitted under the regulations for the type of permit issued. For purposes of this subsection, "location" means a legal parcel of real property or a complete shopping or commercial center or mall sharing common parking and access even if comprised of multiple legal parcels.
- F. The exemption from sound limits under such permit shall not exceed maximum period of four hours in one twenty-four (24) hour day.
- G. The permit will only be granted for hours between nine a.m. and ten p.m. on all days other than Friday and Saturday; and, on Friday and Saturday, between the hours of nine a.m. and one a.m. of the following day, except in the following circumstances:
  1. A permit may be granted for hours between nine a.m. on New Year's Eve and one a.m. the following day (New Year's Day).
  2. A permit may be granted for hours between nine a.m. and two a.m. the following day if there are no residences, hospitals, or nursing homes within a 0.5 mile radius of the property where the function is taking place.
- H. Functions for which the permits are issued shall be limited to a continuous airborne sound level not to exceed seventy (70) dB(A), as measured two hundred (200) feet from the real property boundary of the source property if on private property, or from the source if on public right of way, public space or other publicly owned property. (Ord. 740 § 1.2, 2007)

#### 11.80.050 Measurement or assessment of sound.

A. Measurement With Sound Meter.

1. The measurement of sound shall be made with a sound level meter meeting the standards prescribed by ANSI Section 1.4-1983 (R2006). The instruments shall be maintained in calibration and good working order. A calibration check shall be made of the system at the time of any sound level measurement. Measurements recorded shall be taken so as to provide a proper representation of the source of the sound. The microphone during measurement shall be positioned so as not to create any unnatural enhancement or diminution of the measured sound. A windscreen for the microphone shall be used at all times. However, a violation of this chapter may occur without the occasion of the measurements being made as otherwise provided.
  2. The slow meter response of the sound level meter shall be used in order to best determine the average amplitude.
  3. The measurement shall be made at any point on the property into which the sound is being transmitted and shall be made at least three feet away from any ground, wall, floor, ceiling, roof and other plane surface.
  4. In case of multiple occupancy of a property, the measurement may be made at any point inside the premises to which any complainant has right of legal private occupancy; provided that the measurement shall not be made within three feet of any ground, wall, floor, ceiling, roof or other plane surface.
  5. All measurements of sound provided for in this chapter will be made by qualified officials of the city who are designated by the city manager or designee to operate the apparatus used to make the measurements.
- B. Assessment Without Sound Level Meter. Any police officer, code enforcement officer, or other official designated by the city manager or designee who hears a noise or sound that is plainly audible, as defined in Section [11.80.020](#), in violation of this chapter, may enforce this chapter and shall assess the noise or sound according to the following standards:
1. The primary means of detection shall be by means of the official's normal hearing faculties, not artificially enhanced.
  2. The official shall first attempt to have a direct line of sight and hearing to the vehicle or real property from which the sound or noise emanates so that the official can readily identify the offending source of the sound or noise and the distance involved. If the official is unable to have a direct line of sight and hearing to the vehicle or real property from which the sound or noise emanates, then the official shall confirm the source of the sound or noise by approaching the suspected vehicle or real property until the official is able to obtain a direct line of sight and hearing, and confirm the source of the sound or noise that was heard at the place of the original assessment of the sound or noise.
  3. The official need not be required to identify song titles, artists, or lyrics in order to establish a violation. (Ord. 740 § 1.2, 2007)

#### 11.80.060 Violation.



A. Violation of Sound Level Limits. Any person violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine not to exceed one thousand dollars (\$1,000.00) and/or six months in the county jail, or both. Notwithstanding the foregoing, any violation of the provisions of this chapter may, in the discretion of the citing officer or the city attorney, be cited and/or prosecuted as an infraction or be subject to civil citation pursuant to Chapter 1.10.

B. Joint and Several Responsibility. In addition to the person causing the offending sound, the owner, tenant or lessee of property, or a manager, overseer or agent, or any other person lawfully entitled to possess the property from which the offending sound is emitted at the time the offending sound is emitted, shall be responsible for compliance with this chapter if the additionally responsible party knows or should have known of the offending noise disturbance. It shall not be a lawful defense to assert that some other person caused the sound. The lawful possessor or operator of the premises shall be responsible for operating or maintaining the premises in compliance with this chapter and may be cited regardless of whether or not the person actually causing the sound is also cited.

C. Violation May be Declared a Public Nuisance. The operation or maintenance of any device, equipment, instrument, vehicle or machinery in violation of any provisions of this chapter which endangers the public health, safety and quality of life of residents in the area is declared to be a public nuisance, and may be subject to abatement summarily or by a restraining order or injunction issued by a court of competent jurisdiction. (Ord. 824 § 1.2, 2011; Ord. 740 § 1.2, 2007)

View the [mobile version](#).

**APPENDIX 5.1:**  
**STUDY AREA PHOTOS**

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

JN:11577 Study Area Photos



L1 East  
33, 52' 57.150000", 117, 12' 10.480000"



L1 West  
33, 52' 56.940000", 117, 12' 10.400000"



L2 North  
33, 52' 53.190000", 117, 12' 14.770000"



L2 Northeast  
33, 52' 53.210000", 117, 12' 14.710000"



L3 East  
33, 52' 54.090000", 117, 12' 23.530000"



L3 Northwest  
33, 52' 53.950000", 117, 12' 23.280000"

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



JN:11577 Study Area Photos



L3 West  
33, 52' 53.950000", 117, 12' 23.170000"



L4 East  
33, 52' 58.210000", 117, 12' 26.080000"



L4 North  
33, 52' 58.210000", 117, 12' 26.050000"



L4 Northeast  
33, 52' 58.210000", 117, 12' 26.050000"



L4 South  
33, 52' 58.210000", 117, 12' 26.080000"

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**APPENDIX 5.2:**  
**NOISE LEVEL MEASUREMENT WORKSHEETS**

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of





**24-Hour Noise Level Measurement Summary**

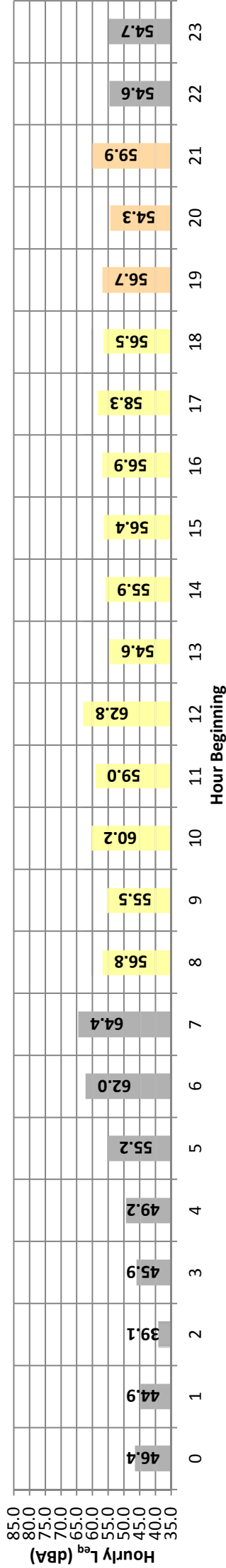
Date: Wednesday, August 15, 2018  
 Project: Continental Villages

Location: L2 - Located south of the Project site across Krameria Avenue near existing residential homes.

Meter: Piccolo I

JN: 11577  
 Analyst: R. Saber

Hourly L<sub>eq</sub> dBA Readings (unadjusted)



| Timeframe        | Hour        | L <sub>eq</sub>       | L <sub>max</sub>       | L <sub>min</sub>       | L1%        | L2%        | L5%        | L8%        | L25%        | L50%        | L90%        | L95%        | L99%        | L <sub>eq</sub>             | Adj.        | Adj. L <sub>eq</sub> |
|------------------|-------------|-----------------------|------------------------|------------------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-----------------------------|-------------|----------------------|
| Night            | 0           | 46.4                  | 73.3                   | 36.5                   | 57.0       | 54.0       | 47.0       | 44.0       | 39.0        | 39.0        | 36.0        | 36.0        | 36.0        | 46.4                        | 10.0        | 56.4                 |
|                  | 1           | 44.9                  | 71.9                   | 36.5                   | 52.0       | 46.0       | 42.0       | 41.0       | 39.0        | 39.0        | 36.0        | 36.0        | 36.0        | 44.9                        | 10.0        | 54.9                 |
|                  | 2           | 39.1                  | 49.2                   | 36.5                   | 44.0       | 42.0       | 41.0       | 40.0       | 39.0        | 39.0        | 36.0        | 36.0        | 36.0        | 39.1                        | 10.0        | 49.1                 |
|                  | 3           | 45.9                  | 70.8                   | 36.5                   | 58.0       | 53.0       | 46.0       | 45.0       | 42.0        | 39.0        | 38.0        | 37.0        | 36.0        | 45.9                        | 10.0        | 55.9                 |
|                  | 4           | 49.2                  | 74.3                   | 39.0                   | 62.0       | 58.0       | 51.0       | 47.0       | 42.0        | 41.0        | 39.0        | 39.0        | 39.0        | 49.2                        | 10.0        | 59.2                 |
|                  | 5           | 55.2                  | 78.4                   | 39.4                   | 68.0       | 65.0       | 59.0       | 56.0       | 47.0        | 44.0        | 44.0        | 41.0        | 41.0        | 55.2                        | 10.0        | 65.2                 |
|                  | 6           | 62.0                  | 85.7                   | 41.3                   | 72.0       | 70.0       | 68.0       | 66.0       | 60.0        | 44.0        | 52.0        | 44.0        | 44.0        | 62.0                        | 10.0        | 72.0                 |
| Day              | 7           | 64.4                  | 81.9                   | 41.1                   | 72.0       | 71.0       | 69.0       | 68.0       | 65.0        | 61.0        | 48.0        | 46.0        | 43.0        | 64.4                        | 0.0         | 64.4                 |
|                  | 8           | 56.8                  | 75.0                   | 39.3                   | 68.0       | 66.0       | 63.0       | 61.0       | 54.0        | 47.0        | 41.0        | 41.0        | 39.0        | 56.8                        | 0.0         | 56.8                 |
|                  | 9           | 55.5                  | 76.2                   | 39.3                   | 68.0       | 65.0       | 61.0       | 58.0       | 51.0        | 46.0        | 41.0        | 41.0        | 39.0        | 55.5                        | 0.0         | 55.5                 |
|                  | 10          | 60.2                  | 86.8                   | 39.3                   | 71.0       | 68.0       | 65.0       | 62.0       | 54.0        | 47.0        | 41.0        | 41.0        | 39.0        | 60.2                        | 0.0         | 60.2                 |
|                  | 11          | 59.0                  | 76.8                   | 39.5                   | 70.0       | 68.0       | 66.0       | 64.0       | 56.0        | 48.0        | 42.0        | 41.0        | 40.0        | 59.0                        | 0.0         | 59.0                 |
|                  | 12          | 62.8                  | 84.3                   | 41.0                   | 72.0       | 70.0       | 68.0       | 67.0       | 62.0        | 57.0        | 46.0        | 44.0        | 42.0        | 62.8                        | 0.0         | 62.8                 |
|                  | 13          | 54.6                  | 76.3                   | 41.2                   | 67.0       | 64.0       | 60.0       | 57.0       | 50.0        | 46.0        | 43.0        | 42.0        | 42.0        | 54.6                        | 0.0         | 54.6                 |
|                  | 14          | 55.9                  | 78.9                   | 43.3                   | 68.0       | 65.0       | 61.0       | 58.0       | 51.0        | 48.0        | 45.0        | 45.0        | 44.0        | 55.9                        | 0.0         | 55.9                 |
|                  | 15          | 56.4                  | 79.0                   | 42.3                   | 69.0       | 66.0       | 61.0       | 59.0       | 52.0        | 48.0        | 45.0        | 44.0        | 43.0        | 56.4                        | 0.0         | 56.4                 |
|                  | 16          | 56.9                  | 77.8                   | 46.0                   | 69.0       | 67.0       | 62.0       | 59.0       | 53.0        | 48.0        | 48.0        | 47.0        | 46.0        | 56.9                        | 0.0         | 56.9                 |
|                  | 17          | 58.3                  | 77.3                   | 47.1                   | 70.0       | 68.0       | 64.0       | 61.0       | 54.0        | 49.0        | 49.0        | 48.0        | 48.0        | 58.3                        | 0.0         | 58.3                 |
| 18               | 56.5        | 78.0                  | 44.6                   | 69.0                   | 66.0       | 60.0       | 57.0       | 51.0       | 49.0        | 47.0        | 46.0        | 45.0        | 56.5        | 0.0                         | 56.5        |                      |
| Evening          | 19          | 56.7                  | 77.2                   | 43.4                   | 69.0       | 67.0       | 62.0       | 59.0       | 52.0        | 48.0        | 45.0        | 44.0        | 44.0        | 56.7                        | 5.0         | 61.7                 |
|                  | 20          | 54.3                  | 77.8                   | 41.1                   | 67.0       | 63.0       | 58.0       | 55.0       | 49.0        | 46.0        | 43.0        | 42.0        | 42.0        | 54.3                        | 5.0         | 59.3                 |
|                  | 21          | 59.9                  | 90.6                   | 39.4                   | 67.0       | 63.0       | 56.0       | 52.0       | 46.0        | 44.0        | 41.0        | 41.0        | 39.0        | 59.9                        | 5.0         | 64.9                 |
| Night            | 22          | 54.6                  | 76.2                   | 42.3                   | 67.0       | 64.0       | 59.0       | 58.0       | 48.0        | 45.0        | 43.0        | 42.0        | 42.0        | 54.6                        | 10.0        | 64.6                 |
|                  | 23          | 54.7                  | 75.1                   | 36.5                   | 64.0       | 60.0       | 58.0       | 58.0       | 54.0        | 51.0        | 39.0        | 39.0        | 36.0        | 54.7                        | 10.0        | 64.7                 |
| <b>Timeframe</b> | <b>Hour</b> | <b>L<sub>eq</sub></b> | <b>L<sub>max</sub></b> | <b>L<sub>min</sub></b> | <b>L1%</b> | <b>L2%</b> | <b>L5%</b> | <b>L8%</b> | <b>L25%</b> | <b>L50%</b> | <b>L90%</b> | <b>L95%</b> | <b>L99%</b> | <b>L<sub>eq</sub> (dBA)</b> |             |                      |
| Day              | Min         | 54.6                  | 75.0                   | 39.3                   | 67.0       | 64.0       | 60.0       | 57.0       | 50.0        | 46.0        | 41.0        | 41.0        | 39.0        | 24-Hour                     | Daytime     | Nighttime            |
|                  | Max         | 62.8                  | 86.8                   | 47.1                   | 72.0       | 70.0       | 68.0       | 67.0       | 62.0        | 57.0        | 49.0        | 48.0        | 48.0        | <b>57.8</b>                 | <b>58.1</b> | <b>57.4</b>          |
| Evening          | Min         | 54.3                  | 77.2                   | 39.4                   | 67.0       | 63.0       | 56.0       | 52.0       | 46.0        | 44.0        | 41.0        | 41.0        | 39.0        | <b>24-Hour CNEL (dBA)</b>   |             |                      |
|                  | Max         | 59.9                  | 90.6                   | 43.4                   | 69.0       | 67.0       | 62.0       | 59.0       | 52.0        | 48.0        | 45.0        | 44.0        | 43.0        | <b>57.8</b>                 | <b>58.1</b> | <b>57.4</b>          |
| Energy Average   | Average     | 57.6                  | Average                | Average                | 67.7       | 64.3       | 58.7       | 55.3       | 46.0        | 46.0        | 43.0        | 42.3        | 41.7        | <b>62.5</b>                 |             |                      |
| Night            | Min         | 39.1                  | 49.2                   | 36.5                   | 44.0       | 42.0       | 41.0       | 40.0       | 39.0        | 39.0        | 36.0        | 36.0        | 36.0        |                             |             |                      |
|                  | Max         | 64.4                  | 85.7                   | 42.3                   | 72.0       | 71.0       | 69.0       | 68.0       | 65.0        | 61.0        | 48.0        | 46.0        | 43.0        |                             |             |                      |
| Energy Average   | Average     | 57.4                  | Average                | Average                | 61.6       | 58.3       | 54.0       | 52.3       | 47.5        | 45.0        | 39.6        | 39.6        | 38.5        |                             |             |                      |



24-Hour Noise Level Measurement Summary

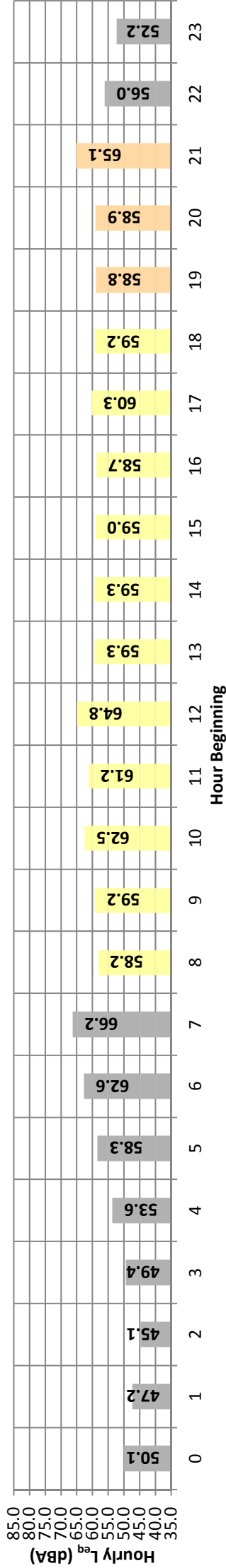
Date: Wednesday, August 15, 2018  
 Project: Continental Villages

Location: L3 - Located southwest of the Project site on Krameria Avenue, adjacent to existing residential homes.

Meter: Piccolo I

JN: 11577  
 Analyst: R. Saber

Hourly L<sub>eq</sub> dBA Readings (unadjusted)



| Timeframe      | Hour    | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> | Hour Beginning |      |      |      |      |      |      |      | L <sub>eq</sub> | Adj.                  | Adj. L <sub>eq</sub> |         |
|----------------|---------|-----------------|------------------|------------------|----------------|------|------|------|------|------|------|------|-----------------|-----------------------|----------------------|---------|
|                |         |                 |                  |                  | L1%            | L2%  | L5%  | L8%  | L25% | L50% | L90% | L95% |                 |                       |                      | L99%    |
| Night          | 0       | 50.1            | 72.0             | 38.1             | 63.0           | 59.0 | 55.0 | 51.0 | 43.0 | 41.0 | 39.0 | 38.0 | 38.0            | 50.1                  | 10.0                 | 60.1    |
|                | 1       | 47.2            | 70.7             | 38.0             | 58.0           | 54.0 | 48.0 | 45.0 | 41.0 | 39.0 | 38.0 | 38.0 | 38.0            | 47.2                  | 10.0                 | 57.2    |
|                | 2       | 45.1            | 66.0             | 38.1             | 56.0           | 53.0 | 49.0 | 46.0 | 41.0 | 39.0 | 38.0 | 38.0 | 38.0            | 45.1                  | 10.0                 | 55.1    |
|                | 3       | 49.4            | 71.2             | 38.1             | 62.0           | 59.0 | 54.0 | 51.0 | 45.0 | 41.0 | 39.0 | 39.0 | 39.0            | 49.4                  | 10.0                 | 59.4    |
|                | 4       | 53.6            | 72.5             | 39.7             | 65.0           | 63.0 | 60.0 | 58.0 | 49.0 | 45.0 | 41.0 | 41.0 | 39.0            | 53.6                  | 10.0                 | 63.6    |
|                | 5       | 58.3            | 79.9             | 40.7             | 71.0           | 67.0 | 63.0 | 61.0 | 53.0 | 49.0 | 43.0 | 42.0 | 41.0            | 58.3                  | 10.0                 | 68.3    |
|                | 6       | 62.6            | 82.9             | 40.7             | 72.0           | 70.0 | 68.0 | 67.0 | 61.0 | 53.0 | 48.0 | 47.0 | 42.0            | 62.6                  | 10.0                 | 72.6    |
| Day            | 7       | 66.2            | 86.1             | 41.9             | 77.0           | 73.0 | 70.0 | 69.0 | 65.0 | 60.0 | 50.0 | 48.0 | 45.0            | 66.2                  | 0.0                  | 66.2    |
|                | 8       | 58.2            | 75.8             | 39.7             | 69.0           | 67.0 | 64.0 | 62.0 | 57.0 | 50.0 | 43.0 | 42.0 | 40.0            | 58.2                  | 0.0                  | 58.2    |
|                | 9       | 59.2            | 86.4             | 38.0             | 70.0           | 67.0 | 64.0 | 62.0 | 55.0 | 49.0 | 43.0 | 42.0 | 40.0            | 59.2                  | 0.0                  | 59.2    |
|                | 10      | 62.5            | 91.3             | 38.0             | 72.0           | 69.0 | 65.0 | 63.0 | 57.0 | 50.0 | 43.0 | 41.0 | 39.0            | 62.5                  | 0.0                  | 62.5    |
|                | 11      | 61.2            | 87.3             | 40.7             | 70.0           | 68.0 | 66.0 | 64.1 | 58.0 | 52.0 | 44.0 | 43.0 | 41.0            | 61.2                  | 0.0                  | 61.2    |
|                | 12      | 64.8            | 89.0             | 41.6             | 75.0           | 71.0 | 68.0 | 67.0 | 63.0 | 57.0 | 47.0 | 46.0 | 43.0            | 64.8                  | 0.0                  | 64.8    |
|                | 13      | 59.3            | 85.5             | 41.0             | 69.0           | 66.0 | 63.0 | 61.0 | 54.2 | 49.0 | 44.0 | 43.0 | 42.0            | 59.3                  | 0.0                  | 59.3    |
|                | 14      | 59.3            | 80.5             | 43.8             | 69.0           | 67.0 | 65.0 | 63.0 | 57.0 | 52.0 | 47.0 | 46.0 | 44.0            | 59.3                  | 0.0                  | 59.3    |
|                | 15      | 59.0            | 82.1             | 41.2             | 69.0           | 67.0 | 64.0 | 62.0 | 56.0 | 50.0 | 45.0 | 44.0 | 42.0            | 59.0                  | 0.0                  | 59.0    |
|                | 16      | 58.7            | 79.7             | 43.4             | 69.0           | 67.0 | 65.0 | 63.0 | 56.0 | 50.0 | 46.0 | 45.0 | 44.0            | 58.7                  | 0.0                  | 58.7    |
| Evening        | 17      | 60.3            | 79.1             | 45.4             | 70.0           | 68.0 | 66.0 | 65.0 | 59.0 | 53.0 | 48.0 | 47.0 | 46.0            | 60.3                  | 0.0                  | 60.3    |
|                | 18      | 59.2            | 81.9             | 42.7             | 69.0           | 68.0 | 65.0 | 63.0 | 56.0 | 51.0 | 46.0 | 45.0 | 44.0            | 59.2                  | 0.0                  | 59.2    |
|                | 19      | 58.8            | 79.2             | 39.9             | 69.0           | 67.0 | 65.0 | 63.0 | 56.0 | 50.0 | 45.0 | 44.0 | 42.0            | 58.8                  | 5.0                  | 63.8    |
| Night          | 20      | 58.9            | 82.7             | 39.4             | 69.0           | 67.0 | 64.0 | 62.0 | 55.0 | 49.0 | 43.0 | 42.0 | 41.0            | 58.9                  | 5.0                  | 63.9    |
|                | 21      | 65.1            | 96.0             | 38.0             | 68.0           | 66.0 | 62.0 | 59.0 | 50.0 | 45.0 | 40.0 | 39.0 | 38.0            | 65.1                  | 5.0                  | 70.1    |
| Night          | 22      | 56.0            | 79.3             | 38.0             | 68.0           | 66.0 | 62.0 | 59.0 | 50.0 | 44.0 | 40.0 | 39.0 | 38.0            | 56.0                  | 10.0                 | 66.0    |
|                | 23      | 52.2            | 73.0             | 35.1             | 65.0           | 63.0 | 57.0 | 53.0 | 44.0 | 41.0 | 38.0 | 37.0 | 35.0            | 52.2                  | 10.0                 | 62.2    |
| Day            | Hour    | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> | L1%            | L2%  | L5%  | L8%  | L25% | L50% | L90% | L95% | L99%            | L <sub>eq</sub> (dBA) |                      |         |
|                | Min     | 58.2            | 75.8             | 38.0             | 69.0           | 66.0 | 63.0 | 61.0 | 54.2 | 49.0 | 43.0 | 41.0 | 39.0            | 39.0                  | 24-Hour              | Daytime |
| Evening        | Hour    | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> | L1%            | L2%  | L5%  | L8%  | L25% | L50% | L90% | L95% | L99%            | 60.2                  | 61.0                 | 58.9    |
|                | Min     | 58.8            | 79.2             | 38.0             | 68.0           | 66.0 | 62.0 | 59.0 | 50.0 | 45.0 | 40.0 | 39.0 | 38.0            | 24-Hour CNEL (dBA)    |                      |         |
| Night          | Hour    | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> | L1%            | L2%  | L5%  | L8%  | L25% | L50% | L90% | L95% | L99%            | 64.5                  |                      |         |
|                | Min     | 45.1            | 66.0             | 35.1             | 56.0           | 53.0 | 48.0 | 45.0 | 41.0 | 38.0 | 37.0 | 35.0 | 35.0            |                       |                      |         |
| Energy Average | Hour    | L <sub>eq</sub> | L <sub>max</sub> | L <sub>min</sub> | L1%            | L2%  | L5%  | L8%  | L25% | L50% | L90% | L95% | L99%            | 64.5                  |                      |         |
|                | Average | 62.0            | 86.1             | 41.9             | 65.7           | 62.7 | 58.6 | 56.0 | 49.2 | 45.5 | 41.4 | 40.7 | 39.3            |                       |                      |         |



Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of Zone, a Plot Plan)

**24-Hour Noise Level Measurement Summary**

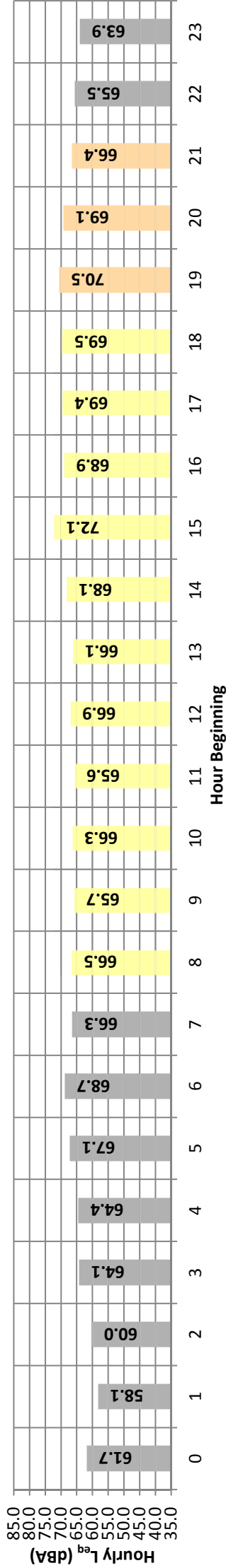
Date: Thursday, August 16, 2018  
 Project: Continental Villages

Location: L4 - Located west of the Project site across Lasselle Street near existing residential homes.

Meter: Piccolo I

JN: 11577  
 Analyst: R. Saber

Hourly L<sub>eq</sub> dBA Readings (unadjusted)



| Timeframe        | Hour        | L <sub>eq</sub>       | L <sub>max</sub>       | L <sub>min</sub>       | L1%        | L2%        | L5%        | L8%        | L25%        | L50%        | L90%        | L95%        | L99%        | L <sub>eq</sub>             | Adj.        | Adj. L <sub>eq</sub> |
|------------------|-------------|-----------------------|------------------------|------------------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-----------------------------|-------------|----------------------|
| Night            | 0           | 61.7                  | 84.3                   | 36.1                   | 73.0       | 71.0       | 67.0       | 65.0       | 55.0        | 45.0        | 38.0        | 38.0        | 37.0        | 61.7                        | 10.0        | 71.7                 |
|                  | 1           | 58.1                  | 76.8                   | 35.2                   | 71.0       | 69.0       | 65.0       | 62.0       | 50.0        | 41.0        | 35.0        | 35.0        | 35.0        | 58.1                        | 10.0        | 68.1                 |
|                  | 2           | 60.0                  | 82.3                   | 35.2                   | 73.0       | 71.0       | 66.0       | 63.0       | 50.0        | 40.0        | 35.0        | 35.0        | 35.0        | 60.0                        | 10.0        | 70.0                 |
|                  | 3           | 64.1                  | 92.6                   | 35.2                   | 74.0       | 72.0       | 69.0       | 66.0       | 59.0        | 49.0        | 38.0        | 36.0        | 35.0        | 64.1                        | 10.0        | 74.1                 |
|                  | 4           | 64.4                  | 82.7                   | 37.6                   | 74.0       | 72.0       | 70.0       | 69.0       | 64.0        | 58.0        | 44.0        | 41.0        | 38.0        | 64.4                        | 10.0        | 74.4                 |
|                  | 5           | 67.1                  | 85.9                   | 38.2                   | 77.0       | 75.0       | 72.0       | 71.0       | 66.0        | 60.0        | 49.0        | 47.0        | 43.0        | 67.1                        | 10.0        | 77.1                 |
|                  | 6           | 68.7                  | 88.1                   | 45.1                   | 78.0       | 76.0       | 73.0       | 72.0       | 68.0        | 60.0        | 55.0        | 53.0        | 49.0        | 68.7                        | 10.0        | 78.7                 |
| Day              | 7           | 66.3                  | 84.4                   | 44.2                   | 75.0       | 73.0       | 71.0       | 70.0       | 66.0        | 63.0        | 55.0        | 52.0        | 48.0        | 66.3                        | 0.0         | 66.3                 |
|                  | 8           | 66.5                  | 88.8                   | 43.5                   | 76.0       | 74.0       | 71.0       | 70.0       | 65.0        | 62.0        | 52.0        | 49.0        | 46.0        | 66.5                        | 0.0         | 66.5                 |
|                  | 9           | 65.7                  | 81.5                   | 42.6                   | 75.0       | 74.0       | 72.0       | 70.0       | 65.0        | 61.0        | 49.0        | 47.0        | 45.0        | 65.7                        | 0.0         | 65.7                 |
|                  | 10          | 66.3                  | 89.6                   | 40.7                   | 75.0       | 74.0       | 72.0       | 70.0       | 66.0        | 61.0        | 50.0        | 47.0        | 45.0        | 66.3                        | 0.0         | 66.3                 |
|                  | 11          | 65.6                  | 82.1                   | 43.0                   | 75.0       | 73.0       | 71.0       | 69.0       | 65.0        | 61.0        | 51.0        | 49.0        | 46.0        | 65.6                        | 0.0         | 65.6                 |
|                  | 12          | 66.9                  | 84.9                   | 44.3                   | 77.0       | 74.0       | 72.0       | 70.0       | 66.0        | 62.0        | 54.0        | 52.0        | 47.0        | 66.9                        | 0.0         | 66.9                 |
|                  | 13          | 66.1                  | 84.1                   | 42.9                   | 74.0       | 73.0       | 71.0       | 70.0       | 66.0        | 62.0        | 51.0        | 48.0        | 44.0        | 66.1                        | 0.0         | 66.1                 |
|                  | 14          | 68.1                  | 83.8                   | 46.5                   | 78.0       | 76.0       | 73.0       | 71.0       | 68.0        | 63.0        | 56.0        | 54.0        | 50.0        | 68.1                        | 0.0         | 68.1                 |
|                  | 15          | 72.1                  | 101.8                  | 42.9                   | 80.0       | 77.0       | 74.0       | 72.0       | 68.0        | 63.0        | 54.0        | 51.0        | 47.0        | 72.1                        | 0.0         | 72.1                 |
|                  | 16          | 68.9                  | 86.4                   | 43.4                   | 78.0       | 76.0       | 74.0       | 73.0       | 69.0        | 64.0        | 54.0        | 51.0        | 47.0        | 68.9                        | 0.0         | 68.9                 |
| 17               | 69.4        | 87.8                  | 45.9                   | 80.0                   | 77.0       | 74.0       | 73.0       | 69.0       | 64.0        | 56.0        | 54.0        | 48.0        | 69.4        | 0.0                         | 69.4        |                      |
| Evening          | 18          | 69.5                  | 92.9                   | 43.6                   | 79.0       | 77.0       | 74.0       | 73.0       | 68.0        | 64.0        | 54.0        | 51.0        | 46.0        | 69.5                        | 0.0         | 69.5                 |
|                  | 19          | 70.5                  | 99.1                   | 44.3                   | 78.0       | 76.0       | 73.0       | 72.0       | 68.0        | 64.0        | 53.0        | 50.0        | 47.0        | 70.5                        | 5.0         | 75.5                 |
|                  | 20          | 69.1                  | 95.7                   | 42.2                   | 79.0       | 76.0       | 73.0       | 72.0       | 67.0        | 62.0        | 51.0        | 48.0        | 45.0        | 69.1                        | 5.0         | 74.1                 |
| Night            | 21          | 66.4                  | 88.3                   | 38.2                   | 76.0       | 74.0       | 72.0       | 70.0       | 65.0        | 59.0        | 47.0        | 44.0        | 41.0        | 66.4                        | 5.0         | 71.4                 |
|                  | 22          | 65.5                  | 86.6                   | 38.2                   | 76.0       | 74.0       | 71.0       | 69.0       | 63.0        | 57.0        | 43.0        | 41.0        | 38.0        | 65.5                        | 10.0        | 75.5                 |
|                  |             | 23                    | 63.9                   | 88.2                   | 35.2       | 75.0       | 73.0       | 67.0       | 59.0        | 49.0        | 40.0        | 38.0        | 38.0        | 63.9                        | 10.0        | 73.9                 |
| <b>Timeframe</b> | <b>Hour</b> | <b>L<sub>eq</sub></b> | <b>L<sub>max</sub></b> | <b>L<sub>min</sub></b> | <b>L1%</b> | <b>L2%</b> | <b>L5%</b> | <b>L8%</b> | <b>L25%</b> | <b>L50%</b> | <b>L90%</b> | <b>L95%</b> | <b>L99%</b> | <b>L<sub>eq</sub> (dBA)</b> |             |                      |
| Day              | Min         | 65.6                  | 81.5                   | 40.7                   | 74.0       | 73.0       | 71.0       | 69.0       | 65.0        | 61.0        | 49.0        | 47.0        | 44.0        | 24-Hour                     | Daytime     | Nighttime            |
| Evening          | Max         | 72.1                  | 101.8                  | 46.5                   | 80.0       | 77.0       | 74.0       | 73.0       | 69.0        | 64.0        | 56.0        | 54.0        | 50.0        | <b>67.3</b>                 | <b>68.4</b> | <b>64.9</b>          |
| Energy Average   | Average     | 68.2                  | Average:               | Average:               | 77.0       | 75.0       | 72.5       | 71.0       | 66.8        | 62.5        | 52.8        | 50.3        | 46.5        | <b>24-Hour CNEL (dBA)</b>   |             |                      |
| Evening          | Min         | 66.4                  | 88.3                   | 38.2                   | 76.0       | 74.0       | 72.0       | 70.0       | 68.0        | 59.0        | 47.0        | 44.0        | 41.0        | <b>67.3</b>                 | <b>68.4</b> | <b>64.9</b>          |
| Energy Average   | Max         | 70.5                  | 99.1                   | 44.3                   | 79.0       | 76.0       | 73.0       | 72.0       | 68.0        | 64.0        | 53.0        | 50.0        | 47.0        |                             |             |                      |
| Energy Average   | Average:    | 69.0                  | Average:               | Average:               | 77.7       | 75.3       | 72.7       | 71.3       | 66.7        | 61.7        | 50.3        | 47.3        | 44.3        |                             |             |                      |
| Night            | Min         | 58.1                  | 76.8                   | 35.2                   | 71.0       | 69.0       | 65.0       | 62.0       | 50.0        | 40.0        | 35.0        | 35.0        | 35.0        |                             |             |                      |
| Energy Average   | Max         | 68.7                  | 92.6                   | 45.1                   | 78.0       | 76.0       | 73.0       | 72.0       | 68.0        | 64.0        | 55.0        | 53.0        | 49.0        |                             |             |                      |
| Energy Average   | Average:    | 64.9                  | Average:               | Average:               | 74.6       | 72.6       | 69.3       | 67.4       | 60.0        | 52.7        | 43.2        | 41.6        | 39.6        | <b>72.5</b>                 |             |                      |



**APPENDIX 7.1:**  
**OFF-SITE TRAFFIC NOISE LEVEL CONTOURS**

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing Without Project<br>Road Name: Kitching St.<br>Road Segment: n/o Krameria Av.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 6,900 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 690 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 50 feet  |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| FHWA Noise Model Calculations   |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 68.46         | -3.56        | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 79.45         | -20.80       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 84.25         | -24.76       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| Unmitigated Noise Levels (without Topo and barrier attenuation)   |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 65.6          | 63.7         | 62.0        | 55.9  | 64.5    | 65.1          |            |
| Medium Trucks:  | 59.4          | 57.9         | 51.6        | 50.0  | 58.5    | 58.7          |            |
| Heavy Trucks:   | 60.3          | 58.9         | 49.8        | 51.1  | 59.4    | 59.5          |            |
| Vehicle Noise:  | 67.5          | 65.7         | 62.6        | 57.9  | 66.5    | 66.9          |            |
| Centerline Distance to Noise Contour (in feet)  |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 26          | 55  | 119     | 255           |            |
| CNEL:   |               |              | 27          | 59  | 127     | 274           |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing Without Project<br>Road Name: Lasselle St.<br>Road Segment: n/o Iris Av.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 25,700 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 2,570 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| FHWA Noise Model Calculations   |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 1.69         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -15.55       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -19.50       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| Unmitigated Noise Levels (without Topo and barrier attenuation)   |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.4          | 69.5         | 67.7        | 61.7  | 70.3    | 70.9          |            |
| Medium Trucks:  | 65.0          | 63.5         | 57.1        | 55.6  | 64.0    | 64.3          |            |
| Heavy Trucks:   | 65.4          | 64.0         | 55.0        | 56.2  | 64.6    | 64.7          |            |
| Vehicle Noise:  | 73.1          | 71.4         | 68.3        | 63.5  | 72.1    | 72.5          |            |
| Centerline Distance to Noise Contour (in feet)  |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 69          | 148   | 319     | 687           |            |
| CNEL:   |               |              | 74          | 159   | 343     | 738           |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing Without Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Iris Av.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 32,100 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,210 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| FHWA Noise Model Calculations   |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 68.46         | 3.11         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 79.45         | -14.12       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 84.25         | -18.08       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| Unmitigated Noise Levels (without Topo and barrier attenuation)   |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.1          | 69.2         | 67.4        | 61.4  | 70.0    | 70.6          |            |
| Medium Trucks:  | 64.9          | 63.4         | 57.0        | 55.4  | 63.9    | 64.1          |            |
| Heavy Trucks:   | 65.7          | 64.3         | 55.2        | 56.5  | 64.9    | 65.0          |            |
| Vehicle Noise:  | 72.9          | 71.2         | 68.0        | 63.4  | 71.9    | 72.4          |            |
| Centerline Distance to Noise Contour (in feet)  |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 67          | 144   | 311     | 669           |            |
| CNEL:   |               |              | 72          | 155   | 333     | 718           |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing Without Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Cauhuilla Dr.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 25,400 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 2,540 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| FHWA Noise Model Calculations   |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 1.64         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -15.60       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -19.55       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| Unmitigated Noise Levels (without Topo and barrier attenuation)   |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.4          | 69.5         | 67.7        | 61.6  | 70.3    | 70.9          |            |
| Medium Trucks:  | 64.9          | 63.4         | 57.1        | 55.5  | 64.0    | 64.2          |            |
| Heavy Trucks:   | 65.4          | 63.9         | 54.9        | 56.1  | 64.5    | 64.6          |            |
| Vehicle Noise:  | 73.1          | 71.3         | 68.3        | 63.5  | 72.0    | 72.5          |            |
| Centerline Distance to Noise Contour (in feet)  |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 68          | 147   | 317     | 682           |            |
| CNEL:   |               |              | 73          | 158   | 340     | 733           |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing Without Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Krameria Av.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 31,900 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,190 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 2.63         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -14.61       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -18.56       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 72.3          | 70.4         | 68.7        | 62.6  | 71.2    | 71.8          |            |
| Medium Trucks:  | 65.9          | 64.4         | 58.1        | 56.5  | 65.0    | 65.2          |            |
| Heavy Trucks:   | 66.3          | 64.9         | 55.9        | 57.1  | 65.5    | 65.6          |            |
| Vehicle Noise:  | 74.0          | 72.3         | 69.2        | 64.5  | 73.0    | 73.5          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 79  | 171     | 368           | 794        |
| CNEL:   |               |              |             | 85  | 184     | 396           | 853        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing Without Project<br>Road Name: Iris Av.<br>Road Segment: w/o Lasselle St.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 26,100 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 2,610 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 1.76         | -0.51       | -1.20   | -4.71   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -15.48       | -0.49       | -1.20   | -4.88   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -19.44       | -0.49       | -1.20   | -5.29   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 70.3          | 68.4         | 66.6        | 60.5  | 69.2    | 69.8          |            |
| Medium Trucks:  | 63.8          | 62.3         | 56.0        | 54.4  | 62.9    | 63.1          |            |
| Heavy Trucks:   | 64.2          | 62.8         | 53.8        | 55.0  | 63.4    | 63.5          |            |
| Vehicle Noise:  | 72.0          | 70.2         | 67.2        | 62.4  | 70.9    | 71.4          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 77  | 166     | 358           | 771        |
| CNEL:   |               |              |             | 83  | 179     | 385           | 829        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing Without Project<br>Road Name: Iris Av.<br>Road Segment: e/o Lasselle St.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 33,100 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,310 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 2.79         | -0.51       | -1.20   | -4.71   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -14.45       | -0.49       | -1.20   | -4.88   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -18.40       | -0.49       | -1.20   | -5.29   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.3          | 69.4         | 67.6        | 61.6  | 70.2    | 70.8          |            |
| Medium Trucks:  | 64.9          | 63.4         | 57.0        | 55.4  | 63.9    | 64.1          |            |
| Heavy Trucks:   | 65.3          | 63.9         | 54.8        | 56.1  | 64.4    | 64.6          |            |
| Vehicle Noise:  | 73.0          | 71.2         | 68.2        | 63.4  | 72.0    | 72.4          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 90  | 195     | 420           | 904        |
| CNEL:   |               |              |             | 97  | 209     | 451           | 971        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing Without Project<br>Road Name: Krameria Av.<br>Road Segment: w/o Kitching St.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 9,800 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 980 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 64.30         | -0.95        | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 75.75         | -18.19       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 81.57         | -22.14       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 64.1          | 62.2         | 60.4        | 54.4  | 63.0    | 63.6          |            |
| Medium Trucks:  | 58.3          | 56.8         | 50.5        | 48.9  | 57.4    | 57.6          |            |
| Heavy Trucks:   | 60.2          | 58.8         | 49.7        | 51.0  | 59.3    | 59.5          |            |
| Vehicle Noise:  | 66.3          | 64.6         | 61.2        | 56.8  | 65.3    | 65.7          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 21  | 46      | 100           | 214        |
| CNEL:   |               |              |             | 23  | 49      | 106           | 229        |

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: Existing Without Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Kitching St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 9,200 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 920 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 21 44 95 206   |  |  |  | CNEL: 22 47 102 220   |     |         |       |

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: Existing Without Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Lasselle St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 5,600 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 560 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 15 32 69 148   |  |  |  | CNEL: 16 34 73 158  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: Existing Without Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Colt Wy.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 4,300 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 430 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 12 27 57 124   |  |  |  | CNEL: 13 28 61 132  |     |         |       |

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: Existing With Project<br>Road Name: Kitching St.<br>Road Segment: n/o Krameria Av.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 7,100 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 710 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 26 56 121 260  |  |  |  | CNEL: 28 60 130 279   |     |         |       |

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing With Project<br>Road Name: Lasselle St.<br>Road Segment: n/o Iris Av.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 26,000 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 2,600 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| FHWA Noise Model Calculations   |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 1.74         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -15.50       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -19.45       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| Unmitigated Noise Levels (without Topo and barrier attenuation)   |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.5          | 69.6         | 67.8        | 61.7  | 70.4    | 71.0          |            |
| Medium Trucks:  | 65.0          | 63.5         | 57.2        | 55.6  | 64.1    | 64.3          |            |
| Heavy Trucks:   | 65.5          | 64.0         | 55.0        | 56.3  | 64.6    | 64.7          |            |
| Vehicle Noise:  | 73.2          | 71.4         | 68.4        | 63.6  | 72.1    | 72.6          |            |
| Centerline Distance to Noise Contour (in feet)  |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 69          | 149   | 321     | 693           |            |
| CNEL:   |               |              | 74          | 160   | 345     | 744           |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing With Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Iris Av.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 33,000 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,300 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| FHWA Noise Model Calculations   |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 68.46         | 3.23         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 79.45         | -14.00       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 84.25         | -17.96       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| Unmitigated Noise Levels (without Topo and barrier attenuation)   |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.2          | 69.3         | 67.5        | 61.5  | 70.1    | 70.7          |            |
| Medium Trucks:  | 65.0          | 63.5         | 57.1        | 55.6  | 64.0    | 64.3          |            |
| Heavy Trucks:   | 65.8          | 64.4         | 55.4        | 56.6  | 65.0    | 65.1          |            |
| Vehicle Noise:  | 73.0          | 71.3         | 68.1        | 63.5  | 72.0    | 72.5          |            |
| Centerline Distance to Noise Contour (in feet)  |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 68          | 147   | 316     | 682           |            |
| CNEL:   |               |              | 73          | 158   | 339     | 731           |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing With Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Cahuilla Dr.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 26,300 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 2,630 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| FHWA Noise Model Calculations   |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 1.79         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -15.45       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -19.40       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| Unmitigated Noise Levels (without Topo and barrier attenuation)   |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.5          | 69.6         | 67.8        | 61.8  | 70.4    | 71.0          |            |
| Medium Trucks:  | 65.1          | 63.6         | 57.2        | 55.7  | 64.1    | 64.4          |            |
| Heavy Trucks:   | 65.5          | 64.1         | 55.1        | 56.3  | 64.7    | 64.8          |            |
| Vehicle Noise:  | 73.2          | 71.5         | 68.4        | 63.6  | 72.2    | 72.6          |            |
| Centerline Distance to Noise Contour (in feet)  |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 70          | 150   | 324     | 698           |            |
| CNEL:   |               |              | 75          | 162   | 348     | 750           |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing With Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Krameria Av.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 32,400 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,240 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| FHWA Noise Model Calculations   |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 2.70         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -14.54       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -18.50       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| Unmitigated Noise Levels (without Topo and barrier attenuation)   |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 72.4          | 70.5         | 68.7        | 62.7  | 71.3    | 71.9          |            |
| Medium Trucks:  | 66.0          | 64.5         | 58.1        | 56.6  | 65.0    | 65.3          |            |
| Heavy Trucks:   | 66.4          | 65.0         | 56.0        | 57.2  | 65.6    | 65.7          |            |
| Vehicle Noise:  | 74.1          | 72.4         | 69.3        | 64.5  | 73.1    | 73.5          |            |
| Centerline Distance to Noise Contour (in feet)  |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 80          | 173   | 372     | 802           |            |
| CNEL:   |               |              | 86          | 186   | 400     | 862           |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing With Project<br>Road Name: Iris Av.<br>Road Segment: w/o Lasselle St.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 26,400 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 2,640 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 1.81         | -0.51       | -1.20   | -4.71   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -15.43       | -0.49       | -1.20   | -4.88   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -19.39       | -0.49       | -1.20   | -5.29   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 70.3          | 68.4         | 66.6        | 60.6  | 69.2    | 69.8          |            |
| Medium Trucks:  | 63.9          | 62.4         | 56.0        | 54.5  | 62.9    | 63.2          |            |
| Heavy Trucks:   | 64.3          | 62.9         | 53.8        | 55.1  | 63.4    | 63.6          |            |
| Vehicle Noise:  | 72.0          | 70.2         | 67.2        | 62.4  | 71.0    | 71.4          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 78  | 167     | 361           | 777        |
| CNEL:   |               |              |             | 84  | 180     | 388           | 835        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing With Project<br>Road Name: Iris Av.<br>Road Segment: e/o Lasselle St.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 33,400 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,340 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 2.83         | -0.51       | -1.20   | -4.71   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -14.41       | -0.49       | -1.20   | -4.88   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -18.37       | -0.49       | -1.20   | -5.29   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.3          | 69.4         | 67.7        | 61.6  | 70.2    | 70.8          |            |
| Medium Trucks:  | 64.9          | 63.4         | 57.0        | 55.5  | 63.9    | 64.2          |            |
| Heavy Trucks:   | 65.3          | 63.9         | 54.9        | 56.1  | 64.5    | 64.6          |            |
| Vehicle Noise:  | 73.0          | 71.3         | 68.2        | 63.4  | 72.0    | 72.5          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 91  | 196     | 422           | 909        |
| CNEL:   |               |              |             | 98  | 210     | 453           | 977        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing With Project<br>Road Name: Krameria Av.<br>Road Segment: w/o Kitching St.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 10,100 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 1,010 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 64.30         | -0.82        | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 75.75         | -18.05       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 81.57         | -22.01       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 64.2          | 62.3         | 60.6        | 54.5  | 63.1    | 63.7          |            |
| Medium Trucks:  | 58.5          | 57.0         | 50.6        | 49.1  | 57.5    | 57.8          |            |
| Heavy Trucks:   | 60.3          | 58.9         | 49.9        | 51.1  | 59.5    | 59.6          |            |
| Vehicle Noise:  | 66.5          | 64.7         | 61.3        | 56.9  | 65.4    | 65.9          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 22  | 47      | 102           | 219        |
| CNEL:   |               |              |             | 23  | 50      | 108           | 234        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: Existing With Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Kitching St.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 9,900 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 990 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 64.30         | -0.90        | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 75.75         | -18.14       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 81.57         | -22.10       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 64.1          | 62.2         | 60.5        | 54.4  | 63.0    | 63.6          |            |
| Medium Trucks:  | 58.4          | 56.9         | 50.5        | 49.0  | 57.4    | 57.7          |            |
| Heavy Trucks:   | 60.2          | 58.8         | 49.8        | 51.0  | 59.4    | 59.5          |            |
| Vehicle Noise:  | 66.4          | 64.7         | 61.2        | 56.8  | 65.4    | 65.8          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 22  | 47      | 100           | 216        |
| CNEL:   |               |              |             | 23  | 50      | 107           | 231        |

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
| Scenario: Existing With Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Lasselle St.  |  |  |  | Project Name: Continental<br>Job Number: 11577   |  |  |  |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS   |  |  |  |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>  |  |  |  |
| Average Daily Traffic (Adt): 6,800 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 680 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15  |  |  |  |
| <b>Site Data</b><br>Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | <b>Vehicle Mix</b>   |  |  |  |
|   |  |  |  | VehicleType   Day   Evening   Night   Daily<br>Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |  |  |  |
| <b>FWHA Noise Model Calculations</b><br>VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berm Atten<br>Autos: 64.30 -2.53 1.94 -1.20 -4.61 0.000 0.000<br>Medium Trucks: 75.75 -19.77 1.98 -1.20 -4.87 0.000 0.000<br>Heavy Trucks: 81.57 -23.73 1.98 -1.20 -5.50 0.000 0.000  |  |  |  | <b>Noise Source Elevations (in feet)</b>   |  |  |  |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0  |  |  |  |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b><br>VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL<br>Autos: 62.5 60.6 58.8 52.8 61.4 62.0<br>Medium Trucks: 56.8 55.2 48.9 47.3 55.8 56.0<br>Heavy Trucks: 58.6 57.2 48.2 49.4 57.8 57.9<br>Vehicle Noise: 64.7 63.0 59.6 55.2 63.7 64.2   |  |  |  | <b>Lane Equivalent Distance (in feet)</b>  |  |  |  |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332   |  |  |  |
| <b>Centerline Distance to Noise Contour (in feet)</b><br>  70 dBA   65 dBA   60 dBA   55 dBA<br>Ldn: 17 36 78 168<br>CNEL: 18 39 83 180   |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
| Scenario: Existing With Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Cott Wy.  |  |  |  | Project Name: Continental<br>Job Number: 11577   |  |  |  |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS   |  |  |  |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>  |  |  |  |
| Average Daily Traffic (Adt): 4,500 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 450 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15  |  |  |  |
| <b>Site Data</b><br>Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | <b>Vehicle Mix</b>   |  |  |  |
|   |  |  |  | VehicleType   Day   Evening   Night   Daily<br>Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |  |  |  |
| <b>FWHA Noise Model Calculations</b><br>VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berm Atten<br>Autos: 64.30 -4.33 1.94 -1.20 -4.61 0.000 0.000<br>Medium Trucks: 75.75 -21.57 1.98 -1.20 -4.87 0.000 0.000<br>Heavy Trucks: 81.57 -25.52 1.98 -1.20 -5.50 0.000 0.000  |  |  |  | <b>Noise Source Elevations (in feet)</b>   |  |  |  |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0  |  |  |  |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b><br>VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL<br>Autos: 60.7 58.8 57.0 51.0 59.6 60.2<br>Medium Trucks: 55.0 53.5 47.1 45.6 54.0 54.2<br>Heavy Trucks: 56.8 55.4 46.4 47.6 56.0 56.1<br>Vehicle Noise: 63.0 61.2 57.8 53.4 61.9 62.4   |  |  |  | <b>Lane Equivalent Distance (in feet)</b>  |  |  |  |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332   |  |  |  |
| <b>Centerline Distance to Noise Contour (in feet)</b><br>  70 dBA   65 dBA   60 dBA   55 dBA<br>Ldn: 13 27 59 128<br>CNEL: 14 29 63 136   |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
| Scenario: OY 2023 Without Project<br>Road Name: Kitching St.<br>Road Segment: n/o Krameria Av.  |  |  |  | Project Name: Continental<br>Job Number: 11577   |  |  |  |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS   |  |  |  |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>  |  |  |  |
| Average Daily Traffic (Adt): 7,700 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 770 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15  |  |  |  |
| <b>Site Data</b><br>Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | <b>Vehicle Mix</b>   |  |  |  |
|   |  |  |  | VehicleType   Day   Evening   Night   Daily<br>Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |  |  |  |
| <b>FWHA Noise Model Calculations</b><br>VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berm Atten<br>Autos: 68.46 -3.09 1.94 -1.20 -4.61 0.000 0.000<br>Medium Trucks: 79.45 -20.32 1.98 -1.20 -4.87 0.000 0.000<br>Heavy Trucks: 84.25 -24.28 1.98 -1.20 -5.50 0.000 0.000  |  |  |  | <b>Noise Source Elevations (in feet)</b>   |  |  |  |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0  |  |  |  |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b><br>VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL<br>Autos: 66.1 64.2 62.4 56.4 65.0 65.6<br>Medium Trucks: 59.9 58.4 52.0 50.5 59.0 59.2<br>Heavy Trucks: 60.7 59.3 50.3 51.5 59.9 60.0<br>Vehicle Noise: 68.0 66.2 63.1 58.4 66.9 67.4   |  |  |  | <b>Lane Equivalent Distance (in feet)</b>  |  |  |  |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966   |  |  |  |
| <b>Centerline Distance to Noise Contour (in feet)</b><br>  70 dBA   65 dBA   60 dBA   55 dBA<br>Ldn: 27 59 128 275<br>CNEL: 29 63 137 295   |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
| Scenario: OY 2023 Without Project<br>Road Name: Lasselle St.<br>Road Segment: n/o Iris Av.  |  |  |  | Project Name: Continental<br>Job Number: 11577   |  |  |  |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS   |  |  |  |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>  |  |  |  |
| Average Daily Traffic (Adt): 32,100 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,210 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15  |  |  |  |
| <b>Site Data</b><br>Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | <b>Vehicle Mix</b>   |  |  |  |
|   |  |  |  | VehicleType   Day   Evening   Night   Daily<br>Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |  |  |  |
| <b>FWHA Noise Model Calculations</b><br>VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berm Atten<br>Autos: 70.20 2.66 0.71 -1.20 -4.65 0.000 0.000<br>Medium Trucks: 81.00 -14.58 0.74 -1.20 -4.87 0.000 0.000<br>Heavy Trucks: 85.38 -18.54 0.73 -1.20 -5.43 0.000 0.000   |  |  |  | <b>Noise Source Elevations (in feet)</b>   |  |  |  |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0  |  |  |  |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b><br>VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL<br>Autos: 72.4 70.5 68.7 62.6 71.3 71.9<br>Medium Trucks: 66.0 64.4 58.1 56.5 65.0 65.2<br>Heavy Trucks: 66.4 65.0 55.9 57.2 65.5 65.6<br>Vehicle Noise: 74.1 72.3 69.3 64.5 73.0 73.5   |  |  |  | <b>Lane Equivalent Distance (in feet)</b>  |  |  |  |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966   |  |  |  |
| <b>Centerline Distance to Noise Contour (in feet)</b><br>  70 dBA   65 dBA   60 dBA   55 dBA<br>Ldn: 80 172 370 797<br>CNEL: 86 184 397 856   |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |

Friday, November 16, 2018

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 Without Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Iris Av.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 37,700 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,770 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 68.46         | 3.81         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 79.45         | -13.43       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 84.25         | -17.38       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.8          | 69.9         | 68.1        | 62.1  | 70.7    | 71.3          |            |
| Medium Trucks:  | 65.6          | 64.1         | 57.7        | 56.1  | 64.6    | 64.8          |            |
| Heavy Trucks:   | 66.4          | 65.0         | 55.9        | 57.2  | 65.6    | 65.7          |            |
| Vehicle Noise:  | 73.6          | 71.9         | 68.7        | 64.1  | 72.6    | 73.1          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 74  | 160     | 346           | 745        |
| CNEL:   |               |              |             | 80  | 172     | 371           | 799        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 Without Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Cahuilla Dr.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 29,800 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 2,980 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 2.33         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -14.90       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -18.86       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 72.0          | 70.1         | 68.4        | 62.3  | 70.9    | 71.6          |            |
| Medium Trucks:  | 65.6          | 64.1         | 57.8        | 56.2  | 64.7    | 64.9          |            |
| Heavy Trucks:   | 66.1          | 64.6         | 55.6        | 56.8  | 65.2    | 65.3          |            |
| Vehicle Noise:  | 73.7          | 72.0         | 68.9        | 64.2  | 72.7    | 73.2          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 76  | 163     | 352           | 759        |
| CNEL:   |               |              |             | 81  | 176     | 378           | 815        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 Without Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Krameria Av.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 36,600 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,660 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 3.23         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -14.01       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -17.97       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 72.9          | 71.0         | 69.3        | 63.2  | 71.8    | 72.4          |            |
| Medium Trucks:  | 66.5          | 65.0         | 58.7        | 57.1  | 65.6    | 65.8          |            |
| Heavy Trucks:   | 66.9          | 65.5         | 56.5        | 57.7  | 66.1    | 66.2          |            |
| Vehicle Noise:  | 74.6          | 72.9         | 69.8        | 65.1  | 73.6    | 74.1          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 87  | 187     | 404           | 870        |
| CNEL:   |               |              |             | 93  | 201     | 434           | 935        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 Without Project<br>Road Name: Iris Av.<br>Road Segment: w/o Lasselle St.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 31,100 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,110 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 2.52         | -0.51       | -1.20   | -4.71   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -14.72       | -0.49       | -1.20   | -4.88   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -18.68       | -0.49       | -1.20   | -5.29   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.0          | 69.1         | 67.3        | 61.3  | 69.9    | 70.5          |            |
| Medium Trucks:  | 64.6          | 63.1         | 56.7        | 55.2  | 63.6    | 63.9          |            |
| Heavy Trucks:   | 65.0          | 63.6         | 54.6        | 55.8  | 64.2    | 64.3          |            |
| Vehicle Noise:  | 72.7          | 71.0         | 67.9        | 63.1  | 71.7    | 72.1          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 87  | 187     | 402           | 867        |
| CNEL:   |               |              |             | 93  | 201     | 432           | 931        |

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 Without Project<br>Road Name: Iris Av.<br>Road Segment: e/o Lasselle St.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 42,100 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 4,210 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 3.83         | -0.51       | -1.20   | -4.71   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -13.40       | -0.49       | -1.20   | -4.88   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -17.36       | -0.49       | -1.20   | -5.29   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 72.3          | 70.4         | 68.7        | 62.6  | 71.2    | 71.8          |            |
| Medium Trucks:  | 65.9          | 64.4         | 58.0        | 56.5  | 65.0    | 65.2          |            |
| Heavy Trucks:   | 66.3          | 64.9         | 55.9        | 57.1  | 65.5    | 65.6          |            |
| Vehicle Noise:  | 74.0          | 72.3         | 69.2        | 64.4  | 73.0    | 73.5          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 106         | 229   | 492     | 1,061         |            |
| CNEL:   |               |              | 114         | 246   | 529     | 1,140         |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 Without Project<br>Road Name: Krameria Av.<br>Road Segment: w/o Kitching St.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 12,400 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 1,240 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 64.30         | 0.07         | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 75.75         | -17.16       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 81.57         | -21.12       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 65.1          | 63.2         | 61.4        | 55.4  | 64.0    | 64.6          |            |
| Medium Trucks:  | 59.4          | 57.9         | 51.5        | 50.0  | 58.4    | 58.6          |            |
| Heavy Trucks:   | 61.2          | 59.8         | 50.8        | 52.0  | 60.4    | 60.5          |            |
| Vehicle Noise:  | 67.4          | 65.6         | 62.2        | 57.8  | 66.3    | 66.8          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 25          | 54  | 116     | 251           |            |
| CNEL:   |               |              | 27          | 58  | 124     | 268           |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 Without Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Kitching St.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 11,700 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 1,170 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 64.30         | -0.18        | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 75.75         | -17.42       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 81.57         | -21.37       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 64.9          | 63.0         | 61.2        | 55.1  | 63.8    | 64.4          |            |
| Medium Trucks:  | 59.1          | 57.6         | 51.2        | 49.7  | 58.2    | 58.4          |            |
| Heavy Trucks:   | 61.0          | 59.6         | 50.5        | 51.8  | 60.1    | 60.2          |            |
| Vehicle Noise:  | 67.1          | 65.4         | 61.9        | 57.6  | 66.1    | 66.5          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 24          | 52  | 112     | 241           |            |
| CNEL:   |               |              | 26          | 56  | 120     | 258           |            |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 Without Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Lasselle St.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 6,700 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 670 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 64.30         | -2.60        | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 75.75         | -19.84       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 81.57         | -23.79       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 62.4          | 60.5         | 58.8        | 52.7  | 61.3    | 61.9          |            |
| Medium Trucks:  | 56.7          | 55.2         | 48.8        | 47.3  | 55.7    | 56.0          |            |
| Heavy Trucks:   | 58.6          | 57.1         | 48.1        | 49.3  | 57.7    | 57.8          |            |
| Vehicle Noise:  | 64.7          | 63.0         | 59.5        | 55.1  | 63.7    | 64.1          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 17          | 36  | 77      | 166           |            |
| CNEL:   |               |              | 18          | 38  | 83      | 178           |            |

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 Without Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Colt Wy.  |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 5,000 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 500 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 64.30         | -3.87        | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 75.75         | -21.11       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 81.57         | -25.06       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 61.2          | 59.3         | 57.5        | 51.5  | 60.1    | 60.7          |            |
| Medium Trucks:  | 55.4          | 53.9         | 47.6        | 46.0  | 54.5    | 54.7          |            |
| Heavy Trucks:   | 57.3          | 55.9         | 46.8        | 48.1  | 56.4    | 56.6          |            |
| Vehicle Noise:  | 63.4          | 61.7         | 58.2        | 53.9  | 62.4    | 62.8          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 14  | 29      | 64            | 137        |
| CNEL:   |               |              |             | 15  | 32      | 68            | 146        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 With Project<br>Road Name: Kitching St.<br>Road Segment: n/o Krameria Av.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 7,900 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 790 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 50 feet  |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 68.46         | -2.97        | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 79.45         | -20.21       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 84.25         | -24.17       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 66.2          | 64.3         | 62.6        | 56.5  | 65.1    | 65.7          |            |
| Medium Trucks:  | 60.0          | 58.5         | 52.1        | 50.6  | 59.1    | 59.3          |            |
| Heavy Trucks:   | 60.9          | 59.4         | 50.4        | 51.7  | 60.0    | 60.1          |            |
| Vehicle Noise:  | 68.1          | 66.3         | 63.2        | 58.5  | 67.0    | 67.5          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 28  | 60      | 130           | 280        |
| CNEL:   |               |              |             | 30  | 65      | 139           | 300        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 With Project<br>Road Name: Lasselle St.<br>Road Segment: n/o Iris Av.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 32,400 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,240 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 70.20         | 2.70         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 81.00         | -14.54       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 85.38         | -18.50       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 72.4          | 70.5         | 68.7        | 62.7  | 71.3    | 71.9          |            |
| Medium Trucks:  | 66.0          | 64.5         | 58.1        | 56.6  | 65.0    | 65.3          |            |
| Heavy Trucks:   | 66.4          | 65.0         | 56.0        | 57.2  | 65.6    | 65.7          |            |
| Vehicle Noise:  | 74.1          | 72.4         | 69.3        | 64.5  | 73.1    | 73.5          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 80  | 173     | 372           | 802        |
| CNEL:   |               |              |             | 86  | 186     | 400           | 862        |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: OY 2023 With Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Iris Av.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 38,600 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,860 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 48 feet   |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
| <b>FHWA Noise Model Calculations</b>  |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 68.46         | 3.91         | 0.71        | -1.20   | -4.65   | 0.000         | 0.000      |
| Medium Trucks:  | 79.45         | -13.32       | 0.74        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 84.25         | -17.28       | 0.73        | -1.20   | -5.43   | 0.000         | 0.000      |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 71.9          | 70.0         | 68.2        | 62.2  | 70.8    | 71.4          |            |
| Medium Trucks:  | 65.7          | 64.2         | 57.8        | 56.2  | 64.7    | 64.9          |            |
| Heavy Trucks:   | 66.5          | 65.1         | 56.1        | 57.3  | 65.7    | 65.8          |            |
| Vehicle Noise:  | 73.7          | 72.0         | 68.8        | 64.2  | 72.7    | 73.2          |            |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |               |              |             |   |         |               |            |
|   |               |              |             | 70 dBA  | 65 dBA  | 60 dBA        | 55 dBA     |
| Ldn:  |               |              |             | 76  | 163     | 351           | 757        |
| CNEL:   |               |              |             | 81  | 175     | 377           | 812        |

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: OY 2023 With Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Cahuilla Dr.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 30,600 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,060 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
|   |  |  |  | 65 dBA  |     |         |       |
|   |  |  |  | 60 dBA  |     |         |       |
|   |  |  |  | 55 dBA  |     |         |       |
| Ldn:  |  |  |  | 77 166 358 772  |     |         |       |
| CNEL:   |  |  |  | 83 179 385 829  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: OY 2023 With Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Krameria Av.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 37,100 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,710 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
|   |  |  |  | 65 dBA  |     |         |       |
|   |  |  |  | 60 dBA  |     |         |       |
|   |  |  |  | 55 dBA  |     |         |       |
| Ldn:  |  |  |  | 88 189 407 878  |     |         |       |
| CNEL:   |  |  |  | 94 203 438 943  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: OY 2023 With Project<br>Road Name: Iris Av.<br>Road Segment: w/o Lasselle St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 31,400 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,140 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
|   |  |  |  | 65 dBA  |     |         |       |
|   |  |  |  | 60 dBA  |     |         |       |
|   |  |  |  | 55 dBA  |     |         |       |
| Ldn:  |  |  |  | 87 188 405 873  |     |         |       |
| CNEL:   |  |  |  | 94 202 435 937  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: OY 2023 With Project<br>Road Name: Iris Av.<br>Road Segment: e/o Lasselle St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 42,400 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 4,240 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
|   |  |  |  | 65 dBA  |     |         |       |
|   |  |  |  | 60 dBA  |     |         |       |
|   |  |  |  | 55 dBA  |     |         |       |
| Ldn:  |  |  |  | 107 230 495 1,066   |     |         |       |
| CNEL:   |  |  |  | 115 247 532 1,145   |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: OY 2023 With Project<br>Road Name: Krameria Av.<br>Road Segment: w/o Kitching St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 12,600 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 1,260 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 25 55 118 254  |  |  |  | Ldn: 25 54 116 250  |     |         |       |
| CNEL: 27 58 126 271   |  |  |  | CNEL: 27 57 124 267   |     |         |       |

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: OY 2023 With Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Kitching St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 12,300 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 1,230 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 25 55 118 254  |  |  |  | Ldn: 25 54 116 250  |     |         |       |
| CNEL: 27 58 126 271   |  |  |  | CNEL: 27 57 124 267   |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: OY 2023 With Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Lasselle St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 7,900 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 790 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 19 40 86 186   |  |  |  | Ldn: 14 30 65 141   |     |         |       |
| CNEL: 20 43 92 198  |  |  |  | CNEL: 15 32 70 150  |     |         |       |

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: OY 2023 With Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Colt Wy.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 5,200 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 520 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 19 40 86 186   |  |  |  | Ldn: 14 30 65 141   |     |         |       |
| CNEL: 20 43 92 198  |  |  |  | CNEL: 15 32 70 150  |     |         |       |

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Kitching St.<br>Road Segment: n/o Krameria Av.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 20,000 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 2,000 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 50 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
| Ldn:  |  |  |  | 52 112 241 519  |     |         |       |
| CNEL:   |  |  |  | 56 120 258 557  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Lasselle St.<br>Road Segment: n/o Iris Av.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 35,300 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,530 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
| Ldn:  |  |  |  | 85 183 394 849  |     |         |       |
| CNEL:   |  |  |  | 91 197 423 912  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Iris Av.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 41,400 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 4,140 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
| Ldn:  |  |  |  | 79 171 368 793  |     |         |       |
| CNEL:   |  |  |  | 85 183 395 850  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Cahuilla Dr.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 32,700 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,270 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
| Ldn:  |  |  |  | 81 174 375 807  |     |         |       |
| CNEL:   |  |  |  | 87 187 402 867  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Krameria Av.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 40,200 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 4,020 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 93 200   |  |  |  | Ldn: 92 199   |     |         |       |
| CNEL: 99 214  |  |  |  | CNEL: 99 214  |     |         |       |

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Iris Av.<br>Road Segment: w/o Lasselle St.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 34,200 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,420 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 93 200   |  |  |  | Ldn: 92 199   |     |         |       |
| CNEL: 99 214  |  |  |  | CNEL: 99 214  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Iris Av.<br>Road Segment: e/o Lasselle St.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 46,300 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 4,630 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 113 244  |  |  |  | Ldn: 27 57  |     |         |       |
| CNEL: 121 262   |  |  |  | CNEL: 28 61   |     |         |       |

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Krameria Av.<br>Road Segment: w/o Kitching St.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 13,600 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 1,360 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | <b>Centerline Distance to Noise Contour (in feet)</b>   |     |         |       |
|   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 27 57  |  |  |  | Ldn: 27 57  |     |         |       |
| CNEL: 28 61   |  |  |  | CNEL: 28 61   |     |         |       |

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Kitching St.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 12,900 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 1,290 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 26 55 120 258  |  |  |  | CNEL: 28 59 128 275   |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Lasselle St.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 7,300 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 730 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 18 38 82 176   |  |  |  | CNEL: 19 41 87 188  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 Without Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Colt Wy.  |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 5,500 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 550 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 15 31 68 146   |  |  |  | CNEL: 16 34 72 156  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 With Project<br>Road Name: Kitching St.<br>Road Segment: n/o Krameria Av.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 20,200 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 2,020 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 50 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 52 113 243 523   |  |  |  | CNEL: 56 121 260 561  |     |         |       |

Friday, November 16, 2018

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 With Project<br>Road Name: Lasselle St.<br>Road Segment: n/o Iris Av.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 35,700 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,570 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 86 184 397 856   |  |  |  | CNEL: 92 198 427 919  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 With Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Iris Av.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 42,400 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 4,240 vehicles<br>Vehicle Speed: 45 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 81 174 374 806   |  |  |  | CNEL: 86 186 401 864  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 With Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Cahuilla Dr.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 33,600 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,360 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 82 177 381 822   |  |  |  | CNEL: 88 190 410 883  |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 With Project<br>Road Name: Lasselle St.<br>Road Segment: s/o Krameria Av.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 40,700 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 4,070 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 48 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 50.0 feet<br>Centerline Dist. to Observer: 50.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 44.147<br>Medium Trucks: 43.947<br>Heavy Trucks: 43.966  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  | 70 dBA 65 dBA 60 dBA 55 dBA   |     |         |       |
| Ldn: 93 201 433 934   |  |  |  | CNEL: 100 216 466 1,003   |     |         |       |

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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 With Project<br>Road Name: Iris Av.<br>Road Segment: w/o Lasselle St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 34,500 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 3,450 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  |   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
| Ldn:  |  |  |  | 93  |     |         |       |
| CNEL:   |  |  |  | 100   |     |         |       |
|   |  |  |  | 65 dBA  |     |         |       |
| Ldn:  |  |  |  | 200   |     |         |       |
| CNEL:   |  |  |  | 215   |     |         |       |
|   |  |  |  | 60 dBA  |     |         |       |
| Ldn:  |  |  |  | 431   |     |         |       |
| CNEL:   |  |  |  | 463   |     |         |       |
|   |  |  |  | 55 dBA  |     |         |       |
| Ldn:  |  |  |  | 929   |     |         |       |
| CNEL:   |  |  |  | 998   |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 With Project<br>Road Name: Iris Av.<br>Road Segment: e/o Lasselle St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 46,600 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 4,660 vehicles<br>Vehicle Speed: 50 mph<br>Near/Far Lane Distance: 82 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 67.0 feet<br>Centerline Dist. to Observer: 67.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 53.226<br>Medium Trucks: 53.059<br>Heavy Trucks: 53.076  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  |   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
| Ldn:  |  |  |  | 114   |     |         |       |
| CNEL:   |  |  |  | 122   |     |         |       |
|   |  |  |  | 65 dBA  |     |         |       |
| Ldn:  |  |  |  | 245   |     |         |       |
| CNEL:   |  |  |  | 263   |     |         |       |
|   |  |  |  | 60 dBA  |     |         |       |
| Ldn:  |  |  |  | 527   |     |         |       |
| CNEL:   |  |  |  | 566   |     |         |       |
|   |  |  |  | 55 dBA  |     |         |       |
| Ldn:  |  |  |  | 929   |     |         |       |
| CNEL:   |  |  |  | 998   |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 With Project<br>Road Name: Krameria Av.<br>Road Segment: w/o Kitching St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 13,900 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 1,390 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  |   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
| Ldn:  |  |  |  | 27  |     |         |       |
| CNEL:   |  |  |  | 29  |     |         |       |
|   |  |  |  | 65 dBA  |     |         |       |
| Ldn:  |  |  |  | 58  |     |         |       |
| CNEL:   |  |  |  | 62  |     |         |       |
|   |  |  |  | 60 dBA  |     |         |       |
| Ldn:  |  |  |  | 126   |     |         |       |
| CNEL:   |  |  |  | 134   |     |         |       |
|   |  |  |  | 55 dBA  |     |         |       |
| Ldn:  |  |  |  | 271   |     |         |       |
| CNEL:   |  |  |  | 289   |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |  |  |  |   |     |         |       |
|---|--|--|--|---|-----|---------|-------|
| Scenario: HY 2040 With Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Kitching St.   |  |  |  | Project Name: Continental<br>Job Number: 11577  |     |         |       |
| SITE SPECIFIC INPUT DATA  |  |  |  | NOISE MODEL INPUTS  |     |         |       |
| <b>Highway Data</b>   |  |  |  | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |     |         |       |
| Average Daily Traffic (Adt): 13,500 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 1,350 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet   |  |  |  | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |     |         |       |
| <b>Site Data</b>  |  |  |  | <b>Vehicle Mix</b>  |     |         |       |
|   |  |  |  | VehicleType   | Day | Evening | Night |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |  |  |  | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |     |         |       |
| <b>FHWA Noise Model Calculations</b>  |  |  |  | <b>Noise Source Elevations (in feet)</b>  |     |         |       |
|   |  |  |  | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |     |         |       |
| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b>  |  |  |  | <b>Lane Equivalent Distance (in feet)</b>   |     |         |       |
|   |  |  |  | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |     |         |       |
| <b>Centerline Distance to Noise Contour (in feet)</b>   |  |  |  |   |     |         |       |
|   |  |  |  | 70 dBA  |     |         |       |
| Ldn:  |  |  |  | 27  |     |         |       |
| CNEL:   |  |  |  | 28  |     |         |       |
|   |  |  |  | 65 dBA  |     |         |       |
| Ldn:  |  |  |  | 57  |     |         |       |
| CNEL:   |  |  |  | 61  |     |         |       |
|   |  |  |  | 60 dBA  |     |         |       |
| Ldn:  |  |  |  | 123   |     |         |       |
| CNEL:   |  |  |  | 132   |     |         |       |
|   |  |  |  | 55 dBA  |     |         |       |
| Ldn:  |  |  |  | 271   |     |         |       |
| CNEL:   |  |  |  | 284   |     |         |       |

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| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: HY 2040 With Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Lasselle St.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 8,500 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 850 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| FHWA Noise Model Calculations   |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 64.30         | -1.57        | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 75.75         | -18.80       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 81.57         | -22.76       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| Unmitigated Noise Levels (without Topo and barrier attenuation)   |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 63.5          | 61.6         | 59.8        | 53.8  | 62.4    | 63.0          |            |
| Medium Trucks:  | 57.7          | 56.2         | 49.9        | 48.3  | 56.8    | 57.0          |            |
| Heavy Trucks:   | 59.6          | 58.2         | 49.1        | 50.4  | 58.7    | 58.9          |            |
| Vehicle Noise:  | 65.7          | 64.0         | 60.6        | 56.2  | 64.7    | 65.1          |            |
| Centerline Distance to Noise Contour (in feet)  |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 20          | 42  | 91      | 195           |            |
| CNEL:   |               |              | 21          | 45  | 97      | 208           |            |

| FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL   |               |              |             |   |         |               |            |
|---|---------------|--------------|-------------|---|---------|---------------|------------|
| Scenario: HY 2040 With Project<br>Road Name: Krameria Av.<br>Road Segment: e/o Cott Wy.   |               |              |             | Project Name: Continental<br>Job Number: 11577  |         |               |            |
| SITE SPECIFIC INPUT DATA  |               |              |             | NOISE MODEL INPUTS  |         |               |            |
| <b>Highway Data</b>   |               |              |             | <b>Site Conditions (Hard = 10, Soft = 15)</b>   |         |               |            |
| Average Daily Traffic (Adt): 5,700 vehicles<br>Peak Hour Percentage: 10%<br>Peak Hour Volume: 570 vehicles<br>Vehicle Speed: 35 mph<br>Near/Far Lane Distance: 50 feet  |               |              |             | Autos: 15<br>Medium Trucks (2 Axles): 15<br>Heavy Trucks (3+ Axles): 15   |         |               |            |
| <b>Site Data</b>  |               |              |             | <b>Vehicle Mix</b>  |         |               |            |
|   |               |              |             | VehicleType   | Day     | Evening       | Night      |
| Barrier Height: 0.0 feet<br>Barrier Type (0-Wall, 1-Berm): 0.0<br>Centerline Dist. to Barrier: 44.0 feet<br>Centerline Dist. to Observer: 44.0 feet<br>Barrier Distance to Observer: 0.0 feet<br>Observer Height (Above Pad): 5.0 feet<br>Pad Elevation: 0.0 feet<br>Road Elevation: 0.0 feet<br>Road Grade: 0.0%<br>Left View: -90.0 degrees<br>Right View: 90.0 degrees |               |              |             | Autos: 77.5% 12.9% 9.6% 97.42%<br>Medium Trucks: 84.8% 4.9% 10.3% 1.84%<br>Heavy Trucks: 86.5% 2.7% 10.8% 0.74% |         |               |            |
|   |               |              |             | <b>Noise Source Elevations (in feet)</b>  |         |               |            |
|   |               |              |             | Autos: 0.000<br>Medium Trucks: 2.297<br>Heavy Trucks: 8.006 Grade Adjustment: 0.0                               |         |               |            |
|   |               |              |             | <b>Lane Equivalent Distance (in feet)</b>   |         |               |            |
|   |               |              |             | Autos: 36.551<br>Medium Trucks: 36.308<br>Heavy Trucks: 36.332  |         |               |            |
| FHWA Noise Model Calculations   |               |              |             |   |         |               |            |
| VehicleType   | REMEL         | Traffic Flow | Distance    | Finite Road   | Fresnel | Barrier Atten | Berm Atten |
| Autos:  | 64.30         | -3.30        | 1.94        | -1.20   | -4.61   | 0.000         | 0.000      |
| Medium Trucks:  | 75.75         | -20.54       | 1.98        | -1.20   | -4.87   | 0.000         | 0.000      |
| Heavy Trucks:   | 81.57         | -24.49       | 1.98        | -1.20   | -5.50   | 0.000         | 0.000      |
| Unmitigated Noise Levels (without Topo and barrier attenuation)   |               |              |             |   |         |               |            |
| VehicleType   | Leq Peak Hour | Leq Day      | Leq Evening | Leq Night   | Ldn     | CNEL          |            |
| Autos:  | 61.7          | 59.8         | 58.1        | 52.0  | 60.6    | 61.2          |            |
| Medium Trucks:  | 56.0          | 54.5         | 48.1        | 46.6  | 55.0    | 55.3          |            |
| Heavy Trucks:   | 57.8          | 56.4         | 47.4        | 48.6  | 57.0    | 57.1          |            |
| Vehicle Noise:  | 64.0          | 62.3         | 58.8        | 54.4  | 63.0    | 63.4          |            |
| Centerline Distance to Noise Contour (in feet)  |               |              |             |   |         |               |            |
|   |               |              | 70 dBA      | 65 dBA  | 60 dBA  | 55 dBA        |            |
| Ldn:  |               |              | 15          | 32  | 69      | 149           |            |
| CNEL:   |               |              | 16          | 34  | 74      | 160           |            |

Friday, November 16, 2018

Friday, November 16, 2018

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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**APPENDIX 8.1:**  
**ON-SITE TRAFFIC NOISE CALCULATIONS**

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Scenario: First Floor With Wall  
 Road Name: Lasselle St.  
 Lot No: West Buildings

Project Name: Continental  
 Job Number: 11577  
 Analyst: A. Wolfe

| SITE SPECIFIC INPUT DATA                     |  | NOISE MODEL INPUTS                            |     |         |       |       |
|--|--|---|-----|---------|-------|-------|
| <b>Highway Data</b>                          |  | <b>Site Conditions (Hard = 10, Soft = 15)</b> |     |         |       |       |
| Average Daily Traffic (Adt): 33,800 vehicles |  | Autos: 15                                     |     |         |       |       |
| Peak Hour Percentage: 10%                    |  | Medium Trucks (2 Axles): 15                   |     |         |       |       |
| Peak Hour Volume: 3,380 vehicles             |  | Heavy Trucks (3+ Axles): 15                   |     |         |       |       |
| Vehicle Speed: 50 mph                        |  | <b>Vehicle Mix</b>                            |     |         |       |       |
| Near/Far Lane Distance: 48 feet              |  | VehicleType                                   | Day | Evening | Night | Daily |
| <b>Site Data</b>                             |  | Autos: 77.5% 12.9% 9.6% 97.42%                |     |         |       |       |
| Barrier Height: 0.0 feet                     |  | Medium Trucks: 84.8% 4.9% 10.3% 1.84%         |     |         |       |       |
| Barrier Type (0-Wall, 1-Berm): 0.0           |  | Heavy Trucks: 86.5% 2.7% 10.8% 0.74%          |     |         |       |       |
| Centerline Dist. to Barrier: 490.0 feet      |  | <b>Noise Source Elevations (in feet)</b>      |     |         |       |       |
| Centerline Dist. to Observer: 490.0 feet     |  | Autos: 0.000                                  |     |         |       |       |
| Barrier Distance to Observer: 0.0 feet       |  | Medium Trucks: 2.297                          |     |         |       |       |
| Observer Height (Above Pad): 5.0 feet        |  | Heavy Trucks: 8.006 Grade Adjustment: 0.0     |     |         |       |       |
| Pad Elevation: 0.0 feet                      |  | <b>Lane Equivalent Distance (in feet)</b>     |     |         |       |       |
| Road Elevation: 0.0 feet                     |  | Autos: 489.437                                |     |         |       |       |
| Barrier Elevation: 0.0 feet                  |  | Medium Trucks: 489.419                        |     |         |       |       |
| Road Grade: 0.0%                             |  | Heavy Trucks: 489.421                         |     |         |       |       |

**FHWA Noise Model Calculations**

| VehicleType    | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|----------------|-------|--------------|----------|-------------|---------|---------------|------------|
| Autos:         | 71.12 | 2.88         | -14.96   | -1.20       | -4.87   | 0.000         | 0.000      |
| Medium Trucks: | 78.79 | -14.36       | -14.96   | -1.20       | -4.89   | 0.000         | 0.000      |
| Heavy Trucks:  | 83.02 | -18.31       | -14.96   | -1.20       | -4.95   | 0.000         | 0.000      |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType    | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |
|----------------|---------------|---------|-------------|-----------|------|------|
| Autos:         | 57.8          | 55.9    | 54.2        | 48.1      | 56.7 | 57.3 |
| Medium Trucks: | 48.3          | 46.8    | 40.4        | 38.9      | 47.3 | 47.6 |
| Heavy Trucks:  | 48.5          | 47.1    | 38.1        | 39.3      | 47.7 | 47.8 |
| Vehicle Noise: | 58.7          | 56.9    | 54.5        | 49.1      | 57.7 | 58.2 |

**Mitigated Noise Levels (with Topo and barrier attenuation)**

| VehicleType    | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |
|----------------|---------------|---------|-------------|-----------|------|------|
| Autos:         | 57.8          | 55.9    | 54.2        | 48.1      | 56.7 | 57.3 |
| Medium Trucks: | 48.3          | 46.8    | 40.4        | 38.9      | 47.3 | 47.6 |
| Heavy Trucks:  | 48.5          | 47.1    | 38.1        | 39.3      | 47.7 | 47.8 |
| Vehicle Noise: | 58.7          | 56.9    | 54.5        | 49.1      | 57.7 | 58.2 |

Scenario: First Floor With Wall  
 Road Name: Krameria Av.  
 Lot No: South Buildings

Project Name: Continental  
 Job Number: 11577  
 Analyst: A. Wolfe

| SITE SPECIFIC INPUT DATA       |                 | NOISE MODEL INPUTS                            |     |         |       |       |
|--------------------------------|-----------------|---|-----|---------|-------|-------|
| <b>Highway Data</b>            |                 | <b>Site Conditions (Hard = 10, Soft = 15)</b> |     |         |       |       |
| Average Daily Traffic (Adt):   | 5,700 vehicles  | Autos: 15                                     |     |         |       |       |
| Peak Hour Percentage:          | 10%             | Medium Trucks (2 Axles): 15                   |     |         |       |       |
| Peak Hour Volume:              | 570 vehicles    | Heavy Trucks (3+ Axles): 15                   |     |         |       |       |
| Vehicle Speed:                 | 35 mph          | <b>Vehicle Mix</b>                            |     |         |       |       |
| Near/Far Lane Distance:        | 50 feet         | VehicleType                                   | Day | Evening | Night | Daily |
| <b>Site Data</b>               |                 | Autos: 77.5% 12.9% 9.6% 97.42%                |     |         |       |       |
| <b>Barrier Height:</b>         | <b>0.0 feet</b> | Medium Trucks: 84.8% 4.9% 10.3% 1.84%         |     |         |       |       |
| Barrier Type (0-Wall, 1-Berm): | 0.0             | Heavy Trucks: 86.5% 2.7% 10.8% 0.74%          |     |         |       |       |
| Centerline Dist. to Barrier:   | 74.0 feet       | <b>Noise Source Elevations (in feet)</b>      |     |         |       |       |
| Centerline Dist. to Observer:  | 74.0 feet       | Autos: 0.000                                  |     |         |       |       |
| Barrier Distance to Observer:  | 0.0 feet        | Medium Trucks: 2.297                          |     |         |       |       |
| Observer Height (Above Pad):   | 5.0 feet        | Heavy Trucks: 8.006 Grade Adjustment: 0.0     |     |         |       |       |
| Pad Elevation:                 | 0.0 feet        | <b>Lane Equivalent Distance (in feet)</b>     |     |         |       |       |
| Road Elevation:                | 0.0 feet        | Autos: 69.828                                 |     |         |       |       |
| Barrier Elevation:             | 0.0 feet        | Medium Trucks: 69.702                         |     |         |       |       |
| Road Grade:                    | 0.0%            | Heavy Trucks: 69.714                          |     |         |       |       |

**FHWA Noise Model Calculations**

| VehicleType    | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|----------------|-------|--------------|----------|-------------|---------|---------------|------------|
| Autos:         | 65.11 | -3.30        | -2.28    | -1.20       | -4.73   | 0.000         | 0.000      |
| Medium Trucks: | 74.83 | -20.54       | -2.27    | -1.20       | -4.88   | 0.000         | 0.000      |
| Heavy Trucks:  | 80.05 | -24.49       | -2.27    | -1.20       | -5.25   | 0.000         | 0.000      |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType    | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |
|----------------|---------------|---------|-------------|-----------|------|------|
| Autos:         | 58.3          | 56.4    | 54.7        | 48.6      | 57.2 | 57.8 |
| Medium Trucks: | 50.8          | 49.3    | 43.0        | 41.4      | 49.9 | 50.1 |
| Heavy Trucks:  | 52.1          | 50.7    | 41.6        | 42.9      | 51.2 | 51.4 |
| Vehicle Noise: | 59.8          | 58.1    | 55.1        | 50.2      | 58.8 | 59.3 |

**Mitigated Noise Levels (with Topo and barrier attenuation)**

| VehicleType    | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |
|----------------|---------------|---------|-------------|-----------|------|------|
| Autos:         | 58.3          | 56.4    | 54.7        | 48.6      | 57.2 | 57.8 |
| Medium Trucks: | 50.8          | 49.3    | 43.0        | 41.4      | 49.9 | 50.1 |
| Heavy Trucks:  | 52.1          | 50.7    | 41.6        | 42.9      | 51.2 | 51.4 |
| Vehicle Noise: | 59.8          | 58.1    | 55.1        | 50.2      | 58.8 | 59.3 |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Scenario: First Floor With Wall  
 Road Name: Krameria Av.  
 Lot No: East Buildings

Project Name: Continental  
 Job Number: 11577  
 Analyst: A. Wolfe

| SITE SPECIFIC INPUT DATA       |                 | NOISE MODEL INPUTS                            |     |         |       |       |
|--------------------------------|-----------------|---|-----|---------|-------|-------|
| <b>Highway Data</b>            |                 | <b>Site Conditions (Hard = 10, Soft = 15)</b> |     |         |       |       |
| Average Daily Traffic (Adt):   | 5,700 vehicles  | Autos:  |     | 15      |       |       |
| Peak Hour Percentage:          | 10%             | Medium Trucks (2 Axles):                      |     | 15      |       |       |
| Peak Hour Volume:              | 570 vehicles    | Heavy Trucks (3+ Axles):                      |     | 15      |       |       |
| Vehicle Speed:                 | 35 mph          | <b>Vehicle Mix</b>                            |     |         |       |       |
| Near/Far Lane Distance:        | 50 feet         | VehicleType                                   | Day | Evening | Night | Daily |
| <b>Site Data</b>               |                 | Autos: 77.5% 12.9% 9.6% 97.42%                |     |         |       |       |
| <b>Barrier Height:</b>         | <b>0.0 feet</b> | Medium Trucks: 84.8% 4.9% 10.3% 1.84%         |     |         |       |       |
| Barrier Type (0-Wall, 1-Berm): | 0.0             | Heavy Trucks: 86.5% 2.7% 10.8% 0.74%          |     |         |       |       |
| Centerline Dist. to Barrier:   | 69.0 feet       | <b>Noise Source Elevations (in feet)</b>      |     |         |       |       |
| Centerline Dist. to Observer:  | 69.0 feet       | Autos:  |     | 0.000   |       |       |
| Barrier Distance to Observer:  | 0.0 feet        | Medium Trucks:                                |     | 2.297   |       |       |
| Observer Height (Above Pad):   | 5.0 feet        | Heavy Trucks:                                 |     | 8.006   |       |       |
| Pad Elevation:                 | 0.0 feet        | Grade Adjustment: 0.0                         |     |         |       |       |
| Road Elevation:                | 0.0 feet        | <b>Lane Equivalent Distance (in feet)</b>     |     |         |       |       |
| Barrier Elevation:             | 0.0 feet        | Autos:  |     | 64.506  |       |       |
| Road Grade:                    | 0.0%            | Medium Trucks:                                |     | 64.369  |       |       |
|                                |                 | Heavy Trucks:                                 |     | 64.382  |       |       |

**FHWA Noise Model Calculations**

| VehicleType    | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|----------------|-------|--------------|----------|-------------|---------|---------------|------------|
| Autos:         | 65.11 | -3.30        | -1.76    | -1.20       | -4.72   | 0.000         | 0.000      |
| Medium Trucks: | 74.83 | -20.54       | -1.75    | -1.20       | -4.88   | 0.000         | 0.000      |
| Heavy Trucks:  | 80.05 | -24.49       | -1.75    | -1.20       | -5.28   | 0.000         | 0.000      |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType    | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |
|----------------|---------------|---------|-------------|-----------|------|------|
| Autos:         | 58.8          | 56.9    | 55.2        | 49.1      | 57.7 | 58.4 |
| Medium Trucks: | 51.3          | 49.8    | 43.5        | 41.9      | 50.4 | 50.6 |
| Heavy Trucks:  | 52.6          | 51.2    | 42.1        | 43.4      | 51.7 | 51.9 |
| Vehicle Noise: | 60.4          | 58.6    | 55.7        | 50.8      | 59.3 | 59.8 |

**Mitigated Noise Levels (with Topo and barrier attenuation)**

| VehicleType    | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |
|----------------|---------------|---------|-------------|-----------|------|------|
| Autos:         | 58.8          | 56.9    | 55.2        | 49.1      | 57.7 | 58.4 |
| Medium Trucks: | 51.3          | 49.8    | 43.5        | 41.9      | 50.4 | 50.6 |
| Heavy Trucks:  | 52.6          | 51.2    | 42.1        | 43.4      | 51.7 | 51.9 |
| Vehicle Noise: | 60.4          | 58.6    | 55.7        | 50.8      | 59.3 | 59.8 |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Scenario: Second Floor With Wall  
 Road Name: Lasselle St.  
 Lot No: West Buildings

Project Name: Continental  
 Job Number: 11577  
 Analyst: A. Wolfe

| SITE SPECIFIC INPUT DATA                     |  | NOISE MODEL INPUTS                            |         |                       |       |        |
|--|--|---|---------|-----------------------|-------|--------|
| <b>Highway Data</b>                          |  | <b>Site Conditions (Hard = 10, Soft = 15)</b> |         |                       |       |        |
| Average Daily Traffic (Adt): 33,800 vehicles |  | Autos: 15                                     |         |                       |       |        |
| Peak Hour Percentage: 10%                    |  | Medium Trucks (2 Axles): 15                   |         |                       |       |        |
| Peak Hour Volume: 3,380 vehicles             |  | Heavy Trucks (3+ Axles): 15                   |         |                       |       |        |
| Vehicle Speed: 50 mph                        |  | <b>Vehicle Mix</b>                            |         |                       |       |        |
| Near/Far Lane Distance: 48 feet              |  | VehicleType                                   | Day     | Evening               | Night | Daily  |
| <b>Site Data</b>                             |  | Autos:  | 77.5%   | 12.9%                 | 9.6%  | 97.42% |
| Barrier Height: 0.0 feet                     |  | Medium Trucks:                                | 84.8%   | 4.9%                  | 10.3% | 1.84%  |
| Barrier Type (0-Wall, 1-Berm): 0.0           |  | Heavy Trucks:                                 | 86.5%   | 2.7%                  | 10.8% | 0.74%  |
| Centerline Dist. to Barrier: 490.0 feet      |  | <b>Noise Source Elevations (in feet)</b>      |         |                       |       |        |
| Centerline Dist. to Observer: 490.0 feet     |  | Autos:  | 0.000   |                       |       |        |
| Barrier Distance to Observer: 0.0 feet       |  | Medium Trucks:                                | 2.297   |                       |       |        |
| Observer Height (Above Pad): 14.0 feet       |  | Heavy Trucks:                                 | 8.006   | Grade Adjustment: 0.0 |       |        |
| Pad Elevation: 0.0 feet                      |  | <b>Lane Equivalent Distance (in feet)</b>     |         |                       |       |        |
| Road Elevation: 0.0 feet                     |  | Autos:  | 489.612 |                       |       |        |
| Barrier Elevation: 0.0 feet                  |  | Medium Trucks:                                | 489.552 |                       |       |        |
| Road Grade: 0.0%                             |  | Heavy Trucks:                                 | 489.449 |                       |       |        |

| <b>FHWA Noise Model Calculations</b> |       |              |          |             |         |               |            |
|--------------------------------------|-------|--------------|----------|-------------|---------|---------------|------------|
| VehicleType                          | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
| Autos:                               | 71.12 | 2.88         | -14.97   | -1.20       | -13.50  | 0.000         | 0.000      |
| Medium Trucks:                       | 78.79 | -14.36       | -14.97   | -1.20       | -13.57  | 0.000         | 0.000      |
| Heavy Trucks:                        | 83.02 | -18.31       | -14.96   | -1.20       | -13.73  | 0.000         | 0.000      |

| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b> |               |         |             |           |      |      |  |
|--|---------------|---------|-------------|-----------|------|------|--|
| VehicleType  | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |  |
| Autos:   | 57.8          | 55.9    | 54.2        | 48.1      | 56.7 | 57.3 |  |
| Medium Trucks:   | 48.3          | 46.8    | 40.4        | 38.9      | 47.3 | 47.5 |  |
| Heavy Trucks:  | 48.5          | 47.1    | 38.1        | 39.3      | 47.7 | 47.8 |  |
| Vehicle Noise:   | 58.7          | 56.9    | 54.4        | 49.1      | 57.7 | 58.2 |  |

| <b>Mitigated Noise Levels (with Topo and barrier attenuation)</b> |               |         |             |           |      |      |  |
|---|---------------|---------|-------------|-----------|------|------|--|
| VehicleType   | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |  |
| Autos:  | 57.8          | 55.9    | 54.2        | 48.1      | 56.7 | 57.3 |  |
| Medium Trucks:  | 48.3          | 46.8    | 40.4        | 38.9      | 47.3 | 47.5 |  |
| Heavy Trucks:   | 48.5          | 47.1    | 38.1        | 39.3      | 47.7 | 47.8 |  |
| Vehicle Noise:  | 58.7          | 56.9    | 54.4        | 49.1      | 57.7 | 58.2 |  |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Scenario: Second Floor With Wall  
 Road Name: Krameria Av.  
 Lot No: South Buildings

Project Name: Continental  
 Job Number: 11577  
 Analyst: A. Wolfe

| SITE SPECIFIC INPUT DATA       |                 | NOISE MODEL INPUTS                            |        |                       |       |        |
|--------------------------------|-----------------|---|--------|-----------------------|-------|--------|
| <b>Highway Data</b>            |                 | <b>Site Conditions (Hard = 10, Soft = 15)</b> |        |                       |       |        |
| Average Daily Traffic (Adt):   | 5,700 vehicles  | Autos: 15                                     |        |                       |       |        |
| Peak Hour Percentage:          | 10%             | Medium Trucks (2 Axles): 15                   |        |                       |       |        |
| Peak Hour Volume:              | 570 vehicles    | Heavy Trucks (3+ Axles): 15                   |        |                       |       |        |
| Vehicle Speed:                 | 35 mph          | <b>Vehicle Mix</b>                            |        |                       |       |        |
| Near/Far Lane Distance:        | 50 feet         | VehicleType                                   | Day    | Evening               | Night | Daily  |
| <b>Site Data</b>               |                 | Autos:  | 77.5%  | 12.9%                 | 9.6%  | 97.42% |
| <b>Barrier Height:</b>         | <b>0.0 feet</b> | Medium Trucks:                                | 84.8%  | 4.9%                  | 10.3% | 1.84%  |
| Barrier Type (0-Wall, 1-Berm): | 0.0             | Heavy Trucks:                                 | 86.5%  | 2.7%                  | 10.8% | 0.74%  |
| Centerline Dist. to Barrier:   | 74.0 feet       | <b>Noise Source Elevations (in feet)</b>      |        |                       |       |        |
| Centerline Dist. to Observer:  | 74.0 feet       | Autos:  | 0.000  |                       |       |        |
| Barrier Distance to Observer:  | 0.0 feet        | Medium Trucks:                                | 2.297  |                       |       |        |
| Observer Height (Above Pad):   | 14.0 feet       | Heavy Trucks:                                 | 8.006  | Grade Adjustment: 0.0 |       |        |
| Pad Elevation:                 | 0.0 feet        | <b>Lane Equivalent Distance (in feet)</b>     |        |                       |       |        |
| Road Elevation:                | 0.0 feet        | Autos:  | 71.042 |                       |       |        |
| Barrier Elevation:             | 0.0 feet        | Medium Trucks:                                | 70.625 |                       |       |        |
| Road Grade:                    | 0.0%            | Heavy Trucks:                                 | 69.907 |                       |       |        |

| <b>FHWA Noise Model Calculations</b> |       |              |          |             |         |               |            |
|--------------------------------------|-------|--------------|----------|-------------|---------|---------------|------------|
| VehicleType                          | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
| Autos:                               | 65.11 | -3.30        | -2.39    | -1.20       | -12.41  | 0.000         | 0.000      |
| Medium Trucks:                       | 74.83 | -20.54       | -2.35    | -1.20       | -12.83  | 0.000         | 0.000      |
| Heavy Trucks:                        | 80.05 | -24.49       | -2.29    | -1.20       | -13.88  | 0.000         | 0.000      |

| <b>Unmitigated Noise Levels (without Topo and barrier attenuation)</b> |               |         |             |           |      |      |  |
|--|---------------|---------|-------------|-----------|------|------|--|
| VehicleType  | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |  |
| Autos:   | 58.2          | 56.3    | 54.6        | 48.5      | 57.1 | 57.7 |  |
| Medium Trucks:   | 50.7          | 49.2    | 42.9        | 41.3      | 49.8 | 50.0 |  |
| Heavy Trucks:  | 52.1          | 50.6    | 41.6        | 42.9      | 51.2 | 51.3 |  |
| Vehicle Noise:   | 59.7          | 58.0    | 55.0        | 50.2      | 58.7 | 59.2 |  |

| <b>Mitigated Noise Levels (with Topo and barrier attenuation)</b> |               |         |             |           |      |      |  |
|---|---------------|---------|-------------|-----------|------|------|--|
| VehicleType   | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |  |
| Autos:  | 58.2          | 56.3    | 54.6        | 48.5      | 57.1 | 57.7 |  |
| Medium Trucks:  | 50.7          | 49.2    | 42.9        | 41.3      | 49.8 | 50.0 |  |
| Heavy Trucks:   | 52.1          | 50.6    | 41.6        | 42.9      | 51.2 | 51.3 |  |
| Vehicle Noise:  | 59.7          | 58.0    | 55.0        | 50.2      | 58.7 | 59.2 |  |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Scenario: Second Floor With Wall  
 Road Name: Krameria Av.  
 Lot No: East Buildings

Project Name: Continental  
 Job Number: 11577  
 Analyst: A. Wolfe

| SITE SPECIFIC INPUT DATA       |                 | NOISE MODEL INPUTS                            |     |                             |       |       |
|--------------------------------|-----------------|---|-----|-----------------------------|-------|-------|
| <b>Highway Data</b>            |                 | <b>Site Conditions (Hard = 10, Soft = 15)</b> |     |                             |       |       |
| Average Daily Traffic (Adt):   | 5,700 vehicles  | Autos:  |     | 15                          |       |       |
| Peak Hour Percentage:          | 10%             | Medium Trucks (2 Axles):                      |     | 15                          |       |       |
| Peak Hour Volume:              | 570 vehicles    | Heavy Trucks (3+ Axles):                      |     | 15                          |       |       |
| Vehicle Speed:                 | 35 mph          | <b>Vehicle Mix</b>                            |     |                             |       |       |
| Near/Far Lane Distance:        | 50 feet         | VehicleType                                   | Day | Evening                     | Night | Daily |
| <b>Site Data</b>               |                 | Autos: 77.5% 12.9% 9.6% 97.42%                |     |                             |       |       |
| <b>Barrier Height:</b>         | <b>0.0 feet</b> | Medium Trucks: 84.8% 4.9% 10.3% 1.84%         |     |                             |       |       |
| Barrier Type (0-Wall, 1-Berm): | 0.0             | Heavy Trucks: 86.5% 2.7% 10.8% 0.74%          |     |                             |       |       |
| Centerline Dist. to Barrier:   | 69.0 feet       | <b>Noise Source Elevations (in feet)</b>      |     |                             |       |       |
| Centerline Dist. to Observer:  | 69.0 feet       | Autos:  |     | 0.000                       |       |       |
| Barrier Distance to Observer:  | 0.0 feet        | Medium Trucks:                                |     | 2.297                       |       |       |
| Observer Height (Above Pad):   | 14.0 feet       | Heavy Trucks:                                 |     | 8.006 Grade Adjustment: 0.0 |       |       |
| Pad Elevation:                 | 0.0 feet        | <b>Lane Equivalent Distance (in feet)</b>     |     |                             |       |       |
| Road Elevation:                | 0.0 feet        | Autos:  |     | 65.818                      |       |       |
| Barrier Elevation:             | 0.0 feet        | Medium Trucks:                                |     | 65.368                      |       |       |
| Road Grade:                    | 0.0%            | Heavy Trucks:                                 |     | 64.590                      |       |       |

**FHWA Noise Model Calculations**

| VehicleType    | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|----------------|-------|--------------|----------|-------------|---------|---------------|------------|
| Autos:         | 65.11 | -3.30        | -1.89    | -1.20       | -12.32  | 0.000         | 0.000      |
| Medium Trucks: | 74.83 | -20.54       | -1.85    | -1.20       | -12.77  | 0.000         | 0.000      |
| Heavy Trucks:  | 80.05 | -24.49       | -1.77    | -1.20       | -13.90  | 0.000         | 0.000      |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType    | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |
|----------------|---------------|---------|-------------|-----------|------|------|
| Autos:         | 58.7          | 56.8    | 55.0        | 49.0      | 57.6 | 58.2 |
| Medium Trucks: | 51.2          | 49.7    | 43.4        | 41.8      | 50.3 | 50.5 |
| Heavy Trucks:  | 52.6          | 51.2    | 42.1        | 43.4      | 51.7 | 51.9 |
| Vehicle Noise: | 60.2          | 58.5    | 55.5        | 50.7      | 59.2 | 59.7 |

**Mitigated Noise Levels (with Topo and barrier attenuation)**

| VehicleType    | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn  | CNEL |
|----------------|---------------|---------|-------------|-----------|------|------|
| Autos:         | 58.7          | 56.8    | 55.0        | 49.0      | 57.6 | 58.2 |
| Medium Trucks: | 51.2          | 49.7    | 43.4        | 41.8      | 50.3 | 50.5 |
| Heavy Trucks:  | 52.6          | 51.2    | 42.1        | 43.4      | 51.7 | 51.9 |
| Vehicle Noise: | 60.2          | 58.5    | 55.5        | 50.7      | 59.2 | 59.7 |

**APPENDIX 10.1:**  
**OPERATIONAL STATIONARY-SOURCE NOISE CALCULATIONS**

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| STATIONARY SOURCE NOISE PREDICTION MODEL        |                                  | 10/4/2018 |
|---|----------------------------------|-----------|
| <b>Observer Location: R1</b>                    | <i>Project Name:</i> Continental |           |
| <i>Source:</i> Air Conditioning Unit (Roof-Top) | <i>Job Number:</i> 11577         |           |
| <i>Condition:</i> Operational                   | <i>Analyst:</i> A. Wolfe         |           |

| NOISE MODEL INPUTS                   |              |  |                 |
|--------------------------------------|--------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 698.0 feet   | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 698.0 feet   | <i>Noise Source Height:</i>  | 5.0 feet        |
| <i>Barrier Distance to Observer:</i> | 0.0 feet     | <i>Observer Height:</i>  | 5.0 feet        |
| <br><i>Observer Elevation:</i>       | <br>0.0 feet | <i>Barrier Type (0-Wall, 1-Berm):</i>  | <br>0           |
| <i>Noise Source Elevation:</i>       | 10.0 feet    | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 0.0 feet     | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 5.0             | 77.2        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 698.0           | -42.9       | -42.9        | -42.9        | -42.9        | -42.9        | -42.9        |
| Shielding (Barrier Attenuation)    | 698.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 34.3        | -42.9        | -42.9        | -42.9        | -42.9        | -42.9        |
| <b>39 Minute Hourly Adjustment</b> |                 | <b>32.4</b> | <b>-44.8</b> | <b>-44.8</b> | <b>-44.8</b> | <b>-44.8</b> | <b>-44.8</b> |

| STATIONARY SOURCE NOISE PREDICTION MODEL        |                                  | 10/4/2018 |
|---|----------------------------------|-----------|
| <b>Observer Location: R1</b>                    | <i>Project Name:</i> Continental |           |
| <i>Source:</i> Residential Entry Gate & Speaker | <i>Job Number:</i> 11577         |           |
| <i>Condition:</i> Operational                   | <i>Analyst:</i> A. Wolfe         |           |

| NOISE MODEL INPUTS                   |              |  |                 |
|--------------------------------------|--------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 456.0 feet   | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 456.0 feet   | <i>Noise Source Height:</i>  | 5.0 feet        |
| <i>Barrier Distance to Observer:</i> | 0.0 feet     | <i>Observer Height:</i>  | 5.0 feet        |
| <br><i>Observer Elevation:</i>       | <br>0.0 feet | <i>Barrier Type (0-Wall, 1-Berm):</i>  | <br>0           |
| <i>Noise Source Elevation:</i>       | 0.0 feet     | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 0.0 feet     | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 40.0            | 55.9        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 456.0           | -21.1       | -21.1        | -21.1        | -21.1        | -21.1        | -21.1        |
| Shielding (Barrier Attenuation)    | 456.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 34.8        | -21.1        | -21.1        | -21.1        | -21.1        | -21.1        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>34.8</b> | <b>-21.1</b> | <b>-21.1</b> | <b>-21.1</b> | <b>-21.1</b> | <b>-21.1</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| STATIONARY SOURCE NOISE PREDICTION MODEL       |                                  | 10/4/2018 |
|--|----------------------------------|-----------|
| <b>Observer Location: R1</b>                   | <i>Project Name: Continental</i> |           |
| Source: Residential Parking Lot Veh. Movements | <i>Job Number: 11577</i>         |           |
| Condition: Operational                         | <i>Analyst: A. Wolfe</i>         |           |

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 333.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 333.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 0               |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:  | 15.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 10.0            | 51.3        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 333.0           | -22.8       | -22.8        | -22.8        | -22.8        | -22.8        | -22.8        |
| Shielding (Barrier Attenuation)    | 333.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 28.5        | -22.8        | -22.8        | -22.8        | -22.8        | -22.8        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>28.5</b> | <b>-22.8</b> | <b>-22.8</b> | <b>-22.8</b> | <b>-22.8</b> | <b>-22.8</b> |

| STATIONARY SOURCE NOISE PREDICTION MODEL      |                                  | 10/4/2018 |
|---|----------------------------------|-----------|
| <b>Observer Location: R1</b>                  | <i>Project Name: Continental</i> |           |
| Source: Commercial Parking Lot Veh. Movements | <i>Job Number: 11577</i>         |           |
| Condition: Operational                        | <i>Analyst: A. Wolfe</i>         |           |

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 620.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 620.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 0               |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:  | 15.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 5.0             | 60.1        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 620.0           | -31.4       | -31.4        | -31.4        | -31.4        | -31.4        | -31.4        |
| Shielding (Barrier Attenuation)    | 620.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 28.7        | -31.4        | -31.4        | -31.4        | -31.4        | -31.4        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>28.7</b> | <b>-31.4</b> | <b>-31.4</b> | <b>-31.4</b> | <b>-31.4</b> | <b>-31.4</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

|                                   |                           |
|-----------------------------------|---------------------------|
| <b>Observer Location: R1</b>      | Project Name: Continental |
| Source: Outdoor Pool/Spa Activity | Job Number: 11577         |
| Condition: Operational            | Analyst: A. Wolfe         |

**NOISE MODEL INPUTS**

|                               |            |                                |          |
|-------------------------------|------------|--------------------------------|----------|
| Noise Distance to Observer    | 738.0 feet | <b>Barrier Height:</b>         | 0.0 feet |
| Noise Distance to Barrier:    | 738.0 feet | Noise Source Height:           | 4.0 feet |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:               | 5.0 feet |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm): | 0        |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:          | 20.0     |
| Barrier Elevation:            | 0.0 feet   |                                |          |

20 = 6 dBA per doubling of distance  
15 = 4.5 dBA per doubling of distance

**NOISE MODEL PROJECTIONS**

| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Reference (Sample)                 | 5.0             | 71.0        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 738.0           | -43.4       | -43.4        | -43.4        | -43.4        | -43.4        | -43.4        |
| Shielding (Barrier Attenuation)    | 738.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 27.6        | -43.4        | -43.4        | -43.4        | -43.4        | -43.4        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>27.6</b> | <b>-43.4</b> | <b>-43.4</b> | <b>-43.4</b> | <b>-43.4</b> | <b>-43.4</b> |

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

|  |                           |
|--|---------------------------|
| <b>Observer Location: R2</b>             | Project Name: Continental |
| Source: Air Conditioning Unit (Roof-Top) | Job Number: 11577         |
| Condition: Operational                   | Analyst: A. Wolfe         |

**NOISE MODEL INPUTS**

|                               |            |                                |          |
|-------------------------------|------------|--------------------------------|----------|
| Noise Distance to Observer    | 777.0 feet | <b>Barrier Height:</b>         | 0.0 feet |
| Noise Distance to Barrier:    | 777.0 feet | Noise Source Height:           | 5.0 feet |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:               | 5.0 feet |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm): | 0        |
| Noise Source Elevation:       | 10.0 feet  | Drop Off Coefficient:          | 20.0     |
| Barrier Elevation:            | 0.0 feet   |                                |          |

20 = 6 dBA per doubling of distance  
15 = 4.5 dBA per doubling of distance

**NOISE MODEL PROJECTIONS**

| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Reference (Sample)                 | 5.0             | 77.2        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 777.0           | -43.8       | -43.8        | -43.8        | -43.8        | -43.8        | -43.8        |
| Shielding (Barrier Attenuation)    | 777.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 33.4        | -43.8        | -43.8        | -43.8        | -43.8        | -43.8        |
| <b>39 Minute Hourly Adjustment</b> |                 | <b>31.5</b> | <b>-45.7</b> | <b>-45.7</b> | <b>-45.7</b> | <b>-45.7</b> | <b>-45.7</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

---

**Observer Location: R2** *Project Name:* Continental  
*Source:* Residential Entry Gate & Speaker *Job Number:* 11577  
*Condition:* Operational *Analyst:* A. Wolfe

| NOISE MODEL INPUTS                   |            |  |                 |
|--------------------------------------|------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 287.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 287.0 feet | <i>Noise Source Height:</i>  | 5.0 feet        |
| <i>Barrier Distance to Observer:</i> | 0.0 feet   | <i>Observer Height:</i>  | 5.0 feet        |
| <i>Observer Elevation:</i>           | 0.0 feet   | <i>Barrier Type (0-Wall, 1-Berm):</i>  | 0               |
| <i>Noise Source Elevation:</i>       | 0.0 feet   | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                        |             |              |              |              |              |              |
|------------------------------------|------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <i>Noise Level</i>                 | <i>Distance (feet)</i> | <i>Leq</i>  | <i>L50</i>   | <i>L25</i>   | <i>L8</i>    | <i>L2</i>    | <i>Lmax</i>  |
| Reference (Sample)                 | 40.0                   | 55.9        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 287.0                  | -17.1       | -17.1        | -17.1        | -17.1        | -17.1        | -17.1        |
| Shielding (Barrier Attenuation)    | 287.0                  | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                        | 38.8        | -17.1        | -17.1        | -17.1        | -17.1        | -17.1        |
| <b>60 Minute Hourly Adjustment</b> |                        | <b>38.8</b> | <b>-17.1</b> | <b>-17.1</b> | <b>-17.1</b> | <b>-17.1</b> | <b>-17.1</b> |

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

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**Observer Location: R2** *Project Name:* Continental  
*Source:* Residential Parking Lot Veh. Movements *Job Number:* 11577  
*Condition:* Operational *Analyst:* A. Wolfe

| NOISE MODEL INPUTS                   |            |  |                 |
|--------------------------------------|------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 232.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 232.0 feet | <i>Noise Source Height:</i>  | 5.0 feet        |
| <i>Barrier Distance to Observer:</i> | 0.0 feet   | <i>Observer Height:</i>  | 5.0 feet        |
| <i>Observer Elevation:</i>           | 0.0 feet   | <i>Barrier Type (0-Wall, 1-Berm):</i>  | 0               |
| <i>Noise Source Elevation:</i>       | 0.0 feet   | <i>Drop Off Coefficient:</i>   | 15.0            |
| <i>Barrier Elevation:</i>            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                        |             |              |              |              |              |              |
|------------------------------------|------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <i>Noise Level</i>                 | <i>Distance (feet)</i> | <i>Leq</i>  | <i>L50</i>   | <i>L25</i>   | <i>L8</i>    | <i>L2</i>    | <i>Lmax</i>  |
| Reference (Sample)                 | 10.0                   | 51.3        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 232.0                  | -20.5       | -20.5        | -20.5        | -20.5        | -20.5        | -20.5        |
| Shielding (Barrier Attenuation)    | 232.0                  | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                        | 30.8        | -20.5        | -20.5        | -20.5        | -20.5        | -20.5        |
| <b>60 Minute Hourly Adjustment</b> |                        | <b>30.8</b> | <b>-20.5</b> | <b>-20.5</b> | <b>-20.5</b> | <b>-20.5</b> | <b>-20.5</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

**Observer Location: R2** Project Name: Continental  
 Source: Commercial Parking Lot Veh. Movements Job Number: 11577  
 Condition: Operational Analyst: A. Wolfe

| NOISE MODEL INPUTS            |            |                                |  |
|-------------------------------|------------|--------------------------------|--|
| Noise Distance to Observer    | 697.0 feet | <b>Barrier Height:</b>         | <b>0.0 feet</b>  |
| Noise Distance to Barrier:    | 697.0 feet | Noise Source Height:           | 5.0 feet   |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:               | 5.0 feet   |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm): | 0  |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:          | 15.0   |
| Barrier Elevation:            | 0.0 feet   |                                | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 5.0             | 60.1        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 697.0           | -32.2       | -32.2        | -32.2        | -32.2        | -32.2        | -32.2        |
| Shielding (Barrier Attenuation)    | 697.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 27.9        | -32.2        | -32.2        | -32.2        | -32.2        | -32.2        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>27.9</b> | <b>-32.2</b> | <b>-32.2</b> | <b>-32.2</b> | <b>-32.2</b> | <b>-32.2</b> |

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

**Observer Location: R2** Project Name: Continental  
 Source: Outdoor Pool/Spa Activity Job Number: 11577  
 Condition: Operational Analyst: A. Wolfe

| NOISE MODEL INPUTS            |            |                                |  |
|-------------------------------|------------|--------------------------------|--|
| Noise Distance to Observer    | 739.0 feet | <b>Barrier Height:</b>         | <b>0.0 feet</b>  |
| Noise Distance to Barrier:    | 739.0 feet | Noise Source Height:           | 4.0 feet   |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:               | 5.0 feet   |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm): | 0  |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:          | 20.0   |
| Barrier Elevation:            | 0.0 feet   |                                | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 5.0             | 71.0        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 739.0           | -43.4       | -43.4        | -43.4        | -43.4        | -43.4        | -43.4        |
| Shielding (Barrier Attenuation)    | 739.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 27.6        | -43.4        | -43.4        | -43.4        | -43.4        | -43.4        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>27.6</b> | <b>-43.4</b> | <b>-43.4</b> | <b>-43.4</b> | <b>-43.4</b> | <b>-43.4</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| STATIONARY SOURCE NOISE PREDICTION MODEL |                                  | 10/4/2018 |
|--|----------------------------------|-----------|
| <b>Observer Location: R3</b>             | <i>Project Name:</i> Continental |           |
| Source: Air Conditioning Unit (Roof-Top) | <i>Job Number:</i> 11577         |           |
| Condition: Operational                   | <i>Analyst:</i> A. Wolfe         |           |

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 711.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 711.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 0               |
| Noise Source Elevation:       | 10.0 feet  | Drop Off Coefficient:  | 20.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 5.0             | 77.2        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 711.0           | -43.1       | -43.1        | -43.1        | -43.1        | -43.1        | -43.1        |
| Shielding (Barrier Attenuation)    | 711.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 34.1        | -43.1        | -43.1        | -43.1        | -43.1        | -43.1        |
| <b>39 Minute Hourly Adjustment</b> |                 | <b>32.2</b> | <b>-45.0</b> | <b>-45.0</b> | <b>-45.0</b> | <b>-45.0</b> | <b>-45.0</b> |

| STATIONARY SOURCE NOISE PREDICTION MODEL |                                  | 10/4/2018 |
|--|----------------------------------|-----------|
| <b>Observer Location: R3</b>             | <i>Project Name:</i> Continental |           |
| Source: Residential Entry Gate & Speaker | <i>Job Number:</i> 11577         |           |
| Condition: Operational                   | <i>Analyst:</i> A. Wolfe         |           |

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 403.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 403.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 0               |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:  | 20.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 40.0            | 55.9        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 403.0           | -20.1       | -20.1        | -20.1        | -20.1        | -20.1        | -20.1        |
| Shielding (Barrier Attenuation)    | 403.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 35.8        | -20.1        | -20.1        | -20.1        | -20.1        | -20.1        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>35.8</b> | <b>-20.1</b> | <b>-20.1</b> | <b>-20.1</b> | <b>-20.1</b> | <b>-20.1</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| STATIONARY SOURCE NOISE PREDICTION MODEL       |                                  | 10/4/2018 |
|--|----------------------------------|-----------|
| <b>Observer Location: R3</b>                   | <i>Project Name: Continental</i> |           |
| Source: Residential Parking Lot Veh. Movements | <i>Job Number: 11577</i>         |           |
| Condition: Operational                         | <i>Analyst: A. Wolfe</i>         |           |

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 237.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 237.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 0               |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:  | 15.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 10.0            | 51.3        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 237.0           | -20.6       | -20.6        | -20.6        | -20.6        | -20.6        | -20.6        |
| Shielding (Barrier Attenuation)    | 237.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 30.7        | -20.6        | -20.6        | -20.6        | -20.6        | -20.6        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>30.7</b> | <b>-20.6</b> | <b>-20.6</b> | <b>-20.6</b> | <b>-20.6</b> | <b>-20.6</b> |

| STATIONARY SOURCE NOISE PREDICTION MODEL      |                                  | 10/4/2018 |
|---|----------------------------------|-----------|
| <b>Observer Location: R3</b>                  | <i>Project Name: Continental</i> |           |
| Source: Commercial Parking Lot Veh. Movements | <i>Job Number: 11577</i>         |           |
| Condition: Operational                        | <i>Analyst: A. Wolfe</i>         |           |

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 649.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 649.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 0               |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:  | 15.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 5.0             | 60.1        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 649.0           | -31.7       | -31.7        | -31.7        | -31.7        | -31.7        | -31.7        |
| Shielding (Barrier Attenuation)    | 649.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 28.4        | -31.7        | -31.7        | -31.7        | -31.7        | -31.7        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>28.4</b> | <b>-31.7</b> | <b>-31.7</b> | <b>-31.7</b> | <b>-31.7</b> | <b>-31.7</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

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**Observer Location: R3** *Project Name: Continental*  
*Source: Outdoor Pool/Spa Activity* *Job Number: 11577*  
*Condition: Operational* *Analyst: A. Wolfe*

| NOISE MODEL INPUTS                   |            |  |                 |
|--------------------------------------|------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 398.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 398.0 feet | <i>Noise Source Height:</i>  | 4.0 feet        |
| <i>Barrier Distance to Observer:</i> | 0.0 feet   | <i>Observer Height:</i>  | 5.0 feet        |
| <i>Observer Elevation:</i>           | 0.0 feet   | <i>Barrier Type (0-Wall, 1-Berm):</i>  | 0               |
| <i>Noise Source Elevation:</i>       | 0.0 feet   | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                        |             |              |              |              |              |              |
|------------------------------------|------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <i>Noise Level</i>                 | <i>Distance (feet)</i> | <i>Leq</i>  | <i>L50</i>   | <i>L25</i>   | <i>L8</i>    | <i>L2</i>    | <i>Lmax</i>  |
| Reference (Sample)                 | 5.0                    | 71.0        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 398.0                  | -38.0       | -38.0        | -38.0        | -38.0        | -38.0        | -38.0        |
| Shielding (Barrier Attenuation)    | 398.0                  | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                        | 33.0        | -38.0        | -38.0        | -38.0        | -38.0        | -38.0        |
| <b>60 Minute Hourly Adjustment</b> |                        | <b>33.0</b> | <b>-38.0</b> | <b>-38.0</b> | <b>-38.0</b> | <b>-38.0</b> | <b>-38.0</b> |

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

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**Observer Location: R4** *Project Name: Continental*  
*Source: Air Conditioning Unit (Roof-Top)* *Job Number: 11577*  
*Condition: Operational* *Analyst: A. Wolfe*

| NOISE MODEL INPUTS                   |            |  |                 |
|--------------------------------------|------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 205.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 195.0 feet | <i>Noise Source Height:</i>  | 5.0 feet        |
| <i>Barrier Distance to Observer:</i> | 10.0 feet  | <i>Observer Height:</i>  | 5.0 feet        |
| <i>Observer Elevation:</i>           | 0.0 feet   | <i>Barrier Type (0-Wall, 1-Berm):</i>  | 6               |
| <i>Noise Source Elevation:</i>       | 10.0 feet  | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                        |             |              |              |              |              |              |
|------------------------------------|------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <i>Noise Level</i>                 | <i>Distance (feet)</i> | <i>Leq</i>  | <i>L50</i>   | <i>L25</i>   | <i>L8</i>    | <i>L2</i>    | <i>Lmax</i>  |
| Reference (Sample)                 | 5.0                    | 77.2        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 205.0                  | -32.3       | -32.3        | -32.3        | -32.3        | -32.3        | -32.3        |
| Shielding (Barrier Attenuation)    | 195.0                  | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                        | 44.9        | -32.3        | -32.3        | -32.3        | -32.3        | -32.3        |
| <b>39 Minute Hourly Adjustment</b> |                        | <b>43.0</b> | <b>-34.2</b> | <b>-34.2</b> | <b>-34.2</b> | <b>-34.2</b> | <b>-34.2</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

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**Observer Location: R4** Project Name: Continental  
 Source: Residential Entry Gate & Speaker Job Number: 11577  
 Condition: Operational Analyst: A. Wolfe

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 408.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 408.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 6               |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:  | 20.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 40.0            | 55.9        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 408.0           | -20.2       | -20.2        | -20.2        | -20.2        | -20.2        | -20.2        |
| Shielding (Barrier Attenuation)    | 408.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 35.7        | -20.2        | -20.2        | -20.2        | -20.2        | -20.2        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>35.7</b> | <b>-20.2</b> | <b>-20.2</b> | <b>-20.2</b> | <b>-20.2</b> | <b>-20.2</b> |

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

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**Observer Location: R4** Project Name: Continental  
 Source: Residential Parking Lot Veh. Movements Job Number: 11577  
 Condition: Operational Analyst: A. Wolfe

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 326.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 326.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 0.0 feet   | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 6               |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:  | 15.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 10.0            | 51.3        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 326.0           | -22.7       | -22.7        | -22.7        | -22.7        | -22.7        | -22.7        |
| Shielding (Barrier Attenuation)    | 326.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 28.6        | -22.7        | -22.7        | -22.7        | -22.7        | -22.7        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>28.6</b> | <b>-22.7</b> | <b>-22.7</b> | <b>-22.7</b> | <b>-22.7</b> | <b>-22.7</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| STATIONARY SOURCE NOISE PREDICTION MODEL             |  | 10/4/2018                        |
|--|--|----------------------------------|
| <b>Observer Location: R4</b>                         |  | <i>Project Name:</i> Continental |
| <i>Source:</i> Commercial Parking Lot Veh. Movements |  | <i>Job Number:</i> 11577         |
| <i>Condition:</i> Operational                        |  | <i>Analyst:</i> A. Wolfe         |

| NOISE MODEL INPUTS                   |            |  |                 |
|--------------------------------------|------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 162.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 162.0 feet | <i>Noise Source Height:</i>  | 5.0 feet        |
| <i>Barrier Distance to Observer:</i> | 0.0 feet   | <i>Observer Height:</i>  | 5.0 feet        |
| <i>Observer Elevation:</i>           | 0.0 feet   | <i>Barrier Type (0-Wall, 1-Berm):</i>  | 6               |
| <i>Noise Source Elevation:</i>       | 0.0 feet   | <i>Drop Off Coefficient:</i>   | 15.0            |
| <i>Barrier Elevation:</i>            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 5.0             | 60.1        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 162.0           | -22.7       | -22.7        | -22.7        | -22.7        | -22.7        | -22.7        |
| Shielding (Barrier Attenuation)    | 162.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 37.4        | -22.7        | -22.7        | -22.7        | -22.7        | -22.7        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>37.4</b> | <b>-22.7</b> | <b>-22.7</b> | <b>-22.7</b> | <b>-22.7</b> | <b>-22.7</b> |

| STATIONARY SOURCE NOISE PREDICTION MODEL |  | 10/4/2018                        |
|--|--|----------------------------------|
| <b>Observer Location: R4</b>             |  | <i>Project Name:</i> Continental |
| <i>Source:</i> Outdoor Pool/Spa Activity |  | <i>Job Number:</i> 11577         |
| <i>Condition:</i> Operational            |  | <i>Analyst:</i> A. Wolfe         |

| NOISE MODEL INPUTS                   |            |  |                 |
|--------------------------------------|------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 294.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 294.0 feet | <i>Noise Source Height:</i>  | 4.0 feet        |
| <i>Barrier Distance to Observer:</i> | 0.0 feet   | <i>Observer Height:</i>  | 5.0 feet        |
| <i>Observer Elevation:</i>           | 0.0 feet   | <i>Barrier Type (0-Wall, 1-Berm):</i>  | 6               |
| <i>Noise Source Elevation:</i>       | 0.0 feet   | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 5.0             | 71.0        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 294.0           | -35.4       | -35.4        | -35.4        | -35.4        | -35.4        | -35.4        |
| Shielding (Barrier Attenuation)    | 294.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 35.6        | -35.4        | -35.4        | -35.4        | -35.4        | -35.4        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>35.6</b> | <b>-35.4</b> | <b>-35.4</b> | <b>-35.4</b> | <b>-35.4</b> | <b>-35.4</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

| STATIONARY SOURCE NOISE PREDICTION MODEL |                                  | 10/4/2018 |
|--|----------------------------------|-----------|
| <b>Observer Location: R5</b>             | <i>Project Name:</i> Continental |           |
| Source: Air Conditioning Unit (Roof-Top) | <i>Job Number:</i> 11577         |           |
| Condition: Operational                   | <i>Analyst:</i> A. Wolfe         |           |

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 253.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 243.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 10.0 feet  | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 6               |
| Noise Source Elevation:       | 10.0 feet  | Drop Off Coefficient:  | 20.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 5.0             | 77.2        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 253.0           | -34.1       | -34.1        | -34.1        | -34.1        | -34.1        | -34.1        |
| Shielding (Barrier Attenuation)    | 243.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 43.1        | -34.1        | -34.1        | -34.1        | -34.1        | -34.1        |
| <b>39 Minute Hourly Adjustment</b> |                 | <b>41.2</b> | <b>-36.0</b> | <b>-36.0</b> | <b>-36.0</b> | <b>-36.0</b> | <b>-36.0</b> |

| STATIONARY SOURCE NOISE PREDICTION MODEL |                                  | 10/4/2018 |
|--|----------------------------------|-----------|
| <b>Observer Location: R5</b>             | <i>Project Name:</i> Continental |           |
| Source: Residential Entry Gate & Speaker | <i>Job Number:</i> 11577         |           |
| Condition: Operational                   | <i>Analyst:</i> A. Wolfe         |           |

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 592.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 582.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 10.0 feet  | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 6               |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:  | 20.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 40.0            | 55.9        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 592.0           | -23.4       | -23.4        | -23.4        | -23.4        | -23.4        | -23.4        |
| Shielding (Barrier Attenuation)    | 582.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 32.5        | -23.4        | -23.4        | -23.4        | -23.4        | -23.4        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>32.5</b> | <b>-23.4</b> | <b>-23.4</b> | <b>-23.4</b> | <b>-23.4</b> | <b>-23.4</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



| STATIONARY SOURCE NOISE PREDICTION MODEL       |                                  | 10/4/2018 |
|--|----------------------------------|-----------|
| <b>Observer Location: R5</b>                   | <i>Project Name:</i> Continental |           |
| Source: Residential Parking Lot Veh. Movements | <i>Job Number:</i> 11577         |           |
| Condition: Operational                         | <i>Analyst:</i> A. Wolfe         |           |

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 542.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 532.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 10.0 feet  | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 6               |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:  | 15.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 10.0            | 51.3        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 542.0           | -26.0       | -26.0        | -26.0        | -26.0        | -26.0        | -26.0        |
| Shielding (Barrier Attenuation)    | 532.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 25.3        | -26.0        | -26.0        | -26.0        | -26.0        | -26.0        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>25.3</b> | <b>-26.0</b> | <b>-26.0</b> | <b>-26.0</b> | <b>-26.0</b> | <b>-26.0</b> |

| STATIONARY SOURCE NOISE PREDICTION MODEL      |                                  | 10/4/2018 |
|---|----------------------------------|-----------|
| <b>Observer Location: R5</b>                  | <i>Project Name:</i> Continental |           |
| Source: Commercial Parking Lot Veh. Movements | <i>Job Number:</i> 11577         |           |
| Condition: Operational                        | <i>Analyst:</i> A. Wolfe         |           |

| NOISE MODEL INPUTS            |            |  |                 |
|-------------------------------|------------|--|-----------------|
| Noise Distance to Observer    | 185.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| Noise Distance to Barrier:    | 175.0 feet | Noise Source Height:   | 5.0 feet        |
| Barrier Distance to Observer: | 10.0 feet  | Observer Height:   | 5.0 feet        |
| Observer Elevation:           | 0.0 feet   | Barrier Type (0-Wall, 1-Berm):   | 6               |
| Noise Source Elevation:       | 0.0 feet   | Drop Off Coefficient:  | 15.0            |
| Barrier Elevation:            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 5.0             | 60.1        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 185.0           | -23.5       | -23.5        | -23.5        | -23.5        | -23.5        | -23.5        |
| Shielding (Barrier Attenuation)    | 175.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 36.6        | -23.5        | -23.5        | -23.5        | -23.5        | -23.5        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>36.6</b> | <b>-23.5</b> | <b>-23.5</b> | <b>-23.5</b> | <b>-23.5</b> | <b>-23.5</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

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|  |                                  |
|--|----------------------------------|
| <b>Observer Location: R5</b>             | <i>Project Name:</i> Continental |
| <i>Source:</i> Outdoor Pool/Spa Activity | <i>Job Number:</i> 11577         |
| <i>Condition:</i> Operational            | <i>Analyst:</i> A. Wolfe         |

**NOISE MODEL INPUTS**

|  |   |  |
|--|---|--|
| <i>Noise Distance to Observer:</i> 667.0 feet  | <b>Barrier Height:</b> 0.0 feet         |  |
| <i>Noise Distance to Barrier:</i> 657.0 feet   | <i>Noise Source Height:</i> 4.0 feet    |  |
| <i>Barrier Distance to Observer:</i> 10.0 feet | <i>Observer Height:</i> 5.0 feet        |  |
| <br>   | <br>                                    |  |
| <i>Observer Elevation:</i> 0.0 feet            | <i>Barrier Type (0-Wall, 1-Berm):</i> 6 |  |
| <i>Noise Source Elevation:</i> 0.0 feet        | <i>Drop Off Coefficient:</i> 20.0       |  |
| <i>Barrier Elevation:</i> 0.0 feet             |   |  |
|  | 20 = 6 dBA per doubling of distance     |  |
|  | 15 = 4.5 dBA per doubling of distance   |  |

**NOISE MODEL PROJECTIONS**

| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Reference (Sample)                 | 5.0             | 71.0        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 667.0           | -42.5       | -42.5        | -42.5        | -42.5        | -42.5        | -42.5        |
| Shielding (Barrier Attenuation)    | 657.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 28.5        | -42.5        | -42.5        | -42.5        | -42.5        | -42.5        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>28.5</b> | <b>-42.5</b> | <b>-42.5</b> | <b>-42.5</b> | <b>-42.5</b> | <b>-42.5</b> |

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

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|   |                                  |
|---|----------------------------------|
| <b>Observer Location: R6</b>                    | <i>Project Name:</i> Continental |
| <i>Source:</i> Air Conditioning Unit (Roof-Top) | <i>Job Number:</i> 11577         |
| <i>Condition:</i> Operational                   | <i>Analyst:</i> A. Wolfe         |

**NOISE MODEL INPUTS**

|   |   |  |
|---|---|--|
| <i>Noise Distance to Observer:</i> 216.0 feet | <b>Barrier Height:</b> 0.0 feet         |  |
| <i>Noise Distance to Barrier:</i> 216.0 feet  | <i>Noise Source Height:</i> 5.0 feet    |  |
| <i>Barrier Distance to Observer:</i> 0.0 feet | <i>Observer Height:</i> 5.0 feet        |  |
| <br>  | <br>                                    |  |
| <i>Observer Elevation:</i> 0.0 feet           | <i>Barrier Type (0-Wall, 1-Berm):</i> 0 |  |
| <i>Noise Source Elevation:</i> 10.0 feet      | <i>Drop Off Coefficient:</i> 20.0       |  |
| <i>Barrier Elevation:</i> 0.0 feet            |   |  |
|   | 20 = 6 dBA per doubling of distance     |  |
|   | 15 = 4.5 dBA per doubling of distance   |  |

**NOISE MODEL PROJECTIONS**

| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Reference (Sample)                 | 5.0             | 77.2        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 216.0           | -32.7       | -32.7        | -32.7        | -32.7        | -32.7        | -32.7        |
| Shielding (Barrier Attenuation)    | 216.0           | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                 | 44.5        | -32.7        | -32.7        | -32.7        | -32.7        | -32.7        |
| <b>39 Minute Hourly Adjustment</b> |                 | <b>42.6</b> | <b>-34.6</b> | <b>-34.6</b> | <b>-34.6</b> | <b>-34.6</b> | <b>-34.6</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

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**Observer Location: R6** *Project Name:* Continental  
*Source:* Residential Entry Gate & Speaker *Job Number:* 11577  
*Condition:* Operational *Analyst:* A. Wolfe

| NOISE MODEL INPUTS                   |            |                                       |  |
|--------------------------------------|------------|---------------------------------------|--|
| <i>Noise Distance to Observer</i>    | 173.0 feet | <b>Barrier Height:</b>                | <b>0.0 feet</b>  |
| <i>Noise Distance to Barrier:</i>    | 173.0 feet | <i>Noise Source Height:</i>           | 5.0 feet   |
| <i>Barrier Distance to Observer:</i> | 0.0 feet   | <i>Observer Height:</i>               | 5.0 feet   |
| <i>Observer Elevation:</i>           | 0.0 feet   | <i>Barrier Type (0-Wall, 1-Berm):</i> | 0  |
| <i>Noise Source Elevation:</i>       | 0.0 feet   | <i>Drop Off Coefficient:</i>          | 20.0   |
| <i>Barrier Elevation:</i>            | 0.0 feet   |                                       | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |

| NOISE MODEL PROJECTIONS            |                        |             |              |              |              |              |              |
|------------------------------------|------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <i>Noise Level</i>                 | <i>Distance (feet)</i> | <i>Leq</i>  | <i>L50</i>   | <i>L25</i>   | <i>L8</i>    | <i>L2</i>    | <i>Lmax</i>  |
| Reference (Sample)                 | 40.0                   | 55.9        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 173.0                  | -12.7       | -12.7        | -12.7        | -12.7        | -12.7        | -12.7        |
| Shielding (Barrier Attenuation)    | 173.0                  | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                        | 43.2        | -12.7        | -12.7        | -12.7        | -12.7        | -12.7        |
| <b>60 Minute Hourly Adjustment</b> |                        | <b>43.2</b> | <b>-12.7</b> | <b>-12.7</b> | <b>-12.7</b> | <b>-12.7</b> | <b>-12.7</b> |

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

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**Observer Location: R6** *Project Name:* Continental  
*Source:* Residential Parking Lot Veh. Movements *Job Number:* 11577  
*Condition:* Operational *Analyst:* A. Wolfe

| NOISE MODEL INPUTS                   |            |                                       |  |
|--------------------------------------|------------|---------------------------------------|--|
| <i>Noise Distance to Observer</i>    | 128.0 feet | <b>Barrier Height:</b>                | <b>0.0 feet</b>  |
| <i>Noise Distance to Barrier:</i>    | 128.0 feet | <i>Noise Source Height:</i>           | 5.0 feet   |
| <i>Barrier Distance to Observer:</i> | 0.0 feet   | <i>Observer Height:</i>               | 5.0 feet   |
| <i>Observer Elevation:</i>           | 0.0 feet   | <i>Barrier Type (0-Wall, 1-Berm):</i> | 0  |
| <i>Noise Source Elevation:</i>       | 0.0 feet   | <i>Drop Off Coefficient:</i>          | 15.0   |
| <i>Barrier Elevation:</i>            | 0.0 feet   |                                       | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |

| NOISE MODEL PROJECTIONS            |                        |             |              |              |              |              |              |
|------------------------------------|------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <i>Noise Level</i>                 | <i>Distance (feet)</i> | <i>Leq</i>  | <i>L50</i>   | <i>L25</i>   | <i>L8</i>    | <i>L2</i>    | <i>Lmax</i>  |
| Reference (Sample)                 | 10.0                   | 51.3        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 128.0                  | -16.6       | -16.6        | -16.6        | -16.6        | -16.6        | -16.6        |
| Shielding (Barrier Attenuation)    | 128.0                  | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                        | 34.7        | -16.6        | -16.6        | -16.6        | -16.6        | -16.6        |
| <b>60 Minute Hourly Adjustment</b> |                        | <b>34.7</b> | <b>-16.6</b> | <b>-16.6</b> | <b>-16.6</b> | <b>-16.6</b> | <b>-16.6</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

**Observer Location: R6** *Project Name: Continental*  
*Source: Commercial Parking Lot Veh. Movements* *Job Number: 11577*  
*Condition: Operational* *Analyst: A. Wolfe*

| NOISE MODEL INPUTS                   |            |  |                 |
|--------------------------------------|------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 149.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 149.0 feet | <i>Noise Source Height:</i>  | 5.0 feet        |
| <i>Barrier Distance to Observer:</i> | 0.0 feet   | <i>Observer Height:</i>  | 5.0 feet        |
| <i>Observer Elevation:</i>           | 0.0 feet   | <i>Barrier Type (0-Wall, 1-Berm):</i>  | 0               |
| <i>Noise Source Elevation:</i>       | 0.0 feet   | <i>Drop Off Coefficient:</i>   | 15.0            |
| <i>Barrier Elevation:</i>            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                        |             |              |              |              |              |              |
|------------------------------------|------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <i>Noise Level</i>                 | <i>Distance (feet)</i> | <i>Leq</i>  | <i>L50</i>   | <i>L25</i>   | <i>L8</i>    | <i>L2</i>    | <i>Lmax</i>  |
| Reference (Sample)                 | 5.0                    | 60.1        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 149.0                  | -22.1       | -22.1        | -22.1        | -22.1        | -22.1        | -22.1        |
| Shielding (Barrier Attenuation)    | 149.0                  | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                        | 38.0        | -22.1        | -22.1        | -22.1        | -22.1        | -22.1        |
| <b>60 Minute Hourly Adjustment</b> |                        | <b>38.0</b> | <b>-22.1</b> | <b>-22.1</b> | <b>-22.1</b> | <b>-22.1</b> | <b>-22.1</b> |

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

**Observer Location: R6** *Project Name: Continental*  
*Source: Outdoor Pool/Spa Activity* *Job Number: 11577*  
*Condition: Operational* *Analyst: A. Wolfe*

| NOISE MODEL INPUTS                   |            |  |                 |
|--------------------------------------|------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 445.0 feet | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 445.0 feet | <i>Noise Source Height:</i>  | 4.0 feet        |
| <i>Barrier Distance to Observer:</i> | 0.0 feet   | <i>Observer Height:</i>  | 5.0 feet        |
| <i>Observer Elevation:</i>           | 0.0 feet   | <i>Barrier Type (0-Wall, 1-Berm):</i>  | 0               |
| <i>Noise Source Elevation:</i>       | 0.0 feet   | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 0.0 feet   | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                        |             |              |              |              |              |              |
|------------------------------------|------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <i>Noise Level</i>                 | <i>Distance (feet)</i> | <i>Leq</i>  | <i>L50</i>   | <i>L25</i>   | <i>L8</i>    | <i>L2</i>    | <i>Lmax</i>  |
| Reference (Sample)                 | 5.0                    | 71.0        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 445.0                  | -39.0       | -39.0        | -39.0        | -39.0        | -39.0        | -39.0        |
| Shielding (Barrier Attenuation)    | 445.0                  | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Raw (Distance + Barrier)           |                        | 32.0        | -39.0        | -39.0        | -39.0        | -39.0        | -39.0        |
| <b>60 Minute Hourly Adjustment</b> |                        | <b>32.0</b> | <b>-39.0</b> | <b>-39.0</b> | <b>-39.0</b> | <b>-39.0</b> | <b>-39.0</b> |

Attachment: Noise Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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**APPENDIX 11.1:**

**TEMPORARY CONSTRUCTION NOISE BARRIER ATTENUATION CALCULATIONS**

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## STATIONARY SOURCE NOISE PREDICTION MODEL

10/4/2018

**Observer Location: R1**

Source: Highest Reference Const. Activity  
Condition: Construction

Project Name: Continental

Job Number: 11577

Analyst: A. Wolfe

## NOISE MODEL INPUTS

|                               |              |                                |                 |
|-------------------------------|--------------|--------------------------------|-----------------|
| Noise Distance to Observer    | 222.0 feet   | <b>Barrier Height:</b>         | <b>7.0 feet</b> |
| Noise Distance to Barrier:    | 10.0 feet    | Noise Source Height:           | 8.0 feet        |
| Barrier Distance to Observer: | 212.0 feet   | Observer Height:               | 5.0 feet        |
| Observer Elevation:           | 1,555.0 feet | Barrier Type (0-Wall, 1-Berm): | 1               |
| Noise Source Elevation:       | 1,548.0 feet | Drop Off Coefficient:          | 20.0            |
| Barrier Elevation:            | 1,548.0 feet |                                |                 |

20 = 6 dBA per doubling of distance  
15 = 4.5 dBA per doubling of distance

## NOISE MODEL PROJECTIONS

| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Reference (Sample)                 | 50.0            | 73.5        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 222.0           | -12.9       | -12.9        | -12.9        | -12.9        | -12.9        | -12.9        |
| Shielding (Barrier Attenuation)    | 10.0            | -5.7        | -5.7         | -5.7         | -5.7         | -5.7         | -5.7         |
| Raw (Distance + Barrier)           |                 | 54.9        | -18.6        | -18.6        | -18.6        | -18.6        | -18.6        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>54.9</b> | <b>-18.6</b> | <b>-18.6</b> | <b>-18.6</b> | <b>-18.6</b> | <b>-18.6</b> |

## STATIONARY SOURCE NOISE PREDICTION MODEL

10/4/2018

**Observer Location: R2**

Source: Highest Reference Const. Activity  
Condition: Construction

Project Name: Continental

Job Number: 11577

Analyst: A. Wolfe

## NOISE MODEL INPUTS

|                               |              |                                |                 |
|-------------------------------|--------------|--------------------------------|-----------------|
| Noise Distance to Observer    | 129.0 feet   | <b>Barrier Height:</b>         | <b>9.0 feet</b> |
| Noise Distance to Barrier:    | 10.0 feet    | Noise Source Height:           | 8.0 feet        |
| Barrier Distance to Observer: | 119.0 feet   | Observer Height:               | 5.0 feet        |
| Observer Elevation:           | 1,564.0 feet | Barrier Type (0-Wall, 1-Berm): | 1               |
| Noise Source Elevation:       | 1,555.0 feet | Drop Off Coefficient:          | 20.0            |
| Barrier Elevation:            | 1,555.0 feet |                                |                 |

20 = 6 dBA per doubling of distance  
15 = 4.5 dBA per doubling of distance

## NOISE MODEL PROJECTIONS

| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Reference (Sample)                 | 50.0            | 73.5        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 129.0           | -8.2        | -8.2         | -8.2         | -8.2         | -8.2         | -8.2         |
| Shielding (Barrier Attenuation)    | 10.0            | -5.2        | -5.2         | -5.2         | -5.2         | -5.2         | -5.2         |
| Raw (Distance + Barrier)           |                 | 60.1        | -13.4        | -13.4        | -13.4        | -13.4        | -13.4        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>60.1</b> | <b>-13.4</b> | <b>-13.4</b> | <b>-13.4</b> | <b>-13.4</b> | <b>-13.4</b> |



**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

---

**Observer Location: R3** *Project Name:* Continental  
*Source:* Highest Reference Const. Activity *Job Number:* 11577  
*Condition:* Construction *Analyst:* A. Wolfe

| NOISE MODEL INPUTS                   |              |  |                 |
|--------------------------------------|--------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 133.0 feet   | <b>Barrier Height:</b>   | <b>7.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 123.0 feet   | <i>Noise Source Height:</i>  | 8.0 feet        |
| <i>Barrier Distance to Observer:</i> | 10.0 feet    | <i>Observer Height:</i>  | 5.0 feet        |
| <i>Observer Elevation:</i>           | 1,560.0 feet | <i>Barrier Type (0-Wall, 1-Berm):</i>  | 1               |
| <i>Noise Source Elevation:</i>       | 1,553.0 feet | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 1,553.0 feet | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                        |             |              |              |              |              |              |
|------------------------------------|------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <i>Noise Level</i>                 | <i>Distance (feet)</i> | <i>Leq</i>  | <i>L50</i>   | <i>L25</i>   | <i>L8</i>    | <i>L2</i>    | <i>Lmax</i>  |
| Reference (Sample)                 | 50.0                   | 73.5        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 133.0                  | -8.5        | -8.5         | -8.5         | -8.5         | -8.5         | -8.5         |
| Shielding (Barrier Attenuation)    | 123.0                  | -10.5       | -10.5        | -10.5        | -10.5        | -10.5        | -10.5        |
| Raw (Distance + Barrier)           |                        | 54.5        | -19.0        | -19.0        | -19.0        | -19.0        | -19.0        |
| <b>60 Minute Hourly Adjustment</b> |                        | <b>54.5</b> | <b>-19.0</b> | <b>-19.0</b> | <b>-19.0</b> | <b>-19.0</b> | <b>-19.0</b> |

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

---

**Observer Location: R4** *Project Name:* Continental  
*Source:* Highest Reference Const. Activity *Job Number:* 11577  
*Condition:* Construction *Analyst:* A. Wolfe

| NOISE MODEL INPUTS                   |              |  |                 |
|--------------------------------------|--------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 133.0 feet   | <b>Barrier Height:</b>   | <b>6.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 123.0 feet   | <i>Noise Source Height:</i>  | 8.0 feet        |
| <i>Barrier Distance to Observer:</i> | 10.0 feet    | <i>Observer Height:</i>  | 5.0 feet        |
| <i>Observer Elevation:</i>           | 1,527.0 feet | <i>Barrier Type (0-Wall, 1-Berm):</i>  | 0               |
| <i>Noise Source Elevation:</i>       | 1,523.0 feet | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 1,527.0 feet | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                        |             |              |              |              |              |              |
|------------------------------------|------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| <i>Noise Level</i>                 | <i>Distance (feet)</i> | <i>Leq</i>  | <i>L50</i>   | <i>L25</i>   | <i>L8</i>    | <i>L2</i>    | <i>Lmax</i>  |
| Reference (Sample)                 | 50.0                   | 73.5        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 133.0                  | -8.5        | -8.5         | -8.5         | -8.5         | -8.5         | -8.5         |
| Shielding (Barrier Attenuation)    | 123.0                  | -5.6        | -5.6         | -5.6         | -5.6         | -5.6         | -5.6         |
| Raw (Distance + Barrier)           |                        | 59.4        | -14.1        | -14.1        | -14.1        | -14.1        | -14.1        |
| <b>60 Minute Hourly Adjustment</b> |                        | <b>59.4</b> | <b>-14.1</b> | <b>-14.1</b> | <b>-14.1</b> | <b>-14.1</b> | <b>-14.1</b> |

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**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

---

**Observer Location: R5** *Project Name:* Continental  
*Source:* Highest Reference Const. Activity *Job Number:* 11577  
*Condition:* Construction *Analyst:* A. Wolfe

| NOISE MODEL INPUTS                   |                  |  |                 |
|--------------------------------------|------------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 153.0 feet       | <b>Barrier Height:</b>   | <b>6.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 143.0 feet       | <i>Noise Source Height:</i>  | 8.0 feet        |
| <i>Barrier Distance to Observer:</i> | 10.0 feet        | <i>Observer Height:</i>  | 5.0 feet        |
| <br><i>Observer Elevation:</i>       | <br>1,510.0 feet | <br><i>Barrier Type (0-Wall, 1-Berm):</i>                                    | <br>0           |
| <i>Noise Source Elevation:</i>       | 1,520.0 feet     | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 1,510.0 feet     | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |              |              |              |              |              |
|------------------------------------|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Noise Level                        | Distance (feet) | Leq         | L50          | L25          | L8           | L2           | Lmax         |
| Reference (Sample)                 | 50.0            | 73.5        | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| Distance Attenuation               | 153.0           | -9.7        | -9.7         | -9.7         | -9.7         | -9.7         | -9.7         |
| Shielding (Barrier Attenuation)    | 143.0           | -4.9        | -4.9         | -4.9         | -4.9         | -4.9         | -4.9         |
| Raw (Distance + Barrier)           |                 | 58.9        | -14.6        | -14.6        | -14.6        | -14.6        | -14.6        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>58.9</b> | <b>-14.6</b> | <b>-14.6</b> | <b>-14.6</b> | <b>-14.6</b> | <b>-14.6</b> |

**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

---

**Observer Location: R6** *Project Name:* Continental  
*Source:* Highest Reference Const. Activity *Job Number:* 11577  
*Condition:* Construction *Analyst:* A. Wolfe

| NOISE MODEL INPUTS                   |                  |  |                 |
|--------------------------------------|------------------|--|-----------------|
| <i>Noise Distance to Observer</i>    | 50.0 feet        | <b>Barrier Height:</b>   | <b>0.0 feet</b> |
| <i>Noise Distance to Barrier:</i>    | 10.0 feet        | <i>Noise Source Height:</i>  | 8.0 feet        |
| <i>Barrier Distance to Observer:</i> | 40.0 feet        | <i>Observer Height:</i>  | 5.0 feet        |
| <br><i>Observer Elevation:</i>       | <br>1,532.0 feet | <br><i>Barrier Type (0-Wall, 1-Berm):</i>                                    | <br>0           |
| <i>Noise Source Elevation:</i>       | 1,532.0 feet     | <i>Drop Off Coefficient:</i>   | 20.0            |
| <i>Barrier Elevation:</i>            | 1,532.0 feet     | 20 = 6 dBA per doubling of distance<br>15 = 4.5 dBA per doubling of distance |                 |

| NOISE MODEL PROJECTIONS            |                 |             |            |            |            |            |            |
|------------------------------------|-----------------|-------------|------------|------------|------------|------------|------------|
| Noise Level                        | Distance (feet) | Leq         | L50        | L25        | L8         | L2         | Lmax       |
| Reference (Sample)                 | 50.0            | 73.5        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| Distance Attenuation               | 50.0            | 0.0         | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| Shielding (Barrier Attenuation)    | 10.0            | 0.0         | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| Raw (Distance + Barrier)           |                 | 73.5        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>73.5</b> | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> |

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**STATIONARY SOURCE NOISE PREDICTION MODEL** 10/4/2018

|   |                           |
|---|---------------------------|
| <b>Observer Location: R6</b>              | Project Name: Continental |
| Source: Highest Reference Const. Activity | Job Number: 11577         |
| Condition: Temporary Noise Barrier        | Analyst: A. Wolfe         |

**NOISE MODEL INPUTS**

|                               |              |                                |                  |
|-------------------------------|--------------|--------------------------------|------------------|
| Noise Distance to Observer    | 50.0 feet    | <b>Barrier Height:</b>         | <b>10.0 feet</b> |
| Noise Distance to Barrier:    | 10.0 feet    | Noise Source Height:           | 8.0 feet         |
| Barrier Distance to Observer: | 40.0 feet    | Observer Height:               | 5.0 feet         |
| Observer Elevation:           | 1,532.0 feet | Barrier Type (0-Wall, 1-Berm): | 0                |
| Noise Source Elevation:       | 1,532.0 feet | Drop Off Coefficient:          | 20.0             |
| Barrier Elevation:            | 1,532.0 feet |                                |                  |

20 = 6 dBA per doubling of distance  
15 = 4.5 dBA per doubling of distance

**NOISE MODEL PROJECTIONS**

| Noise Level                        | Distance (feet) | Leq         | L50         | L25         | L8          | L2          | Lmax        |
|------------------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Reference (Sample)                 | 50.0            | 73.5        | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| Distance Attenuation               | 50.0            | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| Shielding (Barrier Attenuation)    | 10.0            | -8.0        | -8.0        | -8.0        | -8.0        | -8.0        | -8.0        |
| Raw (Distance + Barrier)           |                 | 65.5        | -8.0        | -8.0        | -8.0        | -8.0        | -8.0        |
| <b>60 Minute Hourly Adjustment</b> |                 | <b>65.5</b> | <b>-8.0</b> | <b>-8.0</b> | <b>-8.0</b> | <b>-8.0</b> | <b>-8.0</b> |

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**APPENDIX 11.2:**  
**SAMPLE TEMPORARY CONSTRUCTION NOISE BARRIER PHOTOS**

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# Temporary Construction Noise Barrier Examples



I-Beam & Acoustic Material 01



I-Beam & Acoustic Material 02



I-Beam & Acoustic Material 03



K-Rail Plywood & Acoustic Material



K-Rail Temporary Fence & Acoustic Material



K-Rail-Mounted Acoustic Material 01

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### Temporary Construction Noise Barrier Examples



Pillar & Acoustic Material



Straw Bales 01



Straw Bales 02



Temporary Fence & Acoustic Material 01



Temporary Fence & Acoustic Material 02

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## **CONTINENTAL VILLAGES TRAFFIC IMPACT ANALYSIS CITY OF MORENO VALLEY**

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NOVEMBER 15, 2018

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## LIST OF ABBREVIATED TERMS

|          |  |
|----------|--|
| (1)      | Reference  |
| ADT      | Average Daily Traffic                                |
| CA MUTCD | California Manual on Uniform Traffic Control Devices |
| Caltrans | California Department of Transportation              |
| CEQA     | California Environmental Quality Act                 |
| CMP      | Congestion Management Program                        |
| DIF      | Development Impact Fee                               |
| E+P      | Existing Plus Project                                |
| HCM      | Highway Capacity Manual                              |
| ITE      | Institute of Transportation Engineers                |
| LOS      | Level of Service                                     |
| N/A      | Not Applicable                                       |
| NCHRP    | National Cooperative Highway Research Program        |
| NP       | No Project (or Without Project)                      |
| PHF      | Peak Hour Factor                                     |
| Project  | Continental Villages                                 |
| RCTC     | Riverside County Transportation Commission           |
| RivTAM   | Riverside County Transportation Analysis Model       |
| RTA      | Riverside Transit Authority                          |
| RTP      | Regional Transportation Plan                         |
| SCAG     | Southern California Association of Governments       |
| SCS      | Sustainable Communities Strategy                     |
| sf       | Square Feet  |
| TIA      | Traffic Impact Analysis                              |
| TUMF     | Transportation Uniform Mitigation Fee                |
| WP       | With Project   |
| WRCOG    | Western Riverside Council of Governments             |
| V/C      | Volume to Capacity                                   |

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# 1 INTRODUCTION

This report presents the results of the traffic impact analysis (TIA) for the proposed Continental Villages development (“Project”) located on the northeast corner of Lasselle Street and Krameria Avenue in the City of Moreno Valley as shown on Exhibit 1-1.

The purpose of this traffic impact analysis is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and to recommend improvements to achieve acceptable circulation system operational conditions. This traffic study has been prepared in accordance with the City of Moreno Valley Transportation Engineering Division’s Traffic Impact Analysis Preparation Guide (August 2007) and consultation with City of Moreno Valley staff during the scoping process. (1) The approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TIA.

## 1.1 PROJECT OVERVIEW

For the purposes of this analysis, in an effort to conduct a conservative analysis, the Project has been evaluated to consist of up to 112 apartments/duplexes and 21,000 square feet (sf) of commercial retail use. Per the City’s traffic study guidelines, the Opening Year Cumulative will have a 5-year minimum time horizon from baseline conditions. As such, the Opening Year Cumulative analysis will assess 2023 traffic conditions.

Vehicular access will be provided via the following driveways (see Exhibit 1-1):

- Lasselle Street & Driveway 1 – Right-in right-out only
- Colt Way & Krameria Avenue/Driveway 2 – Full access driveway
- Krameria Avenue & Driveway 3/Quarter Horse Road – Full-access driveway

Trips generated by the Project’s proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10<sup>th</sup> Edition, 2017. (2) The Project is estimated to generate a net total of 2,056 trip-ends per day on a typical weekday with approximately 215 net AM peak hour trips and 167 net PM peak hour trips. The assumptions and methods used to estimate the Project’s trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

### 1.1.1 SITE PLAN DRIVEWAY LOCATIONS

As shown on Exhibit 1-1, each driveway meets the required 100-foot spacing. As such, the location of each Project driveway is acceptable based on the City of Moreno Valley Municipal Code and City staff.



EXHIBIT 1-1: PRELIMINARY SITE PLAN



## 1.2 ANALYSIS SCENARIOS

For the purposes of this traffic study, potential impacts to traffic and circulation have been assessed for each of the following conditions:

- Existing (2018) (1 scenario)
- Existing plus Project (E+P) (1 scenario)
- Opening Year Cumulative (2023), Without and With Project (2 scenarios)
- Horizon Year (2040), Without and With Project (2 scenarios)

### 1.2.1 EXISTING (2018) CONDITIONS

Information for Existing (2018) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

### 1.2.2 EXISTING PLUS PROJECT CONDITIONS

The Existing plus Project (E+P) analysis determines circulation system deficiencies that would occur on the existing roadway system in the scenario of the Project being placed upon Existing conditions.

### 1.2.3 OPENING YEAR CUMULATIVE (2023) CONDITIONS

To account for growth in traffic between Existing Conditions (2018) and the Project Opening Year Cumulative (2023), a compounded annual traffic growth rate of 2.0 percent was assumed (10.41 percent aggregate growth in background traffic for the period from 2018 through 2023).

The 2.0 percent annual growth rate is intended to capture non-specific ambient traffic growth. Conservatively, the TIA estimates area-wide traffic growth, then adds traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed annual 2.0 percent ambient growth in traffic noted above; and in some instances, these related projects would likely not be implemented and operational within the 2023 Opening Year Cumulative time frame assumed for the Project. The resulting traffic growth rate used in the TIA (2.0 percent compounded annual ambient growth plus traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic impacts under 2023 traffic conditions.

### 1.2.4 HORIZON YEAR (2040) CONDITIONS

The Horizon Year (2040) Without Project traffic conditions were derived from the Riverside County Transportation Analysis Model (RivTAM) modified to represent Horizon Year conditions for the City of Moreno Valley using accepted procedures for model forecast refinement and smoothing. The traffic forecasts reflect the area-wide growth anticipated between Existing conditions and Horizon Year conditions. The Horizon Year With Project traffic forecasts were determined by adding the Project traffic to the Horizon Year (2040) Without Project traffic forecasts from the RivTAM model. The Horizon Year traffic forecasts used in the traffic analysis were refined with existing peak hour traffic count data collected at intersection analysis locations. The

initial estimate of the future peak hour turning movements have, therefore, been reviewed for reasonableness. The reasonableness checks performed include a review of traffic flow conservation in addition to a comparison with the Existing and Opening Year Cumulative traffic volumes. Where necessary, the Horizon Year volumes have been adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes.

The Horizon Year Without and With Project traffic conditions analyses will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the Transportation Uniform Mitigation Fee (TUMF) and Development Impact Fee (DIF) programs, or other approved funding mechanism can accommodate the long-range cumulative traffic at the target Level of Service (LOS) identified in the City of Moreno Valley General Plan. (3) If the “funded” improvements can provide the target LOS, then the Project’s payment into TUMF and/or DIF will be considered as long-range cumulative mitigation through the conditions of approval. Other improvements needed beyond the “funded” improvements (such as localized improvements to non-TUMF facilities) are identified as such. Post-processing worksheets for Horizon Year (2040) Without Project traffic conditions are provided in Appendix 4.1.

### 1.3 STUDY AREA

To ensure that this TIA satisfies the City of Moreno Valley’s traffic study requirements, Urban Crossroads, Inc. prepared a project traffic study scoping package for review by City of Moreno Valley staff prior to the preparation of this report. The scoping agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology and is included in Appendix 1.1.

#### 1.3.1 INTERSECTIONS

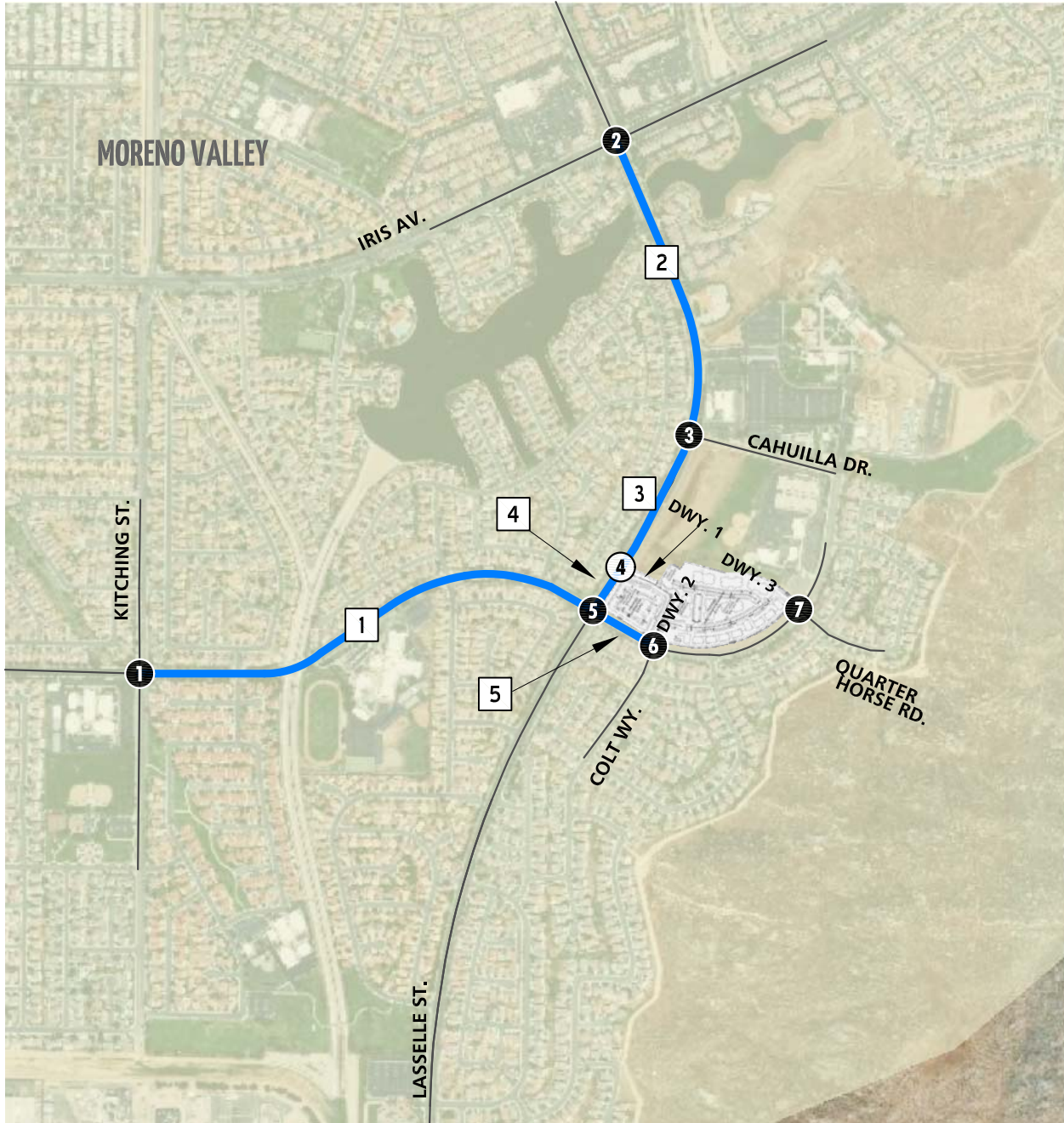
The 7 study area intersections shown on Exhibit 1-2 and listed in Table 1-1 were selected for this TIA based on the City of Moreno Valley’s Traffic Study Guidelines and in consultation with City of Moreno Valley staff. Pursuant to the Traffic Study Guidelines, the City requires analysis of intersections where the Project would contribute 50 or more peak hour trips.<sup>1</sup> In an effort to conduct a conservative analysis, the trip generation for the proposed Project has been utilized to determine if the 50 peak hour trip criteria has been met at the study area intersections.

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
<sup>1</sup> The “50 or more peak hour trips” intersection analytic protocol stipulated in the City’s Traffic Study Guidelines is consistent with standard industry practice. It is noted further that the 50 peak hour trip threshold is employed by other agencies throughout southern California including Caltrans, County of Riverside, County of San Bernardino, and the County of Orange.



EXHIBIT 1-2: LOCATION MAP



LEGEND:

-  - EXISTING INTERSECTION ANALYSIS LOCATION
-  - FUTURE INTERSECTION ANALYSIS LOCATION
-  - ROADWAY SEGMENT ANALYSIS LOCATION





**TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS**

| ID | Intersection Location                              | Jurisdiction          | CMP? |
|----|--|-----------------------|------|
| 1  | Kitching Street & Krameria Avenue                  | City of Moreno Valley | No   |
| 2  | Lasselle Street & Iris Avenue                      | City of Moreno Valley | No   |
| 3  | Lasselle Street & Cahuilla Drive                   | City of Moreno Valley | No   |
| 4  | Lasselle Street & Driveway 1 – Future Intersection | City of Moreno Valley | No   |
| 5  | Lasselle Street & Krameria Avenue                  | City of Moreno Valley | No   |
| 6  | Driveway 2/Colt Way & Krameria Avenue              | City of Moreno Valley | No   |
| 7  | Krameria Avenue & Driveway 3/Quarter Horse Road    | City of Moreno Valley | No   |

The intent of a Congestion Management Program (CMP) is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality. Counties within California have developed CMPs with varying methods and strategies to meet the intent of the CMP legislation. The County of Riverside CMP became effective with the passage of Proposition 111 in 1990 and updated most recently in 2011. The Riverside County Transportation Commission (RCTC) adopted the 2011 CMP for the County of Riverside in December 2011. (4) There are no CMP intersections in this study area.

### 1.3.2 ROADWAY SEGMENTS

The roadway segment study area utilized for this analysis is based on a review of the key roadway segments in which the Project is anticipated to contribute 50 or more peak hour trips. The study area identifies a total of 6 existing/future roadway segments. The roadway segments include the segments on either side of the study area intersections and are listed in Table 1-2.

**TABLE 1-2: ROADWAY SEGMENT ANALYSIS LOCATIONS**

| ID | Roadway Segment | Segment Limits                     |
|----|-----------------|------------------------------------|
| 1  | Krameria Avenue | Kitching Street to Lasselle Street |
| 2  | Krameria Avenue | Lasselle Street to Colt Way        |
| 3  | Lasselle Street | Iris Avenue to Cahuilla Drive      |
| 4  | Lasselle Street | Cahuilla Drive to Driveway 1       |
| 5  | Lasselle Street | Driveway 1 to Krameria Avenue      |

### 1.4 SUMMARY OF INTERSECTION ANALYSIS

This section provides a summary of the analysis results for Existing, E+P, Opening Year Cumulative, and Horizon Year traffic conditions. A summary of intersection LOS by analysis scenario is shown in Exhibit 1-3 and improvement needs to address those deficiencies are summarized in Table 1-3.

## Existing (2018) Conditions

### *Intersection Operations Analysis*

As shown on Exhibit 1-3, all of the study area intersections are currently operating at an acceptable LOS during the peak hours. The City is currently in the process of implementing a road diet along Krameria Avenue starting from the intersection at Lasselle Street to the east up to Cahuilla Drive. The road diet is anticipated to reduce the number of travel lanes along Krameria Avenue in order to accommodate a wide shoulder with bike lanes. The intersection of Lasselle Street and Krameria Avenue is anticipated to operate at an unacceptable LOS during the AM peak hour with the road diet improvements in place for Existing (2018) traffic conditions. The road diet improvements would eliminate the existing 2<sup>nd</sup> eastbound left turn lane and the 2<sup>nd</sup> through lane in both the eastbound and westbound directions in place of a right turn lane.

### *Roadway Segment Analysis*

The study area roadway segments are currently operating at an acceptable LOS for Existing (2018) traffic conditions.

### *Peak Hour Queuing Analysis*

A queuing analysis was performed at 5 study area intersections in close proximity to the Project in order to determine if the turn pocket lengths can accommodate the 95<sup>th</sup> percentile queues. The analysis was conducted for the weekday AM and weekday PM peak hours. The intersection of Lasselle Street and Krameria Avenue currently experiences queuing issues during the AM or PM peak hours for the northbound left turn pocket and northbound right turn pocket.

A 180-foot northbound left turn lane and 280-foot right turn lane are recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for Existing (2018) traffic conditions.

## E+P Conditions

### *Intersection Operations Analysis*

As shown in Exhibit 1-3, the intersection of Lasselle Street and Krameria Avenue is anticipated to operate at an unacceptable LOS with the implementation of the road diet improvements, consistent with Existing (2018) traffic conditions. The road diet improvements would eliminate the existing 2<sup>nd</sup> eastbound left turn lane and the 2<sup>nd</sup> through lane in both the eastbound and westbound directions in place of a right turn lane. However, the intersection is anticipated to operate at an acceptable LOS without the implementation of the road diet along Krameria Avenue.

### *Roadway Segment Analysis*

Consistent with Existing (2018) traffic conditions, the study area roadway segments are anticipated to continue to operate at an acceptable LOS for E+P traffic conditions.

**EXHIBIT 1-3: SUMMARY OF DEFICIENT INTERSECTIONS BY ANALYSIS SCENARIO**

| # | Intersection                                       | Existing (2018) | E+P | Opening Year (2023) Without Project | Opening Year (2023) With Project | Horizon Year (2040) Without Project | Horizon Year (2040) With Project |
|---|--|-----------------|-----|-------------------------------------|----------------------------------|-------------------------------------|----------------------------------|
| 1 | Kitching St. & Krameria Av.                        |                 |     |                                     |                                  |                                     |                                  |
| 2 | Lasselle St. & Iris Av.                            |                 |     |                                     |                                  |                                     |                                  |
| 3 | Lasselle St. & Cahuilla Dr.                        |                 |     |                                     |                                  |                                     |                                  |
| 4 | Lasselle St. & Dwy. 1                              | NA              |     | NA                                  |                                  | NA                                  |                                  |
| 5 | Lasselle St. & Krameria Av. (Without Road Diet)    |                 |     |                                     |                                  |                                     |                                  |
| 5 | Lasselle St. & Krameria Av. (With Road Diet)       |                 |     |                                     |                                  |                                     |                                  |
| 6 | Dwy. 2/Colt Wy. & Krameria Av. (Without Road Diet) |                 |     |                                     |                                  |                                     |                                  |
| 6 | Dwy. 2/Colt Wy. & Krameria Av. (With Road Diet)    | NA              | NA  |                                     |                                  |                                     |                                  |
| 7 | Krameria Av. & Quarter Horse Rd.                   |                 |     |                                     |                                  |                                     |                                  |

**LEGEND:**

- AM PEAK HOUR
- PM PEAK HOUR
- LOS A-D
- LOS D-E
- LOS F
- NA ■ NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

**Table 1-3**

**Summary of Improvements by Analysis Scenario**

| #   | Intersection Location       | Jurisdiction          | Recommended Improvements |  | Improvements in DIF, TUMF, etc. <sup>1</sup>  | Total Cost <sup>2,3,4</sup> | Project Fair Share <sup>5</sup> | Fair Share Cost <sup>6</sup> |
|---|-----------------------------|-----------------------|--------------------------|--|---|-----------------------------|---------------------------------|------------------------------|
|   |                             |                       | E+P                      | 2023 With Project  |   |                             |                                 |                              |
| 1   | Kitching St. & Krameria Av. | City of Moreno Valley | - None                   | - None   | - Add an EB right turn lane<br>- Modify the traffic signal to implement overlap phasing on the EB right turn lane | \$74,200<br>\$111,300       | 2.7%                            | \$1,985<br>\$2,977           |
| 2   | Lasselle St. & Iris Av.     | City of Moreno Valley | - None                   | - Add an EB right turn lane<br>- Modify the traffic signal to implement overlap phasing on the EB right turn lane  | - Same<br>- Same  | \$74,200<br>\$111,300       | 4.8%                            | \$3,560<br>\$5,340           |
| 5   | Lasselle St. & Krameria Av. | City of Moreno Valley | - None                   | - Add a 2nd NB left turn lane<br>- Restripe the EB approach with 2 lefts, 1 through, and 1 right<br>- Modify the traffic signal to implement overlap phasing on the EB right turn lane | - Same<br>- Same  | \$74,200<br>\$37,100        | 10.5%                           | \$7,811<br>\$3,905           |
| <b>Total</b>  |                             |                       |                          |  |   | <b>\$185,500</b>            |                                 | <b>\$8,900</b>               |
| <b>Total Project Fair Share Contribution to the City of Moreno Valley<sup>7</sup></b> |                             |                       |                          |  |   | <b>\$296,800</b>            |                                 | <b>\$31,242</b>              |
| <b>Total Project Fair Share Contribution to the City of Moreno Valley<sup>7</sup></b> |                             |                       |                          |  |   | <b>\$667,800</b>            |                                 | <b>\$45,103</b>              |

<sup>1</sup> Improvements included in Regional TUMF or City of Moreno Valley DIF programs have been identified as such.

<sup>2</sup> Costs have been estimated using the data provided in Appendix "G" of the CMP (2003 Update) for preliminary construction costs.

<sup>3</sup> Appendix "G" costs escalated by a factor of 1.484 except Traffic Signals. This is consistent with the methodology used by other near-by agencies.

<sup>4</sup> Program improvements constructed by project may be eligible for fee credit. In lieu fee payment is at discretion of City. Represents the fair share percentage for the Project during the most impacted peak hour.

<sup>5</sup> Total project fair share contribution consists of the improvements which are not already included in the City-wide DIF/County TUMF for those intersections wholly or partially within the City of Moreno Valley.

<sup>6</sup> Rough order of magnitude cost estimate.

<sup>7</sup> Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Moreno Valley.



### *Peak Hour Queuing Analysis*

A queuing analysis was performed at 5 study area intersections in close proximity to the Project in order to determine if the turn pocket lengths can accommodate the 95<sup>th</sup> percentile queues. The analysis was conducted for the weekday AM and weekday PM peak hours for E+P traffic conditions. With the addition of Project traffic, there are no additional intersection movements that are anticipated to experience queuing issues during the AM or PM peak hours for E+P conditions, in addition to the movements previously identified under Existing conditions.

Consistent with Existing (2018) traffic conditions, a 180-foot northbound left turn lane and 280-foot right turn lane are recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for E+P traffic conditions. The Project should contribute fair share towards the turn pocket improvements for the northbound left and right turn lanes as they are needed to address Existing queuing deficiencies at the intersection of Lasselle Street and Krameria Avenue.

### **Opening Year Cumulative (2023) Conditions**

#### *Intersection Operations Analysis*

As shown on Exhibit 1-3, there are 2 study area intersections that are anticipated to operate at an unacceptable LOS during one or both peak hours for Opening Year Cumulative (2023) Without Project traffic conditions. The addition of Project traffic is not anticipated to result in any additional deficiencies in addition to the locations identified under Opening Year Cumulative (2023) Without Project traffic conditions. The Project should contribute fair share towards the following improvements to address the deficiencies that are anticipated to occur under both Opening Year Cumulative (2023) Without and With Project traffic conditions:

#### **Improvement – Lasselle Street & Iris Avenue (#2)**

- Add an eastbound right turn lane and modify the traffic signal to implement overlap phasing on the right turn lane

#### **Improvement – Lasselle Street & Krameria Avenue (#5)**

- Add a 2<sup>nd</sup> northbound left turn lane
- Restripe the eastbound approach with 2 lefts, 1 through, and 1 right turn lane
- Modify the traffic signal to implement overlap phasing on the eastbound right turn lane
- The road diet lanes on the westbound approach can remain

#### *Roadway Segment Analysis*

The study area roadway segment of Lasselle Street between Iris Avenue and Cahuilla Drive (#3) is anticipated to operate at an unacceptable LOS for Opening Year Cumulative (2023) Without Project traffic conditions. The addition of Project traffic is not anticipated to result in any additional roadway segment deficiencies from the location identified previously for Opening Year Cumulative (2023) Without Project traffic conditions.

### *Peak Hour Queuing Analysis*

A queuing analysis was performed at 5 study area intersections in close proximity to the Project in order to determine if the turn pocket lengths can accommodate the 95<sup>th</sup> percentile queues. The analysis was conducted for the weekday AM and weekday PM peak hours for Opening Year Cumulative (2023) traffic conditions. The intersection of Lasselle Street and Krameria Avenue is anticipated to continue to experience queuing issues during the AM or PM peak hours for the northbound left turn pocket and northbound right turn pocket. In addition, the westbound left turn pocket is also anticipated to experience queues during the AM peak hour only for Opening Year Cumulative (2023) Without Project traffic conditions. With the addition of Project traffic, the southbound left turn pocket is anticipated to experience queuing issues during the AM peak hour only.

Consistent with Existing (2018) and E+P traffic conditions, a 180-foot northbound left turn lane and 280-foot right turn lane are recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for Opening Year Cumulative (2023) traffic conditions. Additionally, a 270-foot southbound left turn lane is recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for Opening Year Cumulative (2023) traffic conditions. The Project should contribute fair share towards the turn pocket improvements for the northbound left and right turn lanes and modifications to the existing landscaped median to accommodate a 270-foot southbound left turn lane at the intersection of Lasselle Street and Krameria Avenue.

### **Horizon Year (2040) Conditions**

#### *Intersection Operations Analysis*

As shown on Exhibit 1-3, there is 1 additional study area intersection anticipated to operate at an unacceptable LOS for both Horizon Year (2040) Without Project and With Project, beyond those previously identified in Opening Year Cumulative (2023) Without Project traffic conditions. The Project should contribute fair share towards the following improvements to address the deficiencies that are anticipated to occur under both Horizon Year (2040) Without and With Project traffic conditions:

#### ***Improvement – Kitching Street & Krameria Avenue (#1)***

- Add an eastbound right turn lane
- Modify the traffic signal to implement overlap phasing on the eastbound right turn lane

#### ***Improvement – Lasselle Street & Iris Avenue (#2)***

- Add an eastbound right turn lane and modify the traffic signal to implement overlap phasing on the right turn lane

### **Improvement – Lasselle Street & Krameria Avenue (#5)**

- Add a 2<sup>nd</sup> northbound left turn lane
- Add an eastbound right turn lane and modify the traffic signal to implement overlap phasing on the eastbound right turn lane
- The road diet lanes on the westbound approach can remain

#### *Roadway Segment Analysis*

The study area roadway segment of Lasselle Street between Iris Avenue and Cahuilla Drive (#3) is anticipated to operate at an unacceptable LOS for Horizon Year (2040) Without Project traffic conditions. The addition of Project traffic is not anticipated to result in any additional roadway segment deficiencies in addition to the location identified previously for Horizon Year (2040) Without Project traffic conditions.

#### *Peak Hour Queuing Analysis*

A queuing analysis was performed at 5 study area intersections in close proximity to the Project in order to determine if the turn pocket lengths can accommodate the 95<sup>th</sup> percentile queues. The analysis was conducted for the weekday AM and weekday PM peak hours for Horizon Year (2040) Without and With Project traffic conditions. The intersection of Lasselle Street and Krameria Avenue is anticipated to continue to experience queuing issues during the AM or PM peak hours for the northbound left turn pocket, northbound right turn pocket, southbound left turn pocket, and westbound left turn pocket for Horizon Year (2040) Without Project traffic conditions. There are no additional turn pockets anticipated to experience peak hour queues with the addition of Project traffic for Horizon Year (2040) With Project traffic conditions.

Consistent with Existing (2018), E+P, and Opening Year Cumulative (2023) traffic conditions, a 180-foot northbound left turn lane and 280-foot northbound right turn lane are recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for Horizon Year (2040) traffic conditions. Consistent with Opening Year Cumulative (2023) traffic conditions, a 270-foot southbound left turn lane is recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for Horizon Year (2040) traffic conditions. The Project should contribute fair share towards the turn pocket improvements for the northbound left and right turn lanes and modifications to the existing landscaped median to accommodate a 270-foot southbound left turn lane at the intersection of Lasselle Street and Krameria Avenue. Although there is an anticipated queue that exceeds the storage length for the westbound left turn lane at Lasselle Street and Krameria Avenue, additional improvements have not been recommended as the existing striped two-way-left-turn lane could accommodate up to an additional vehicle (15-feet) without spilling back to the upstream intersection of Colt Way.

## 1.5 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements throughout the City of Moreno Valley are funded through a combination of project mitigation, fair share contributions or development impact fee programs, such as TUMF program or the City's DIF program.

### 1.5.1 TRANSPORTATION UNIFORM MITIGATION FEE (TUMF) PROGRAM

The Western Riverside Council of Governments (WRCOG) is responsible for establishing and updating Transportation Uniform Mitigation Fee (TUMF) rates. The County may grant to developers a credit against the specific components of fees for the dedication of land or the construction of facilities identified in the list of improvements funded by each of these fee programs. Fees are based upon projected land uses and a related transportation need to address growth based upon a 2016 Nexus study.

TUMF is an ambitious regional program created to address cumulative impacts of growth throughout western Riverside County. Program guidelines are being handled on an iterative basis. Exemptions, credits, reimbursements and local administration are being deferred to primary agencies. The County of Riverside serves this function for the proposed Project. Fees submitted to the County are passed on to the WRCOG as the ultimate program administrator.

TUMF guidelines empower a local zone committee to prioritize and arbitrate certain projects. The Project is located in the Central Zone. The zone has developed a 5-year capital improvement program to prioritize public construction of certain roads. TUMF is focused on improvements necessitated by regional growth.

### 1.5.2 CITY OF MORENO VALLEY DEVELOPMENT IMPACT FEE (DIF) PROGRAM

The City of Moreno Valley has created its own local Development Impact Fee (DIF) program to impose and collect fees from new residential, commercial and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation Element. The City's DIF program includes facilities that are not part of, or which may exceed improvements identified and covered by the TUMF program. As a result, the pairing of the regional and local fee programs provides a more comprehensive funding and implementation plan to ensure an adequate and interconnected transportation system. Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of implementing the improvements listed in its facilities list.



The Project Applicant would pay requisite DIF pursuant to incumbent City ordinance requirements. Payment of requisite DIF would satisfy the Applicant's mitigation responsibilities for potentially significant impacts affecting DIF-funded facilities.

### 1.5.3 FAIR SHARE FEES

The Project Applicant's responsibilities may also be fulfilled through payment of fair-share fees. Fair share fees would be paid in instances where required traffic facilities are not otherwise funded by TUMF and/or DIF programs noted above. Fair share calculations are provided in Table 1-4 for each of the study area intersections where the Project is anticipated to contribute cumulatively to a peak hour queuing issue.

Table 1-4

## Project Fair Share Calculations

| # | Intersection                | Existing (2018) | Project | 2040 With Project | Total New Traffic | Project Fair Share <sup>1</sup> |              |
|---|-----------------------------|-----------------|---------|-------------------|-------------------|---------------------------------|--------------|
| 1 | Kitching St. & Krameria Av. | AM:             | 1,974   | 62                | 4,292             | 2,318                           | <b>2.7%</b>  |
|   |                             | PM:             | 1,007   | 46                | 3,159             | 2,152                           | 2.1%         |
| 2 | Lasselle St. & Iris Av.     | AM:             | 4,314   | 96                | 6,315             | 2,001                           | <b>4.8%</b>  |
|   |                             | PM:             | 4,228   | 75                | 6,586             | 2,358                           | 3.2%         |
| 5 | Lasselle St. & Krameria Av. | AM:             | 3,656   | 162               | 5,195             | 1,539                           | <b>10.5%</b> |
|   |                             | PM:             | 2,559   | 128               | 3,881             | 1,322                           | 9.7%         |

\* Highest fair share percentage represented in **BOLD** and shown on Table 1-3.

<sup>1</sup> Fair share based on net new traffic which is calculated from Project traffic volumes divided by the 2040 With Project less Existing (2018) traffic

## 1.6 SITE ADJACENT ROADWAY AND SITE ACCESS IMPROVEMENTS

This section summarizes Project site access and on-site circulation recommendations. Vehicular access will be provided via the following driveways:

- Lasselle Street & Driveway 1 – Right-in right-out only
- Colt Way & Krameria Avenue/Driveway 2 – Full access driveway
- Krameria Avenue & Driveway 3/Quarter Horse Road – Full-access driveway

### 1.6.1 SITE ADJACENT ROADWAY IMPROVEMENTS

Since both Lasselle Street and Krameria Avenue are built out to their ultimate cross-section, according to the City of Moreno Valley General Plan along the Project's frontage, there are no roadway improvement recommendations. However, additional curb, gutter, and sidewalk improvements are recommended, as needed for site access along the Project's frontage consistent with the City's standards.

### 1.6.2 SITE ACCESS IMPROVEMENTS

The recommended site access driveway improvements for the Project are described below. Exhibit 1-4 illustrates the on-site and site adjacent recommended roadway lane improvements. Construction of on-site and site adjacent improvements are recommended to occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

**Lasselle Street & Driveway 1 (#5)** – Install a stop control on the westbound approach and construct the intersection with the following geometrics:

- Northbound Approach: One through lane and one shared through-right turn lane.
- Southbound Approach: Two through lanes.
- Eastbound Approach: Not Applicable (N/A)
- Westbound Approach: One right turn lane.

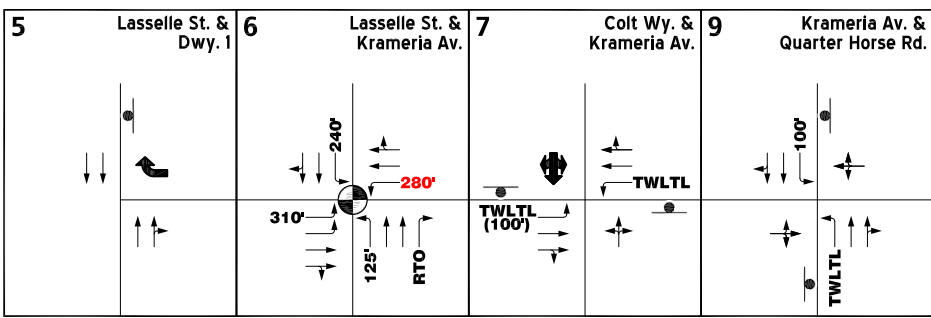
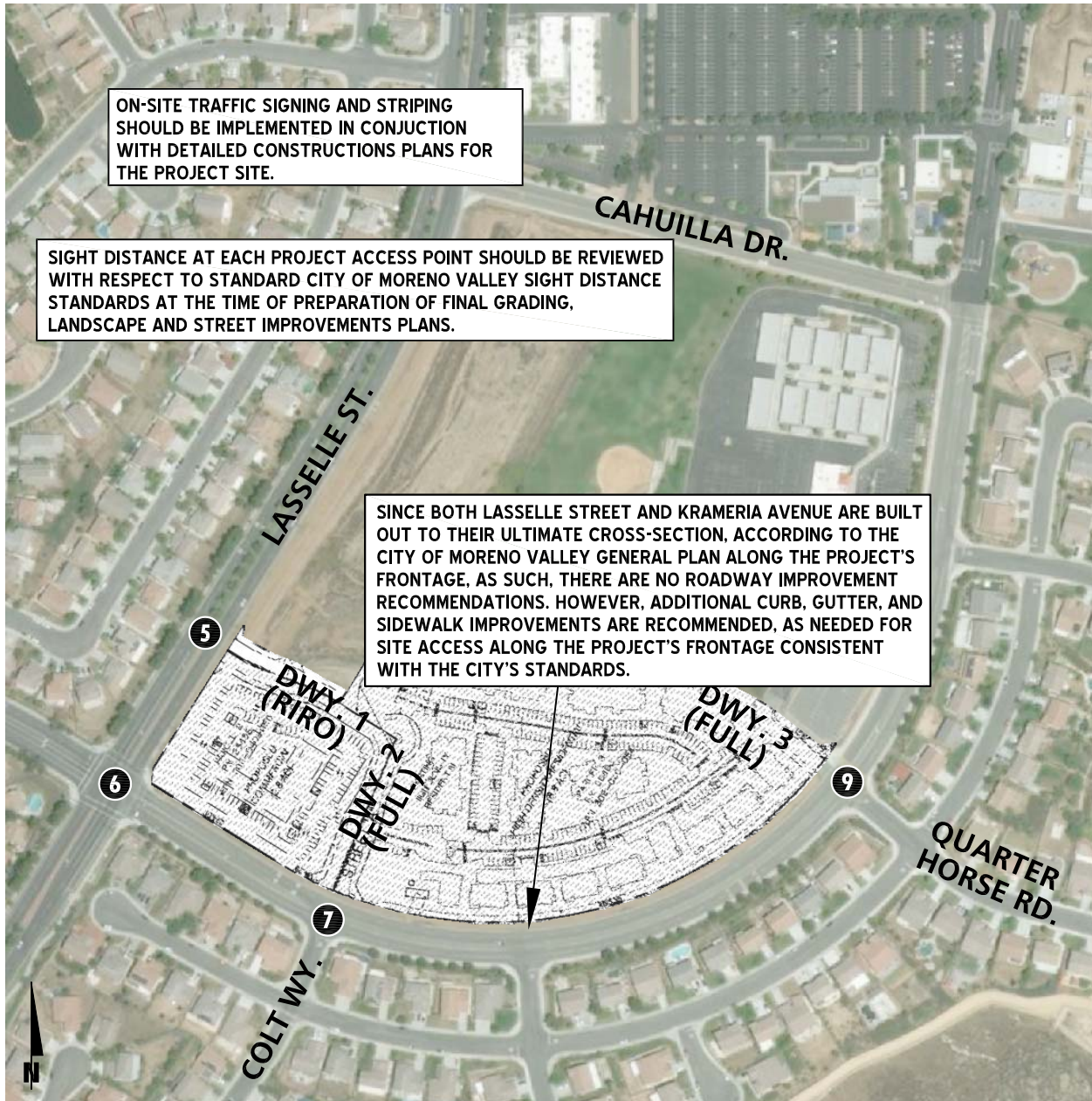
**Lasselle Street & Krameria Avenue (#6)** – Maintain the existing lane geometrics and modify the southbound left turn lane to accommodate 270-feet of storage.

**Driveway 2/Colt Way & Krameria Avenue (#7)** – Install a stop control on the southbound approach and construct the intersection with the following geometrics:

- Northbound Approach: One shared left-through-right turn lane.
- Southbound Approach: One shared left-through-right turn lane.
- Eastbound Approach: One left turn lane, one through lane, and one shared through-right turn lane.
- Westbound Approach: One left turn lane, one through lane, and one shared through-right turn lane.

**Krameria Avenue & Driveway 3/Quarter Horse Road (#8)** – Maintain the existing traffic controls and lane geometrics.

**EXHIBIT 1-4: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS**



**LEGEND:**

- = TRAFFIC SIGNAL
- = STOP SIGN
- = EXISTING LANE
- = LANE IMPROVEMENT
- TWLTL** = TWO WAY LEFT TURN LANE
- RTO** = RIGHT TURN OVERLAP
- 150' = MINIMUM TURN POCKET LENGTH
- 150' = TURN POCKET IMPROVEMENT



On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the Project site.

Sight distance at each project access point should be reviewed with respect to standard City of Moreno Valley sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

### **1.6.3 QUEUING ANALYSIS AT THE PROJECT DRIVEWAYS**

A queuing analysis was conducted for the Project driveways for Horizon Year (2040) traffic conditions to determine the turn pocket lengths necessary to accommodate near-term 95<sup>th</sup> percentile queues. The analysis was conducted for the weekday AM and weekday PM peak hours for all analysis scenarios. Queuing worksheets are included in Appendix 1.2.

## 2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are consistent with City of Moreno Valley's traffic study guidelines. (1)

### 2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

### 2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (5) The HCM uses different procedures depending on the type of intersection control.

#### 2.2.1 SIGNALIZED INTERSECTIONS

##### *City of Moreno Valley and City of Perris*

The City of Moreno Valley and City of Perris require signalized intersection operations analysis based on the methodology described in the HCM. (5) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1. Study area intersections have been evaluated using the Synchro (Version 10) analysis software package.

Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

**TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS**

| Description   | Average Control Delay (Seconds),<br>V/C ≤ 1.0 | Level of Service, V/C ≤ 1.0 | Level of Service, V/C > 1.0 |
|---|---|-----------------------------|-----------------------------|
| Operations with very low delay occurring with favorable progression and/or short cycle length.  | 0 to 10.00                                    | A                           | F                           |
| Operations with low delay occurring with good progression and/or short cycle lengths.   | 10.01 to 20.00                                | B                           | F                           |
| Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.  | 20.01 to 35.00                                | C                           | F                           |
| Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.                             | 35.01 to 55.00                                | D                           | F                           |
| Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay. | 55.01 to 80.00                                | E                           | F                           |
| Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths   | 80.01 and up                                  | F                           | F                           |

Source: HCM 6<sup>th</sup> Edition

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g.  $PHF = \frac{\text{Hourly Volume}}{4 \times \text{Peak 15-minute Flow Rate}}$ ). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows, while lower PHF values are indicative of greater variability of flow during the peak hour. (5)

### 2.2.2 UNSIGNALIZED INTERSECTIONS

The unsignalized intersections in the study area are located within the City of Moreno Valley. The City of Moreno Valley requires the operations of unsignalized intersections be evaluated using the methodology described in the HCM. (5) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

| Description   | Average Control Delay Per Vehicle (Seconds) | Level of Service, V/C ≤ 1.0 | Level of Service, V/C > 1.0 |
|---|---|-----------------------------|-----------------------------|
| Little or no delays.  | 0 to 10.00                                  | A                           | F                           |
| Short traffic delays.                                       | 10.01 to 15.00                              | B                           | F                           |
| Average traffic delays.                                     | 15.01 to 25.00                              | C                           | F                           |
| Long traffic delays.  | 25.01 to 35.00                              | D                           | F                           |
| Very long traffic delays.                                   | 35.01 to 50.00                              | E                           | F                           |
| Extreme traffic delays with intersection capacity exceeded. | > 50.00                                     | F                           | F                           |

Source: HCM 6<sup>th</sup> Edition

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

### 2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by the California Department of Transportation (Caltrans) and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TIA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD) for all unsignalized study area intersections. (6)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicate that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (6) Specifically, this TIA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 is appropriate to use for this TIA because it provides specialized warrant criteria for intersections with urban characteristics (e.g. located in communities with populations of more than 10,000 persons or with adjacent major streets operating below 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Future unsignalized intersections, that currently do not exist, have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets.

As shown in Table 2-3, traffic signal warrant analyses were performed for the following unsignalized study area intersections during the peak weekday conditions wherein the Project is anticipated to contribute the highest trips:



**TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS**

| ID | Intersection Location                 | Jurisdiction  |
|----|---------------------------------------|---------------|
| 7  | Driveway 2/Colt Way & Krameria Avenue | Moreno Valley |
| 8  | Krameria Avenue & Cahuilla Drive      | Moreno Valley |
| 9  | Krameria Avenue & Quarter Horse Road  | Moreno Valley |

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *E+P Traffic Analysis*, Section 6 *Opening Year Cumulative (2023) Traffic Analysis*, and Section 7 *Horizon Year (2040) Traffic Analysis* of this report.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

## 2.4 ROADWAY SEGMENT CAPACITY ANALYSIS

Roadway segment operations have been evaluated using the City of Moreno Valley Daily Roadway Capacity Values provided in the City of Moreno Valley's Transportation Engineering Division Traffic Impact Analysis (TIA) Preparation Guide. (1) Per the City of Moreno Valley TIA guidelines, roadway segments within the study area should maintain the LOS capacities illustrated on Exhibit 2-1. The daily roadway segment capacities for each type of roadway are summarized in Table 2-4. As noted in both the City of Moreno Valley's traffic study guidelines, these roadway capacities are "rule of thumb" estimates for planning purposes and are affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian bicycle traffic. In other words, while using average daily traffic (ADT) for planning purposes is suitable with regards to evaluating potential volume to capacity with future forecasts, it is not suitable for operational analysis because it does not account for the factors listed previously. As such, where the ADT based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis and progression analysis are undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. Therefore, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes.

**TABLE 2-4: ROADWAY SEGMENT CAPACITY LOS THRESHOLDS<sup>1</sup>**

| Facility Type                  | Level of Service Capacity <sup>1</sup> |        |        |        |        |
|--------------------------------|--|--------|--------|--------|--------|
|                                | A                                      | B      | C      | D      | E      |
| Six Lane Divided Arterial      | 33,900                                 | 39,400 | 45,000 | 50,600 | 56,300 |
| Four Lane Divided Arterial     | 22,500                                 | 26,300 | 30,000 | 33,800 | 37,500 |
| Four Lane Undivided Arterial   | 15,000                                 | 17,500 | 20,000 | 22,500 | 25,000 |
| Two Lane Industrial Collector  | 7,500                                  | 8,800  | 10,000 | 11,300 | 12,500 |
| Two Lane Undivided Residential | N/A                                    | N/A    | N/A    | N/A    | 2,000  |

<sup>1</sup> These maximum roadway capacities have been extracted from the City of Moreno Valley's Transportation Division's TIA Preparation Guidelines (August 2007). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS "E" service volumes are estimated maximum daily capacity for respective roadway classifications. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

## 2.5 QUEUING ANALYSIS

A queuing analysis was conducted for all study area intersections for E+P, Opening Year Cumulative (2023), and Horizon Year (2040) traffic conditions in an effort to determine the turn pocket lengths necessary to accommodate 95<sup>th</sup> percentile queues. The analysis was conducted for both the weekday AM and weekday PM peak hours.

The traffic modeling and signal timing optimization software package Synchro (Version 10) has been utilized to assess queues. Synchro is a macroscopic traffic software program that is based on the signalized and unsignalized intersection capacity analyses as specified in the Highway Capacity Manual (HCM). Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length in Synchro. The LOS and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

A vehicle is considered queued whenever it is traveling at less than 10 feet/second. A vehicle will only become queued when it is either at the stop bar or behind another queued vehicle. Although only the 95<sup>th</sup> percentile queue has been utilized for purposes of determining the necessary turn pocket storage lengths, the 50<sup>th</sup> percentile queues are also reported. The 50<sup>th</sup> percentile queue is the maximum back of queue on a typical cycle during the peak hour, while the 95<sup>th</sup> percentile queue is the maximum back of queue with 95<sup>th</sup> percentile traffic volumes during the peak hour. The 50<sup>th</sup> percentile, or average, queue represents the typical queue length for peak hour traffic conditions, while the 95<sup>th</sup> percentile queue is derived from the average queue plus 1.65 standard deviations. The 95<sup>th</sup> percentile queue is not necessarily ever observed; it is simply based on statistical calculations. However, many jurisdictions utilize the 95<sup>th</sup> percentile queues for design purposes.

## 2.6 MINIMUM LEVEL OF SERVICE (LOS)

The definition of an intersection deficiency in the City of Moreno Valley is based on the City of Moreno Valley General Plan Circulation Element. The City of Moreno Valley General Plan states that target LOS C or LOS D be maintained along City roads (including intersections) wherever possible. Exhibit 2-1 depicts the level of service standards within the City. LOS D is applicable to intersections and roadway segments that are adjacent to freeway on/off ramps and/or adjacent to employment generating land uses. LOS C is applicable to all other intersections and roadway segments. Boundary intersections are assumed to be LOS D.

## 2.7 THRESHOLDS OF SIGNIFICANCE

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies.

The following types of traffic deficiencies are considered to be significant under the California Environmental Quality Act (CEQA):

- When project traffic, added to existing traffic, will deteriorate the LOS to below the target LOS.
- When cumulative traffic exceeds the target LOS.

Lastly, the City of Moreno Valley also does not have a significance threshold for peak hour queues. For the purposes of this analysis, if the addition of Project traffic is found to have a less than significant impact to the peak hour operations, then a less than significant impact has also been identified for the peak hour queues at the same intersection. However, queuing results have been reported at the City's request.

## 2.8 PROJECT FAIR SHARE CALCULATION METHODOLOGY

In cases where this TIA identifies that the Project would contribute to cumulatively considerable traffic deficiencies, Project fair share costs of improvements necessary to address those deficiencies have been identified. The Project's fair share is determined based on the following equation, which is the ratio of Project traffic to new traffic, where new traffic is total future (Horizon Year) traffic less existing baseline traffic:

$$\text{Project Fair Share \%} = \text{Project Traffic} / (\text{2040 With Project Total Traffic} - \text{Existing Traffic})$$

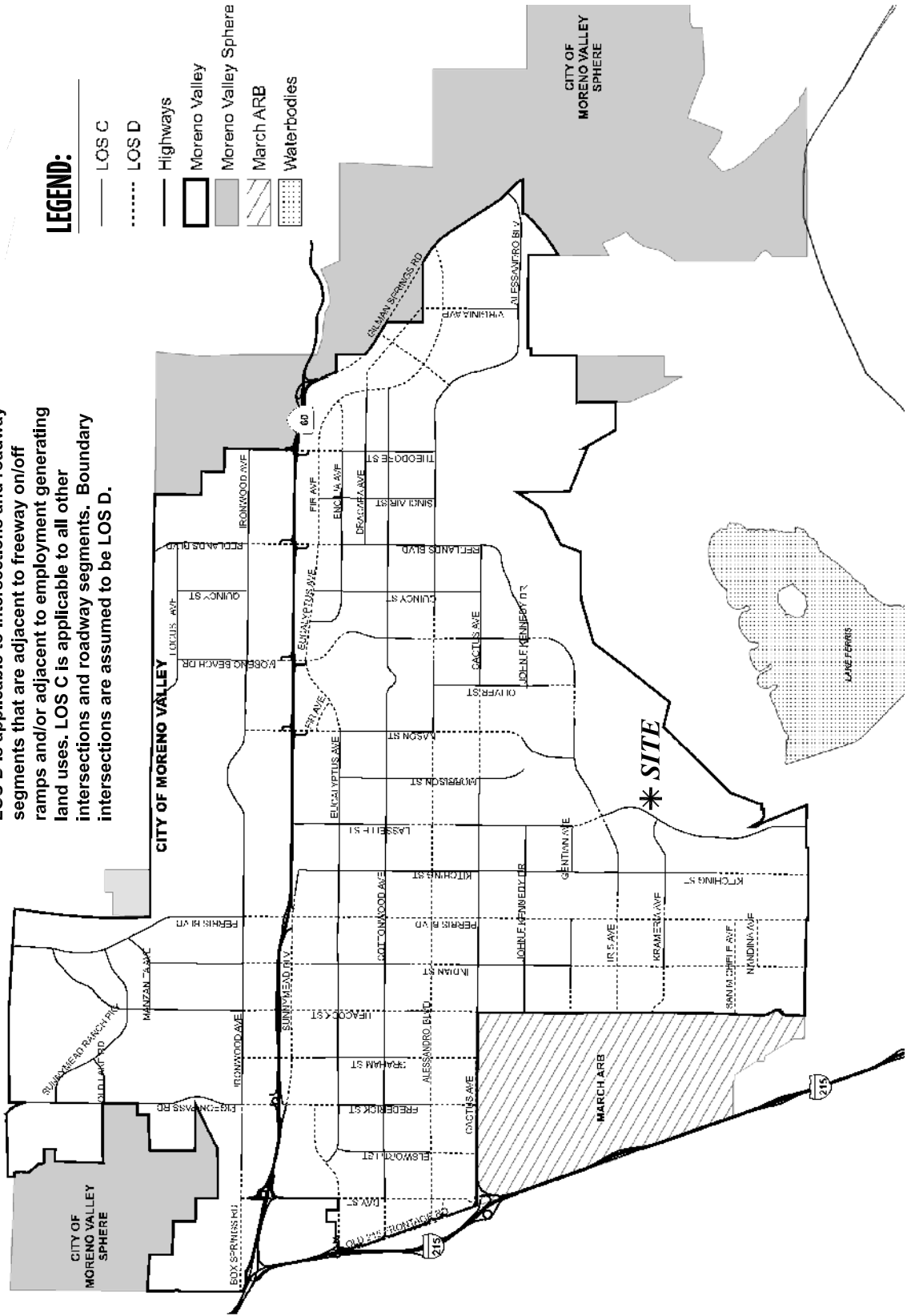
The Project fair share contribution calculations are presented in Section 1.5 *Local and Regional Funding Mechanisms* of this TIA.

**EXHIBIT 2-1: CITY OF MORENO VALLEY LEVEL OF SERVICE (LOS) STANDARDS**

LOS D is applicable to intersections and roadway segments that are adjacent to freeway on/off ramps and/or adjacent to employment generating land uses. LOS C is applicable to all other intersections and roadway segments. Boundary intersections are assumed to be LOS D.

**LEGEND:**

- LOS C
- ..... LOS D
- Highways
- Moreno Valley
- Moreno Valley Sphere
- March ARB
- Waterbodies



11575 - mv-los.dwg





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Attachment: Traffic Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

### 3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Moreno Valley General Plan Circulation Network, and a review of existing peak hour intersection operations and traffic signal warrant analyses.

#### 3.1 EXISTING CIRCULATION NETWORK

Pursuant to the scoping agreement with City of Moreno Valley staff (Appendix 1.1), the study area includes a total of 7 existing and future intersections as shown previously on Exhibit 1-2 have been evaluated at the request of City staff. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

The City is currently in the process of implementing a road diet along Krameria Avenue starting from the intersection at Lasselle Street to the east up to Cahuilla Drive. The road diet is anticipated to reduce the number of travel lanes along Krameria Avenue from four lanes to two lanes (one lane in each direction of travel) in order to accommodate a wide shoulder with bike lanes. The road diet improvements would eliminate the existing 2<sup>nd</sup> eastbound left turn lane and the 2<sup>nd</sup> through lane in both the eastbound and westbound directions at Lasselle Street and Krameria Avenue in place of a right turn lane.

#### 3.2 CITY OF MORENO VALLEY GENERAL PLAN CIRCULATION ELEMENT

The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on the City of Moreno Valley General Plan Circulation Element, are described subsequently. Exhibit 3-2 shows the City of Moreno Valley General Plan Circulation Element, and Exhibit 3-3 illustrates the City of Moreno Valley General Plan roadway cross-sections.

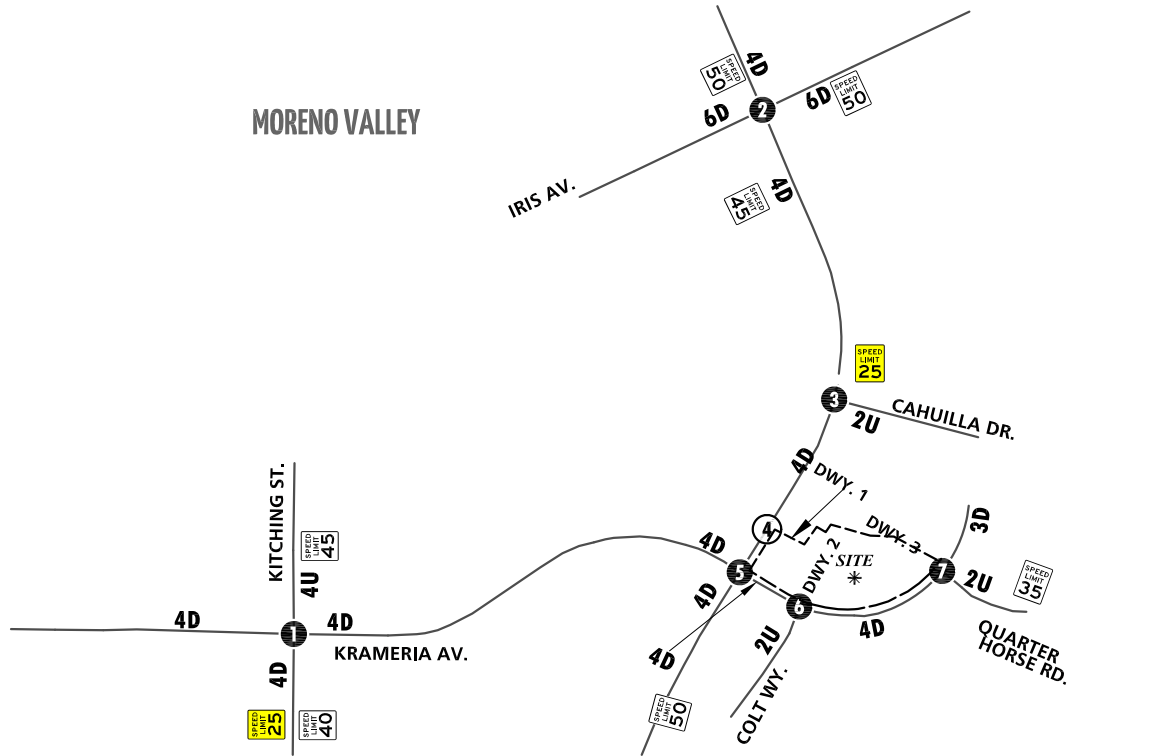
Exhibit 3-4 illustrates the City of Perris General Plan Circulation Element and the City of Perris General Plan roadway cross-sections are shown on Exhibit 3-5.

#### 3.3 TRANSIT SERVICE

The study area is currently served by the Riverside Transit Authority (RTA), a public transit agency serving the unincorporated Riverside County region. As shown on Exhibit 3-6, RTA Routes 18, 19, and 20 serves portions of Kitching Street, Iris Avenue, Krameria Avenue, Lasselle Street, and Perris Boulevard. RTA Route 41 serves Lasselle Street/Evans Road and portions of Ramona Expressway within the study area.

Transit service is reviewed and updated by RTA periodically to address ridership, budget, and community demands. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

**EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS**



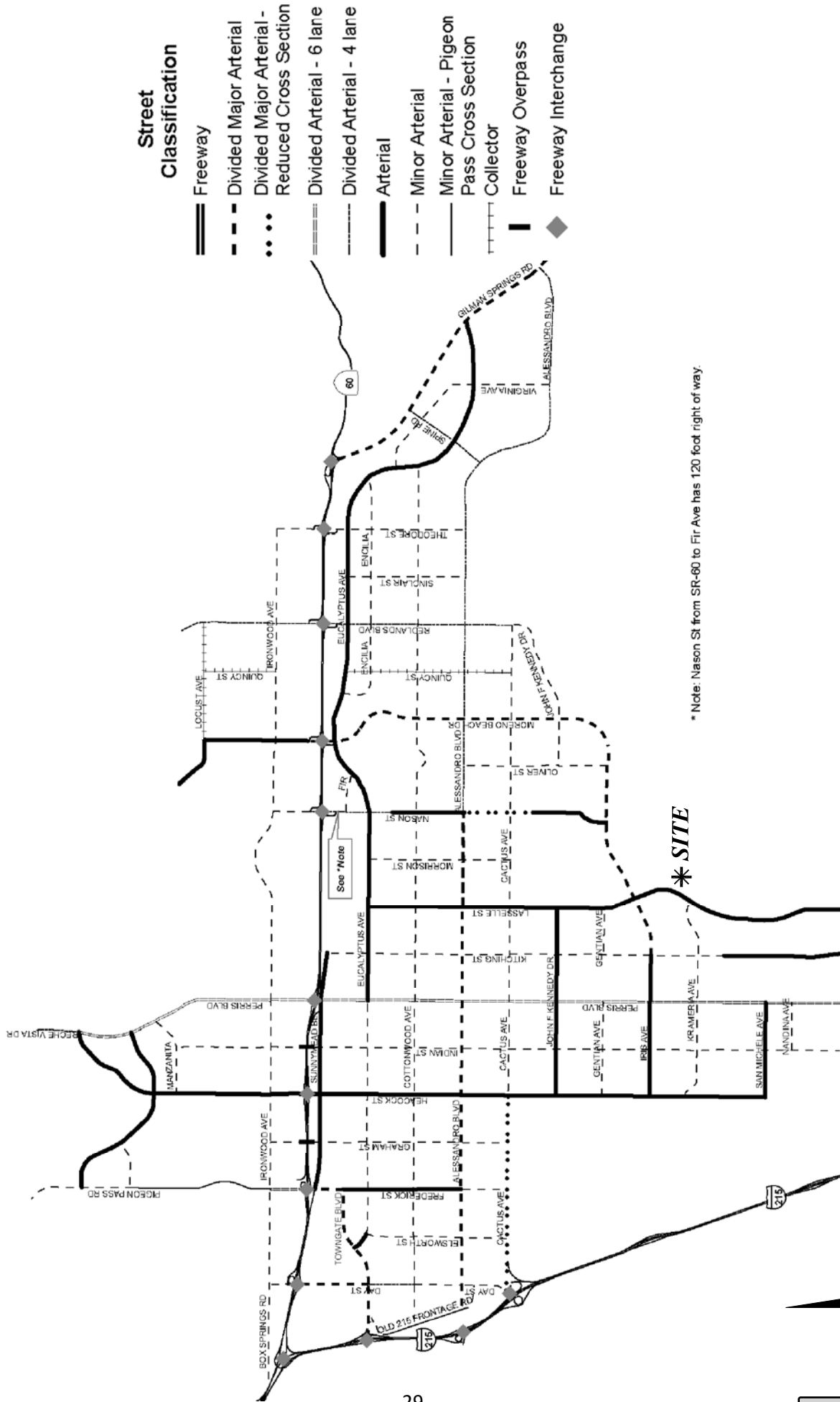
|  |  |   |  |   |
|--|--|---|--|---|
| <p><b>1</b> Kitching St. &amp; Krameria Av.</p>      | <p><b>2</b> Lasselle St. &amp; Iris Av.</p>          | <p><b>3</b> Lasselle St. &amp; Cahuilla Dr.</p> | <p><b>4</b> Lasselle St. &amp; Dwy. 1</p> <p>Future Intersection</p> | <p><b>5</b> Lasselle St. &amp; Krameria Av.</p> |
| <p><b>6</b> Dwy. 2 / Colt Wy. &amp; Krameria Av.</p> | <p><b>7</b> Krameria Av. &amp; Quarter Horse Rd.</p> |   |  |   |

**LEGEND:**

- = TRAFFIC SIGNAL
- = ALL WAY STOP
- = STOP SIGN
- 4** = NUMBER OF LANES
- D** = DIVIDED
- U** = UNDIVIDED
- = CHANNELIZED YIELD
- RTO** = RIGHT TURN OVERLAP
- DEF** = DEFACTO RIGHT TURN
- = SPEED LIMIT (MPH)
- = SCHOOL SPEED LIMIT (MPH)



EXHIBIT 3-2: CITY OF MORENO VALLEY GENERAL PLAN CIRCULATION ELEMENT

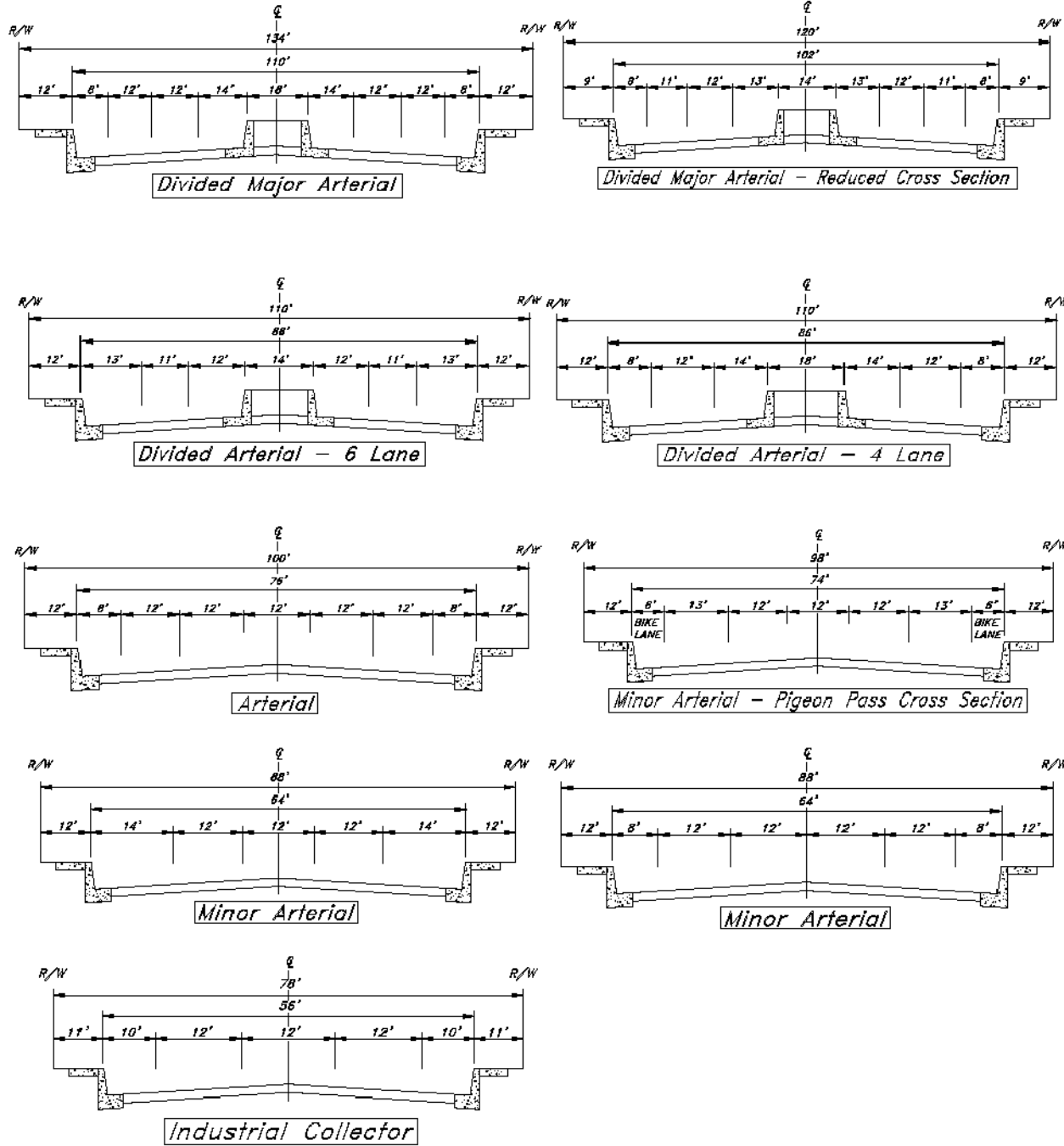


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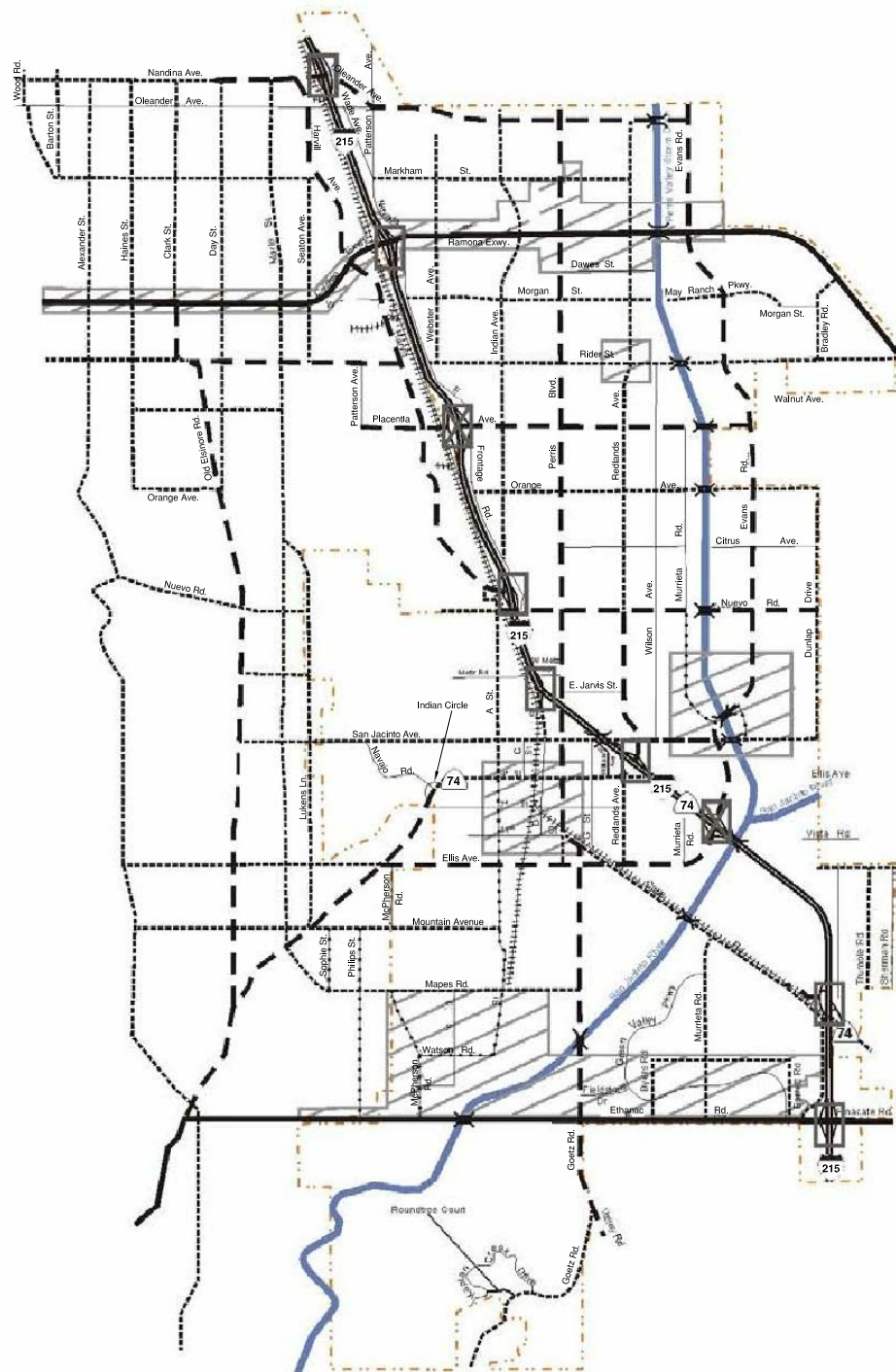


EXHIBIT 3-3: CITY OF MORENO VALLEY GENERAL PLAN ROADWAY CROSS-SECTIONS



Attachment: Traffic Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

EXHIBIT 3-4: CITY OF PERRIS GENERAL PLAN CIRCULATION ELEMENT



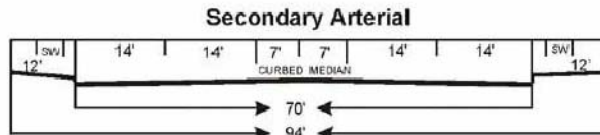
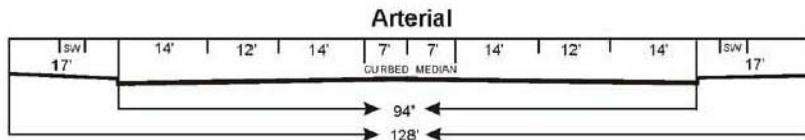
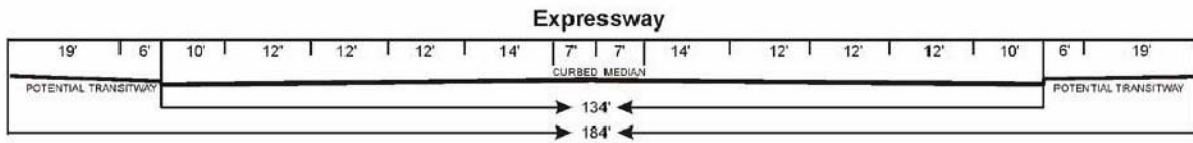
LEGEND:

- Freeway
- Expressway (184' ROW)
- Arterial (128' ROW)
- Secondary Arterial (94' ROW)
- Major Collector (78' ROW)
- Collector (66' ROW)
- Railroad
- Bridge
- Water
- City Boundary
- Existing Interchange With Future Modifications
- Proposed Interchange
- Corridor Study Areas

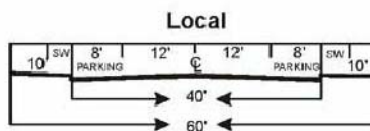
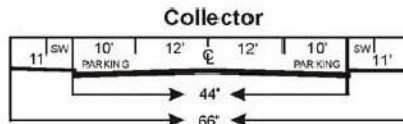
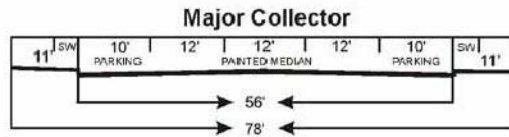
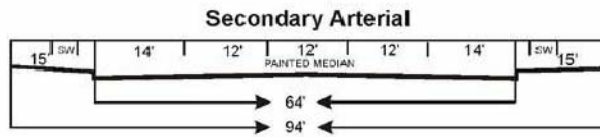


SOURCE: CITY OF PERRIS (June 14, 2005)

**EXHIBIT 3-5: CITY OF PERRIS GENERAL PLAN ROADWAY CROSS-SECTIONS**



or



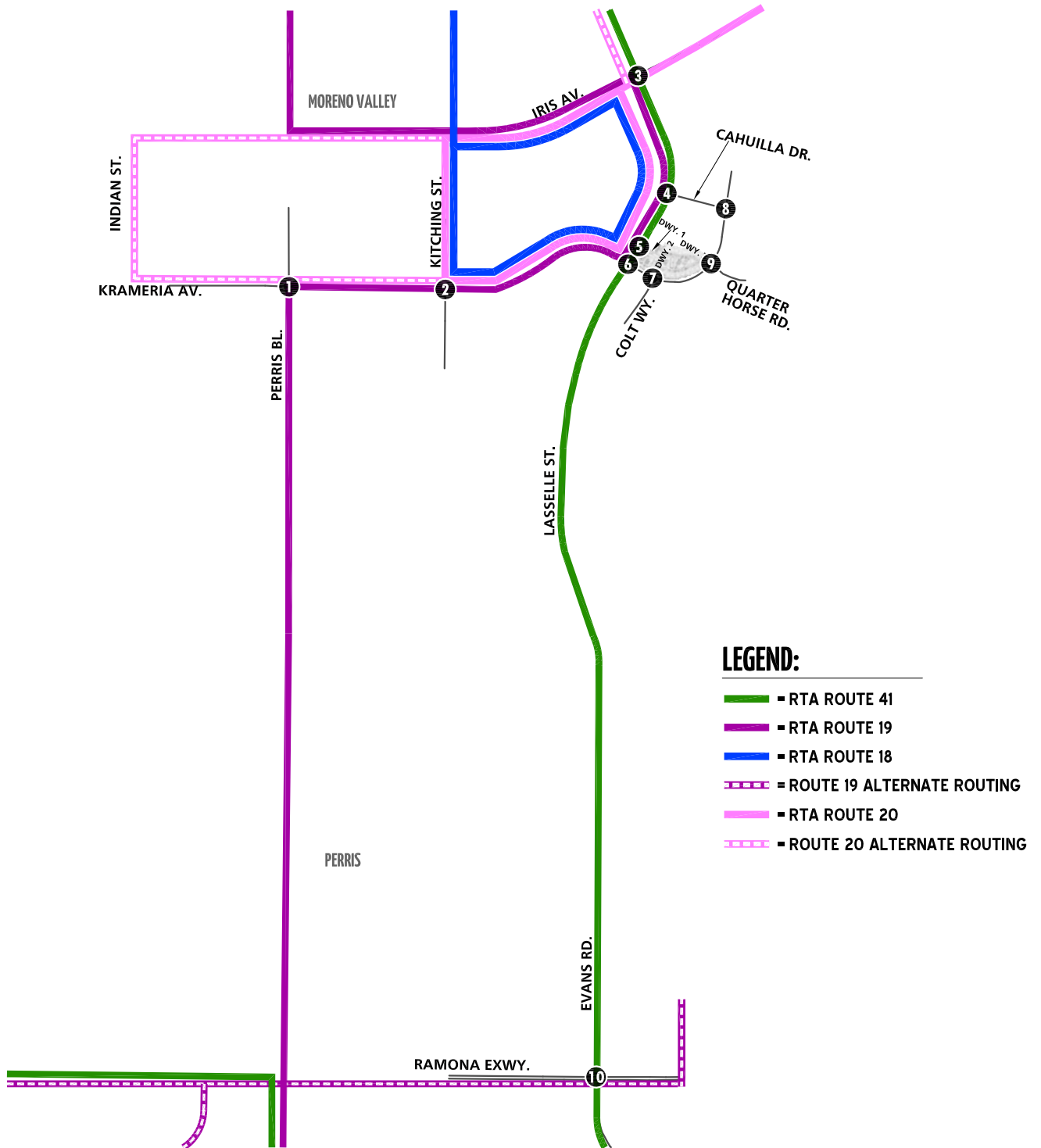
Specific details for each cross-section follow in Figures 4.1 A - 4.1 F

**Legend**

- SW Sidewalk or Trail (at least 4 feet)
- PARKING Parking or Bike Lane
- PAINTED MEDIAN Center Median and/or Continuous Left Turning Lane
- CURBED MEDIAN Landscaped Center Median

Source: City of Perris General Plan

EXHIBIT 3-6: EXISTING TRANSIT ROUTES





### 3.4 BICYCLE & PEDESTRIAN FACILITIES

In an effort to promote alternative modes of transportation, the City of Moreno Valley General Plan also includes a trails and bikeway system. The City of Moreno Valley trails and bikeway system are shown on Exhibit 3-7 and Exhibit 3-8, respectively. There is an improved trail to the southeast of the proposed Project along the east side of the existing residential area and northwest of the Lake Perris State Recreation Park. This improved trail also serves as a Class I bicycle path. Lasselle Street has Class II bicycle lanes to the south of Krameria Avenue, but has planned future Class II bicycle lanes to the north of Krameria Avenue. Krameria Avenue is also proposed to accommodate Class II bicycle lanes. The City of Perris' proposed bikeways and trail improvements are shown on Exhibit 3-9. Both Evans Road and Ramona Expressway are proposed to accommodate Class II bicycle lanes.

Field observations conducted in September 2018 indicate moderate pedestrian and bicycle activity within the study area at Perris Boulevard and Krameria Avenue, Kitching Street and Krameria Avenue, Lasselle Street and Iris Avenue, and Krameria Avenue near the existing Lasselle Elementary School and Moreno Valley College. Exhibit 3-10 illustrates the existing pedestrian facilities, including sidewalks and crosswalk locations, and the existing Class II bicycle lanes within the study area.

### 3.5 EXISTING (2018) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in March 2018. The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The weekday AM and weekday PM peak hour count data is representative of typical weekday peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity or detour routes and near-by schools were in session and operating on normal schedules.

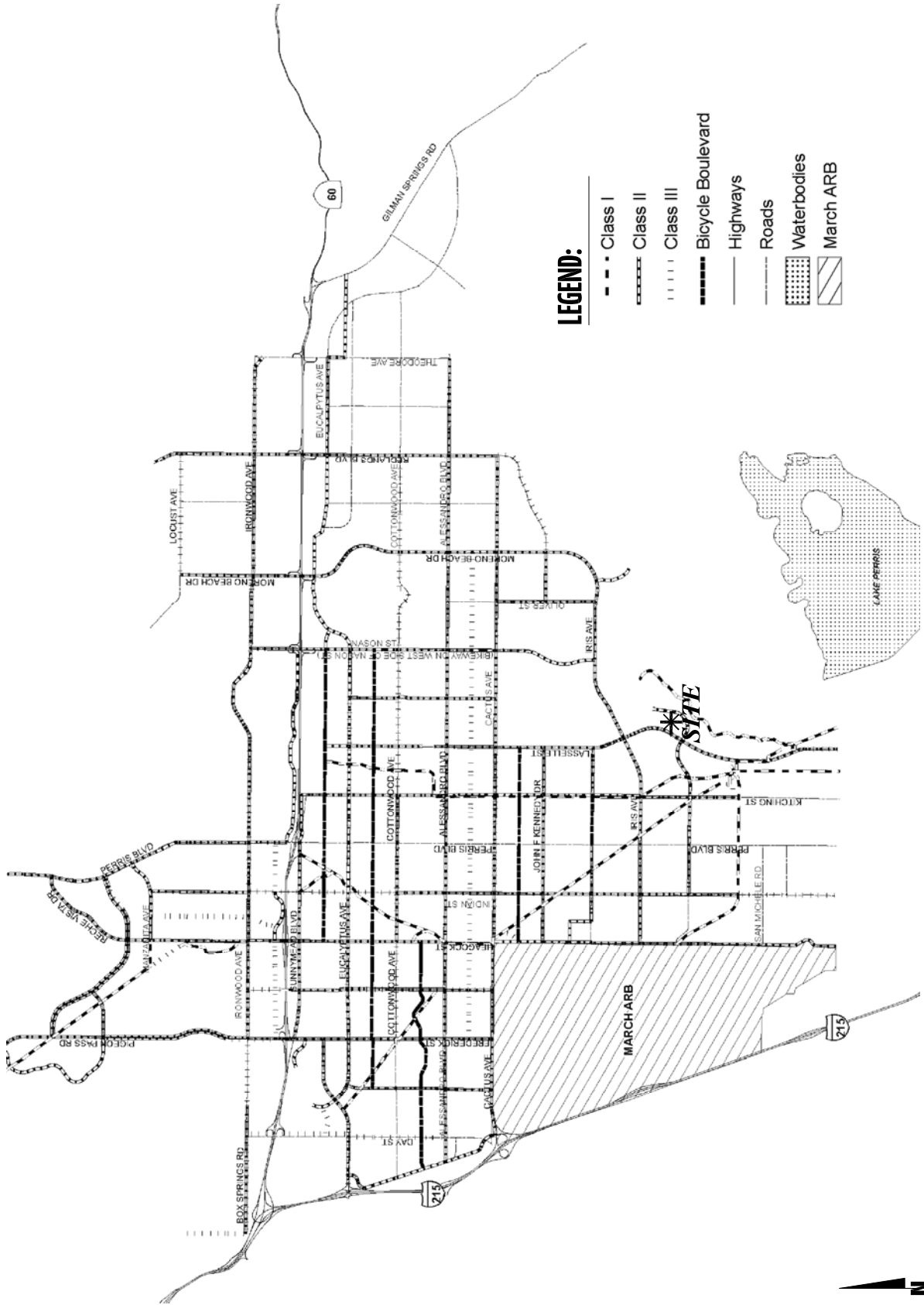
The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. These raw turning volumes have been flow conserved between intersections with limited access, no access, and where there are currently no uses generating traffic (e.g., between ramp-to-arterial intersections, etc.).

Existing weekday average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Exhibit 3-11. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 14.8852 = \text{Leg Volume}$$



EXHIBIT 3-8: CITY OF MORENO VALLEY BIKE PLAN



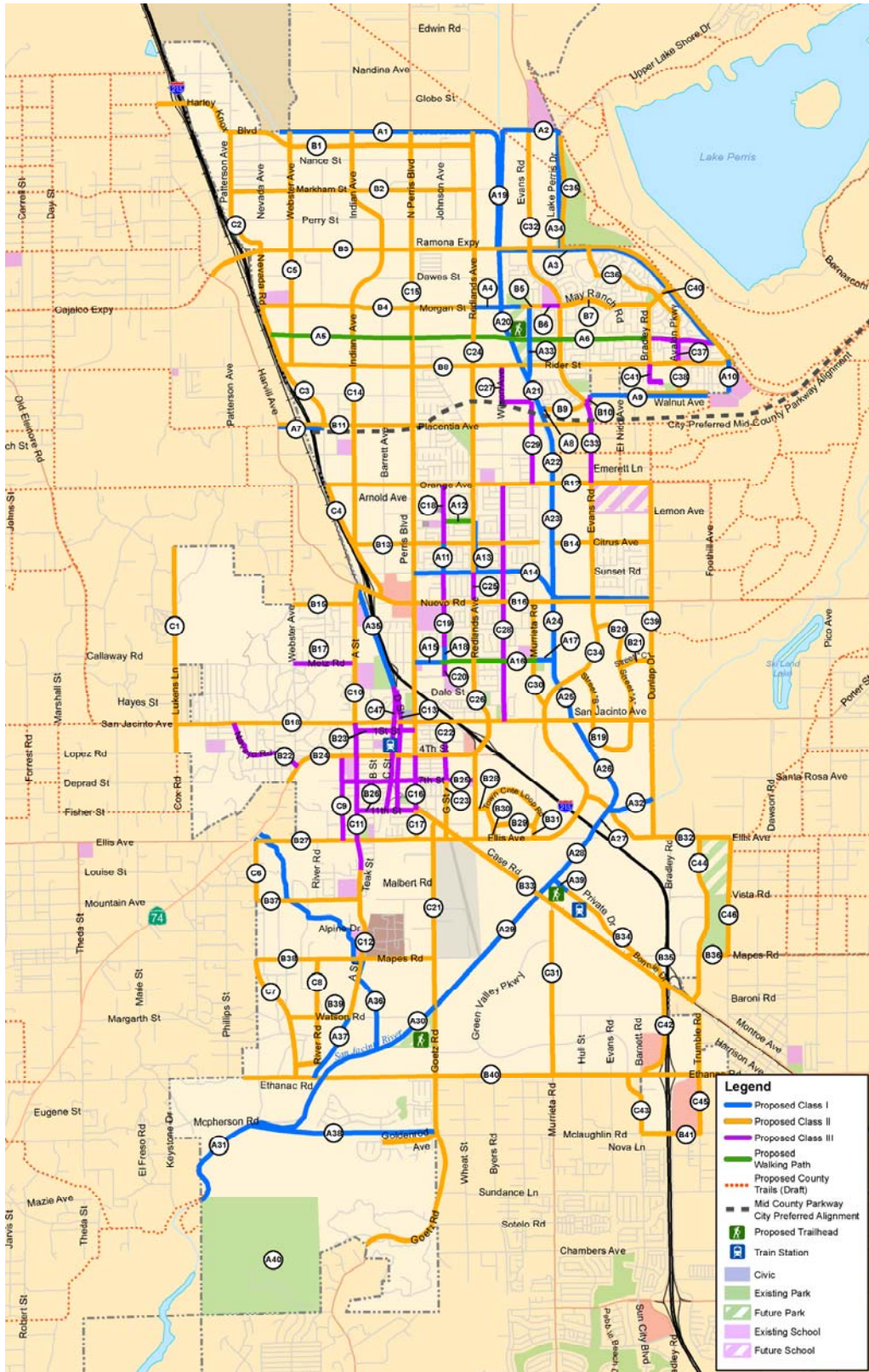
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Attachment: Traffic Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



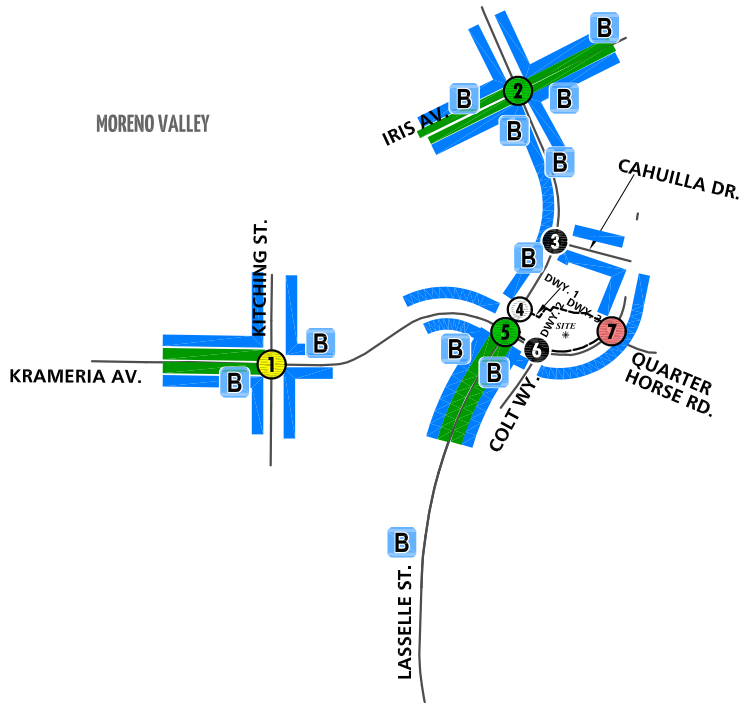
EXHIBIT 3-9: CITY OF PERRIS PROPOSED BIKEWAYS AND TRAIL IMPROVEMENTS



Source: City of Perris General Plan



### EXHIBIT 3-10: EXISTING PEDESTRIAN FACILITIES



#### LEGEND:

- = SIDEWALK
- = BIKE LANE
- B = BUS STOP
- 0 = NO CROSSWALK
- 0 = FUTURE INTERSECTION
- 0 = CROSSWALK ON ALL APPROACHES
- 0 = SCHOOL CROSSWALK ON TWO APPROACHES
- 0 = SCHOOL CROSSWALK ON FOUR APPROACHES



A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 6.72 percent. As such, the above equation utilizing a factor of 14.8852 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 6.72 percent (i.e.,  $1/0.0672 = 14.8852$ ) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes are also shown on Exhibit 3-11.

### 3.6 INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1 which indicates that the existing study area intersections are currently operating at an acceptable LOS during the peak hours. However, the intersection of Lasselle Street and Krameria Avenue is anticipated to operate at an unacceptable LOS during the AM peak hour with the road diet improvements in place for Existing (2018) traffic conditions. The road diet improvements would serve as a traffic calming measure and provide additional facilities for other modes of transportation (i.e., bicyclists), but would reduce capacity for vehicular traffic. As such, if the City moves forward with the proposed road diet improvements along Krameria Avenue, there may be periods during the morning peak hour when intersections along Krameria Avenue would operate at a deficient LOS.

Consistent with Table 3-1, a summary of the peak hour intersection LOS for Existing conditions are shown on Exhibit 3-12. The intersection operations analysis worksheets are included in Appendix 3.2 of this TIA.

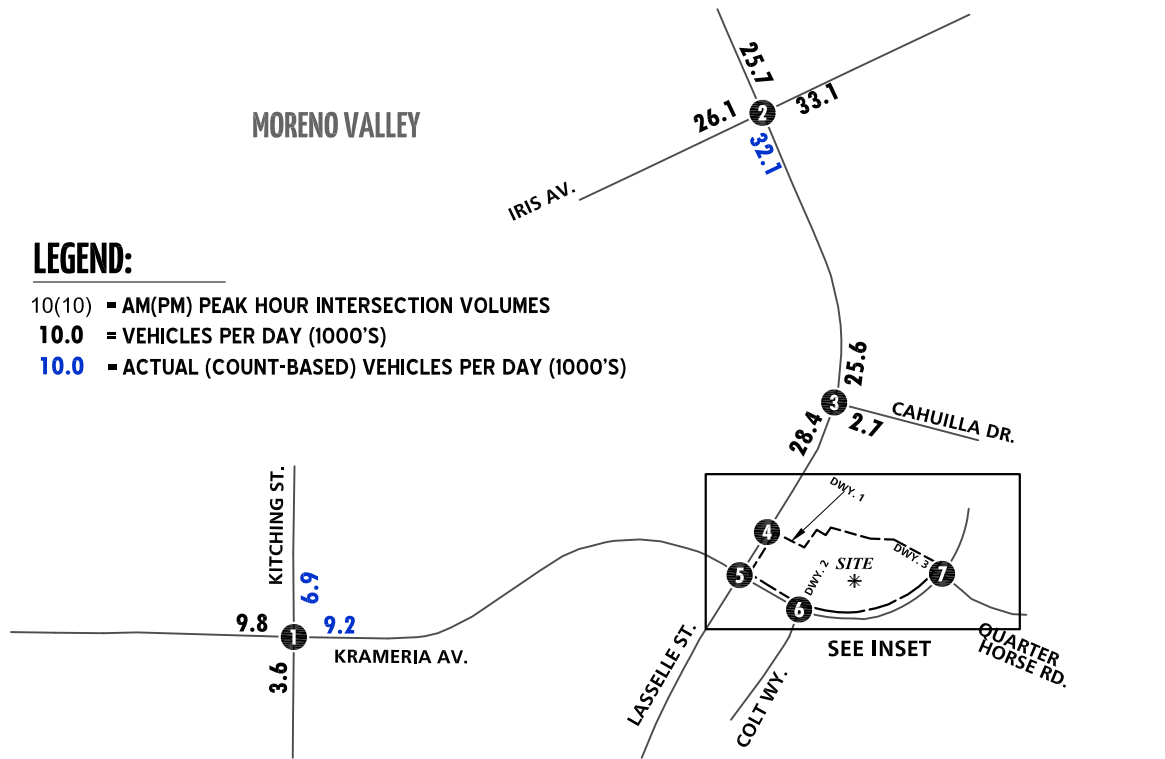
### 3.7 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. No study area intersections currently warrant a traffic signal for Existing traffic conditions (see Appendix 3.3).

### 3.8 ROADWAY SEGMENT ANALYSIS

The City of Moreno Valley General Plan Circulation Element provides roadway volume capacity values presented previously in Table 2-4. The roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 3-2 provides a summary of the Existing (2018) conditions roadway segment capacity analysis based on the City of Moreno Valley Roadway Segment Capacity/LOS Thresholds identified previously in Table 2-4. As shown in Table 3-2, all of the study area roadway segments currently operate at an acceptable LOS based on the City's planning level daily roadway capacity thresholds.

**EXHIBIT 3-11: EXISTING (2018) TRAFFIC VOLUMES (IN PCE)**



**LEGEND:**

- 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
- 10.0 = VEHICLES PER DAY (1000'S)
- 10.0 = ACTUAL (COUNT-BASED) VEHICLES PER DAY (1000'S)

|          |   |          |   |          |  |          |                                  |          |  |
|----------|---|----------|---|----------|--|----------|----------------------------------|----------|--|
| <b>1</b> | <b>Kitching St. &amp; Krameria Av.</b>      | <b>2</b> | <b>Lasselle St. &amp; Iris Av.</b>          | <b>3</b> | <b>Lasselle St. &amp; Cahuilla Dr.</b> | <b>4</b> | <b>Lasselle St. &amp; Dwy. 1</b> | <b>5</b> | <b>Lasselle St. &amp; Krameria Av.</b> |
|          |   |          |   |          | <b>Future Intersection</b>             |          |                                  |          |  |
| <b>6</b> | <b>Dwy. 2 / Colt Wy. &amp; Krameria Av.</b> | <b>7</b> | <b>Krameria Av. &amp; Quarter Horse Rd.</b> |          |  |          |                                  |          |  |
|          |   |          |   |          |  |          |                                  |          |  |

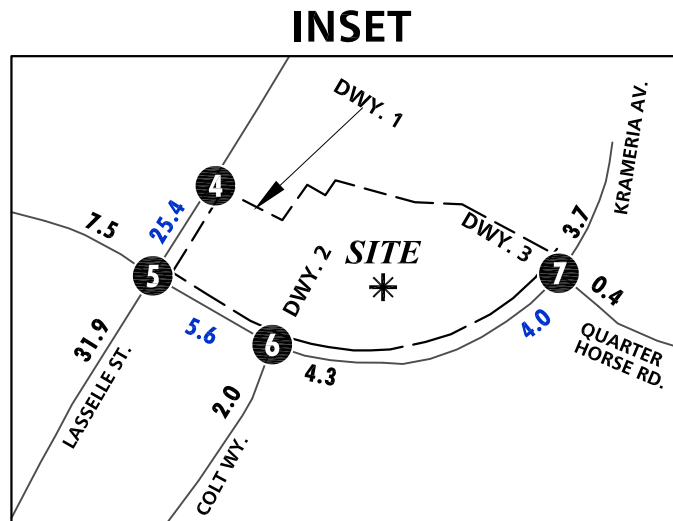


EXHIBIT 3-12: EXISTING (2018) SUMMARY OF LOS

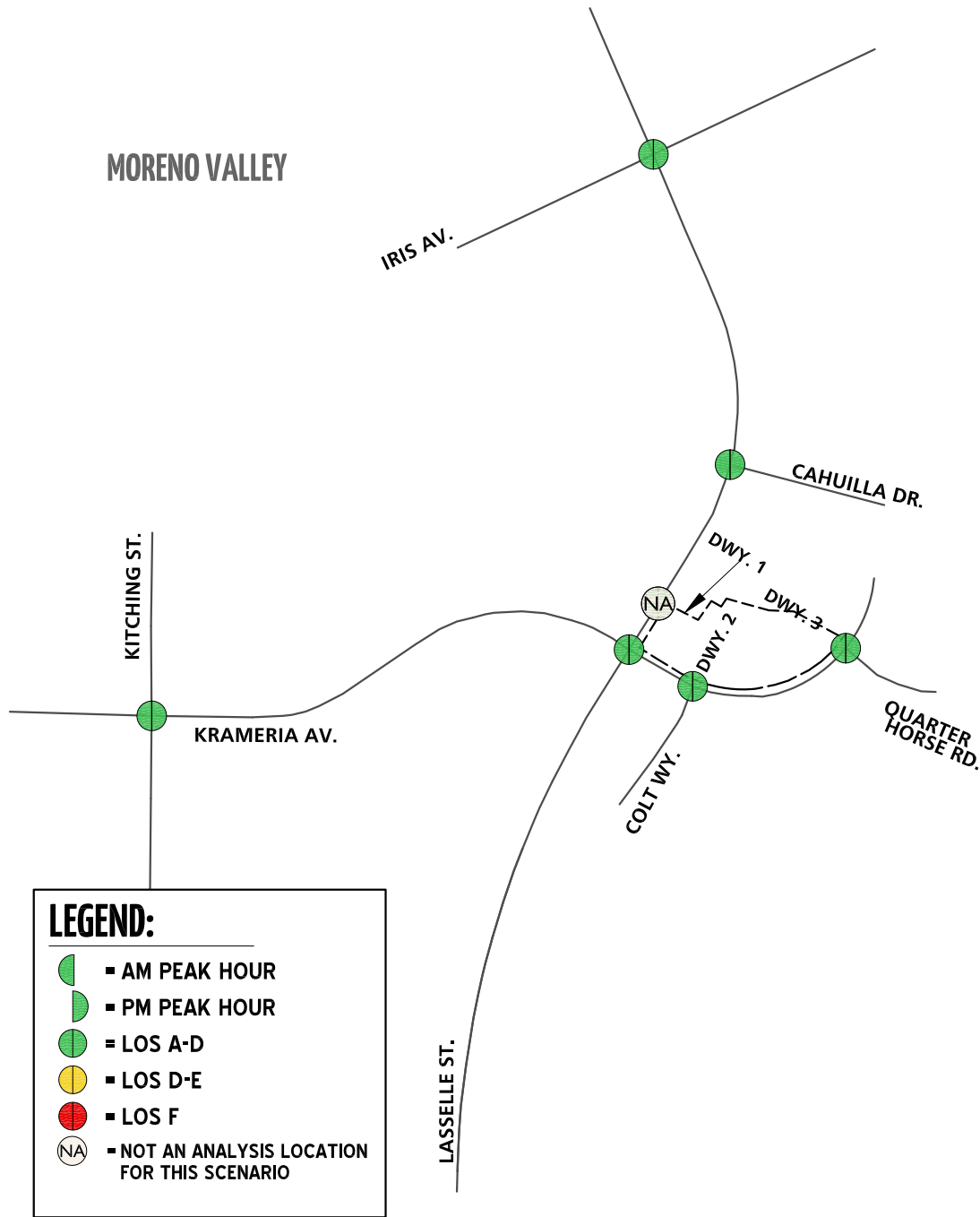




Table 3-1

Intersection Analysis for Existing (2018) Conditions

| # | Intersection                       | Traffic Control <sup>3</sup> | Intersection Approach Lanes <sup>1</sup> |          |              |            |          |          |           |          |          |           |          |          | Delay <sup>2</sup> (secs.) |             | Level of Service |          | Acceptable LOS |
|---|------------------------------------|------------------------------|--|----------|--------------|------------|----------|----------|-----------|----------|----------|-----------|----------|----------|----------------------------|-------------|------------------|----------|----------------|
|   |                                    |                              | Northbound                               |          |              | Southbound |          |          | Eastbound |          |          | Westbound |          |          | AM                         | PM          | AM               | PM       |                |
| 1 | Kitching St. & Krameria Av.        | TS                           | 1  | 2        | 0            | 1          | 2        | 0        | 1         | 2        | 0        | 1         | 2        | 0        | 24.0                       | 16.0        | C                | B        | C              |
| 2 | Lasselle St. & Iris Av.            | TS                           | 2  | 2        | 1>           | 2          | 2        | d        | 2         | 3        | 0        | 2         | 3        | 0        | 36.3                       | 36.7        | D                | D        | D              |
| 3 | Lasselle St. & Cahuilla Dr.        | CSS                          | 0  | 2        | d            | 0          | 2        | 0        | 0         | 0        | 0        | 0         | 0        | 1        | 16.9                       | 12.7        | C                | B        | C              |
| 4 | Lasselle St. & Driveway 1          |                              | Future Intersection                      |          |              |            |          |          |           |          |          |           |          |          |                            |             |                  |          | C              |
| 5 | Lasselle St. & Krameria Av.        | TS                           | 1  | 2        | 1>           | 1          | 2        | 0        | 2         | 2        | 0        | 1         | 2        | 0        | 35.8                       | 18.6        | D                | B        | D              |
|   | <i>With Road Diet Improvements</i> | TS                           | <b>1</b>                                 | <b>2</b> | <b>1&gt;</b> | <b>1</b>   | <b>2</b> | <b>0</b> | <b>1</b>  | <b>1</b> | <b>1</b> | <b>1</b>  | <b>1</b> | <b>1</b> | <b>56.1</b>                | <b>19.7</b> | <b>E</b>         | <b>B</b> |                |
| 6 | Driveway 2/Colt Wy. & Krameria Av. | CSS                          | 0  | 1        | 0            | 0          | 0        | 0        | 0         | 2        | 0        | 1         | 2        | 0        | 17.0                       | 10.3        | C                | B        | C              |
| 7 | Krameria Av. & Quarter Horse Rd.   | CSS                          | 1  | 2        | 0            | 1          | 1        | d        | 0         | 1        | 0        | 0         | 1        | 0        | 17.9                       | 9.6         | C                | A        | C              |

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-turn Overlap Phasing; d = Defacto Right Turn Lane

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> AWS = All-way Stop; CSS = Cross-street Stop; TS = Traffic Signal

Attachment: Traffic Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Table 3-2

## Roadway Segment Analysis for Existing (2018) Conditions

| # | Roadway      | Segment Limits               | Roadway Section | LOS Capacity <sup>1</sup> | Existing 2018 | V/C <sup>2</sup> | LOS <sup>3</sup> |
|---|--------------|------------------------------|-----------------|---------------------------|---------------|------------------|------------------|
| 1 | Krameria Av. | Kitching St. to Lasselle St. | 4D              | 37,500                    | 9,285         | 0.25             | A                |
| 2 |              | Lasselle St. to Colt Wy.     | 4D              | 37,500                    | 5,606         | 0.15             | A                |
| 3 | Lasselle St. | Iris Av. to Cahuilla Dr.     | 4D              | 37,500                    | 32,045        | 0.85             | D                |
| 4 |              | Cahuilla Dr. to Driveway 1   | 4D              | 37,500                    | 25,435        | 0.68             | B                |
| 5 |              | Driveway 1 to Krameria Av.   | 4D              | 37,500                    | 25,435        | 0.68             | B                |

<sup>1</sup> These maximum roadway capacities have been obtained from the City of Moreno Valley's Transportation Division's TIA Preparation Guidelines (August 2007).

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

### 3.9 QUEUING ANALYSIS

A queuing analysis was conducted at 5 study area intersections in close proximity to the Project in order to determine 95<sup>th</sup> percentile queues during the peak hours. The queuing analysis results are summarized in Table 3-3 for Existing (2018) traffic conditions, which indicates that the following movements currently experience queuing issues based on the 95<sup>th</sup> percentile peak hour traffic flows:

- Lasselle Street and Krameria Avenue (#5), northbound left turn lane (AM and PM peak hours)
- Lasselle Street and Krameria Avenue (#5), northbound right turn lane (AM peak hour only)

Queuing worksheets for Existing (2018) traffic conditions are included in Appendix 3.4.

### 3.10 RECOMMENDED IMPROVEMENTS

As previously shown in Table 3-3, there are 2 movements that are currently experience queuing issues during the AM or PM peak hours. Recommended improvements to address queuing issues for Existing (2018) traffic conditions are shown in Table 3-4. A 180-foot northbound left turn lane and 280-foot northbound right turn lane are recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for Existing (2018) traffic conditions.

Table 3-3

## Peak Hour Queuing Summary for Existing (2018) Conditions

| Intersection                                | Movement | Available Stacking Distance (Feet) | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |           |
|---|----------|------------------------------------|------------------------------|--------------|--------------------------|-----------|
|   |          |                                    | AM Peak Hour                 | PM Peak Hour | AM                       | PM        |
| Lasselle St. & Cahuilla Dr.                 | NBR      | 135                                | 4                            | 0            | Yes                      | Yes       |
| Lasselle St. & Driveway 1                   | NBT/R    | 250                                | --                           | --           |                          |           |
| Lasselle St. & Krameria Av.                 | NBL      | 125                                | <b>155</b>                   | <b>137</b>   | <b>No</b>                | <b>No</b> |
|   | NBR      | 180                                | <b>254</b>                   | 46           | <b>No</b>                | Yes       |
|   | SBL      | 240                                | 122                          | 122          | Yes                      | Yes       |
|   | EBL      | 310                                | 199                          | 112          | Yes                      | Yes       |
|   | WBL      | 200                                | 160                          | 89           | Yes                      | Yes       |
| Driveway 2/Colt Wy. & Krameria Av.          | EBL      | 100                                | --                           | --           |                          |           |
|   | WBL      | 100                                | 38                           | 4            | Yes                      | Yes       |
| Krameria Av. & Driveway 3/Quarter Horse Rd. | NBL      | 50                                 | 17                           | 0            | Yes                      | Yes       |
|   | SBL      | 100                                | 15                           | 0            | Yes                      | Yes       |
|   | SBR      | 415                                | 0                            | 0            | Yes                      | Yes       |

**BOLD** = Inadequate 95th percentile storage.

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.



Table 3-4

Peak Hour Queuing Summary for Existing (2018) Conditions With Improvements

| Intersection                                | Movement | Available Stacking Distance (Feet) | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |     |
|---|----------|------------------------------------|------------------------------|--------------|--------------------------|-----|
|   |          |                                    | AM Peak Hour                 | PM Peak Hour | AM                       | PM  |
| Lasselle St. & Cahuilla Dr.                 | NBR      | 135                                | 4                            | 0            | Yes                      | Yes |
|   | NBT/R    | 250                                | --                           | --           |                          |     |
| Lasselle St. & Krameria Av.                 | NBL      | <u>180</u>                         | 155                          | 137          | Yes                      | Yes |
|   | NBR      | <u>280</u>                         | 254                          | 46           | Yes                      | Yes |
|   | SBL      | 240                                | 122                          | 122          | Yes                      | Yes |
|   | EBL      | 310                                | 199                          | 112          | Yes                      | Yes |
| Driveway 2/Colt Wy. & Krameria Av.          | WBL      | 200                                | 160                          | 89           | Yes                      | Yes |
|   | EBL      | 100                                | --                           | --           |                          |     |
| Krameria Av. & Driveway 3/Quarter Horse Rd. | WBL      | 100                                | 38                           | 4            | Yes                      | Yes |
|   | NBL      | 50                                 | 17                           | 0            | Yes                      | Yes |
|   | SBL      | 100                                | 15                           | 0            | Yes                      | Yes |
|   | SBR      | 415                                | 0                            | 0            | Yes                      | Yes |



## 4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment, onto the study area roadway network. The Project has been evaluated to consist of up to 112 apartments/duplexes and 21,000 sf of commercial retail use. Per the City's traffic study guidelines, the Opening Year Cumulative will have a 5-year minimum horizon from baseline conditions. As such, the Opening Year Cumulative analysis will assess 2023 traffic conditions.

Vehicular access will be provided via the following driveways (see Exhibit 1-1):

- Lasselle Street & Driveway 1 – Right-in right-out only
- Colt Way & Krameria Avenue/Driveway 2 – Full access driveway
- Krameria Avenue & Driveway 3/Quarter Horse Road – Full-access driveway

Regional access to the Project site is provided via the I-215 Freeway at Cactus Avenue and Ramona Expressway interchanges.

### 4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development. The ITE Trip Generation Manual is a nationally recognized source for estimating site-specific trip generation. ITE's most current version of the Trip Generation Manual is based on more than 4,800 trip generation studies submitted to ITE by public agencies, consulting firms, universities/colleges, developers, associations, and local sections/districts/student chapters of ITE. (2)

In order to develop the traffic characteristics of the proposed project, trip generation rates are based on the ITE Trip Generation Manual (10<sup>th</sup> Edition, 2017) for the following land uses: (2)

- Multifamily Housing (Low-Rise) – ITE Land Use 220
- Shopping Center – ITE Land Use 820

Table 4-1 presents the trip generation rates for each of the land uses above. Internal capture is a percentage reduction that can be applied to the trip generation estimates for individual land uses to account for trips internal to the site. In other words, trips may be made between individual retail uses on-site and can be made either by walking or using internal roadways without using external streets. Internal capture reductions between the proposed land uses have been taken into account based on the City's maximum allowable 10 percent.

Table 4-1

## Proposed Project Trip Generation Summary

| Land Use                                  | Units | ITE LU Code | AM Peak Hour |      |       | PM Peak Hour |      |       | Daily |
|---|-------|-------------|--------------|------|-------|--------------|------|-------|-------|
|   |       |             | In           | Out  | Total | In           | Out  | Total |       |
| <b>Trip Generation Rates</b> <sup>1</sup> |       |             |              |      |       |              |      |       |       |
| Multifamily Housing (Low-Rise)            | DU    | 220         | 0.11         | 0.35 | 0.46  | 0.35         | 0.21 | 0.56  | 7.32  |
| Shopping Center <sup>3</sup>              | TSF   | 820         | 4.79         | 2.94 | 7.73  | 3.91         | 4.24 | 8.15  | 99.06 |

| Land Use   | Quantity | Units | AM Peak Hour |            |            | PM Peak Hour |           |            | Daily        |
|--|----------|-------|--------------|------------|------------|--------------|-----------|------------|--------------|
|  |          |       | In           | Out        | Total      | In           | Out       | Total      |              |
| <b>Proposed Project Trip Generation Summary</b>        |          |       |              |            |            |              |           |            |              |
| Multifamily Housing                                    | 112      | DU    | 12           | 40         | 52         | 40           | 23        | 63         | 820          |
| Shopping Center  | 21,000   | TSF   | 101          | 62         | 163        | 82           | 89        | 171        | 2,080        |
| Internal Capture (10% PM and Daily only)               |          |       | 0            | 0          | 0          | -8           | -9        | -17        | -208         |
| Pass-by Reduction (34% PM and Daily only) <sup>4</sup> |          |       | 0            | 0          | 0          | -25          | -25       | -50        | -636         |
| <b>Total</b>   |          |       | <b>113</b>   | <b>102</b> | <b>215</b> | <b>89</b>    | <b>78</b> | <b>167</b> | <b>2,056</b> |

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

<sup>2</sup> DU = Dwelling Units; TSF = Thousand Square Feet

<sup>3</sup> Trip generation rate based on the regression equation for ITE Land Use Code 820.

<sup>4</sup> Pass-by Reduction Source: ITE Trip Generation Handbook, Third Edition (2017).

Pass-by trips are defined as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the generator. These types of trips are many times associated with retail uses. As the Project is proposed to include retail use, pass-by reduction percentages have been obtained and applied from the ITE Trip Generation Handbook, 3<sup>rd</sup> Edition (2017). (7)

Table 4-1 also summarizes the trip generation based on the proposed Project land uses. As shown in Table 4-1, the proposed Project is anticipated to generate a total of approximately 2,056 trip-ends per day on a typical weekday with 215 vehicle trips during the weekday AM peak hour and 167 vehicle trips during the weekday PM peak.

## 4.2 PROJECT TRIP DISTRIBUTION

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered to identify the route where the Project traffic would distribute.

The Project trip distribution patterns for the residential use utilized for the purposes of this analysis are shown on Exhibit 4-1. The Project trip distribution patterns for the retail use is shown on Exhibit 4-2.

## 4.3 MODAL SPLIT

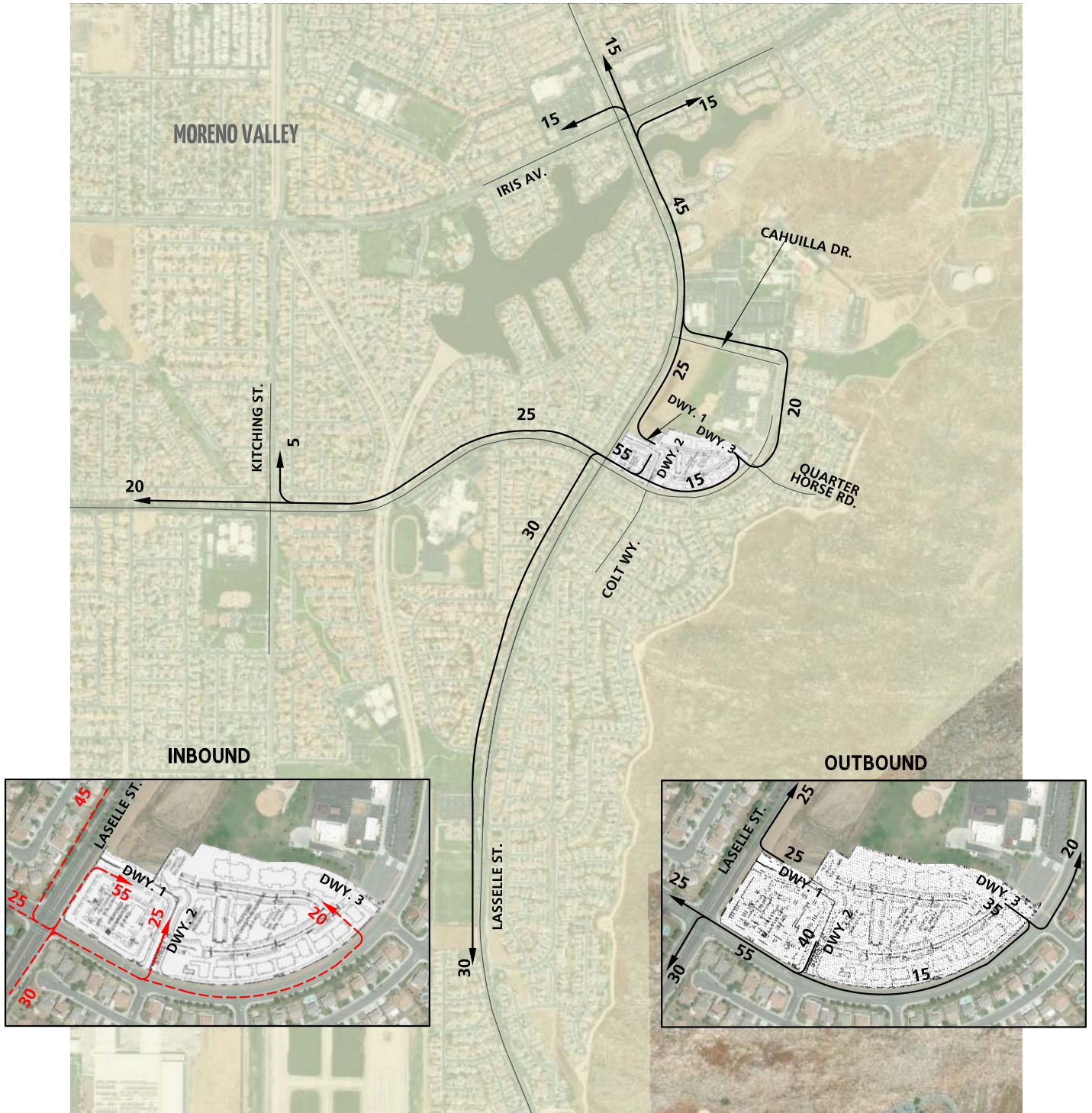
The traffic reducing potential of public transit, walking, or bicycling have not been considered in this TIA. Essentially, the traffic projections are "conservative" in that these alternative travel modes might be able to reduce the forecasted traffic volumes.

## 4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution patterns, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-3.



EXHIBIT 4-1: PROJECT (RESIDENTIAL) TRIP DISTRIBUTION



LEGEND:

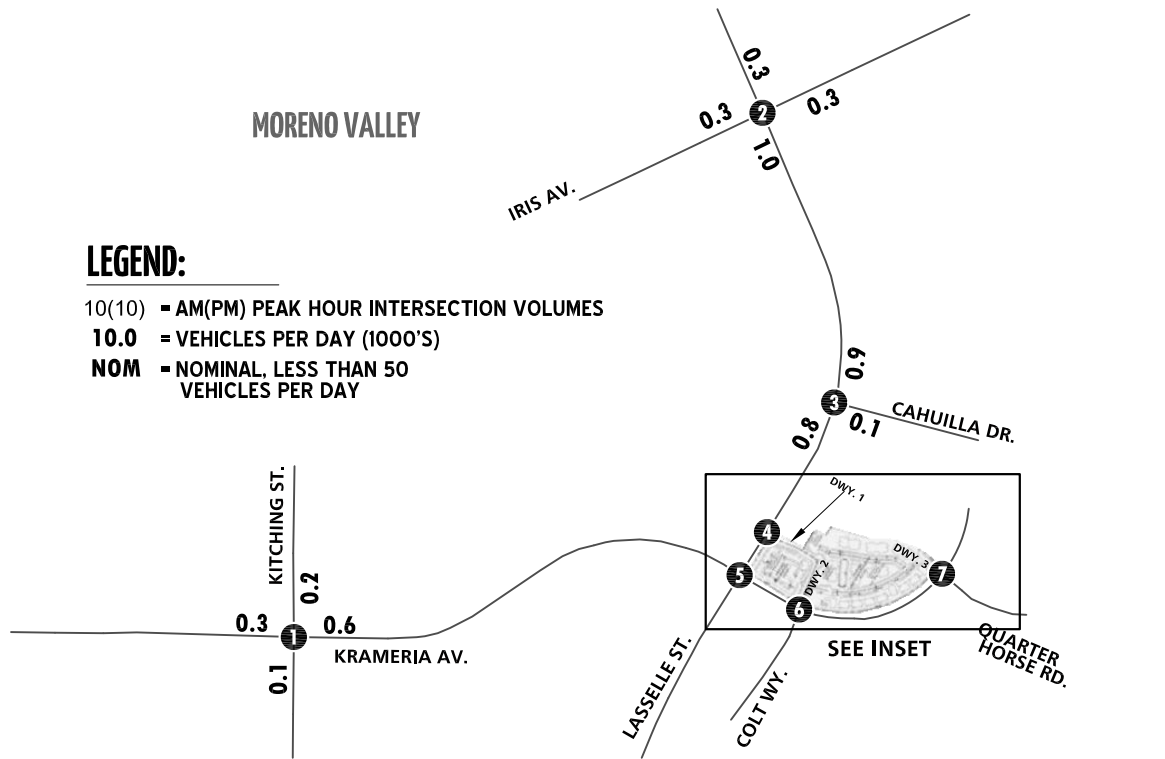
- 10 = PERCENT TO/FROM PROJECT
- ← = OUTBOUND
- = INBOUND







EXHIBIT 4-3: PROJECT ONLY TRAFFIC VOLUMES

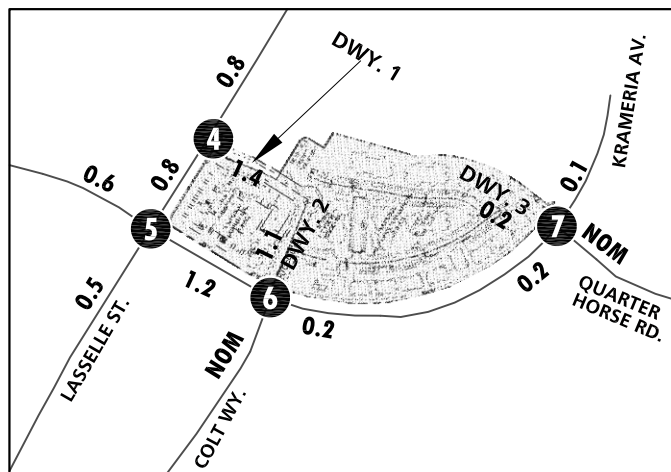


**LEGEND:**

- 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

|          |  |          |                                    |          |  |          |                                  |          |  |
|----------|--|----------|------------------------------------|----------|--|----------|----------------------------------|----------|--|
| <b>1</b> | <b>Kitching St. &amp; Krameria Av.</b> | <b>2</b> | <b>Lasselle St. &amp; Iris Av.</b> | <b>3</b> | <b>Lasselle St. &amp; Cahuilla Dr.</b> | <b>4</b> | <b>Lasselle St. &amp; Dwy. 1</b> | <b>5</b> | <b>Lasselle St. &amp; Krameria Av.</b> |
|          |  |          |                                    |          |  |          |                                  |          |  |

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#### 4.5 BACKGROUND TRAFFIC

To account for growth in traffic between Existing Conditions (2018) and the Project Opening Year Cumulative (2023), a compounded annual traffic growth rate of 2.0 percent was assumed (10.41 percent aggregate growth in background traffic for the period between 2018 and 2023). The 2.0 percent annual growth rate is intended to capture non-specific ambient traffic growth.

In context, the TIA's assumed 2.0 percent compounded annual growth rate is considered a reasonable approximation of future traffic growth when compared to demographic projections reflected in other local and regional growth modeling efforts. More specifically, the Southern California Association of Governments (SCAG) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) growth forecasts for the City of Moreno Valley assume the City population to increase from 197,600 in 2012 to 256,600 by the year 2040, or an approximate 0.94 percent growth rate compounded annually. The RTP/SCS assumed growth in households over the same 28-year period reflects an increase from 51,800 households to 73,000 households; a rate of 1.23 percent compounded annually. At the upper end of assumed RTP/SCS growth rates, employment over the same 28-year period is projected to increase from 31,400 jobs to 83,200 jobs; a rate of approximately 3.54 percent compounded annually. (8) The 2.0 percent compounded annual traffic growth rate used in the TIA reflects the fact that not all persons comprising population growth, household growth, or employment growth would translate on a one-to-one basis as a new vehicle trip in the region; and establishes a judicious midrange estimate lying between the RTP/SCS assumed regional population growth rate (0.94 percent) and the RTP/SCS assumed regional employment growth rate (3.54 percent).

Conservatively, the TIA estimates of area traffic growth then add traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed annual 2.0 percent ambient growth in traffic noted above; and in some instances, these related projects would likely not be implemented and functional within the 2023 Opening Year Cumulative time frame assumed for the Project. The resulting traffic growth rate used in the TIA (2.0 percent annual ambient growth plus traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic impacts under 2023 conditions.

#### 4.6 CUMULATIVE DEVELOPMENT TRAFFIC

California Environmental Quality Act (CEQA) guidelines require that other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of Moreno Valley. The cumulative project list includes known and foreseeable projects that are anticipated to contribute traffic to the study area intersections.



Where applicable, cumulative projects anticipated to contribute measurable traffic (i.e. 50 or more peak hour trips) to study area intersections have been manually added to the study area network to generate Opening Year Cumulative forecasts. In other words, this list of cumulative development projects has been reviewed to determine which projects would likely contribute measurable traffic through the study area intersections (e.g., those cumulative projects in close proximity to the proposed Project). For the purposes of this analysis, the cumulative projects that were determined to affect one or more of the study area intersections are shown on Exhibit 4-4 (and listed in Table 4-2), and have been considered for inclusion.

Although it is unlikely that these cumulative projects would be fully built and occupied by Year 2023, they have been included in an effort to conduct a conservative analysis and overstate as opposed to understate potential traffic impacts.

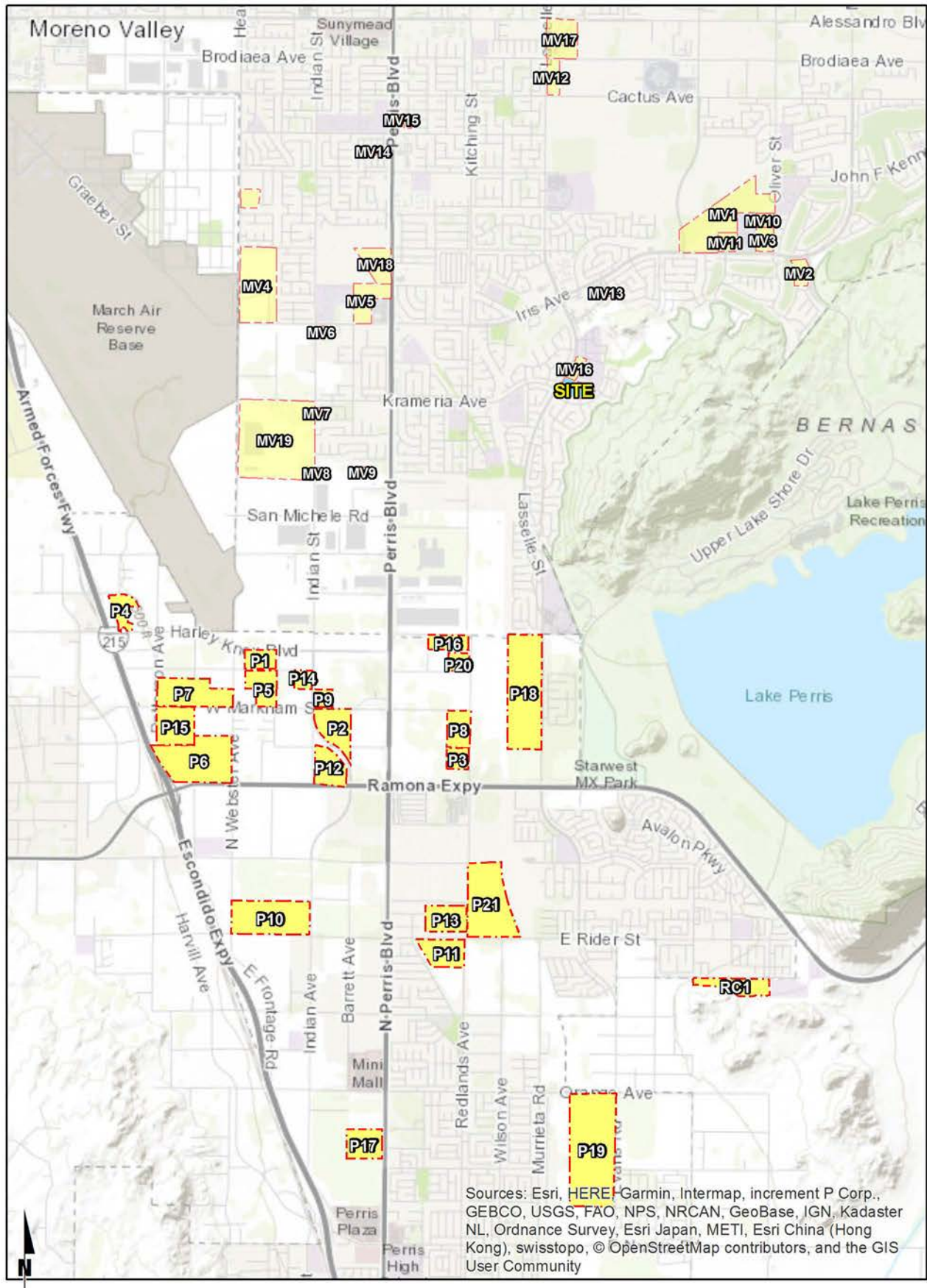
Any other cumulative projects that are not expected to contribute measurable traffic to study area intersections have not been included since the traffic would dissipate due to the distance from the Project site and study area intersections. Any additional traffic generated by other projects not on the cumulative projects list is accounted for through background ambient growth factors that have been applied to the peak hour volumes at study area intersections as discussed in Section 4.5 *Background Traffic*. Cumulative development project ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-5.

#### 4.7 NEAR-TERM TRAFFIC FORECASTS

To provide a comprehensive assessment of potential transportation network deficiencies, a “buildup” analysis was performed in support of this work effort. The “buildup” method was used to approximate the Opening Year Cumulative traffic forecasts, and is intended to identify the cumulative impacts on both the existing and planned near-term circulation system. The Opening Year Cumulative traffic forecasts include background traffic, traffic generated by other cumulative development projects within the study area, and the traffic generated by the proposed Project.

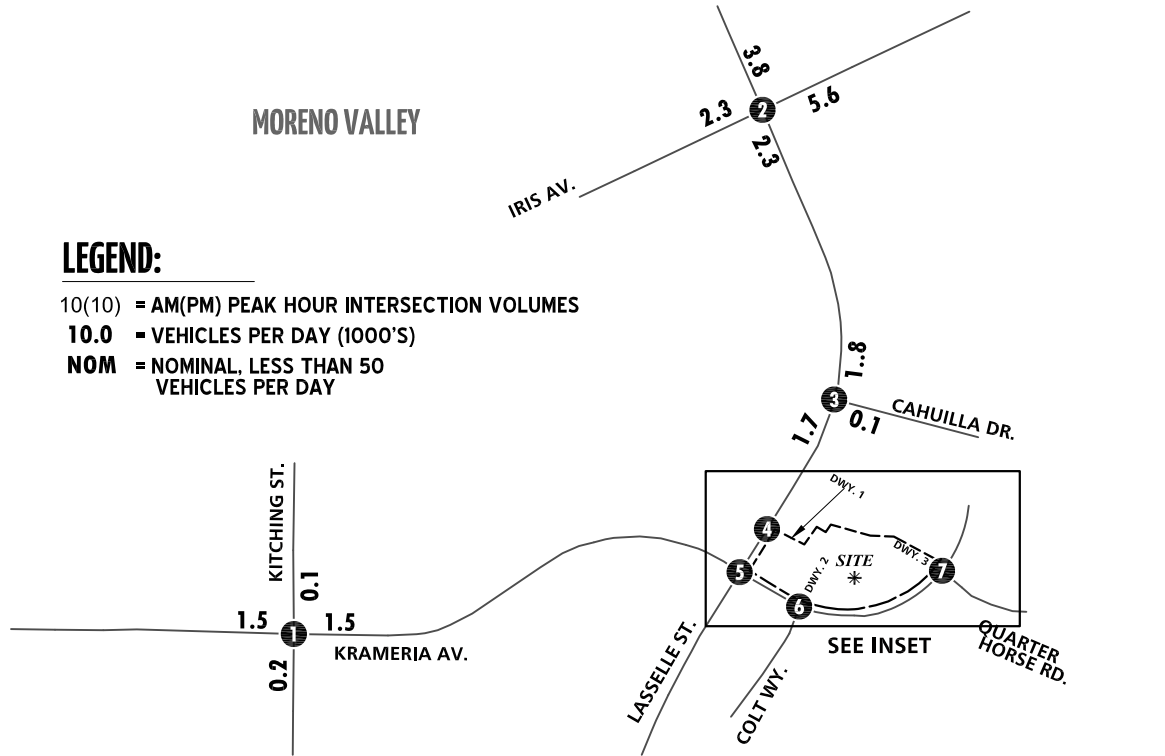
The “buildup” approach combines existing traffic counts with a background ambient growth factor to forecast the near-term 2023 traffic conditions. An ambient growth factor of 10.41% (2023) accounts for background (area-wide) traffic increases that occur over time, up to the year 2023 from the year 2018 (compounded two percent per year growth over a 5-year period). Traffic volumes generated by the Project are then added to assess the Opening Year Cumulative traffic conditions. The 2023 roadway network is similar to the existing conditions roadway network with the exception of future roadways and intersections proposed to be developed by the Project.

EXHIBIT 4-4: CUMULATIVE DEVELOPMENT LOCATION MAP



Attachment: Traffic Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

EXHIBIT 4-5: CUMULATIVE ONLY TRAFFIC VOLUMES

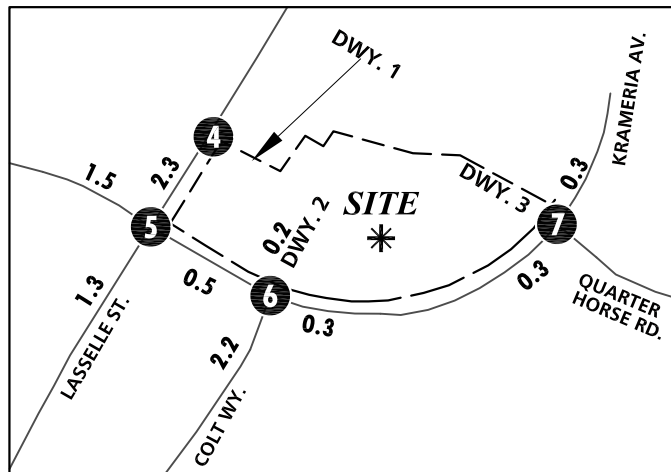


**LEGEND:**

- 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

|          |   |          |   |          |                                     |   |                                |          |                                      |
|----------|---|----------|---|----------|-------------------------------------|---|--------------------------------|----------|--------------------------------------|
| <b>1</b> | <b>Kitching St. &amp; Krameria Av.</b>      | <b>2</b> | <b>Lassel St. &amp; Iris Av.</b>            | <b>3</b> | <b>Lassel St. &amp; Cahulla Dr.</b> | <b>4</b>  | <b>Lassel St. &amp; Dwy. 1</b> | <b>5</b> | <b>Lassel St. &amp; Krameria Av.</b> |
|          |   |          |   |          |                                     | <p style="text-align: center;"><b>Future Intersection</b></p> |                                |          |                                      |
| <b>6</b> | <b>Dwy. 2 / Colt Wy. &amp; Krameria Av.</b> | <b>7</b> | <b>Krameria Av. &amp; Quarter Horse Rd.</b> |          |                                     |   |                                |          |                                      |
|          |   |          |   |          |                                     |   |                                |          |                                      |

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Cumulative Development Land Use Summary

| TAZ                          | Project Name/Builder/Applicant  | Land Use <sup>1</sup> | Quantity  | Units <sup>2</sup> |
|------------------------------|---|-----------------------|-----------|--------------------|
| <b>City of Moreno Valley</b> |   |                       |           |                    |
| MV1                          | Moreno Valley Medical Overlay Area  | Medical Office        | 122.250   | TSF                |
| MV2                          | Fresenius Medical Care  | Medical Office        | 12.000    | TSF                |
| MV3                          | Kaiser Permanente Moreno Valley Emergency Room Expansion                    | Hospital              | 8.500     | TSF                |
| MV4                          | Rados   | SFDR                  | 135       | DU                 |
|                              | Invermex, Inc.  | SFDR                  | 32        | DU                 |
| MV5                          | RSI   | SFDR                  | 140       | DU                 |
| MV6                          | Mission Pacific Land Co.  | SFDR                  | 221       | DU                 |
| MV7                          | 33024 Adam Wisler   | SFDR                  | 8         | DU                 |
|                              | Ada Deturcios (PEN18-0042)  | SFDR                  | 2         | DU                 |
| MV8                          | 32716 Bob Rogers  | SFDR                  | 57        | DU                 |
| MV9                          | SKG Pacific Enterprises Inc.  | SFDR                  | 63        | DU                 |
| MV10                         | Mainstreet Post-acute Care  | Medical Office        | 57.000    | TSF                |
| MV11                         | Pacific Communities "High Pointe" and "Pacific Iris"                        | SFDR                  | 83        | DU                 |
| MV12                         | MV Bella Vista GP, LLC.   | Multifamily Housing   | 220       | DU                 |
| MV13                         | GHA   | Multifamily Housing   | 62        | DU                 |
| MV14                         | Nova Homes  | Multifamily Housing   | 122       | DU                 |
| MV15                         | Mo Ghiassi TL Group   | Multifamily Housing   | 52        | DU                 |
| MV16                         | Continental East Fund III, LLC. (Moreno Valley Ranch Specific Plan No. 193) | Multifamily Housing   | 125       | DU                 |
| MV17                         | Boulder Ridge (PEN17-0064)  | Multifamily Housing   | 141       | DU                 |
|                              | Rancho Belago Developers  | Multifamily Housing   | 141       | DU                 |
|                              | Rocas Grandes (PA 15-0046)  | Multifamily Housing   | 426       | DU                 |
| MV18                         | South Moreno Valley Walmart   | Walmart               | 189.520   | TSF                |
|                              |   | Gas Station           | 16        | VFP                |
| MV19                         | Moreno Valley Logistics Center  | High-Cube Warehouse   | 1351.770  | TSF                |
|                              |   | Light Industrial      | 385.748   | TSF                |
| <b>City of Perris</b>        |   |                       |           |                    |
| P1                           | Bargemann / DPR 07-09-0018  | Warehousing           | 173.000   | TSF                |
| P2                           | Duke 2 / DPR 16-00008   | High-Cube Warehouse   | 669.000   | TSF                |
| P3                           | First Perry / DPR 16-00013  | High-Cube Warehouse   | 240.000   | TSF                |
| P4                           | Gateway / DPR 16-00003  | High-Cube Warehouse   | 400.000   | TSF                |
| P5                           | Integra / DPR 14-02-0014  | High-Cube Warehouse   | 864.000   | TSF                |
| P6                           | OLC 1 / DPR 12-10-0005  | High-Cube Warehouse   | 1,455.000 | TSF                |
| P7                           | OLC2 / DPR 14-01-0015   | High-Cube Warehouse   | 1,037.000 | TSF                |
| P8                           | Markham East / DPR 05-0477  | High-Cube Warehouse   | 460.000   | TSF                |
| P9                           | Markham Industrial / DPR 16-00015   | Warehousing           | 170.000   | TSF                |
| P10                          | Rados / DPR 07-0119   | High-Cube Warehouse   | 1,200.000 | TSF                |
| P11                          | Rider 1 / DPR 16-0365   | High-Cube Warehouse   | 350.000   | TSF                |
| P12                          | Indian/Ramona Warehouse   | High-Cube Warehouse   | 428.730   | TSF                |
| P13                          | Rider 3 / DPR 06-0432   | High-Cube Warehouse   | 640.000   | TSF                |
| P14                          | Westcoast Textile / DPR 16-00001  | Warehousing           | 180.000   | TSF                |
| P15                          | Duke at Patterson / DPR 17-00001  | High-Cube Warehouse   | 811.000   | TSF                |
| P16                          | Harley Knox Commerce Park / DPR 16-004                                      | High-Cube Warehouse   | 386.278   | TSF                |
| P17                          | Perris Marketplace / DPR 05-0341  | Commercial Retail     | 520.000   | TSF                |
| P18                          | Stratford Ranch Residential / TTM 36648                                     | SFDR                  | 270       | DU                 |
| P19                          | Pulte Residential / TTM 30850   | SFDR                  | 496       | DU                 |
| P20                          | Perris Circle 3   | Warehousing           | 210.900   | TSF                |
| P21                          | Rider 2 & 4   | High-Cube Warehouse   | 1,376.721 | TSF                |
| <b>County of Riverside</b>   |   |                       |           |                    |
| RC1                          | McCanna Hills / TTM 33978   | SFDR                  | 63        | DU                 |

<sup>1</sup> SFDR = Single Family Detached Residential

<sup>2</sup> DU = Dwelling Units; TSF = Thousand Square Feet ; VFP = Vehicle Fueling Positions

Attachment: Traffic Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



As noted previously, an analysis of the proposed Project at various development tiers has been assessed for the purposes of this traffic study. The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- Opening Year Cumulative (2023) Without Project
  - Existing 2018 counts
  - Ambient growth (10.41%)
  - Cumulative Development traffic
- Opening Year Cumulative (2023) With Project
  - Existing 2018 counts
  - Ambient growth (10.41%)
  - Cumulative Development traffic
  - Project traffic

#### 4.8 HORIZON YEAR (2040) VOLUME DEVELOPMENT

The Horizon Year (2040) With Project traffic conditions were derived from the RivTAM modified to represent Horizon Year conditions for the City of Moreno Valley using accepted procedures for model forecast refinement and smoothing. The traffic forecasts reflect the area-wide growth anticipated between Existing conditions and Horizon Year conditions.

In most instances the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year With Project peak hour forecasts were refined using the model derived long-range forecasts, along with existing peak hour traffic count data collected at each analysis location in March 2018. Future estimated peak hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Horizon Year With Project peak hour forecasts.

The refined future peak hour approach and departure volumes obtained from the model output data are then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program (NCHRP Report 255), along with initial estimates of turning movement proportions. A linear programming algorithm is used to calculate individual turning movements which match the known directional roadway segment forecast volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

Typically, the model growth is prorated and is subsequently added to the existing (base validation) traffic volumes to represent Long Range traffic conditions. However, review of the resulting model growth indicates negative growth for several study area intersections. In an effort to conduct a conservative analysis, reductions to traffic forecasts from either Existing or Opening Year Cumulative traffic conditions were not assumed as part of this analysis. Additional growth has also been applied on a movement-by-movement basis, where applicable, to estimate reasonable Horizon Year forecasts. Horizon Year turning volumes were compared to Opening Year Cumulative volumes in order to ensure a minimum growth as a part of the refinement process. The minimum growth

includes any additional growth between Opening Year Cumulative and Horizon Year traffic conditions that is not accounted for by the traffic generated by cumulative development projects and ambient growth rates assumed between Existing (2018) and Opening Year Cumulative traffic conditions. Future estimated peak hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Horizon Year peak hour forecasts.

The future Horizon Year without Project peak hour turning movements were then reviewed by Urban Crossroads for reasonableness, and in some cases, were adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes. Flow conservation checks ensure that traffic flow between two closely spaced intersections, such as two freeway ramp locations, is verified in order to make certain that vehicles leaving one intersection are entering the adjacent intersection and that there are no unexplained loss of vehicles. The result of this traffic forecasting procedure is a series of traffic volumes which are suitable for traffic operations analysis.

Post-processing worksheets for Horizon Year Without Project traffic conditions are provided in Appendix 4.1.

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Attachment: Traffic Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

## 5 E+P TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing plus Project (E+P) conditions and the resulting intersection operations, queuing, and traffic signal warrant analyses.

### 5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

### 5.2 E+P TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus Project traffic. Exhibit 5-1 shows the ADT and peak hour intersection turning movement volumes, which can be expected for E+P traffic conditions.

### 5.3 INTERSECTION OPERATIONS ANALYSIS

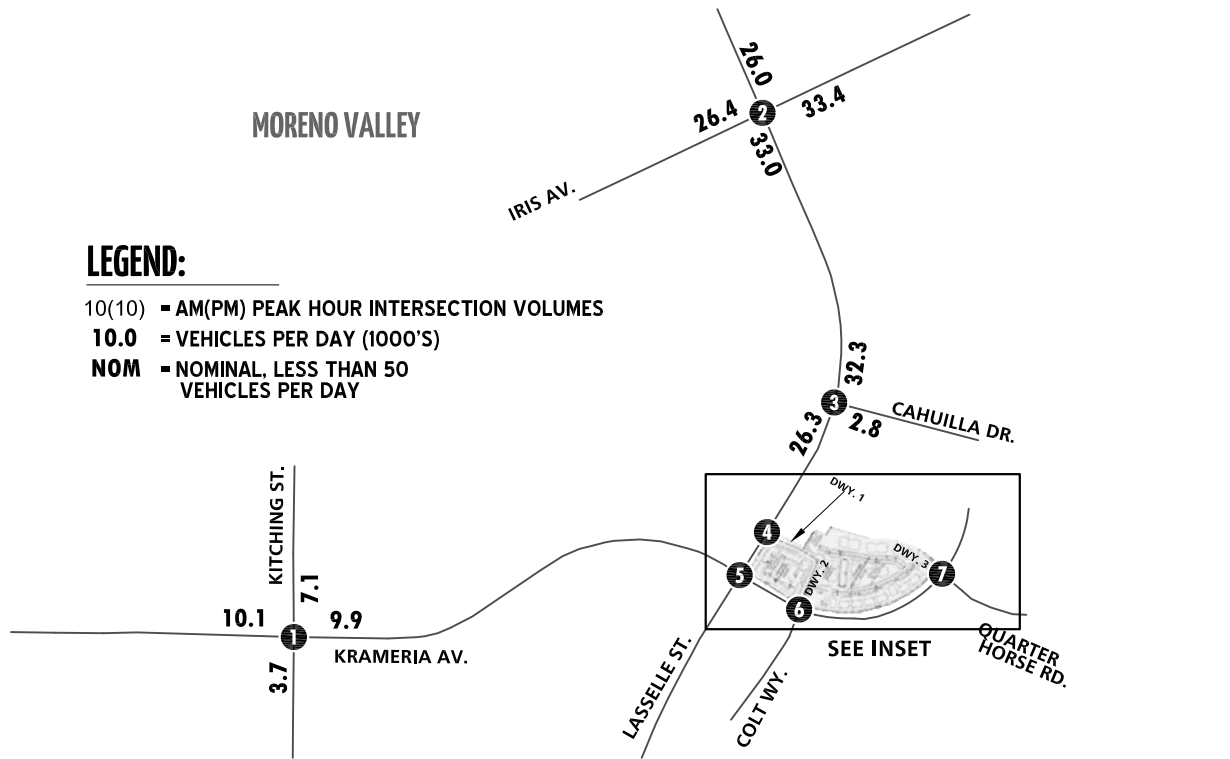
E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 5-1, which indicates that there are no study area intersections anticipated to operate at an unacceptable LOS during one or both peak hours, consistent with Existing (2018) traffic conditions. Also, similar to Existing (2018) traffic conditions, the intersection of Lasselle Street and Krameria Avenue is anticipated to operate at a deficient LOS during the AM peak hour with the implementation of the proposed road diet improvements along Krameria Avenue. Exhibit 5-2 summarizes the weekday AM and PM peak hour study area intersections LOS under E+P traffic conditions, consistent with the results provided in Table 5-1. The intersection operations analysis worksheets are included in Appendix 5.1 of this TIA.

### 5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no unsignalized study area intersections anticipated to meet either peak hour or planning level (ADT) volume-based traffic signal warrants under E+P traffic conditions (see Appendix 5.2).



EXHIBIT 5-1: E+P TRAFFIC VOLUMES



| 1                             | Kitching St. & Krameria Av.      | 2                                | Lassel St. & Iris Av.            | 3                    | Lassel St. & Cahulla Dr. | 4                                   | Lassel St. & Dwy. 1             | 5                                | Lassel St. & Krameria Av.     |
|-------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------|--------------------------|-------------------------------------|---------------------------------|----------------------------------|-------------------------------|
| 80(84)<br>144(78)<br>269(90)  | 192(90)<br>425(212)<br>87(22)    | 97(96)<br>577(679)<br>116(192)   | 98(91)<br>583(554)<br>527(600)   | 948(1214)            | 80(109)                  | 0(0)<br>970(1211)<br>0(0)           | 37(54)<br>0(0)<br>0(0)          | 107(57)<br>722(1019)<br>141(135) | 88(48)<br>178(61)<br>121(100) |
| 71(83)<br>421(245)<br>109(32) | 54(25)<br>112(73)<br>72(19)      | 134(142)<br>478(396)<br>333(329) | 384(260)<br>597(550)<br>486(414) | 1262(861)<br>150(75) | 0(0)<br>0(0)<br>0(0)     | 0(0)<br>0(0)<br>1360(882)<br>27(57) | 257(128)<br>271(74)<br>332(149) | 322(84)<br>1042(763)<br>237(69)  |                               |
| 6                             | Dwy. 2 / Colt Wy. & Krameria Av. | 7                                | Krameria Av. & Quarter Horse Rd. |                      |                          |                                     |                                 |                                  |                               |
| 47(37)<br>1(1)<br>4(3)        | 3(1)<br>278(128)<br>48(5)        | 0(12)<br>297(122)<br>5(1)        | 6(0)<br>1(0)<br>8(0)             |                      |                          |                                     |                                 |                                  |                               |
| 80(47)<br>523(154)<br>46(76)  | 62(44)<br>1(0)<br>79(10)         | 8(11)<br>0(0)<br>16(10)          | 19(10)<br>564(111)<br>14(1)      |                      |                          |                                     |                                 |                                  |                               |

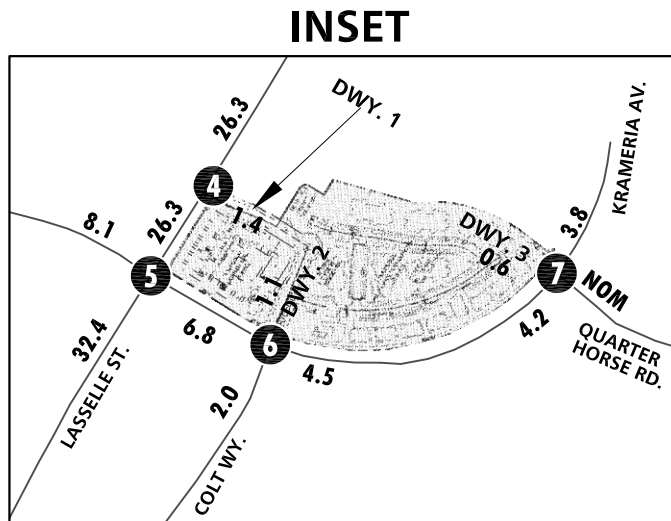


EXHIBIT 5-2: E+P SUMMARY OF LOS

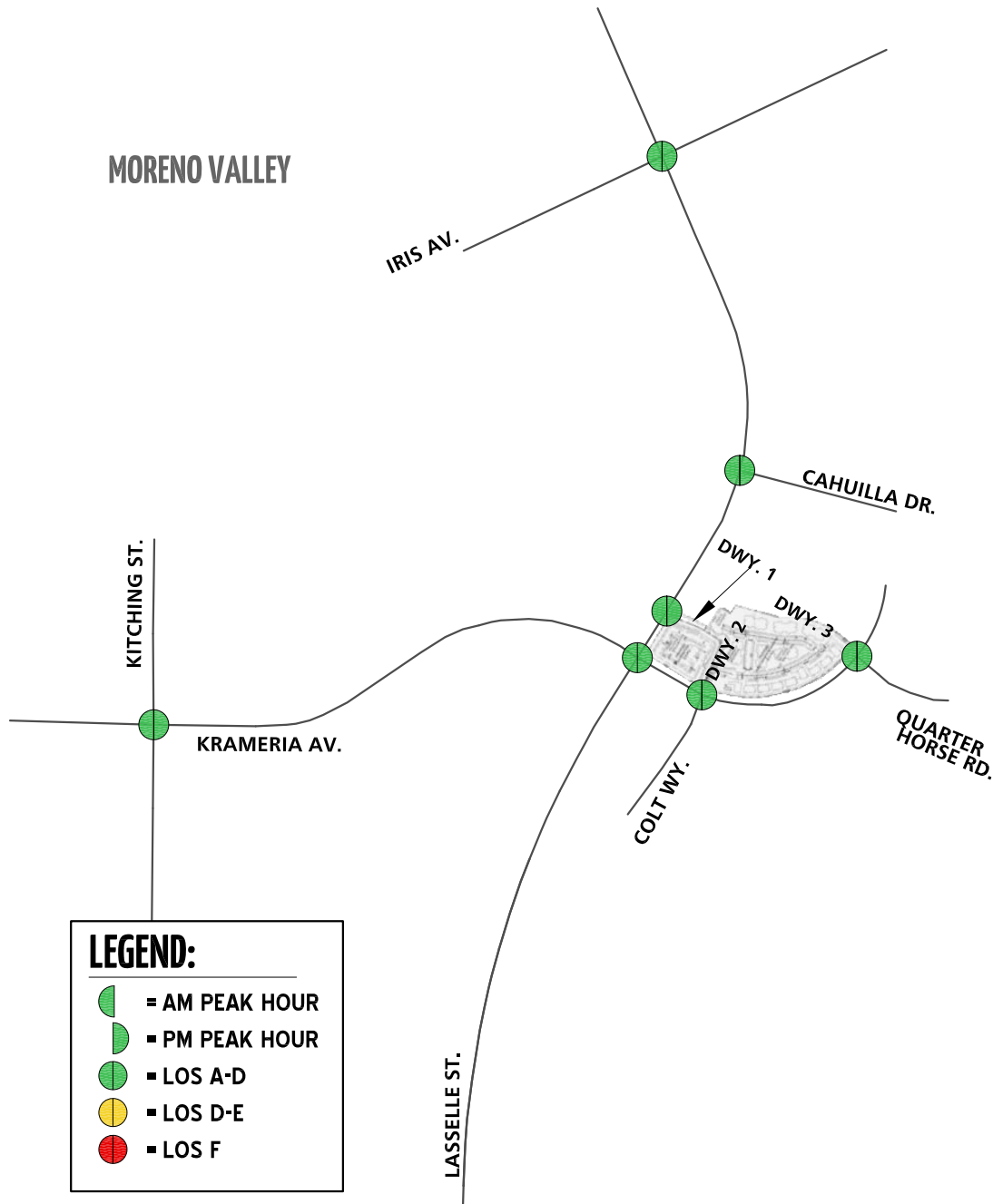


Table 5-1

## Intersection Analysis for E+P Conditions

| # | Intersection                       | Traffic Control <sup>2</sup> | Existing (2018)            |             |                  |          | E+P                        |             |                  |          | Acceptable LOS |
|---|------------------------------------|------------------------------|----------------------------|-------------|------------------|----------|----------------------------|-------------|------------------|----------|----------------|
|   |                                    |                              | Delay <sup>1</sup> (secs.) |             | Level of Service |          | Delay <sup>1</sup> (secs.) |             | Level of Service |          |                |
|   |                                    |                              | AM                         | PM          | AM               | PM       | AM                         | PM          | AM               | PM       |                |
| 1 | Kitching St. & Krameria Av.        | TS                           | 24.0                       | 16.0        | C                | B        | 25.0                       | 16.2        | C                | B        | C              |
| 2 | Lasselle St. & Iris Av.            | TS                           | 36.3                       | 36.7        | D                | D        | 38.0                       | 38.0        | D                | D        | D              |
| 3 | Lasselle St. & Cahuilla Dr.        | CSS                          | 16.9                       | 12.7        | C                | B        | 17.9                       | 13.1        | C                | B        | C              |
| 4 | Lasselle St. & Driveway 1          | <b>CSS</b>                   | Future Intersection        |             |                  |          | 16.5                       | 13.0        | C                | B        | C              |
| 5 | Lasselle St. & Krameria Av.        | TS                           | 35.8                       | 18.6        | D                | B        | 42.6                       | 34.8        | D                | C        | D              |
|   | <i>With Road Diet Improvements</i> |                              | <b>56.1</b>                | <b>19.7</b> | <b>E</b>         | <b>B</b> | <b>62.1</b>                | <b>21.0</b> | <b>E</b>         | <b>C</b> |                |
| 6 | Driveway 2/Colt Wy. & Krameria Av. | CSS                          | 17.0                       | 10.3        | C                | B        | 23.7                       | 11.1        | C                | B        | C              |
| 7 | Krameria Av. & Quarter Horse Rd.   | CSS                          | 17.9                       | 9.6         | C                | A        | 19.6                       | 10.0        | C                | B        | C              |

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>2</sup> AWS = All-way Stop; CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement

## 5.5 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the City of Moreno Valley stated roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future traffic demand.

Table 5-2 provides a summary of the E+P conditions roadway segment capacity analysis based on the City of Moreno Valley Roadway Segment Capacity/LOS Thresholds identified previously in Table 2-4. As shown in Table 5-2, the study area roadway segments are anticipated to continue to operate at an acceptable LOS under E+P traffic conditions, consistent with Existing (2018) traffic conditions.

## 5.6 QUEUING ANALYSIS

A queuing analysis was conducted at 5 study area intersections in close proximity to the Project in order to determine 95<sup>th</sup> percentile queues during the peak hours for E+P traffic conditions. The queuing analysis results are summarized in Table 5-3 for E+P traffic conditions. As shown in Table 5-3, with the addition of Project traffic, there are no additional movements anticipated to experience queuing issues during the AM or PM peak hours for E+P traffic conditions, in addition to those movements previously identified under Existing (2018) traffic conditions. Queuing worksheets for E+P traffic conditions are included in Appendix 5.3.

## 5.7 RECOMMENDED IMPROVEMENTS

### 5.7.1 INTERSECTION IMPROVEMENTS

The study area intersections are anticipated to operate at an acceptable LOS, as such, intersection improvements have not been recommended.

### 5.7.2 QUEUING IMPROVEMENTS

As previously shown in Table 5-3, there are 2 movements that experience queuing issues during the AM or PM peak hours. Recommended improvements to address queuing issues for E+P traffic conditions are shown in Table 5-4. Consistent with Existing (2018) traffic conditions, a 180-foot northbound left turn lane and 280-foot northbound right turn lane in order to accommodate the 95<sup>th</sup> percentile peak hour queues for E+P traffic conditions. The Project should contribute fair share towards the turn pocket improvements for the northbound left and right turn lanes as they are needed to address Existing queuing deficiencies at the intersection of Lasselle Street and Krameria Avenue.



Table 5-2

## Roadway Segment Analysis for E+P Conditions

| # | Roadway      | Segment Limits               | Roadway Section | LOS Capacity <sup>1</sup> | Existing 2018 | V/C <sup>2</sup> | LOS <sup>3</sup> | E+P    | V/C <sup>2</sup> | LOS <sup>3</sup> |
|---|--------------|------------------------------|-----------------|---------------------------|---------------|------------------|------------------|--------|------------------|------------------|
| 1 | Krameria Av. | Kitching St. to Lasselle St. | 4D              | 37,500                    | 9,285         | 0.25             | A                | 9,861  | 0.26             | A                |
| 2 |              | Lasselle St. to Colt Wy.     | 2D              | 18,750                    | 5,606         | 0.30             | A                | 6,795  | 0.36             | A                |
| 3 |              | Iris Av. to Cahuilla Dr.     | 4D              | 37,500                    | 32,045        | 0.85             | D                | 32,969 | 0.88             | D                |
| 4 | Lasselle St. | Cahuilla Dr. to Driveway 1   | 4D              | 37,500                    | 25,435        | 0.68             | B                | 26,272 | 0.70             | C                |
| 5 |              | Driveway 1 to Krameria Av.   | 4D              | 37,500                    | 25,435        | 0.68             | B                | 26,254 | 0.70             | B                |

<sup>1</sup> These maximum roadway capacities have been obtained from the City of Moreno Valleys Transportation Division's TIA Preparation Guidelines (August 2007).

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

Table 5-3

Peak Hour Queuing Summary for E+P Conditions

| Intersection                                | Movement | Available Stacking Distance (Feet) | Existing (2018)              |                  |                          |     | E+P                          |              |                          |     |
|---|----------|------------------------------------|------------------------------|------------------|--------------------------|-----|------------------------------|--------------|--------------------------|-----|
|   |          |                                    | 95th Percentile Queue (Feet) |                  | Acceptable? <sup>1</sup> |     | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |     |
|   |          |                                    | AM Peak Hour                 | PM Peak Hour     | AM                       | PM  | AM Peak Hour                 | PM Peak Hour | AM                       | PM  |
| Lasselle St. & Cahuilla Dr.                 | NBR      | 135                                | 4                            | 0                | Yes                      | Yes | 6                            | 0            | Yes                      | Yes |
|   | NBT/R    | 250                                | --                           | --               |                          |     | 0                            | 0            | Yes                      | Yes |
| Lasselle St. & Krameria Av.                 | NBL      | 125                                | 155                          | 137 <sup>1</sup> | No                       | Yes | 152                          | 150          | No                       | No  |
|   | NBR      | 180                                | 254                          | 46               | No                       | Yes | 269                          | 211          | No                       | No  |
|   | SBL      | 240                                | 122                          | 122              | Yes                      | Yes | 258                          | 155          | Yes                      | Yes |
|   | EBL      | 310                                | 199                          | 112              | Yes                      | Yes | 226                          | 225          | Yes                      | Yes |
| Driveway 2/Colt Wy. & Krameria Av.          | WBL      | 200                                | 160                          | 89               | Yes                      | Yes | 197                          | 158          | Yes                      | Yes |
|   | EBL      | 100                                | --                           | --               |                          |     | 39                           | 36           | Yes                      | Yes |
| Krameria Av. & Driveway 3/Quarter Horse Rd. | WBL      | 100                                | 38                           | 4                | Yes                      | Yes | 24                           | 25           | Yes                      | Yes |
|   | NBL      | 50                                 | 17                           | 0                | Yes                      | Yes | 24                           | 17           | Yes                      | Yes |
|   | SBL      | 100                                | 15                           | 0                | Yes                      | Yes | 16                           | 15           | Yes                      | Yes |
|   | SBR      | 415                                | 0                            | 0                | Yes                      | Yes | 42                           | 14           | Yes                      | Yes |

**BOLD** = Inadequate 95th percentile storage.

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.



Table 5-4

Peak Hour Queuing Summary for E+P Conditions With Improvements

| Intersection                                | Movement | Available Stacking Distance (Feet) | Existing (2018)              |              |                          |     | E+P                          |              |                          |     |
|---|----------|------------------------------------|------------------------------|--------------|--------------------------|-----|------------------------------|--------------|--------------------------|-----|
|   |          |                                    | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |     | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |     |
|   |          |                                    | AM Peak Hour                 | PM Peak Hour | AM                       | PM  | AM Peak Hour                 | PM Peak Hour | AM                       | PM  |
| Lasselle St. & Cahuilla Dr.                 | NBR      | 135                                | 4                            | 0            | Yes                      | Yes | 6                            | 0            | Yes                      | Yes |
|   | NBT/R    | 250                                | --                           | --           |                          |     | 0                            | 0            | Yes                      | Yes |
| Lasselle St. & Krameria Av.                 | NBL      | <b>180</b>                         | 155                          | 137          | Yes                      | Yes | 152                          | 150          | Yes                      | Yes |
|   | NBR      | <b>280</b>                         | 254                          | 46           | Yes                      | Yes | 269                          | 211          | Yes                      | Yes |
|   | SBL      | 240                                | 122                          | 122          | Yes                      | Yes | 258                          | 155          | Yes                      | Yes |
|   | EBL      | 310                                | 199                          | 112          | Yes                      | Yes | 226                          | 225          | Yes                      | Yes |
| Driveway 2/Colt Wy. & Krameria Av.          | WBL      | 200                                | 160                          | 89           | Yes                      | Yes | 197                          | 158          | Yes                      | Yes |
|   | EBL      | 100                                | --                           | --           |                          |     | 39                           | 36           | Yes                      | Yes |
| Krameria Av. & Driveway 3/Quarter Horse Rd. | WBL      | 100                                | 38                           | 4            | Yes                      | Yes | 24                           | 25           | Yes                      | Yes |
|   | NBL      | 50                                 | 17                           | 0            | Yes                      | Yes | 24                           | 17           | Yes                      | Yes |
|   | SBL      | 100                                | 15                           | 0            | Yes                      | Yes | 16                           | 15           | Yes                      | Yes |
|   | SBR      | 415                                | 0                            | 0            | Yes                      | Yes | 42                           | 14           | Yes                      | Yes |

**BOLD** = Inadequate 95th percentile storage.

## 6 OPENING YEAR CUMULATIVE (2023) TRAFFIC CONDITIONS

This section discusses the methods used to develop Opening Year Cumulative (2023) traffic forecasts and the resulting intersection operations, queuing, and traffic signal warrant analyses.

### 6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2023) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways).

### 6.2 OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

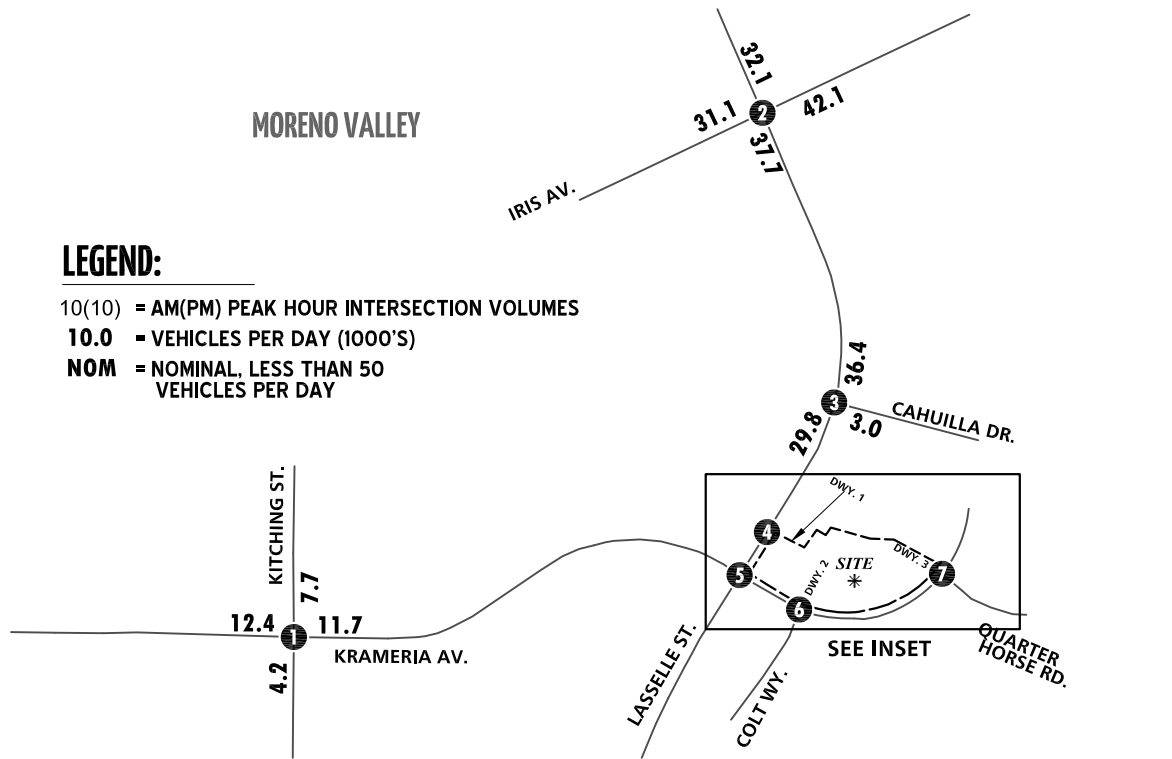
To account for background traffic, other known cumulative development projects in the study area were included in addition to 10.41% of ambient growth for Opening Year Cumulative traffic conditions. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2023) Without Project traffic conditions are shown on Exhibit 6-1.

### 6.3 OPENING YEAR CUMULATIVE (2023) WITH PROJECT TRAFFIC VOLUME FORECASTS

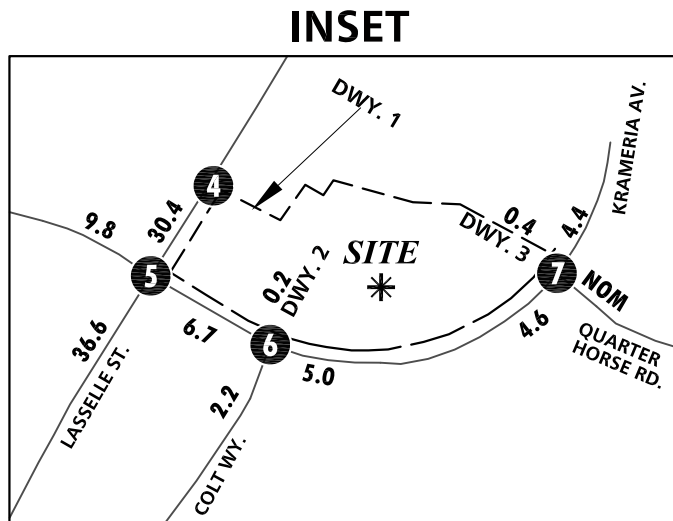
To account for background traffic, other known cumulative development projects in the study area were included in addition to 10.41% of ambient growth for Opening Year Cumulative traffic conditions in conjunction with traffic associated with the proposed Project. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2023) With Project traffic conditions are shown on Exhibit 6-2.



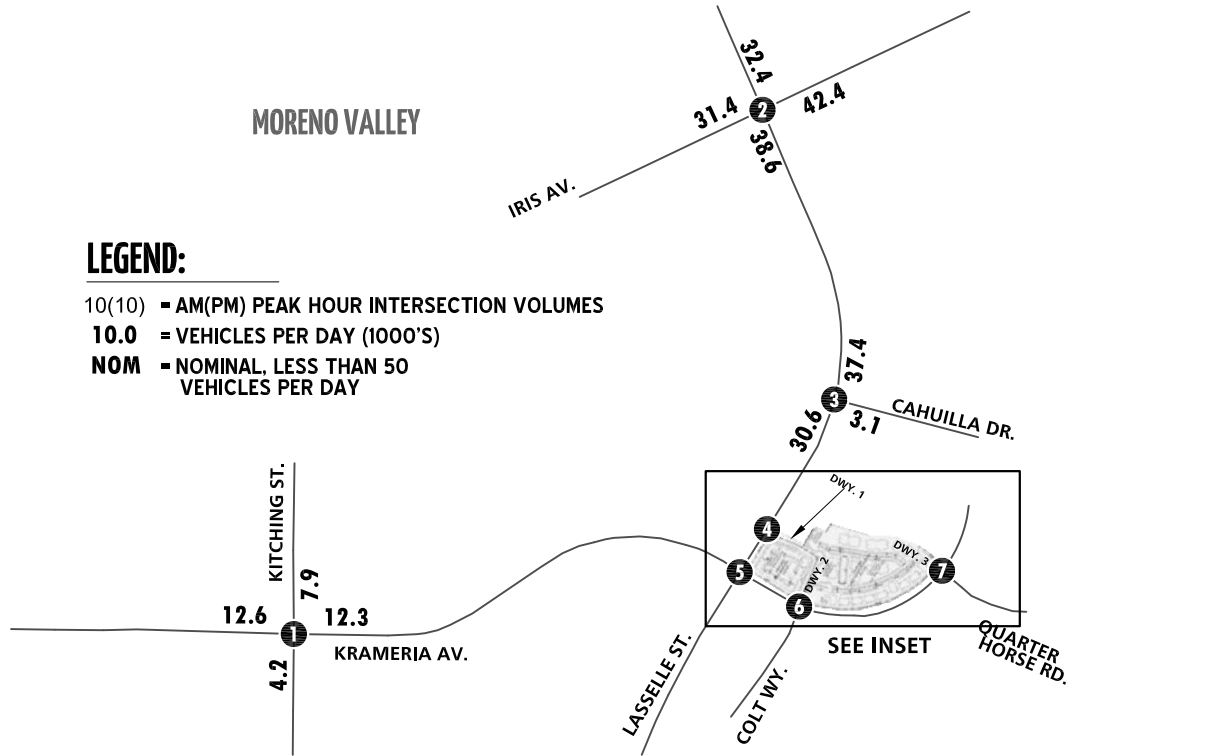
**EXHIBIT 6-1: OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT TRAFFIC VOLUMES**



|  |   |   |  |   |
|--|---|---|--|---|
| <p><b>1</b> Kitching St. &amp; Krameria Av.</p> <p>111(109) ←<br/>159(86) ←<br/>291(99) ←</p> <p>209(97) ←<br/>673(375) ←<br/>103(30) ←</p> <p>92(106) →<br/>572(407) →<br/>134(49) →</p> <p>83(44) →<br/>124(81) →<br/>86(31) →</p> | <p><b>2</b> Lassel St. &amp; Iris Av.</p> <p>123(116) ←<br/>735(824) ←<br/>275(293) ←</p> <p>162(270) ←<br/>688(721) ←<br/>611(726) ←</p> <p>153(173) →<br/>619(497) →<br/>379(376) →</p> <p>433(297) →<br/>721(680) →<br/>584(498) →</p> | <p><b>3</b> Lassel St. &amp; Cahuilla Dr.</p> <p>1044(1386) ↓</p> <p>88(120) ←</p> <p>1414(982) ↑<br/>166(83) ↑</p> | <p><b>4</b> Lassel St. &amp; Dwy. 1</p> <p>Future Intersection</p> | <p><b>5</b> Lassel St. &amp; Krameria Av.</p> <p>286(182) ↓<br/>819(1180) ↓<br/>104(124) ↓</p> <p>97(53) ←<br/>176(50) ←<br/>120(99) ←</p> <p>385(260) →<br/>267(67) →<br/>407(205) →</p> <p>416(137) ↑<br/>1173(861) ↑<br/>262(76) ↑</p> |
| <p><b>6</b> Dwy. 2 / Colt Wy. &amp; Krameria Av.</p> <p>0(0) ↓<br/>0(0) ↓<br/>0(0) ↓</p> <p>0(0) ↓<br/>324(152) ↓<br/>53(6) ↓</p> <p>7(22) →<br/>575(161) →<br/>51(84) →</p> <p>68(49) →<br/>0(0) →<br/>87(11) →</p>                 | <p><b>7</b> Krameria Av. &amp; Quarter Horse Rd.</p> <p>0(13) ↓<br/>351(149) ↓<br/>6(1) ↓</p> <p>7(0) ↓<br/>1(0) ↓<br/>8(0) ↓</p> <p>0(7) →<br/>0(0) →<br/>11(8) →</p> <p>19(2) →<br/>620(120) →<br/>14(0) →</p>                          |   |  |   |



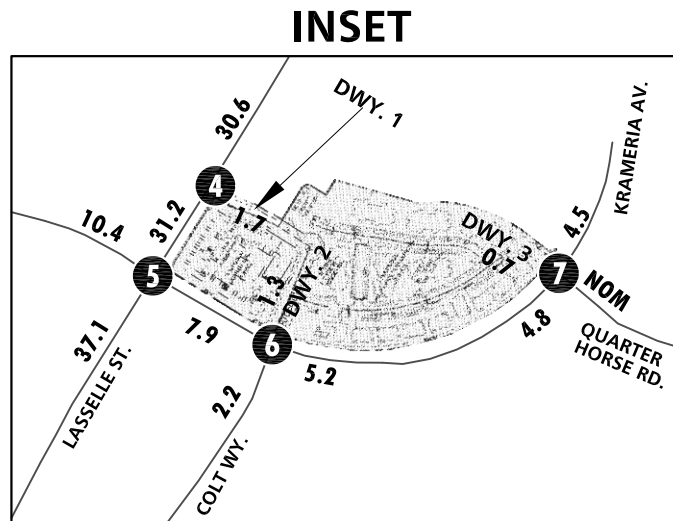
**EXHIBIT 6-2: OPENING YEAR CUMULATIVE (2023) WITH PROJECT TRAFFIC VOLUMES**



**LEGEND:**

- 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

|  |  |                           |  |  |  |  |                                       |  |   |
|--|--|---------------------------|--|--|--|--|---------------------------------------|--|---|
| <b>1</b>   | <b>Kitching St. &amp; Krameria Av.</b>   | <b>2</b>                  | <b>Lasselle St. &amp; Iris Av.</b>                               | <b>3</b>   | <b>Lasselle St. &amp; Cahuilla Dr.</b> | <b>4</b>   | <b>Lasselle St. &amp; Dwy. 1</b>      | <b>5</b>                               | <b>Lasselle St. &amp; Krameria Av.</b>                                    |
| ↓ 111(109)<br>↓ 159(86)<br>↓ 307(108)<br>← 220(106)<br>← 687(385)<br>← 106(33) | ↓ 123(116)<br>↓ 752(837)<br>↓ 275(293)<br>← 162(270)<br>← 688(721)<br>← 628(739) | ↓ 1096(1427)<br>← 98(126) | ↓ 0(0)<br>↓ 1121(1424)<br>↓ 0(0)<br>← 46(59)<br>← 0(0)<br>← 0(0) | ↓ 286(182)<br>↓ 819(1180)<br>↓ 156(165)<br>← 97(53)<br>← 205(72)<br>← 144(117) | ↓ 1451(1011)<br>↓ 166(83)              | ↓ 0(0)<br>↓ 0(0)<br>↓ 0(0)<br>↓ 0(0)<br>↓ 1556(1033)<br>↓ 34(79) | ↓ 388(270)<br>↓ 297(82)<br>↓ 407(205) | ↓ 416(137)<br>↓ 1197(883)<br>↓ 262(76) | ↓ 92(106)<br>↓ 585(420)<br>↓ 134(49)<br>↓ 83(44)<br>↓ 124(81)<br>↓ 91(33) |
| <b>6</b>   | <b>Dwy. 2 / Colt Wy. &amp; Krameria Av.</b>                                      | <b>7</b>                  | <b>Krameria Av. &amp; Quarter Horse Rd.</b>                      |  |  |  |                                       |  |   |
| ↓ 47(37)<br>↓ 1(1)<br>↓ 4(3)<br>← 3(1)<br>← 330(155)<br>← 53(6)                | ↓ 0(13)<br>↓ 352(149)<br>↓ 6(1)<br>← 7(0)<br>← 1(0)<br>← 9(0)                    |                           |  |  |  |  |                                       |  |   |
| ↓ 87(69)<br>↓ 577(169)<br>↓ 51(84)<br>↓ 68(49)<br>↓ 1(0)<br>↓ 87(11)           | ↓ 8(12)<br>↓ 0(0)<br>↓ 17(11)<br>↓ 21(10)<br>↓ 622(122)<br>↓ 15(1)               |                           |  |  |  |  |                                       |  |   |



## 6.4 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under Opening Year Cumulative conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. As shown in Table 6-1, the study area intersections are anticipated to operate at an acceptable LOS during the peak hours under Opening Year Cumulative (2023) Without Project traffic conditions, with the exception of the following study area intersections:

- Lasselle Street & Iris Avenue (#2) – LOS E AM and PM peak hours
- Lasselle Street & Krameria Avenue (#5) – LOS F AM peak hour only

The addition of Project traffic is not anticipated to result in any additional deficiencies at the study area intersections, in addition to the locations identified under Opening Year Cumulative (2023) Without Project traffic conditions. A summary of the peak hour intersection LOS for Opening Year Cumulative (2023) Without Project conditions are shown on Exhibit 6-3 and on Exhibit 6-4 for Opening Year Cumulative (2023) With Project traffic conditions. The intersection operations analysis worksheets for Opening Year Cumulative (2023) Without and With Project traffic conditions are included in Appendix 6.1 and Appendix 6.2 of this TIA, respectively. Measures to address near-term cumulative deficiencies for Opening Year Cumulative traffic conditions are discussed in Section 6.8 *Opening Year Cumulative Deficiencies and Recommended Improvements*.

The intersections of Lasselle Street at Krameria Avenue and Driveway 2/Colt Way at Krameria Avenue are anticipated to experience higher delays with the implementation of the road diet improvements along Krameria Avenue. If the road diet improvements are implemented, it is anticipated that there will be periods during the morning peak hour where the intersections along the affected roadway would likely experience higher/unacceptable delays.

## 6.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no unsignalized study area intersections that are anticipated to meet either peak hour or planning level (ADT) volume-based traffic signal warrants for Opening Year Cumulative traffic conditions (see Appendix 6.3 and Appendix 6.4).

Table 6-1

## Intersection Analysis for Opening Year Cumulative (2023) Conditions

| # | Intersection                       | Traffic Control <sup>2</sup> | 2023 Without Project       |             |                  |    | 2023 With Project          |             |                  |    | Acceptable LOS |
|---|------------------------------------|------------------------------|----------------------------|-------------|------------------|----|----------------------------|-------------|------------------|----|----------------|
|   |                                    |                              | Delay <sup>1</sup> (secs.) |             | Level of Service |    | Delay <sup>1</sup> (secs.) |             | Level of Service |    |                |
|   |                                    |                              | AM                         | PM          | AM               | PM | AM                         | PM          | AM               | PM |                |
| 1 | Kitching St. & Krameria Av.        | TS                           | 33.4                       | 17.2        | C                | B  | 34.7                       | 17.5        | C                | B  | C              |
| 2 | Lasselle St. & Iris Av.            | TS                           | <b>58.4</b>                | <b>56.0</b> | E                | E  | <b>62.2</b>                | <b>57.5</b> | E                | E  | D              |
| 3 | Lasselle St. & Cahuilla Dr.        | CSS                          | 21.1                       | 14.3        | C                | B  | 22.7                       | 14.8        | C                | B  | C              |
| 4 | Lasselle St. & Driveway 1          | <b>CSS</b>                   | Future Intersection        |             |                  |    | 19.6                       | 14.5        | C                | B  | C              |
| 5 | Lasselle St. & Krameria Av.        | TS                           | <b>88.1</b>                | 28.1        | F                | C  | <b>96.7</b>                | 29.6        | F                | C  | D              |
|   | <i>With Road Diet Improvements</i> |                              | <b>136.6</b>               | 50.1        | F                | D  | <b>143.0</b>               | 53.4        | F                | D  |                |
| 6 | Driveway 2/Colt Wy. & Krameria Av. | CSS                          | 14.8                       | 10.2        | B                | B  | 18.5                       | 12.1        | C                | B  | C              |
|   | <i>With Road Diet Improvements</i> |                              | 18.8                       | 10.8        | C                | B  | <b>32.0</b>                | 11.9        | D                | B  |                |
| 7 | Krameria Av. & Quarter Horse Rd.   | CSS                          | 21.4                       | 10.0        | C                | B  | 21.9                       | 10.3        | C                | B  | C              |

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>2</sup> AWS = All-way Stop; CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement



EXHIBIT 6-3: OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT SUMMARY OF LOS

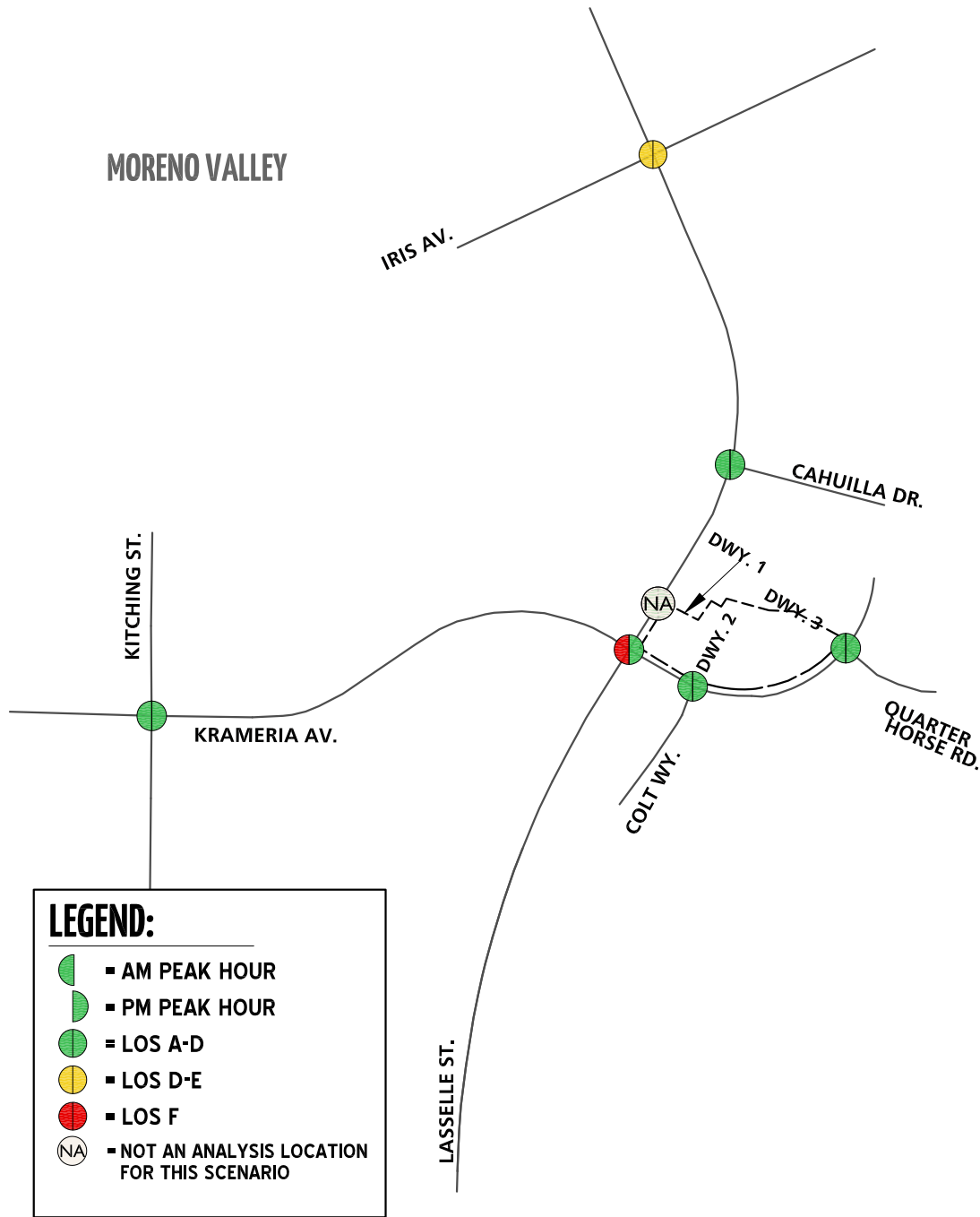
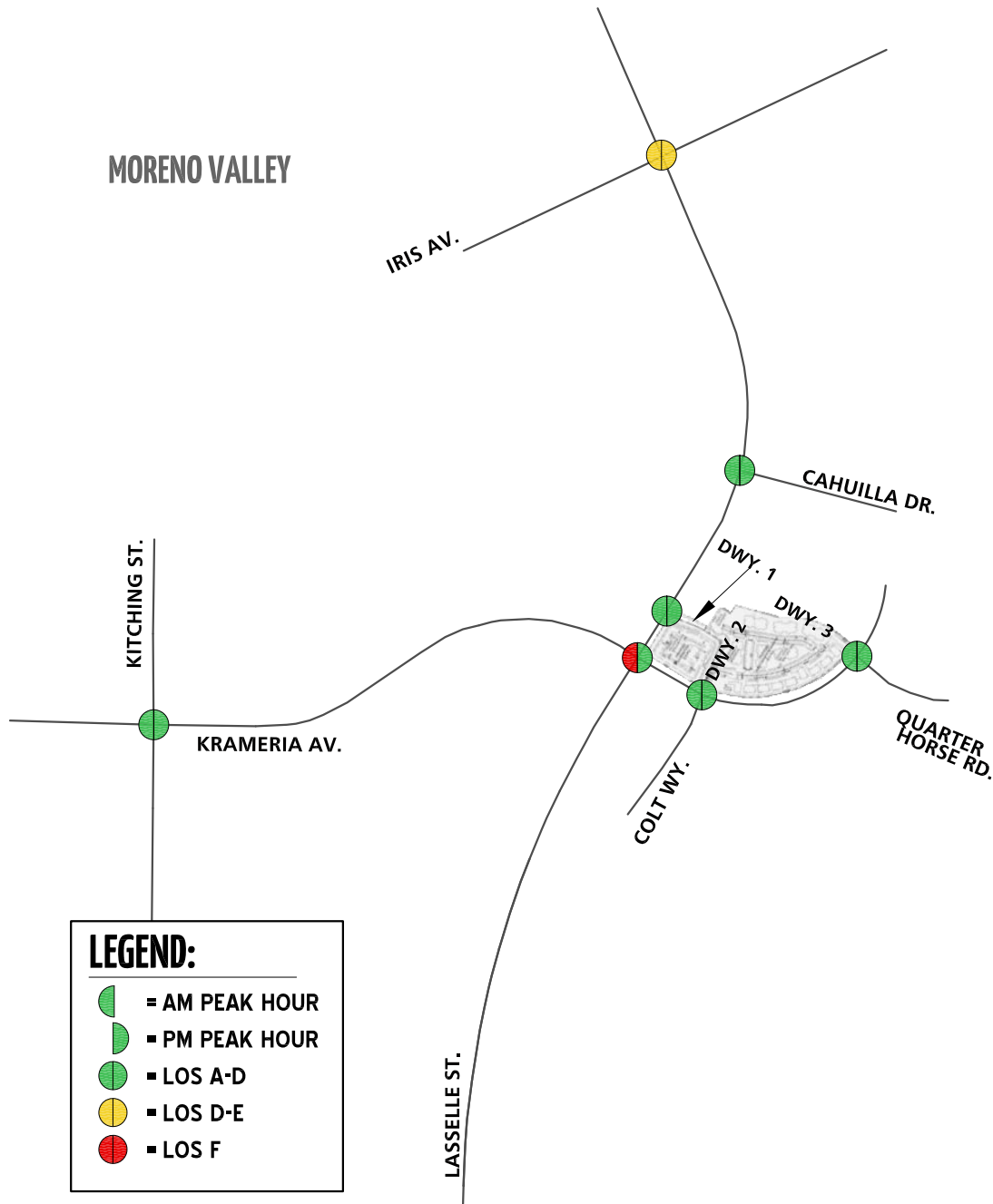


EXHIBIT 6-4: OPENING YEAR CUMULATIVE (2023) WITH PROJECT SUMMARY OF LOS



## 6.6 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the City of Moreno Valley stated roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future traffic demand.

Table 6-2 provides a summary of the Opening Year Cumulative (2023) conditions roadway segment capacity analysis based on the City of Moreno Valley Roadway Segment Capacity/LOS Thresholds identified previously in Table 2-4. As shown in Table 6-2, the study area roadway segment of Lasselle Street between Iris Avenue and Cahuilla Drive (#3) is anticipated to operate at an unacceptable LOS for Opening Year Cumulative (2023) Without Project traffic conditions. The addition of Project traffic is not anticipated to result in any additional roadway segment deficiencies from the location identified previously for Opening Year Cumulative (2023) Without Project traffic conditions.

## 6.7 QUEUING ANALYSIS

A queuing analysis was conducted at 5 study area intersections in close proximity to the Project in order to determine 95<sup>th</sup> percentile queues during the peak hours for Opening Year Cumulative (2023) traffic conditions. The queuing analysis results are summarized in Table 6-3 for Opening Year Cumulative (2023) traffic conditions which indicates the intersection of Lasselle Street and Krameria Avenue is anticipated to continue to experience queuing issues during the AM or PM peak hours for the northbound left turn pocket and northbound right turn pocket, consistent with Existing and E+P traffic conditions. In addition, the westbound left turn pocket is also anticipated to experience queues during the AM peak hour only for Opening Year Cumulative (2023) Without Project traffic conditions. With the addition of Project traffic, the southbound left turn pocket is anticipated to experience queuing issues during the AM peak hour only. Queuing worksheets for Opening Year Cumulative (2023) Without and With Project traffic conditions are included in Appendix 6.5 and Appendix 6.6, respectively.

## 6.8 OPENING YEAR CUMULATIVE DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

### 6.8.1 INTERSECTION IMPROVEMENTS

Improvements necessary to reduce project-related traffic impacts to less-than-significant are also discussed below. The effectiveness of the proposed recommended mitigation measures are presented in Table 6-4 for Opening Year Cumulative (2023) traffic conditions. With the implementation of the intersection improvements discussed below, there are no cumulatively considerable project-related impacts anticipated to the study area intersections (Project to contribute fair share).

#### ***Improvement – Lasselle Street & Iris Avenue (#2)***

- Add an eastbound right turn lane and modify the traffic signal to implement overlap phasing on the right turn lane

Table 6-2

Roadway Segment Analysis for Opening Year Cumulative (2023) Conditions

| # | Roadway      | Segment Limits               | Roadway Section | LOS Capacity <sup>1</sup> | 2023 NP       | V/C <sup>2</sup> | LOS <sup>3</sup> | 2023 WP       | V/C <sup>2</sup> | LOS <sup>3</sup> |
|---|--------------|------------------------------|-----------------|---------------------------|---------------|------------------|------------------|---------------|------------------|------------------|
| 1 | Krameria Av. | Kitching St. to Lasselle St. | 4D              | 37,500                    | 11,715        | 0.31             | A                | 12,291        | 0.33             | A                |
| 2 |              | Lasselle St. to Colt Wy.     | 2D              | 18,750                    | 6,669         | 0.36             | A                | 7,858         | 0.42             | A                |
| 3 |              | Iris Av. to Cahuilla Dr.     | 4D              | 37,500                    | <b>37,676</b> | <b>1.00</b>      | <b>F</b>         | <b>38,600</b> | <b>1.03</b>      | <b>F</b>         |
| 4 | Lasselle St. | Cahuilla Dr. to Driveway 1   | 4D              | 37,500                    | 29,766        | 0.79             | C                | 30,603        | 0.82             | D                |
| 5 |              | Driveway 1 to Krameria Av.   | 4D              | 37,500                    | 30,400        | 0.81             | D                | 31,219        | 0.83             | D                |

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> These maximum roadway capacities have been obtained from the City of Moreno Valle's Transportation Division's TIA Preparation Guidelines (August 2007).

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service





Table 6-3

Peak Hour Queuing Summary for Opening Year Cumulative (2023) Conditions

| Intersection                                | Movement | Available Stacking Distance (Feet) | 2023 Without Project         |              |                          |           | 2023 With Project            |              |                          |           |
|---|----------|------------------------------------|------------------------------|--------------|--------------------------|-----------|------------------------------|--------------|--------------------------|-----------|
|   |          |                                    | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |           | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |           |
|   |          |                                    | AM Peak Hour                 | PM Peak Hour | AM                       | PM        | AM Peak Hour                 | PM Peak Hour | AM                       | PM        |
| Lasselle St. & Cahuilla Dr.                 | NBR      | 135                                | 0                            | 4            | Yes                      | Yes       | 4                            | 6            | Yes                      | Yes       |
|   | NBT/R    | 250                                | 0                            | 5            | Yes                      | Yes       | 0                            | 5            | Yes                      | Yes       |
| Lasselle St. & Krameria Av.                 | NBL      | 125                                | <b>150</b>                   | <b>172</b>   | <b>No</b>                | <b>No</b> | <b>150</b>                   | <b>175</b>   | <b>No</b>                | <b>No</b> |
|   | NBR      | 180                                | <b>279</b>                   | 77           | <b>No</b>                | Yes       | <b>279</b>                   | 111          | <b>No</b>                | Yes       |
|   | SBL      | 240                                | 209                          | 187          | Yes                      | Yes       | <b>266</b>                   | 234          | <b>No</b>                | Yes       |
|   | EBL      | 310                                | 227                          | 240          | Yes                      | Yes       | 225                          | 225          | Yes                      | Yes       |
| Driveway 2/Colt Wy. & Krameria Av.          | WBL      | 200                                | 172                          | 121          | Yes                      | Yes       | 199                          | 149          | Yes                      | Yes       |
|   | EBL      | 100                                | 12                           | 16           | Yes                      | Yes       | 39                           | 28           | Yes                      | Yes       |
| Krameria Av. & Driveway 3/Quarter Horse Rd. | WBL      | 100                                | 32                           | 9            | Yes                      | Yes       | 26                           | 4            | Yes                      | Yes       |
|   | NBL      | 50                                 | 22                           | 6            | Yes                      | Yes       | 23                           | 9            | Yes                      | Yes       |
|   | SBL      | 100                                | 18                           | 0            | Yes                      | Yes       | 20                           | 0            | Yes                      | Yes       |
|   | SBR      | 415                                | 0                            | 0            | Yes                      | Yes       | 47                           | 0            | Yes                      | Yes       |

**BOLD** = Inadequate 95th percentile storage.

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

Table 6-4

Intersection Analysis for Opening Year Cumulative (2023) Conditions With Improvements

| # | Intersection                | Traffic Control <sup>3</sup> | Intersection Approach Lanes <sup>1</sup> |   |    |            |   |   |           |          |              |           |          |          | Delay <sup>2</sup> (secs.) |             | Level of Service |    |
|---|-----------------------------|------------------------------|--|---|----|------------|---|---|-----------|----------|--------------|-----------|----------|----------|----------------------------|-------------|------------------|----|
|   |                             |                              | Northbound                               |   |    | Southbound |   |   | Eastbound |          |              | Westbound |          |          | AM                         | PM          | AM               | PM |
|   |                             |                              | L  | T | R  | L          | T | R | L         | T        | R            | L         | T        | R        |                            |             |                  |    |
| 2 | Lasselle St. & Iris Av.     |                              |  |   |    |            |   |   |           |          |              |           |          |          |                            |             |                  |    |
|   | - Without Improvements      | TS                           | 2  | 2 | 1> | 2          | 2 | d | 2         | 3        | 0            | 2         | 3        | 0        | <b>62.2</b>                | <b>57.5</b> | E                | E  |
|   | - With Improvements         | TS                           | 2  | 2 | 1> | 2          | 2 | d | 2         | 3        | <u>1&gt;</u> | 2         | 3        | 0        | 50.7                       | 48.8        | D                | D  |
| 5 | Lasselle St. & Krameria Av. |                              |  |   |    |            |   |   |           |          |              |           |          |          |                            |             |                  |    |
|   | - Without Improvements      | TS                           | 1  | 2 | 1> | 1          | 2 | 0 | 2         | 2        | 0            | 1         | 2        | 0        | <b>96.7</b>                | 29.6        | F                | C  |
|   | - With Improvements         | TS                           | <u>2</u>                                 | 2 | 1> | 1          | 2 | 0 | 2         | <u>1</u> | <u>1&gt;</u> | 1         | <u>1</u> | <u>1</u> | 50.9                       | 24.4        | D                | C  |

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; d = Defacto right turn lane; 1 = Improvement

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> TS = Traffic Signal; CSS = Cross-Street Stop

Attachment: Traffic Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

### **Improvement – Lasselle Street & Krameria Avenue (#5)**

- Add a 2<sup>nd</sup> northbound left turn lane
- Restripe the eastbound approach with 2 lefts, 1 through, and 1 right turn lane
- Modify the traffic signal to implement overlap phasing on the eastbound right turn lane
- The road diet lanes on the westbound approach can remain

The intersection operations analysis worksheets for Opening Year Cumulative (2023) With Project traffic conditions, with improvements, are included in Appendix 6.7 of this TIA.

#### **6.8.2 ROADWAY SEGMENT IMPROVEMENTS**

As shown in Table 6-1, the Opening Year Cumulative (2023) peak hour analysis indicates that the adjacent study area intersections on either side of the deficient roadway segment along Lasselle Street is anticipated to operate at acceptable LOS. As such, roadway segment widening does not appear necessary to address the deficiency along the segment of Lasselle Street between Iris Avenue and Cahuilla Drive.

#### **6.8.3 QUEUING IMPROVEMENTS**

As previously shown in Table 6-3, there are 3 movements that experience queuing issues during the AM or PM peak hours for Opening Year Cumulative (2023) With Project traffic conditions. Consistent with Existing (2018) and E+P traffic conditions, a 180-foot northbound left turn lane and 280-foot northbound right turn lane are recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for Opening Year Cumulative (2023) traffic conditions. Additionally, a 270-foot southbound left turn lane is recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for Opening Year Cumulative (2023) traffic conditions.

The Project should contribute fair share towards the turn pocket improvements for the northbound left and right turn lanes and modifications to the existing landscaped median to accommodate a 270-foot southbound left turn lane at the intersection of Lasselle Street and Krameria Avenue. Recommended improvements to address queuing issues for Opening Year Cumulative (2023) traffic conditions are described below and shown in Table 6-5.

Table 6-5

Peak Hour Queuing Summary for Opening Year Cumulative (2023) Conditions With Improvements

| Intersection                                | Movement | Available Stacking Distance (Feet) | 2023 Without Project         |              |                          |     | 2023 With Project            |              |                          |     |
|---|----------|------------------------------------|------------------------------|--------------|--------------------------|-----|------------------------------|--------------|--------------------------|-----|
|   |          |                                    | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |     | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |     |
|   |          |                                    | AM Peak Hour                 | PM Peak Hour | AM                       | PM  | AM Peak Hour                 | PM Peak Hour | AM                       | PM  |
| Lasselle St. & Cahuilla Dr.                 | NBR      | 135                                | 0                            | 4            | Yes                      | Yes | 4                            | 6            | Yes                      | Yes |
|   | NBT/R    | 250                                | 0                            | 5            | Yes                      | Yes | 0                            | 5            | Yes                      | Yes |
| Lasselle St. & Krameria Av.                 | NBL      | <b>180</b>                         | 150                          | 172          | Yes                      | Yes | 150                          | 175          | Yes                      | Yes |
|   | NBR      | <b>280</b>                         | 279                          | 77           | Yes                      | Yes | 279                          | 111          | Yes                      | Yes |
|   | SBL      | <b>270</b>                         | 209                          | 187          | Yes                      | Yes | 266                          | 234          | Yes                      | Yes |
|   | EBL      | 310                                | 227                          | 240          | Yes                      | Yes | 225                          | 225          | Yes                      | Yes |
| Driveway 2/Colt Wy. & Krameria Av.          | WBL      | 200                                | 172                          | 121          | Yes                      | Yes | 199                          | 149          | Yes                      | Yes |
|   | EBL      | 100                                | 12                           | 16           | Yes                      | Yes | 39                           | 28           | Yes                      | Yes |
| Krameria Av. & Driveway 3/Quarter Horse Rd. | WBL      | 100                                | 32                           | 9            | Yes                      | Yes | 26                           | 4            | Yes                      | Yes |
|   | NBL      | 50                                 | 22                           | 6            | Yes                      | Yes | 23                           | 9            | Yes                      | Yes |
|   | SBL      | 100                                | 18                           | 0            | Yes                      | Yes | 20                           | 0            | Yes                      | Yes |
|   | SBR      | 415                                | 0                            | 0            | Yes                      | Yes | 47                           | 0            | Yes                      | Yes |

**BOLD** = Inadequate 95th percentile storage.

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.





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Attachment: Traffic Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

## 7 HORIZON YEAR (2040) TRAFFIC CONDITIONS

This section discusses the methods used to develop Horizon Year (2040) Without and With Project traffic forecasts, and the resulting intersection operations, queuing, and traffic signal warrant analyses.

### 7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Horizon Year conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Horizon Year conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Horizon Year conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways).

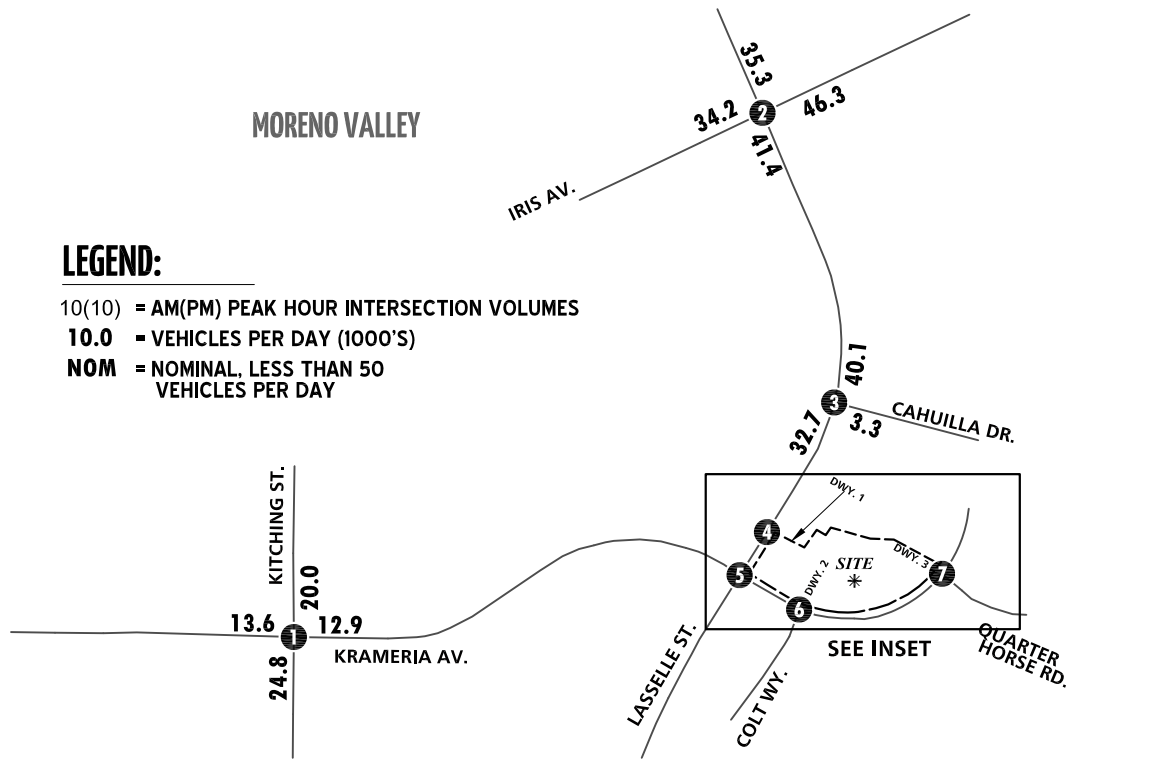
### 7.2 HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes the refined post-processed volumes obtained from the RivTAM. For additional information on the development of the Horizon Year Without Project traffic forecasts, see Section 4.8 *Horizon Year (2040) Volume Development* of this TIA. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year Without Project traffic conditions are shown on Exhibit 7-1.

### 7.3 HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes the refined post-processed volumes obtained from the RivTAM, plus Project traffic. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Horizon Year With Project traffic conditions are shown on Exhibit 7-2.

**EXHIBIT 7-1: HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUMES**



|  |   |  |   |  |
|--|---|--|---|--|
| <p><b>1</b> Kitching St. &amp; Krameria Av.</p> <p>↓ 122(120)<br/>↓ 600(441)<br/>↓ 320(109)</p> <p>← 230(107)<br/>← 740(413)<br/>← 193(97)</p> <p>102(116) →<br/>630(448) →<br/>254(268) →</p> <p>264(222) ←<br/>505(646) ←<br/>270(126) ←</p> | <p><b>2</b> Lassel St. &amp; Iris Av.</p> <p>↓ 156(146)<br/>↓ 809(907)<br/>↓ 303(322)</p> <p>← 178(298)<br/>← 908(988)<br/>← 672(799)</p> <p>184(259) →<br/>681(757) →<br/>417(413) →</p> <p>477(326) ←<br/>793(748) ←<br/>642(548) ←</p> | <p><b>3</b> Lassel St. &amp; Cahuilla Dr.</p> <p>↓ 1149(1525)</p> <p>← 97(132)</p> <p>1556(1080) →<br/>182(91) →</p> | <p><b>4</b> Lassel St. &amp; Dwy. 1</p> <p><b>Future Intersection</b></p> | <p><b>5</b> Lassel St. &amp; Krameria Av.</p> <p>↓ 315(200)<br/>↓ 971(1298)<br/>↓ 115(136)</p> <p>← 107(64)<br/>← 193(55)<br/>← 132(108)</p> <p>424(286) →<br/>294(74) →<br/>447(225) →</p> <p>457(150) ←<br/>1290(1072) ←<br/>288(84) ←</p> |
| <p><b>6</b> Dwy. 2 / Colt Wy. &amp; Krameria Av.</p> <p>↓ 0(0)<br/>↓ 0(0)<br/>↓ 0(0)</p> <p>← 0(0)<br/>← 357(167)<br/>← 58(6)</p> <p>8(24) →<br/>633(177) →<br/>56(92) →</p> <p>75(63) ←<br/>0(0) ←<br/>96(12) ←</p>                           | <p><b>7</b> Krameria Av. &amp; Quarter Horse Rd.</p> <p>↓ 0(15)<br/>↓ 386(164)<br/>↓ 6(1)</p> <p>← 7(0)<br/>← 1(0)<br/>← 9(0)</p> <p>0(7) →<br/>0(0) →<br/>12(9) →</p> <p>21(2) ←<br/>683(132) ←<br/>16(0) ←</p>                          |  |   |  |

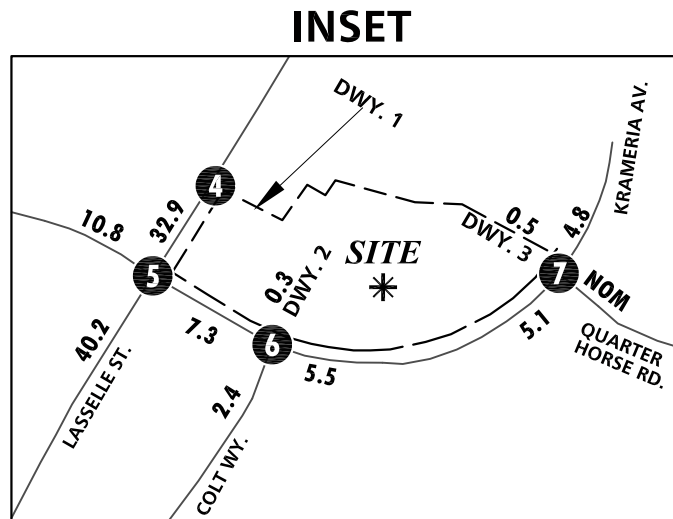
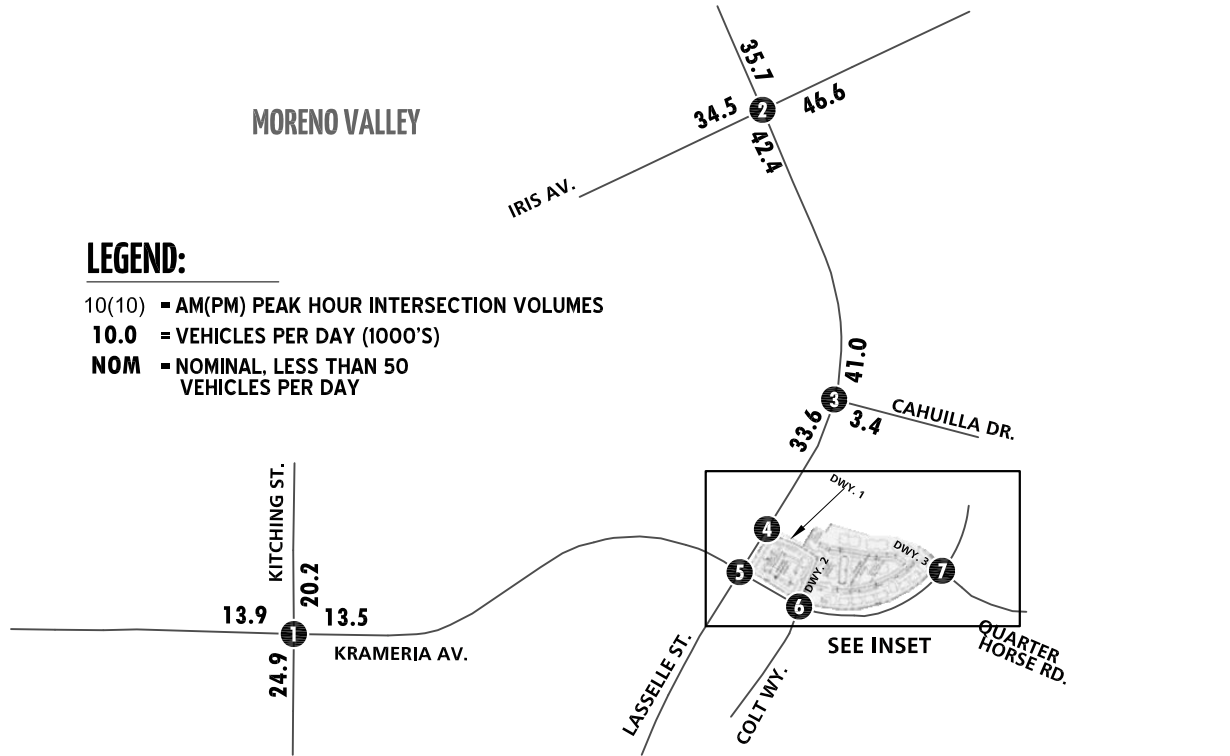


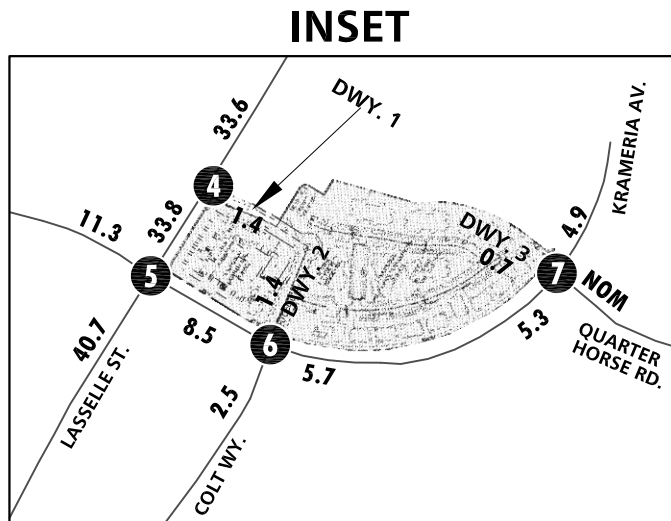
EXHIBIT 7-2: HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUMES



**LEGEND:**

- 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

|  |  |                         |  |   |  |  |                                  |                                   |  |
|--|--|-------------------------|--|---|--|--|----------------------------------|-----------------------------------|--|
| <b>1</b>   | <b>Kitching St. &amp; Krameria Av.</b>                               | <b>2</b>                | <b>Lasselle St. &amp; Iris Av.</b>                   | <b>3</b>  | <b>Lasselle St. &amp; Cahuilla Dr.</b> | <b>4</b>   | <b>Lasselle St. &amp; Dwy. 1</b> | <b>5</b>                          | <b>Lasselle St. &amp; Krameria Av.</b> |
| 122(120)<br>600(441)<br>336(118)<br>241(116)<br>754(423)<br>196(100) | 156(146)<br>826(920)<br>303(322)<br>178(298)<br>908(988)<br>689(812) | 1201(1566)<br>107(138)  | 0(0)<br>1452(1675)<br>0(0)<br>37(54)<br>0(0)<br>0(0) | 315(200)<br>971(1298)<br>167(177)<br>107(64)<br>222(77)<br>156(126) | 1593(1109)<br>182(91)                  | 0(0)<br>0(0)<br>0(0)<br>0(0)<br>1821(1397)<br>27(57) | 427(296)<br>324(89)<br>447(225)  | 457(150)<br>1314(1094)<br>288(84) |  |
| <b>6</b>   | <b>Dwy. 2 / Colt Wy. &amp; Krameria Av.</b>                          | <b>7</b>                | <b>Krameria Av. &amp; Quarter Horse Rd.</b>          |   |  |  |                                  |                                   |  |
| 47(37)<br>1(1)<br>4(3)<br>3(1)<br>363(170)<br>58(6)                  | 0(15)<br>387(164)<br>6(1)<br>7(0)<br>1(0)<br>10(0)                   |                         |  |   |  |  |                                  |                                   |  |
| 88(71)<br>635(185)<br>56(92)   | 75(63)<br>1(0)<br>96(12)   | 8(12)<br>0(0)<br>18(12) | 23(10)<br>685(134)<br>17(1)                          |   |  |  |                                  |                                   |  |





## 7.4 INTERSECTION OPERATIONS ANALYSIS

### 7.4.1 HORIZON YEAR WITHOUT PROJECT TRAFFIC CONDITIONS

LOS calculations were conducted for the study intersections to evaluate their operations under Horizon Year Without Project conditions with roadway and intersection geometrics consistent with Section 7.1 *Roadway Improvements*. As shown in Table 7-1, the study area intersections are anticipated to operate at acceptable LOS for Horizon Year (2040) Without Project traffic conditions, with the exception of the following study area intersection:

- Kitching Street & Krameria Avenue (#1) – LOS D AM peak hour only
- Lasselle Street & Iris Avenue (#2) – LOS E AM and PM peak hours
- Lasselle Street & Krameria Avenue (#5) – LOS F AM peak hour only

A summary of the peak hour intersection LOS for Horizon Year Without Project conditions are shown on Exhibit 7-3. The intersection operations analysis worksheets for Horizon Year Without Project traffic conditions are included in Appendix 7.1.

### 7.4.2 HORIZON YEAR WITH PROJECT TRAFFIC CONDITIONS

As shown in Table 7-1 and illustrated on Exhibit 7-4, there are no additional study area intersections anticipated to experience unacceptable LOS (LOS E or worse) with the addition of Project traffic during one or more peak hours in addition to those previously identified under Horizon Year Without Project traffic conditions. The intersection operations analysis worksheets for Horizon Year With Project traffic conditions are included in Appendix 7.2 of this TIA.

The intersections of Lasselle Street at Krameria Avenue and Driveway 2/Colt Way at Krameria Avenue are anticipated to experience higher delays with the implementation of the road diet improvements along Krameria Avenue. If the road diet improvements are implemented, it is anticipated that there will be periods during the morning peak hour where the intersections along the affected roadway would likely experience higher/unacceptable delays.

## 7.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no unsignalized study area intersections that are anticipated to meet either peak hour or planning level (ADT) volume-based traffic signal warrants for Horizon Year (2040) Without and With Project traffic conditions (see Appendix 7.3 and Appendix 7.4).

Table 7-1

## Intersection Analysis for Horizon Year (2040) Conditions

| # | Intersection                       | Traffic Control <sup>2</sup> | 2040 Without Project       |             |                  |    | 2040 With Project          |             |                  |    | Acceptable LOS |
|---|------------------------------------|------------------------------|----------------------------|-------------|------------------|----|----------------------------|-------------|------------------|----|----------------|
|   |                                    |                              | Delay <sup>1</sup> (secs.) |             | Level of Service |    | Delay <sup>1</sup> (secs.) |             | Level of Service |    |                |
|   |                                    |                              | AM                         | PM          | AM               | PM | AM                         | PM          | AM               | PM |                |
| 1 | Kitching St. & Krameria Av.        | TS                           | <b>48.7</b>                | 24.7        | D                | C  | <b>54.9</b>                | 26.4        | D                | C  | C              |
| 2 | Lasselle St. & Iris Av.            | TS                           | <b>74.5</b>                | <b>70.9</b> | E                | E  | <b>78.8</b>                | <b>73.5</b> | E                | E  | D              |
| 3 | Lasselle St. & Cahuilla Dr.        | CSS                          | 23.4                       | 15.7        | C                | C  | 24.7                       | 16.3        | C                | C  | C              |
| 4 | Lasselle St. & Driveway 1          | <b>CSS</b>                   | Future Intersection        |             |                  |    | 23.0                       | 18.1        | C                | C  | C              |
| 5 | Lasselle St. & Krameria Av.        | TS                           | <b>113.7</b>               | 32.6        | F                | C  | <b>116.4</b>               | 33.4        | F                | C  | D              |
|   | <i>With Road Diet Improvements</i> |                              | <b>187.8</b>               | <b>61.9</b> | F                | E  | <b>195.2</b>               | <b>68.2</b> | F                | E  |                |
| 6 | Driveway 2/Colt Wy. & Krameria Av. | CSS                          | 16.6                       | 10.4        | C                | B  | 24.7                       | 19.9        | C                | C  | C              |
|   | <i>With Road Diet Improvements</i> |                              | 22.7                       | 11.0        | C                | B  | <b>47.1</b>                | 12.3        | E                | B  |                |
| 7 | Krameria Av. & Quarter Horse Rd.   | CSS                          | 24.2                       | 10.1        | C                | B  | 24.9                       | 10.4        | C                | B  | C              |

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>2</sup> AWS = All-way Stop; CSS = Cross-street Stop; TS = Traffic Signal; **CSS** = Improvement

EXHIBIT 7-3: HORIZON YEAR (2040) WITHOUT PROJECT SUMMARY OF LOS

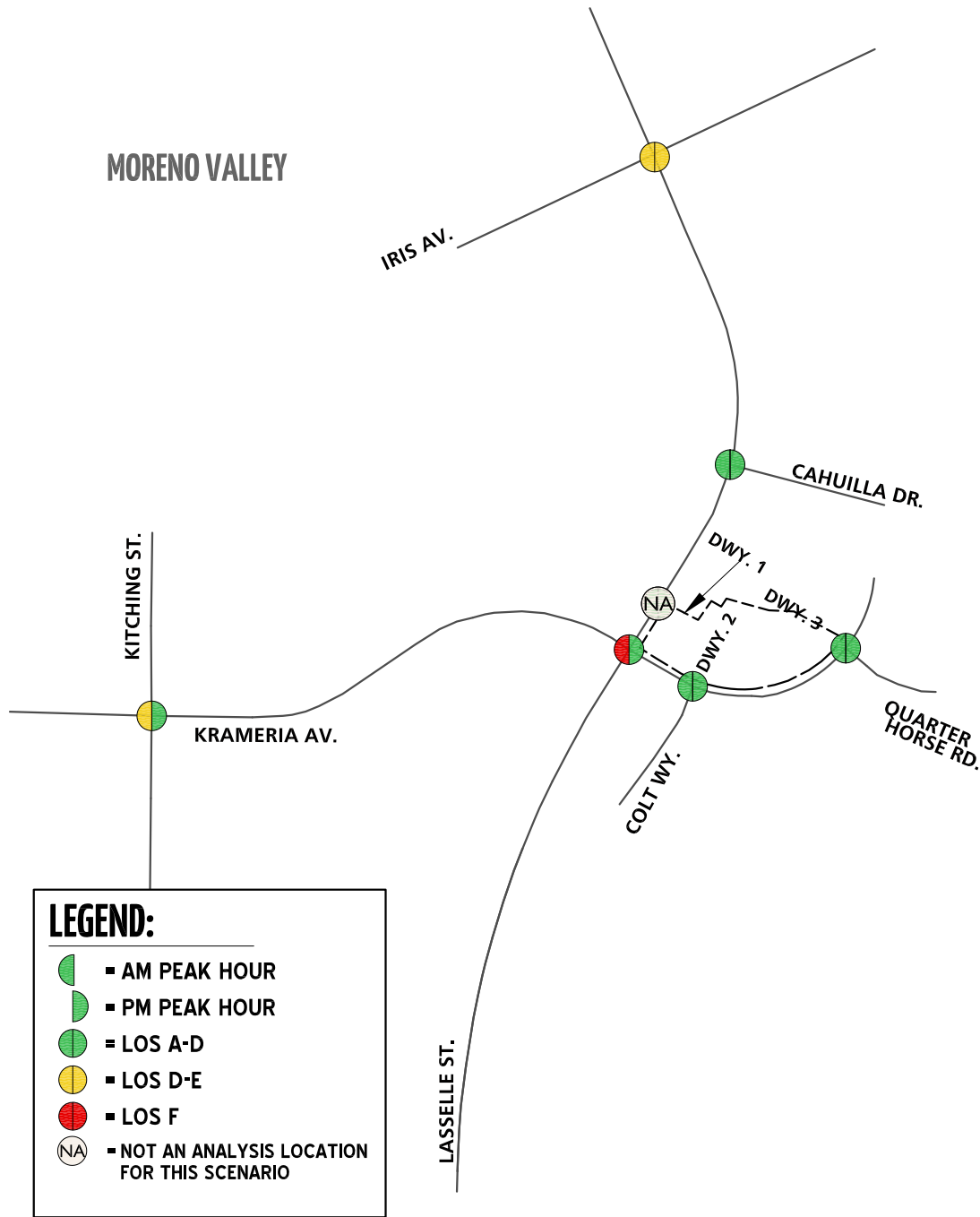
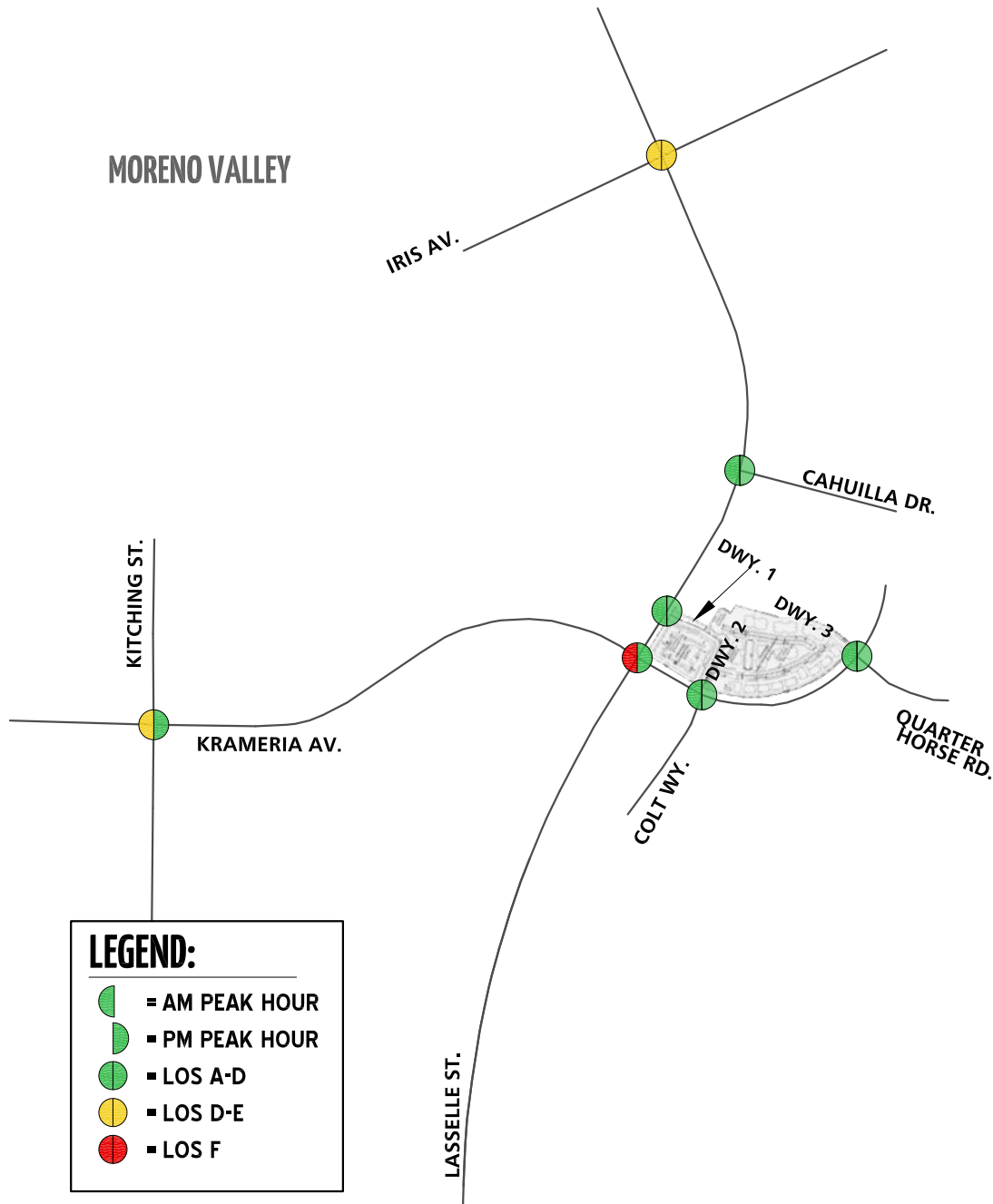


EXHIBIT 7-4: HORIZON YEAR (2040) WITH PROJECT SUMMARY OF LOS





## 7.6 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the City of Moreno Valley stated roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future traffic demand.

Table 7-2 provides a summary of the Horizon Year (2040) conditions roadway segment capacity analysis based on the City of Moreno Valley Roadway Segment Capacity/LOS Thresholds identified previously in Table 2-4. As shown in Table 7-2, the study area roadway segment of Lasselle Street between Iris Avenue and Cahuilla Drive (#3) is anticipated to operate at an unacceptable LOS for Horizon Year (2040) Without Project traffic conditions. The addition of Project traffic is not anticipated to result in any additional roadway segment deficiencies in addition to the location identified previously for Horizon Year (2040) Without Project traffic conditions.

## 7.7 QUEUING ANALYSIS

A queuing analysis was conducted at 5 study area intersections in close proximity to the Project in order to determine 95<sup>th</sup> percentile queues during the peak hours for Horizon Year (2040) traffic conditions. The queuing analysis results are summarized in Table 7-3 for Horizon Year (2040) traffic conditions which indicates the intersection of Lasselle Street and Krameria Avenue is anticipated to continue to experience queuing issues during the AM or PM peak hours for the northbound left turn pocket, northbound right turn pocket, southbound left turn pocket, and westbound left turn pocket for Horizon Year (2040) Without Project traffic conditions. There are no additional turn pockets anticipated to experience peak hour queues with the addition of Project traffic for Horizon Year (2040) With Project traffic conditions. Queuing worksheets for Horizon Year (2040) Without and With Project traffic conditions are included in Appendix 7.5 and Appendix 7.6, respectively.

Table 7-2

## Roadway Segment Analysis for Horizon Year (2040) Conditions

| # | Roadway      | Segment Limits               | Roadway Section | LOS Capacity <sup>1</sup> | 2040 NP       | V/C <sup>2</sup> | LOS <sup>3</sup> | 2040 WP       | V/C <sup>2</sup> | LOS <sup>3</sup> |
|---|--------------|------------------------------|-----------------|---------------------------|---------------|------------------|------------------|---------------|------------------|------------------|
| 1 | Krameria Av. | Kitching St. to Lasselle St. | 4D              | 37,500                    | 12,887        | 0.34             | A                | 13,463        | 0.36             | A                |
| 2 |              | Lasselle St. to Colt Wy.     | 2D              | 18,750                    | 7,336         | 0.39             | A                | 8,525         | 0.45             | A                |
| 3 |              | Iris Av. to Cahuilla Dr.     | 4D              | 37,500                    | <b>41,444</b> | <b>1.11</b>      | <b>F</b>         | <b>42,368</b> | <b>1.13</b>      | <b>F</b>         |
| 4 | Lasselle St. | Cahuilla Dr. to Driveway 1   | 4D              | 37,500                    | 32,743        | 0.87             | D                | 33,580        | 0.90             | D                |
| 5 |              | Driveway 1 to Krameria Av.   | 4D              | 37,500                    | 32,940        | 0.88             | D                | 33,759        | 0.90             | D                |

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> These maximum roadway capacities have been obtained from the City of Moreno Valleys Transportation Division's TIA Preparation Guidelines (August 2007).

<sup>2</sup> V/C = Volume to Capacity Ratio

<sup>3</sup> LOS = Level of Service

Table 7-3

Peak Hour Queuing Summary for Horizon Year (2040) Conditions

| Intersection                                | Movement | Available Stacking Distance (Feet) | 2040 Without Project         |              |                          |           | 2040 With Project            |              |                          |           |
|---|----------|------------------------------------|------------------------------|--------------|--------------------------|-----------|------------------------------|--------------|--------------------------|-----------|
|   |          |                                    | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |           | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |           |
|   |          |                                    | AM Peak Hour                 | PM Peak Hour | AM                       | PM        | AM Peak Hour                 | PM Peak Hour | AM                       | PM        |
| Lasselle St. & Cahuilla Dr.                 | NBR      | 135                                | 0                            | 4            | Yes                      | Yes       | 8                            | 0            | Yes                      | Yes       |
| Lasselle St. & Driveway 1                   | NBT/R    | 250                                | 0                            | 0            | Yes                      | Yes       | 9                            | 7            | Yes                      | Yes       |
| Lasselle St. & Krameria Av.                 | NBL      | 125                                | <b>150</b>                   | <b>182</b>   | <b>No</b>                | <b>No</b> | <b>150</b>                   | <b>178</b>   | <b>No</b>                | <b>No</b> |
|   | NBR      | 180                                | <b>277</b>                   | 143          | <b>No</b>                | Yes       | <b>283</b>                   | 151          | <b>No</b>                | Yes       |
|   | SBL      | 240                                | <b>264</b>                   | 222          | <b>No</b>                | Yes       | <b>273</b>                   | 239          | <b>No</b>                | Yes       |
|   | EBL      | 310                                | 226                          | 224          | Yes                      | Yes       | 225                          | 224          | Yes                      | Yes       |
|   | WBL      | 200                                | <b>215</b>                   | 132          | <b>No</b>                | Yes       | <b>218</b>                   | 148          | <b>No</b>                | Yes       |
| Driveway 2/Colt Wy. & Krameria Av.          | EBL      | 100                                | 34                           | 20           | Yes                      | Yes       | 37                           | 30           | Yes                      | Yes       |
|   | WBL      | 100                                | 29                           | 7            | Yes                      | Yes       | 24                           | 9            | Yes                      | Yes       |
| Krameria Av. & Driveway 3/Quarter Horse Rd. | NBL      | 50                                 | 28                           | 4            | Yes                      | Yes       | 32                           | 12           | Yes                      | Yes       |
|   | SBL      | 100                                | 20                           | 0            | Yes                      | Yes       | 20                           | 0            | Yes                      | Yes       |
|   | SBR      | 415                                | 0                            | 0            | Yes                      | Yes       | 45                           | 0            | Yes                      | Yes       |

**BOLD** = Inadequate 95th percentile storage.

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

## 7.8 HORIZON YEAR DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

### 7.8.1 INTERSECTION IMPROVEMENTS

Improvements necessary to reduce project-related traffic impacts to less-than-significant are also discussed below. The effectiveness of the proposed recommended mitigation measures are presented in Table 7-4 for Horizon Year (2040) traffic conditions. With the implementation of the intersection improvements discussed below, there are no cumulatively considerable project-related impacts anticipated to the study area intersections (Project to contribute fair share).

#### ***Improvement – Kitching Street & Krameria Avenue (#1)***

- Add an eastbound right turn lane
- Modify the traffic signal to implement overlap phasing on the eastbound right turn lane

#### ***Improvement – Lasselle Street & Iris Avenue (#2)***

- Add an eastbound right turn lane and modify the traffic signal to implement overlap phasing on the right turn lane

#### ***Improvement – Lasselle Street & Krameria Avenue (#6)***

- Add a 2<sup>nd</sup> northbound left turn lane
- Add an eastbound right turn lane and modify the traffic signal to implement overlap phasing on the eastbound right turn lane
- The road diet lanes on the westbound approach can remain

The intersection operations analysis worksheets for Horizon Year (2040) With Project traffic conditions, with improvements, are included in Appendix 7.7 of this TIA.

### 7.8.2 ROADWAY SEGMENT IMPROVEMENTS

As shown in Table 7-1 and with the improvements shown in Table 7-4, the Horizon Year (2040) peak hour analysis indicates that the adjacent study area intersections on either side of the deficient roadway segments are anticipated to operate at acceptable LOS. As such, roadway segment widening does not appear necessary to address the deficiencies.



Table 7-4

## Intersection Analysis for Horizon Year (2040) Conditions With Improvements

| # | Intersection                | Traffic Control <sup>3</sup> | Intersection Approach Lanes <sup>1</sup> |   |    |            |   |   |           |   |            |           |          |          | Delay <sup>2</sup> (secs.) |             | Level of Service |    |
|---|-----------------------------|------------------------------|--|---|----|------------|---|---|-----------|---|------------|-----------|----------|----------|----------------------------|-------------|------------------|----|
|   |                             |                              | Northbound                               |   |    | Southbound |   |   | Eastbound |   |            | Westbound |          |          | AM                         | PM          | AM               | PM |
|   |                             |                              | L  | T | R  | L          | T | R | L         | T | R          | L         | T        | R        |                            |             |                  |    |
| 1 | Kitching St. & Krameria Av. |                              |  |   |    |            |   |   |           |   |            |           |          |          |                            |             |                  |    |
|   | - Without Improvements      | TS                           | 1  | 2 | 0  | 1          | 2 | 0 | 1         | 2 | 0          | 1         | 2        | 0        | <b>54.9</b>                | 26.4        | D                | C  |
|   | - With Improvements         | TS                           | 1  | 2 | 0  | 1          | 2 | 0 | 1         | 2 | <u>1</u> > | 1         | 2        | 0        | 34.9                       | 20.0        | C                | B  |
| 2 | Lasselle St. & Iris Av.     |                              |  |   |    |            |   |   |           |   |            |           |          |          |                            |             |                  |    |
|   | - Without Improvements      | TS                           | 2  | 2 | 1> | 2          | 2 | d | 2         | 3 | 0          | 2         | 3        | 0        | <b>78.8</b>                | <b>73.5</b> | E                | E  |
|   | - With Improvements         | TS                           | 2  | 2 | 1> | 2          | 2 | d | 2         | 3 | <u>1</u> > | 2         | 3        | 0        | 54.9                       | 54.8        | D                | D  |
| 5 | Lasselle St. & Krameria Av. |                              |  |   |    |            |   |   |           |   |            |           |          |          |                            |             |                  |    |
|   | - Without Improvements      | TS                           | 1  | 2 | 1> | 1          | 2 | 0 | 2         | 2 | 0          | 1         | 2        | 0        | <b>116.4</b>               | 33.4        | F                | C  |
|   | - With Improvements         | TS                           | <u>2</u>                                 | 2 | 1> | 1          | 2 | 0 | 2         | 2 | <u>1</u> > | 1         | <u>1</u> | <u>1</u> | 54.2                       | 30.7        | D                | C  |

**BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; d = Defacto right turn lane; 1 = Improvement

<sup>2</sup> Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

<sup>3</sup> TS = Traffic Signal

### 7.8.3 QUEUING IMPROVEMENTS

As previously shown in Table 7-3, there are movements that experience queuing issues during the AM or PM peak hours for Horizon Year (2040) With Project traffic conditions. Consistent with Existing (2018), E+P, and Opening Year Cumulative (2023) traffic conditions, a 180-foot northbound left turn lane and 280-foot northbound right turn lane are recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for Horizon Year (2040) traffic conditions. Consistent with Opening Year Cumulative (2023) traffic conditions, a 270-foot southbound left turn lane is recommended in order to accommodate the 95<sup>th</sup> percentile peak hour queues for Horizon Year (2040) traffic conditions.

The Project should contribute fair share towards the turn pocket improvements for the northbound left and right turn lanes and modifications to the existing landscaped median to accommodate a 270-foot southbound left turn lane at the intersection of Lasselle Street and Krameria Avenue. Although there is an anticipated queue that exceeds the storage length for the westbound left turn lane at Lasselle Street and Krameria Avenue, additional improvements have not been recommended as the existing striped two-way-left-turn lane could accommodate up to an additional vehicle (25-feet) without spilling back to the upstream intersection of Colt Way. Recommended improvements to address queuing issues for Horizon Year (2040) traffic conditions are described below and shown in Table 7-5.

Table 7-5

Peak Hour Queuing Summary for Horizon Year (2040) Conditions With Improvements

| Intersection                                | Movement | Available Stacking Distance (Feet) | 2040 Without Project         |                  |                          |     | 2040 With Project            |              |                          |     |
|---|----------|------------------------------------|------------------------------|------------------|--------------------------|-----|------------------------------|--------------|--------------------------|-----|
|   |          |                                    | 95th Percentile Queue (Feet) |                  | Acceptable? <sup>1</sup> |     | 95th Percentile Queue (Feet) |              | Acceptable? <sup>1</sup> |     |
|   |          |                                    | AM Peak Hour                 | PM Peak Hour     | AM                       | PM  | AM Peak Hour                 | PM Peak Hour | AM                       | PM  |
| Lasselle St. & Cahuilla Dr.                 | NBR      | 135                                | 0                            | 4                | Yes                      | Yes | 8                            | 0            | Yes                      | Yes |
| Lasselle St. & Driveway 1                   | NBT/R    | 250                                | 0                            | 0                | Yes                      | Yes | 9                            | 7            | Yes                      | Yes |
| Lasselle St. & Krameria Av.                 | NBL      | <b>180</b>                         | 150                          | 182 <sup>2</sup> | Yes                      | Yes | 150                          | 178          | Yes                      | Yes |
|   | NBR      | <b>280</b>                         | 277                          | 143              | Yes                      | Yes | 283 <sup>2</sup>             | 151          | Yes                      | Yes |
|   | SBL      | <b>270</b>                         | 264                          | 222              | Yes                      | Yes | 273 <sup>2</sup>             | 239          | Yes                      | Yes |
|   | EBL      | 310                                | 226                          | 224              | Yes                      | Yes | 225                          | 224          | Yes                      | Yes |
|   | WBL      | 200                                | <b>215</b>                   | 132              | <b>No</b>                | Yes | <b>218</b>                   | 148          | <b>No</b>                | Yes |
| Driveway 2/Colt Wy. & Krameria Av.          | EBL      | 100                                | 34                           | 20               | Yes                      | Yes | 37                           | 30           | Yes                      | Yes |
|   | WBL      | 100                                | 29                           | 7                | Yes                      | Yes | 24                           | 9            | Yes                      | Yes |
| Krameria Av. & Driveway 3/Quarter Horse Rd. | NBL      | 50                                 | 28                           | 4                | Yes                      | Yes | 32                           | 12           | Yes                      | Yes |
|   | SBL      | 100                                | 20                           | 0                | Yes                      | Yes | 20                           | 0            | Yes                      | Yes |
|   | SBR      | 415                                | 0                            | 0                | Yes                      | Yes | 45                           | 0            | Yes                      | Yes |

**BOLD** = Inadequate 95th percentile storage.

<sup>1</sup> Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

## 8 REFERENCES

1. **City of Moreno Valley Transportation Engineering Division.** *Traffic Impact Analysis Preparation Guide.* Moreno Valley : s.n., August 2007.
2. **Institute of Transportation Engineers.** *Trip Generation Manual.* 10th Edition. 2017.
3. **City of Moreno Valley.** *City of Moreno Valley General Plan.* Moreno Valley : s.n., July 11, 2006.
4. **Riverside County Transportation Commission.** *2011 Riverside County Congestion Management Program.* County of Riverside : RCTC, December 14, 2011.
5. **Transportation Research Board.** *Highway Capacity Manual (HCM).* s.l. : National Academy of Sciences, 2016.
6. **California Department of Transportation.** Manual on Uniform Traffic Control Devices (MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CAMUTCD).* 2014.
7. **Institute of Transportation Engineers.** *Trip Generation Handbook.* 3rd Edition. September 2017.
8. **Southern California Association of Governments.** *2016 Regional Transportation Plan/Sustainable Communities Strategy.* April 2016.



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Attachment: Traffic Assessment (Nov 2018) (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**APPENDIX 1.1:**  
**APPROVED TRAFFIC STUDY SCOPING AGREEMENT**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Date: October 11, 2018

This letter acknowledges the City of Moreno Valley Transportation Engineering Division requirements for the traffic impact analysis of the following project:

|                      |  |   |
|----------------------|--|---|
| Case No.             | PEN18-0056, PEN18-0090, PEN18-0107                                 |   |
| Project Name:        | Continental Villages   |   |
| Project Address:     | Northeast corner of Evans Road/Lasselle Street and Krameria Avenue |   |
| Project Description: | 112 apartments/duplexes and 21,000 square feet of retail use       |   |
| Related Cases:       |  |   |
| Name:                | <u>Consultant</u><br>URBAN CROSSROADS, INC.<br>Attn: Charlene So   | <u>Developer Representative</u><br>Continental East Development<br>Attn: Andrew Spousta |
| Address:             | 260 E. Baker Street,<br>Suite 200<br>Costa Mesa, CA 92626          | 25467 Medical Center Drive<br><br>Murrieta, CA 92563                                    |
| Telephone:           | 949-336-5982   | 951-600-8600  |

**I. Background**

The proposed Continental Villages development (referred to as "Project") is located on the northeast corner of Lasselle Street and Krameria Avenue in the City of Moreno Valley. The Project is proposed to consist of 112 apartments/duplexes and 21,000 square feet of retail use.

The Project is anticipated to be built in a single phase and the opening year of 2023 will be evaluated for the purposes of this analysis (minimum five-year opening year per Moreno Valley traffic study guidelines). See preliminary site plan on **Exhibit 1**. **Exhibit 2** illustrates the study area and proposed intersection and roadway segment analyses locations.

**II. Trip Geographic Distribution and Assignment**

The project trip distribution patterns (shown on **Exhibits 3 and 4**) were developed based on an understanding of existing travel patterns in the area, the geographical location of the site, and the site's proximity to the local arterial and regional state highway system.



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**III. Site Trip Generation Forecast**

- A. Source for trip generation rates: Institute of Transportation Engineers (ITE) Trip Generation Manual 10<sup>th</sup> Edition (2017) for ITE Land Use Codes 220 for Multifamily Housing (Low-Rise) and 820 for Shopping Center (based on the ITE Land Use Code 820 regression equation).
- B. Weekday AM Peak: 7:00-9:00 AM
- C. Weekday PM Peak: 4:00-6:00 PM
- D. Intersection and link acceptable Level of Service D for some intersections and links and Level of Service C for others based upon the current City policy. (Use Highway Capacity Manual (6<sup>th</sup> Edition) operations procedures; parameters per County of Riverside Traffic Impact Analysis Guidelines)

**Proposed Use Rates** <sup>(1)</sup> (See attached **Table 1**)

|  |                     |                 |  |
|--|---------------------|-----------------|--|
| <i>Multifamily Housing (Low-Rise)</i> (per DU) | Daily: <u>7.32</u>  | AM: <u>0.46</u> | PM: <u>0.56</u>  |
| <i>Shopping Center</i> (per TSF)               | Daily: <u>99.06</u> | AM: <u>7.73</u> | PM: <u>8.15</u>  |
| Internal Trip Allowance:                       | Yes: <u>X</u>       | No: _____       | Percentage: <u>10% (PM/Daily only)</u>                   |
| Pass-by Trip Allowance:                        | Yes: <u>X</u>       | No: _____       | Percentage: <u>34%<sup>(2)</sup> (PM and Daily only)</u> |

- (1) Institute of Transportation Engineers Trip Generation Manual (10<sup>th</sup> Edition, 2017).
- (2) Institute of Transportation Engineers Trip Generation Handbook (3<sup>rd</sup> Edition 2017).

- A. As shown in **Table 1**, the proposed Project is anticipated to generate a net total of 2,056 trip-ends per day with 215 AM peak hour trips and 167 PM peak hour trips. A maximum 10% reduction has been used to account for internal capture for the PM peak hour and Daily trips.

**IV. Specific Project Issues to be Analyzed**

- A. The traffic study will address the adequacy of site access and identify specific near-term circulation improvements required at study area intersections and roadways to maintain acceptable peak hour and daily levels of service (LOS).
- B. The traffic study shall address the project traffic impacts at all study intersections listed in Section VI and provide appropriate recommended improvements if applicable. Peak-hour traffic signal warrants shall be evaluated for all intersections that are not currently signalized.
- C. Qualitative assessment of existing and planned non-motorized facilities (e.g., pedestrians, bike routes, trails, etc.) within the study area.

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- D. The traffic study shall provide a detail analysis of each driveway location based on Table 9.11.080-14 of the City of Moreno Valley Municipal Code - Design Guidelines, by preparing a table or an exhibit to show the required minimum spacing distance between the Project driveways and whether each proposed driveway location can meet the minimum distance.
- E. The traffic study will include fair share calculations for any study area intersection that is required to contribute to future improvements.
- F. The traffic study shall provide a Queuing Analysis section to determine the 95<sup>th</sup> percentile queues for turning movements (left-turn, right-turn, and/or U-turn) based on forecasted E+P, Opening Year Cumulative (2023) With Project, and Horizon Year (2040) With Project traffic volumes using the Synchro Version 10 software:
  - 1. Lasselle St. & Krameria Av. (all directions)
  - 2. Driveway 2/Colt Wy. & Krameria Av. (all directions)
  - 3. Lasselle St. & Driveway 1 (NB right only)
  - 4. Driveway 3/Quarter Horse Rd. & Krameria Av. (all directions)
  - 5. Lasselle St. & Cahuilla Dr. (NB right only)

If there is not sufficient queuing storage length available, the traffic study shall recommend improvements to resolve such issue.

#### V. Study Horizon Year

- A. Existing (2018)
- B. Existing (2018) Plus Project
- C. Opening Year Cumulative (2023) Without Project (existing to opening year-2023, assuming a growth rate of 2% per year and includes the traffic from other cumulative development projects in the vicinity)
- D. Opening Year Cumulative (2023) With Project
- E. Horizon Year (2040) Without Project
- F. Horizon Year (2040) With Project

#### VI. Facilities to be Studied

- A. Analysis Locations: (See **Exhibit 2**)
  - 1. Kitching Street & Krameria Avenue
  - 2. Lasselle Street & Iris Avenue
  - 3. Lasselle Street & Cahuilla Drive
  - 4. Lasselle Street & Driveway 1 – Future Intersection
  - 5. Lasselle Street & Krameria Avenue
  - 6. Driveway 2/Colt Way & Krameria Avenue
  - 7. Krameria Avenue & Driveway 3/Quarter Horse Road
- B. Roadway Segments:
  - 1. Krameria Avenue between Kitching Street and Lasselle Street
  - 2. Lasselle Street between Iris Avenue and Cahuilla Drive
  - 3. Lasselle Street between Cahuilla Drive and Driveway 1
  - 4. Lasselle Street between Driveway 1 and Krameria Avenue
  - 5. Krameria Avenue between Lasselle Street and Colt Way

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**VII. Other Items**

- A. There is a list of cumulative projects provided in **Table 2** (also shown graphically on **Exhibit 5**) and is consistent with the cumulative lists on other recent projects.
- B. **Exhibit 6** shows the distribution for the apartment complex Parcel 1 (cumulative project) north of the Project site. This distribution is consistent with the Project residential trip distribution previously shown on **Exhibit 3**.

**VIII. Deliverables**

- a. Draft traffic impact studies (2 hard copies plus PDF on a CD or USB drive)
- b. Final traffic impact studies (4 hard copies plus PDF on a CD or USB drive)

All draft and final traffic impact studies shall be delivered with the appropriate review fee to the Permit Technician, Land Development Division - Moreno Valley City Hall, 14177 Frederick Street, Moreno Valley, CA 92552. Please contact the Land Development Division at 951-413-3110 prior to the delivery of the traffic study.

A review fee of \$3,118 will be required upon submittal of the traffic study. **A signed copy of this Scoping Agreement must be included in the submitted draft and final traffic impact studies.** If you have any questions regarding this *Scoping Agreement*, please contact Eric Lewis at 951-413-3140.

If you have any questions regarding this *Scoping Agreement*, please contact Eric Lewis at 951-413-3140.

**Recommended By:**



Charlene So, PE  
Senior Associate  
Urban Crossroads, Inc.

**Approved By:**



Eric Lewis, City of Moreno Valley

\* NOTE: This scoping agreement was reviewed and approved based on the information submitted by Urban Crossroads, Inc. on 10/11/2018. Urban Crossroads and the Project Applicant acknowledge that any changes to the Project (zoning, size, type of use, number or location of access points, etc.) after 10/11/2018 may require this scoping agreement to be revised and resubmitted for review and approval by the City of Moreno Valley.

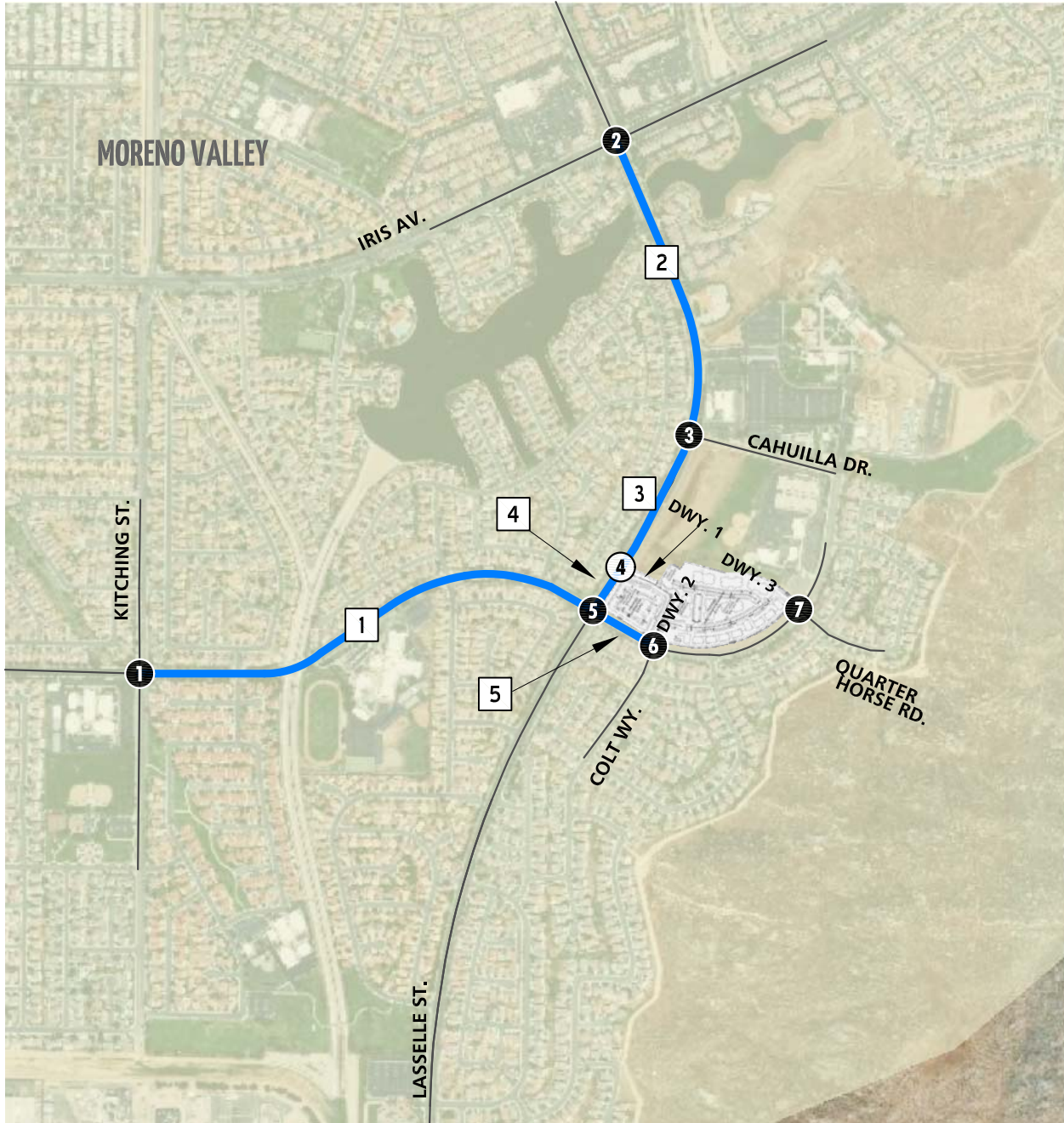
Attachments

EXHIBIT 1: PRELIMINARY SITE PLAN





EXHIBIT 2: LOCATION MAP



LEGEND:




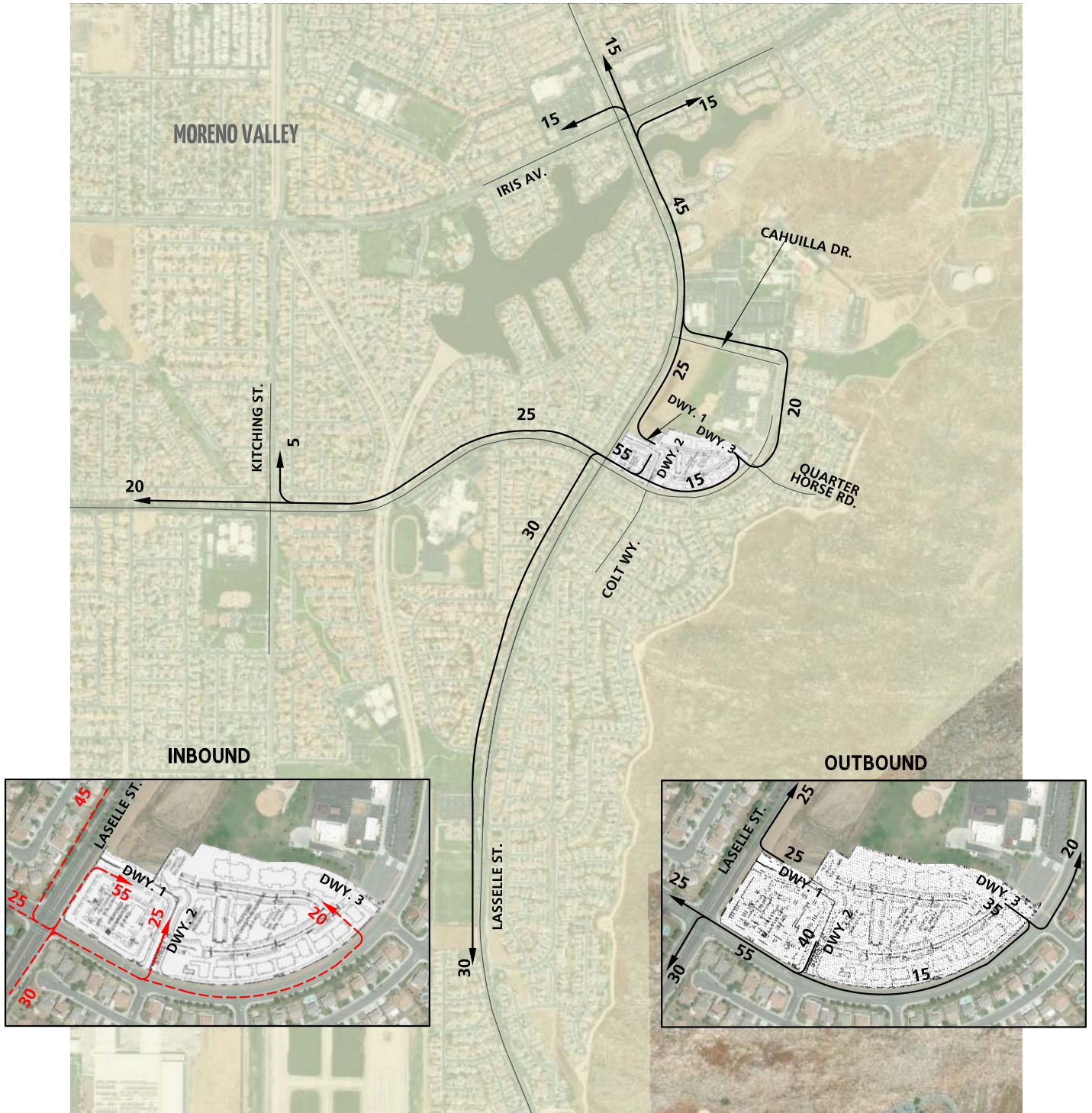
-  = EXISTING INTERSECTION ANALYSIS LOCATION
-  = FUTURE INTERSECTION ANALYSIS LOCATION
-  = ROADWAY SEGMENT ANALYSIS LOCATION





EXHIBIT 3: PROJECT (RESIDENTIAL) TRIP DISTRIBUTION

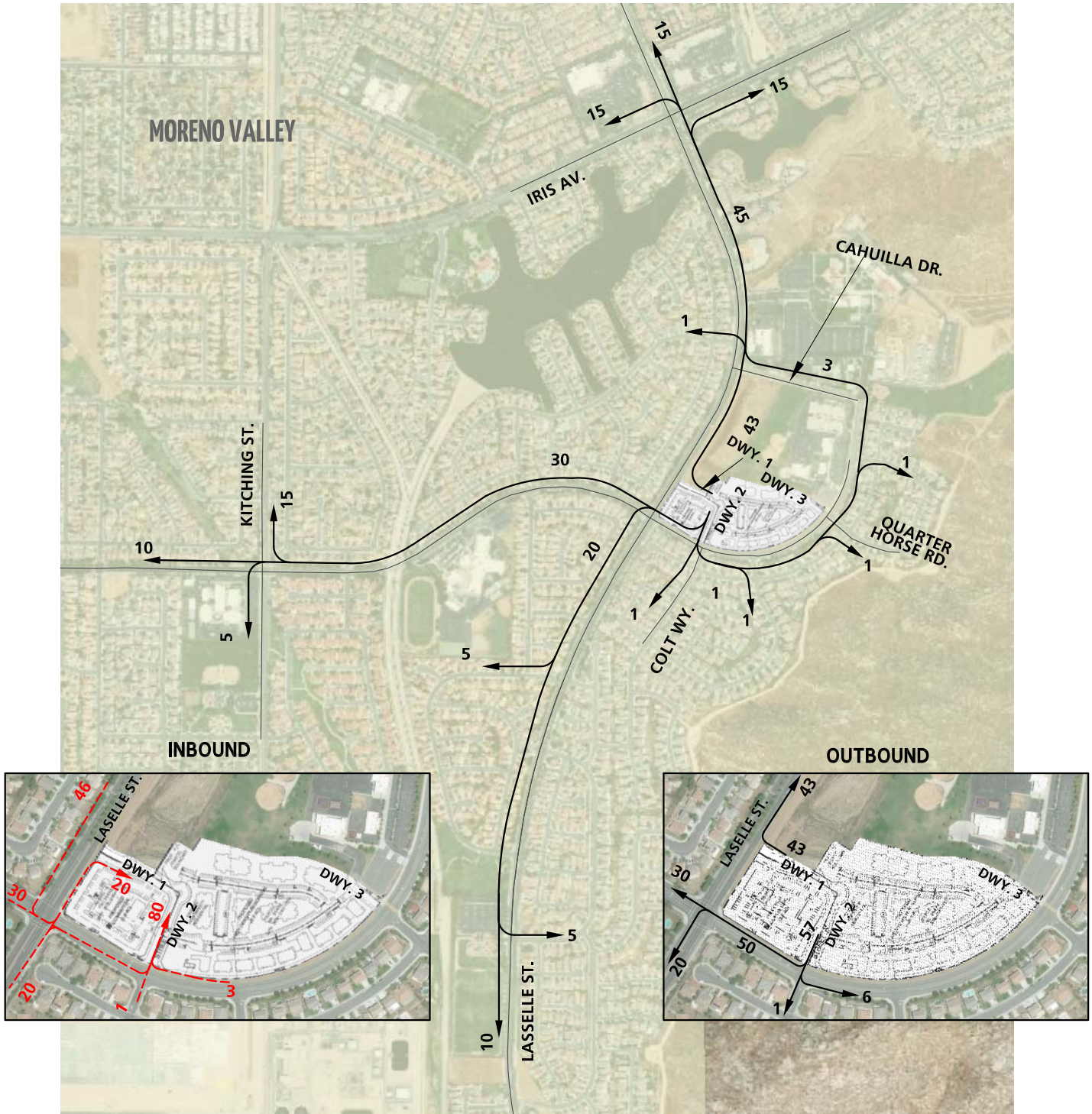


LEGEND:

- 10 = PERCENT TO/FROM PROJECT
- = OUTBOUND
- (dashed red) = INBOUND



EXHIBIT 4: PROJECT (RETAIL) TRIP DISTRIBUTION

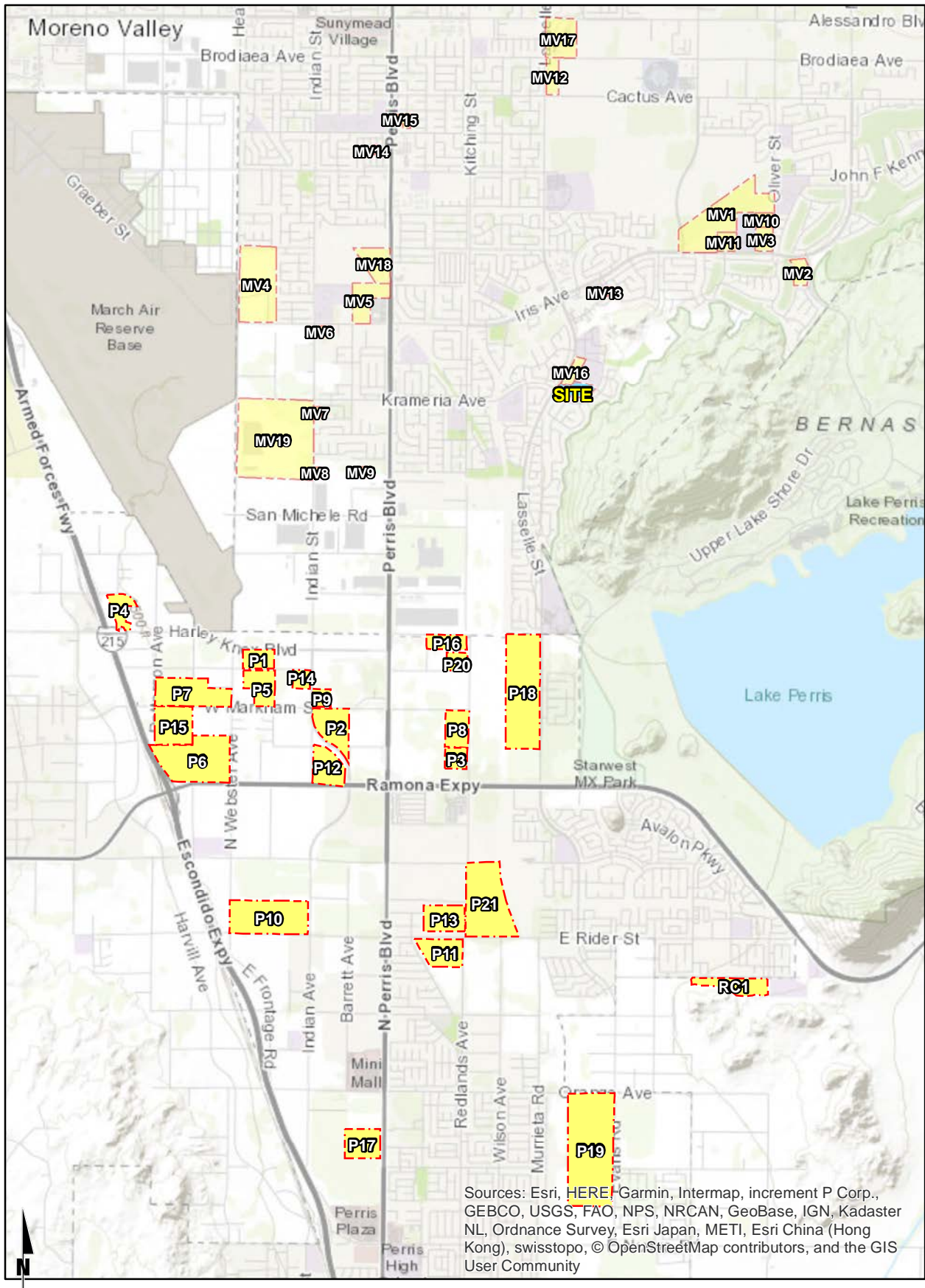


LEGEND:

- 10 = PERCENT TO/FROM PROJECT
- ← = OUTBOUND
- = INBOUND



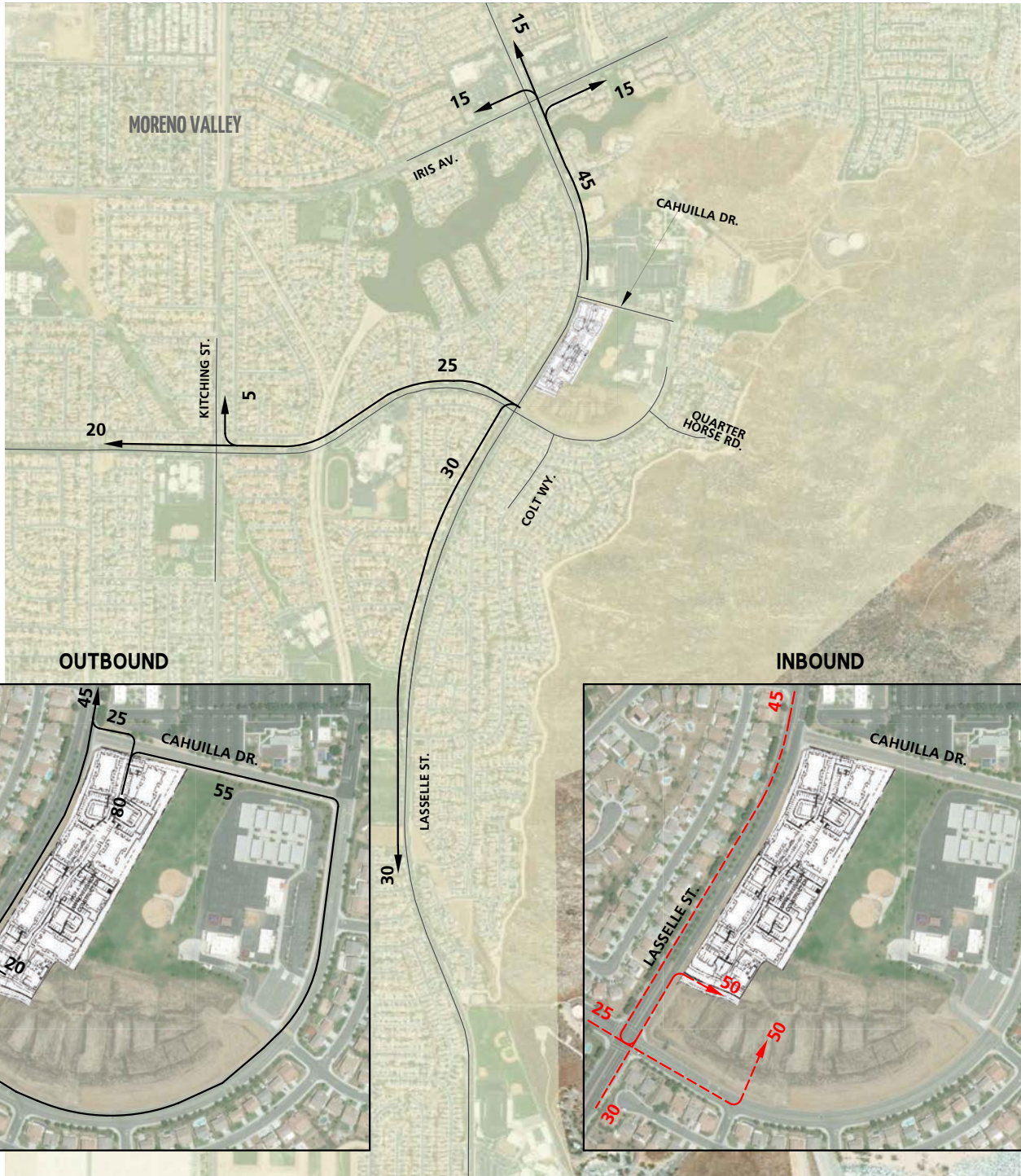
EXHIBIT 5: CUMULATIVE DEVELOPMENT LOCATION MAP



Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



EXHIBIT 6: PARCEL 1 TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

← = OUTBOUND

→ = INBOUND



Table 1

Proposed Project Trip Generation Summary

| Land Use                                  | Units | ITE LU Code | AM Peak Hour |      |       | PM Peak Hour |      |       | Daily |
|---|-------|-------------|--------------|------|-------|--------------|------|-------|-------|
|   |       |             | In           | Out  | Total | In           | Out  | Total |       |
| <b>Trip Generation Rates</b> <sup>1</sup> |       |             |              |      |       |              |      |       |       |
| Multifamily Housing (Low-Rise)            | DU    | 220         | 0.11         | 0.35 | 0.46  | 0.35         | 0.21 | 0.56  | 7.32  |
| Shopping Center <sup>3</sup>              | TSF   | 820         | 4.79         | 2.94 | 7.73  | 3.91         | 4.24 | 8.15  | 99.06 |

| Land Use   | Quantity | Units | AM Peak Hour |            |            | PM Peak Hour |           |            | Daily        |
|--|----------|-------|--------------|------------|------------|--------------|-----------|------------|--------------|
|  |          |       | In           | Out        | Total      | In           | Out       | Total      |              |
| <b>Proposed Project Trip Generation Summary</b>        |          |       |              |            |            |              |           |            |              |
| Multifamily Housing                                    | 112      | DU    | 12           | 40         | 52         | 40           | 23        | 63         | 820          |
| Shopping Center  | 21,000   | TSF   | 101          | 62         | 163        | 82           | 89        | 171        | 2,080        |
| Internal Capture (10% PM and Daily only)               |          |       | 0            | 0          | 0          | -8           | -9        | -17        | -208         |
| Pass-by Reduction (34% PM and Daily only) <sup>4</sup> |          |       | 0            | 0          | 0          | -25          | -25       | -50        | -636         |
| <b>Total</b>   |          |       | <b>113</b>   | <b>102</b> | <b>215</b> | <b>89</b>    | <b>78</b> | <b>167</b> | <b>2,056</b> |

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

<sup>2</sup> DU = Dwelling Units; TSF = Thousand Square Feet

<sup>3</sup> Trip generation rate based on the regression equation for ITE Land Use Code 820.

<sup>4</sup> Pass-by Reduction Source: ITE Trip Generation Handbook, Third Edition (2017).

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Table 2

## Cumulative Development Land Use Summary

| TAZ                          | Project Name/Builder/Applicant  | Land Use <sup>1</sup> | Quantity  | Units <sup>2</sup> |
|------------------------------|---|-----------------------|-----------|--------------------|
| <b>City of Moreno Valley</b> |   |                       |           |                    |
| MV1                          | Moreno Valley Medical Overlay Area  | Medical Office        | 122.250   | TSF                |
| MV2                          | Fresenius Medical Care  | Medical Office        | 12.000    | TSF                |
| MV3                          | Kaiser Permanente Moreno Valley Emergency Room Expansion                    | Hospital              | 8.500     | TSF                |
| MV4                          | Rados   | SFDR                  | 135       | DU                 |
|                              | Invermex, Inc.  | SFDR                  | 32        | DU                 |
| MV5                          | RSI   | SFDR                  | 140       | DU                 |
| MV6                          | Mission Pacific Land Co.  | SFDR                  | 221       | DU                 |
| MV7                          | 33024 Adam Wisler   | SFDR                  | 8         | DU                 |
|                              | Ada Deturcios (PEN18-0042)  | SFDR                  | 2         | DU                 |
| MV8                          | 32716 Bob Rogers  | SFDR                  | 57        | DU                 |
| MV9                          | SKG Pacific Enterprises Inc.  | SFDR                  | 63        | DU                 |
| MV10                         | Mainstreet Post-acute Care  | Medical Office        | 57.000    | TSF                |
| MV11                         | Pacific Communities "High Pointe" and "Pacific Iris"                        | SFDR                  | 83        | DU                 |
| MV12                         | MV Bella Vista GP, LLC.   | Multifamily Housing   | 220       | DU                 |
| MV13                         | GHA   | Multifamily Housing   | 62        | DU                 |
| MV14                         | Nova Homes  | Multifamily Housing   | 122       | DU                 |
| MV15                         | Mo Ghiassi TL Group   | Multifamily Housing   | 52        | DU                 |
| MV16                         | Continental East Fund III, LLC. (Moreno Valley Ranch Specific Plan No. 193) | Multifamily Housing   | 125       | DU                 |
| MV17                         | Boulder Ridge (PEN17-0064)  | Multifamily Housing   | 141       | DU                 |
|                              | Rancho Belago Developers  | Multifamily Housing   | 141       | DU                 |
|                              | Rocas Grandes (PA 15-0046)  | Multifamily Housing   | 426       | DU                 |
| MV18                         | South Moreno Valley Walmart   | Walmart               | 189.520   | TSF                |
|                              |   | Gas Station           | 16        | VFP                |
| MV19                         | Moreno Valley Logistics Center  | High-Cube Warehouse   | 1351.770  | TSF                |
|                              |   | Light Industrial      | 385.748   | TSF                |
| <b>City of Perris</b>        |   |                       |           |                    |
| P1                           | Bargemann / DPR 07-09-0018  | Warehousing           | 173.000   | TSF                |
| P2                           | Duke 2 / DPR 16-00008   | High-Cube Warehouse   | 669.000   | TSF                |
| P3                           | First Perry / DPR 16-00013  | High-Cube Warehouse   | 240.000   | TSF                |
| P4                           | Gateway / DPR 16-00003  | High-Cube Warehouse   | 400.000   | TSF                |
| P5                           | Integra / DPR 14-02-0014  | High-Cube Warehouse   | 864.000   | TSF                |
| P6                           | OLC 1 / DPR 12-10-0005  | High-Cube Warehouse   | 1,455.000 | TSF                |
| P7                           | OLC2 / DPR 14-01-0015   | High-Cube Warehouse   | 1,037.000 | TSF                |
| P8                           | Markham East / DPR 05-0477  | High-Cube Warehouse   | 460.000   | TSF                |
| P9                           | Markham Industrial / DPR 16-00015   | Warehousing           | 170.000   | TSF                |
| P10                          | Rados / DPR 07-0119   | High-Cube Warehouse   | 1,200.000 | TSF                |
| P11                          | Rider 1 / DPR 16-0365   | High-Cube Warehouse   | 350.000   | TSF                |
| P12                          | Indian/Ramona Warehouse   | High-Cube Warehouse   | 428.730   | TSF                |
| P13                          | Rider 3 / DPR 06-0432   | High-Cube Warehouse   | 640.000   | TSF                |
| P14                          | Westcoast Textile / DPR 16-00001  | Warehousing           | 180.000   | TSF                |
| P15                          | Duke at Patterson / DPR 17-00001  | High-Cube Warehouse   | 811.000   | TSF                |
| P16                          | Harley Knox Commerce Park / DPR 16-004                                      | High-Cube Warehouse   | 386.278   | TSF                |
| P17                          | Perris Marketplace / DPR 05-0341  | Commercial Retail     | 520.000   | TSF                |
| P18                          | Stratford Ranch Residential / TTM 36648                                     | SFDR                  | 270       | DU                 |
| P19                          | Pulte Residential / TTM 30850   | SFDR                  | 496       | DU                 |
| P20                          | Perris Circle 3   | Warehousing           | 210.900   | TSF                |
| P21                          | Rider 2 & 4   | High-Cube Warehouse   | 1,376.721 | TSF                |
| <b>County of Riverside</b>   |   |                       |           |                    |
| RC1                          | McCanna Hills / TTM 33978   | SFDR                  | 63        | DU                 |

<sup>1</sup> SFDR = Single Family Detached Residential

<sup>2</sup> DU = Dwelling Units; TSF = Thousand Square Feet ; VFP = Vehicle Fueling Positions

**APPENDIX 1.2:**  
**SITE ADJACENT QUEUES**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Queuing and Blocking Report  
Horizon Year (2040) With Project - AM Peak Hour

10/24/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  | NB  | SB   | SB   |
|-----------------------|-----|-----|------|------|
| Directions Served     | R   | R   | T    | T    |
| Maximum Queue (ft)    | 81  | 11  | 897  | 874  |
| Average Queue (ft)    | 34  | 0   | 518  | 502  |
| 95th Queue (ft)       | 67  | 8   | 1108 | 1086 |
| Link Distance (ft)    | 458 |     | 1025 | 1025 |
| Upstream Blk Time (%) |     |     | 13   | 12   |
| Queuing Penalty (veh) |     |     | 0    | 0    |
| Storage Bay Dist (ft) |     | 140 |      |      |
| Storage Blk Time (%)  |     |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |

Intersection: 5: Lasselle St. & Driveway 1

| Movement              | WB  | NB  | SB   | SB   |
|-----------------------|-----|-----|------|------|
| Directions Served     | R   | T   | T    | T    |
| Maximum Queue (ft)    | 77  | 17  | 1024 | 1017 |
| Average Queue (ft)    | 26  | 1   | 956  | 953  |
| 95th Queue (ft)       | 57  | 9   | 1090 | 1094 |
| Link Distance (ft)    | 202 | 225 | 975  | 975  |
| Upstream Blk Time (%) |     |     | 34   | 38   |
| Queuing Penalty (veh) |     |     | 207  | 230  |
| Storage Bay Dist (ft) |     |     |      |      |
| Storage Blk Time (%)  |     |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |

Queuing and Blocking Report  
Horizon Year (2040) With Project - AM Peak Hour

10/24/2018

Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB   | NB   | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T    | T    | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1072 | 1062 | 224 | 279 | 104 | 150 | 1007 | 1010 | 205 | 225 | 294 |
| Average Queue (ft)    | 224 | 1047 | 1034 | 118 | 130 | 42  | 149 | 976  | 974  | 145 | 179 | 250 |
| 95th Queue (ft)       | 225 | 1060 | 1102 | 218 | 224 | 81  | 150 | 997  | 997  | 283 | 273 | 285 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953  | 953  |     |     | 225 |
| Upstream Blk Time (%) |     | 95   | 45   |     |     |     |     | 75   | 53   |     | 13  | 59  |
| Queuing Penalty (veh) |     | 0    | 0    |     |     |     |     | 0    | 0    |     | 0   | 431 |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |      |      | 180 | 240 |     |
| Storage Blk Time (%)  | 90  | 5    |      | 5   | 1   |     | 71  | 13   | 39   | 0   | 13  | 59  |
| Queuing Penalty (veh) | 291 | 20   |      | 11  | 2   |     | 467 | 61   | 111  | 1   | 61  | 99  |

Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 277 |
| Average Queue (ft)    | 241 |
| 95th Queue (ft)       | 260 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 54  |
| Queuing Penalty (veh) | 394 |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | EB  | WB | NB  | SB  |
|-----------------------|----|-----|----|-----|-----|
| Directions Served     | L  | TR  | L  | LTR | LTR |
| Maximum Queue (ft)    | 47 | 9   | 26 | 130 | 71  |
| Average Queue (ft)    | 13 | 0   | 9  | 61  | 27  |
| 95th Queue (ft)       | 37 | 4   | 24 | 105 | 55  |
| Link Distance (ft)    |    | 401 |    | 164 | 252 |
| Upstream Blk Time (%) |    |     |    | 0   |     |
| Queuing Penalty (veh) |    |     |    | 0   |     |
| Storage Bay Dist (ft) | 50 |     | 50 |     |     |
| Storage Blk Time (%)  | 0  |     | 0  |     |     |
| Queuing Penalty (veh) | 2  |     | 0  |     |     |

Queuing and Blocking Report  
 Horizon Year (2040) With Project - AM Peak Hour

10/24/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | WB  | NB | NB  | SB  | SB  |
|-----------------------|-----|-----|----|-----|-----|-----|
| Directions Served     | LTR | LTR | L  | TR  | L   | TR  |
| Maximum Queue (ft)    | 53  | 49  | 41 | 151 | 30  | 64  |
| Average Queue (ft)    | 20  | 13  | 9  | 25  | 4   | 13  |
| 95th Queue (ft)       | 47  | 37  | 32 | 86  | 20  | 45  |
| Link Distance (ft)    | 245 | 150 |    | 658 |     | 453 |
| Upstream Blk Time (%) |     |     |    |     |     |     |
| Queuing Penalty (veh) |     |     |    |     |     |     |
| Storage Bay Dist (ft) |     |     | 50 |     | 100 |     |
| Storage Blk Time (%)  |     |     | 0  | 1   |     |     |
| Queuing Penalty (veh) |     |     | 0  | 0   |     |     |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | EB  | EB  | EB   | EB   | EB   | EB  | WB  | WB  | WB   | WB   | WB  | NB  |
|-----------------------|-----|-----|------|------|------|-----|-----|-----|------|------|-----|-----|
| Directions Served     | L   | L   | T    | T    | T    | R   | L   | L   | T    | T    | R   | L   |
| Maximum Queue (ft)    | 308 | 318 | 381  | 342  | 127  | 84  | 64  | 335 | 1350 | 1356 | 225 | 212 |
| Average Queue (ft)    | 218 | 232 | 111  | 98   | 48   | 14  | 22  | 154 | 1319 | 1326 | 222 | 206 |
| 95th Queue (ft)       | 339 | 350 | 261  | 214  | 102  | 58  | 55  | 397 | 1344 | 1345 | 252 | 230 |
| Link Distance (ft)    |     |     | 2427 | 2427 | 2427 |     |     |     | 1304 | 1304 |     |     |
| Upstream Blk Time (%) |     |     |      |      |      |     |     |     | 34   | 73   |     |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |     | 0    | 0    |     |     |
| Storage Bay Dist (ft) | 325 | 325 |      |      |      | 300 | 310 | 310 |      |      | 200 | 200 |
| Storage Blk Time (%)  | 1   | 3   |      |      |      |     |     | 0   | 55   | 50   | 19  | 38  |
| Queuing Penalty (veh) | 1   | 6   |      |      |      |     |     | 0   | 50   | 330  | 145 | 185 |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | NB  | NB   | NB   | NB   | SB  | SB  | SB   | SB   | SB  |
|-----------------------|-----|------|------|------|-----|-----|------|------|-----|
| Directions Served     | L   | T    | T    | R    | L   | L   | T    | T    | R   |
| Maximum Queue (ft)    | 225 | 1152 | 1142 | 1127 | 227 | 240 | 2176 | 2180 | 240 |
| Average Queue (ft)    | 223 | 1123 | 1116 | 994  | 225 | 239 | 1870 | 1845 | 236 |
| 95th Queue (ft)       | 239 | 1141 | 1137 | 1525 | 232 | 240 | 2666 | 2658 | 268 |
| Link Distance (ft)    |     | 1103 | 1103 | 1103 |     |     | 2298 | 2298 |     |
| Upstream Blk Time (%) |     | 84   | 44   | 23   |     |     | 25   | 28   |     |
| Queuing Penalty (veh) |     | 0    | 0    | 0    |     |     | 0    | 0    |     |
| Storage Bay Dist (ft) | 200 |      |      |      | 215 | 215 |      |      | 215 |
| Storage Blk Time (%)  | 59  | 36   |      |      | 23  | 80  | 8    | 13   | 42  |
| Queuing Penalty (veh) | 285 | 184  |      |      | 70  | 249 | 33   | 64   | 130 |

Network Summary

Network wide Queuing Penalty: 4119



Queuing and Blocking Report  
Horizon Year (2040) With Project - PM Peak Hour

10/24/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  | SB   | SB   |
|-----------------------|-----|------|------|
| Directions Served     | R   | T    | T    |
| Maximum Queue (ft)    | 92  | 84   | 62   |
| Average Queue (ft)    | 40  | 5    | 3    |
| 95th Queue (ft)       | 74  | 55   | 46   |
| Link Distance (ft)    | 458 | 1025 | 1025 |
| Upstream Blk Time (%) |     |      |      |
| Queuing Penalty (veh) |     |      |      |
| Storage Bay Dist (ft) |     |      |      |
| Storage Blk Time (%)  |     |      |      |
| Queuing Penalty (veh) |     |      |      |

Intersection: 5: Lasselle St. & Driveway 1

| Movement              | WB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | R   | TR  | T   | T   |
| Maximum Queue (ft)    | 67  | 10  | 802 | 784 |
| Average Queue (ft)    | 32  | 0   | 482 | 482 |
| 95th Queue (ft)       | 60  | 7   | 931 | 928 |
| Link Distance (ft)    | 202 | 225 | 975 | 975 |
| Upstream Blk Time (%) |     |     | 0   | 0   |
| Queuing Penalty (veh) |     |     | 2   | 2   |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Queuing and Blocking Report  
Horizon Year (2040) With Project - PM Peak Hour

10/24/2018

Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T   | T   | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1076 | 1054 | 176 | 147 | 77  | 149 | 400 | 355 | 205 | 225 | 277 |
| Average Queue (ft)    | 224 | 1047 | 944  | 78  | 48  | 27  | 114 | 230 | 200 | 41  | 138 | 239 |
| 95th Queue (ft)       | 224 | 1062 | 1374 | 148 | 102 | 58  | 178 | 363 | 325 | 151 | 239 | 268 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953 | 953 |     |     | 225 |
| Upstream Blk Time (%) |     | 97   | 33   |     |     |     |     |     |     |     | 1   | 35  |
| Queuing Penalty (veh) |     | 0    | 0    |     |     |     |     |     |     |     | 0   | 292 |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |     |     | 180 | 240 |     |
| Storage Blk Time (%)  | 95  | 2    |      | 0   |     |     | 7   | 24  | 10  | 0   | 1   | 35  |
| Queuing Penalty (veh) | 85  | 6    |      | 0   |     |     | 37  | 35  | 8   | 0   | 8   | 62  |

Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 264 |
| Average Queue (ft)    | 238 |
| 95th Queue (ft)       | 259 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 36  |
| Queuing Penalty (veh) | 303 |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | EB  | WB | NB  | SB  |
|-----------------------|----|-----|----|-----|-----|
| Directions Served     | L  | TR  | L  | LTR | LTR |
| Maximum Queue (ft)    | 40 | 8   | 21 | 78  | 57  |
| Average Queue (ft)    | 8  | 0   | 1  | 35  | 24  |
| 95th Queue (ft)       | 30 | 4   | 9  | 65  | 49  |
| Link Distance (ft)    |    | 401 |    | 164 | 252 |
| Upstream Blk Time (%) |    |     |    |     |     |
| Queuing Penalty (veh) |    |     |    |     |     |
| Storage Bay Dist (ft) | 50 |     | 50 |     |     |
| Storage Blk Time (%)  | 0  |     | 0  |     |     |
| Queuing Penalty (veh) | 0  |     | 0  |     |     |

Queuing and Blocking Report  
 Horizon Year (2040) With Project - PM Peak Hour

10/24/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | NB |
|-----------------------|-----|----|
| Directions Served     | LTR | L  |
| Maximum Queue (ft)    | 36  | 28 |
| Average Queue (ft)    | 17  | 2  |
| 95th Queue (ft)       | 43  | 12 |
| Link Distance (ft)    | 245 |    |
| Upstream Blk Time (%) |     |    |
| Queuing Penalty (veh) |     |    |
| Storage Bay Dist (ft) | 50  |    |
| Storage Blk Time (%)  |     |    |
| Queuing Penalty (veh) |     |    |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | EB  | EB  | EB   | EB   | EB   | EB  | WB  | WB   | WB   | WB  | WB  | NB  |
|-----------------------|-----|-----|------|------|------|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | L   | T    | T    | T    | R   | L   | L    | T    | T   | R   | L   |
| Maximum Queue (ft)    | 293 | 304 | 314  | 332  | 306  | 292 | 126 | 334  | 463  | 494 | 225 | 195 |
| Average Queue (ft)    | 177 | 191 | 228  | 231  | 211  | 105 | 31  | 91   | 266  | 274 | 188 | 108 |
| 95th Queue (ft)       | 265 | 279 | 302  | 307  | 284  | 219 | 80  | 225  | 393  | 430 | 280 | 203 |
| Link Distance (ft)    |     |     | 2427 | 2427 | 2427 |     |     | 1304 | 1304 |     |     |     |
| Upstream Blk Time (%) |     |     |      |      |      |     |     |      |      |     |     |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |      |      |     |     |     |
| Storage Bay Dist (ft) | 325 | 325 |      |      |      | 300 | 310 | 310  |      |     | 200 | 200 |
| Storage Blk Time (%)  | 0   | 0   | 0    |      | 0    | 0   |     | 0    | 4    | 13  | 7   | 0   |
| Queuing Penalty (veh) | 0   | 1   | 0    |      | 1    | 0   |     | 0    | 4    | 57  | 27  | 0   |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | NB   | NB  | NB   | NB   | SB  | SB  | SB   | SB   | SB  |  |  |
|-----------------------|------|-----|------|------|-----|-----|------|------|-----|--|--|
| Directions Served     | L    | T   | T    | R    | L   | L   | T    | T    | R   |  |  |
| Maximum Queue (ft)    | 224  | 330 | 284  | 84   | 227 | 240 | 2352 | 2354 | 240 |  |  |
| Average Queue (ft)    | 154  | 193 | 168  | 32   | 225 | 239 | 2319 | 2318 | 173 |  |  |
| 95th Queue (ft)       | 229  | 286 | 249  | 67   | 234 | 240 | 2338 | 2335 | 304 |  |  |
| Link Distance (ft)    | 1103 |     | 1103 | 1103 |     |     | 2298 | 2298 |     |  |  |
| Upstream Blk Time (%) |      |     |      |      |     |     | 87   | 50   |     |  |  |
| Queuing Penalty (veh) |      |     |      |      |     |     | 0    | 0    |     |  |  |
| Storage Bay Dist (ft) | 200  |     |      |      | 215 | 215 |      |      | 215 |  |  |
| Storage Blk Time (%)  | 2    | 6   |      |      | 21  | 75  | 7    | 13   | 2   |  |  |
| Queuing Penalty (veh) | 6    | 16  |      |      | 93  | 328 | 37   | 50   | 7   |  |  |

Network Summary

Network wide Queuing Penalty: 1468

**APPENDIX 3.1:**  
**EXISTING TRAFFIC COUNTS – MARCH 2018**



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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Perris Boulevard  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 03\_MR\_V\_Perris\_Krameria AM  
 Site Code : 05118162  
 Start Date : 3/8/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time  | Perris Boulevard Southbound |      |       |      | Krameria Avenue Westbound |      |      |       | Perris Boulevard Northbound |            |      |      | Krameria Avenue Eastbound |      |            |      | Exclu. Total | Inclu. Total | Int. Total |      |       |      |            |
|-------------|-----------------------------|------|-------|------|---------------------------|------|------|-------|-----------------------------|------------|------|------|---------------------------|------|------------|------|--------------|--------------|------------|------|-------|------|------------|
|             | Left                        | Thru | Right | RTOR | App. Total                | Left | Thru | Right | RTOR                        | App. Total | Left | Thru | Right                     | RTOR | App. Total | Left |              |              |            | Thru | Right | RTOR | App. Total |
| 07:00 AM    | 13                          | 172  | 39    | 5    | 224                       | 10   | 21   | 9     | 5                           | 40         | 77   | 205  | 19                        | 7    | 301        | 43   | 24           | 113          | 50         | 180  | 67    | 745  | 812        |
| 07:15 AM    | 15                          | 232  | 27    | 4    | 274                       | 23   | 33   | 12    | 3                           | 68         | 99   | 270  | 42                        | 6    | 411        | 103  | 49           | 127          | 16         | 279  | 29    | 1032 | 1061       |
| 07:30 AM    | 18                          | 112  | 19    | 2    | 149                       | 14   | 37   | 23    | 9                           | 74         | 79   | 278  | 58                        | 19   | 415        | 71   | 59           | 45           | 13         | 175  | 43    | 813  | 856        |
| 07:45 AM    | 46                          | 140  | 17    | 2    | 203                       | 27   | 30   | 23    | 6                           | 80         | 49   | 250  | 79                        | 21   | 378        | 56   | 59           | 22           | 9          | 137  | 38    | 798  | 836        |
| Total       | 92                          | 656  | 102   | 13   | 850                       | 74   | 121  | 67    | 23                          | 262        | 304  | 1003 | 198                       | 53   | 1505       | 273  | 191          | 307          | 88         | 771  | 177   | 3388 | 3565       |
| 08:00 AM    | 40                          | 105  | 7     | 0    | 152                       | 57   | 41   | 29    | 10                          | 127        | 32   | 212  | 75                        | 20   | 319        | 53   | 41           | 28           | 18         | 122  | 48    | 720  | 768        |
| 08:15 AM    | 10                          | 85   | 16    | 1    | 111                       | 31   | 32   | 27    | 14                          | 90         | 19   | 153  | 9                         | 5    | 181        | 24   | 14           | 25           | 11         | 63   | 31    | 445  | 476        |
| 08:30 AM    | 6                           | 88   | 7     | 0    | 101                       | 14   | 5    | 12    | 5                           | 31         | 17   | 151  | 4                         | 2    | 172        | 24   | 3            | 20           | 13         | 47   | 20    | 351  | 371        |
| 08:45 AM    | 3                           | 90   | 8     | 0    | 101                       | 11   | 3    | 7     | 3                           | 21         | 9    | 157  | 7                         | 1    | 173        | 20   | 3            | 19           | 15         | 42   | 19    | 337  | 356        |
| Total       | 59                          | 368  | 38    | 1    | 465                       | 113  | 81   | 75    | 32                          | 269        | 77   | 673  | 95                        | 28   | 845        | 121  | 61           | 92           | 57         | 274  | 118   | 1853 | 1971       |
| Grand Total | 151                         | 1024 | 140   | 14   | 1315                      | 187  | 202  | 142   | 55                          | 531        | 381  | 1676 | 293                       | 81   | 2350       | 394  | 252          | 399          | 145        | 1045 | 295   | 5241 | 5536       |
| Approach %  | 11.5                        | 77.9 | 10.6  |      |                           | 35.2 | 38   | 26.7  |                             |            | 16.2 | 71.3 | 12.5                      |      | 44.8       | 37.7 | 24.1         | 38.2         |            | 19.9 | 5.3   | 94.7 |            |
| Total %     | 2.9                         | 19.5 | 2.7   |      | 25.1                      | 3.6  | 3.9  | 2.7   |                             | 10.1       | 7.3  | 32   | 5.6                       |      |            | 7.5  | 4.8          | 7.6          |            |      |       |      |            |

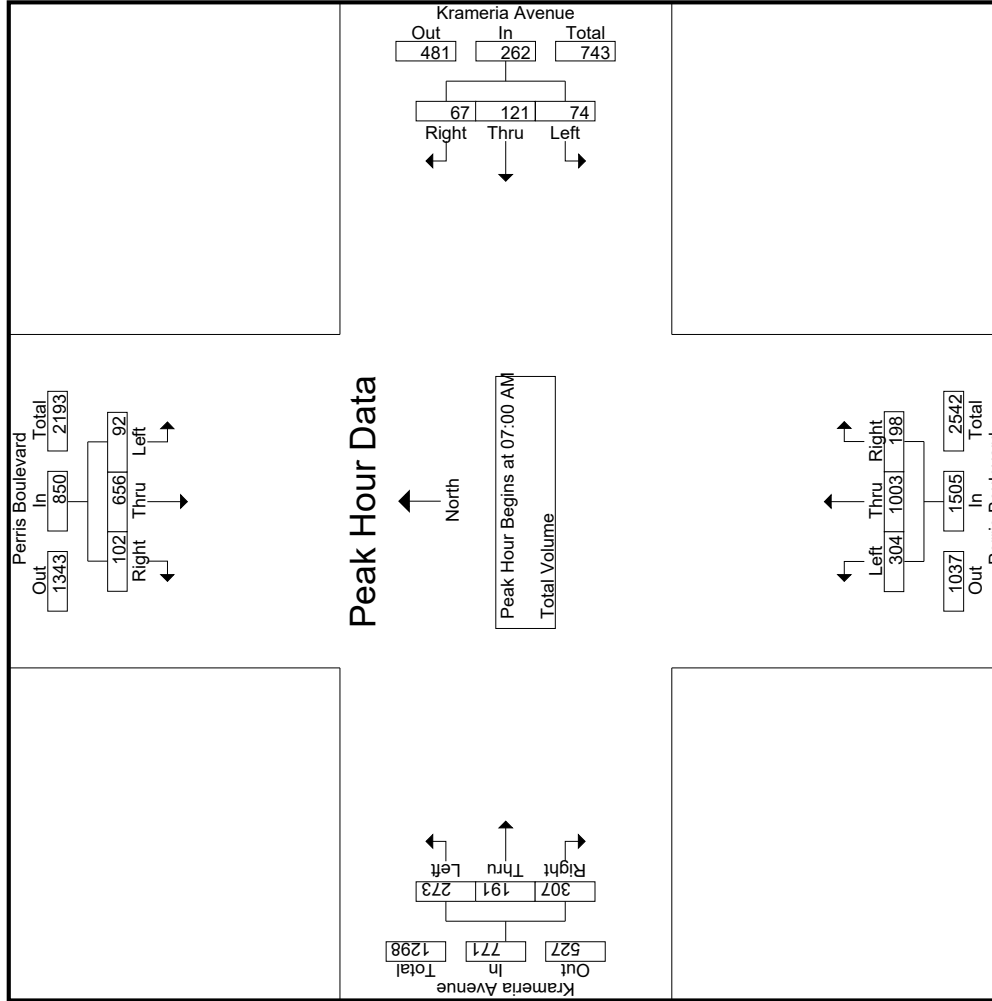
  

| Start Time   | Perris Boulevard Southbound |      |       |      | Krameria Avenue Westbound |      |      |       | Perris Boulevard Northbound |            |      |      | Krameria Avenue Eastbound |      |            |      | Exclu. Total | Inclu. Total | Int. Total |      |       |      |            |
|--|-----------------------------|------|-------|------|---------------------------|------|------|-------|-----------------------------|------------|------|------|---------------------------|------|------------|------|--------------|--------------|------------|------|-------|------|------------|
|  | Left                        | Thru | Right | RTOR | App. Total                | Left | Thru | Right | RTOR                        | App. Total | Left | Thru | Right                     | RTOR | App. Total | Left |              |              |            | Thru | Right | RTOR | App. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                             |      |       |      |                           |      |      |       |                             |            |      |      |                           |      |            |      |              |              |            |      |       |      |            |
| Peak Hour for Entire Intersection Begins at 07:00 AM       |                             |      |       |      |                           |      |      |       |                             |            |      |      |                           |      |            |      |              |              |            |      |       |      |            |
| 07:00 AM   | 13                          | 172  | 39    |      | 224                       | 10   | 21   | 9     |                             | 40         | 77   | 205  | 19                        |      | 301        | 43   | 24           | 113          |            | 180  | 67    | 745  | 745        |
| 07:15 AM   | 15                          | 232  | 27    |      | 274                       | 23   | 33   | 12    |                             | 68         | 99   | 270  | 42                        |      | 411        | 103  | 49           | 127          |            | 279  | 29    | 1032 | 1032       |
| 07:30 AM   | 18                          | 112  | 19    |      | 149                       | 14   | 37   | 23    |                             | 74         | 79   | 278  | 58                        |      | 415        | 71   | 59           | 45           |            | 175  | 43    | 813  | 813        |
| 07:45 AM   | 46                          | 140  | 17    |      | 203                       | 27   | 30   | 23    |                             | 80         | 49   | 250  | 79                        |      | 378        | 56   | 59           | 22           |            | 137  | 38    | 798  | 798        |
| Total Volume   | 92                          | 656  | 102   |      | 850                       | 74   | 121  | 67    |                             | 262        | 304  | 1003 | 198                       |      | 1505       | 273  | 191          | 307          |            | 771  | 177   | 3388 | 3388       |
| % App. Total   | 10.8                        | 77.2 | 12    |      |                           | 28.2 | 46.2 | 25.6  |                             |            | 20.2 | 66.6 | 13.2                      |      |            | 35.4 | 24.8         | 39.8         |            |      |       |      |            |
| PHF  | .500                        | .707 | .654  |      | .776                      | .685 | .818 | .728  |                             | .819       | .768 | .902 | .627                      |      | .907       | .663 | .809         | .604         |            | .691 |       |      | .821       |

Counts Unlimited  
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City of Moreno Valley  
 N/S: Perris Boulevard  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 03\_MR\_V\_Perris\_Krameria AM  
 Site Code : 05118162  
 Start Date : 3/8/2018  
 Page No : 2



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City of Moreno Valley  
 N/S: Perris Boulevard  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 03\_MR\_V\_Perris\_Krameria PM  
 Site Code : 05118162  
 Start Date : 3/8/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time  | Perris Boulevard Southbound |      |       |      | Krameria Avenue Westbound |      |      |       | Perris Boulevard Northbound |            |      |      | Krameria Avenue Eastbound |      |            |      | Exclu. Total | Inclu. Total | Int. Total |      |       |      |            |
|-------------|-----------------------------|------|-------|------|---------------------------|------|------|-------|-----------------------------|------------|------|------|---------------------------|------|------------|------|--------------|--------------|------------|------|-------|------|------------|
|             | Left                        | Thru | Right | RTOR | App. Total                | Left | Thru | Right | RTOR                        | App. Total | Left | Thru | Right                     | RTOR | App. Total | Left |              |              |            | Thru | Right | RTOR | App. Total |
| 04:00 PM    | 25                          | 194  | 19    | 2    | 238                       | 20   | 17   | 11    | 1                           | 48         | 31   | 182  | 9                         | 1    | 222        | 23   | 8            | 39           | 14         | 70   | 18    | 578  | 596        |
| 04:15 PM    | 25                          | 268  | 10    | 0    | 303                       | 14   | 11   | 6     | 1                           | 31         | 26   | 174  | 9                         | 0    | 209        | 28   | 6            | 33           | 8          | 67   | 9     | 610  | 619        |
| 04:30 PM    | 24                          | 212  | 17    | 2    | 253                       | 18   | 10   | 9     | 1                           | 37         | 28   | 191  | 9                         | 1    | 228        | 37   | 11           | 33           | 6          | 81   | 10    | 599  | 609        |
| 04:45 PM    | 19                          | 255  | 24    | 2    | 298                       | 18   | 11   | 9     | 4                           | 38         | 28   | 186  | 16                        | 0    | 230        | 23   | 6            | 40           | 18         | 69   | 24    | 635  | 659        |
| Total       | 93                          | 929  | 70    | 6    | 1092                      | 70   | 49   | 35    | 7                           | 154        | 113  | 733  | 43                        | 2    | 889        | 111  | 31           | 145          | 46         | 287  | 61    | 2422 | 2483       |
| 05:00 PM    | 18                          | 209  | 19    | 1    | 246                       | 13   | 6    | 15    | 9                           | 34         | 22   | 175  | 3                         | 1    | 200        | 32   | 8            | 32           | 19         | 72   | 30    | 552  | 582        |
| 05:15 PM    | 20                          | 259  | 18    | 2    | 297                       | 18   | 11   | 11    | 4                           | 40         | 13   | 191  | 15                        | 5    | 219        | 25   | 14           | 28           | 18         | 67   | 29    | 623  | 652        |
| 05:30 PM    | 27                          | 259  | 15    | 2    | 301                       | 14   | 7    | 8     | 3                           | 29         | 25   | 222  | 13                        | 7    | 260        | 34   | 11           | 31           | 11         | 76   | 23    | 666  | 689        |
| 05:45 PM    | 27                          | 271  | 8     | 2    | 306                       | 9    | 4    | 21    | 14                          | 34         | 29   | 209  | 17                        | 2    | 255        | 34   | 16           | 49           | 26         | 99   | 44    | 694  | 738        |
| Total       | 92                          | 998  | 60    | 7    | 1150                      | 54   | 28   | 55    | 30                          | 137        | 89   | 797  | 48                        | 15   | 934        | 125  | 49           | 140          | 74         | 314  | 126   | 2535 | 2661       |
| Grand Total | 185                         | 1927 | 130   | 13   | 2242                      | 124  | 77   | 90    | 37                          | 291        | 202  | 1530 | 91                        | 17   | 1823       | 236  | 80           | 285          | 120        | 601  | 187   | 4957 | 5144       |
| Approach %  | 8.3                         | 86   | 5.8   |      | 45.2                      | 42.6 | 26.5 | 30.9  |                             | 5.9        | 11.1 | 83.9 | 5                         |      | 36.8       | 39.3 | 13.3         | 47.4         |            | 12.1 | 3.6   | 96.4 |            |
| Total %     | 3.7                         | 38.9 | 2.6   |      |                           | 2.5  | 1.6  | 1.8   |                             |            | 4.1  | 30.9 | 1.8                       |      |            | 4.8  | 1.6          | 5.7          |            |      |       |      |            |

| Start Time   | Perris Boulevard Southbound |      |       |      | Krameria Avenue Westbound |      |      |       | Perris Boulevard Northbound |            |      |      | Krameria Avenue Eastbound |      |            |      | Exclu. Total | Inclu. Total | Int. Total |      |       |      |            |
|--------------|-----------------------------|------|-------|------|---------------------------|------|------|-------|-----------------------------|------------|------|------|---------------------------|------|------------|------|--------------|--------------|------------|------|-------|------|------------|
|              | Left                        | Thru | Right | RTOR | App. Total                | Left | Thru | Right | RTOR                        | App. Total | Left | Thru | Right                     | RTOR | App. Total | Left |              |              |            | Thru | Right | RTOR | App. Total |
| 05:00 PM     | 18                          | 209  | 19    | 1    | 246                       | 13   | 6    | 15    | 9                           | 34         | 22   | 175  | 3                         | 1    | 200        | 32   | 8            | 32           | 19         | 72   | 30    | 552  | 582        |
| 05:15 PM     | 20                          | 259  | 18    | 2    | 297                       | 18   | 11   | 11    | 4                           | 40         | 13   | 191  | 15                        | 5    | 219        | 25   | 14           | 28           | 18         | 67   | 29    | 623  | 652        |
| 05:30 PM     | 27                          | 259  | 15    | 2    | 301                       | 14   | 7    | 8     | 3                           | 29         | 25   | 222  | 13                        | 7    | 260        | 34   | 11           | 31           | 11         | 76   | 23    | 666  | 689        |
| 05:45 PM     | 27                          | 271  | 8     | 2    | 306                       | 9    | 4    | 21    | 14                          | 34         | 29   | 209  | 17                        | 2    | 255        | 34   | 16           | 49           | 26         | 99   | 44    | 694  | 738        |
| Total Volume | 92                          | 998  | 60    | 7    | 1150                      | 54   | 28   | 55    | 30                          | 137        | 89   | 797  | 48                        | 15   | 934        | 125  | 49           | 140          | 74         | 314  | 126   | 2535 | 2661       |
| % App. Total | 8                           | 86.8 | 5.2   |      | 45.2                      | 42.6 | 26.5 | 30.9  |                             | 5.9        | 11.1 | 83.9 | 5                         |      | 36.8       | 39.3 | 13.3         | 47.4         |            | 12.1 | 3.6   | 96.4 |            |
| PHF          | .852                        | .921 | .789  |      | .940                      | .750 | .636 | .655  |                             | .856       | .767 | .898 | .706                      |      | .898       | .919 | .766         | .714         |            | .793 |       | .913 |            |

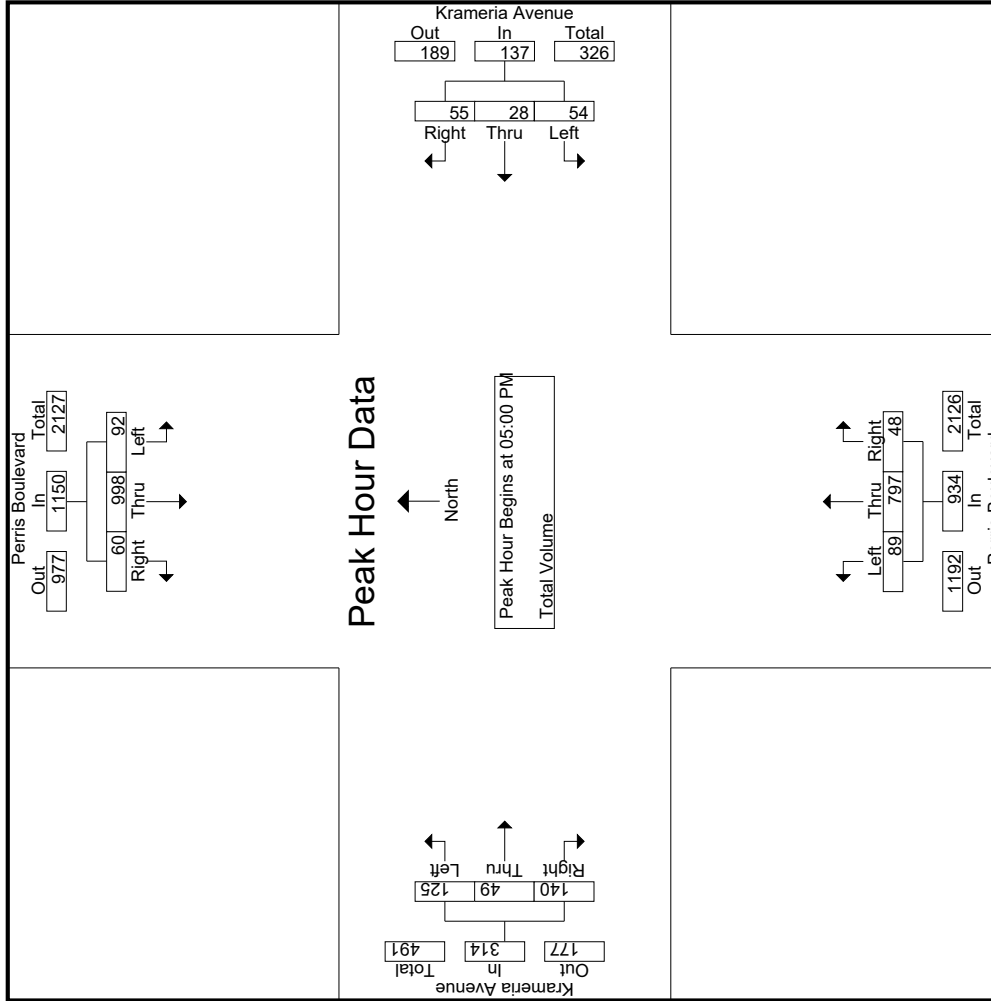
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM



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 (951) 268-6268

City of Moreno Valley  
 N/S: Perris Boulevard  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 03\_MR\_V\_Perris\_Krameria PM  
 Site Code : 05118162  
 Start Date : 3/8/2018  
 Page No : 2



Location: Moreno Valley  
 N/S: Perris Boulevard  
 E/W: Krameria Avenue



Date: 3/8/2018  
 Date: Thursday

PEDESTRIANS

|                | North Leg<br>Perris Boulevard<br>Pedestrians | East Leg<br>Krameria Avenue<br>Pedestrians | South Leg<br>Perris Boulevard<br>Pedestrians | West Leg<br>Krameria Avenue<br>Pedestrians |    |
|----------------|--|--|--|--|----|
| 7:00 AM        | 0  | 0  | 0  | 7  | 7  |
| 7:15 AM        | 0  | 0  | 2  | 1  | 3  |
| 7:30 AM        | 0  | 1  | 3  | 0  | 4  |
| 7:45 AM        | 0  | 0  | 1  | 1  | 2  |
| 8:00 AM        | 0  | 0  | 0  | 0  | 0  |
| 8:15 AM        | 0  | 0  | 0  | 0  | 0  |
| 8:30 AM        | 0  | 0  | 0  | 1  | 1  |
| 8:45 AM        | 0  | 0  | 0  | 0  | 0  |
| TOTAL VOLUMES: | 0  | 1  | 6  | 10   | 17 |

|                | North Leg<br>Perris Boulevard<br>Pedestrians | East Leg<br>Krameria Avenue<br>Pedestrians | South Leg<br>Perris Boulevard<br>Pedestrians | West Leg<br>Krameria Avenue<br>Pedestrians |    |
|----------------|--|--|--|--|----|
| 4:00 PM        | 2  | 0  | 11   | 1  | 14 |
| 4:15 PM        | 0  | 0  | 3  | 5  | 8  |
| 4:30 PM        | 0  | 1  | 11   | 1  | 13 |
| 4:45 PM        | 0  | 0  | 2  | 2  | 4  |
| 5:00 PM        | 0  | 0  | 2  | 5  | 7  |
| 5:15 PM        | 0  | 0  | 0  | 0  | 0  |
| 5:30 PM        | 0  | 0  | 0  | 0  | 0  |
| 5:45 PM        | 2  | 1  | 2  | 0  | 5  |
| TOTAL VOLUMES: | 4  | 2  | 31   | 14   | 51 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Location: Moreno Valley  
 N/S: Perris Boulevard  
 E/W: Krameria Avenue



Date: 3/8/2018  
 Date: Thursday

BICYCLES

|                | Southbound<br>Perris Boulevard |      |       | Westbound<br>Krameria Avenue |      |       | Northbound<br>Perris Boulevard |      |       | Eastbound<br>Krameria Avenue |      |       |   |
|----------------|--------------------------------|------|-------|------------------------------|------|-------|--------------------------------|------|-------|------------------------------|------|-------|---|
|                | Left                           | Thru | Right | Left                         | Thru | Right | Left                           | Thru | Right | Left                         | Thru | Right |   |
| 7:00 AM        | 1                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 1    | 0     | 0                            | 0    | 0     | 2 |
| 7:15 AM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 0 |
| 7:30 AM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 0 |
| 7:45 AM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 1    | 0     | 0                            | 1    | 0     | 2 |
| 8:00 AM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 0 |
| 8:15 AM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 0 |
| 8:30 AM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 0 |
| 8:45 AM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 0 |
| TOTAL VOLUMES: | 1                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 2    | 0     | 0                            | 1    | 0     | 4 |

|                | Southbound<br>Perris Boulevard |      |       | Westbound<br>Krameria Avenue |      |       | Northbound<br>Perris Boulevard |      |       | Eastbound<br>Krameria Avenue |      |       |   |
|----------------|--------------------------------|------|-------|------------------------------|------|-------|--------------------------------|------|-------|------------------------------|------|-------|---|
|                | Left                           | Thru | Right | Left                         | Thru | Right | Left                           | Thru | Right | Left                         | Thru | Right |   |
| 4:00 PM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 0 |
| 4:15 PM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 1    | 0     | 0                            | 2    | 0     | 3 |
| 4:30 PM        | 1                              | 0    | 0     | 0                            | 1    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 2 |
| 4:45 PM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 0 |
| 5:00 PM        | 0                              | 1    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 1 |
| 5:15 PM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 1    | 0     | 0                            | 0    | 0     | 1 |
| 5:30 PM        | 0                              | 0    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 0 |
| 5:45 PM        | 0                              | 2    | 0     | 0                            | 0    | 0     | 0                              | 0    | 0     | 0                            | 0    | 0     | 2 |
| TOTAL VOLUMES: | 1                              | 3    | 0     | 0                            | 1    | 0     | 0                              | 2    | 0     | 0                            | 2    | 0     | 9 |

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City of Moreno Valley  
 N/S: Kitching Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 05\_MRV\_Kitching\_Krameria AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time  | Kitching Street Southbound |      |       |      |            | Krameria Avenue Westbound |      |       |      |            | Kitching Street Northbound |      |       |      |            | Krameria Avenue Eastbound |      |       |      |            |              |              |            |
|-------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|--------------|--------------|------------|
|             | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Exclu. Total | Inclu. Total | Int. Total |
| 07:00 AM    | 85                         | 17   | 17    | 6    | 119        | 10                        | 75   | 45    | 19   | 130        | 8                          | 13   | 21    | 6    | 42         | 7                         | 110  | 14    | 2    | 131        | 33           | 422          | 455        |
| 07:15 AM    | 114                        | 22   | 16    | 6    | 152        | 23                        | 123  | 64    | 14   | 210        | 11                         | 20   | 19    | 7    | 50         | 17                        | 124  | 10    | 1    | 151        | 28           | 563          | 591        |
| 07:30 AM    | 28                         | 41   | 20    | 7    | 89         | 26                        | 144  | 55    | 7    | 225        | 11                         | 34   | 17    | 7    | 62         | 24                        | 79   | 30    | 10   | 133        | 31           | 509          | 540        |
| 07:45 AM    | 26                         | 64   | 27    | 7    | 117        | 25                        | 69   | 17    | 4    | 111        | 24                         | 45   | 10    | 4    | 79         | 23                        | 95   | 55    | 2    | 173        | 17           | 480          | 497        |
| Total       | 253                        | 144  | 80    | 26   | 477        | 84                        | 411  | 181   | 44   | 676        | 54                         | 112  | 67    | 24   | 233        | 71                        | 408  | 109   | 15   | 588        | 109          | 1974         | 2083       |
| 08:00 AM    | 17                         | 45   | 18    | 3    | 80         | 5                         | 70   | 26    | 3    | 101        | 24                         | 73   | 13    | 2    | 110        | 16                        | 49   | 23    | 4    | 88         | 12           | 379          | 391        |
| 08:15 AM    | 6                          | 16   | 25    | 9    | 47         | 0                         | 59   | 18    | 5    | 77         | 4                          | 16   | 3     | 0    | 23         | 10                        | 34   | 6     | 2    | 50         | 16           | 197          | 213        |
| 08:30 AM    | 10                         | 10   | 9     | 4    | 29         | 2                         | 55   | 26    | 3    | 83         | 3                          | 18   | 1     | 0    | 22         | 7                         | 29   | 5     | 2    | 41         | 9            | 175          | 184        |
| 08:45 AM    | 6                          | 9    | 16    | 5    | 31         | 1                         | 30   | 10    | 1    | 41         | 2                          | 11   | 2     | 1    | 15         | 13                        | 34   | 0     | 0    | 47         | 7            | 134          | 141        |
| Total       | 39                         | 80   | 68    | 21   | 187        | 8                         | 214  | 80    | 12   | 302        | 33                         | 118  | 19    | 3    | 170        | 46                        | 146  | 34    | 8    | 226        | 44           | 885          | 929        |
| Grand Total | 292                        | 224  | 148   | 47   | 664        | 92                        | 625  | 261   | 56   | 978        | 87                         | 230  | 86    | 27   | 403        | 117                       | 554  | 143   | 23   | 814        | 153          | 2859         | 3012       |
| Approach %  | 44                         | 33.7 | 22.3  |      |            | 9.4                       | 63.9 | 26.7  |      |            | 21.6                       | 57.1 | 21.3  |      | 14.1       | 14.4                      | 68.1 | 17.6  |      | 28.5       | 5.1          | 94.9         |            |
| Total %     | 10.2                       | 7.8  | 5.2   |      | 23.2       | 3.2                       | 21.9 | 9.1   |      | 34.2       | 3                          | 8    | 3     |      |            | 4.1                       | 19.4 | 5     |      |            |              |              |            |

3.1-7

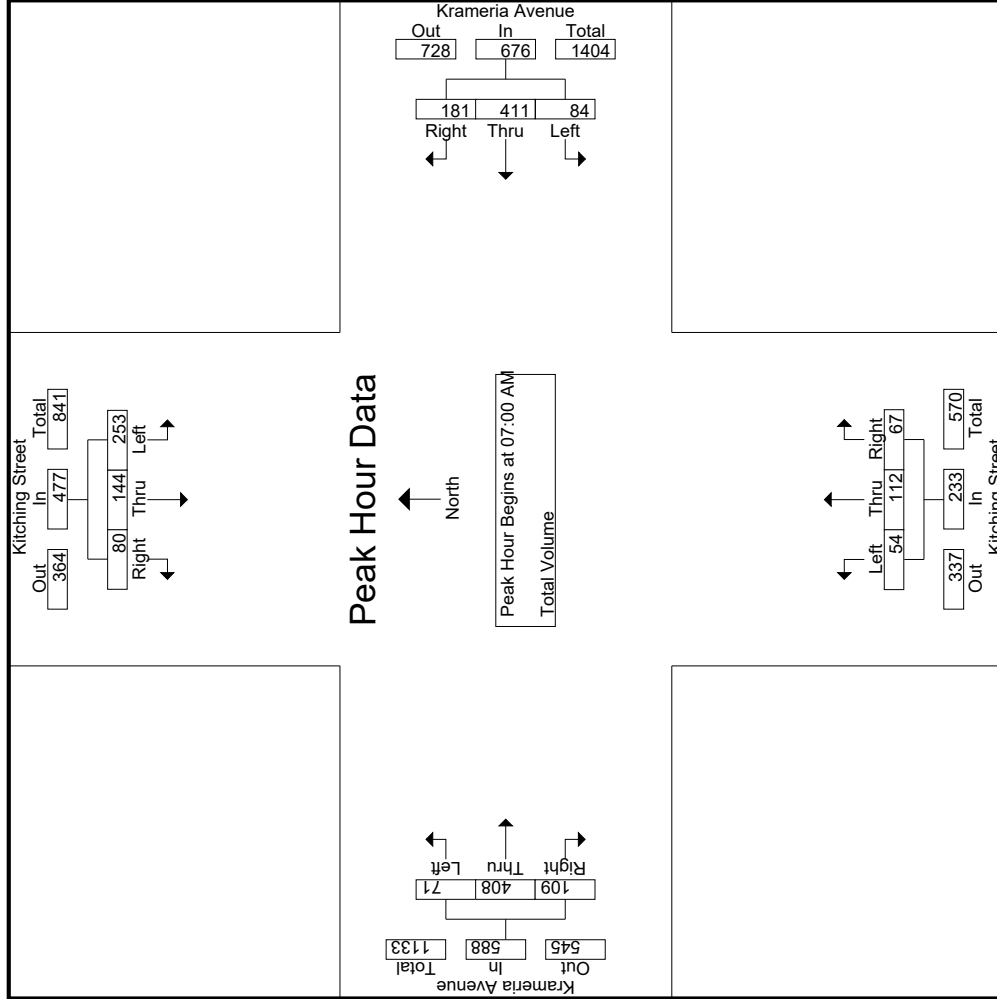
| Start Time   | Kitching Street Southbound |      |       |      |            | Krameria Avenue Westbound |      |       |      |            | Kitching Street Northbound |      |       |      |            | Krameria Avenue Eastbound |      |       |      |            |              |              |            |
|--|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|--------------|--------------|------------|
|  | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Exclu. Total | Inclu. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                            |      |       |      |            |                           |      |       |      |            |                            |      |       |      |            |                           |      |       |      |            |              |              |            |
| Peak Hour for Entire Intersection Begins at 07:00 AM       |                            |      |       |      |            |                           |      |       |      |            |                            |      |       |      |            |                           |      |       |      |            |              |              |            |
| 07:00 AM   | 85                         | 17   | 17    | 6    | 119        | 10                        | 75   | 45    | 19   | 130        | 8                          | 13   | 21    | 6    | 42         | 7                         | 110  | 14    | 2    | 131        | 33           | 422          | 455        |
| 07:15 AM   | 114                        | 22   | 16    | 6    | 152        | 23                        | 123  | 64    | 14   | 210        | 11                         | 20   | 19    | 7    | 50         | 17                        | 124  | 10    | 1    | 151        | 28           | 563          | 591        |
| 07:30 AM   | 28                         | 41   | 20    | 7    | 89         | 26                        | 144  | 55    | 7    | 225        | 11                         | 34   | 17    | 7    | 62         | 24                        | 79   | 30    | 10   | 133        | 31           | 509          | 540        |
| 07:45 AM   | 26                         | 64   | 27    | 7    | 117        | 25                        | 69   | 17    | 4    | 111        | 24                         | 45   | 10    | 4    | 79         | 23                        | 95   | 55    | 2    | 173        | 17           | 480          | 497        |
| Total Volume   | 253                        | 144  | 80    | 26   | 477        | 84                        | 411  | 181   | 44   | 676        | 54                         | 112  | 67    | 24   | 233        | 71                        | 408  | 109   | 15   | 588        | 109          | 1974         | 2083       |
| % App. Total   | 53                         | 30.2 | 16.8  |      | 23.2       | 3.2                       | 21.9 | 9.1   |      | 34.2       | 3                          | 8    | 3     |      | 14.1       | 4.1                       | 19.4 | 5     |      | 28.5       | 5.1          | 94.9         |            |
| PHF  | .555                       | .563 | .741  |      | .785       | .808                      | .714 | .707  |      | .751       | .563                       | .622 | .798  |      | .737       | .740                      | .823 | .495  |      | .850       |              | .877         |            |



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City of Moreno Valley  
 N/S: Kitching Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 05\_MRV\_Kitching\_Krameria AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



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City of Moreno Valley  
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File Name : 05\_MRV\_Kitching\_Krameria PM  
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Groups Printed- Total Volume

| Start Time  | Kitching Street Southbound |      |       |      |            | Krameria Avenue Westbound |      |       |      |            | Kitching Street Northbound |      |       |      |            | Krameria Avenue Eastbound |      |       |      |            |              |              |            |
|-------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|--------------|--------------|------------|
|             | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Exclu. Total | Inclu. Total | Int. Total |
| 04:00 PM    | 20                         | 18   | 23    | 12   | 61         | 5                         | 56   | 23    | 5    | 84         | 6                          | 20   | 4     | 1    | 30         | 16                        | 48   | 3     | 0    | 67         | 18           | 242          | 260        |
| 04:15 PM    | 15                         | 22   | 21    | 11   | 58         | 6                         | 51   | 27    | 4    | 84         | 12                         | 23   | 6     | 3    | 41         | 15                        | 50   | 13    | 3    | 78         | 21           | 261          | 282        |
| 04:30 PM    | 23                         | 20   | 21    | 10   | 64         | 5                         | 49   | 17    | 1    | 71         | 4                          | 12   | 4     | 2    | 20         | 30                        | 61   | 7     | 1    | 98         | 14           | 253          | 267        |
| 04:45 PM    | 23                         | 18   | 19    | 2    | 60         | 3                         | 46   | 14    | 7    | 63         | 3                          | 18   | 3     | 0    | 24         | 22                        | 73   | 9     | 2    | 104        | 11           | 251          | 262        |
| Total       | 81                         | 78   | 84    | 35   | 243        | 19                        | 202  | 81    | 17   | 302        | 25                         | 73   | 17    | 6    | 115        | 83                        | 232  | 32    | 6    | 347        | 64           | 1007         | 1071       |
| 05:00 PM    | 35                         | 18   | 20    | 10   | 73         | 3                         | 39   | 17    | 4    | 59         | 7                          | 14   | 4     | 0    | 25         | 18                        | 57   | 5     | 2    | 80         | 16           | 237          | 253        |
| 05:15 PM    | 35                         | 18   | 16    | 6    | 69         | 7                         | 38   | 12    | 2    | 57         | 1                          | 8    | 4     | 3    | 13         | 13                        | 69   | 7     | 0    | 89         | 11           | 228          | 239        |
| 05:30 PM    | 24                         | 21   | 25    | 10   | 70         | 7                         | 38   | 16    | 4    | 61         | 4                          | 23   | 7     | 2    | 34         | 14                        | 69   | 6     | 3    | 89         | 19           | 254          | 273        |
| 05:45 PM    | 31                         | 16   | 28    | 8    | 75         | 6                         | 35   | 18    | 5    | 59         | 9                          | 17   | 4     | 0    | 30         | 19                        | 66   | 6     | 2    | 91         | 15           | 255          | 270        |
| Total       | 125                        | 73   | 89    | 34   | 287        | 23                        | 150  | 63    | 15   | 236        | 21                         | 62   | 19    | 5    | 102        | 64                        | 261  | 24    | 7    | 349        | 61           | 974          | 1035       |
| Grand Total | 206                        | 151  | 173   | 69   | 530        | 42                        | 352  | 144   | 32   | 538        | 46                         | 135  | 36    | 11   | 217        | 147                       | 493  | 56    | 13   | 696        | 125          | 1981         | 2106       |
| Approach %  | 38.9                       | 28.5 | 32.6  |      |            | 7.8                       | 65.4 | 26.8  |      |            | 21.2                       | 62.2 | 16.6  |      |            | 21.1                      | 70.8 | 8     |      |            | 5.9          | 94.1         |            |
| Total %     | 10.4                       | 7.6  | 8.7   |      | 26.8       | 2.1                       | 17.8 | 7.3   |      | 27.2       | 2.3                        | 6.8  | 1.8   |      | 11         | 7.4                       | 24.9 | 2.8   |      | 35.1       |              |              |            |

3.1-9

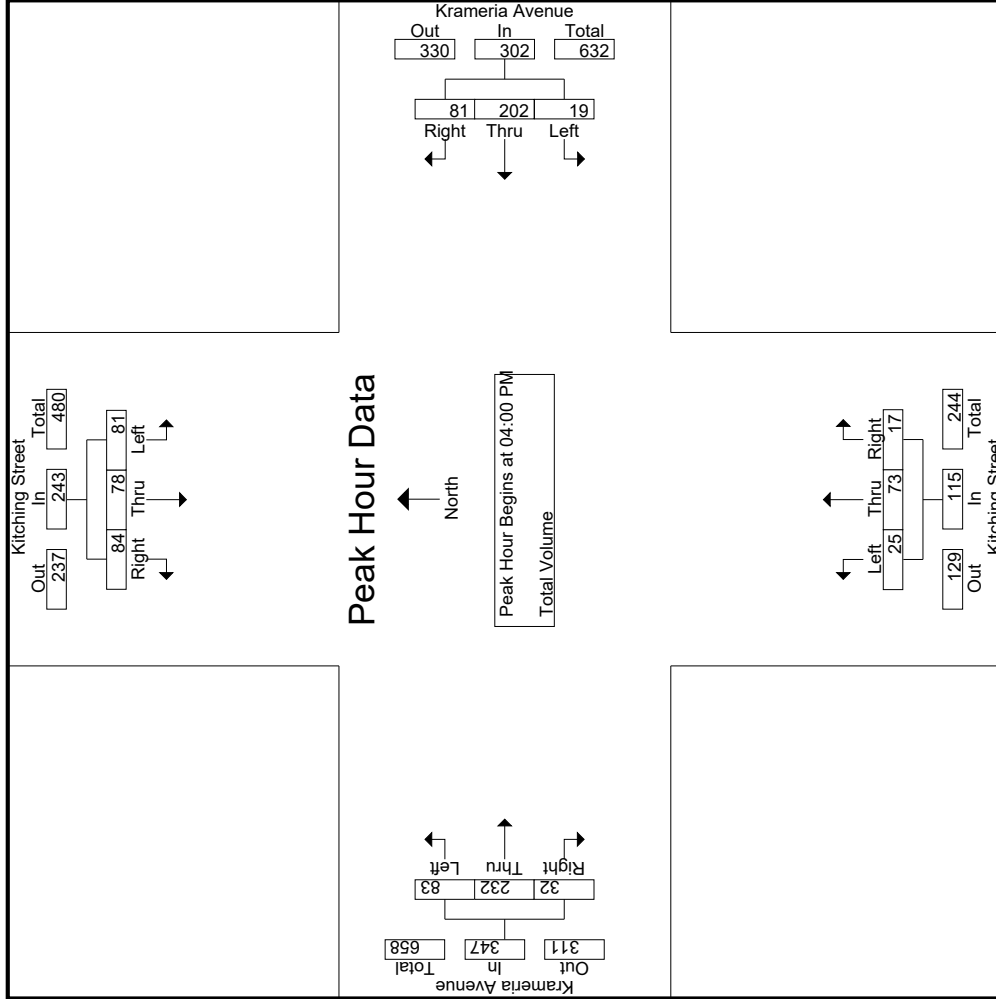
| Start Time   | Kitching Street Southbound |      |       |      |            | Krameria Avenue Westbound |      |       |      |            | Kitching Street Northbound |      |       |      |            | Krameria Avenue Eastbound |      |       |      |            |              |              |            |
|--------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|--------------|--------------|------------|
|              | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Exclu. Total | Inclu. Total | Int. Total |
| 04:00 PM     | 20                         | 18   | 23    | 12   | 61         | 5                         | 56   | 23    | 5    | 84         | 6                          | 20   | 4     | 1    | 30         | 16                        | 48   | 3     | 0    | 67         | 18           | 242          | 260        |
| 04:15 PM     | 15                         | 22   | 21    | 11   | 58         | 6                         | 51   | 27    | 4    | 84         | 12                         | 23   | 6     | 3    | 41         | 15                        | 50   | 13    | 3    | 78         | 21           | 261          | 282        |
| 04:30 PM     | 23                         | 20   | 21    | 10   | 64         | 5                         | 49   | 17    | 1    | 71         | 4                          | 12   | 4     | 2    | 20         | 30                        | 61   | 7     | 1    | 98         | 14           | 253          | 267        |
| 04:45 PM     | 23                         | 18   | 19    | 2    | 60         | 3                         | 46   | 14    | 7    | 63         | 3                          | 18   | 3     | 0    | 24         | 22                        | 73   | 9     | 2    | 104        | 11           | 251          | 262        |
| Total Volume | 81                         | 78   | 84    | 35   | 243        | 19                        | 202  | 81    | 17   | 302        | 25                         | 73   | 17    | 6    | 115        | 83                        | 232  | 32    | 6    | 347        | 64           | 1007         | 1071       |
| % App. Total | 33.3                       | 32.1 | 34.6  |      |            | 6.3                       | 66.9 | 26.8  |      |            | 21.7                       | 63.5 | 14.8  |      |            | 23.9                      | 66.9 | 9.2   |      |            |              |              |            |
| PHF          | .880                       | .886 | .913  |      |            | .949                      | .899 | .750  |      |            | .521                       | .793 | .708  |      |            | .692                      | .795 | .615  |      |            |              | .834         | .965       |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Kitching Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 05\_MRV\_Kitching\_Krameria PM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



Location: Moreno Valley  
 N/S: Kitching Street  
 E/W: Krameria Avenue



Date: 3/6/2018  
 Date: Tuesday

PEDESTRIANS

|                | North Leg<br>Kitching Street<br>Pedestrians | East Leg<br>Krameria Avenue<br>Pedestrians | South Leg<br>Kitching Street<br>Pedestrians | West Leg<br>Krameria Avenue<br>Pedestrians |    |
|----------------|---|--|---|--|----|
| 7:00 AM        | 2   | 2  | 3   | 2  | 9  |
| 7:15 AM        | 0   | 0  | 7   | 4  | 11 |
| 7:30 AM        | 0   | 0  | 3   | 3  | 6  |
| 7:45 AM        | 2   | 3  | 7   | 15   | 27 |
| 8:00 AM        | 0   | 0  | 1   | 11   | 12 |
| 8:15 AM        | 0   | 0  | 0   | 0  | 0  |
| 8:30 AM        | 0   | 2  | 2   | 0  | 4  |
| 8:45 AM        | 0   | 0  | 0   | 1  | 1  |
| TOTAL VOLUMES: | 4   | 7  | 23  | 36   | 70 |

|                | North Leg<br>Kitching Street<br>Pedestrians | East Leg<br>Krameria Avenue<br>Pedestrians | South Leg<br>Kitching Street<br>Pedestrians | West Leg<br>Krameria Avenue<br>Pedestrians |    |
|----------------|---|--|---|--|----|
| 4:00 PM        | 0   | 0  | 0   | 0  | 0  |
| 4:15 PM        | 0   | 0  | 2   | 0  | 2  |
| 4:30 PM        | 0   | 0  | 0   | 4  | 4  |
| 4:45 PM        | 2   | 1  | 0   | 1  | 4  |
| 5:00 PM        | 0   | 1  | 0   | 1  | 2  |
| 5:15 PM        | 0   | 1  | 2   | 2  | 5  |
| 5:30 PM        | 0   | 1  | 0   | 0  | 1  |
| 5:45 PM        | 2   | 1  | 0   | 0  | 3  |
| TOTAL VOLUMES: | 4   | 5  | 4   | 8  | 21 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Location: Moreno Valley  
 N/S: Kitching Street  
 E/W: Krameria Avenue



Date: 3/6/2018  
 Date: Tuesday

BICYCLES

|                | Southbound<br>Kitching Street |      |       | Westbound<br>Krameria Avenue |      |       | Northbound<br>Kitching Street |      |       | Eastbound<br>Krameria Avenue |      |       |   |
|----------------|-------------------------------|------|-------|------------------------------|------|-------|-------------------------------|------|-------|------------------------------|------|-------|---|
|                | Left                          | Thru | Right | Left                         | Thru | Right | Left                          | Thru | Right | Left                         | Thru | Right |   |
| 7:00 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 1    | 0     | 0                            | 3    | 0     | 4 |
| 7:15 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 1                            | 0    | 0     | 1 |
| 7:30 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 0 |
| 7:45 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 0 |
| 8:00 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 0 |
| 8:15 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 0 |
| 8:30 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 0 |
| 8:45 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 0 |
| TOTAL VOLUMES: | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 1    | 0     | 1                            | 3    | 0     | 5 |

|                | Southbound<br>Kitching Street |      |       | Westbound<br>Krameria Avenue |      |       | Northbound<br>Kitching Street |      |       | Eastbound<br>Krameria Avenue |      |       |   |
|----------------|-------------------------------|------|-------|------------------------------|------|-------|-------------------------------|------|-------|------------------------------|------|-------|---|
|                | Left                          | Thru | Right | Left                         | Thru | Right | Left                          | Thru | Right | Left                         | Thru | Right |   |
| 4:00 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 0 |
| 4:15 PM        | 0                             | 1    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 1 |
| 4:30 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 0 |
| 4:45 PM        | 0                             | 0    | 0     | 0                            | 1    | 0     | 0                             | 0    | 0     | 0                            | 1    | 0     | 2 |
| 5:00 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 1     | 1 |
| 5:15 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 1     | 1 |
| 5:30 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 0 |
| 5:45 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                            | 0    | 0     | 0 |
| TOTAL VOLUMES: | 0                             | 1    | 0     | 0                            | 1    | 0     | 0                             | 0    | 0     | 0                            | 1    | 2     | 5 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Lasselle Street  
 EW: Iris Avenue  
 Weather: Clear

File Name : 06\_MRV\_Lasselle\_Iris AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time  | Lasselle Street Southbound |      |       |      | Iris Avenue Westbound |      |      |       | Lasselle Street Northbound |            |      |      | Iris Avenue Eastbound |      |            |      | Exclu. Total | Inclu. Total | Int. Total |      |       |      |            |
|-------------|----------------------------|------|-------|------|-----------------------|------|------|-------|----------------------------|------------|------|------|-----------------------|------|------------|------|--------------|--------------|------------|------|-------|------|------------|
|             | Left                       | Thru | Right | RTOR | App. Total            | Left | Thru | Right | RTOR                       | App. Total | Left | Thru | Right                 | RTOR | App. Total | Left |              |              |            | Thru | Right | RTOR | App. Total |
| 07:00 AM    | 18                         | 108  | 11    | 5    | 137                   | 163  | 149  | 21    | 12                         | 333        | 57   | 117  | 97                    | 56   | 271        | 18   | 72           | 76           | 43         | 166  | 116   | 907  | 1023       |
| 07:15 AM    | 15                         | 147  | 21    | 10   | 183                   | 156  | 130  | 9     | 6                          | 295        | 110  | 157  | 127                   | 55   | 394        | 31   | 70           | 92           | 40         | 193  | 111   | 1065 | 1176       |
| 07:30 AM    | 25                         | 141  | 23    | 11   | 189                   | 128  | 167  | 24    | 10                         | 319        | 134  | 144  | 102                   | 40   | 380        | 23   | 137          | 72           | 24         | 232  | 85    | 1120 | 1205       |
| 07:45 AM    | 31                         | 165  | 32    | 21   | 228                   | 147  | 182  | 51    | 16                         | 380        | 63   | 131  | 101                   | 52   | 295        | 58   | 155          | 95           | 36         | 308  | 125   | 1211 | 1336       |
| Total       | 89                         | 561  | 87    | 47   | 737                   | 594  | 628  | 105   | 44                         | 1327       | 364  | 549  | 427                   | 203  | 1340       | 130  | 434          | 335          | 143        | 899  | 437   | 4303 | 4740       |
| 08:00 AM    | 45                         | 107  | 21    | 11   | 173                   | 79   | 104  | 14    | 6                          | 197        | 62   | 150  | 141                   | 57   | 353        | 22   | 116          | 57           | 32         | 195  | 106   | 918  | 1024       |
| 08:15 AM    | 33                         | 68   | 13    | 9    | 114                   | 69   | 92   | 22    | 18                         | 183        | 53   | 105  | 114                   | 62   | 272        | 20   | 99           | 36           | 17         | 155  | 106   | 724  | 830        |
| 08:30 AM    | 48                         | 63   | 11    | 6    | 122                   | 64   | 88   | 19    | 12                         | 171        | 45   | 91   | 83                    | 37   | 219        | 16   | 83           | 31           | 14         | 130  | 69    | 642  | 711        |
| 08:45 AM    | 42                         | 77   | 12    | 8    | 131                   | 93   | 115  | 28    | 9                          | 236        | 33   | 101  | 63                    | 36   | 197        | 28   | 69           | 34           | 17         | 131  | 70    | 695  | 765        |
| Total       | 168                        | 315  | 57    | 34   | 540                   | 305  | 399  | 83    | 45                         | 787        | 193  | 447  | 401                   | 192  | 1041       | 86   | 367          | 158          | 80         | 611  | 351   | 2979 | 3330       |
| Grand Total | 257                        | 876  | 144   | 81   | 1277                  | 899  | 1027 | 188   | 89                         | 2114       | 557  | 996  | 828                   | 395  | 2381       | 216  | 801          | 493          | 223        | 1510 | 788   | 7282 | 8070       |
| Approach %  | 20.1                       | 68.6 | 11.3  |      | 17.5                  | 42.5 | 48.6 | 8.9   |                            | 29         | 23.4 | 41.8 | 34.8                  |      | 32.7       | 14.3 | 53           | 32.6         |            | 20.7 | 9.8   | 90.2 |            |
| Total %     | 3.5                        | 12   | 2     |      |                       | 12.3 | 14.1 | 2.6   |                            |            | 7.6  | 13.7 | 11.4                  |      |            | 3    | 11           | 6.8          |            |      |       |      |            |

3.1-13

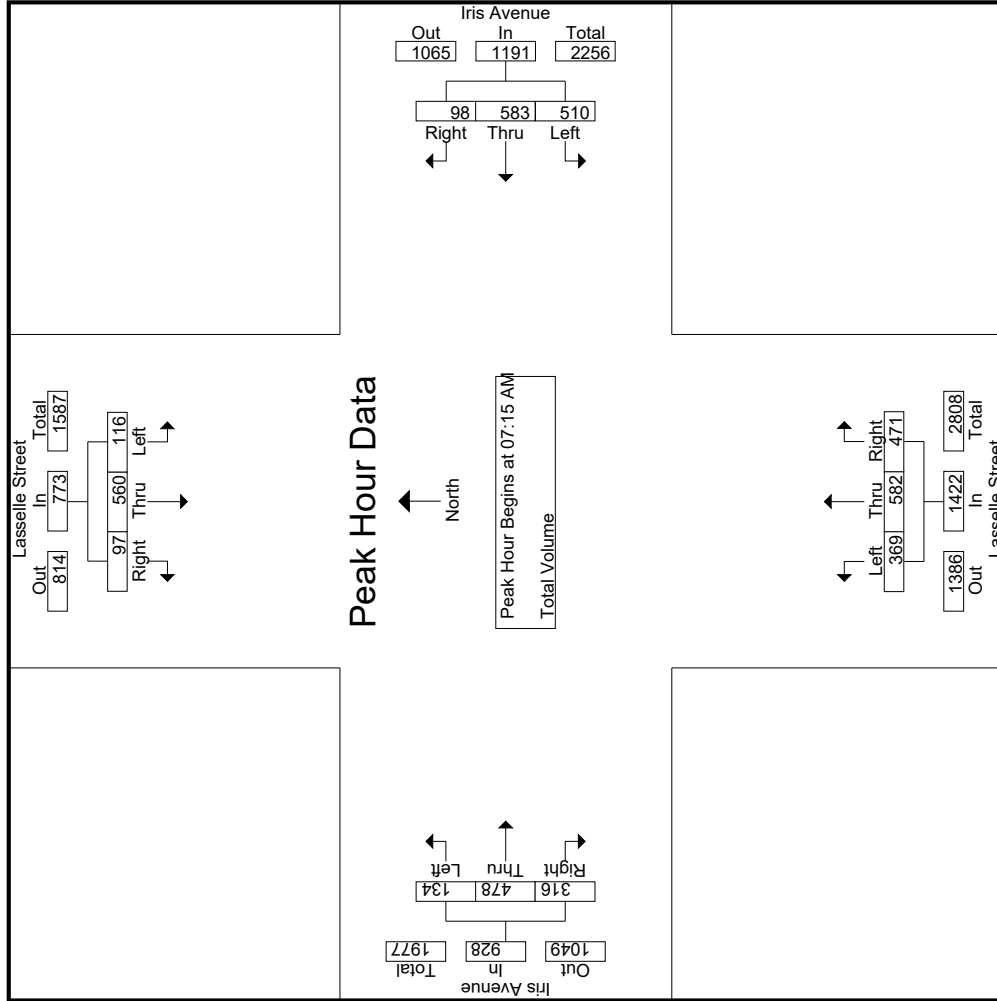
| Start Time   | Lasselle Street Southbound |      |       |      | Iris Avenue Westbound |      |      |       | Lasselle Street Northbound |            |      |      | Iris Avenue Eastbound |      |            |      | Exclu. Total | Inclu. Total | Int. Total |      |       |      |            |
|--------------|----------------------------|------|-------|------|-----------------------|------|------|-------|----------------------------|------------|------|------|-----------------------|------|------------|------|--------------|--------------|------------|------|-------|------|------------|
|              | Left                       | Thru | Right | RTOR | App. Total            | Left | Thru | Right | RTOR                       | App. Total | Left | Thru | Right                 | RTOR | App. Total | Left |              |              |            | Thru | Right | RTOR | App. Total |
| 07:15 AM     | 15                         | 147  | 21    |      | 183                   | 156  | 130  | 9     |                            | 295        | 110  | 157  | 127                   |      | 394        | 31   | 70           | 92           |            | 193  | 116   | 907  | 1023       |
| 07:30 AM     | 25                         | 141  | 23    |      | 189                   | 128  | 167  | 24    |                            | 319        | 134  | 144  | 102                   |      | 380        | 23   | 137          | 72           |            | 232  | 85    | 1120 | 1205       |
| 07:45 AM     | 31                         | 165  | 32    |      | 228                   | 147  | 182  | 51    |                            | 380        | 63   | 131  | 101                   |      | 295        | 58   | 155          | 95           |            | 308  | 125   | 1211 | 1336       |
| 08:00 AM     | 45                         | 107  | 21    |      | 173                   | 79   | 104  | 14    |                            | 197        | 62   | 150  | 141                   |      | 353        | 22   | 116          | 57           |            | 195  | 106   | 918  | 1024       |
| Total Volume | 116                        | 560  | 97    |      | 773                   | 510  | 583  | 98    |                            | 1191       | 369  | 582  | 471                   |      | 1422       | 134  | 478          | 316          |            | 928  | 437   | 4303 | 4740       |
| % App. Total | 15                         | 72.4 | 12.5  |      | 12.5                  | 42.8 | 49   | 8.2   |                            | 8.2        | 25.9 | 40.9 | 33.1                  |      | 34.1       | 14.4 | 51.5         | 34.1         |            | 20.7 | 9.8   | 90.2 |            |
| PHF          | .644                       | .848 | .758  |      | .848                  | .817 | .801 | .480  |                            | .784       | .688 | .927 | .835                  |      | .902       | .578 | .771         | .832         |            | .753 |       |      |            |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:15 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Lasselle Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 06\_MRV\_Lasselle\_Iris AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Lasselle Street  
 EW: Iris Avenue  
 Weather: Clear

File Name : 06\_MRV\_Lasselle\_Iris PM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time  | Lasselle Street Southbound |      |       |      |            | Iris Avenue Westbound |      |       |      |            | Lasselle Street Northbound |      |       |      |            | Iris Avenue Eastbound |      |       |      |            |              |              |            |
|-------------|----------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|--------------|--------------|------------|
|             | Left                       | Thru | Right | RTOR | App. Total | Left                  | Thru | Right | RTOR | App. Total | Left                       | Thru | Right | RTOR | App. Total | Left                  | Thru | Right | RTOR | App. Total | Exclu. Total | Inclu. Total | Int. Total |
| 04:00 PM    | 49                         | 120  | 21    | 10   | 190        | 123                   | 108  | 22    | 9    | 253        | 74                         | 159  | 111   | 47   | 344        | 34                    | 93   | 53    | 15   | 180        | 81           | 967          | 1048       |
| 04:15 PM    | 59                         | 131  | 17    | 9    | 207        | 100                   | 125  | 16    | 6    | 241        | 41                         | 139  | 123   | 65   | 303        | 27                    | 110  | 60    | 22   | 197        | 102          | 948          | 1050       |
| 04:30 PM    | 47                         | 120  | 28    | 17   | 195        | 139                   | 130  | 22    | 9    | 291        | 44                         | 158  | 107   | 48   | 309        | 29                    | 86   | 68    | 27   | 183        | 101          | 978          | 1079       |
| 04:45 PM    | 61                         | 145  | 23    | 12   | 229        | 128                   | 128  | 20    | 4    | 276        | 47                         | 144  | 120   | 53   | 311        | 36                    | 124  | 38    | 13   | 198        | 82           | 1014         | 1096       |
| Total       | 216                        | 516  | 89    | 48   | 821        | 490                   | 491  | 80    | 28   | 1061       | 206                        | 600  | 461   | 213  | 1267       | 126                   | 413  | 219   | 77   | 758        | 366          | 3907         | 4273       |
| 05:00 PM    | 54                         | 130  | 14    | 9    | 198        | 141                   | 125  | 31    | 10   | 297        | 62                         | 150  | 106   | 52   | 318        | 31                    | 96   | 76    | 23   | 203        | 94           | 1016         | 1110       |
| 05:15 PM    | 54                         | 165  | 16    | 5    | 235        | 134                   | 138  | 20    | 7    | 292        | 64                         | 136  | 119   | 41   | 319        | 29                    | 108  | 72    | 24   | 209        | 77           | 1055         | 1132       |
| 05:30 PM    | 45                         | 160  | 33    | 18   | 238        | 158                   | 139  | 23    | 10   | 320        | 78                         | 112  | 93    | 55   | 283        | 33                    | 97   | 68    | 13   | 198        | 96           | 1039         | 1135       |
| 05:45 PM    | 39                         | 211  | 33    | 17   | 283        | 154                   | 152  | 17    | 0    | 323        | 44                         | 140  | 84    | 45   | 268        | 49                    | 95   | 100   | 23   | 244        | 85           | 1118         | 1203       |
| Total       | 192                        | 666  | 96    | 49   | 954        | 587                   | 554  | 91    | 27   | 1232       | 248                        | 538  | 402   | 193  | 1188       | 142                   | 396  | 316   | 83   | 854        | 352          | 4228         | 4580       |
| Grand Total | 408                        | 1182 | 185   | 97   | 1775       | 1077                  | 1045 | 171   | 55   | 2293       | 454                        | 1138 | 863   | 406  | 2455       | 268                   | 809  | 535   | 160  | 1612       | 718          | 8135         | 8853       |
| Approach %  | 23                         | 66.6 | 10.4  |      | 21.8       | 47                    | 45.6 | 7.5   |      | 28.2       | 18.5                       | 46.4 | 35.2  |      | 30.2       | 16.6                  | 50.2 | 33.2  |      | 19.8       | 8.1          | 91.9         |            |
| Total %     | 5                          | 14.5 | 2.3   |      | 21.8       | 13.2                  | 12.8 | 2.1   |      | 28.2       | 5.6                        | 14   | 10.6  |      | 30.2       | 3.3                   | 9.9  | 6.6   |      | 19.8       | 8.1          | 91.9         |            |

3.1-15

| Start Time   | Lasselle Street Southbound |      |       |      |            | Iris Avenue Westbound |      |       |      |            | Lasselle Street Northbound |      |       |      |            | Iris Avenue Eastbound |      |       |      |            |              |              |            |
|--------------|----------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|-----------------------|------|-------|------|------------|--------------|--------------|------------|
|              | Left                       | Thru | Right | RTOR | App. Total | Left                  | Thru | Right | RTOR | App. Total | Left                       | Thru | Right | RTOR | App. Total | Left                  | Thru | Right | RTOR | App. Total | Exclu. Total | Inclu. Total | Int. Total |
| 05:00 PM     | 54                         | 130  | 14    | 9    | 198        | 141                   | 125  | 31    | 10   | 297        | 62                         | 150  | 106   | 52   | 318        | 31                    | 96   | 76    | 23   | 203        | 94           | 1016         | 1110       |
| 05:15 PM     | 54                         | 165  | 16    | 5    | 235        | 134                   | 138  | 20    | 7    | 292        | 64                         | 136  | 119   | 41   | 319        | 29                    | 108  | 72    | 24   | 209        | 77           | 1055         | 1132       |
| 05:30 PM     | 45                         | 160  | 33    | 18   | 238        | 158                   | 139  | 23    | 10   | 320        | 78                         | 112  | 93    | 55   | 283        | 33                    | 97   | 68    | 13   | 198        | 96           | 1039         | 1135       |
| 05:45 PM     | 39                         | 211  | 33    | 17   | 283        | 154                   | 152  | 17    | 0    | 323        | 44                         | 140  | 84    | 45   | 268        | 49                    | 95   | 100   | 23   | 244        | 85           | 1118         | 1203       |
| Total Volume | 192                        | 666  | 96    | 49   | 954        | 587                   | 554  | 91    | 27   | 1232       | 248                        | 538  | 402   | 193  | 1188       | 142                   | 396  | 316   | 83   | 854        | 352          | 4228         | 4580       |
| % App. Total | 20.1                       | 69.8 | 10.1  |      | 21.8       | 47                    | 45.6 | 7.5   |      | 28.2       | 18.5                       | 46.4 | 35.2  |      | 30.2       | 16.6                  | 50.2 | 33.2  |      | 19.8       | 8.1          | 91.9         |            |
| PHF          | .889                       | .789 | .727  |      | .843       | .929                  | .911 | .734  |      | .954       | .795                       | .897 | .845  |      | .931       | .724                  | .917 | .790  |      | .875       |              | .945         |            |

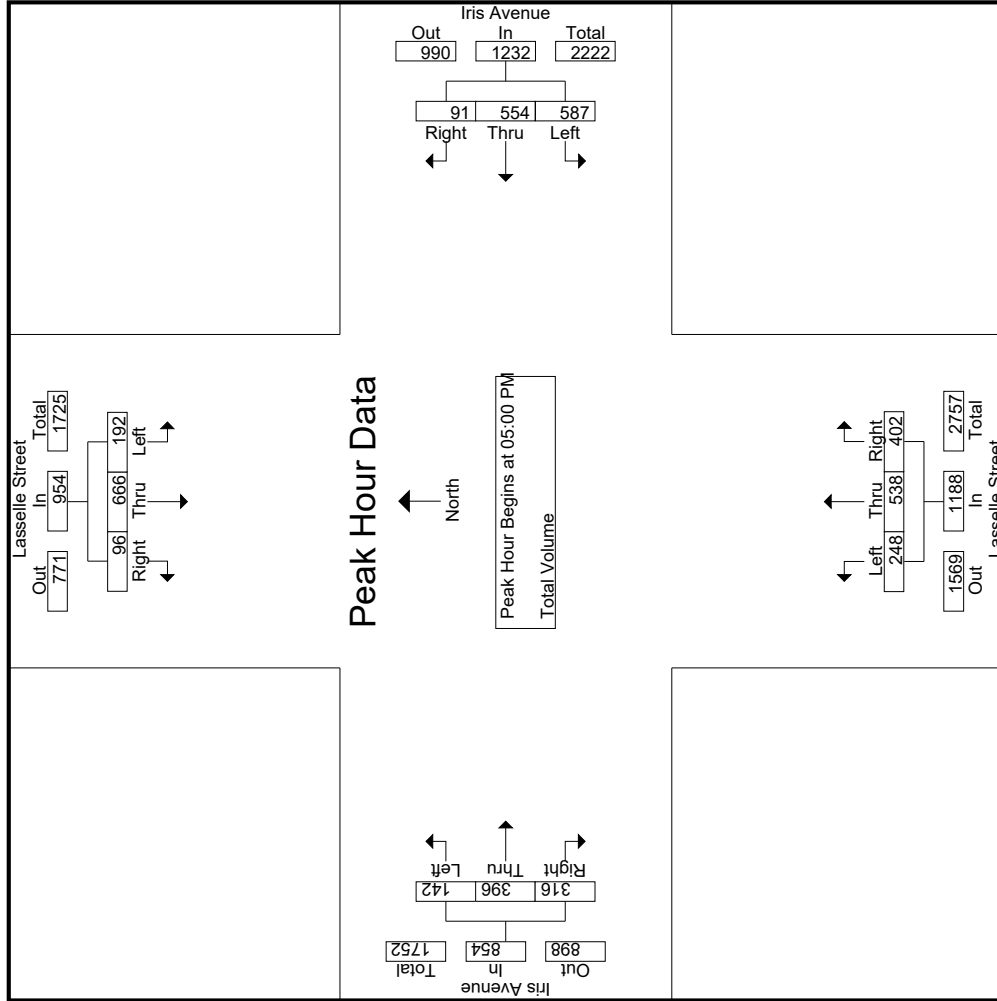
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Lasselle Street  
 E/W: Iris Avenue  
 Weather: Clear

File Name : 06\_MRV\_Lasselle\_Iris PM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



Location: Moreno Valley  
 N/S: Lasselle Street  
 E/W: Iris Avenue



Date: 3/6/2018  
 Date: Tuesday

PEDESTRIANS

|                | North Leg<br>Lasselle Street | East Leg<br>Iris Avenue | South Leg<br>Lasselle Street | West Leg<br>Iris Avenue |     |
|----------------|------------------------------|-------------------------|------------------------------|-------------------------|-----|
|                | Pedestrians                  | Pedestrians             | Pedestrians                  | Pedestrians             |     |
| 7:00 AM        | 9                            | 3                       | 2                            | 8                       | 22  |
| 7:15 AM        | 5                            | 1                       | 1                            | 7                       | 14  |
| 7:30 AM        | 0                            | 1                       | 0                            | 7                       | 8   |
| 7:45 AM        | 11                           | 4                       | 0                            | 7                       | 22  |
| 8:00 AM        | 1                            | 2                       | 1                            | 13                      | 17  |
| 8:15 AM        | 2                            | 4                       | 2                            | 8                       | 16  |
| 8:30 AM        | 4                            | 1                       | 5                            | 6                       | 16  |
| 8:45 AM        | 4                            | 1                       | 1                            | 4                       | 10  |
| TOTAL VOLUMES: | 36                           | 17                      | 12                           | 60                      | 125 |

|                | North Leg<br>Lasselle Street | East Leg<br>Iris Avenue | South Leg<br>Lasselle Street | West Leg<br>Iris Avenue |     |
|----------------|------------------------------|-------------------------|------------------------------|-------------------------|-----|
|                | Pedestrians                  | Pedestrians             | Pedestrians                  | Pedestrians             |     |
| 4:00 PM        | 9                            | 2                       | 2                            | 4                       | 17  |
| 4:15 PM        | 8                            | 6                       | 0                            | 7                       | 21  |
| 4:30 PM        | 9                            | 0                       | 1                            | 4                       | 14  |
| 4:45 PM        | 6                            | 7                       | 1                            | 5                       | 19  |
| 5:00 PM        | 19                           | 11                      | 0                            | 7                       | 37  |
| 5:15 PM        | 13                           | 5                       | 2                            | 3                       | 23  |
| 5:30 PM        | 6                            | 5                       | 1                            | 3                       | 15  |
| 5:45 PM        | 6                            | 3                       | 0                            | 7                       | 16  |
| TOTAL VOLUMES: | 76                           | 39                      | 7                            | 40                      | 162 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Location: Moreno Valley  
 N/S: Lasselle Street  
 E/W: Iris Avenue



Date: 3/6/2018  
 Date: Tuesday

BICYCLES

|                | Southbound Lasselle Street |      |       | Westbound Iris Avenue |      |       | Northbound Lasselle Street |      |       | Eastbound Iris Avenue |      |       |    |
|----------------|----------------------------|------|-------|-----------------------|------|-------|----------------------------|------|-------|-----------------------|------|-------|----|
|                | Left                       | Thru | Right | Left                  | Thru | Right | Left                       | Thru | Right | Left                  | Thru | Right |    |
| 7:00 AM        | 0                          | 2    | 0     | 0                     | 1    | 0     | 0                          | 0    | 0     | 0                     | 0    | 0     | 3  |
| 7:15 AM        | 0                          | 1    | 0     | 0                     | 0    | 0     | 0                          | 1    | 0     | 0                     | 0    | 0     | 2  |
| 7:30 AM        | 0                          | 0    | 0     | 0                     | 0    | 0     | 0                          | 2    | 0     | 0                     | 0    | 0     | 2  |
| 7:45 AM        | 0                          | 2    | 0     | 0                     | 0    | 0     | 0                          | 0    | 0     | 0                     | 0    | 0     | 2  |
| 8:00 AM        | 0                          | 0    | 0     | 0                     | 0    | 0     | 0                          | 0    | 0     | 0                     | 0    | 0     | 0  |
| 8:15 AM        | 0                          | 0    | 0     | 0                     | 0    | 0     | 0                          | 0    | 0     | 0                     | 0    | 0     | 0  |
| 8:30 AM        | 0                          | 1    | 0     | 0                     | 0    | 0     | 0                          | 0    | 0     | 0                     | 0    | 0     | 1  |
| 8:45 AM        | 0                          | 0    | 0     | 1                     | 0    | 0     | 0                          | 0    | 0     | 0                     | 0    | 0     | 1  |
| TOTAL VOLUMES: | 0                          | 6    | 0     | 1                     | 1    | 0     | 0                          | 3    | 0     | 0                     | 0    | 0     | 11 |

|                | Southbound Lasselle Street |      |       | Westbound Iris Avenue |      |       | Northbound Lasselle Street |      |       | Eastbound Iris Avenue |      |       |    |
|----------------|----------------------------|------|-------|-----------------------|------|-------|----------------------------|------|-------|-----------------------|------|-------|----|
|                | Left                       | Thru | Right | Left                  | Thru | Right | Left                       | Thru | Right | Left                  | Thru | Right |    |
| 4:00 PM        | 0                          | 0    | 0     | 0                     | 0    | 0     | 1                          | 1    | 0     | 0                     | 0    | 0     | 2  |
| 4:15 PM        | 0                          | 0    | 0     | 0                     | 2    | 0     | 0                          | 1    | 0     | 0                     | 3    | 0     | 6  |
| 4:30 PM        | 0                          | 1    | 0     | 0                     | 1    | 0     | 0                          | 1    | 0     | 0                     | 1    | 0     | 4  |
| 4:45 PM        | 0                          | 1    | 0     | 0                     | 2    | 0     | 0                          | 2    | 0     | 0                     | 0    | 0     | 5  |
| 5:00 PM        | 0                          | 2    | 0     | 0                     | 3    | 0     | 0                          | 1    | 0     | 1                     | 0    | 0     | 7  |
| 5:15 PM        | 0                          | 0    | 0     | 0                     | 0    | 0     | 0                          | 0    | 0     | 0                     | 0    | 0     | 0  |
| 5:30 PM        | 0                          | 0    | 0     | 0                     | 0    | 0     | 0                          | 0    | 1     | 0                     | 1    | 0     | 2  |
| 5:45 PM        | 0                          | 2    | 0     | 0                     | 1    | 0     | 0                          | 0    | 0     | 0                     | 1    | 0     | 4  |
| TOTAL VOLUMES: | 0                          | 6    | 0     | 0                     | 9    | 0     | 1                          | 6    | 1     | 1                     | 6    | 0     | 30 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Lasselle Street  
 E/W: Cahuilla Drive  
 Weather: Clear

File Name : 07\_MR\_V\_Lasselle\_Cahuilla AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time  | Lasselle Street Southbound |      |            | Cahuilla Drive Westbound |       |            | Lasselle Street Northbound |       |            | Int. Total |
|-------------|----------------------------|------|------------|--------------------------|-------|------------|----------------------------|-------|------------|------------|
|             | Left                       | Thru | App. Total | Left                     | Right | App. Total | Thru                       | Right | App. Total |            |
| 07:00 AM    | 0                          | 292  | 292        | 0                        | 12    | 12         | 277                        | 4     | 281        | 585        |
| 07:15 AM    | 0                          | 251  | 251        | 0                        | 20    | 20         | 371                        | 22    | 393        | 664        |
| 07:30 AM    | 0                          | 156  | 156        | 0                        | 19    | 19         | 318                        | 36    | 354        | 529        |
| 07:45 AM    | 0                          | 197  | 197        | 0                        | 19    | 19         | 259                        | 88    | 347        | 563        |
| Total       | 0                          | 896  | 896        | 0                        | 70    | 70         | 1225                       | 150   | 1375       | 2341       |
| 08:00 AM    | 0                          | 142  | 142        | 0                        | 54    | 54         | 255                        | 77    | 332        | 528        |
| 08:15 AM    | 0                          | 124  | 124        | 0                        | 34    | 34         | 203                        | 13    | 216        | 374        |
| 08:30 AM    | 0                          | 121  | 121        | 0                        | 16    | 16         | 169                        | 13    | 182        | 319        |
| 08:45 AM    | 0                          | 139  | 139        | 0                        | 15    | 15         | 163                        | 15    | 178        | 332        |
| Total       | 0                          | 526  | 526        | 0                        | 119   | 119        | 790                        | 118   | 908        | 1553       |
| Grand Total | 0                          | 1422 | 1422       | 0                        | 189   | 189        | 2015                       | 268   | 2283       | 3894       |
| Apprch %    | 0                          | 100  |            | 0                        | 100   |            | 88.3                       | 11.7  |            |            |
| Total %     | 0                          | 36.5 | 36.5       | 0                        | 4.9   | 4.9        | 51.7                       | 6.9   | 58.6       |            |

| Start Time   | Lasselle Street Southbound |            |            | Cahuilla Drive Westbound |           |            | Lasselle Street Northbound |           |            | Int. Total |
|--------------|----------------------------|------------|------------|--------------------------|-----------|------------|----------------------------|-----------|------------|------------|
|              | Left                       | Thru       | App. Total | Left                     | Right     | App. Total | Thru                       | Right     | App. Total |            |
| 07:00 AM     | 0                          | <b>292</b> | <b>292</b> | 0                        | 12        | 12         | 277                        | 4         | 281        | 585        |
| 07:15 AM     | 0                          | 251        | 251        | 0                        | <b>20</b> | <b>20</b>  | <b>371</b>                 | 22        | <b>393</b> | <b>664</b> |
| 07:30 AM     | 0                          | 156        | 156        | 0                        | 19        | 19         | 318                        | 36        | 354        | 529        |
| 07:45 AM     | 0                          | 197        | 197        | 0                        | 19        | 19         | 259                        | <b>88</b> | 347        | 563        |
| Total Volume | 0                          | 896        | 896        | 0                        | 70        | 70         | 1225                       | 150       | 1375       | 2341       |
| % App. Total | 0                          | 100        |            | 0                        | 100       |            | 89.1                       | 10.9      |            |            |
| PHF          | .000                       | .767       | .767       | .000                     | .875      | .875       | .825                       | .426      | .875       | .881       |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

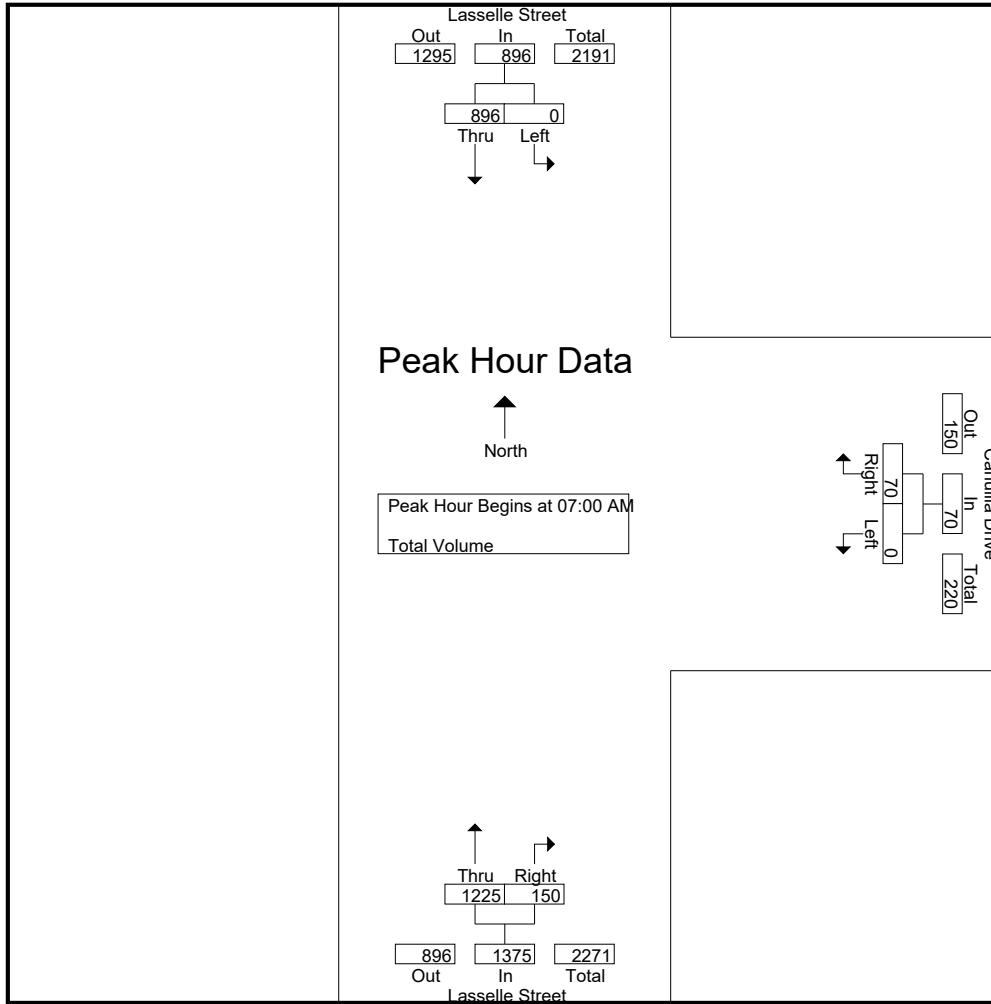
Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Lasselle Street  
 E/W: Cahuilla Drive  
 Weather: Clear

File Name : 07\_MR\_V\_Lasselle\_Cahuilla AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

|              | 07:00 AM |            |            | 07:30 AM |           |           | 07:15 AM   |           |            |
|--------------|----------|------------|------------|----------|-----------|-----------|------------|-----------|------------|
| +0 mins.     | 0        | <b>292</b> | <b>292</b> | 0        | 19        | 19        | <b>371</b> | 22        | <b>393</b> |
| +15 mins.    | 0        | 251        | 251        | 0        | 19        | 19        | 318        | 36        | 354        |
| +30 mins.    | 0        | 156        | 156        | 0        | <b>54</b> | <b>54</b> | 259        | <b>88</b> | 347        |
| +45 mins.    | 0        | 197        | 197        | 0        | 34        | 34        | 255        | 77        | 332        |
| Total Volume | 0        | 896        | 896        | 0        | 126       | 126       | 1203       | 223       | 1426       |
| % App. Total | 0        | 100        |            | 0        | 100       |           | 84.4       | 15.6      |            |
| PHF          | .000     | .767       | .767       | .000     | .583      | .583      | .811       | .634      | .907       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Lasselle Street  
 E/W: Cahuilla Drive  
 Weather: Clear

File Name : 07\_MRV\_Lasselle\_Cahuilla PM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time         | Lasselle Street Southbound |      |            | Cahuilla Drive Westbound |       |            | Lasselle Street Northbound |       |            | Int. Total |
|--------------------|----------------------------|------|------------|--------------------------|-------|------------|----------------------------|-------|------------|------------|
|                    | Left                       | Thru | App. Total | Left                     | Right | App. Total | Thru                       | Right | App. Total |            |
| 04:00 PM           | 0                          | 255  | 255        | 0                        | 38    | 38         | 205                        | 7     | 212        | 505        |
| 04:15 PM           | 0                          | 230  | 230        | 0                        | 38    | 38         | 184                        | 5     | 189        | 457        |
| 04:30 PM           | 0                          | 309  | 309        | 0                        | 36    | 36         | 225                        | 4     | 229        | 574        |
| 04:45 PM           | 0                          | 261  | 261        | 0                        | 28    | 28         | 223                        | 4     | 227        | 516        |
| <b>Total</b>       | 0                          | 1055 | 1055       | 0                        | 140   | 140        | 837                        | 20    | 857        | 2052       |
| 05:00 PM           | 0                          | 278  | 278        | 0                        | 30    | 30         | 191                        | 10    | 201        | 509        |
| 05:15 PM           | 0                          | 320  | 320        | 0                        | 33    | 33         | 200                        | 6     | 206        | 559        |
| 05:30 PM           | 0                          | 281  | 281        | 0                        | 27    | 27         | 229                        | 29    | 258        | 566        |
| 05:45 PM           | 0                          | 294  | 294        | 0                        | 13    | 13         | 212                        | 30    | 242        | 549        |
| <b>Total</b>       | 0                          | 1173 | 1173       | 0                        | 103   | 103        | 832                        | 75    | 907        | 2183       |
| <b>Grand Total</b> | 0                          | 2228 | 2228       | 0                        | 243   | 243        | 1669                       | 95    | 1764       | 4235       |
| Apprch %           | 0                          | 100  |            | 0                        | 100   |            | 94.6                       | 5.4   |            |            |
| Total %            | 0                          | 52.6 | 52.6       | 0                        | 5.7   | 5.7        | 39.4                       | 2.2   | 41.7       |            |

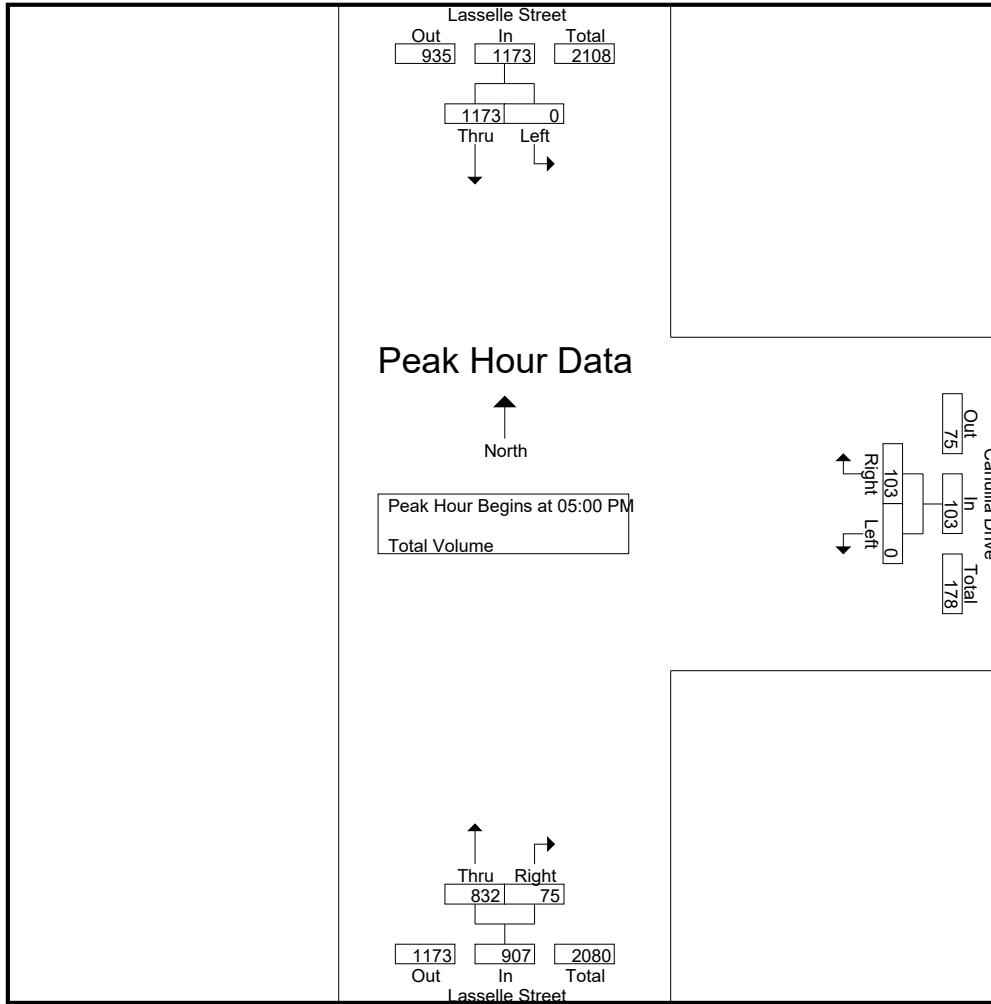
| Start Time   | Lasselle Street Southbound |            |            | Cahuilla Drive Westbound |           |            | Lasselle Street Northbound |           |            | Int. Total |
|--|----------------------------|------------|------------|--------------------------|-----------|------------|----------------------------|-----------|------------|------------|
|  | Left                       | Thru       | App. Total | Left                     | Right     | App. Total | Thru                       | Right     | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                            |            |            |                          |           |            |                            |           |            |            |
| Peak Hour for Entire Intersection Begins at 05:00 PM       |                            |            |            |                          |           |            |                            |           |            |            |
| 05:00 PM   | 0                          | 278        | 278        | 0                        | 30        | 30         | 191                        | 10        | 201        | 509        |
| 05:15 PM   | 0                          | <b>320</b> | <b>320</b> | 0                        | <b>33</b> | <b>33</b>  | 200                        | 6         | 206        | 559        |
| 05:30 PM   | 0                          | 281        | 281        | 0                        | 27        | 27         | <b>229</b>                 | 29        | <b>258</b> | <b>566</b> |
| 05:45 PM   | 0                          | 294        | 294        | 0                        | 13        | 13         | 212                        | <b>30</b> | 242        | 549        |
| <b>Total Volume</b>  | 0                          | 1173       | 1173       | 0                        | 103       | 103        | 832                        | 75        | 907        | 2183       |
| % App. Total   | 0                          | 100        |            | 0                        | 100       |            | 91.7                       | 8.3       |            |            |
| PHF  | .000                       | .916       | .916       | .000                     | .780      | .780       | .908                       | .625      | .879       | .964       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Lasselle Street  
 E/W: Cahuilla Drive  
 Weather: Clear

File Name : 07\_MR\_V\_Lasselle\_Cahuilla PM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

|              | 05:00 PM |            |            | 04:00 PM |           |           | 05:00 PM   |           |            |
|--------------|----------|------------|------------|----------|-----------|-----------|------------|-----------|------------|
| +0 mins.     | 0        | 278        | 278        | 0        | <b>38</b> | <b>38</b> | 191        | 10        | 201        |
| +15 mins.    | 0        | <b>320</b> | <b>320</b> | 0        | 38        | 38        | 200        | 6         | 206        |
| +30 mins.    | 0        | 281        | 281        | 0        | 36        | 36        | <b>229</b> | 29        | <b>258</b> |
| +45 mins.    | 0        | 294        | 294        | 0        | 28        | 28        | 212        | <b>30</b> | 242        |
| Total Volume | 0        | 1173       | 1173       | 0        | 140       | 140       | 832        | 75        | 907        |
| % App. Total | 0        | 100        |            | 0        | 100       |           | 91.7       | 8.3       |            |
| PHF          | .000     | .916       | .916       | .000     | .921      | .921      | .908       | .625      | .879       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Location: Moreno Valley  
 N/S: Lasselle Street  
 E/W: Cahuilla Drive



Date: 3/6/2018  
 Date: Tuesday

PEDESTRIANS

|                | North Leg<br>Lasselle Street | East Leg<br>Cahuilla Drive | South Leg<br>Lasselle Street | West Leg<br>Dead End |   |
|----------------|------------------------------|----------------------------|------------------------------|----------------------|---|
|                | Pedestrians                  | Pedestrians                | Pedestrians                  | Pedestrians          |   |
| 7:00 AM        | 0                            | 0                          | 0                            | 0                    | 0 |
| 7:15 AM        | 0                            | 1                          | 0                            | 0                    | 1 |
| 7:30 AM        | 0                            | 2                          | 0                            | 0                    | 2 |
| 7:45 AM        | 0                            | 0                          | 0                            | 0                    | 0 |
| 8:00 AM        | 0                            | 1                          | 2                            | 0                    | 3 |
| 8:15 AM        | 2                            | 0                          | 0                            | 0                    | 2 |
| 8:30 AM        | 0                            | 0                          | 0                            | 0                    | 0 |
| 8:45 AM        | 0                            | 0                          | 0                            | 0                    | 0 |
| TOTAL VOLUMES: | 2                            | 4                          | 2                            | 0                    | 8 |

|                | North Leg<br>Lasselle Street | East Leg<br>Cahuilla Drive | South Leg<br>Lasselle Street | West Leg<br>Dead End |   |
|----------------|------------------------------|----------------------------|------------------------------|----------------------|---|
|                | Pedestrians                  | Pedestrians                | Pedestrians                  | Pedestrians          |   |
| 4:00 PM        | 0                            | 3                          | 0                            | 0                    | 3 |
| 4:15 PM        | 1                            | 2                          | 0                            | 0                    | 3 |
| 4:30 PM        | 0                            | 0                          | 0                            | 0                    | 0 |
| 4:45 PM        | 0                            | 1                          | 0                            | 0                    | 1 |
| 5:00 PM        | 0                            | 2                          | 0                            | 0                    | 2 |
| 5:15 PM        | 0                            | 0                          | 0                            | 0                    | 0 |
| 5:30 PM        | 0                            | 0                          | 0                            | 0                    | 0 |
| 5:45 PM        | 0                            | 0                          | 0                            | 0                    | 0 |
| TOTAL VOLUMES: | 1                            | 8                          | 0                            | 0                    | 9 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Location: Moreno Valley  
 N/S: Lasselle Street  
 E/W: Cahuilla Drive



Date: 3/6/2018  
 Date: Tuesday

BICYCLES

|                | Southbound Lasselle Street |      |       | Westbound Cahuilla Drive |      |       | Northbound Lasselle Street |      |       | Eastbound Dead End |      |       |   |
|----------------|----------------------------|------|-------|--------------------------|------|-------|----------------------------|------|-------|--------------------|------|-------|---|
|                | Left                       | Thru | Right | Left                     | Thru | Right | Left                       | Thru | Right | Left               | Thru | Right |   |
| 7:00 AM        | 0                          | 2    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 2 |
| 7:15 AM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 2    | 0     | 0                  | 0    | 0     | 2 |
| 7:30 AM        | 0                          | 1    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 1 |
| 7:45 AM        | 1                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 1    | 0     | 0                  | 0    | 0     | 2 |
| 8:00 AM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 0 |
| 8:15 AM        | 0                          | 1    | 0     | 0                        | 0    | 0     | 0                          | 0    | 1     | 0                  | 0    | 0     | 2 |
| 8:30 AM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 0 |
| 8:45 AM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 0 |
| TOTAL VOLUMES: | 1                          | 4    | 0     | 0                        | 0    | 0     | 0                          | 3    | 1     | 0                  | 0    | 0     | 9 |

|                | Southbound Lasselle Street |      |       | Westbound Cahuilla Drive |      |       | Northbound Lasselle Street |      |       | Eastbound Dead End |      |       |   |
|----------------|----------------------------|------|-------|--------------------------|------|-------|----------------------------|------|-------|--------------------|------|-------|---|
|                | Left                       | Thru | Right | Left                     | Thru | Right | Left                       | Thru | Right | Left               | Thru | Right |   |
| 4:00 PM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 0 |
| 4:15 PM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 0 |
| 4:30 PM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 0 |
| 4:45 PM        | 0                          | 2    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 2 |
| 5:00 PM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 0 |
| 5:15 PM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 0 |
| 5:30 PM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 1    | 0     | 0                  | 0    | 0     | 1 |
| 5:45 PM        | 0                          | 0    | 0     | 0                        | 0    | 0     | 0                          | 0    | 0     | 0                  | 0    | 0     | 0 |
| TOTAL VOLUMES: | 0                          | 2    | 0     | 0                        | 0    | 0     | 0                          | 1    | 0     | 0                  | 0    | 0     | 3 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Lasselle Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 08\_MRV\_Lasselle\_Krameria AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time  | Lasselle Street Southbound |      |       |      |            | Krameria Avenue Westbound |      |       |      |            | Lasselle Street Northbound |      |       |      |            | Krameria Avenue Eastbound |      |       |      |            | Int. Total |              |              |
|-------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|------------|--------------|--------------|
|             | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total |            | Exclu. Total | Inclu. Total |
| 07:00 AM    | 13                         | 214  | 40    | 8    | 267        | 8                         | 28   | 13    | 7    | 49         | 70                         | 207  | 24    | 9    | 301        | 38                        | 34   | 113   | 47   | 185        | 71         | 802          | 873          |
| 07:15 AM    | 14                         | 231  | 34    | 9    | 279        | 22                        | 31   | 15    | 2    | 68         | 90                         | 251  | 40    | 12   | 381        | 90                        | 58   | 128   | 52   | 276        | 75         | 1004         | 1079         |
| 07:30 AM    | 15                         | 132  | 15    | 3    | 162        | 25                        | 33   | 17    | 3    | 75         | 102                        | 277  | 42    | 21   | 421        | 76                        | 55   | 61    | 32   | 192        | 59         | 850          | 909          |
| 07:45 AM    | 29                         | 145  | 18    | 3    | 192        | 18                        | 19   | 20    | 11   | 57         | 60                         | 283  | 85    | 31   | 428        | 50                        | 48   | 30    | 20   | 128        | 65         | 805          | 870          |
| Total       | 71                         | 722  | 107   | 23   | 900        | 73                        | 111  | 65    | 23   | 249        | 322                        | 1018 | 191   | 73   | 1531       | 254                       | 195  | 332   | 151  | 781        | 270        | 3461         | 3731         |
| 08:00 AM    | 52                         | 116  | 11    | 1    | 179        | 42                        | 36   | 25    | 7    | 103        | 29                         | 227  | 75    | 37   | 331        | 64                        | 54   | 30    | 5    | 148        | 50         | 761          | 811          |
| 08:15 AM    | 5                          | 107  | 8     | 0    | 120        | 52                        | 41   | 24    | 10   | 117        | 23                         | 166  | 16    | 4    | 205        | 33                        | 10   | 18    | 15   | 61         | 29         | 503          | 532          |
| 08:30 AM    | 11                         | 113  | 7     | 0    | 131        | 4                         | 4    | 5     | 5    | 13         | 21                         | 159  | 9     | 2    | 189        | 28                        | 2    | 24    | 19   | 54         | 26         | 387          | 413          |
| 08:45 AM    | 3                          | 120  | 11    | 1    | 134        | 5                         | 3    | 12    | 8    | 20         | 8                          | 130  | 12    | 2    | 150        | 29                        | 10   | 11    | 6    | 50         | 17         | 354          | 371          |
| Total       | 71                         | 456  | 37    | 2    | 564        | 103                       | 84   | 66    | 30   | 253        | 81                         | 682  | 112   | 45   | 875        | 154                       | 76   | 83    | 45   | 313        | 122        | 2005         | 2127         |
| Grand Total | 142                        | 1178 | 144   | 25   | 1464       | 176                       | 195  | 131   | 53   | 502        | 403                        | 1700 | 303   | 118  | 2406       | 408                       | 271  | 415   | 196  | 1094       | 392        | 5466         | 5858         |
| Approach %  | 9.7                        | 80.5 | 9.8   |      | 35.1       | 38.8                      | 26.1 |       |      | 9.2        | 16.7                       | 70.7 | 12.6  |      | 44         | 37.3                      | 24.8 | 37.9  |      | 20         | 6.7        | 93.3         |              |
| Total %     | 2.6                        | 21.6 | 2.6   |      | 26.8       | 3.2                       | 3.6  | 2.4   |      | 9.2        | 7.4                        | 31.1 | 5.5   |      |            | 7.5                       | 5    | 7.6   |      |            |            |              |              |

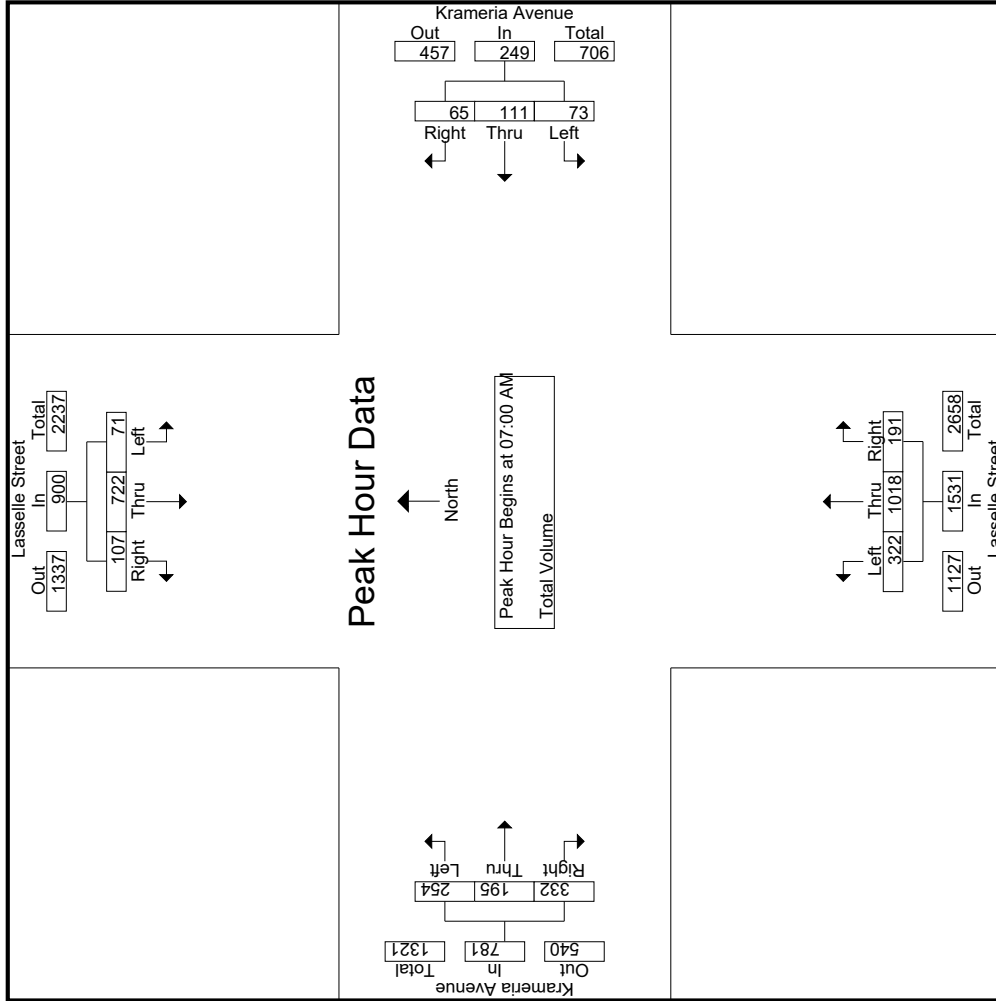
  

| Start Time   | Lasselle Street Southbound |      |       |      |            | Krameria Avenue Westbound |      |       |      |            | Lasselle Street Northbound |      |       |      |            | Krameria Avenue Eastbound |      |       |      |            | Int. Total |              |              |
|--|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|------------|--------------|--------------|
|  | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total |            | Exclu. Total | Inclu. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                            |      |       |      |            |                           |      |       |      |            |                            |      |       |      |            |                           |      |       |      |            |            |              |              |
| Peak Hour for Entire Intersection Begins at 07:00 AM       |                            |      |       |      |            |                           |      |       |      |            |                            |      |       |      |            |                           |      |       |      |            |            |              |              |
| 07:00 AM   | 13                         | 214  | 40    | 8    | 267        | 8                         | 28   | 13    | 7    | 49         | 70                         | 207  | 24    | 9    | 301        | 38                        | 34   | 113   | 47   | 185        | 71         | 802          | 873          |
| 07:15 AM   | 14                         | 231  | 34    | 9    | 279        | 22                        | 31   | 15    | 2    | 68         | 90                         | 251  | 40    | 12   | 381        | 90                        | 58   | 128   | 52   | 276        | 75         | 1004         | 1079         |
| 07:30 AM   | 15                         | 132  | 15    | 3    | 162        | 25                        | 33   | 17    | 3    | 75         | 102                        | 277  | 42    | 21   | 421        | 76                        | 55   | 61    | 32   | 192        | 59         | 850          | 909          |
| 07:45 AM   | 29                         | 145  | 18    | 3    | 192        | 18                        | 19   | 20    | 11   | 57         | 60                         | 283  | 85    | 31   | 428        | 50                        | 48   | 30    | 20   | 128        | 65         | 805          | 870          |
| Total Volume   | 71                         | 722  | 107   | 23   | 900        | 73                        | 111  | 65    | 23   | 249        | 322                        | 1018 | 191   | 73   | 1531       | 254                       | 195  | 332   | 151  | 781        | 270        | 3461         | 3731         |
| % App. Total   | 7.9                        | 80.2 | 11.9  |      | 35.1       | 38.8                      | 26.1 |       |      | 9.2        | 16.7                       | 70.7 | 12.6  |      | 44         | 37.3                      | 24.8 | 37.9  |      | 20         | 6.7        | 93.3         |              |
| PHF  | .612                       | .781 | .669  |      | .806       | .730                      | .841 | .813  |      | .830       | .789                       | .899 | .562  |      | .894       | .706                      | .841 | .648  |      | .707       |            | .862         |              |

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Lasselle Street  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 08\_MRV\_Lasselle\_Krameria AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



Counts Unlimited  
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City of Moreno Valley  
 N/S: Lasselle Street  
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File Name : 08\_MRV\_Lasselle\_Krameria PM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time  | Lasselle Street Southbound |      |       |      |            | Krameria Avenue Westbound |      |       |      |            | Lasselle Street Northbound |      |       |      |            | Krameria Avenue Eastbound |      |       |      |            |              |              |            |
|-------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|--------------|--------------|------------|
|             | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Exclu. Total | Inclu. Total | Int. Total |
| 04:00 PM    | 18                         | 207  | 18    | 6    | 243        | 14                        | 9    | 19    | 10   | 42         | 27                         | 173  | 5     | 3    | 205        | 26                        | 12   | 35    | 20   | 73         | 39           | 563          | 602        |
| 04:15 PM    | 13                         | 218  | 21    | 2    | 252        | 18                        | 12   | 11    | 7    | 41         | 25                         | 135  | 5     | 4    | 165        | 35                        | 15   | 19    | 13   | 69         | 26           | 527          | 553        |
| 04:30 PM    | 26                         | 250  | 20    | 4    | 296        | 23                        | 16   | 13    | 9    | 52         | 18                         | 184  | 10    | 4    | 212        | 29                        | 10   | 38    | 26   | 77         | 43           | 637          | 680        |
| 04:45 PM    | 16                         | 216  | 17    | 2    | 249        | 16                        | 7    | 11    | 6    | 34         | 19                         | 188  | 12    | 4    | 219        | 24                        | 11   | 42    | 25   | 77         | 37           | 579          | 616        |
| Total       | 73                         | 891  | 76    | 14   | 1040       | 71                        | 44   | 54    | 32   | 169        | 89                         | 680  | 32    | 15   | 801        | 114                       | 48   | 134   | 84   | 296        | 145          | 2306         | 2451       |
| 05:00 PM    | 19                         | 227  | 15    | 4    | 261        | 20                        | 7    | 13    | 11   | 40         | 21                         | 164  | 9     | 2    | 194        | 28                        | 14   | 43    | 29   | 85         | 46           | 580          | 626        |
| 05:15 PM    | 20                         | 307  | 14    | 3    | 341        | 27                        | 11   | 11    | 6    | 49         | 17                         | 171  | 12    | 5    | 200        | 28                        | 11   | 41    | 22   | 80         | 36           | 670          | 706        |
| 05:30 PM    | 22                         | 246  | 15    | 3    | 283        | 25                        | 9    | 10    | 8    | 44         | 31                         | 192  | 17    | 5    | 240        | 29                        | 17   | 30    | 18   | 76         | 34           | 643          | 677        |
| 05:45 PM    | 30                         | 239  | 13    | 1    | 282        | 10                        | 12   | 14    | 6    | 36         | 15                         | 214  | 29    | 7    | 258        | 33                        | 15   | 35    | 21   | 83         | 35           | 659          | 694        |
| Total       | 91                         | 1019 | 57    | 11   | 1167       | 82                        | 39   | 48    | 31   | 169        | 84                         | 741  | 67    | 19   | 892        | 118                       | 57   | 149   | 90   | 324        | 151          | 2552         | 2703       |
| Grand Total | 164                        | 1910 | 133   | 25   | 2207       | 153                       | 83   | 102   | 63   | 338        | 173                        | 1421 | 99    | 34   | 1693       | 232                       | 105  | 283   | 174  | 620        | 296          | 4858         | 5154       |
| Approach %  | 7.4                        | 86.5 | 6     |      | 45.3       | 45.3                      | 24.6 | 30.2  |      | 7          | 10.2                       | 83.9 | 5.8   |      | 34.8       | 37.4                      | 16.9 | 45.6  |      | 12.8       | 5.7          | 94.3         |            |
| Total %     | 3.4                        | 39.3 | 2.7   |      | 45.4       | 3.1                       | 1.7  | 2.1   |      |            | 3.6                        | 29.3 | 2     |      |            | 4.8                       | 2.2  | 5.8   |      |            |              |              |            |

3.1-27

| Start Time  | Lasselle Street Southbound |      |       |      |            | Krameria Avenue Westbound |      |       |      |            | Lasselle Street Northbound |      |       |      |            | Krameria Avenue Eastbound |      |       |      |            |              |              |            |
|-------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|---------------------------|------|-------|------|------------|--------------|--------------|------------|
|             | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Left                       | Thru | Right | RTOR | App. Total | Left                      | Thru | Right | RTOR | App. Total | Exclu. Total | Inclu. Total | Int. Total |
| 05:00 PM    | 19                         | 227  | 15    | 4    | 261        | 20                        | 7    | 13    | 11   | 40         | 21                         | 164  | 9     | 2    | 194        | 28                        | 14   | 43    | 29   | 85         | 46           | 580          | 626        |
| 05:15 PM    | 20                         | 307  | 14    | 3    | 341        | 27                        | 11   | 11    | 6    | 49         | 17                         | 171  | 12    | 5    | 200        | 28                        | 11   | 41    | 22   | 80         | 36           | 670          | 706        |
| 05:30 PM    | 22                         | 246  | 15    | 3    | 283        | 25                        | 9    | 10    | 8    | 44         | 31                         | 192  | 17    | 5    | 240        | 29                        | 17   | 30    | 18   | 76         | 34           | 643          | 677        |
| 05:45 PM    | 30                         | 239  | 13    | 1    | 282        | 10                        | 12   | 14    | 6    | 36         | 15                         | 214  | 29    | 7    | 258        | 33                        | 15   | 35    | 21   | 83         | 35           | 659          | 694        |
| Total       | 91                         | 1019 | 57    | 11   | 1167       | 82                        | 39   | 48    | 31   | 169        | 84                         | 741  | 67    | 19   | 892        | 118                       | 57   | 149   | 90   | 324        | 151          | 2552         | 2703       |
| Grand Total | 164                        | 1910 | 133   | 25   | 2207       | 153                       | 83   | 102   | 63   | 338        | 173                        | 1421 | 99    | 34   | 1693       | 232                       | 105  | 283   | 174  | 620        | 296          | 4858         | 5154       |
| Approach %  | 7.4                        | 86.5 | 6     |      | 45.3       | 45.3                      | 24.6 | 30.2  |      | 7          | 10.2                       | 83.9 | 5.8   |      | 34.8       | 37.4                      | 16.9 | 45.6  |      | 12.8       | 5.7          | 94.3         |            |
| Total %     | 3.4                        | 39.3 | 2.7   |      | 45.4       | 3.1                       | 1.7  | 2.1   |      |            | 3.6                        | 29.3 | 2     |      |            | 4.8                       | 2.2  | 5.8   |      |            |              |              |            |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

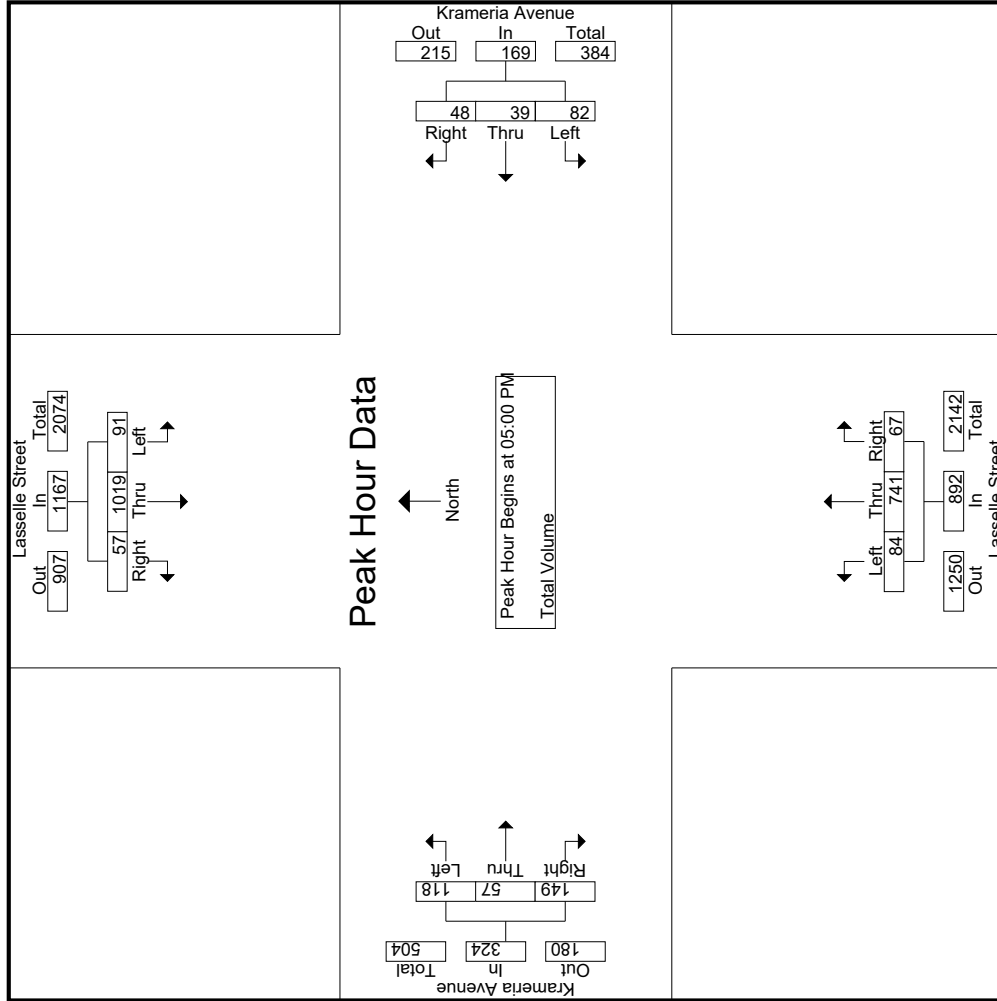
|              |      |      |      |    |      |      |      |      |    |      |      |      |      |    |      |      |      |      |    |      |     |      |      |
|--------------|------|------|------|----|------|------|------|------|----|------|------|------|------|----|------|------|------|------|----|------|-----|------|------|
| 05:00 PM     | 19   | 227  | 15   | 4  | 261  | 20   | 7    | 13   | 11 | 40   | 21   | 164  | 9    | 2  | 194  | 28   | 14   | 43   | 29 | 85   | 46  | 580  | 626  |
| 05:15 PM     | 20   | 307  | 14   | 3  | 341  | 27   | 11   | 11   | 6  | 49   | 17   | 171  | 12   | 5  | 200  | 28   | 11   | 41   | 22 | 80   | 36  | 670  | 706  |
| 05:30 PM     | 22   | 246  | 15   | 3  | 283  | 25   | 9    | 10   | 8  | 44   | 31   | 192  | 17   | 5  | 240  | 29   | 17   | 30   | 18 | 76   | 34  | 643  | 677  |
| 05:45 PM     | 30   | 239  | 13   | 1  | 282  | 10   | 12   | 14   | 6  | 36   | 15   | 214  | 29   | 7  | 258  | 33   | 15   | 35   | 21 | 83   | 35  | 659  | 694  |
| Total Volume | 91   | 1019 | 57   | 11 | 1167 | 82   | 39   | 48   | 31 | 169  | 84   | 741  | 67   | 19 | 892  | 118  | 57   | 149  | 90 | 324  | 151 | 2552 | 2703 |
| % App. Total | 7.8  | 87.3 | 4.9  |    | 45.3 | 45.3 | 24.6 | 30.2 |    | 7    | 10.2 | 83.9 | 5.8  |    | 34.8 | 37.4 | 16.9 | 45.6 |    | 12.8 | 5.7 | 94.3 |      |
| PHF          | .758 | .830 | .950 |    | .856 | .759 | .813 | .857 |    | .862 | .677 | .866 | .578 |    | .864 | .894 | .838 | .866 |    | .953 |     | .952 |      |



Counts Unlimited  
PO Box 1178  
Corona, CA 92878  
(951) 268-6268

File Name : 08\_MRV\_Lasselle\_Krameria PM  
Site Code : 05118162  
Start Date : 3/6/2018  
Page No : 2

City of Moreno Valley  
N/S: Lasselle Street  
E/W: Krameria Avenue  
Weather: Clear



Location: Moreno Valley  
 N/S: Lasselle Street  
 E/W: Krameria Avenue



Date: 3/6/2018  
 Date: Tuesday

PEDESTRIANS

|                | North Leg<br>Lasselle Street | East Leg<br>Krameria Avenue | South Leg<br>Lasselle Street | West Leg<br>Dead End |    |
|----------------|------------------------------|-----------------------------|------------------------------|----------------------|----|
|                | Pedestrians                  | Pedestrians                 | Pedestrians                  | Pedestrians          |    |
| 7:00 AM        | 0                            | 0                           | 2                            | 6                    | 8  |
| 7:15 AM        | 0                            | 1                           | 3                            | 0                    | 4  |
| 7:30 AM        | 0                            | 1                           | 0                            | 1                    | 2  |
| 7:45 AM        | 0                            | 0                           | 2                            | 0                    | 2  |
| 8:00 AM        | 0                            | 1                           | 0                            | 2                    | 3  |
| 8:15 AM        | 0                            | 0                           | 1                            | 2                    | 3  |
| 8:30 AM        | 0                            | 0                           | 1                            | 0                    | 1  |
| 8:45 AM        | 0                            | 0                           | 4                            | 1                    | 5  |
| TOTAL VOLUMES: | 0                            | 3                           | 13                           | 12                   | 28 |

|                | North Leg<br>Lasselle Street | East Leg<br>Krameria Avenue | South Leg<br>Lasselle Street | West Leg<br>Dead End |    |
|----------------|------------------------------|-----------------------------|------------------------------|----------------------|----|
|                | Pedestrians                  | Pedestrians                 | Pedestrians                  | Pedestrians          |    |
| 4:00 PM        | 1                            | 1                           | 0                            | 2                    | 4  |
| 4:15 PM        | 1                            | 1                           | 0                            | 7                    | 9  |
| 4:30 PM        | 0                            | 0                           | 1                            | 3                    | 4  |
| 4:45 PM        | 0                            | 1                           | 0                            | 0                    | 1  |
| 5:00 PM        | 0                            | 2                           | 0                            | 0                    | 2  |
| 5:15 PM        | 1                            | 0                           | 0                            | 0                    | 1  |
| 5:30 PM        | 1                            | 1                           | 0                            | 1                    | 3  |
| 5:45 PM        | 0                            | 0                           | 0                            | 0                    | 0  |
| TOTAL VOLUMES: | 4                            | 6                           | 1                            | 13                   | 24 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Location: Moreno Valley  
 N/S: Lasselle Street  
 E/W: Krameria Avenue



Date: 3/6/2018  
 Date: Tuesday

BICYCLES

|                | Southbound<br>Lasselle Street |      |       | Westbound<br>Krameria Avenue |      |       | Northbound<br>Lasselle Street |      |       | Eastbound<br>Dead End |      |       |   |
|----------------|-------------------------------|------|-------|------------------------------|------|-------|-------------------------------|------|-------|-----------------------|------|-------|---|
|                | Left                          | Thru | Right | Left                         | Thru | Right | Left                          | Thru | Right | Left                  | Thru | Right |   |
| 7:00 AM        | 0                             | 3    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 3 |
| 7:15 AM        | 0                             | 0    | 0     | 0                            | 0    | 1     | 0                             | 1    | 0     | 0                     | 0    | 0     | 2 |
| 7:30 AM        | 0                             | 1    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 1 |
| 7:45 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 1    | 0     | 0                     | 0    | 0     | 1 |
| 8:00 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 0 |
| 8:15 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 0 |
| 8:30 AM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 0 |
| 8:45 AM        | 0                             | 1    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 1 |
| TOTAL VOLUMES: | 0                             | 5    | 0     | 0                            | 0    | 1     | 0                             | 2    | 0     | 0                     | 0    | 0     | 8 |

|                | Southbound<br>Lasselle Street |      |       | Westbound<br>Krameria Avenue |      |       | Northbound<br>Lasselle Street |      |       | Eastbound<br>Dead End |      |       |   |
|----------------|-------------------------------|------|-------|------------------------------|------|-------|-------------------------------|------|-------|-----------------------|------|-------|---|
|                | Left                          | Thru | Right | Left                         | Thru | Right | Left                          | Thru | Right | Left                  | Thru | Right |   |
| 4:00 PM        | 0                             | 0    | 0     | 0                            | 0    | 1     | 0                             | 0    | 2     | 0                     | 0    | 0     | 3 |
| 4:15 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 0 |
| 4:30 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 0 |
| 4:45 PM        | 0                             | 1    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 1 |
| 5:00 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 0 |
| 5:15 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 0 |
| 5:30 PM        | 0                             | 0    | 0     | 0                            | 0    | 1     | 0                             | 0    | 0     | 0                     | 0    | 0     | 1 |
| 5:45 PM        | 0                             | 0    | 0     | 0                            | 0    | 0     | 0                             | 0    | 0     | 0                     | 0    | 0     | 0 |
| TOTAL VOLUMES: | 0                             | 1    | 0     | 0                            | 0    | 2     | 0                             | 0    | 2     | 0                     | 0    | 0     | 5 |

Counts Unlimited  
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City of Moreno Valley  
 N/S: Colt Way  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 10\_MRV\_Colt\_Krameria AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time         | Krameria Avenue Westbound |            |            | Colt Way Northbound |           |            | Krameria Avenue Eastbound |           |            | Int. Total  |
|--------------------|---------------------------|------------|------------|---------------------|-----------|------------|---------------------------|-----------|------------|-------------|
|                    | Left                      | Thru       | App. Total | Left                | Right     | App. Total | Thru                      | Right     | App. Total |             |
| 07:00 AM           | 3                         | 28         | 31         | 21                  | 4         | 25         | 66                        | 15        | 81         | 137         |
| 07:15 AM           | 5                         | 54         | 59         | 24                  | 15        | 39         | 99                        | 20        | 119        | 217         |
| 07:30 AM           | 8                         | 53         | 61         | 10                  | 10        | 20         | 103                       | 7         | 110        | 191         |
| 07:45 AM           | 4                         | 58         | 62         | 15                  | 22        | 37         | 174                       | 12        | 186        | 285         |
| <b>Total</b>       | <b>20</b>                 | <b>193</b> | <b>213</b> | <b>70</b>           | <b>51</b> | <b>121</b> | <b>442</b>                | <b>54</b> | <b>496</b> | <b>830</b>  |
| 08:00 AM           | 31                        | 107        | 138        | 13                  | 32        | 45         | 145                       | 7         | 152        | 335         |
| 08:15 AM           | 9                         | 80         | 89         | 8                   | 1         | 9          | 21                        | 1         | 22         | 120         |
| 08:30 AM           | 1                         | 8          | 9          | 5                   | 2         | 7          | 17                        | 4         | 21         | 37          |
| 08:45 AM           | 1                         | 13         | 14         | 10                  | 0         | 10         | 18                        | 6         | 24         | 48          |
| <b>Total</b>       | <b>42</b>                 | <b>208</b> | <b>250</b> | <b>36</b>           | <b>35</b> | <b>71</b>  | <b>201</b>                | <b>18</b> | <b>219</b> | <b>540</b>  |
| <b>Grand Total</b> | <b>62</b>                 | <b>401</b> | <b>463</b> | <b>106</b>          | <b>86</b> | <b>192</b> | <b>643</b>                | <b>72</b> | <b>715</b> | <b>1370</b> |
| Apprch %           | 13.4                      | 86.6       |            | 55.2                | 44.8      |            | 89.9                      | 10.1      |            |             |
| Total %            | 4.5                       | 29.3       | 33.8       | 7.7                 | 6.3       | 14         | 46.9                      | 5.3       | 52.2       |             |

| Start Time   | Krameria Avenue Westbound |            |            | Colt Way Northbound |           |            | Krameria Avenue Eastbound |           |            | Int. Total |
|--|---------------------------|------------|------------|---------------------|-----------|------------|---------------------------|-----------|------------|------------|
|  | Left                      | Thru       | App. Total | Left                | Right     | App. Total | Thru                      | Right     | App. Total |            |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                           |            |            |                     |           |            |                           |           |            |            |
| Peak Hour for Entire Intersection Begins at 07:15 AM       |                           |            |            |                     |           |            |                           |           |            |            |
| 07:15 AM   | 5                         | 54         | 59         | <b>24</b>           | 15        | 39         | 99                        | <b>20</b> | 119        | 217        |
| 07:30 AM   | 8                         | 53         | 61         | 10                  | 10        | 20         | 103                       | 7         | 110        | 191        |
| 07:45 AM   | 4                         | 58         | 62         | 15                  | 22        | 37         | <b>174</b>                | 12        | <b>186</b> | 285        |
| 08:00 AM   | <b>31</b>                 | <b>107</b> | <b>138</b> | 13                  | <b>32</b> | <b>45</b>  | 145                       | 7         | 152        | <b>335</b> |
| Total Volume   | 48                        | 272        | 320        | 62                  | 79        | 141        | 521                       | 46        | 567        | 1028       |
| % App. Total   | 15                        | 85         |            | 44                  | 56        |            | 91.9                      | 8.1       |            |            |
| PHF  | .387                      | .636       | .580       | .646                | .617      | .783       | .749                      | .575      | .762       | .767       |

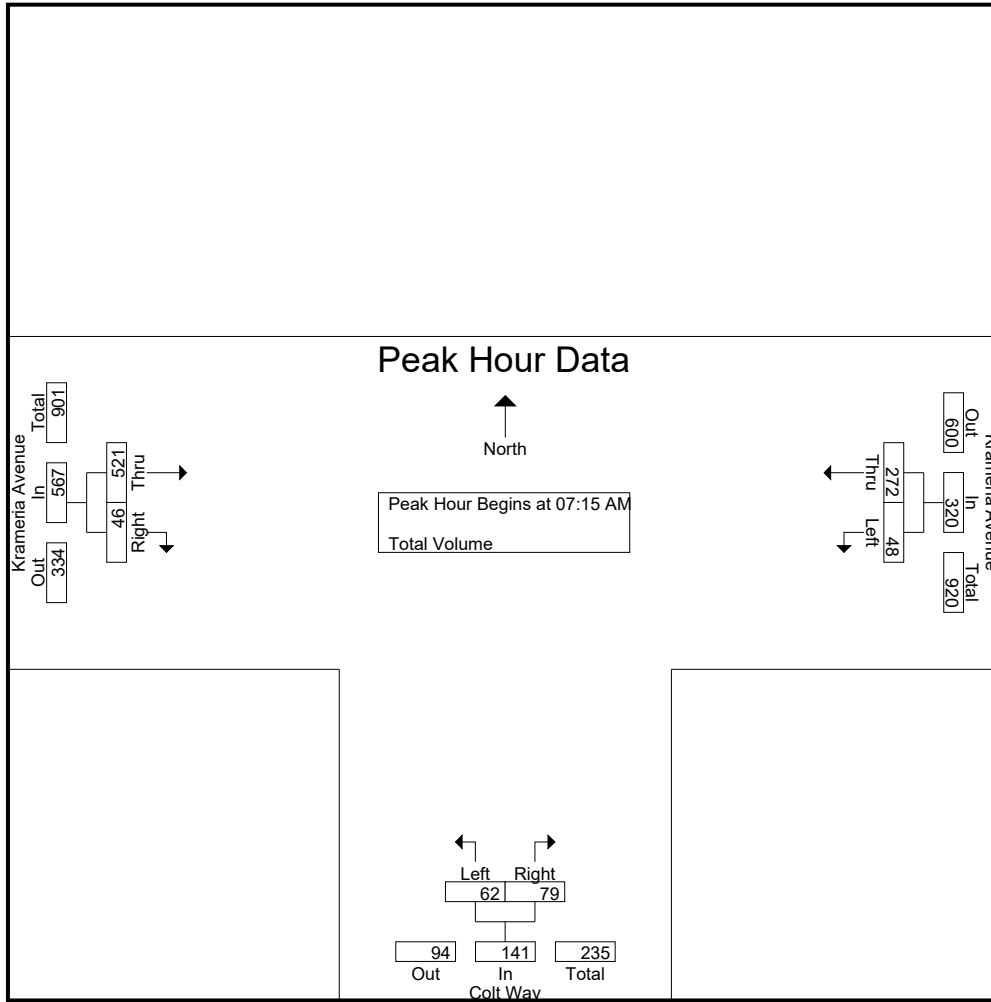
Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Colt Way  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 10\_MRV\_Colt\_Krameria AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

|              | 07:30 AM |      |      | 07:15 AM |      |      | 07:15 AM |      |      |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins.     | 8        | 53   | 61   | 24       | 15   | 39   | 99       | 20   | 119  |
| +15 mins.    | 4        | 58   | 62   | 10       | 10   | 20   | 103      | 7    | 110  |
| +30 mins.    | 31       | 107  | 138  | 15       | 22   | 37   | 174      | 12   | 186  |
| +45 mins.    | 9        | 80   | 89   | 13       | 32   | 45   | 145      | 7    | 152  |
| Total Volume | 52       | 298  | 350  | 62       | 79   | 141  | 521      | 46   | 567  |
| % App. Total | 14.9     | 85.1 |      | 44       | 56   |      | 91.9     | 8.1  |      |
| PHF          | .419     | .696 | .634 | .646     | .617 | .783 | .749     | .575 | .762 |

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 (951) 268-6268

City of Moreno Valley  
 N/S: Colt Way  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 10\_MRV\_Colt\_Krameria PM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time         | Krameria Avenue Westbound |            |            | Colt Way Northbound |           |            | Krameria Avenue Eastbound |            |            | Int. Total |
|--------------------|---------------------------|------------|------------|---------------------|-----------|------------|---------------------------|------------|------------|------------|
|                    | Left                      | Thru       | App. Total | Left                | Right     | App. Total | Thru                      | Right      | App. Total |            |
| 04:00 PM           | 3                         | 24         | 27         | 16                  | 0         | 16         | 19                        | 7          | 26         | 69         |
| 04:15 PM           | 1                         | 30         | 31         | 13                  | 2         | 15         | 23                        | 16         | 39         | 85         |
| 04:30 PM           | 1                         | 45         | 46         | 12                  | 0         | 12         | 26                        | 17         | 43         | 101        |
| 04:45 PM           | 5                         | 19         | 24         | 12                  | 1         | 13         | 22                        | 17         | 39         | 76         |
| <b>Total</b>       | <b>10</b>                 | <b>118</b> | <b>128</b> | <b>53</b>           | <b>3</b>  | <b>56</b>  | <b>90</b>                 | <b>57</b>  | <b>147</b> | <b>331</b> |
| 05:00 PM           | 1                         | 31         | 32         | 11                  | 0         | 11         | 19                        | 23         | 42         | 85         |
| 05:15 PM           | 2                         | 41         | 43         | 9                   | 3         | 12         | 29                        | 16         | 45         | 100        |
| 05:30 PM           | 1                         | 32         | 33         | 10                  | 2         | 12         | 42                        | 16         | 58         | 103        |
| 05:45 PM           | 1                         | 20         | 21         | 14                  | 5         | 19         | 56                        | 21         | 77         | 117        |
| <b>Total</b>       | <b>5</b>                  | <b>124</b> | <b>129</b> | <b>44</b>           | <b>10</b> | <b>54</b>  | <b>146</b>                | <b>76</b>  | <b>222</b> | <b>405</b> |
| <b>Grand Total</b> | <b>15</b>                 | <b>242</b> | <b>257</b> | <b>97</b>           | <b>13</b> | <b>110</b> | <b>236</b>                | <b>133</b> | <b>369</b> | <b>736</b> |
| Apprch %           | 5.8                       | 94.2       |            | 88.2                | 11.8      |            | 64                        | 36         |            |            |
| Total %            | 2                         | 32.9       | 34.9       | 13.2                | 1.8       | 14.9       | 32.1                      | 18.1       | 50.1       |            |

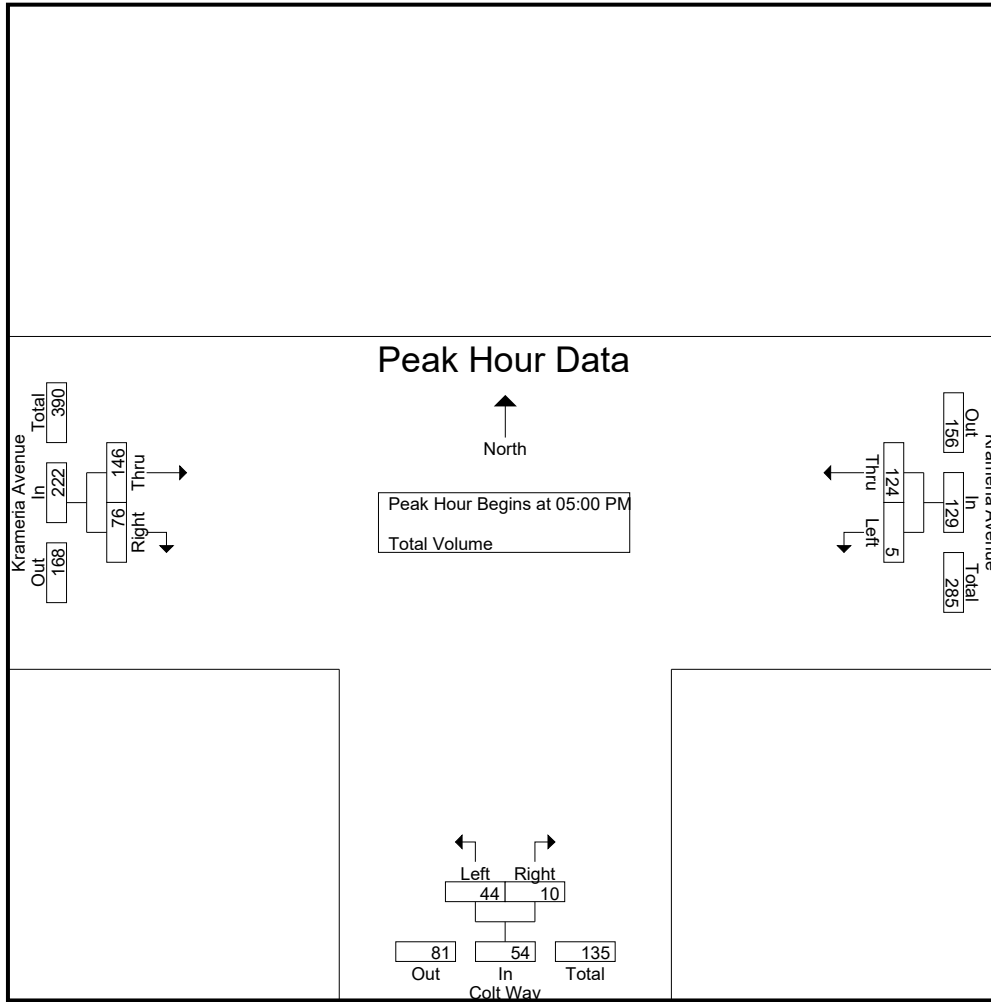
| Start Time   | Krameria Avenue Westbound |            |            | Colt Way Northbound |           |            | Krameria Avenue Eastbound |           |            | Int. Total |
|--|---------------------------|------------|------------|---------------------|-----------|------------|---------------------------|-----------|------------|------------|
|  | Left                      | Thru       | App. Total | Left                | Right     | App. Total | Thru                      | Right     | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                           |            |            |                     |           |            |                           |           |            |            |
| Peak Hour for Entire Intersection Begins at 05:00 PM       |                           |            |            |                     |           |            |                           |           |            |            |
| 05:00 PM   | 1                         | 31         | 32         | 11                  | 0         | 11         | 19                        | <b>23</b> | 42         | 85         |
| 05:15 PM   | <b>2</b>                  | <b>41</b>  | <b>43</b>  | 9                   | 3         | 12         | 29                        | 16        | 45         | 100        |
| 05:30 PM   | 1                         | 32         | 33         | 10                  | 2         | 12         | 42                        | 16        | 58         | 103        |
| 05:45 PM   | 1                         | 20         | 21         | <b>14</b>           | <b>5</b>  | <b>19</b>  | <b>56</b>                 | 21        | <b>77</b>  | <b>117</b> |
| <b>Total Volume</b>  | <b>5</b>                  | <b>124</b> | <b>129</b> | <b>44</b>           | <b>10</b> | <b>54</b>  | <b>146</b>                | <b>76</b> | <b>222</b> | <b>405</b> |
| % App. Total   | 3.9                       | 96.1       |            | 81.5                | 18.5      |            | 65.8                      | 34.2      |            |            |
| PHF  | .625                      | .756       | .750       | .786                | .500      | .711       | .652                      | .826      | .721       | .865       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Colt Way  
 E/W: Krameria Avenue  
 Weather: Clear

File Name : 10\_MRV\_Colt\_Krameria PM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

|              | 04:30 PM |      |      | 04:00 PM |      |      | 05:00 PM |      |      |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins.     | 1        | 45   | 46   | 16       | 0    | 16   | 19       | 23   | 42   |
| +15 mins.    | 5        | 19   | 24   | 13       | 2    | 15   | 29       | 16   | 45   |
| +30 mins.    | 1        | 31   | 32   | 12       | 0    | 12   | 42       | 16   | 58   |
| +45 mins.    | 2        | 41   | 43   | 12       | 1    | 13   | 56       | 21   | 77   |
| Total Volume | 9        | 136  | 145  | 53       | 3    | 56   | 146      | 76   | 222  |
| % App. Total | 6.2      | 93.8 |      | 94.6     | 5.4  |      | 65.8     | 34.2 |      |
| PHF          | .450     | .756 | .788 | .828     | .375 | .875 | .652     | .826 | .721 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Location: Moreno Valley  
 N/S: Colt Way  
 E/W: Krameria Avenue



Date: 3/6/2018  
 Date: Tuesday

PEDESTRIANS

|                | North Leg<br>Dead End | East Leg<br>Krameria Avenue | South Leg<br>Colt Way | West Leg<br>Dead End |    |
|----------------|-----------------------|-----------------------------|-----------------------|----------------------|----|
|                | Pedestrians           | Pedestrians                 | Pedestrians           | Pedestrians          |    |
| 7:00 AM        | 0                     | 0                           | 2                     | 0                    | 2  |
| 7:15 AM        | 0                     | 0                           | 0                     | 0                    | 0  |
| 7:30 AM        | 0                     | 0                           | 0                     | 0                    | 0  |
| 7:45 AM        | 0                     | 0                           | 2                     | 0                    | 2  |
| 8:00 AM        | 0                     | 0                           | 0                     | 0                    | 0  |
| 8:15 AM        | 0                     | 0                           | 3                     | 0                    | 3  |
| 8:30 AM        | 0                     | 0                           | 4                     | 0                    | 4  |
| 8:45 AM        | 0                     | 0                           | 3                     | 0                    | 3  |
| TOTAL VOLUMES: | 0                     | 0                           | 14                    | 0                    | 14 |

|                | North Leg<br>Dead End | East Leg<br>Krameria Avenue | South Leg<br>Colt Way | West Leg<br>Dead End |   |
|----------------|-----------------------|-----------------------------|-----------------------|----------------------|---|
|                | Pedestrians           | Pedestrians                 | Pedestrians           | Pedestrians          |   |
| 4:00 PM        | 0                     | 0                           | 0                     | 0                    | 0 |
| 4:15 PM        | 0                     | 0                           | 0                     | 0                    | 0 |
| 4:30 PM        | 0                     | 0                           | 0                     | 0                    | 0 |
| 4:45 PM        | 0                     | 0                           | 0                     | 0                    | 0 |
| 5:00 PM        | 0                     | 0                           | 2                     | 0                    | 2 |
| 5:15 PM        | 0                     | 0                           | 0                     | 0                    | 0 |
| 5:30 PM        | 0                     | 0                           | 1                     | 0                    | 1 |
| 5:45 PM        | 0                     | 0                           | 0                     | 0                    | 0 |
| TOTAL VOLUMES: | 0                     | 0                           | 3                     | 0                    | 3 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Location: Moreno Valley  
 N/S: Colt Way  
 E/W: Krameria Avenue



Date: 3/6/2018  
 Date: Tuesday

BICYCLES

|                | Southbound<br>Dead End |      |       | Westbound<br>Krameria Avenue |      |       | Northbound<br>Colt Way |      |       | Eastbound<br>Dead End |      |       |   |
|----------------|------------------------|------|-------|------------------------------|------|-------|------------------------|------|-------|-----------------------|------|-------|---|
|                | Left                   | Thru | Right | Left                         | Thru | Right | Left                   | Thru | Right | Left                  | Thru | Right |   |
| 7:00 AM        | 0                      | 0    | 0     | 1                            | 1    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 2 |
| 7:15 AM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 0 |
| 7:30 AM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 0 |
| 7:45 AM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 1                      | 0    | 0     | 0                     | 0    | 0     | 1 |
| 8:00 AM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 0 |
| 8:15 AM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 0 |
| 8:30 AM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 0 |
| 8:45 AM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 0 |
| TOTAL VOLUMES: | 0                      | 0    | 0     | 1                            | 1    | 0     | 1                      | 0    | 0     | 0                     | 0    | 0     | 3 |

|                | Southbound<br>Dead End |      |       | Westbound<br>Krameria Avenue |      |       | Northbound<br>Colt Way |      |       | Eastbound<br>Dead End |      |       |    |
|----------------|------------------------|------|-------|------------------------------|------|-------|------------------------|------|-------|-----------------------|------|-------|----|
|                | Left                   | Thru | Right | Left                         | Thru | Right | Left                   | Thru | Right | Left                  | Thru | Right |    |
| 4:00 PM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 1                      | 0    | 0     | 0                     | 2    | 0     | 3  |
| 4:15 PM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 0  |
| 4:30 PM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 0     | 0                     | 1    | 0     | 1  |
| 4:45 PM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 0  |
| 5:00 PM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 0  |
| 5:15 PM        | 0                      | 0    | 0     | 0                            | 0    | 0     | 0                      | 0    | 1     | 0                     | 1    | 0     | 2  |
| 5:30 PM        | 0                      | 0    | 0     | 0                            | 1    | 0     | 0                      | 0    | 0     | 0                     | 0    | 0     | 1  |
| 5:45 PM        | 0                      | 0    | 0     | 2                            | 0    | 0     | 0                      | 0    | 1     | 0                     | 0    | 0     | 3  |
| TOTAL VOLUMES: | 0                      | 0    | 0     | 2                            | 1    | 0     | 1                      | 0    | 2     | 0                     | 4    | 0     | 10 |

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Cahuilla Drive  
 Weather: Clear

File Name : 12\_MR\_V\_Krameria\_Cahuilla AM  
 Site Code : 05118162  
 Start Date : 9/18/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time  | Krameria Avenue Southbound |       |            | Krameria Avenue Northbound |      |            | Cahuilla Drive Eastbound |       |            | Int. Total |
|-------------|----------------------------|-------|------------|----------------------------|------|------------|--------------------------|-------|------------|------------|
|             | Thru                       | Right | App. Total | Left                       | Thru | App. Total | Left                     | Right | App. Total |            |
| 07:00 AM    | 6                          | 1     | 7          | 21                         | 13   | 34         | 1                        | 6     | 7          | 48         |
| 07:15 AM    | 11                         | 0     | 11         | 25                         | 37   | 62         | 3                        | 9     | 12         | 85         |
| 07:30 AM    | 14                         | 3     | 17         | 17                         | 42   | 59         | 8                        | 7     | 15         | 91         |
| 07:45 AM    | 21                         | 6     | 27         | 28                         | 72   | 100        | 11                       | 15    | 26         | 153        |
| Total       | 52                         | 10    | 62         | 91                         | 164  | 255        | 23                       | 37    | 60         | 377        |
| 08:00 AM    | 20                         | 10    | 30         | 48                         | 33   | 81         | 4                        | 47    | 51         | 162        |
| 08:15 AM    | 6                          | 2     | 8          | 28                         | 8    | 36         | 2                        | 6     | 8          | 52         |
| 08:30 AM    | 3                          | 2     | 5          | 8                          | 10   | 18         | 2                        | 7     | 9          | 32         |
| 08:45 AM    | 6                          | 3     | 9          | 4                          | 17   | 21         | 7                        | 1     | 8          | 38         |
| Total       | 35                         | 17    | 52         | 88                         | 68   | 156        | 15                       | 61    | 76         | 284        |
| Grand Total | 87                         | 27    | 114        | 179                        | 232  | 411        | 38                       | 98    | 136        | 661        |
| Apprch %    | 76.3                       | 23.7  |            | 43.6                       | 56.4 |            | 27.9                     | 72.1  |            |            |
| Total %     | 13.2                       | 4.1   | 17.2       | 27.1                       | 35.1 | 62.2       | 5.7                      | 14.8  | 20.6       |            |

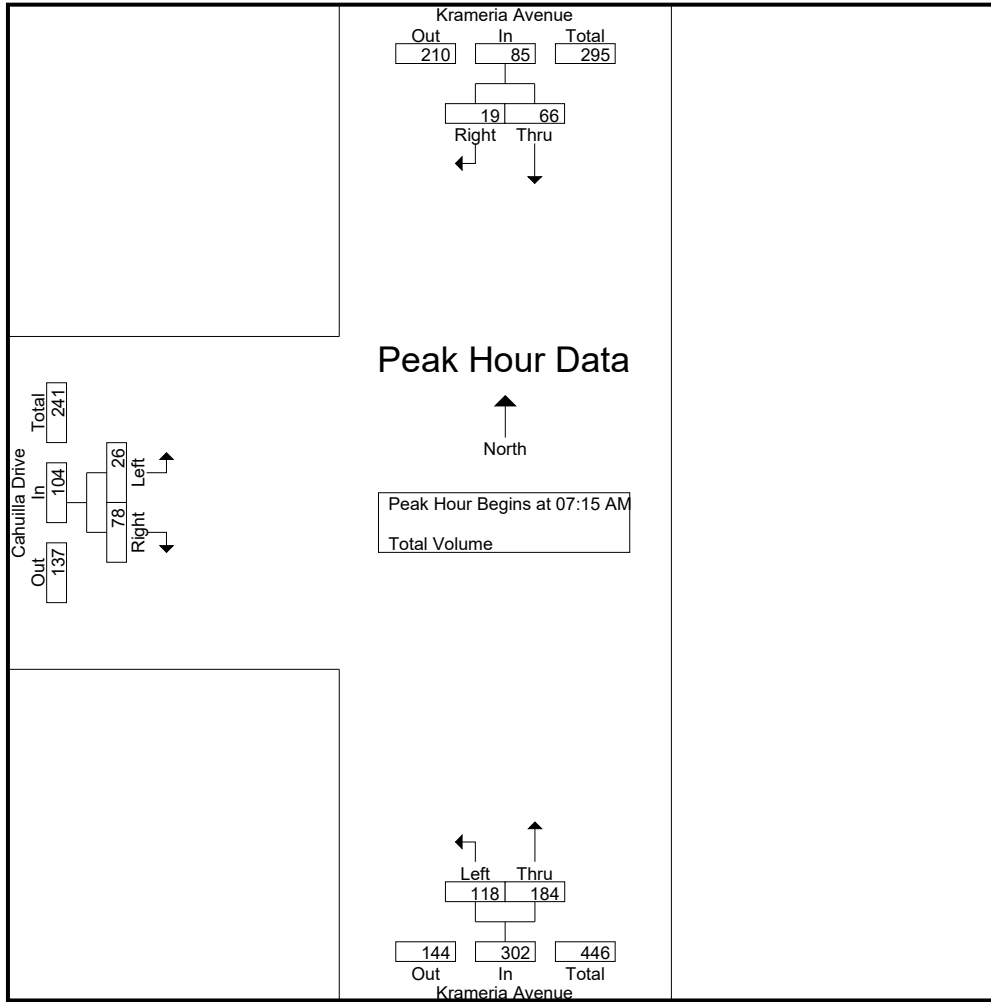
| Start Time   | Krameria Avenue Southbound |           |            | Krameria Avenue Northbound |           |            | Cahuilla Drive Eastbound |           |            | Int. Total |
|--|----------------------------|-----------|------------|----------------------------|-----------|------------|--------------------------|-----------|------------|------------|
|  | Thru                       | Right     | App. Total | Left                       | Thru      | App. Total | Left                     | Right     | App. Total |            |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                            |           |            |                            |           |            |                          |           |            |            |
| Peak Hour for Entire Intersection Begins at 07:15 AM       |                            |           |            |                            |           |            |                          |           |            |            |
| 07:15 AM   | 11                         | 0         | 11         | 25                         | 37        | 62         | 3                        | 9         | 12         | 85         |
| 07:30 AM   | 14                         | 3         | 17         | 17                         | 42        | 59         | 8                        | 7         | 15         | 91         |
| 07:45 AM   | <b>21</b>                  | 6         | 27         | 28                         | <b>72</b> | <b>100</b> | <b>11</b>                | 15        | 26         | 153        |
| 08:00 AM   | 20                         | <b>10</b> | <b>30</b>  | <b>48</b>                  | 33        | 81         | 4                        | <b>47</b> | <b>51</b>  | <b>162</b> |
| Total Volume   | 66                         | 19        | 85         | 118                        | 184       | 302        | 26                       | 78        | 104        | 491        |
| % App. Total   | 77.6                       | 22.4      |            | 39.1                       | 60.9      |            | 25                       | 75        |            |            |
| PHF  | .786                       | .475      | .708       | .615                       | .639      | .755       | .591                     | .415      | .510       | .758       |

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City of Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Cahuilla Drive  
 Weather: Clear

File Name : 12\_MRV\_Krameria\_Cahuilla AM  
 Site Code : 05118162  
 Start Date : 9/18/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

|              | 07:15 AM  |           |           | 07:15 AM  |           |            | 07:15 AM  |           |           |
|--------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|
| +0 mins.     | 11        | 0         | 11        | 25        | 37        | 62         | 3         | 9         | 12        |
| +15 mins.    | 14        | 3         | 17        | 17        | 42        | 59         | 8         | 7         | 15        |
| +30 mins.    | <b>21</b> | 6         | 27        | 28        | <b>72</b> | <b>100</b> | <b>11</b> | 15        | 26        |
| +45 mins.    | 20        | <b>10</b> | <b>30</b> | <b>48</b> | 33        | 81         | 4         | <b>47</b> | <b>51</b> |
| Total Volume | 66        | 19        | 85        | 118       | 184       | 302        | 26        | 78        | 104       |
| % App. Total | 77.6      | 22.4      |           | 39.1      | 60.9      |            | 25        | 75        |           |
| PHF          | .786      | .475      | .708      | .615      | .639      | .755       | .591      | .415      | .510      |

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 N/S: Krameria Avenue  
 E/W: Cahuilla Drive  
 Weather: Clear

File Name : 12\_MR\_V\_Krameria\_Cahuilla PM  
 Site Code : 05118162  
 Start Date : 9/18/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time         | Krameria Avenue Southbound |           |            | Krameria Avenue Northbound |            |            | Cahuilla Drive Eastbound |           |            | Int. Total |
|--------------------|----------------------------|-----------|------------|----------------------------|------------|------------|--------------------------|-----------|------------|------------|
|                    | Thru                       | Right     | App. Total | Left                       | Thru       | App. Total | Left                     | Right     | App. Total |            |
| 04:00 PM           | 31                         | 11        | 42         | 11                         | 12         | 23         | 0                        | 5         | 5          | 70         |
| 04:15 PM           | 16                         | 5         | 21         | 6                          | 5          | 11         | 3                        | 6         | 9          | 41         |
| 04:30 PM           | 21                         | 7         | 28         | 9                          | 9          | 18         | 2                        | 7         | 9          | 55         |
| 04:45 PM           | 8                          | 6         | 14         | 14                         | 9          | 23         | 2                        | 2         | 4          | 41         |
| <b>Total</b>       | <b>76</b>                  | <b>29</b> | <b>105</b> | <b>40</b>                  | <b>35</b>  | <b>75</b>  | <b>7</b>                 | <b>20</b> | <b>27</b>  | <b>207</b> |
| 05:00 PM           | 13                         | 5         | 18         | 8                          | 11         | 19         | 1                        | 6         | 7          | 44         |
| 05:15 PM           | 21                         | 8         | 29         | 8                          | 10         | 18         | 3                        | 9         | 12         | 59         |
| 05:30 PM           | 16                         | 6         | 22         | 26                         | 28         | 54         | 7                        | 21        | 28         | 104        |
| 05:45 PM           | 19                         | 6         | 25         | 16                         | 48         | 64         | 11                       | 13        | 24         | 113        |
| <b>Total</b>       | <b>69</b>                  | <b>25</b> | <b>94</b>  | <b>58</b>                  | <b>97</b>  | <b>155</b> | <b>22</b>                | <b>49</b> | <b>71</b>  | <b>320</b> |
| <b>Grand Total</b> | <b>145</b>                 | <b>54</b> | <b>199</b> | <b>98</b>                  | <b>132</b> | <b>230</b> | <b>29</b>                | <b>69</b> | <b>98</b>  | <b>527</b> |
| Apprch %           | 72.9                       | 27.1      |            | 42.6                       | 57.4       |            | 29.6                     | 70.4      |            |            |
| Total %            | 27.5                       | 10.2      | 37.8       | 18.6                       | 25         | 43.6       | 5.5                      | 13.1      | 18.6       |            |

| Start Time   | Krameria Avenue Southbound |          |            | Krameria Avenue Northbound |           |            | Cahuilla Drive Eastbound |           |            | Int. Total |
|--|----------------------------|----------|------------|----------------------------|-----------|------------|--------------------------|-----------|------------|------------|
|  | Thru                       | Right    | App. Total | Left                       | Thru      | App. Total | Left                     | Right     | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                            |          |            |                            |           |            |                          |           |            |            |
| Peak Hour for Entire Intersection Begins at 05:00 PM       |                            |          |            |                            |           |            |                          |           |            |            |
| 05:00 PM   | 13                         | 5        | 18         | 8                          | 11        | 19         | 1                        | 6         | 7          | 44         |
| 05:15 PM   | <b>21</b>                  | <b>8</b> | <b>29</b>  | 8                          | 10        | 18         | 3                        | 9         | 12         | 59         |
| 05:30 PM   | 16                         | 6        | 22         | <b>26</b>                  | <b>28</b> | <b>54</b>  | 7                        | <b>21</b> | <b>28</b>  | 104        |
| 05:45 PM   | 19                         | 6        | 25         | 16                         | <b>48</b> | <b>64</b>  | <b>11</b>                | 13        | 24         | <b>113</b> |
| Total Volume   | 69                         | 25       | 94         | 58                         | 97        | 155        | 22                       | 49        | 71         | 320        |
| % App. Total   | 73.4                       | 26.6     |            | 37.4                       | 62.6      |            | 31                       | 69        |            |            |
| PHF  | .821                       | .781     | .810       | .558                       | .505      | .605       | .500                     | .583      | .634       | .708       |

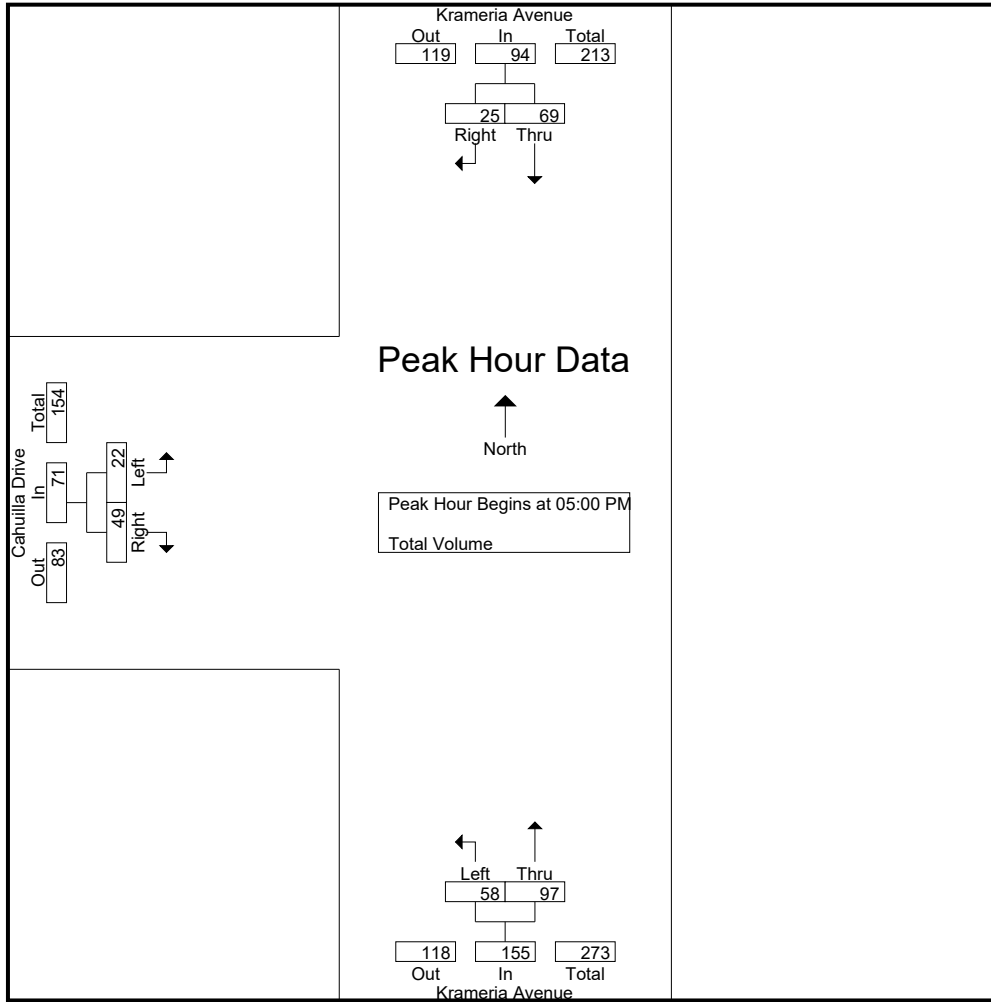
Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Cahuilla Drive  
 Weather: Clear

File Name : 12\_MR\_V\_Krameria\_Cahuilla PM  
 Site Code : 05118162  
 Start Date : 9/18/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

|              | 04:00 PM |      |      | 05:00 PM |      |      | 05:00 PM |      |      |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins.     | 31       | 11   | 42   | 8        | 11   | 19   | 1        | 6    | 7    |
| +15 mins.    | 16       | 5    | 21   | 8        | 10   | 18   | 3        | 9    | 12   |
| +30 mins.    | 21       | 7    | 28   | 26       | 28   | 54   | 7        | 21   | 28   |
| +45 mins.    | 8        | 6    | 14   | 16       | 48   | 64   | 11       | 13   | 24   |
| Total Volume | 76       | 29   | 105  | 58       | 97   | 155  | 22       | 49   | 71   |
| % App. Total | 72.4     | 27.6 |      | 37.4     | 62.6 |      | 31       | 69   |      |
| PHF          | .613     | .659 | .625 | .558     | .505 | .605 | .500     | .583 | .634 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Location: Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Cahuilla Drive



Date: 3/6/2018  
 Date: Tuesday

PEDESTRIANS

|                | North Leg<br>Krameria Avenue<br>Pedestrians | East Leg<br>Dead End<br>Pedestrians | South Leg<br>Krameria Avenue<br>Pedestrians | West Leg<br>Cahuilla Drive<br>Pedestrians |    |
|----------------|---|-------------------------------------|---|---|----|
| 7:00 AM        | 0   | 0                                   | 0   | 2   | 2  |
| 7:15 AM        | 0   | 0                                   | 1   | 0   | 1  |
| 7:30 AM        | 1   | 0                                   | 5   | 6   | 12 |
| 7:45 AM        | 2   | 0                                   | 3   | 5   | 10 |
| 8:00 AM        | 1   | 0                                   | 1   | 11  | 13 |
| 8:15 AM        | 4   | 0                                   | 0   | 3   | 7  |
| 8:30 AM        | 1   | 0                                   | 6   | 7   | 14 |
| 8:45 AM        | 0   | 0                                   | 0   | 0   | 0  |
| TOTAL VOLUMES: | 9   | 0                                   | 16  | 34  | 59 |

|                | North Leg<br>Krameria Avenue<br>Pedestrians | East Leg<br>Dead End<br>Pedestrians | South Leg<br>Krameria Avenue<br>Pedestrians | West Leg<br>Cahuilla Drive<br>Pedestrians |    |
|----------------|---|-------------------------------------|---|---|----|
| 4:00 PM        | 0   | 0                                   | 2   | 4   | 6  |
| 4:15 PM        | 0   | 0                                   | 5   | 8   | 13 |
| 4:30 PM        | 0   | 0                                   | 2   | 4   | 6  |
| 4:45 PM        | 0   | 0                                   | 2   | 1   | 3  |
| 5:00 PM        | 0   | 0                                   | 3   | 3   | 6  |
| 5:15 PM        | 0   | 0                                   | 1   | 1   | 2  |
| 5:30 PM        | 0   | 0                                   | 9   | 8   | 17 |
| 5:45 PM        | 0   | 0                                   | 3   | 9   | 12 |
| TOTAL VOLUMES: | 0   | 0                                   | 27  | 38  | 65 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Location: Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Cahuilla Drive



Date: 3/6/2018  
 Date: Tuesday

BICYCLES

|                | Southbound<br>Krameria Avenue |      |       | Westbound<br>Dead End |      |       | Northbound<br>Krameria Avenue |      |       | Eastbound<br>Cahuilla Drive |      |       |   |
|----------------|-------------------------------|------|-------|-----------------------|------|-------|-------------------------------|------|-------|-----------------------------|------|-------|---|
|                | Left                          | Thru | Right | Left                  | Thru | Right | Left                          | Thru | Right | Left                        | Thru | Right |   |
| 7:00 AM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 7:15 AM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 7:30 AM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 7:45 AM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 8:00 AM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 8:15 AM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 8:30 AM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 8:45 AM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| TOTAL VOLUMES: | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |

|                | Southbound<br>Krameria Avenue |      |       | Westbound<br>Dead End |      |       | Northbound<br>Krameria Avenue |      |       | Eastbound<br>Cahuilla Drive |      |       |   |
|----------------|-------------------------------|------|-------|-----------------------|------|-------|-------------------------------|------|-------|-----------------------------|------|-------|---|
|                | Left                          | Thru | Right | Left                  | Thru | Right | Left                          | Thru | Right | Left                        | Thru | Right |   |
| 4:00 PM        | 0                             | 1    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 1 |
| 4:15 PM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 4:30 PM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 2    | 0     | 0                           | 0    | 0     | 2 |
| 4:45 PM        | 0                             | 2    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 2 |
| 5:00 PM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 5:15 PM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 5:30 PM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| 5:45 PM        | 0                             | 0    | 0     | 0                     | 0    | 0     | 0                             | 0    | 0     | 0                           | 0    | 0     | 0 |
| TOTAL VOLUMES: | 0                             | 3    | 0     | 0                     | 0    | 0     | 0                             | 2    | 0     | 0                           | 0    | 0     | 5 |

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Quarter Horse Road  
 Weather: Clear

File Name : 09\_MRV\_Krameria\_Quarter Horse AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time         | Krameria Avenue Southbound |            |          |            | Quarter Horse Road Westbound |          |           |            | Krameria Avenue Northbound |            |           |            | Lasselle Elementary School Driveway Eastbound |          |           |            | Int. Total  |
|--------------------|----------------------------|------------|----------|------------|------------------------------|----------|-----------|------------|----------------------------|------------|-----------|------------|---|----------|-----------|------------|-------------|
|                    | Left                       | Thru       | Right    | App. Total | Left                         | Thru     | Right     | App. Total | Left                       | Thru       | Right     | App. Total | Left  | Thru     | Right     | App. Total |             |
| 07:00 AM           | 0                          | 27         | 1        | 28         | 4                            | 0        | 3         | 7          | 3                          | 60         | 6         | 69         | 0   | 0        | 1         | 1          | 105         |
| 07:15 AM           | 2                          | 52         | 0        | 54         | 5                            | 0        | 2         | 7          | 1                          | 108        | 2         | 111        | 0   | 0        | 1         | 1          | 173         |
| 07:30 AM           | 1                          | 54         | 0        | 55         | 1                            | 0        | 2         | 3          | 0                          | 108        | 2         | 110        | 0   | 0        | 1         | 1          | 169         |
| 07:45 AM           | 1                          | 56         | 0        | 57         | 1                            | 0        | 1         | 2          | 2                          | 194        | 2         | 198        | 0   | 0        | 0         | 0          | 257         |
| <b>Total</b>       | <b>4</b>                   | <b>189</b> | <b>1</b> | <b>194</b> | <b>11</b>                    | <b>0</b> | <b>8</b>  | <b>19</b>  | <b>6</b>                   | <b>470</b> | <b>12</b> | <b>488</b> | <b>0</b>                                      | <b>0</b> | <b>3</b>  | <b>3</b>   | <b>704</b>  |
| 08:00 AM           | 1                          | 134        | 0        | 135        | 0                            | 1        | 1         | 2          | 14                         | 152        | 7         | 173        | 0   | 0        | 8         | 8          | 318         |
| 08:15 AM           | 0                          | 71         | 0        | 71         | 3                            | 0        | 3         | 6          | 0                          | 19         | 2         | 21         | 1   | 1        | 6         | 8          | 106         |
| 08:30 AM           | 1                          | 3          | 0        | 4          | 1                            | 0        | 1         | 2          | 1                          | 14         | 4         | 19         | 0   | 0        | 0         | 0          | 25          |
| 08:45 AM           | 0                          | 9          | 0        | 9          | 1                            | 0        | 0         | 1          | 0                          | 15         | 2         | 17         | 0   | 0        | 2         | 2          | 29          |
| <b>Total</b>       | <b>2</b>                   | <b>217</b> | <b>0</b> | <b>219</b> | <b>5</b>                     | <b>1</b> | <b>5</b>  | <b>11</b>  | <b>15</b>                  | <b>200</b> | <b>15</b> | <b>230</b> | <b>1</b>                                      | <b>1</b> | <b>16</b> | <b>18</b>  | <b>478</b>  |
| <b>Grand Total</b> | <b>6</b>                   | <b>406</b> | <b>1</b> | <b>413</b> | <b>16</b>                    | <b>1</b> | <b>13</b> | <b>30</b>  | <b>21</b>                  | <b>670</b> | <b>27</b> | <b>718</b> | <b>1</b>                                      | <b>1</b> | <b>19</b> | <b>21</b>  | <b>1182</b> |
| Apprch %           | 1.5                        | 98.3       | 0.2      |            | 53.3                         | 3.3      | 43.3      |            | 2.9                        | 93.3       | 3.8       |            | 4.8   | 4.8      | 90.5      |            |             |
| Total %            | 0.5                        | 34.3       | 0.1      | 34.9       | 1.4                          | 0.1      | 1.1       | 2.5        | 1.8                        | 56.7       | 2.3       | 60.7       | 0.1   | 0.1      | 1.6       | 1.8        |             |

| Start Time   | Krameria Avenue Southbound |            |          |            | Quarter Horse Road Westbound |          |          |            | Krameria Avenue Northbound |            |           |            | Lasselle Elementary School Driveway Eastbound |          |           |            | Int. Total |
|--|----------------------------|------------|----------|------------|------------------------------|----------|----------|------------|----------------------------|------------|-----------|------------|---|----------|-----------|------------|------------|
|  | Left                       | Thru       | Right    | App. Total | Left                         | Thru     | Right    | App. Total | Left                       | Thru       | Right     | App. Total | Left  | Thru     | Right     | App. Total |            |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                            |            |          |            |                              |          |          |            |                            |            |           |            |   |          |           |            |            |
| Peak Hour for Entire Intersection Begins at 07:15 AM       |                            |            |          |            |                              |          |          |            |                            |            |           |            |   |          |           |            |            |
| 07:15 AM   | 2                          | 52         | 0        | 54         | 5                            | 0        | 2        | 7          | 1                          | 108        | 2         | 111        | 0   | 0        | 1         | 1          | 173        |
| 07:30 AM   | 1                          | 54         | 0        | 55         | 1                            | 0        | 2        | 3          | 0                          | 108        | 2         | 110        | 0   | 0        | 1         | 1          | 169        |
| 07:45 AM   | 1                          | 56         | 0        | 57         | 1                            | 0        | 1        | 2          | 2                          | 194        | 2         | 198        | 0   | 0        | 0         | 0          | 257        |
| 08:00 AM   | 1                          | 134        | 0        | 135        | 0                            | 1        | 1        | 2          | 14                         | 152        | 7         | 173        | 0   | 0        | 8         | 8          | 318        |
| <b>Total Volume</b>  | <b>5</b>                   | <b>296</b> | <b>0</b> | <b>301</b> | <b>7</b>                     | <b>1</b> | <b>6</b> | <b>14</b>  | <b>17</b>                  | <b>562</b> | <b>13</b> | <b>592</b> | <b>0</b>                                      | <b>0</b> | <b>10</b> | <b>10</b>  | <b>917</b> |
| % App. Total   | 1.7                        | 98.3       | 0        |            | 50                           | 7.1      | 42.9     |            | 2.9                        | 94.9       | 2.2       |            | 0   | 0        | 100       |            |            |
| PHF  | .625                       | .552       | .000     | .557       | .350                         | .250     | .750     | .500       | .304                       | .724       | .464      | .747       | .000  | .000     | .313      | .313       | .721       |

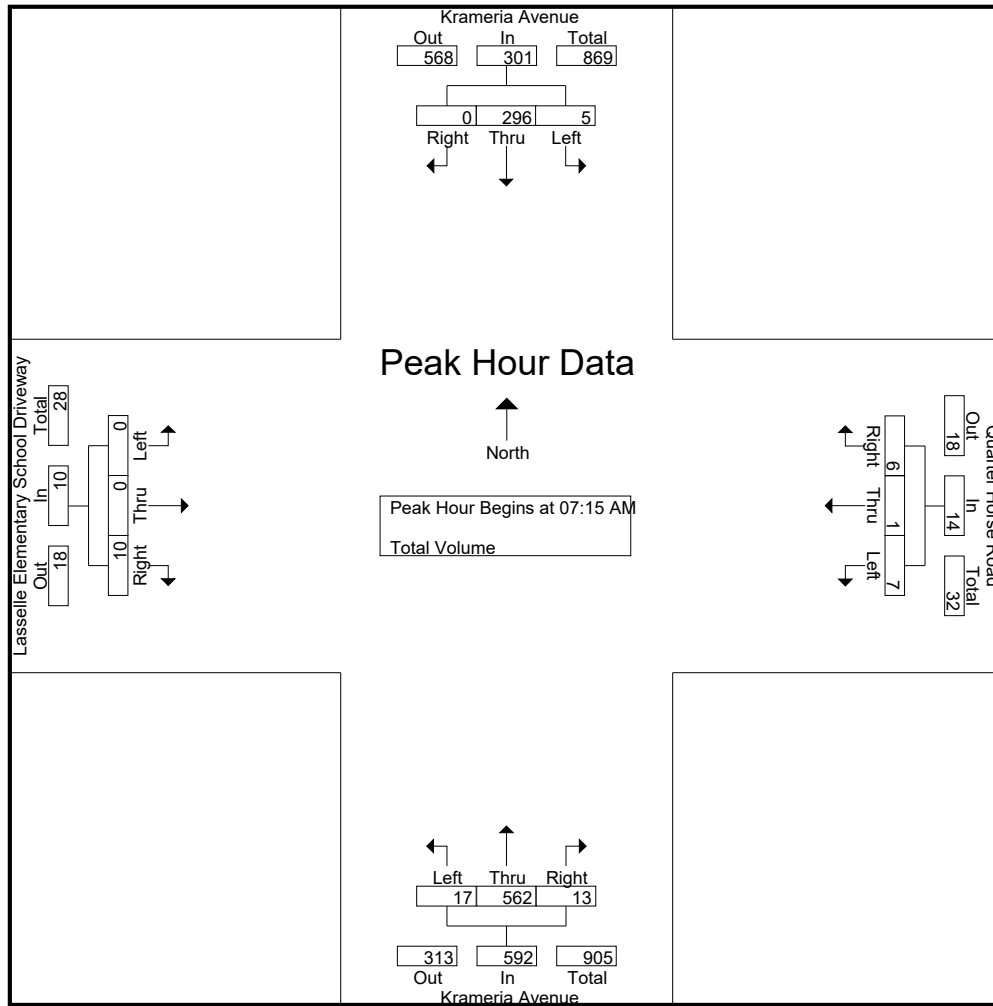
Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Quarter Horse Road  
 Weather: Clear

File Name : 09\_MRV\_Krameria\_Quarter Horse AM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

|              | 07:30 AM |      |      |      | 07:00 AM |      |      |      | 07:15 AM |      |      |      | 08:00 AM |      |      |      |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins.     | 1        | 54   | 0    | 55   | 4        | 0    | 3    | 7    | 1        | 108  | 2    | 111  | 0        | 0    | 8    | 8    |
| +15 mins.    | 1        | 56   | 0    | 57   | 5        | 0    | 2    | 7    | 0        | 108  | 2    | 110  | 1        | 1    | 6    | 8    |
| +30 mins.    | 1        | 134  | 0    | 135  | 1        | 0    | 2    | 3    | 2        | 194  | 2    | 198  | 0        | 0    | 0    | 0    |
| +45 mins.    | 0        | 71   | 0    | 71   | 1        | 0    | 1    | 2    | 14       | 152  | 7    | 173  | 0        | 0    | 2    | 2    |
| Total Volume | 3        | 315  | 0    | 318  | 11       | 0    | 8    | 19   | 17       | 562  | 13   | 592  | 1        | 1    | 16   | 18   |
| % App. Total | 0.9      | 99.1 | 0    |      | 57.9     | 0    | 42.1 |      | 2.9      | 94.9 | 2.2  |      | 5.6      | 5.6  | 88.9 |      |
| PHF          | .750     | .588 | .000 | .589 | .550     | .000 | .667 | .679 | .304     | .724 | .464 | .747 | .250     | .250 | .500 | .563 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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 Corona, CA 92878  
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City of Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Quarter Horse Road  
 Weather: Clear

File Name : 09\_MRV\_Krameria\_Quarter Horse PM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 1

Groups Printed- Total Volume

| Start Time         | Krameria Avenue Southbound |            |           |            | Quarter Horse Road Westbound |          |          |            | Krameria Avenue Northbound |            |          |            | Lasselle Elementary School Driveway Eastbound |          |          |            | Int. Total |
|--------------------|----------------------------|------------|-----------|------------|------------------------------|----------|----------|------------|----------------------------|------------|----------|------------|---|----------|----------|------------|------------|
|                    | Left                       | Thru       | Right     | App. Total | Left                         | Thru     | Right    | App. Total | Left                       | Thru       | Right    | App. Total | Left  | Thru     | Right    | App. Total |            |
| 04:00 PM           | 0                          | 11         | 1         | 12         | 1                            | 0        | 1        | 2          | 1                          | 23         | 0        | 24         | 1   | 0        | 0        | 1          | 39         |
| 04:15 PM           | 0                          | 19         | 3         | 22         | 0                            | 0        | 1        | 1          | 0                          | 28         | 0        | 28         | 1   | 0        | 1        | 2          | 53         |
| 04:30 PM           | 0                          | 12         | 6         | 18         | 0                            | 0        | 0        | 0          | 1                          | 39         | 0        | 40         | 1   | 0        | 1        | 2          | 60         |
| 04:45 PM           | 0                          | 17         | 2         | 19         | 0                            | 0        | 0        | 0          | 0                          | 23         | 0        | 23         | 1   | 0        | 0        | 1          | 43         |
| <b>Total</b>       | <b>0</b>                   | <b>59</b>  | <b>12</b> | <b>71</b>  | <b>1</b>                     | <b>0</b> | <b>2</b> | <b>3</b>   | <b>2</b>                   | <b>113</b> | <b>0</b> | <b>115</b> | <b>4</b>                                      | <b>0</b> | <b>2</b> | <b>6</b>   | <b>195</b> |
| 05:00 PM           | 0                          | 11         | 2         | 13         | 0                            | 0        | 0        | 0          | 0                          | 27         | 0        | 27         | 0   | 0        | 2        | 2          | 42         |
| 05:15 PM           | 0                          | 25         | 4         | 29         | 0                            | 0        | 0        | 0          | 2                          | 39         | 0        | 41         | 2   | 0        | 1        | 3          | 73         |
| 05:30 PM           | 1                          | 31         | 4         | 36         | 0                            | 0        | 0        | 0          | 0                          | 25         | 0        | 25         | 1   | 0        | 2        | 3          | 64         |
| 05:45 PM           | 0                          | 55         | 2         | 57         | 0                            | 0        | 0        | 0          | 0                          | 18         | 0        | 18         | 3   | 0        | 2        | 5          | 80         |
| <b>Total</b>       | <b>1</b>                   | <b>122</b> | <b>12</b> | <b>135</b> | <b>0</b>                     | <b>0</b> | <b>0</b> | <b>0</b>   | <b>2</b>                   | <b>109</b> | <b>0</b> | <b>111</b> | <b>6</b>                                      | <b>0</b> | <b>7</b> | <b>13</b>  | <b>259</b> |
| <b>Grand Total</b> | <b>1</b>                   | <b>181</b> | <b>24</b> | <b>206</b> | <b>1</b>                     | <b>0</b> | <b>2</b> | <b>3</b>   | <b>4</b>                   | <b>222</b> | <b>0</b> | <b>226</b> | <b>10</b>                                     | <b>0</b> | <b>9</b> | <b>19</b>  | <b>454</b> |
| Apprch %           | 0.5                        | 87.9       | 11.7      |            | 33.3                         | 0        | 66.7     |            | 1.8                        | 98.2       | 0        |            | 52.6  | 0        | 47.4     |            |            |
| Total %            | 0.2                        | 39.9       | 5.3       | 45.4       | 0.2                          | 0        | 0.4      | 0.7        | 0.9                        | 48.9       | 0        | 49.8       | 2.2   | 0        | 2        | 4.2        |            |

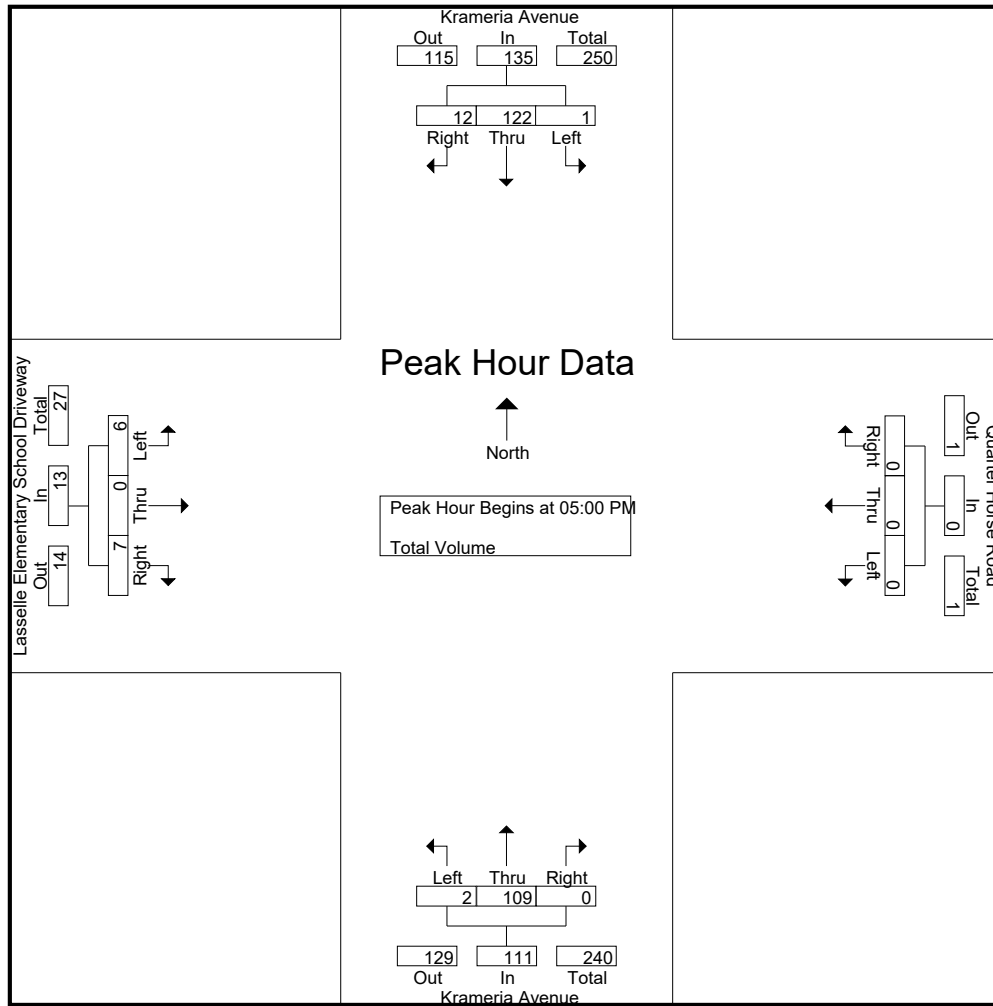
| Start Time   | Krameria Avenue Southbound |            |           |            | Quarter Horse Road Westbound |          |          |            | Krameria Avenue Northbound |            |          |            | Lasselle Elementary School Driveway Eastbound |          |          |            | Int. Total |
|--|----------------------------|------------|-----------|------------|------------------------------|----------|----------|------------|----------------------------|------------|----------|------------|---|----------|----------|------------|------------|
|  | Left                       | Thru       | Right     | App. Total | Left                         | Thru     | Right    | App. Total | Left                       | Thru       | Right    | App. Total | Left  | Thru     | Right    | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                            |            |           |            |                              |          |          |            |                            |            |          |            |   |          |          |            |            |
| Peak Hour for Entire Intersection Begins at 05:00 PM       |                            |            |           |            |                              |          |          |            |                            |            |          |            |   |          |          |            |            |
| 05:00 PM   | 0                          | 11         | 2         | 13         | 0                            | 0        | 0        | 0          | 0                          | 27         | 0        | 27         | 0   | 0        | 2        | 2          | 42         |
| 05:15 PM   | 0                          | 25         | 4         | 29         | 0                            | 0        | 0        | 0          | 2                          | 39         | 0        | 41         | 2   | 0        | 1        | 3          | 73         |
| 05:30 PM   | 1                          | 31         | 4         | 36         | 0                            | 0        | 0        | 0          | 0                          | 25         | 0        | 25         | 1   | 0        | 2        | 3          | 64         |
| 05:45 PM   | 0                          | 55         | 2         | 57         | 0                            | 0        | 0        | 0          | 0                          | 18         | 0        | 18         | 3   | 0        | 2        | 5          | 80         |
| <b>Total Volume</b>  | <b>1</b>                   | <b>122</b> | <b>12</b> | <b>135</b> | <b>0</b>                     | <b>0</b> | <b>0</b> | <b>0</b>   | <b>2</b>                   | <b>109</b> | <b>0</b> | <b>111</b> | <b>6</b>                                      | <b>0</b> | <b>7</b> | <b>13</b>  | <b>259</b> |
| % App. Total   | 0.7                        | 90.4       | 8.9       |            | 0                            | 0        | 0        |            | 1.8                        | 98.2       | 0        |            | 46.2  | 0        | 53.8     |            |            |
| PHF  | .250                       | .555       | .750      | .592       | .000                         | .000     | .000     | .000       | .250                       | .699       | .000     | .677       | .500  | .000     | .875     | .650       | .809       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Quarter Horse Road  
 Weather: Clear

File Name : 09\_MRV\_Krameria\_Quarter Horse PM  
 Site Code : 05118162  
 Start Date : 3/6/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

|              | 05:00 PM |      |      |      | 04:00 PM |      |      |      | 04:30 PM |      |      |      | 05:00 PM |      |      |      |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins.     | 0        | 11   | 2    | 13   | 1        | 0    | 1    | 2    | 1        | 39   | 0    | 40   | 0        | 0    | 2    | 2    |
| +15 mins.    | 0        | 25   | 4    | 29   | 0        | 0    | 1    | 1    | 0        | 23   | 0    | 23   | 2        | 0    | 1    | 3    |
| +30 mins.    | 1        | 31   | 4    | 36   | 0        | 0    | 0    | 0    | 0        | 27   | 0    | 27   | 1        | 0    | 2    | 3    |
| +45 mins.    | 0        | 55   | 2    | 57   | 0        | 0    | 0    | 0    | 2        | 39   | 0    | 41   | 3        | 0    | 2    | 5    |
| Total Volume | 1        | 122  | 12   | 135  | 1        | 0    | 2    | 3    | 3        | 128  | 0    | 131  | 6        | 0    | 7    | 13   |
| % App. Total | 0.7      | 90.4 | 8.9  |      | 33.3     | 0    | 66.7 |      | 2.3      | 97.7 | 0    |      | 46.2     | 0    | 53.8 |      |
| PHF          | .250     | .555 | .750 | .592 | .250     | .000 | .500 | .375 | .375     | .821 | .000 | .799 | .500     | .000 | .875 | .650 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Location: Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Quarter Horse Road



Date: 3/6/2018  
 Date: Tuesday

PEDESTRIANS

|                | North Leg<br>Krameria Avenue | East Leg<br>Quarter Horse Road | South Leg<br>Krameria Avenue | West Leg<br>Lasselle Elementary DW |     |
|----------------|------------------------------|--------------------------------|------------------------------|------------------------------------|-----|
|                | Pedestrians                  | Pedestrians                    | Pedestrians                  | Pedestrians                        |     |
| 7:00 AM        | 1                            | 2                              | 0                            | 0                                  | 3   |
| 7:15 AM        | 11                           | 5                              | 0                            | 0                                  | 16  |
| 7:30 AM        | 3                            | 5                              | 0                            | 0                                  | 8   |
| 7:45 AM        | 10                           | 7                              | 0                            | 0                                  | 17  |
| 8:00 AM        | 45                           | 4                              | 0                            | 0                                  | 49  |
| 8:15 AM        | 9                            | 3                              | 0                            | 0                                  | 12  |
| 8:30 AM        | 0                            | 3                              | 1                            | 1                                  | 5   |
| 8:45 AM        | 0                            | 2                              | 0                            | 0                                  | 2   |
| TOTAL VOLUMES: | 79                           | 31                             | 1                            | 1                                  | 112 |

|                | North Leg<br>Krameria Avenue | East Leg<br>Quarter Horse Road | South Leg<br>Krameria Avenue | West Leg<br>Lasselle Elementary DW |    |
|----------------|------------------------------|--------------------------------|------------------------------|------------------------------------|----|
|                | Pedestrians                  | Pedestrians                    | Pedestrians                  | Pedestrians                        |    |
| 4:00 PM        | 0                            | 0                              | 0                            | 0                                  | 0  |
| 4:15 PM        | 0                            | 0                              | 0                            | 0                                  | 0  |
| 4:30 PM        | 0                            | 0                              | 2                            | 2                                  | 4  |
| 4:45 PM        | 0                            | 0                              | 0                            | 0                                  | 0  |
| 5:00 PM        | 0                            | 0                              | 1                            | 2                                  | 3  |
| 5:15 PM        | 0                            | 0                              | 0                            | 1                                  | 1  |
| 5:30 PM        | 0                            | 1                              | 0                            | 2                                  | 3  |
| 5:45 PM        | 0                            | 1                              | 0                            | 1                                  | 2  |
| TOTAL VOLUMES: | 0                            | 2                              | 3                            | 8                                  | 13 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Location: Moreno Valley  
 N/S: Krameria Avenue  
 E/W: Quarter Horse Road



Date: 3/6/2018  
 Date: Tuesday

BICYCLES

|                | Southbound<br>Krameria Avenue |      |       | Westbound<br>Quarter Horse Road |      |       | Northbound<br>Krameria Avenue |      |       | Eastbound<br>Lasselle Elementary DW |      |       |   |
|----------------|-------------------------------|------|-------|---------------------------------|------|-------|-------------------------------|------|-------|-------------------------------------|------|-------|---|
|                | Left                          | Thru | Right | Left                            | Thru | Right | Left                          | Thru | Right | Left                                | Thru | Right |   |
| 7:00 AM        | 0                             | 2    | 0     | 0                               | 0    | 0     | 0                             | 1    | 0     | 0                                   | 0    | 0     | 3 |
| 7:15 AM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 0 |
| 7:30 AM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 0 |
| 7:45 AM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 0 |
| 8:00 AM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 0 |
| 8:15 AM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 0 |
| 8:30 AM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 0 |
| 8:45 AM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 0 |
| TOTAL VOLUMES: | 0                             | 2    | 0     | 0                               | 0    | 0     | 0                             | 1    | 0     | 0                                   | 0    | 0     | 3 |

|                | Southbound<br>Krameria Avenue |      |       | Westbound<br>Quarter Horse Road |      |       | Northbound<br>Krameria Avenue |      |       | Eastbound<br>Lasselle Elementary DW |      |       |   |
|----------------|-------------------------------|------|-------|---------------------------------|------|-------|-------------------------------|------|-------|-------------------------------------|------|-------|---|
|                | Left                          | Thru | Right | Left                            | Thru | Right | Left                          | Thru | Right | Left                                | Thru | Right |   |
| 4:00 PM        | 0                             | 2    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 2 |
| 4:15 PM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 0 |
| 4:30 PM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 0 |
| 4:45 PM        | 0                             | 1    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 1 |
| 5:00 PM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 1    | 0     | 0                                   | 0    | 0     | 1 |
| 5:15 PM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 0    | 0     | 0                                   | 0    | 0     | 0 |
| 5:30 PM        | 0                             | 1    | 0     | 0                               | 0    | 0     | 0                             | 1    | 0     | 0                                   | 0    | 0     | 2 |
| 5:45 PM        | 0                             | 0    | 0     | 0                               | 0    | 0     | 0                             | 1    | 0     | 0                                   | 0    | 0     | 1 |
| TOTAL VOLUMES: | 0                             | 4    | 0     | 0                               | 0    | 0     | 0                             | 3    | 0     | 0                                   | 0    | 0     | 7 |

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Evans Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 103\_PER\_Evans\_Ramona AM  
 Site Code : 09818079  
 Start Date : 2/1/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

| Start Time              | Evans Road Southbound |            |            |             | Ramona Expressway Westbound |             |            |             | Evans Road Northbound |            |           |             | Ramona Expressway Eastbound |            |            |             | Int. Total  |
|-------------------------|-----------------------|------------|------------|-------------|-----------------------------|-------------|------------|-------------|-----------------------|------------|-----------|-------------|-----------------------------|------------|------------|-------------|-------------|
|                         | Left                  | Thru       | Right      | App. Total  | Left                        | Thru        | Right      | App. Total  | Left                  | Thru       | Right     | App. Total  | Left                        | Thru       | Right      | App. Total  |             |
| 07:00 AM                | 57                    | 89         | 94         | 240         | 0                           | 291         | 89         | 380         | 105                   | 161        | 6         | 272         | 74                          | 89         | 41         | 204         | 1096        |
| 07:15 AM                | 57                    | 106        | 93         | 256         | 3                           | 253         | 91         | 347         | 106                   | 142        | 6         | 254         | 82                          | 95         | 40         | 217         | 1074        |
| 07:30 AM                | 69                    | 125        | 113        | 307         | 12                          | 267         | 70         | 349         | 89                    | 124        | 10        | 223         | 46                          | 80         | 33         | 159         | 1038        |
| 07:45 AM                | 22                    | 50         | 71         | 143         | 8                           | 219         | 75         | 302         | 97                    | 123        | 3         | 223         | 52                          | 74         | 41         | 167         | 835         |
| <b>Total</b>            | <b>205</b>            | <b>370</b> | <b>371</b> | <b>946</b>  | <b>23</b>                   | <b>1030</b> | <b>325</b> | <b>1378</b> | <b>397</b>            | <b>550</b> | <b>25</b> | <b>972</b>  | <b>254</b>                  | <b>338</b> | <b>155</b> | <b>747</b>  | <b>4043</b> |
| 08:00 AM                | 31                    | 50         | 55         | 136         | 3                           | 198         | 44         | 245         | 78                    | 86         | 1         | 165         | 58                          | 93         | 23         | 174         | 720         |
| 08:15 AM                | 23                    | 51         | 56         | 130         | 1                           | 136         | 33         | 170         | 52                    | 71         | 0         | 123         | 51                          | 78         | 30         | 159         | 582         |
| 08:30 AM                | 24                    | 32         | 55         | 111         | 2                           | 200         | 50         | 252         | 55                    | 84         | 2         | 141         | 52                          | 102        | 25         | 179         | 683         |
| 08:45 AM                | 23                    | 54         | 44         | 121         | 1                           | 141         | 30         | 172         | 40                    | 60         | 2         | 102         | 35                          | 88         | 22         | 145         | 540         |
| <b>Total</b>            | <b>101</b>            | <b>187</b> | <b>210</b> | <b>498</b>  | <b>7</b>                    | <b>675</b>  | <b>157</b> | <b>839</b>  | <b>225</b>            | <b>301</b> | <b>5</b>  | <b>531</b>  | <b>196</b>                  | <b>361</b> | <b>100</b> | <b>657</b>  | <b>2525</b> |
| <b>Grand Total</b>      | <b>306</b>            | <b>557</b> | <b>581</b> | <b>1444</b> | <b>30</b>                   | <b>1705</b> | <b>482</b> | <b>2217</b> | <b>622</b>            | <b>851</b> | <b>30</b> | <b>1503</b> | <b>450</b>                  | <b>699</b> | <b>255</b> | <b>1404</b> | <b>6568</b> |
| Apprch %                | 21.2                  | 38.6       | 40.2       |             | 1.4                         | 76.9        | 21.7       |             | 41.4                  | 56.6       | 2         |             | 32.1                        | 49.8       | 18.2       |             |             |
| Total %                 | 4.7                   | 8.5        | 8.8        | 22          | 0.5                         | 26          | 7.3        | 33.8        | 9.5                   | 13         | 0.5       | 22.9        | 6.9                         | 10.6       | 3.9        | 21.4        |             |
| Passenger Vehicles      | 301                   | 547        | 570        | 1418        | 28                          | 1655        | 478        | 2161        | 614                   | 837        | 30        | 1481        | 439                         | 658        | 252        | 1349        | 6409        |
| % Passenger Vehicles    | 98.4                  | 98.2       | 98.1       | 98.2        | 93.3                        | 97.1        | 99.2       | 97.5        | 98.7                  | 98.4       | 100       | 98.5        | 97.6                        | 94.1       | 98.8       | 96.1        | 97.6        |
| Large 2 Axle Vehicles   | 3                     | 10         | 11         | 24          | 2                           | 26          | 3          | 31          | 8                     | 14         | 0         | 22          | 8                           | 14         | 3          | 25          | 102         |
| % Large 2 Axle Vehicles | 1                     | 1.8        | 1.9        | 1.7         | 6.7                         | 1.5         | 0.6        | 1.4         | 1.3                   | 1.6        | 0         | 1.5         | 1.8                         | 2          | 1.2        | 1.8         | 1.6         |
| 3 Axle Vehicles         | 0                     | 0          | 0          | 0           | 0                           | 12          | 0          | 12          | 0                     | 0          | 0         | 0           | 3                           | 17         | 0          | 20          | 32          |
| % 3 Axle Vehicles       | 0                     | 0          | 0          | 0           | 0                           | 0.7         | 0          | 0.5         | 0                     | 0          | 0         | 0           | 0.7                         | 2.4        | 0          | 1.4         | 0.5         |
| 4+ Axle Trucks          | 2                     | 0          | 0          | 2           | 0                           | 12          | 1          | 13          | 0                     | 0          | 0         | 0           | 0                           | 10         | 0          | 10          | 25          |
| % 4+ Axle Trucks        | 0.7                   | 0          | 0          | 0.1         | 0                           | 0.7         | 0.2        | 0.6         | 0                     | 0          | 0         | 0           | 0                           | 1.4        | 0          | 0.7         | 0.4         |

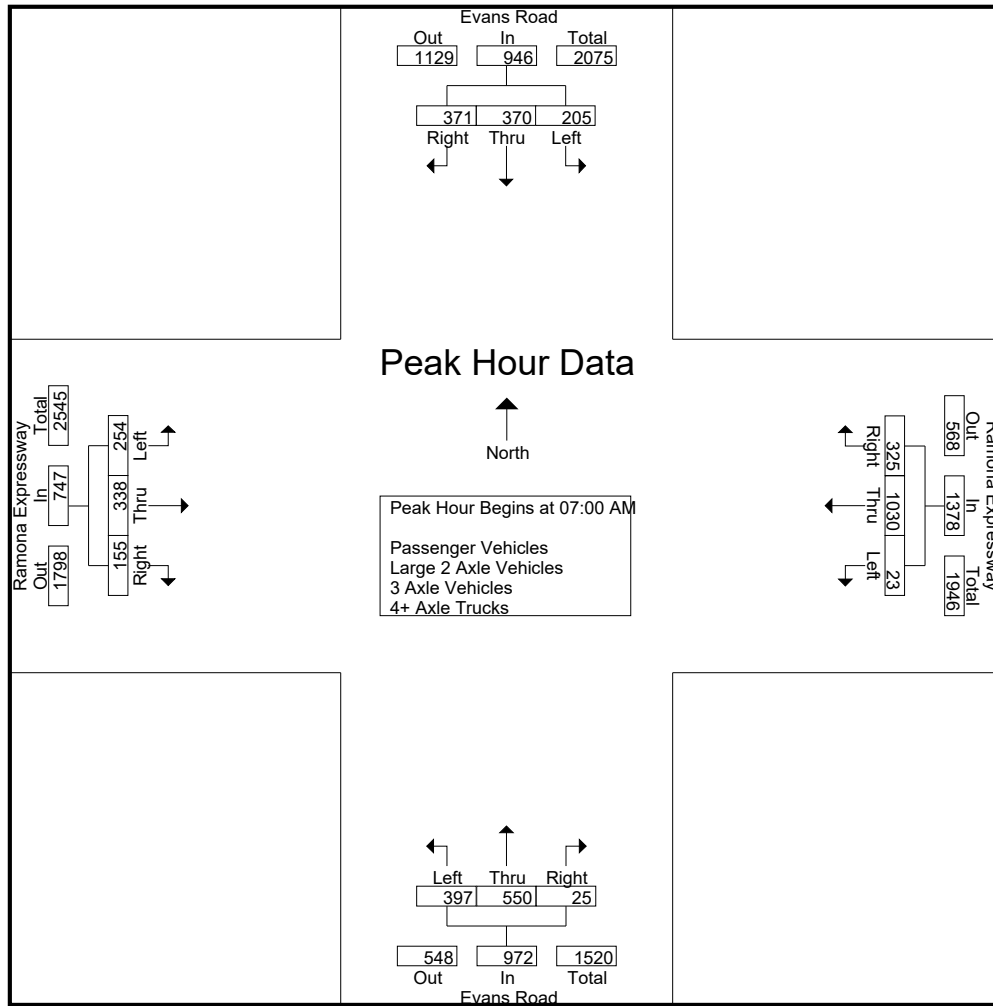
| Start Time   | Evans Road Southbound |      |       |            | Ramona Expressway Westbound |      |       |            | Evans Road Northbound |      |       |            | Ramona Expressway Eastbound |      |       |            | Int. Total |
|--|-----------------------|------|-------|------------|-----------------------------|------|-------|------------|-----------------------|------|-------|------------|-----------------------------|------|-------|------------|------------|
|  | Left                  | Thru | Right | App. Total | Left                        | Thru | Right | App. Total | Left                  | Thru | Right | App. Total | Left                        | Thru | Right | App. Total |            |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                       |      |       |            |                             |      |       |            |                       |      |       |            |                             |      |       |            |            |
| Peak Hour for Entire Intersection Begins at 07:00 AM       |                       |      |       |            |                             |      |       |            |                       |      |       |            |                             |      |       |            |            |
| 07:00 AM   | 57                    | 89   | 94    | 240        | 0                           | 291  | 89    | 380        | 105                   | 161  | 6     | 272        | 74                          | 89   | 41    | 204        | 1096       |
| 07:15 AM   | 57                    | 106  | 93    | 256        | 3                           | 253  | 91    | 347        | 106                   | 142  | 6     | 254        | 82                          | 95   | 40    | 217        | 1074       |
| 07:30 AM   | 69                    | 125  | 113   | 307        | 12                          | 267  | 70    | 349        | 89                    | 124  | 10    | 223        | 46                          | 80   | 33    | 159        | 1038       |
| 07:45 AM   | 22                    | 50   | 71    | 143        | 8                           | 219  | 75    | 302        | 97                    | 123  | 3     | 223        | 52                          | 74   | 41    | 167        | 835        |
| Total Volume   | 205                   | 370  | 371   | 946        | 23                          | 1030 | 325   | 1378       | 397                   | 550  | 25    | 972        | 254                         | 338  | 155   | 747        | 4043       |
| % App. Total   | 21.7                  | 39.1 | 39.2  |            | 1.7                         | 74.7 | 23.6  |            | 40.8                  | 56.6 | 2.6   |            | 34                          | 45.2 | 20.7  |            |            |
| PHF  | .743                  | .740 | .821  | .770       | .479                        | .885 | .893  | .907       | .936                  | .854 | .625  | .893       | .774                        | .889 | .945  | .861       | .922       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Evans Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 103\_PER\_Evans\_Ramona AM  
 Site Code : 09818079  
 Start Date : 2/1/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

|              | 07:00 AM  |            |            |            | 07:00 AM  |            |           |            | 07:00 AM   |            |           |            | 07:00 AM  |           |           |            |
|--------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|------------|------------|-----------|------------|-----------|-----------|-----------|------------|
| +0 mins.     | 57        | 89         | 94         | 240        | 0         | <b>291</b> | 89        | <b>380</b> | 105        | <b>161</b> | 6         | <b>272</b> | 74        | 89        | <b>41</b> | 204        |
| +15 mins.    | 57        | 106        | 93         | 256        | 3         | 253        | <b>91</b> | <b>347</b> | <b>106</b> | 142        | 6         | 254        | <b>82</b> | <b>95</b> | 40        | <b>217</b> |
| +30 mins.    | <b>69</b> | <b>125</b> | <b>113</b> | <b>307</b> | <b>12</b> | 267        | 70        | 349        | 89         | 124        | <b>10</b> | 223        | 46        | 80        | 33        | 159        |
| +45 mins.    | 22        | 50         | 71         | 143        | 8         | 219        | 75        | 302        | 97         | 123        | 3         | 223        | 52        | 74        | 41        | 167        |
| Total Volume | 205       | 370        | 371        | 946        | 23        | 1030       | 325       | 1378       | 397        | 550        | 25        | 972        | 254       | 338       | 155       | 747        |
| % App. Total | 21.7      | 39.1       | 39.2       |            | 1.7       | 74.7       | 23.6      |            | 40.8       | 56.6       | 2.6       |            | 34        | 45.2      | 20.7      |            |
| PHF          | .743      | .740       | .821       | .770       | .479      | .885       | .893      | .907       | .936       | .854       | .625      | .893       | .774      | .889      | .945      | .861       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Evans Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 103\_PER\_Evans\_Ramona PM  
 Site Code : 09818079  
 Start Date : 2/1/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

| Start Time              | Evans Road Southbound |            |            |             | Ramona Expressway Westbound |             |            |             | Evans Road Northbound |            |           |             | Ramona Expressway Eastbound |             |            |             | Int. Total  |
|-------------------------|-----------------------|------------|------------|-------------|-----------------------------|-------------|------------|-------------|-----------------------|------------|-----------|-------------|-----------------------------|-------------|------------|-------------|-------------|
|                         | Left                  | Thru       | Right      | App. Total  | Left                        | Thru        | Right      | App. Total  | Left                  | Thru       | Right     | App. Total  | Left                        | Thru        | Right      | App. Total  |             |
| 04:00 PM                | 45                    | 98         | 52         | 195         | 1                           | 107         | 36         | 144         | 36                    | 89         | 2         | 127         | 74                          | 177         | 79         | 330         | 796         |
| 04:15 PM                | 49                    | 109        | 68         | 226         | 2                           | 151         | 46         | 199         | 37                    | 62         | 4         | 103         | 71                          | 205         | 70         | 346         | 874         |
| 04:30 PM                | 66                    | 110        | 70         | 246         | 5                           | 149         | 45         | 199         | 54                    | 84         | 5         | 143         | 96                          | 248         | 83         | 427         | 1015        |
| 04:45 PM                | 46                    | 125        | 71         | 242         | 6                           | 138         | 42         | 186         | 50                    | 74         | 1         | 125         | 79                          | 227         | 81         | 387         | 940         |
| <b>Total</b>            | <b>206</b>            | <b>442</b> | <b>261</b> | <b>909</b>  | <b>14</b>                   | <b>545</b>  | <b>169</b> | <b>728</b>  | <b>177</b>            | <b>309</b> | <b>12</b> | <b>498</b>  | <b>320</b>                  | <b>857</b>  | <b>313</b> | <b>1490</b> | <b>3625</b> |
| 05:00 PM                | 66                    | 96         | 66         | 228         | 4                           | 122         | 42         | 168         | 47                    | 77         | 9         | 133         | 76                          | 218         | 77         | 371         | 900         |
| 05:15 PM                | 51                    | 101        | 62         | 214         | 3                           | 127         | 50         | 180         | 66                    | 100        | 2         | 168         | 80                          | 195         | 98         | 373         | 935         |
| 05:30 PM                | 69                    | 137        | 74         | 280         | 9                           | 143         | 47         | 199         | 44                    | 113        | 4         | 161         | 82                          | 188         | 71         | 341         | 981         |
| 05:45 PM                | 49                    | 129        | 74         | 252         | 2                           | 162         | 44         | 208         | 61                    | 79         | 2         | 142         | 60                          | 208         | 93         | 361         | 963         |
| <b>Total</b>            | <b>235</b>            | <b>463</b> | <b>276</b> | <b>974</b>  | <b>18</b>                   | <b>554</b>  | <b>183</b> | <b>755</b>  | <b>218</b>            | <b>369</b> | <b>17</b> | <b>604</b>  | <b>298</b>                  | <b>809</b>  | <b>339</b> | <b>1446</b> | <b>3779</b> |
| <b>Grand Total</b>      | <b>441</b>            | <b>905</b> | <b>537</b> | <b>1883</b> | <b>32</b>                   | <b>1099</b> | <b>352</b> | <b>1483</b> | <b>395</b>            | <b>678</b> | <b>29</b> | <b>1102</b> | <b>618</b>                  | <b>1666</b> | <b>652</b> | <b>2936</b> | <b>7404</b> |
| Apprch %                | 23.4                  | 48.1       | 28.5       |             | 2.2                         | 74.1        | 23.7       |             | 35.8                  | 61.5       | 2.6       |             | 21                          | 56.7        | 22.2       |             |             |
| Total %                 | 6                     | 12.2       | 7.3        | 25.4        | 0.4                         | 14.8        | 4.8        | 20          | 5.3                   | 9.2        | 0.4       | 14.9        | 8.3                         | 22.5        | 8.8        | 39.7        |             |
| Passenger Vehicles      | 441                   | 899        | 533        | 1873        | 31                          | 1064        | 351        | 1446        | 392                   | 675        | 28        | 1095        | 614                         | 1642        | 646        | 2902        | 7316        |
| % Passenger Vehicles    | 100                   | 99.3       | 99.3       | 99.5        | 96.9                        | 96.8        | 99.7       | 97.5        | 99.2                  | 99.6       | 96.6      | 99.4        | 99.4                        | 98.6        | 99.1       | 98.8        | 98.8        |
| Large 2 Axle Vehicles   | 0                     | 6          | 2          | 8           | 1                           | 6           | 1          | 8           | 1                     | 2          | 1         | 4           | 3                           | 8           | 3          | 14          | 34          |
| % Large 2 Axle Vehicles | 0                     | 0.7        | 0.4        | 0.4         | 3.1                         | 0.5         | 0.3        | 0.5         | 0.3                   | 0.3        | 3.4       | 0.4         | 0.5                         | 0.5         | 0.5        | 0.5         | 0.5         |
| 3 Axle Vehicles         | 0                     | 0          | 2          | 2           | 0                           | 16          | 0          | 16          | 2                     | 1          | 0         | 3           | 1                           | 6           | 2          | 9           | 30          |
| % 3 Axle Vehicles       | 0                     | 0          | 0.4        | 0.1         | 0                           | 1.5         | 0          | 1.1         | 0.5                   | 0.1        | 0         | 0.3         | 0.2                         | 0.4         | 0.3        | 0.3         | 0.4         |
| 4+ Axle Trucks          | 0                     | 0          | 0          | 0           | 0                           | 13          | 0          | 13          | 0                     | 0          | 0         | 0           | 0                           | 10          | 1          | 11          | 24          |
| % 4+ Axle Trucks        | 0                     | 0          | 0          | 0           | 0                           | 1.2         | 0          | 0.9         | 0                     | 0          | 0         | 0           | 0                           | 0.6         | 0.2        | 0.4         | 0.3         |

| Start Time   | Evans Road Southbound |      |       |            | Ramona Expressway Westbound |      |       |            | Evans Road Northbound |      |       |            | Ramona Expressway Eastbound |      |       |            | Int. Total |
|--|-----------------------|------|-------|------------|-----------------------------|------|-------|------------|-----------------------|------|-------|------------|-----------------------------|------|-------|------------|------------|
|  | Left                  | Thru | Right | App. Total | Left                        | Thru | Right | App. Total | Left                  | Thru | Right | App. Total | Left                        | Thru | Right | App. Total |            |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                       |      |       |            |                             |      |       |            |                       |      |       |            |                             |      |       |            |            |
| Peak Hour for Entire Intersection Begins at 04:30 PM       |                       |      |       |            |                             |      |       |            |                       |      |       |            |                             |      |       |            |            |
| 04:30 PM   | 66                    | 110  | 70    | 246        | 5                           | 149  | 45    | 199        | 54                    | 84   | 5     | 143        | 96                          | 248  | 83    | 427        | 1015       |
| 04:45 PM   | 46                    | 125  | 71    | 242        | 6                           | 138  | 42    | 186        | 50                    | 74   | 1     | 125        | 79                          | 227  | 81    | 387        | 940        |
| 05:00 PM   | 66                    | 96   | 66    | 228        | 4                           | 122  | 42    | 168        | 47                    | 77   | 9     | 133        | 76                          | 218  | 77    | 371        | 900        |
| 05:15 PM   | 51                    | 101  | 62    | 214        | 3                           | 127  | 50    | 180        | 66                    | 100  | 2     | 168        | 80                          | 195  | 98    | 373        | 935        |
| Total Volume   | 229                   | 432  | 269   | 930        | 18                          | 536  | 179   | 733        | 217                   | 335  | 17    | 569        | 331                         | 888  | 339   | 1558       | 3790       |
| % App. Total   | 24.6                  | 46.5 | 28.9  |            | 2.5                         | 73.1 | 24.4  |            | 38.1                  | 58.9 | 3     |            | 21.2                        | 57   | 21.8  |            |            |
| PHF  | .867                  | .864 | .947  | .945       | .750                        | .899 | .895  | .921       | .822                  | .838 | .472  | .847       | .862                        | .895 | .865  | .912       | .933       |

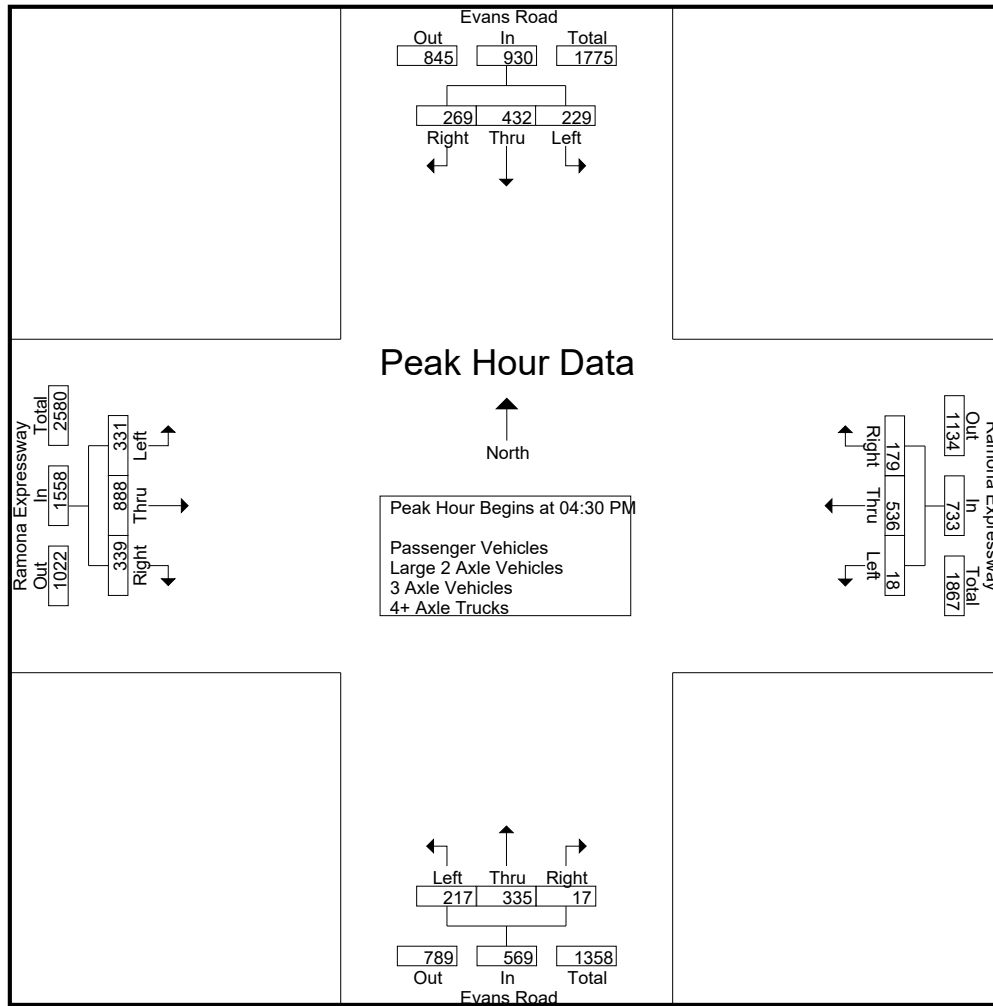
Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Evans Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 103\_PER\_Evans\_Ramona PM  
 Site Code : 09818079  
 Start Date : 2/1/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

|              | 05:00 PM |      |      |      | 05:00 PM |      |      |      | 05:00 PM |      |      |      | 04:30 PM |      |      |      |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins.     | 66       | 96   | 66   | 228  | 4        | 122  | 42   | 168  | 47       | 77   | 9    | 133  | 96       | 248  | 83   | 427  |
| +15 mins.    | 51       | 101  | 62   | 214  | 3        | 127  | 50   | 180  | 66       | 100  | 2    | 168  | 79       | 227  | 81   | 387  |
| +30 mins.    | 69       | 137  | 74   | 280  | 9        | 143  | 47   | 199  | 44       | 113  | 4    | 161  | 76       | 218  | 77   | 371  |
| +45 mins.    | 49       | 129  | 74   | 252  | 2        | 162  | 44   | 208  | 61       | 79   | 2    | 142  | 80       | 195  | 98   | 373  |
| Total Volume | 235      | 463  | 276  | 974  | 18       | 554  | 183  | 755  | 218      | 369  | 17   | 604  | 331      | 888  | 339  | 1558 |
| % App. Total | 24.1     | 47.5 | 28.3 |      | 2.4      | 73.4 | 24.2 |      | 36.1     | 61.1 | 2.8  |      | 21.2     | 57   | 21.8 |      |
| PHF          | .851     | .845 | .932 | .870 | .500     | .855 | .915 | .907 | .826     | .816 | .472 | .899 | .862     | .895 | .865 | .912 |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

# Counts Unlimited, Inc.

City of Moreno Valley  
 Krameria Avenue  
 E/ Perris Boulevard  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: 951-268-6268  
 email: counts@countsunlimited.com

MRV003  
 Site Code: 051-18162

| Start Time            | 06-Mar-18 Tue | Eastbound   |             | Hour Totals |             | Westbound   |             | Hour Totals |             | Combined Totals |             |
|-----------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|
|                       |               | Morning     | Afternoon   | Morning     | Afternoon   | Morning     | Afternoon   | Morning     | Afternoon   | Morning         | Afternoon   |
| 12:00                 |               | 15          | 41          |             |             | 11          | 53          |             |             |                 |             |
| 12:15                 |               | 7           | 58          |             |             | 9           | 72          |             |             |                 |             |
| 12:30                 |               | 11          | 42          |             |             | 4           | 72          |             |             |                 |             |
| 12:45                 |               | 12          | 53          | 45          | 194         | 0           | 55          | 24          | 252         | 69              | 446         |
| 01:00                 |               | 8           | 57          |             |             | 3           | 61          |             |             |                 |             |
| 01:15                 |               | 3           | 51          |             |             | 1           | 65          |             |             |                 |             |
| 01:30                 |               | 7           | 80          |             |             | 4           | 59          |             |             |                 |             |
| 01:45                 |               | 7           | 99          | 25          | 287         | 5           | 83          | 13          | 268         | 38              | 555         |
| 02:00                 |               | 5           | 85          |             |             | 6           | 75          |             |             |                 |             |
| 02:15                 |               | 4           | 84          |             |             | 5           | 88          |             |             |                 |             |
| 02:30                 |               | 8           | 105         |             |             | 6           | 108         |             |             |                 |             |
| 02:45                 |               | 3           | 118         | 20          | 392         | 5           | 101         | 22          | 372         | 42              | 764         |
| 03:00                 |               | 7           | 86          |             |             | 6           | 117         |             |             |                 |             |
| 03:15                 |               | 1           | 69          |             |             | 14          | 84          |             |             |                 |             |
| 03:30                 |               | 9           | 92          |             |             | 22          | 78          |             |             |                 |             |
| 03:45                 |               | 5           | 75          | 22          | 322         | 23          | 85          | 65          | 364         | 87              | 686         |
| 04:00                 |               | 12          | 85          |             |             | 28          | 71          |             |             |                 |             |
| 04:15                 |               | 3           | 67          |             |             | 52          | 75          |             |             |                 |             |
| 04:30                 |               | 18          | 119         |             |             | 56          | 74          |             |             |                 |             |
| 04:45                 |               | 19          | 82          | 52          | 353         | 51          | 63          | 187         | 283         | 239             | 636         |
| 05:00                 |               | 13          | 88          |             |             | 40          | 67          |             |             |                 |             |
| 05:15                 |               | 13          | 98          |             |             | 50          | 57          |             |             |                 |             |
| 05:30                 |               | 6           | 103         |             |             | 68          | 79          |             |             |                 |             |
| 05:45                 |               | 22          | 85          | 54          | 374         | 71          | 60          | 229         | 263         | 283             | 637         |
| 06:00                 |               | 14          | 71          |             |             | 46          | 78          |             |             |                 |             |
| 06:15                 |               | 25          | 81          |             |             | 63          | 85          |             |             |                 |             |
| 06:30                 |               | 48          | 71          |             |             | 78          | 54          |             |             |                 |             |
| 06:45                 |               | 60          | 72          | 147         | 295         | 99          | 54          | 286         | 271         | 433             | 566         |
| 07:00                 |               | 128         | 75          |             |             | 133         | 50          |             |             |                 |             |
| 07:15                 |               | 129         | 78          |             |             | 141         | 53          |             |             |                 |             |
| 07:30                 |               | 110         | 58          |             |             | 148         | 56          |             |             |                 |             |
| 07:45                 |               | 138         | 55          | 505         | 266         | 135         | 45          | 557         | 204         | 1062            | 470         |
| 08:00                 |               | 60          | 52          |             |             | 106         | 33          |             |             |                 |             |
| 08:15                 |               | 39          | 38          |             |             | 78          | 39          |             |             |                 |             |
| 08:30                 |               | 45          | 34          |             |             | 59          | 44          |             |             |                 |             |
| 08:45                 |               | 33          | 53          | 177         | 177         | 56          | 32          | 299         | 148         | 476             | 325         |
| 09:00                 |               | 37          | 31          |             |             | 60          | 29          |             |             |                 |             |
| 09:15                 |               | 29          | 31          |             |             | 54          | 22          |             |             |                 |             |
| 09:30                 |               | 40          | 32          |             |             | 56          | 24          |             |             |                 |             |
| 09:45                 |               | 51          | 35          | 157         | 129         | 33          | 32          | 203         | 107         | 360             | 236         |
| 10:00                 |               | 39          | 26          |             |             | 78          | 12          |             |             |                 |             |
| 10:15                 |               | 32          | 19          |             |             | 51          | 24          |             |             |                 |             |
| 10:30                 |               | 37          | 42          |             |             | 50          | 29          |             |             |                 |             |
| 10:45                 |               | 45          | 32          | 153         | 119         | 43          | 13          | 222         | 78          | 375             | 197         |
| 11:00                 |               | 35          | 22          |             |             | 66          | 19          |             |             |                 |             |
| 11:15                 |               | 49          | 22          |             |             | 55          | 11          |             |             |                 |             |
| 11:30                 |               | 40          | 13          |             |             | 61          | 7           |             |             |                 |             |
| 11:45                 |               | 33          | 19          | 157         | 76          | 45          | 5           | 227         | 42          | 384             | 118         |
| <b>Total</b>          |               | <b>1514</b> | <b>2984</b> | <b>1514</b> | <b>2984</b> | <b>2334</b> | <b>2652</b> | <b>2334</b> | <b>2652</b> | <b>3848</b>     | <b>5636</b> |
| <b>Combined Total</b> |               | <b>4498</b> |             | <b>4498</b> |             | <b>4986</b> |             | <b>4986</b> |             | <b>9484</b>     |             |
| AM Peak               | -             | 07:00       | -           | -           | -           | 07:00       | -           | -           | -           | -               | -           |
| Vol.                  | -             | 505         | -           | -           | -           | 557         | -           | -           | -           | -               | -           |
| P.H.F.                | -             | 0.915       | -           | -           | -           | 0.941       | -           | -           | -           | -               | -           |
| PM Peak               | -             | -           | 02:15       | -           | -           | -           | 02:15       | -           | -           | -               | -           |
| Vol.                  | -             | -           | 393         | -           | -           | -           | 414         | -           | -           | -               | -           |
| P.H.F.                | -             | -           | 0.833       | -           | -           | -           | 0.885       | -           | -           | -               | -           |
| Percentage            |               | 33.7%       | 66.3%       |             |             | 46.8%       | 53.2%       |             |             |                 |             |
| ADT/AADT              |               | ADT 9,484   | AADT 9,484  |             |             |             |             |             |             |                 |             |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

# Counts Unlimited, Inc.

City of Moreno Valley  
 Kitching Street  
 N/ Krameria Avenue  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: 951-268-6268  
 email: counts@countsunlimited.com

MRV005  
 Site Code: 051-18162

| Start Time            | 06-Mar-18 Tue | Northbound  |             | Hour Totals |             | Southbound  |             | Hour Totals |             | Combined Totals |             |
|-----------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|
|                       |               | Morning     | Afternoon   | Morning     | Afternoon   | Morning     | Afternoon   | Morning     | Afternoon   | Morning         | Afternoon   |
| 12:00                 |               | 7           | 28          |             |             | 6           | 49          |             |             |                 |             |
| 12:15                 |               | 1           | 53          |             |             | 7           | 42          |             |             |                 |             |
| 12:30                 |               | 3           | 33          |             |             | 1           | 40          |             |             |                 |             |
| 12:45                 |               | 1           | 27          | 12          | 141         | 3           | 32          | 17          | 163         | 29              | 304         |
| 01:00                 |               | 2           | 38          |             |             | 4           | 43          |             |             |                 |             |
| 01:15                 |               | 1           | 30          |             |             | 4           | 43          |             |             |                 |             |
| 01:30                 |               | 4           | 36          |             |             | 2           | 62          |             |             |                 |             |
| 01:45                 |               | 2           | 43          | 9           | 147         | 6           | 73          | 16          | 221         | 25              | 368         |
| 02:00                 |               | 0           | 87          |             |             | 1           | 125         |             |             |                 |             |
| 02:15                 |               | 3           | 118         |             |             | 1           | 106         |             |             |                 |             |
| 02:30                 |               | 3           | 99          |             |             | 2           | 80          |             |             |                 |             |
| 02:45                 |               | 2           | 71          | 8           | 375         | 3           | 59          | 7           | 370         | 15              | 745         |
| 03:00                 |               | 2           | 69          |             |             | 8           | 70          |             |             |                 |             |
| 03:15                 |               | 1           | 46          |             |             | 2           | 53          |             |             |                 |             |
| 03:30                 |               | 4           | 53          |             |             | 7           | 55          |             |             |                 |             |
| 03:45                 |               | 2           | 39          | 9           | 207         | 8           | 66          | 25          | 244         | 34              | 451         |
| 04:00                 |               | 6           | 75          |             |             | 9           | 61          |             |             |                 |             |
| 04:15                 |               | 6           | 61          |             |             | 16          | 63          |             |             |                 |             |
| 04:30                 |               | 7           | 55          |             |             | 31          | 63          |             |             |                 |             |
| 04:45                 |               | 20          | 50          | 39          | 241         | 17          | 71          | 73          | 258         | 112             | 499         |
| 05:00                 |               | 8           | 51          |             |             | 18          | 54          |             |             |                 |             |
| 05:15                 |               | 13          | 33          |             |             | 20          | 84          |             |             |                 |             |
| 05:30                 |               | 22          | 59          |             |             | 31          | 72          |             |             |                 |             |
| 05:45                 |               | 19          | 47          | 62          | 190         | 26          | 78          | 95          | 288         | 157             | 478         |
| 06:00                 |               | 24          | 56          |             |             | 16          | 67          |             |             |                 |             |
| 06:15                 |               | 28          | 40          |             |             | 35          | 63          |             |             |                 |             |
| 06:30                 |               | 36          | 42          |             |             | 51          | 60          |             |             |                 |             |
| 06:45                 |               | 39          | 33          | 127         | 171         | 62          | 52          | 164         | 242         | 291             | 413         |
| 07:00                 |               | 79          | 19          |             |             | 147         | 43          |             |             |                 |             |
| 07:15                 |               | 106         | 31          |             |             | 129         | 54          |             |             |                 |             |
| 07:30                 |               | 104         | 24          |             |             | 91          | 47          |             |             |                 |             |
| 07:45                 |               | 91          | 25          | 380         | 99          | 132         | 36          | 499         | 180         | 879             | 279         |
| 08:00                 |               | 103         | 15          |             |             | 48          | 38          |             |             |                 |             |
| 08:15                 |               | 36          | 15          |             |             | 48          | 35          |             |             |                 |             |
| 08:30                 |               | 46          | 15          |             |             | 26          | 35          |             |             |                 |             |
| 08:45                 |               | 31          | 25          | 216         | 70          | 28          | 23          | 150         | 131         | 366             | 201         |
| 09:00                 |               | 20          | 13          |             |             | 22          | 30          |             |             |                 |             |
| 09:15                 |               | 20          | 8           |             |             | 47          | 25          |             |             |                 |             |
| 09:30                 |               | 53          | 14          |             |             | 49          | 27          |             |             |                 |             |
| 09:45                 |               | 28          | 13          | 121         | 48          | 27          | 30          | 145         | 112         | 266             | 160         |
| 10:00                 |               | 20          | 4           |             |             | 36          | 28          |             |             |                 |             |
| 10:15                 |               | 21          | 8           |             |             | 39          | 23          |             |             |                 |             |
| 10:30                 |               | 46          | 13          |             |             | 25          | 18          |             |             |                 |             |
| 10:45                 |               | 44          | 13          | 131         | 38          | 48          | 8           | 148         | 77          | 279             | 115         |
| 11:00                 |               | 38          | 10          |             |             | 36          | 10          |             |             |                 |             |
| 11:15                 |               | 33          | 3           |             |             | 39          | 18          |             |             |                 |             |
| 11:30                 |               | 51          | 3           |             |             | 45          | 8           |             |             |                 |             |
| 11:45                 |               | 35          | 5           | 157         | 21          | 44          | 11          | 164         | 47          | 321             | 68          |
| <b>Total</b>          |               | <b>1271</b> | <b>1748</b> | <b>1271</b> | <b>1748</b> | <b>1503</b> | <b>2333</b> | <b>1503</b> | <b>2333</b> | <b>2774</b>     | <b>4081</b> |
| <b>Combined Total</b> |               | <b>3019</b> |             | <b>3019</b> |             | <b>3836</b> |             | <b>3836</b> |             | <b>6855</b>     |             |
| AM Peak               | -             | 07:15       | -           | -           | -           | 07:00       | -           | -           | -           | -               | -           |
| Vol.                  | -             | 404         | -           | -           | -           | 499         | -           | -           | -           | -               | -           |
| P.H.F.                | -             | 0.953       | -           | -           | -           | 0.849       | -           | -           | -           | -               | -           |
| PM Peak               | -             | -           | 02:00       | -           | -           | -           | 01:45       | -           | -           | -               | -           |
| Vol.                  | -             | -           | 375         | -           | -           | -           | 384         | -           | -           | -               | -           |
| P.H.F.                | -             | -           | 0.794       | -           | -           | -           | 0.768       | -           | -           | -               | -           |
| Percentage            |               | 42.1%       | 57.9%       |             |             | 39.2%       | 60.8%       |             |             |                 |             |
| ADT/AADT              |               | ADT 6,855   | AADT 6,855  |             |             |             |             |             |             |                 |             |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

# Counts Unlimited, Inc.

City of Moreno Valley  
 Krameria Avenue  
 E/ Kitching Street  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: 951-268-6268  
 email: counts@countsunlimited.com

MRV004  
 Site Code: 051-18162

| Start Time     | 06-Mar-18 Tue | Eastbound |            | Hour Totals |           | Westbound |           | Hour Totals |           | Combined Totals |           |
|----------------|---------------|-----------|------------|-------------|-----------|-----------|-----------|-------------|-----------|-----------------|-----------|
|                |               | Morning   | Afternoon  | Morning     | Afternoon | Morning   | Afternoon | Morning     | Afternoon | Morning         | Afternoon |
| 12:00          |               | 8         | 39         |             |           | 7         | 52        |             |           |                 |           |
| 12:15          |               | 2         | 73         |             |           | 5         | 57        |             |           |                 |           |
| 12:30          |               | 5         | 35         |             |           | 2         | 66        |             |           |                 |           |
| 12:45          |               | 6         | 48         | 21          | 195       | 0         | 47        | 14          | 222       | 35              | 417       |
| 01:00          |               | 4         | 68         |             |           | 4         | 67        |             |           |                 |           |
| 01:15          |               | 8         | 54         |             |           | 0         | 53        |             |           |                 |           |
| 01:30          |               | 2         | 61         |             |           | 3         | 55        |             |           |                 |           |
| 01:45          |               | 2         | 100        | 16          | 283       | 4         | 74        | 11          | 249       | 27              | 532       |
| 02:00          |               | 2         | 144        |             |           | 5         | 104       |             |           |                 |           |
| 02:15          |               | 1         | 134        |             |           | 4         | 104       |             |           |                 |           |
| 02:30          |               | 5         | 121        |             |           | 8         | 95        |             |           |                 |           |
| 02:45          |               | 2         | 121        | 10          | 520       | 1         | 90        | 18          | 393       | 28              | 913       |
| 03:00          |               | 3         | 101        |             |           | 4         | 142       |             |           |                 |           |
| 03:15          |               | 2         | 65         |             |           | 11        | 95        |             |           |                 |           |
| 03:30          |               | 5         | 82         |             |           | 8         | 61        |             |           |                 |           |
| 03:45          |               | 2         | 75         | 12          | 323       | 11        | 78        | 34          | 376       | 46              | 699       |
| 04:00          |               | 8         | 74         |             |           | 20        | 92        |             |           |                 |           |
| 04:15          |               | 1         | 51         |             |           | 26        | 83        |             |           |                 |           |
| 04:30          |               | 10        | 91         |             |           | 23        | 63        |             |           |                 |           |
| 04:45          |               | 14        | 84         | 33          | 300       | 35        | 64        | 104         | 302       | 137             | 602       |
| 05:00          |               | 10        | 88         |             |           | 19        | 59        |             |           |                 |           |
| 05:15          |               | 12        | 109        |             |           | 28        | 50        |             |           |                 |           |
| 05:30          |               | 11        | 93         |             |           | 48        | 68        |             |           |                 |           |
| 05:45          |               | 19        | 89         | 52          | 379       | 39        | 53        | 134         | 230       | 186             | 609       |
| 06:00          |               | 14        | 81         |             |           | 38        | 61        |             |           |                 |           |
| 06:15          |               | 49        | 77         |             |           | 49        | 61        |             |           |                 |           |
| 06:30          |               | 64        | 81         |             |           | 56        | 49        |             |           |                 |           |
| 06:45          |               | 96        | 67         | 223         | 306       | 98        | 54        | 241         | 225       | 464             | 531       |
| 07:00          |               | 263       | 57         |             |           | 150       | 41        |             |           |                 |           |
| 07:15          |               | 213       | 81         |             |           | 234       | 41        |             |           |                 |           |
| 07:30          |               | 100       | 35         |             |           | 166       | 51        |             |           |                 |           |
| 07:45          |               | 122       | 55         | 698         | 228       | 111       | 37        | 661         | 170       | 1359            | 398       |
| 08:00          |               | 58        | 57         |             |           | 84        | 28        |             |           |                 |           |
| 08:15          |               | 43        | 42         |             |           | 83        | 37        |             |           |                 |           |
| 08:30          |               | 34        | 47         |             |           | 68        | 43        |             |           |                 |           |
| 08:45          |               | 33        | 39         | 168         | 185       | 42        | 33        | 277         | 141       | 445             | 326       |
| 09:00          |               | 40        | 28         |             |           | 57        | 24        |             |           |                 |           |
| 09:15          |               | 28        | 34         |             |           | 55        | 19        |             |           |                 |           |
| 09:30          |               | 53        | 26         |             |           | 48        | 25        |             |           |                 |           |
| 09:45          |               | 45        | 37         | 166         | 125       | 42        | 25        | 202         | 93        | 368             | 218       |
| 10:00          |               | 38        | 31         |             |           | 59        | 14        |             |           |                 |           |
| 10:15          |               | 29        | 17         |             |           | 44        | 9         |             |           |                 |           |
| 10:30          |               | 28        | 23         |             |           | 56        | 17        |             |           |                 |           |
| 10:45          |               | 51        | 16         | 146         | 87        | 40        | 11        | 199         | 51        | 345             | 138       |
| 11:00          |               | 35        | 15         |             |           | 59        | 16        |             |           |                 |           |
| 11:15          |               | 44        | 20         |             |           | 49        | 3         |             |           |                 |           |
| 11:30          |               | 41        | 11         |             |           | 53        | 7         |             |           |                 |           |
| 11:45          |               | 32        | 14         | 152         | 60        | 56        | 7         | 217         | 33        | 369             | 93        |
| Total          |               | 1697      | 2991       | 1697        | 2991      | 2112      | 2485      | 2112        | 2485      | 3809            | 5476      |
| Combined Total |               | 4688      |            | 4688        |           | 4597      |           | 4597        |           | 9285            |           |
| AM Peak        | -             | 07:00     | -          | -           | -         | 07:00     | -         | -           | -         | -               | -         |
| Vol.           | -             | 698       | -          | -           | -         | 661       | -         | -           | -         | -               | -         |
| P.H.F.         | -             | 0.663     | -          | -           | -         | 0.706     | -         | -           | -         | -               | -         |
| PM Peak        | -             | -         | 02:00      | -           | -         | -         | 02:15     | -           | -         | -               | -         |
| Vol.           | -             | -         | 520        | -           | -         | -         | 431       | -           | -         | -               | -         |
| P.H.F.         | -             | -         | 0.903      | -           | -         | -         | 0.759     | -           | -         | -               | -         |
| Percentage     |               | 36.2%     | 63.8%      |             |           | 45.9%     | 54.1%     |             |           |                 |           |
| ADT/AADT       |               | ADT 9,285 | AADT 9,285 |             |           |           |           |             |           |                 |           |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



# Counts Unlimited, Inc.

City of Moreno Valley  
 Krameria Avenue  
 E/ Lasselle Street  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: 951-268-6268  
 email: counts@countsunlimited.com

MRV006  
 Site Code: 051-18162

| Start Time            | 06-Mar-18 Tue | Eastbound   |             | Hour Totals |             | Westbound   |             | Hour Totals |             | Combined Totals |             |
|-----------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|
|                       |               | Morning     | Afternoon   | Morning     | Afternoon   | Morning     | Afternoon   | Morning     | Afternoon   | Morning         | Afternoon   |
| 12:00                 |               | 6           | 34          |             |             | 5           | 48          |             |             |                 |             |
| 12:15                 |               | 1           | 51          |             |             | 0           | 66          |             |             |                 |             |
| 12:30                 |               | 2           | 26          |             |             | 0           | 91          |             |             |                 |             |
| 12:45                 |               | 3           | 33          | 12          | 144         | 2           | 45          | 7           | 250         | 19              | 394         |
| 01:00                 |               | 5           | 26          |             |             | 3           | 30          |             |             |                 |             |
| 01:15                 |               | 1           | 24          |             |             | 1           | 18          |             |             |                 |             |
| 01:30                 |               | 2           | 48          |             |             | 0           | 24          |             |             |                 |             |
| 01:45                 |               | 1           | 68          | 9           | 166         | 1           | 31          | 5           | 103         | 14              | 269         |
| 02:00                 |               | 2           | 83          |             |             | 0           | 39          |             |             |                 |             |
| 02:15                 |               | 1           | 113         |             |             | 3           | 35          |             |             |                 |             |
| 02:30                 |               | 0           | 114         |             |             | 3           | 153         |             |             |                 |             |
| 02:45                 |               | 0           | 65          | 3           | 375         | 0           | 110         | 6           | 337         | 9               | 712         |
| 03:00                 |               | 1           | 47          |             |             | 1           | 43          |             |             |                 |             |
| 03:15                 |               | 2           | 36          |             |             | 3           | 34          |             |             |                 |             |
| 03:30                 |               | 2           | 44          |             |             | 3           | 46          |             |             |                 |             |
| 03:45                 |               | 1           | 42          | 6           | 169         | 5           | 43          | 12          | 166         | 18              | 335         |
| 04:00                 |               | 4           | 31          |             |             | 4           | 46          |             |             |                 |             |
| 04:15                 |               | 0           | 41          |             |             | 16          | 37          |             |             |                 |             |
| 04:30                 |               | 1           | 44          |             |             | 3           | 56          |             |             |                 |             |
| 04:45                 |               | 4           | 34          | 9           | 150         | 18          | 34          | 41          | 173         | 50              | 323         |
| 05:00                 |               | 3           | 43          |             |             | 11          | 50          |             |             |                 |             |
| 05:15                 |               | 5           | 55          |             |             | 10          | 42          |             |             |                 |             |
| 05:30                 |               | 3           | 54          |             |             | 7           | 39          |             |             |                 |             |
| 05:45                 |               | 9           | 77          | 20          | 229         | 29          | 39          | 57          | 170         | 77              | 399         |
| 06:00                 |               | 7           | 43          |             |             | 16          | 39          |             |             |                 |             |
| 06:15                 |               | 11          | 46          |             |             | 21          | 16          |             |             |                 |             |
| 06:30                 |               | 24          | 36          |             |             | 23          | 21          |             |             |                 |             |
| 06:45                 |               | 38          | 23          | 80          | 148         | 37          | 14          | 97          | 90          | 177             | 238         |
| 07:00                 |               | 79          | 33          |             |             | 60          | 39          |             |             |                 |             |
| 07:15                 |               | 139         | 33          |             |             | 85          | 11          |             |             |                 |             |
| 07:30                 |               | 110         | 20          |             |             | 56          | 24          |             |             |                 |             |
| 07:45                 |               | 196         | 23          | 524         | 109         | 74          | 12          | 275         | 86          | 799             | 195         |
| 08:00                 |               | 109         | 26          |             |             | 142         | 21          |             |             |                 |             |
| 08:15                 |               | 20          | 22          |             |             | 50          | 26          |             |             |                 |             |
| 08:30                 |               | 20          | 32          |             |             | 17          | 50          |             |             |                 |             |
| 08:45                 |               | 25          | 23          | 174         | 103         | 28          | 20          | 237         | 117         | 411             | 220         |
| 09:00                 |               | 26          | 18          |             |             | 12          | 18          |             |             |                 |             |
| 09:15                 |               | 55          | 16          |             |             | 46          | 11          |             |             |                 |             |
| 09:30                 |               | 35          | 10          |             |             | 29          | 9           |             |             |                 |             |
| 09:45                 |               | 55          | 14          | 171         | 58          | 33          | 8           | 120         | 46          | 291             | 104         |
| 10:00                 |               | 48          | 16          |             |             | 57          | 6           |             |             |                 |             |
| 10:15                 |               | 23          | 11          |             |             | 27          | 5           |             |             |                 |             |
| 10:30                 |               | 28          | 11          |             |             | 24          | 2           |             |             |                 |             |
| 10:45                 |               | 30          | 8           | 129         | 46          | 19          | 4           | 127         | 17          | 256             | 63          |
| 11:00                 |               | 27          | 5           |             |             | 54          | 1           |             |             |                 |             |
| 11:15                 |               | 17          | 7           |             |             | 28          | 1           |             |             |                 |             |
| 11:30                 |               | 20          | 4           |             |             | 19          | 1           |             |             |                 |             |
| 11:45                 |               | 13          | 3           | 77          | 19          | 33          | 0           | 134         | 3           | 211             | 22          |
| <b>Total</b>          |               | <b>1214</b> | <b>1716</b> | <b>1214</b> | <b>1716</b> | <b>1118</b> | <b>1558</b> | <b>1118</b> | <b>1558</b> | <b>2332</b>     | <b>3274</b> |
| <b>Combined Total</b> |               | <b>2930</b> |             | <b>2930</b> |             | <b>2676</b> |             | <b>2676</b> |             | <b>5606</b>     |             |
| AM Peak               | -             | 07:15       | -           | -           | -           | 07:15       | -           | -           | -           | -               | -           |
| Vol.                  | -             | 554         | -           | -           | -           | 357         | -           | -           | -           | -               | -           |
| P.H.F.                | -             | 0.707       | -           | -           | -           | 0.629       | -           | -           | -           | -               | -           |
| PM Peak               | -             | -           | 01:45       | -           | -           | -           | 02:15       | -           | -           | -               | -           |
| Vol.                  | -             | -           | 378         | -           | -           | -           | 341         | -           | -           | -               | -           |
| P.H.F.                | -             | -           | 0.829       | -           | -           | -           | 0.557       | -           | -           | -               | -           |
| Percentage            |               | 41.4%       | 58.6%       |             |             | 41.8%       | 58.2%       |             |             |                 |             |
| ADT/AADT              |               | ADT 5,606   | AADT 5,606  |             |             |             |             |             |             |                 |             |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

# Counts Unlimited, Inc.

City of Moreno Valley  
 Lasselie Street  
 S/ Iris Avenue  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: 951-268-6268  
 email: counts@countsunlimited.com

MRV009  
 Site Code: 051-18162

| Start Time     | 06-Mar-18 Tue | Northbound |            | Hour Totals |           | Southbound |            | Hour Totals |           | Combined Totals |           |
|----------------|---------------|------------|------------|-------------|-----------|------------|------------|-------------|-----------|-----------------|-----------|
|                |               | Morning    | Afternoon  | Morning     | Afternoon | Morning    | Afternoon  | Morning     | Afternoon | Morning         | Afternoon |
| 12:00          |               | 26         | 253        |             |           | 39         | 191        |             |           |                 |           |
| 12:15          |               | 21         | 275        |             |           | 26         | 193        |             |           |                 |           |
| 12:30          |               | 11         | 337        |             |           | 22         | 206        |             |           |                 |           |
| 12:45          |               | 11         | 249        | 69          | 1114      | 19         | 192        | 106         | 782       | 175             | 1896      |
| 01:00          |               | 12         | 197        |             |           | 25         | 218        |             |           |                 |           |
| 01:15          |               | 15         | 168        |             |           | 8          | 230        |             |           |                 |           |
| 01:30          |               | 11         | 206        |             |           | 19         | 272        |             |           |                 |           |
| 01:45          |               | 7          | 247        | 45          | 818       | 16         | 336        | 68          | 1056      | 113             | 1874      |
| 02:00          |               | 8          | 260        |             |           | 7          | 308        |             |           |                 |           |
| 02:15          |               | 12         | 273        |             |           | 10         | 257        |             |           |                 |           |
| 02:30          |               | 15         | <b>293</b> |             |           | 9          | 266        |             |           |                 |           |
| 02:45          |               | 12         | <b>296</b> | 47          | 1122      | 8          | 311        | 34          | 1142      | 81              | 2264      |
| 03:00          |               | 19         | <b>383</b> |             |           | 12         | 290        |             |           |                 |           |
| 03:15          |               | 14         | <b>359</b> |             |           | 28         | 312        |             |           |                 |           |
| 03:30          |               | 20         | 252        |             |           | 20         | 306        |             |           |                 |           |
| 03:45          |               | 27         | 295        | 80          | 1289      | 22         | 281        | 82          | 1189      | 162             | 2478      |
| 04:00          |               | 35         | 324        |             |           | 30         | 289        |             |           |                 |           |
| 04:15          |               | 45         | 305        |             |           | 38         | 289        |             |           |                 |           |
| 04:30          |               | 66         | 295        |             |           | 44         | 306        |             |           |                 |           |
| 04:45          |               | 69         | 307        | 215         | 1231      | 38         | 284        | 150         | 1168      | 365             | 2399      |
| 05:00          |               | 53         | 280        |             |           | 35         | <b>356</b> |             |           |                 |           |
| 05:15          |               | 78         | 308        |             |           | 39         | <b>337</b> |             |           |                 |           |
| 05:30          |               | 83         | 260        |             |           | 77         | <b>413</b> |             |           |                 |           |
| 05:45          |               | 122        | 280        | 336         | 1128      | 65         | <b>404</b> | 216         | 1510      | 552             | 2638      |
| 06:00          |               | 153        | 224        |             |           | 76         | 319        |             |           |                 |           |
| 06:15          |               | 196        | 208        |             |           | 108        | 316        |             |           |                 |           |
| 06:30          |               | 267        | 237        |             |           | 146        | 251        |             |           |                 |           |
| 06:45          |               | 262        | 182        | 878         | 851       | 222        | 224        | 552         | 1110      | 1430            | 1961      |
| 07:00          |               | 299        | 200        |             |           | <b>370</b> | 232        |             |           |                 |           |
| 07:15          |               | <b>386</b> | 169        |             |           | <b>352</b> | 189        |             |           |                 |           |
| 07:30          |               | <b>321</b> | 154        |             |           | <b>368</b> | 210        |             |           |                 |           |
| 07:45          |               | <b>319</b> | 166        | 1325        | 689       | <b>415</b> | 178        | 1505        | 809       | 2830            | 1498      |
| 08:00          |               | <b>318</b> | 184        |             |           | 201        | 162        |             |           |                 |           |
| 08:15          |               | 225        | 159        |             |           | 168        | 163        |             |           |                 |           |
| 08:30          |               | 211        | 224        |             |           | 170        | 152        |             |           |                 |           |
| 08:45          |               | 187        | 154        | 941         | 721       | 194        | 152        | 733         | 629       | 1674            | 1350      |
| 09:00          |               | 198        | 113        |             |           | 204        | 124        |             |           |                 |           |
| 09:15          |               | 220        | 97         |             |           | 259        | 122        |             |           |                 |           |
| 09:30          |               | 224        | 87         |             |           | 168        | 115        |             |           |                 |           |
| 09:45          |               | 211        | 80         | 853         | 377       | 184        | 115        | 815         | 476       | 1668            | 853       |
| 10:00          |               | 230        | 52         |             |           | 203        | 106        |             |           |                 |           |
| 10:15          |               | 199        | 45         |             |           | 154        | 74         |             |           |                 |           |
| 10:30          |               | 171        | 41         |             |           | 146        | 64         |             |           |                 |           |
| 10:45          |               | 179        | 58         | 779         | 196       | 196        | 67         | 699         | 311       | 1478            | 507       |
| 11:00          |               | 298        | 34         |             |           | 174        | 54         |             |           |                 |           |
| 11:15          |               | 200        | 36         |             |           | 162        | 44         |             |           |                 |           |
| 11:30          |               | 170        | 19         |             |           | 165        | 45         |             |           |                 |           |
| 11:45          |               | 187        | 22         | 855         | 111       | 161        | 28         | 662         | 171       | 1517            | 282       |
| Total          |               | 6423       | 9647       | 6423        | 9647      | 5622       | 10353      | 5622        | 10353     | 12045           | 20000     |
| Combined Total |               | 16070      |            | 16070       |           | 15975      |            | 15975       |           | 32045           |           |
| AM Peak        | -             | 07:15      | -          | -           | -         | 07:00      | -          | -           | -         | -               | -         |
| Vol.           | -             | 1344       | -          | -           | -         | 1505       | -          | -           | -         | -               | -         |
| P.H.F.         | -             | 0.870      | -          | -           | -         | 0.907      | -          | -           | -         | -               | -         |
| PM Peak        | -             | -          | 02:30      | -           | -         | -          | 05:00      | -           | -         | -               | -         |
| Vol.           | -             | -          | 1331       | -           | -         | -          | 1510       | -           | -         | -               | -         |
| P.H.F.         | -             | -          | 0.869      | -           | -         | -          | 0.914      | -           | -         | -               | -         |
| Percentage     |               | 40.0%      | 60.0%      |             |           | 35.2%      | 64.8%      |             |           |                 |           |
| ADT/AADT       |               | ADT 32,045 |            | AADT 32,045 |           |            |            |             |           |                 |           |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

# Counts Unlimited, Inc.

City of Moreno Valley  
 Lasselle Street  
 N/ Krameria Avenue  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: 951-268-6268  
 email: counts@countsunlimited.com

MRV008  
 Site Code: 051-18162

| Start Time            | 06-Mar-18 Tue | Northbound   |             | Hour Totals  |             | Southbound   |             | Hour Totals  |             | Combined Totals |              |
|-----------------------|---------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|-----------------|--------------|
|                       |               | Morning      | Afternoon   | Morning      | Afternoon   | Morning      | Afternoon   | Morning      | Afternoon   | Morning         | Afternoon    |
| 12:00                 |               | 23           | 150         |              |             | 32           | 161         |              |             |                 |              |
| 12:15                 |               | 19           | 127         |              |             | 24           | 141         |              |             |                 |              |
| 12:30                 |               | 11           | 169         |              |             | 19           | 147         |              |             |                 |              |
| 12:45                 |               | 11           | 164         | 64           | 610         | 18           | 159         | 93           | 608         | 157             | 1218         |
| 01:00                 |               | 11           | 151         |              |             | 20           | 158         |              |             |                 |              |
| 01:15                 |               | 12           | 138         |              |             | 6            | 164         |              |             |                 |              |
| 01:30                 |               | 9            | 207         |              |             | 17           | 172         |              |             |                 |              |
| 01:45                 |               | 7            | 234         | 39           | 730         | 16           | 173         | 59           | 667         | 98              | 1397         |
| 02:00                 |               | 8            | 248         |              |             | 8            | 211         |              |             |                 |              |
| 02:15                 |               | 12           | 251         |              |             | 9            | 224         |              |             |                 |              |
| 02:30                 |               | 15           | 243         |              |             | 8            | 225         |              |             |                 |              |
| 02:45                 |               | 11           | 242         | 46           | 984         | 9            | 263         | 34           | 923         | 80              | 1907         |
| 03:00                 |               | 18           | 321         |              |             | 11           | 242         |              |             |                 |              |
| 03:15                 |               | 16           | 319         |              |             | 25           | 247         |              |             |                 |              |
| 03:30                 |               | 16           | 204         |              |             | 19           | 214         |              |             |                 |              |
| 03:45                 |               | 29           | 234         | 79           | 1078        | 21           | 243         | 76           | 946         | 155             | 2024         |
| 04:00                 |               | 31           | 203         |              |             | 31           | 244         |              |             |                 |              |
| 04:15                 |               | 47           | 202         |              |             | 33           | 243         |              |             |                 |              |
| 04:30                 |               | 62           | 200         |              |             | 42           | 278         |              |             |                 |              |
| 04:45                 |               | 67           | 241         | 207          | 846         | 44           | 271         | 150          | 1036        | 357             | 1882         |
| 05:00                 |               | 50           | 183         |              |             | 32           | 287         |              |             |                 |              |
| 05:15                 |               | 67           | 217         |              |             | 37           | 302         |              |             |                 |              |
| 05:30                 |               | 85           | 251         |              |             | 75           | 261         |              |             |                 |              |
| 05:45                 |               | 123          | 232         | 325          | 883         | 59           | 274         | 203          | 1124        | 528             | 2007         |
| 06:00                 |               | 138          | 194         |              |             | 72           | 272         |              |             |                 |              |
| 06:15                 |               | 193          | 194         |              |             | 101          | 283         |              |             |                 |              |
| 06:30                 |               | 256          | 204         |              |             | 130          | 219         |              |             |                 |              |
| 06:45                 |               | 259          | 156         | 846          | 748         | 190          | 193         | 493          | 967         | 1339            | 1715         |
| 07:00                 |               | 276          | 158         |              |             | 300          | 210         |              |             |                 |              |
| 07:15                 |               | 390          | 142         |              |             | 211          | 183         |              |             |                 |              |
| 07:30                 |               | 324          | 113         |              |             | 179          | 195         |              |             |                 |              |
| 07:45                 |               | 353          | 120         | 1343         | 533         | 184          | 156         | 874          | 744         | 2217            | 1277         |
| 08:00                 |               | 262          | 103         |              |             | 133          | 169         |              |             |                 |              |
| 08:15                 |               | 209          | 86          |              |             | 124          | 144         |              |             |                 |              |
| 08:30                 |               | 183          | 92          |              |             | 118          | 169         |              |             |                 |              |
| 08:45                 |               | 169          | 87          | 823          | 368         | 134          | 127         | 509          | 609         | 1332            | 977          |
| 09:00                 |               | 169          | 80          |              |             | 114          | 119         |              |             |                 |              |
| 09:15                 |               | 183          | 83          |              |             | 123          | 118         |              |             |                 |              |
| 09:30                 |               | 153          | 71          |              |             | 99           | 97          |              |             |                 |              |
| 09:45                 |               | 152          | 84          | 657          | 318         | 100          | 108         | 436          | 442         | 1093            | 760          |
| 10:00                 |               | 141          | 51          |              |             | 120          | 103         |              |             |                 |              |
| 10:15                 |               | 155          | 45          |              |             | 130          | 69          |              |             |                 |              |
| 10:30                 |               | 162          | 42          |              |             | 89           | 63          |              |             |                 |              |
| 10:45                 |               | 152          | 55          | 610          | 193         | 118          | 60          | 457          | 295         | 1067            | 488          |
| 11:00                 |               | 155          | 36          |              |             | 148          | 46          |              |             |                 |              |
| 11:15                 |               | 143          | 35          |              |             | 128          | 42          |              |             |                 |              |
| 11:30                 |               | 126          | 20          |              |             | 136          | 41          |              |             |                 |              |
| 11:45                 |               | 135          | 21          | 559          | 112         | 123          | 25          | 535          | 154         | 1094            | 266          |
| <b>Total</b>          |               | <b>5598</b>  | <b>7403</b> | <b>5598</b>  | <b>7403</b> | <b>3919</b>  | <b>8515</b> | <b>3919</b>  | <b>8515</b> | <b>9517</b>     | <b>15918</b> |
| <b>Combined Total</b> |               | <b>13001</b> |             | <b>13001</b> |             | <b>12434</b> |             | <b>12434</b> |             | <b>25435</b>    |              |
| AM Peak               | -             | 07:00        | -           | -            | -           | 06:45        | -           | -            | -           | -               | -            |
| Vol.                  | -             | 1343         | -           | -            | -           | 880          | -           | -            | -           | -               | -            |
| P.H.F.                | -             | 0.861        | -           | -            | -           | 0.733        | -           | -            | -           | -               | -            |
| PM Peak               | -             | -            | 02:30       | -            | -           | -            | 04:30       | -            | -           | -               | -            |
| Vol.                  | -             | -            | 1125        | -            | -           | -            | 1138        | -            | -           | -               | -            |
| P.H.F.                | -             | -            | 0.876       | -            | -           | -            | 0.942       | -            | -           | -               | -            |
| Percentage            |               | 43.1%        | 56.9%       |              |             | 31.5%        | 68.5%       |              |             |                 |              |
| ADT/AADT              |               | ADT 25,435   | AADT 25,435 |              |             |              |             |              |             |                 |              |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

# Counts Unlimited, Inc.

City of Moreno Valley  
 Krameria Avenue  
 E/ Spirit Road  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: 951-268-6268  
 email: counts@countsunlimited.com

MRV007  
 Site Code: 051-18162

| Start Time            | 06-Mar-18 Tue | Eastbound   |             | Hour Totals |             | Westbound   |             | Hour Totals |             | Combined Totals |             |
|-----------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|
|                       |               | Morning     | Afternoon   | Morning     | Afternoon   | Morning     | Afternoon   | Morning     | Afternoon   | Morning         | Afternoon   |
| 12:00                 |               | 3           | 18          |             |             | 2           | 32          |             |             |                 |             |
| 12:15                 |               | 0           | 46          |             |             | 0           | 58          |             |             |                 |             |
| 12:30                 |               | 0           | 20          |             |             | 0           | 80          |             |             |                 |             |
| 12:45                 |               | 0           | 15          | 3           | 99          | 0           | 37          | 2           | 207         | 5               | 306         |
| 01:00                 |               | 0           | 10          |             |             | 0           | 18          |             |             |                 |             |
| 01:15                 |               | 0           | 15          |             |             | 0           | 8           |             |             |                 |             |
| 01:30                 |               | 1           | 36          |             |             | 0           | 13          |             |             |                 |             |
| 01:45                 |               | 0           | 62          | 1           | 123         | 1           | 23          | 1           | 62          | 2               | 185         |
| 02:00                 |               | 0           | 84          |             |             | 0           | 25          |             |             |                 |             |
| 02:15                 |               | 0           | 94          |             |             | 0           | 19          |             |             |                 |             |
| 02:30                 |               | 0           | 101         |             |             | 0           | 186         |             |             |                 |             |
| 02:45                 |               | 0           | 49          | 0           | 328         | 0           | 97          | 0           | 327         | 0               | 655         |
| 03:00                 |               | 0           | 26          |             |             | 0           | 31          |             |             |                 |             |
| 03:15                 |               | 1           | 15          |             |             | 0           | 25          |             |             |                 |             |
| 03:30                 |               | 0           | 23          |             |             | 0           | 36          |             |             |                 |             |
| 03:45                 |               | 0           | 20          | 1           | 84          | 1           | 24          | 1           | 116         | 2               | 200         |
| 04:00                 |               | 0           | 12          |             |             | 0           | 28          |             |             |                 |             |
| 04:15                 |               | 0           | 24          |             |             | 2           | 29          |             |             |                 |             |
| 04:30                 |               | 0           | 16          |             |             | 1           | 36          |             |             |                 |             |
| 04:45                 |               | 0           | 16          | 0           | 68          | 3           | 26          | 6           | 119         | 6               | 187         |
| 05:00                 |               | 1           | 16          |             |             | 1           | 30          |             |             |                 |             |
| 05:15                 |               | 1           | 31          |             |             | 1           | 38          |             |             |                 |             |
| 05:30                 |               | 2           | 41          |             |             | 1           | 23          |             |             |                 |             |
| 05:45                 |               | 4           | 51          | 8           | 139         | 6           | 25          | 9           | 116         | 17              | 255         |
| 06:00                 |               | 4           | 25          |             |             | 2           | 18          |             |             |                 |             |
| 06:15                 |               | 7           | 14          |             |             | 5           | 7           |             |             |                 |             |
| 06:30                 |               | 16          | 15          |             |             | 3           | 2           |             |             |                 |             |
| 06:45                 |               | 26          | 3           | 53          | 57          | 13          | 3           | 23          | 30          | 76              | 87          |
| 07:00                 |               | 71          | 9           |             |             | 37          | 17          |             |             |                 |             |
| 07:15                 |               | 128         | 11          |             |             | 65          | 3           |             |             |                 |             |
| 07:30                 |               | 111         | 6           |             |             | 49          | 14          |             |             |                 |             |
| 07:45                 |               | 220         | 9           | 530         | 35          | 68          | 10          | 219         | 44          | 749             | 79          |
| 08:00                 |               | 115         | 7           |             |             | 167         | 16          |             |             |                 |             |
| 08:15                 |               | 18          | 12          |             |             | 35          | 25          |             |             |                 |             |
| 08:30                 |               | 18          | 12          |             |             | 6           | 39          |             |             |                 |             |
| 08:45                 |               | 18          | 7           | 169         | 38          | 14          | 14          | 222         | 94          | 391             | 132         |
| 09:00                 |               | 21          | 7           |             |             | 5           | 11          |             |             |                 |             |
| 09:15                 |               | 49          | 5           |             |             | 42          | 3           |             |             |                 |             |
| 09:30                 |               | 30          | 4           |             |             | 20          | 5           |             |             |                 |             |
| 09:45                 |               | 52          | 6           | 152         | 22          | 18          | 5           | 85          | 24          | 237             | 46          |
| 10:00                 |               | 45          | 3           |             |             | 54          | 0           |             |             |                 |             |
| 10:15                 |               | 11          | 1           |             |             | 12          | 0           |             |             |                 |             |
| 10:30                 |               | 25          | 4           |             |             | 11          | 0           |             |             |                 |             |
| 10:45                 |               | 21          | 2           | 102         | 10          | 10          | 1           | 87          | 1           | 189             | 11          |
| 11:00                 |               | 22          | 0           |             |             | 49          | 0           |             |             |                 |             |
| 11:15                 |               | 11          | 0           |             |             | 16          | 1           |             |             |                 |             |
| 11:30                 |               | 13          | 0           |             |             | 12          | 0           |             |             |                 |             |
| 11:45                 |               | 11          | 0           | 57          | 0           | 24          | 0           | 101         | 1           | 158             | 1           |
| <b>Total</b>          |               | <b>1076</b> | <b>1003</b> | <b>1076</b> | <b>1003</b> | <b>756</b>  | <b>1141</b> | <b>756</b>  | <b>1141</b> | <b>1832</b>     | <b>2144</b> |
| <b>Combined Total</b> |               | <b>2079</b> |             | <b>2079</b> |             | <b>1897</b> |             | <b>1897</b> |             | <b>3976</b>     |             |
| AM Peak               | -             | 07:15       | -           | -           | -           | 07:15       | -           | -           | -           | -               | -           |
| Vol.                  | -             | 574         | -           | -           | -           | 349         | -           | -           | -           | -               | -           |
| P.H.F.                | -             | 0.652       | -           | -           | -           | 0.522       | -           | -           | -           | -               | -           |
| PM Peak               | -             | -           | 01:45       | -           | -           | -           | 02:30       | -           | -           | -               | -           |
| Vol.                  | -             | -           | 341         | -           | -           | -           | 339         | -           | -           | -               | -           |
| P.H.F.                | -             | -           | 0.844       | -           | -           | -           | 0.456       | -           | -           | -               | -           |
| Percentage            |               | 51.8%       | 48.2%       |             |             | 39.9%       | 60.1%       |             |             |                 |             |
| ADT/AADT              |               | ADT 3,976   |             | AADT 3,976  |             |             |             |             |             |                 |             |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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**APPENDIX 3.2:**

**EXISTING (2018) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

1: Perris Bl. & Krameria Av.

09/20/2018

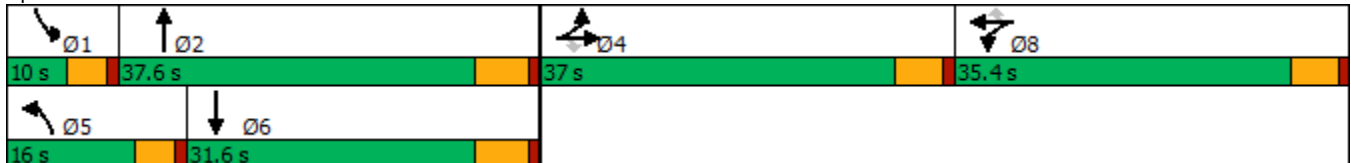


| Lane Group           | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBL  | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations  | ↕     | ↗     | ↕     | ↗     | ↖     | ↑↑↑   | ↖    | ↑↑↑   |
| Traffic Volume (vph) | 191   | 307   | 121   | 67    | 304   | 1003  | 92   | 656   |
| Future Volume (vph)  | 191   | 307   | 121   | 67    | 304   | 1003  | 92   | 656   |
| Turn Type            | NA    | Perm  | NA    | Perm  | Prot  | NA    | Prot | NA    |
| Protected Phases     | 4     |       | 8     |       | 5     | 2     | 1    | 6     |
| Permitted Phases     |       | 4     |       | 8     |       |       |      |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 1    | 6     |
| Switch Phase         |       |       |       |       |       |       |      |       |
| Minimum Initial (s)  | 10.0  | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  | 5.0  | 10.0  |
| Minimum Split (s)    | 35.4  | 35.4  | 35.4  | 35.4  | 9.6   | 32.8  | 9.6  | 26.8  |
| Total Split (s)      | 37.0  | 37.0  | 35.4  | 35.4  | 16.0  | 37.6  | 10.0 | 31.6  |
| Total Split (%)      | 30.8% | 30.8% | 29.5% | 29.5% | 13.3% | 31.3% | 8.3% | 26.3% |
| Yellow Time (s)      | 4.4   | 4.4   | 4.4   | 4.4   | 3.6   | 4.8   | 3.6  | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0  | 1.0   |
| Lost Time Adjust (s) | -1.4  | -1.4  | -1.4  | -1.4  | -0.6  | -1.8  | -0.6 | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   | Yes   | Yes  | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 110.1  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Perris Bl. & Krameria Av.



























HCM 6th Signalized Intersection Summary

1: Perris Bl. & Krameria Av.

09/20/2018

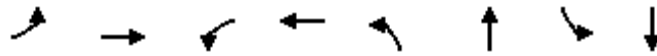
|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |   |  |  |   |  |  |   |  |  |  |  |  |
| Traffic Volume (veh/h)       | 273   | 191   | 307   | 74  | 121   | 67  | 304  | 1003  | 198   | 92  | 656   | 102   |
| Future Volume (veh/h)        | 273   | 191   | 307   | 74  | 121   | 67  | 304  | 1003  | 198   | 92  | 656   | 102   |
| Initial Q (Qb), veh          | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)          | 1.00  |   | 0.98  | 1.00  |   | 1.00  | 1.00   |   | 0.99  | 1.00  |   | 0.96  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach        |   | No  |   |   | No  |   |  | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870   | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 333   | 233   | 267   | 90  | 148   | 54  | 371  | 1223  | 176   | 112   | 800   | 108   |
| Peak Hour Factor             | 0.82  | 0.82  | 0.82  | 0.82  | 0.82  | 0.82  | 0.82   | 0.82  | 0.82  | 0.82  | 0.82  | 0.82  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2  | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 334   | 234   | 486   | 116   | 191   | 266   | 202  | 1401  | 202   | 101   | 1153  | 154   |
| Arrive On Green              | 0.31  | 0.31  | 0.31  | 0.17  | 0.17  | 0.17  | 0.11   | 0.31  | 0.29  | 0.06  | 0.25  | 0.24  |
| Sat Flow, veh/h              | 1069  | 748   | 1556  | 694   | 1141  | 1585  | 1781   | 4499  | 647   | 1781  | 4529  | 607   |
| Grp Volume(v), veh/h         | 566   | 0   | 267   | 238   | 0   | 54  | 371  | 925   | 474   | 112   | 600   | 308   |
| Grp Sat Flow(s),veh/h/ln     | 1817  | 0   | 1556  | 1836  | 0   | 1585  | 1781   | 1702  | 1743  | 1781  | 1702  | 1731  |
| Q Serve(g_s), s              | 32.8  | 0.0   | 15.0  | 13.1  | 0.0   | 3.1   | 12.0   | 27.1  | 27.2  | 6.0   | 16.8  | 17.1  |
| Cycle Q Clear(g_c), s        | 32.8  | 0.0   | 15.0  | 13.1  | 0.0   | 3.1   | 12.0   | 27.1  | 27.2  | 6.0   | 16.8  | 17.1  |
| Prop In Lane                 | 0.59  |   | 1.00  | 0.38  |   | 1.00  | 1.00   |   | 0.37  | 1.00  |   | 0.35  |
| Lane Grp Cap(c), veh/h       | 568   | 0   | 486   | 308   | 0   | 266   | 202  | 1060  | 543   | 101   | 867   | 441   |
| V/C Ratio(X)                 | 1.00  | 0.00  | 0.55  | 0.77  | 0.00  | 0.20  | 1.83   | 0.87  | 0.87  | 1.11  | 0.69  | 0.70  |
| Avail Cap(c_a), veh/h        | 568   | 0   | 486   | 546   | 0   | 471   | 202  | 1083  | 555   | 101   | 890   | 453   |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 0.00  | 1.00  | 1.00  | 0.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 36.2  | 0.0   | 30.1  | 42.0  | 0.0   | 37.9  | 46.8   | 34.4  | 34.7  | 49.8  | 35.6  | 36.0  |
| Incr Delay (d2), s/veh       | 36.9  | 0.0   | 1.3   | 4.1   | 0.0   | 0.4   | 393.3  | 7.9   | 14.1  | 121.0   | 2.2   | 4.6   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 19.6  | 0.0   | 5.6   | 6.1   | 0.0   | 1.2   | 27.2   | 11.7  | 13.0  | 6.0   | 6.9   | 7.5   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |  |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 73.1  | 0.0   | 31.4  | 46.2  | 0.0   | 38.2  | 440.0  | 42.3  | 48.8  | 170.8   | 37.8  | 40.6  |
| LnGrp LOS                    | E   | A   | C   | D   | A   | D   | F  | D   | D   | F   | D   | D   |
| Approach Vol, veh/h          |   | 833   |   |   | 292   |   |  | 1770  |   |   | 1020  |   |
| Approach Delay, s/veh        |   | 59.7  |   |   | 44.7  |   |  | 127.4   |   |   | 53.3  |   |
| Approach LOS                 |   | E   |   |   | D   |   |  | F   |   |   | D   |   |
| Timer - Assigned Phs         | 1   | 2   |   | 4   | 5   | 6   |  | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 10.0  | 36.9  |   | 37.0  | 16.0  | 30.9  |  | 21.7  |   |   |   |   |
| Change Period (Y+Rc), s      | 4.6   | 5.8   |   | 5.4   | 4.6   | 5.8   |  | 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 5.4   | 31.8  |   | 31.6  | 11.4  | 25.8  |  | 30.0  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 8.0   | 29.2  |   | 34.8  | 14.0  | 19.1  |  | 15.1  |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 1.9   |   | 0.0   | 0.0   | 2.9   |  | 1.2   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |  |   |   |   |   |   |
| HCM 6th Ctrl Delay           |   |   | 87.5  |   |   |   |  |   |   |   |   |   |
| HCM 6th LOS                  |   |   | F   |   |   |   |  |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

2: Kitching St. & Krameria Av.

09/20/2018

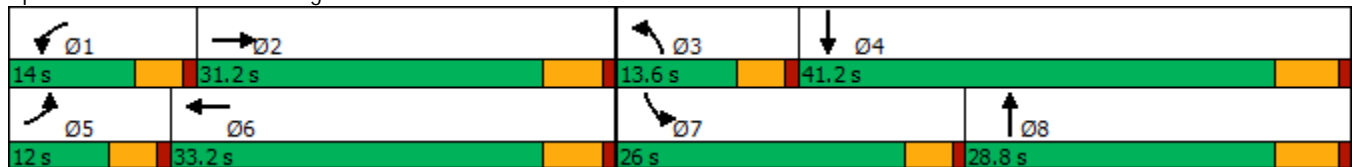


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 71    | 408   | 84    | 411   | 54    | 112   | 253   | 144   |
| Future Volume (vph)  | 71    | 408   | 84    | 411   | 54    | 112   | 253   | 144   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 12.0  | 31.2  | 14.0  | 33.2  | 13.6  | 28.8  | 26.0  | 41.2  |
| Total Split (%)      | 12.0% | 31.2% | 14.0% | 33.2% | 13.6% | 28.8% | 26.0% | 41.2% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 74.6  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Kitching St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
 2: Kitching St. & Krameria Av.

09/20/2018

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 71   | 408  | 109  | 84   | 411  | 181  | 54   | 112  | 67   | 253  | 144  | 80   |
| Future Volume (veh/h)        | 71   | 408  | 109  | 84   | 411  | 181  | 54   | 112  | 67   | 253  | 144  | 80   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 0.96 | 1.00 |      | 1.00 | 1.00 |      | 0.98 | 1.00 |      | 0.98 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 81   | 464  | 107  | 95   | 467  | 156  | 61   | 127  | 49   | 288  | 164  | 61   |
| Peak Hour Factor             | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 119  | 781  | 178  | 137  | 744  | 247  | 105  | 554  | 203  | 350  | 909  | 324  |
| Arrive On Green              | 0.07 | 0.27 | 0.25 | 0.08 | 0.28 | 0.26 | 0.06 | 0.22 | 0.19 | 0.20 | 0.36 | 0.33 |
| Sat Flow, veh/h              | 1781 | 2848 | 651  | 1781 | 2618 | 868  | 1781 | 2528 | 929  | 1781 | 2550 | 909  |
| Grp Volume(v), veh/h         | 81   | 288  | 283  | 95   | 316  | 307  | 61   | 87   | 89   | 288  | 112  | 113  |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1722 | 1781 | 1777 | 1709 | 1781 | 1777 | 1680 | 1781 | 1777 | 1683 |
| Q Serve(g_s), s              | 3.0  | 9.6  | 9.8  | 3.6  | 10.6 | 10.8 | 2.3  | 2.8  | 3.0  | 10.6 | 3.0  | 3.2  |
| Cycle Q Clear(g_c), s        | 3.0  | 9.6  | 9.8  | 3.6  | 10.6 | 10.8 | 2.3  | 2.8  | 3.0  | 10.6 | 3.0  | 3.2  |
| Prop In Lane                 | 1.00 |      | 0.38 | 1.00 |      | 0.51 | 1.00 |      | 0.55 | 1.00 |      | 0.54 |
| Lane Grp Cap(c), veh/h       | 119  | 487  | 472  | 137  | 505  | 486  | 105  | 389  | 368  | 350  | 633  | 599  |
| V/C Ratio(X)                 | 0.68 | 0.59 | 0.60 | 0.69 | 0.63 | 0.63 | 0.58 | 0.22 | 0.24 | 0.82 | 0.18 | 0.19 |
| Avail Cap(c_a), veh/h        | 208  | 706  | 684  | 260  | 758  | 729  | 250  | 644  | 609  | 573  | 966  | 914  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 31.2 | 21.5 | 21.8 | 30.8 | 21.3 | 21.7 | 31.4 | 22.0 | 22.5 | 26.4 | 15.1 | 15.6 |
| Incr Delay (d2), s/veh       | 2.5  | 1.1  | 1.2  | 2.3  | 1.3  | 1.4  | 1.9  | 0.3  | 0.3  | 2.0  | 0.1  | 0.2  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.3  | 3.7  | 3.7  | 1.5  | 4.1  | 4.1  | 1.0  | 1.1  | 1.1  | 4.2  | 1.1  | 1.1  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 33.8 | 22.7 | 23.1 | 33.1 | 22.6 | 23.1 | 33.3 | 22.2 | 22.8 | 28.4 | 15.3 | 15.7 |
| LnGrp LOS                    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    | B    | B    |
| Approach Vol, veh/h          |      | 652  |      |      | 718  |      |      | 237  |      |      | 513  |      |
| Approach Delay, s/veh        |      | 24.2 |      |      | 24.2 |      |      | 25.3 |      |      | 22.7 |      |
| Approach LOS                 |      | C    |      |      | C    |      |      | C    |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 9.3  | 22.8 | 8.0  | 28.4 | 8.6  | 23.5 | 17.4 | 19.0 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  |      |      |      |      |
| Max Green Setting (Gmax), s  | 9.4  | 25.8 | 9.0  | 35.4 | 7.4  | 27.8 | 21.4 | 23.0 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 5.6  | 11.8 | 4.3  | 5.2  | 5.0  | 12.8 | 12.6 | 5.0  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.8  | 0.0  | 1.2  | 0.0  | 3.2  | 0.3  | 0.7  |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 24.0 |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

3: Lasselle St. & Iris Av.

09/20/2018

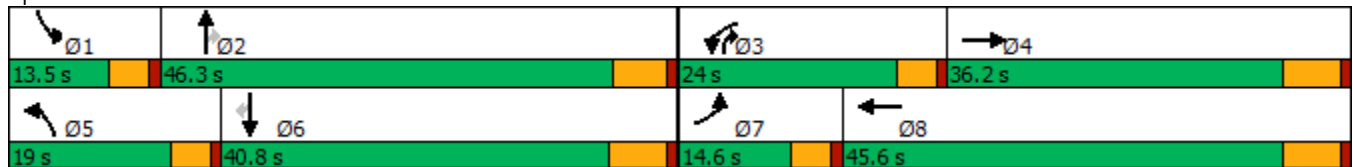


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↑↑↓   | ↖↗    | ↑↑↓   | ↖↗    | ↑↑    | ↖     | ↖↗    | ↑↑    | ↖     |
| Traffic Volume (vph) | 134   | 478   | 510   | 583   | 369   | 582   | 471   | 116   | 560   | 97    |
| Future Volume (vph)  | 134   | 478   | 510   | 583   | 369   | 582   | 471   | 116   | 560   | 97    |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 14.6  | 36.2  | 24.0  | 45.6  | 19.0  | 46.3  | 24.0  | 13.5  | 40.8  | 40.8  |
| Total Split (%)      | 12.2% | 30.2% | 20.0% | 38.0% | 15.8% | 38.6% | 20.0% | 11.3% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 104.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

































Splits and Phases: 3: Lasselle St. & Iris Av.





HCM 6th Signalized Intersection Summary  
 3: Lasselle St. & Iris Av.

09/20/2018

|  |    |    |  |    |    |  |    |    |  |    |    |  |
|--|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |    |   |   |    |   |   |   |  |   |   |  |
| Traffic Volume (veh/h)   | 134   | 478   | 316   | 510   | 583   | 98  | 369  | 582   | 471   | 116   | 560   | 97  |
| Future Volume (veh/h)  | 134   | 478   | 316   | 510   | 583   | 98  | 369  | 582   | 471   | 116   | 560   | 97  |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00   |   | 0.98  | 1.00  |   | 0.95  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |  | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870   | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 151   | 537   | 207   | 573   | 655   | 67  | 415  | 654   | 300   | 130   | 629   | 49  |
| Peak Hour Factor   | 0.89  | 0.89  | 0.89  | 0.89  | 0.89  | 0.89  | 0.89   | 0.89  | 0.89  | 0.89  | 0.89  | 0.89  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2  | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 233   | 862   | 322   | 647   | 1672  | 169   | 491  | 1279  | 838   | 210   | 1004  | 426   |
| Arrive On Green  | 0.07  | 0.24  | 0.21  | 0.19  | 0.36  | 0.33  | 0.14   | 0.36  | 0.35  | 0.06  | 0.28  | 0.28  |
| Sat Flow, veh/h  | 3456  | 3657  | 1367  | 3456  | 4703  | 477   | 3456   | 3554  | 1552  | 3456  | 3554  | 1506  |
| Grp Volume(v), veh/h   | 151   | 499   | 245   | 573   | 472   | 250   | 415  | 654   | 300   | 130   | 629   | 49  |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1702  | 1620  | 1728  | 1702  | 1776  | 1728   | 1777  | 1552  | 1728  | 1777  | 1506  |
| Q Serve(g_s), s  | 4.5   | 13.8  | 14.4  | 16.9  | 10.9  | 11.1  | 12.3   | 15.1  | 11.7  | 3.9   | 16.2  | 2.5   |
| Cycle Q Clear(g_c), s  | 4.5   | 13.8  | 14.4  | 16.9  | 10.9  | 11.1  | 12.3   | 15.1  | 11.7  | 3.9   | 16.2  | 2.5   |
| Prop In Lane   | 1.00  |   | 0.84  | 1.00  |   | 0.27  | 1.00   |   | 1.00  | 1.00  |   | 1.00  |
| Lane Grp Cap(c), veh/h   | 233   | 802   | 382   | 647   | 1210  | 631   | 491  | 1279  | 838   | 210   | 1004  | 426   |
| V/C Ratio(X)   | 0.65  | 0.62  | 0.64  | 0.89  | 0.39  | 0.40  | 0.85   | 0.51  | 0.36  | 0.62  | 0.63  | 0.12  |
| Avail Cap(c_a), veh/h  | 349   | 1045  | 497   | 659   | 1350  | 704   | 494  | 1433  | 905   | 313   | 1247  | 529   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 47.7  | 35.9  | 37.0  | 41.5  | 25.3  | 25.6  | 43.9   | 26.3  | 14.0  | 48.1  | 32.8  | 27.9  |
| Incr Delay (d2), s/veh   | 1.1   | 0.8   | 1.8   | 13.1  | 0.2   | 0.4   | 12.1   | 0.3   | 0.3   | 1.1   | 0.7   | 0.1   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 1.9   | 5.5   | 5.7   | 8.0   | 4.1   | 4.5   | 5.9  | 6.1   | 3.7   | 1.6   | 6.6   | 0.9   |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |  |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 48.8  | 36.7  | 38.8  | 54.6  | 25.5  | 26.0  | 55.9   | 26.6  | 14.3  | 49.2  | 33.5  | 28.0  |
| LnGrp LOS  | D   | D   | D   | D   | C   | C   | E  | C   | B   | D   | C   | C   |
| Approach Vol, veh/h  |   | 895   |   |   | 1295  |   |  | 1369  |   |   | 808   |   |
| Approach Delay, s/veh  |   | 39.3  |   |   | 38.5  |   |  | 32.8  |   |   | 35.7  |   |
| Approach LOS   |   | D   |   |   | D   |   |  | C   |   |   | D   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 10.4  | 42.2  | 23.6  | 28.7  | 18.9  | 33.6  | 11.1   | 41.3  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | * 6.2   | 4.6   | 6.2   | 4.6   | 6.2   | 4.6  | 6.2   |   |   |   |   |
| Max Green Setting (Gmax), s  | 8.9   | * 41  | 19.4  | 30.0  | 14.4  | 34.6  | 10.0   | 39.4  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 5.9   | 17.1  | 18.9  | 16.4  | 14.3  | 18.2  | 6.5  | 13.1  |   |   |   |   |
| Green Ext Time (p_c), s  | 0.1   | 5.3   | 0.1   | 3.6   | 0.0   | 3.6   | 0.1  | 4.3   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |  |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 36.3  |   |   |   |  |   |   |   |   |   |
| HCM 6th LOS  |   |   | D   |   |   |   |  |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |  |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |  |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
4: Lasselle St. & Cahuillia Dr.

09/20/2018

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      | ↗    | ↕    | ↗    |      | ↕    |
| Traffic Vol, veh/h       | 0    | 70   | 1225 | 150  | 0    | 896  |
| Future Vol, veh/h        | 0    | 70   | 1225 | 150  | 0    | 896  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 3    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 80   | 1392 | 170  | 0    | 1018 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 699    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 382    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | -      | 381    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 16.9 | 0  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 381   |
| HCM Lane V/C Ratio    | -   | -        | 0.209 |
| HCM Control Delay (s) | -   | -        | 16.9  |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 0.8   |

Timings

6: Lasselie St. & Krameria Av.

09/20/2018

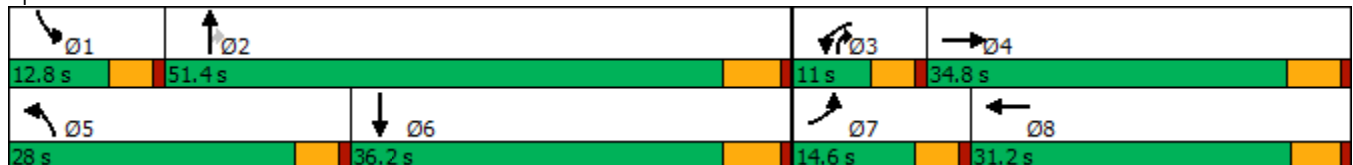


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕     | ↗     | ↖     | ↕     |
| Traffic Volume (vph) | 254   | 241   | 97    | 149   | 322   | 1018  | 237   | 89    | 722   |
| Future Volume (vph)  | 254   | 241   | 97    | 149   | 322   | 1018  | 237   | 89    | 722   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 14.6  | 34.8  | 11.0  | 31.2  | 28.0  | 51.4  | 11.0  | 12.8  | 36.2  |
| Total Split (%)      | 13.3% | 31.6% | 10.0% | 28.4% | 25.5% | 46.7% | 10.0% | 11.6% | 32.9% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

































Cycle Length: 110  
 Actuated Cycle Length: 99.2  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

09/20/2018

|  |    |    |  |    |    |  |   |    |    |    |    |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |   |   |   |   |   |   |   |   |   |   |   |
| Traffic Volume (veh/h)   | 254   | 241   | 332   | 97  | 149   | 88  | 322   | 1018  | 237   | 89  | 722   | 107   |
| Future Volume (veh/h)  | 254   | 241   | 332   | 97  | 149   | 88  | 322   | 1018  | 237   | 89  | 722   | 107   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.98  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 295   | 280   | 210   | 113   | 173   | 75  | 374   | 1184  | 191   | 103   | 840   | 97  |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 383   | 412   | 299   | 132   | 417   | 173   | 415   | 1656  | 826   | 141   | 999   | 115   |
| Arrive On Green  | 0.11  | 0.21  | 0.20  | 0.07  | 0.17  | 0.16  | 0.23  | 0.47  | 0.45  | 0.08  | 0.31  | 0.29  |
| Sat Flow, veh/h  | 3456  | 1955  | 1418  | 1781  | 2438  | 1011  | 1781  | 3554  | 1562  | 1781  | 3201  | 370   |
| Grp Volume(v), veh/h   | 295   | 254   | 236   | 113   | 124   | 124   | 374   | 1184  | 191   | 103   | 466   | 471   |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1777  | 1597  | 1781  | 1777  | 1672  | 1781  | 1777  | 1562  | 1781  | 1777  | 1794  |
| Q Serve(g_s), s  | 7.8   | 12.4  | 13.0  | 5.9   | 5.9   | 6.3   | 19.2  | 25.1  | 6.2   | 5.3   | 23.0  | 23.1  |
| Cycle Q Clear(g_c), s  | 7.8   | 12.4  | 13.0  | 5.9   | 5.9   | 6.3   | 19.2  | 25.1  | 6.2   | 5.3   | 23.0  | 23.1  |
| Prop In Lane   | 1.00  |   | 0.89  | 1.00  |   | 0.60  | 1.00  |   | 1.00  | 1.00  |   | 0.21  |
| Lane Grp Cap(c), veh/h   | 383   | 374   | 337   | 132   | 304   | 286   | 415   | 1656  | 826   | 141   | 554   | 560   |
| V/C Ratio(X)   | 0.77  | 0.68  | 0.70  | 0.85  | 0.41  | 0.43  | 0.90  | 0.71  | 0.23  | 0.73  | 0.84  | 0.84  |
| Avail Cap(c_a), veh/h  | 389   | 581   | 522   | 132   | 513   | 483   | 454   | 1789  | 884   | 166   | 608   | 613   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 40.7  | 34.2  | 35.0  | 43.1  | 34.8  | 35.2  | 35.1  | 20.1  | 12.0  | 42.4  | 30.2  | 30.4  |
| Incr Delay (d2), s/veh   | 8.2   | 2.1   | 2.7   | 37.0  | 0.9   | 1.0   | 18.8  | 1.3   | 0.1   | 9.7   | 9.6   | 9.6   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 3.6   | 5.3   | 5.1   | 3.9   | 2.6   | 2.6   | 10.0  | 9.5   | 2.0   | 2.6   | 10.6  | 10.7  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 48.9  | 36.4  | 37.7  | 80.1  | 35.6  | 36.3  | 53.8  | 21.4  | 12.1  | 52.1  | 39.9  | 40.0  |
| LnGrp LOS  | D   | D   | D   | F   | D   | D   | D   | C   | B   | D   | D   | D   |
| Approach Vol, veh/h  |   | 785   |   |   | 361   |   |   | 1749  |   |   | 1040  |   |
| Approach Delay, s/veh  |   | 41.5  |   |   | 49.8  |   |   | 27.3  |   |   | 41.1  |   |
| Approach LOS   |   | D   |   |   | D   |   |   | C   |   |   | D   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 11.4  | 47.9  | 11.0  | 23.8  | 25.9  | 33.4  | 14.4  | 20.4  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 8.2   | 45.6  | 6.4   | 29.4  | 23.4  | 30.4  | 10.0  | * 26  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 7.3   | 27.1  | 7.9   | 15.0  | 21.2  | 25.1  | 9.8   | 8.3   |   |   |   |   |
| Green Ext Time (p_c), s  | 0.0   | 8.4   | 0.0   | 2.4   | 0.2   | 2.5   | 0.0   | 1.2   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 35.8  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | D   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

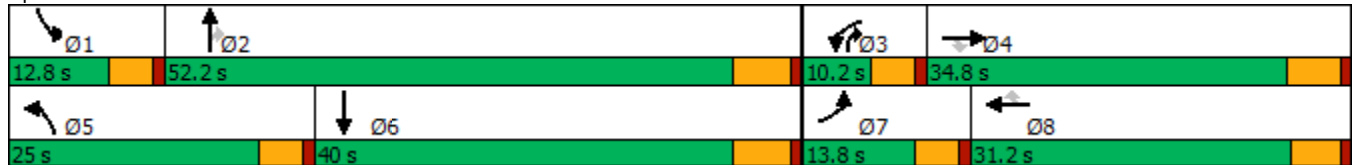
10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |  |
|----------------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  |       |       |       |      |       |       |       |       |       |       |       |  |
| Traffic Volume (vph) | 254   | 241   | 332   | 97   | 149   | 88    | 322   | 1018  | 237   | 89    | 722   |  |
| Future Volume (vph)  | 254   | 241   | 332   | 97   | 149   | 88    | 322   | 1018  | 237   | 89    | 722   |  |
| Turn Type            | Prot  | NA    | Perm  | Prot | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |  |
| Protected Phases     | 7     | 4     |       | 3    | 8     |       | 5     | 2     | 3     | 1     | 6     |  |
| Permitted Phases     |       |       | 4     |      |       | 8     |       |       | 2     |       |       |  |
| Detector Phase       | 7     | 4     | 4     | 3    | 8     | 8     | 5     | 2     | 3     | 1     | 6     |  |
| Switch Phase         |       |       |       |      |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0  | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6  | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |  |
| Total Split (s)      | 13.8  | 34.8  | 34.8  | 10.2 | 31.2  | 31.2  | 25.0  | 52.2  | 10.2  | 12.8  | 40.0  |  |
| Total Split (%)      | 12.5% | 31.6% | 31.6% | 9.3% | 28.4% | 28.4% | 22.7% | 47.5% | 9.3%  | 11.6% | 36.4% |  |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6  | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |  |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0  | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |  |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6 | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0  | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |  |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode          | None  | None  | None  | None | None  | None  | None  | Min   | None  | None  | Min   |  |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 99.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

|  |  |  |  |  |  |  |   |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)   | 254   | 241   | 332   | 97  | 149   | 88  | 322   | 1018  | 237   | 89  | 722   | 107   |
| Future Volume (veh/h)  | 254   | 241   | 332   | 97  | 149   | 88  | 322   | 1018  | 237   | 89  | 722   | 107   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.98  | 1.00  |   | 0.96  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 295   | 280   | 210   | 113   | 173   | 75  | 374   | 1184  | 191   | 103   | 840   | 97  |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 189   | 390   | 303   | 119   | 311   | 242   | 405   | 1678  | 817   | 141   | 1036  | 120   |
| Arrive On Green  | 0.11  | 0.21  | 0.19  | 0.07  | 0.17  | 0.15  | 0.23  | 0.47  | 0.46  | 0.08  | 0.32  | 0.30  |
| Sat Flow, veh/h  | 1781  | 1870  | 1568  | 1781  | 1870  | 1564  | 1781  | 3554  | 1547  | 1781  | 3196  | 369   |
| Grp Volume(v), veh/h   | 295   | 280   | 210   | 113   | 173   | 75  | 374   | 1184  | 191   | 103   | 467   | 470   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1568  | 1781  | 1870  | 1564  | 1781  | 1777  | 1547  | 1781  | 1777  | 1788  |
| Q Serve(g_s), s  | 9.8   | 12.9  | 11.5  | 5.8   | 7.9   | 3.9   | 19.0  | 24.4  | 6.2   | 5.2   | 22.3  | 22.3  |
| Cycle Q Clear(g_c), s  | 9.8   | 12.9  | 11.5  | 5.8   | 7.9   | 3.9   | 19.0  | 24.4  | 6.2   | 5.2   | 22.3  | 22.3  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 0.21  |
| Lane Grp Cap(c), veh/h   | 189   | 390   | 303   | 119   | 311   | 242   | 405   | 1678  | 817   | 141   | 576   | 580   |
| V/C Ratio(X)   | 1.56  | 0.72  | 0.69  | 0.95  | 0.56  | 0.31  | 0.92  | 0.71  | 0.23  | 0.73  | 0.81  | 0.81  |
| Avail Cap(c_a), veh/h  | 189   | 623   | 499   | 119   | 550   | 441   | 405   | 1853  | 893   | 170   | 692   | 696   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 41.3  | 34.1  | 34.7  | 43.0  | 35.4  | 34.7  | 35.0  | 19.3  | 11.8  | 41.6  | 28.6  | 28.8  |
| Incr Delay (d2), s/veh   | 277.3   | 2.5   | 2.8   | 64.8  | 1.6   | 0.7   | 26.4  | 1.1   | 0.1   | 8.9   | 6.1   | 6.1   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 18.7  | 5.9   | 4.5   | 4.7   | 3.6   | 1.5   | 10.7  | 9.1   | 2.0   | 2.5   | 9.7   | 9.8   |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 318.6   | 36.5  | 37.6  | 107.8   | 37.0  | 35.4  | 61.3  | 20.4  | 12.0  | 50.6  | 34.8  | 34.9  |
| LnGrp LOS  | F   | D   | D   | F   | D   | D   | E   | C   | B   | D   | C   | C   |
| Approach Vol, veh/h  |   | 785   |   |   | 361   |   |   | 1749  |   |   | 1040  |   |
| Approach Delay, s/veh  |   | 142.8   |   |   | 58.8  |   |   | 28.3  |   |   | 36.4  |   |
| Approach LOS   |   | F   |   |   | E   |   |   | C   |   |   | D   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 11.3  | 47.7  | 10.2  | 23.3  | 25.0  | 34.0  | 13.8  | 19.7  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 8.2   | 46.4  | 5.6   | 29.4  | 20.4  | 34.2  | 9.2   | * 26  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 7.2   | 26.4  | 7.8   | 14.9  | 21.0  | 24.3  | 11.8  | 9.9   |   |   |   |   |
| Green Ext Time (p_c), s  | 0.0   | 8.7   | 0.0   | 1.9   | 0.0   | 3.9   | 0.0   | 1.0   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 56.1  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | E   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

09/20/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |       |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Int Delay, s/veh         | 2.8  |      |      |      |      |      |      |      |      |      |       |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
| Lane Configurations      |      | ↑↑   |      | ↑    | ↑↑   |      |      | ↑↑   |      |      |       |      |
| Traffic Vol, veh/h       | 0    | 521  | 46   | 48   | 272  | 0    | 62   | 0    | 79   | 0    | 0     | 0    |
| Future Vol, veh/h        | 0    | 521  | 46   | 48   | 272  | 0    | 62   | 0    | 79   | 0    | 0     | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop  | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -     | None |
| Storage Length           | -    | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -     | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 16965 | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0     | -    |
| Peak Hour Factor         | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77    | 77   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    |
| Mvmt Flow                | 0    | 677  | 60   | 62   | 353  | 0    | 81   | 0    | 103  | 0    | 0     | 0    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|------|
| Conflicting Flow All | -      | 0 | 0 | 739    | 0 | 0 | 1010   | 1186 | 371  |
| Stage 1              | -      | - | - | -      | - | - | 709    | 709  | -    |
| Stage 2              | -      | - | - | -      | - | - | 301    | 477  | -    |
| Critical Hdwy        | -      | - | - | 4.14   | - | - | 6.84   | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 5.84   | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 5.84   | 5.54 | -    |
| Follow-up Hdwy       | -      | - | - | 2.22   | - | - | 3.52   | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | - | - | 863    | - | 0 | 236    | 187  | 626  |
| Stage 1              | 0      | - | - | -      | - | 0 | 449    | 435  | -    |
| Stage 2              | 0      | - | - | -      | - | 0 | 725    | 554  | -    |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -    | -    |
| Mov Cap-1 Maneuver   | -      | - | - | 861    | - | - | 219    | 0    | 625  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 372    | 0    | -    |
| Stage 1              | -      | - | - | -      | - | - | 416    | 0    | -    |
| Stage 2              | -      | - | - | -      | - | - | 725    | 0    | -    |

| Approach             | EB | WB  | NB |
|----------------------|----|-----|----|
| HCM Control Delay, s | 0  | 1.4 | 17 |
| HCM LOS              |    |     | C  |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 481   | -   | -   | 861   | -   |
| HCM Lane V/C Ratio    | 0.381 | -   | -   | 0.072 | -   |
| HCM Control Delay (s) | 17    | -   | -   | 9.5   | -   |
| HCM Lane LOS          | C     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 1.8   | -   | -   | 0.2   | -   |

HCM 6th AWSC  
8: Krameria Av./Driveway & Cahuillia Dr.

09/20/2018

| Intersection              |     |
|---------------------------|-----|
| Intersection Delay, s/veh | 9.9 |
| Intersection LOS          | A   |

| Movement            | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|
| Lane Configurations | W    |      |      | ↑↑   | ↑↑   | ↑    |
| Traffic Vol, veh/h  | 26   | 78   | 118  | 184  | 66   | 19   |
| Future Vol, veh/h   | 26   | 78   | 118  | 184  | 66   | 19   |
| Peak Hour Factor    | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 34   | 103  | 155  | 242  | 87   | 25   |
| Number of Lanes     | 1    | 0    | 0    | 2    | 2    | 1    |

| Approach                   | EB  | NB   | SB  |
|----------------------------|-----|------|-----|
| Opposing Approach          |     | SB   | NB  |
| Opposing Lanes             | 0   | 3    | 2   |
| Conflicting Approach Left  | SB  | EB   |     |
| Conflicting Lanes Left     | 3   | 1    | 0   |
| Conflicting Approach Right | NB  |      | EB  |
| Conflicting Lanes Right    | 2   | 0    | 1   |
| HCM Control Delay          | 9.4 | 10.6 | 7.8 |
| HCM LOS                    | A   | B    | A   |

| Lane                   | NBLn1 | NBLn2 | EBLn1 | SBLn1 | SBLn2 | SBLn3 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 66%   | 0%    | 25%   | 0%    | 0%    | 0%    |
| Vol Thru, %            | 34%   | 100%  | 0%    | 100%  | 100%  | 0%    |
| Vol Right, %           | 0%    | 0%    | 75%   | 0%    | 0%    | 100%  |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 179   | 123   | 104   | 33    | 33    | 19    |
| LT Vol                 | 118   | 0     | 26    | 0     | 0     | 0     |
| Through Vol            | 61    | 123   | 0     | 33    | 33    | 0     |
| RT Vol                 | 0     | 0     | 78    | 0     | 0     | 19    |
| Lane Flow Rate         | 236   | 161   | 137   | 43    | 43    | 25    |
| Geometry Grp           | 8     | 8     | 7     | 7     | 7     | 7     |
| Degree of Util (X)     | 0.36  | 0.231 | 0.202 | 0.064 | 0.064 | 0.02  |
| Departure Headway (Hd) | 5.487 | 5.157 | 5.311 | 5.312 | 5.312 | 2.858 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 654   | 694   | 673   | 672   | 672   | 1238  |
| Service Time           | 3.236 | 2.905 | 3.06  | 3.064 | 3.064 | 0.609 |
| HCM Lane V/C Ratio     | 0.361 | 0.232 | 0.204 | 0.064 | 0.064 | 0.02  |
| HCM Control Delay      | 11.3  | 9.5   | 9.4   | 8.4   | 8.4   | 5.7   |
| HCM Lane LOS           | B     | A     | A     | A     | A     | A     |
| HCM 95th-tile Q        | 1.6   | 0.9   | 0.8   | 0.2   | 0.2   | 0.1   |



HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

09/20/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    | ↕    |
| Traffic Vol, veh/h       | 0    | 0    | 10   | 7    | 1    | 6    | 17   | 562  | 13   | 5    | 296  | 0    |
| Future Vol, veh/h        | 0    | 0    | 10   | 7    | 1    | 6    | 17   | 562  | 13   | 5    | 296  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 69   | 0    | 0    | 21   | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | 0    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 14   | 10   | 1    | 8    | 24   | 781  | 18   | 7    | 411  | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 933    | 1293  | 411    | 1291  | 1284   | 490   | 411    | 0 | 0 | 820   | 0 | 0 |
| Stage 1              | 425    | 425   | -      | 859   | 859    | -     | -      | - | - | -     | - | - |
| Stage 2              | 508    | 868   | -      | 432   | 425    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.33   | 6.53  | 6.23   | 7.33  | 6.53   | 6.93  | 4.13   | - | - | 4.13  | - | - |
| Critical Hdwy Stg 1  | 6.13   | 5.53  | -      | 6.53  | 5.53   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.53   | 5.53  | -      | 6.13  | 5.53   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.519  | 4.019 | 3.319  | 3.519 | 4.019  | 3.319 | 2.219  | - | - | 2.219 | - | - |
| Pot Cap-1 Maneuver   | 233    | 162   | 640    | 130   | 164    | 525   | 1146   | - | - | 807   | - | - |
| Stage 1              | 606    | 586   | -      | 318   | 372    | -     | -      | - | - | -     | - | - |
| Stage 2              | 517    | 369   | -      | 601   | 586    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 208    | 154   | 640    | 122   | 156    | 481   | 1146   | - | - | 791   | - | - |
| Mov Cap-2 Maneuver   | 328    | 262   | -      | 229   | 265    | -     | -      | - | - | -     | - | - |
| Stage 1              | 593    | 581   | -      | 305   | 357    | -     | -      | - | - | -     | - | - |
| Stage 2              | 463    | 354   | -      | 583   | 581    | -     | -      | - | - | -     | - | - |

| Approach             | EB   |  | WB   |  | NB  |  | SB  |  |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 10.8 |  | 17.9 |  | 0.2 |  | 0.2 |  |
| HCM LOS              | B    |  | C    |  |     |  |     |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 1146  | -   | -   | 640        | 299   | 791   | -   |
| HCM Lane V/C Ratio    | 0.021 | -   | -   | 0.022      | 0.065 | 0.009 | -   |
| HCM Control Delay (s) | 8.2   | -   | -   | 10.8       | 17.9  | 9.6   | -   |
| HCM Lane LOS          | A     | -   | -   | B          | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1        | 0.2   | 0     | -   |

Timings

10: Evans Rd. & Ramona Exwy.

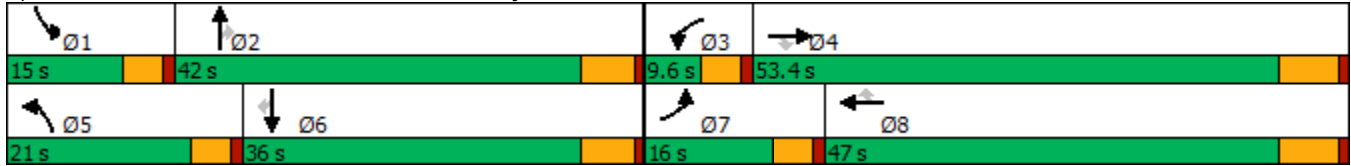
09/20/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |      |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 254   | 338   | 155   | 23   | 1030  | 325   | 397   | 550   | 25    | 205   | 370   | 371   |
| Future Volume (vph)  | 254   | 338   | 155   | 23   | 1030  | 325   | 397   | 550   | 25    | 205   | 370   | 371   |
| Turn Type            | Prot  | NA    | Perm  | Prot | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3    | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |       |       | 4     |      |       | 8     |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3    | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |      |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0  | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 33.5  | 33.5  | 9.6  | 36.5  | 36.5  | 9.6   | 38.8  | 38.8  | 9.6   | 34.8  | 34.8  |
| Total Split (s)      | 16.0  | 53.4  | 53.4  | 9.6  | 47.0  | 47.0  | 21.0  | 42.0  | 42.0  | 15.0  | 36.0  | 36.0  |
| Total Split (%)      | 13.3% | 44.5% | 44.5% | 8.0% | 39.2% | 39.2% | 17.5% | 35.0% | 35.0% | 12.5% | 30.0% | 30.0% |
| Yellow Time (s)      | 3.6   | 5.5   | 5.5   | 3.6  | 5.5   | 5.5   | 3.6   | 4.8   | 4.8   | 3.6   | 4.8   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0  | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.5  | -2.5  | -0.6 | -2.5  | -2.5  | -0.6  | -1.8  | -1.8  | -0.6  | -1.8  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None | None  | None  | None  | Min   | Min   | None  | Min   | Min   |

Intersection Summary


































Cycle Length: 120  
 Actuated Cycle Length: 108.9  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 10: Evans Rd. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
10: Evans Rd. & Ramona Exwy.

09/20/2018

|  |    |    |  |    |    |  |    |    |  |    |    |  |
|--|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |    |  |   |   |  |   |   |  |   |   |  |
| Traffic Volume (veh/h)   | 254   | 338   | 155   | 23  | 1030  | 325   | 397  | 550   | 25  | 205   | 370   | 371   |
| Future Volume (veh/h)  | 254   | 338   | 155   | 23  | 1030  | 325   | 397  | 550   | 25  | 205   | 370   | 371   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00   |   | 1.00  | 1.00  |   | 1.00  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |  | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870   | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 276   | 367   | 0   | 25  | 1120  | 353   | 432  | 598   | 27  | 223   | 402   | 403   |
| Peak Hour Factor   | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92   | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2  | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 346   | 2170  |   | 99  | 1256  | 560   | 494  | 1161  | 518   | 295   | 956   | 426   |
| Arrive On Green  | 0.10  | 0.42  | 0.00  | 0.03  | 0.35  | 0.35  | 0.14   | 0.33  | 0.33  | 0.09  | 0.27  | 0.27  |
| Sat Flow, veh/h  | 3456  | 5106  | 1585  | 3456  | 3554  | 1585  | 3456   | 3554  | 1585  | 3456  | 3554  | 1585  |
| Grp Volume(v), veh/h   | 276   | 367   | 0   | 25  | 1120  | 353   | 432  | 598   | 27  | 223   | 402   | 403   |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1702  | 1585  | 1728  | 1777  | 1585  | 1728   | 1777  | 1585  | 1728  | 1777  | 1585  |
| Q Serve(g_s), s  | 9.3   | 5.3   | 0.0   | 0.8   | 35.4  | 22.0  | 14.6   | 16.2  | 1.4   | 7.5   | 11.1  | 29.6  |
| Cycle Q Clear(g_c), s  | 9.3   | 5.3   | 0.0   | 0.8   | 35.4  | 22.0  | 14.6   | 16.2  | 1.4   | 7.5   | 11.1  | 29.6  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00   |   | 1.00  | 1.00  |   | 1.00  |
| Lane Grp Cap(c), veh/h   | 346   | 2170  |   | 99  | 1256  | 560   | 494  | 1161  | 518   | 295   | 956   | 426   |
| V/C Ratio(X)   | 0.80  | 0.17  |   | 0.25  | 0.89  | 0.63  | 0.87   | 0.52  | 0.05  | 0.76  | 0.42  | 0.95  |
| Avail Cap(c_a), veh/h  | 349   | 2170  |   | 163   | 1285  | 573   | 494  | 1161  | 518   | 320   | 956   | 426   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 0.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 52.4  | 21.2  | 0.0   | 56.5  | 36.3  | 32.0  | 49.9   | 32.4  | 27.4  | 53.2  | 35.8  | 42.6  |
| Incr Delay (d2), s/veh   | 11.3  | 0.0   | 0.0   | 0.5   | 8.1   | 2.1   | 15.4   | 0.4   | 0.0   | 7.9   | 0.3   | 30.0  |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 4.4   | 2.0   | 0.0   | 0.4   | 15.6  | 8.2   | 7.2  | 6.8   | 0.5   | 3.5   | 4.7   | 14.4  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |  |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 63.7  | 21.2  | 0.0   | 57.0  | 44.4  | 34.1  | 65.3   | 32.8  | 27.5  | 61.1  | 36.1  | 72.6  |
| LnGrp LOS  | E   | C   |   | E   | D   | C   | E  | C   | C   | E   | D   | E   |
| Approach Vol, veh/h  |   | 643   | A   |   | 1498  |   |  | 1057  |   |   | 1028  |   |
| Approach Delay, s/veh  |   | 39.4  |   |   | 42.2  |   |  | 46.0  |   |   | 55.9  |   |
| Approach LOS   |   | D   |   |   | D   |   |  | D   |   |   | E   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 14.1  | 42.9  | 7.4   | 54.5  | 21.0  | 36.0  | 15.9   | 46.1  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 6.5   | 4.6   | 5.8   | 4.6  | 6.5   |   |   |   |   |
| Max Green Setting (Gmax), s  | 10.4  | 36.2  | 5.0   | 46.9  | 16.4  | 30.2  | 11.4   | 40.5  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 9.5   | 18.2  | 2.8   | 7.3   | 16.6  | 31.6  | 11.3   | 37.4  |   |   |   |   |
| Green Ext Time (p_c), s  | 0.0   | 3.5   | 0.0   | 2.2   | 0.0   | 0.0   | 0.0  | 2.2   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |  |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 46.0  |   |   |   |  |   |   |   |   |   |
| HCM 6th LOS  |   |   | D   |   |   |   |  |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |  |   |   |   |   |   |
| Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay. |   |   |   |   |   |   |  |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

1: Perris Bl. & Krameria Av.

09/20/2018

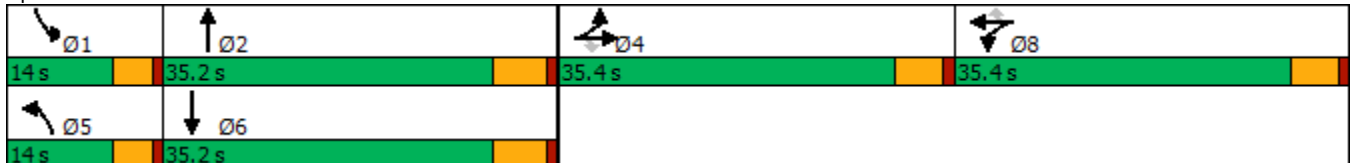


| Lane Group           | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↕↕↕   | ↔     | ↕↕↕   |
| Traffic Volume (vph) | 49    | 140   | 28    | 55    | 89    | 797   | 92    | 998   |
| Future Volume (vph)  | 49    | 140   | 28    | 55    | 89    | 797   | 92    | 998   |
| Turn Type            | NA    | Perm  | NA    | Perm  | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 4     |       | 8     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     |       | 4     |       | 8     |       |       |       |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 10.0  | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 35.4  | 35.4  | 35.4  | 35.4  | 9.6   | 32.8  | 9.6   | 26.8  |
| Total Split (s)      | 35.4  | 35.4  | 35.4  | 35.4  | 14.0  | 35.2  | 14.0  | 35.2  |
| Total Split (%)      | 29.5% | 29.5% | 29.5% | 29.5% | 11.7% | 29.3% | 11.7% | 29.3% |
| Yellow Time (s)      | 4.4   | 4.4   | 4.4   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -1.4  | -1.4  | -1.4  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 83.6  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Perris Bl. & Krameria Av.





HCM 6th Signalized Intersection Summary

1: Perris Bl. & Krameria Av.

09/20/2018

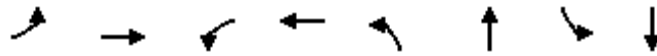
| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      | ↕    | ↗    |      | ↕    | ↗    | ↗    | ↕↕↕  |      | ↗    | ↕↕↕  |      |
| Traffic Volume (veh/h)       | 125  | 49   | 140  | 54   | 28   | 55   | 89   | 797  | 48   | 92   | 998  | 60   |
| Future Volume (veh/h)        | 125  | 49   | 140  | 54   | 28   | 55   | 89   | 797  | 48   | 92   | 998  | 60   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 0.99 | 1.00 |      | 1.00 | 1.00 |      | 0.99 | 1.00 |      | 0.97 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 137  | 54   | 73   | 59   | 31   | 27   | 98   | 876  | 37   | 101  | 1097 | 58   |
| Peak Hour Factor             | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 235  | 93   | 286  | 190  | 100  | 253  | 141  | 1691 | 71   | 145  | 1679 | 89   |
| Arrive On Green              | 0.18 | 0.18 | 0.18 | 0.16 | 0.16 | 0.16 | 0.08 | 0.34 | 0.31 | 0.08 | 0.34 | 0.31 |
| Sat Flow, veh/h              | 1295 | 510  | 1575 | 1187 | 624  | 1579 | 1781 | 5021 | 212  | 1781 | 4956 | 262  |
| Grp Volume(v), veh/h         | 191  | 0    | 73   | 90   | 0    | 27   | 98   | 593  | 320  | 101  | 753  | 402  |
| Grp Sat Flow(s),veh/h/ln     | 1806 | 0    | 1575 | 1811 | 0    | 1579 | 1781 | 1702 | 1829 | 1781 | 1702 | 1814 |
| Q Serve(g_s), s              | 6.4  | 0.0  | 2.6  | 2.9  | 0.0  | 1.0  | 3.6  | 9.3  | 9.4  | 3.7  | 12.5 | 12.6 |
| Cycle Q Clear(g_c), s        | 6.4  | 0.0  | 2.6  | 2.9  | 0.0  | 1.0  | 3.6  | 9.3  | 9.4  | 3.7  | 12.5 | 12.6 |
| Prop In Lane                 | 0.72 |      | 1.00 | 0.66 |      | 1.00 | 1.00 |      | 0.12 | 1.00 |      | 0.14 |
| Lane Grp Cap(c), veh/h       | 327  | 0    | 286  | 290  | 0    | 253  | 141  | 1146 | 616  | 145  | 1153 | 615  |
| V/C Ratio(X)                 | 0.58 | 0.00 | 0.26 | 0.31 | 0.00 | 0.11 | 0.69 | 0.52 | 0.52 | 0.70 | 0.65 | 0.65 |
| Avail Cap(c_a), veh/h        | 852  | 0    | 743  | 855  | 0    | 745  | 268  | 1596 | 857  | 268  | 1596 | 851  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 24.9 | 0.0  | 23.4 | 24.7 | 0.0  | 23.9 | 29.8 | 17.7 | 17.8 | 29.8 | 18.7 | 18.8 |
| Incr Delay (d2), s/veh       | 1.6  | 0.0  | 0.5  | 0.6  | 0.0  | 0.2  | 2.3  | 0.4  | 0.7  | 2.2  | 0.6  | 1.2  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 2.7  | 0.0  | 0.9  | 1.2  | 0.0  | 0.3  | 1.5  | 3.2  | 3.5  | 1.5  | 4.3  | 4.7  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 26.6 | 0.0  | 23.9 | 25.3 | 0.0  | 24.1 | 32.1 | 18.1 | 18.5 | 32.0 | 19.3 | 20.0 |
| LnGrp LOS                    | C    | A    | C    | C    | A    | C    | C    | B    | B    | C    | B    | B    |
| Approach Vol, veh/h          |      | 264  |      |      | 117  |      |      | 1011 |      |      | 1256 |      |
| Approach Delay, s/veh        |      | 25.8 |      |      | 25.0 |      |      | 19.6 |      |      | 20.5 |      |
| Approach LOS                 |      | C    |      |      | C    |      |      | B    |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2    |      | 4    | 5    | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 9.4  | 26.4 |      | 16.1 | 9.3  | 26.5 |      | 14.6 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.8  |      | 5.4  | 4.6  | 5.8  |      | 5.4  |      |      |      |      |
| Max Green Setting (Gmax), s  | 9.4  | 29.4 |      | 30.0 | 9.4  | 29.4 |      | 30.0 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 5.7  | 11.4 |      | 8.4  | 5.6  | 14.6 |      | 4.9  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 5.2  |      | 1.2  | 0.0  | 6.2  |      | 0.5  |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 20.9 |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

2: Kitching St. & Krameria Av.

09/20/2018

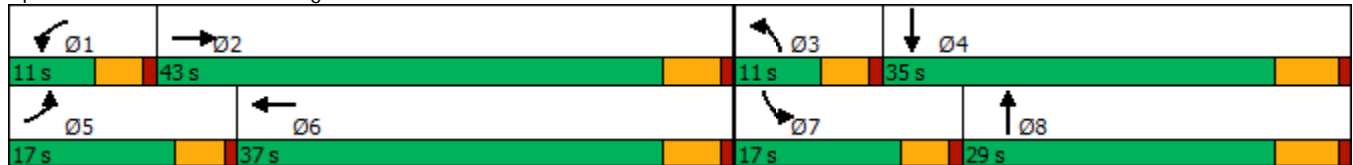


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 83    | 232   | 19    | 202   | 25    | 73    | 81    | 78    |
| Future Volume (vph)  | 83    | 232   | 19    | 202   | 25    | 73    | 81    | 78    |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 17.0  | 43.0  | 11.0  | 37.0  | 11.0  | 29.0  | 17.0  | 35.0  |
| Total Split (%)      | 17.0% | 43.0% | 11.0% | 37.0% | 11.0% | 29.0% | 17.0% | 35.0% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary






















Cycle Length: 100  
 Actuated Cycle Length: 58  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Kitching St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
 2: Kitching St. & Krameria Av.

09/20/2018

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |   |  |  |   |  |  |   |  |  |  |
| Traffic Volume (veh/h)       | 83  | 232   | 32  | 19  | 202   | 81  | 25  | 73  | 17  | 81  | 78  | 84  |
| Future Volume (veh/h)        | 83  | 232   | 32  | 19  | 202   | 81  | 25  | 73  | 17  | 81  | 78  | 84  |
| Initial Q (Qb), veh          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)          | 1.00  |   | 0.98  | 1.00  |   | 0.98  | 1.00  |   | 1.00  | 1.00  |   | 0.98  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach        |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 86  | 239   | 27  | 20  | 208   | 66  | 26  | 75  | 12  | 84  | 80  | 51  |
| Peak Hour Factor             | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 149   | 940   | 105   | 66  | 654   | 201   | 77  | 788   | 123   | 147   | 633   | 370   |
| Arrive On Green              | 0.08  | 0.29  | 0.26  | 0.04  | 0.25  | 0.22  | 0.04  | 0.26  | 0.22  | 0.08  | 0.30  | 0.26  |
| Sat Flow, veh/h              | 1781  | 3217  | 359   | 1781  | 2664  | 820   | 1781  | 3078  | 481   | 1781  | 2143  | 1251  |
| Grp Volume(v), veh/h         | 86  | 131   | 135   | 20  | 137   | 137   | 26  | 43  | 44  | 84  | 65  | 66  |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1777  | 1799  | 1781  | 1777  | 1707  | 1781  | 1777  | 1783  | 1781  | 1777  | 1617  |
| Q Serve(g_s), s              | 2.2   | 2.7   | 2.8   | 0.5   | 3.0   | 3.2   | 0.7   | 0.9   | 0.9   | 2.2   | 1.3   | 1.5   |
| Cycle Q Clear(g_c), s        | 2.2   | 2.7   | 2.8   | 0.5   | 3.0   | 3.2   | 0.7   | 0.9   | 0.9   | 2.2   | 1.3   | 1.5   |
| Prop In Lane                 | 1.00  |   | 0.20  | 1.00  |   | 0.48  | 1.00  |   | 0.27  | 1.00  |   | 0.77  |
| Lane Grp Cap(c), veh/h       | 149   | 519   | 526   | 66  | 436   | 419   | 77  | 455   | 456   | 147   | 525   | 478   |
| V/C Ratio(X)                 | 0.58  | 0.25  | 0.26  | 0.30  | 0.31  | 0.33  | 0.34  | 0.09  | 0.10  | 0.57  | 0.12  | 0.14  |
| Avail Cap(c_a), veh/h        | 481   | 1440  | 1458  | 259   | 1218  | 1170  | 259   | 923   | 926   | 481   | 1144  | 1041  |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 21.2  | 13.0  | 13.1  | 22.6  | 14.8  | 15.2  | 22.4  | 13.7  | 13.9  | 21.3  | 12.4  | 13.0  |
| Incr Delay (d2), s/veh       | 1.3   | 0.3   | 0.3   | 1.0   | 0.4   | 0.5   | 1.0   | 0.1   | 0.1   | 1.3   | 0.1   | 0.1   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 0.9   | 0.9   | 0.9   | 0.2   | 1.0   | 1.1   | 0.3   | 0.3   | 0.3   | 0.8   | 0.4   | 0.4   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 22.6  | 13.3  | 13.4  | 23.5  | 15.2  | 15.6  | 23.3  | 13.7  | 13.9  | 22.6  | 12.5  | 13.1  |
| LnGrp LOS                    | C   | B   | B   | C   | B   | B   | C   | B   | B   | C   | B   | B   |
| Approach Vol, veh/h          |   | 352   |   |   | 294   |   |   | 113   |   |   | 215   |   |
| Approach Delay, s/veh        |   | 15.6  |   |   | 16.0  |   |   | 16.0  |   |   | 16.6  |   |
| Approach LOS                 |   | B   |   |   | B   |   |   | B   |   |   | B   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 5.8   | 18.1  | 6.1   | 18.2  | 8.0   | 15.8  | 8.0   | 16.3  |   |   |   |   |
| Change Period (Y+Rc), s      | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   |   |   |   |   |
| Max Green Setting (Gmax), s  | 6.4   | 37.6  | 6.4   | 29.2  | 12.4  | 31.6  | 12.4  | 23.2  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 2.5   | 4.8   | 2.7   | 3.5   | 4.2   | 5.2   | 4.2   | 2.9   |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 1.5   | 0.0   | 0.6   | 0.0   | 1.5   | 0.0   | 0.3   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay           |   |   | 16.0  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS                  |   |   | B   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

3: Lasselle St. & Iris Av.

09/20/2018

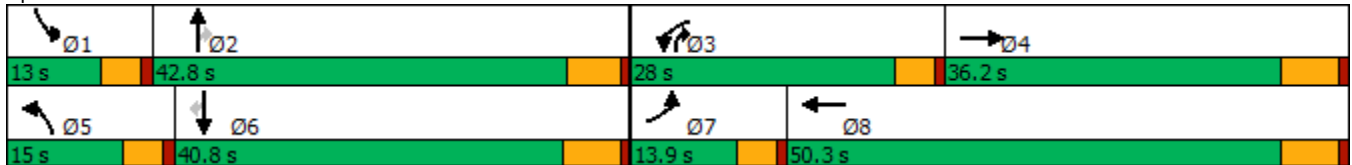


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕↗    | ↖↗    | ↕↗    | ↖↗    | ↕↕    | ↖     | ↖↗    | ↕↕    | ↖     |
| Traffic Volume (vph) | 142   | 396   | 587   | 554   | 248   | 538   | 402   | 192   | 666   | 96    |
| Future Volume (vph)  | 142   | 396   | 587   | 554   | 248   | 538   | 402   | 192   | 666   | 96    |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 13.9  | 36.2  | 28.0  | 50.3  | 15.0  | 42.8  | 28.0  | 13.0  | 40.8  | 40.8  |
| Total Split (%)      | 11.6% | 30.2% | 23.3% | 41.9% | 12.5% | 35.7% | 23.3% | 10.8% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 99.7  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Lasselle St. & Iris Av.





HCM 6th Signalized Intersection Summary  
 3: Lasselle St. & Iris Av.

09/20/2018

| Movement   | EBL  | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--|------|-------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations  |      |       |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)   | 142  | 396   | 316  | 587  | 554  | 91   | 248  | 538  | 402  | 192  | 666  | 96   |
| Future Volume (veh/h)  | 142  | 396   | 316  | 587  | 554  | 91   | 248  | 538  | 402  | 192  | 666  | 96   |
| Initial Q (Qb), veh  | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 0.98 | 1.00 |      | 0.95 | 1.00 |      | 0.96 | 1.00 |      | 0.96 |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  |      | No    |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 149  | 417   | 246  | 618  | 583  | 68   | 261  | 566  | 220  | 202  | 701  | 49   |
| Peak Hour Factor   | 0.95 | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 229  | 875   | 400  | 699  | 1814 | 208  | 340  | 1086 | 770  | 281  | 1039 | 447  |
| Arrive On Green  | 0.07 | 0.26  | 0.24 | 0.20 | 0.39 | 0.37 | 0.10 | 0.31 | 0.29 | 0.08 | 0.29 | 0.29 |
| Sat Flow, veh/h  | 3456 | 3404  | 1556 | 3456 | 4617 | 530  | 3456 | 3554 | 1526 | 3456 | 3554 | 1530 |
| Grp Volume(v), veh/h   | 149  | 417   | 246  | 618  | 427  | 224  | 261  | 566  | 220  | 202  | 701  | 49   |
| Grp Sat Flow(s),veh/h/ln   | 1728 | 1702  | 1556 | 1728 | 1702 | 1743 | 1728 | 1777 | 1526 | 1728 | 1777 | 1530 |
| Q Serve(g_s), s  | 4.5  | 11.1  | 15.1 | 18.5 | 9.3  | 9.6  | 7.9  | 14.0 | 9.0  | 6.1  | 18.5 | 2.5  |
| Cycle Q Clear(g_c), s  | 4.5  | 11.1  | 15.1 | 18.5 | 9.3  | 9.6  | 7.9  | 14.0 | 9.0  | 6.1  | 18.5 | 2.5  |
| Prop In Lane   | 1.00 |       | 1.00 | 1.00 |      | 0.30 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h   | 229  | 875   | 400  | 699  | 1338 | 685  | 340  | 1086 | 770  | 281  | 1039 | 447  |
| V/C Ratio(X)   | 0.65 | 0.48  | 0.62 | 0.88 | 0.32 | 0.33 | 0.77 | 0.52 | 0.29 | 0.72 | 0.67 | 0.11 |
| Avail Cap(c_a), veh/h  | 321  | 1028  | 470  | 777  | 1477 | 756  | 356  | 1293 | 858  | 292  | 1226 | 528  |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 48.6 | 33.6  | 36.0 | 41.3 | 22.5 | 22.8 | 46.9 | 30.6 | 15.8 | 47.8 | 33.3 | 27.6 |
| Incr Delay (d2), s/veh   | 1.2  | 0.4   | 1.8  | 10.2 | 0.1  | 0.3  | 8.3  | 0.4  | 0.2  | 6.8  | 1.2  | 0.1  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 1.9  | 4.4   | 5.7  | 8.5  | 3.5  | 3.7  | 3.7  | 5.8  | 2.9  | 2.8  | 7.7  | 0.9  |
| Unsig. Movement Delay, s/veh   |      |       |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh   | 49.8 | 34.0  | 37.8 | 51.6 | 22.6 | 23.1 | 55.2 | 31.0 | 16.0 | 54.6 | 34.4 | 27.7 |
| LnGrp LOS  | D    | C     | D    | D    | C    | C    | E    | C    | B    | D    | C    | C    |
| Approach Vol, veh/h  |      | 812   |      |      | 1269 |      |      | 1047 |      |      | 952  |      |
| Approach Delay, s/veh  |      | 38.0  |      |      | 36.8 |      |      | 33.9 |      |      | 38.4 |      |
| Approach LOS   |      | D     |      |      | D    |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 12.7 | 37.0  | 25.6 | 31.4 | 14.5 | 35.2 | 11.1 | 45.9 |      |      |      |      |
| Change Period (Y+Rc), s  | 4.6  | * 6.2 | 4.6  | 6.2  | 4.6  | 6.2  | 4.6  | 6.2  |      |      |      |      |
| Max Green Setting (Gmax), s  | 8.4  | * 37  | 23.4 | 30.0 | 10.4 | 34.6 | 9.3  | 44.1 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 8.1  | 16.0  | 20.5 | 17.1 | 9.9  | 20.5 | 6.5  | 11.6 |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0  | 4.2   | 0.4  | 3.2  | 0.0  | 3.7  | 0.1  | 4.0  |      |      |      |      |
| <b>Intersection Summary</b>  |      |       |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay   |      |       |      | 36.7 |      |      |      |      |      |      |      |      |
| HCM 6th LOS  |      |       |      | D    |      |      |      |      |      |      |      |      |
| <b>Notes</b>   |      |       |      |      |      |      |      |      |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |      |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
4: Lasselie St. & Cahuillia Dr.

09/20/2018

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      | ↗    | ↕    | ↗    |      | ↕    |
| Traffic Vol, veh/h       | 0    | 103  | 832  | 75   | 0    | 1173 |
| Future Vol, veh/h        | 0    | 103  | 832  | 75   | 0    | 1173 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 2    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 106  | 858  | 77   | 0    | 1209 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 431    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 573    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | -      | 572    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 12.7 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 572   |
| HCM Lane V/C Ratio    | -   | -        | 0.186 |
| HCM Control Delay (s) | -   | -        | 12.7  |
| HCM Lane LOS          | -   | -        | B     |
| HCM 95th %tile Q(veh) | -   | -        | 0.7   |

Timings

6: Lasselle St. & Krameria Av.

09/20/2018



| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕     | ↗     | ↖     | ↕     |
| Traffic Volume (vph) | 118   | 59    | 82    | 39    | 84    | 741   | 69    | 94    | 1019  |
| Future Volume (vph)  | 118   | 59    | 82    | 39    | 84    | 741   | 69    | 94    | 1019  |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 12.4  | 34.4  | 14.0  | 36.0  | 14.0  | 44.8  | 14.0  | 16.8  | 47.6  |
| Total Split (%)      | 11.3% | 31.3% | 12.7% | 32.7% | 12.7% | 40.7% | 12.7% | 15.3% | 43.3% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

































Cycle Length: 110  
 Actuated Cycle Length: 78.6  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselle St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

09/20/2018

|  |    |    |  |    |    |  |   |    |    |    |    |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |   |   |   |   |   |   |   |   |   |   |   |
| Traffic Volume (veh/h)   | 118   | 59  | 149   | 82  | 39  | 48  | 84  | 741   | 69  | 94  | 1019  | 57  |
| Future Volume (veh/h)  | 118   | 59  | 149   | 82  | 39  | 48  | 84  | 741   | 69  | 94  | 1019  | 57  |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00  |   | 1.00  | 1.00  |   | 1.00  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 124   | 62  | 62  | 86  | 41  | 18  | 88  | 780   | 53  | 99  | 1073  | 48  |
| Peak Hour Factor   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 269   | 330   | 292   | 126   | 425   | 174   | 129   | 1486  | 745   | 143   | 1477  | 66  |
| Arrive On Green  | 0.08  | 0.18  | 0.16  | 0.07  | 0.17  | 0.16  | 0.07  | 0.42  | 0.40  | 0.08  | 0.43  | 0.40  |
| Sat Flow, veh/h  | 3456  | 1784  | 1579  | 1781  | 2446  | 1000  | 1781  | 3554  | 1581  | 1781  | 3464  | 155   |
| Grp Volume(v), veh/h   | 124   | 62  | 62  | 86  | 29  | 30  | 88  | 780   | 53  | 99  | 550   | 571   |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1777  | 1586  | 1781  | 1777  | 1670  | 1781  | 1777  | 1581  | 1781  | 1777  | 1842  |
| Q Serve(g_s), s  | 2.2   | 1.9   | 2.2   | 3.1   | 0.9   | 1.0   | 3.1   | 10.7  | 1.2   | 3.5   | 16.8  | 16.8  |
| Cycle Q Clear(g_c), s  | 2.2   | 1.9   | 2.2   | 3.1   | 0.9   | 1.0   | 3.1   | 10.7  | 1.2   | 3.5   | 16.8  | 16.8  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 0.60  | 1.00  |   | 1.00  | 1.00  |   | 0.08  |
| Lane Grp Cap(c), veh/h   | 269   | 329   | 293   | 126   | 308   | 290   | 129   | 1486  | 745   | 143   | 758   | 786   |
| V/C Ratio(X)   | 0.46  | 0.19  | 0.21  | 0.68  | 0.09  | 0.10  | 0.68  | 0.52  | 0.07  | 0.69  | 0.73  | 0.73  |
| Avail Cap(c_a), veh/h  | 445   | 828   | 739   | 273   | 872   | 819   | 273   | 2223  | 1073  | 350   | 1188  | 1232  |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 28.8  | 22.4  | 23.2  | 29.6  | 22.6  | 23.0  | 29.5  | 14.1  | 9.4   | 29.2  | 15.5  | 15.6  |
| Incr Delay (d2), s/veh   | 0.5   | 0.3   | 0.4   | 2.4   | 0.1   | 0.2   | 2.4   | 0.3   | 0.0   | 2.2   | 1.3   | 1.3   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 0.9   | 0.8   | 0.8   | 1.3   | 0.4   | 0.4   | 1.3   | 3.5   | 0.4   | 1.5   | 5.7   | 6.0   |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 29.2  | 22.7  | 23.5  | 32.0  | 22.8  | 23.1  | 31.9  | 14.4  | 9.5   | 31.4  | 16.9  | 16.9  |
| LnGrp LOS  | C   | C   | C   | C   | C   | C   | C   | B   | A   | C   | B   | B   |
| Approach Vol, veh/h  |   | 248   |   |   | 145   |   |   | 921   |   |   | 1220  |   |
| Approach Delay, s/veh  |   | 26.2  |   |   | 28.3  |   |   | 15.8  |   |   | 18.1  |   |
| Approach LOS   |   | C   |   |   | C   |   |   | B   |   |   | B   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 9.3   | 31.3  | 8.6   | 16.1  | 8.7   | 31.8  | 9.1   | 15.6  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 12.2  | 39.0  | 9.4   | 29.0  | 9.4   | 41.8  | 7.8   | * 31  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 5.5   | 12.7  | 5.1   | 4.2   | 5.1   | 18.8  | 4.2   | 3.0   |   |   |   |   |
| Green Ext Time (p_c), s  | 0.1   | 5.4   | 0.0   | 0.6   | 0.0   | 7.2   | 0.1   | 0.2   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 18.6  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | B   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Timings

6: Lasselie St. & Krameria Av.

10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 118   | 59    | 149   | 82    | 39    | 48    | 84    | 741   | 69    | 94    | 1019  |
| Future Volume (vph)  | 118   | 59    | 149   | 82    | 39    | 48    | 84    | 741   | 69    | 94    | 1019  |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 12.4  | 34.4  | 34.4  | 14.0  | 36.0  | 36.0  | 14.0  | 44.8  | 14.0  | 16.8  | 47.6  |
| Total Split (%)      | 11.3% | 31.3% | 31.3% | 12.7% | 32.7% | 32.7% | 12.7% | 40.7% | 12.7% | 15.3% | 43.3% |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

























Cycle Length: 110  
 Actuated Cycle Length: 78.7  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

10/25/2018

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)       | 118   | 59  | 149   | 82  | 39  | 48  | 84  | 741   | 69  | 94  | 1019  | 57  |
| Future Volume (veh/h)        | 118   | 59  | 149   | 82  | 39  | 48  | 84  | 741   | 69  | 94  | 1019  | 57  |
| Initial Q (Qb), veh          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)          | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00  |   | 1.00  | 1.00  |   | 1.00  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach        |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 124   | 62  | 62  | 86  | 41  | 18  | 88  | 780   | 53  | 99  | 1073  | 48  |
| Peak Hour Factor             | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 172   | 371   | 282   | 126   | 314   | 236   | 128   | 1469  | 737   | 143   | 1460  | 65  |
| Arrive On Green              | 0.10  | 0.20  | 0.18  | 0.07  | 0.17  | 0.15  | 0.07  | 0.41  | 0.40  | 0.08  | 0.42  | 0.39  |
| Sat Flow, veh/h              | 1781  | 1870  | 1585  | 1781  | 1870  | 1558  | 1781  | 3554  | 1579  | 1781  | 3464  | 155   |
| Grp Volume(v), veh/h         | 124   | 62  | 62  | 86  | 41  | 18  | 88  | 780   | 53  | 99  | 550   | 571   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1870  | 1585  | 1781  | 1870  | 1558  | 1781  | 1777  | 1579  | 1781  | 1777  | 1842  |
| Q Serve(g_s), s              | 4.6   | 1.9   | 2.3   | 3.2   | 1.3   | 0.7   | 3.3   | 11.1  | 1.3   | 3.7   | 17.5  | 17.5  |
| Cycle Q Clear(g_c), s        | 4.6   | 1.9   | 2.3   | 3.2   | 1.3   | 0.7   | 3.3   | 11.1  | 1.3   | 3.7   | 17.5  | 17.5  |
| Prop In Lane                 | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 0.08  |
| Lane Grp Cap(c), veh/h       | 172   | 371   | 282   | 126   | 314   | 236   | 128   | 1469  | 737   | 143   | 749   | 776   |
| V/C Ratio(X)                 | 0.72  | 0.17  | 0.22  | 0.68  | 0.13  | 0.08  | 0.68  | 0.53  | 0.07  | 0.69  | 0.73  | 0.74  |
| Avail Cap(c_a), veh/h        | 222   | 843   | 681   | 264   | 887   | 713   | 264   | 2149  | 1039  | 338   | 1148  | 1190  |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 29.6  | 22.4  | 23.7  | 30.6  | 23.9  | 24.6  | 30.6  | 14.9  | 9.9   | 30.2  | 16.4  | 16.4  |
| Incr Delay (d2), s/veh       | 4.9   | 0.2   | 0.4   | 2.4   | 0.2   | 0.1   | 2.4   | 0.3   | 0.0   | 2.2   | 1.4   | 1.4   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 2.0   | 0.8   | 0.8   | 1.4   | 0.5   | 0.2   | 1.4   | 3.8   | 0.4   | 1.5   | 6.1   | 6.4   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 34.4  | 22.6  | 24.1  | 33.0  | 24.1  | 24.7  | 33.0  | 15.2  | 10.0  | 32.5  | 17.8  | 17.8  |
| LnGrp LOS                    | C   | C   | C   | C   | C   | C   | C   | B   | A   | C   | B   | B   |
| Approach Vol, veh/h          |   | 248   |   |   | 145   |   |   | 921   |   |   | 1220  |   |
| Approach Delay, s/veh        |   | 28.9  |   |   | 29.5  |   |   | 16.6  |   |   | 19.0  |   |
| Approach LOS                 |   | C   |   |   | C   |   |   | B   |   |   | B   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 9.4   | 31.9  | 8.8   | 17.4  | 8.9   | 32.4  | 10.5  | 15.6  |   |   |   |   |
| Change Period (Y+Rc), s      | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 12.2  | 39.0  | 9.4   | 29.0  | 9.4   | 41.8  | 7.8   | * 31  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 5.7   | 13.1  | 5.2   | 4.3   | 5.3   | 19.5  | 6.6   | 3.3   |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 5.4   | 0.0   | 0.4   | 0.0   | 7.1   | 0.0   | 0.2   |   |   |   |   |

| Intersection Summary |  |  |  |  |  |  |  |  |  |  |      |  |
|----------------------|--|--|--|--|--|--|--|--|--|--|------|--|
| HCM 6th Ctrl Delay   |  |  |  |  |  |  |  |  |  |  | 19.7 |  |
| HCM 6th LOS          |  |  |  |  |  |  |  |  |  |  | B    |  |

Notes  
User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

09/20/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |       |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|-------|------|
| Int Delay, s/veh         | 2.9  |      |      |      |      |      |      |      |      |      |       |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
| Lane Configurations      |      | ↑↑   |      | ↑    | ↑↑   |      |      | ↑↑   |      |      |       |      |
| Traffic Vol, veh/h       | 0    | 146  | 76   | 5    | 125  | 0    | 44   | 10   | 79   | 0    | 0     | 0    |
| Future Vol, veh/h        | 0    | 146  | 76   | 5    | 125  | 0    | 44   | 10   | 79   | 0    | 0     | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop  | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -     | None |
| Storage Length           | -    | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -     | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 16965 | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0     | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87    | 87   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    |
| Mvmt Flow                | 0    | 168  | 87   | 6    | 144  | 0    | 51   | 11   | 91   | 0    | 0     | 0    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|------|
| Conflicting Flow All | -      | 0 | 0 | 258    | 0 | 0 | 299    | 371  | 131  |
| Stage 1              | -      | - | - | -      | - | - | 215    | 215  | -    |
| Stage 2              | -      | - | - | -      | - | - | 84     | 156  | -    |
| Critical Hdwy        | -      | - | - | 4.14   | - | - | 6.84   | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 5.84   | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 5.84   | 5.54 | -    |
| Follow-up Hdwy       | -      | - | - | 2.22   | - | - | 3.52   | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 0      | - | - | 1304   | - | 0 | 668    | 557  | 894  |
| Stage 1              | 0      | - | - | -      | - | 0 | 800    | 724  | -    |
| Stage 2              | 0      | - | - | -      | - | 0 | 930    | 768  | -    |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -    | -    |
| Mov Cap-1 Maneuver   | -      | - | - | 1300   | - | - | 663    | 0    | 891  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 736    | 0    | -    |
| Stage 1              | -      | - | - | -      | - | - | 794    | 0    | -    |
| Stage 2              | -      | - | - | -      | - | - | 930    | 0    | -    |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 0.3 | 10.3 |
| HCM LOS              |    |     | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 829   | -   | -   | 1300  | -   |
| HCM Lane V/C Ratio    | 0.184 | -   | -   | 0.004 | -   |
| HCM Control Delay (s) | 10.3  | -   | -   | 7.8   | -   |
| HCM Lane LOS          | B     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.7   | -   | -   | 0     | -   |

HCM 6th AWSC  
8: Krameria Av./Driveway & Cahuillia Dr.

09/20/2018

| Intersection              |     |
|---------------------------|-----|
| Intersection Delay, s/veh | 8.4 |
| Intersection LOS          | A   |

| Movement            | EBL  | EBR  | NBL  | NBT  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|
| Lane Configurations | W    |      |      | ↑↑   | ↑↑   | ↑    |
| Traffic Vol, veh/h  | 22   | 49   | 58   | 97   | 69   | 25   |
| Future Vol, veh/h   | 22   | 49   | 58   | 97   | 69   | 25   |
| Peak Hour Factor    | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 31   | 69   | 82   | 137  | 97   | 35   |
| Number of Lanes     | 1    | 0    | 0    | 2    | 2    | 1    |

| Approach                   | EB  | NB | SB  |
|----------------------------|-----|----|-----|
| Opposing Approach          |     | SB | NB  |
| Opposing Lanes             | 0   | 3  | 2   |
| Conflicting Approach Left  | SB  | EB |     |
| Conflicting Lanes Left     | 3   | 1  | 0   |
| Conflicting Approach Right | NB  |    | EB  |
| Conflicting Lanes Right    | 2   | 0  | 1   |
| HCM Control Delay          | 8.5 | 9  | 7.4 |
| HCM LOS                    | A   | A  | A   |

| Lane                   | NBLn1 | NBLn2 | EBLn1 | SBLn1 | SBLn2 | SBLn3 |
|------------------------|-------|-------|-------|-------|-------|-------|
| Vol Left, %            | 64%   | 0%    | 31%   | 0%    | 0%    | 0%    |
| Vol Thru, %            | 36%   | 100%  | 0%    | 100%  | 100%  | 0%    |
| Vol Right, %           | 0%    | 0%    | 69%   | 0%    | 0%    | 100%  |
| Sign Control           | Stop  | Stop  | Stop  | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 90    | 65    | 71    | 35    | 35    | 25    |
| LT Vol                 | 58    | 0     | 22    | 0     | 0     | 0     |
| Through Vol            | 32    | 65    | 0     | 35    | 35    | 0     |
| RT Vol                 | 0     | 0     | 49    | 0     | 0     | 25    |
| Lane Flow Rate         | 127   | 91    | 100   | 49    | 49    | 35    |
| Geometry Grp           | 8     | 8     | 7     | 7     | 7     | 7     |
| Degree of Util (X)     | 0.19  | 0.128 | 0.139 | 0.067 | 0.067 | 0.025 |
| Departure Headway (Hd) | 5.376 | 5.054 | 5.003 | 5     | 5     | 2.554 |
| Convergence, Y/N       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Cap                    | 668   | 710   | 718   | 718   | 718   | 1399  |
| Service Time           | 3.101 | 2.778 | 2.727 | 2.722 | 2.722 | 0.275 |
| HCM Lane V/C Ratio     | 0.19  | 0.128 | 0.139 | 0.068 | 0.068 | 0.025 |
| HCM Control Delay      | 9.4   | 8.5   | 8.5   | 8.1   | 8.1   | 5.3   |
| HCM Lane LOS           | A     | A     | A     | A     | A     | A     |
| HCM 95th-tile Q        | 0.7   | 0.4   | 0.5   | 0.2   | 0.2   | 0.1   |



HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

09/20/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    | ↕    |
| Traffic Vol, veh/h       | 6    | 0    | 7    | 0    | 0    | 0    | 2    | 109  | 0    | 1    | 122  | 12   |
| Future Vol, veh/h        | 6    | 0    | 7    | 0    | 0    | 0    | 2    | 109  | 0    | 1    | 122  | 12   |
| Conflicting Peds, #/hr   | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 6    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | 0    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 7    | 0    | 9    | 0    | 0    | 0    | 2    | 135  | 0    | 1    | 151  | 15   |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 231    | 300   | 158    | 307   | 315    | 70    | 172    | 0 | 0 | 137   | 0 | 0 |
| Stage 1              | 159    | 159   | -      | 141   | 141    | -     | -      | - | - | -     | - | - |
| Stage 2              | 72     | 141   | -      | 166   | 174    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.33   | 6.53  | 6.23   | 7.33  | 6.53   | 6.93  | 4.13   | - | - | 4.13  | - | - |
| Critical Hdwy Stg 1  | 6.13   | 5.53  | -      | 6.53  | 5.53   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.53   | 5.53  | -      | 6.13  | 5.53   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.519  | 4.019 | 3.319  | 3.519 | 4.019  | 3.319 | 2.219  | - | - | 2.219 | - | - |
| Pot Cap-1 Maneuver   | 714    | 612   | 887    | 634   | 600    | 979   | 1404   | - | - | 1446  | - | - |
| Stage 1              | 843    | 766   | -      | 848   | 780    | -     | -      | - | - | -     | - | - |
| Stage 2              | 930    | 780   | -      | 835   | 754    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 709    | 606   | 881    | 625   | 594    | 977   | 1396   | - | - | 1443  | - | - |
| Mov Cap-2 Maneuver   | 721    | 627   | -      | 666   | 619    | -     | -      | - | - | -     | - | - |
| Stage 1              | 837    | 761   | -      | 845   | 778    | -     | -      | - | - | -     | - | - |
| Stage 2              | 929    | 778   | -      | 825   | 749    | -     | -      | - | - | -     | - | - |

| Approach             | EB  | WB | NB  | SB  |
|----------------------|-----|----|-----|-----|
| HCM Control Delay, s | 9.6 | 0  | 0.1 | 0.1 |
| HCM LOS              | A   | A  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-----|-----|
| Capacity (veh/h)      | 1396  | -   | -   | 799        | 1443  | -   | -   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | 0.02       | 0.001 | -   | -   |
| HCM Control Delay (s) | 7.6   | -   | -   | 9.6        | 0     | 7.5 | -   |
| HCM Lane LOS          | A     | -   | -   | A          | A     | -   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.1        | 0     | -   | -   |

Timings

10: Evans Rd. & Ramona Exwy.

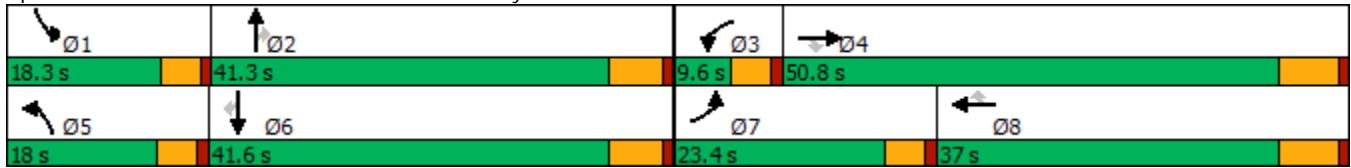
09/20/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |      |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 331   | 888   | 339   | 18   | 536   | 179   | 217   | 335   | 17    | 229   | 432   | 269   |
| Future Volume (vph)  | 331   | 888   | 339   | 18   | 536   | 179   | 217   | 335   | 17    | 229   | 432   | 269   |
| Turn Type            | Prot  | NA    | Perm  | Prot | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3    | 8     |       | 5     | 2     |       | 1     | 6     |       |
| Permitted Phases     |       |       | 4     |      |       | 8     |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3    | 8     | 8     | 5     | 2     | 2     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |      |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0  | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 33.5  | 33.5  | 9.6  | 36.5  | 36.5  | 9.6   | 38.8  | 38.8  | 9.6   | 34.8  | 34.8  |
| Total Split (s)      | 23.4  | 50.8  | 50.8  | 9.6  | 37.0  | 37.0  | 18.0  | 41.3  | 41.3  | 18.3  | 41.6  | 41.6  |
| Total Split (%)      | 19.5% | 42.3% | 42.3% | 8.0% | 30.8% | 30.8% | 15.0% | 34.4% | 34.4% | 15.3% | 34.7% | 34.7% |
| Yellow Time (s)      | 3.6   | 5.5   | 5.5   | 3.6  | 5.5   | 5.5   | 3.6   | 4.8   | 4.8   | 3.6   | 4.8   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0  | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.5  | -2.5  | -0.6 | -2.5  | -2.5  | -0.6  | -1.8  | -1.8  | -0.6  | -1.8  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None | None  | None  | None  | Min   | Min   | None  | Min   | Min   |

Intersection Summary


































Cycle Length: 120  
 Actuated Cycle Length: 87.6  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 10: Evans Rd. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 10: Evans Rd. & Ramona Exwy.

09/20/2018

|                              |    |    |  |    |    |   |   |    |  |    |    |  |
|------------------------------|---|---|---|---|---|--|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |   |    |  |   |   |  |   |   |  |   |   |  |
| Traffic Volume (veh/h)       | 331   | 888   | 339   | 18  | 536   | 179  | 217   | 335   | 17  | 229   | 432   | 269   |
| Future Volume (veh/h)        | 331   | 888   | 339   | 18  | 536   | 179  | 217   | 335   | 17  | 229   | 432   | 269   |
| Initial Q (Qb), veh          | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)          | 1.00  |   | 1.00  | 1.00  |   | 1.00   | 1.00  |   | 1.00  | 1.00  |   | 1.00  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach        |   | No  |   |   | No  |  |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870  | 1870  | 1870  | 1870  | 1870   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 356   | 955   | 0   | 19  | 576   | 192  | 233   | 360   | 18  | 246   | 465   | 289   |
| Peak Hour Factor             | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93   | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  | 0.93  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2  | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 490   | 1891  |   | 105   | 921   | 411  | 358   | 944   | 421   | 372   | 959   | 428   |
| Arrive On Green              | 0.14  | 0.37  | 0.00  | 0.03  | 0.26  | 0.26   | 0.10  | 0.27  | 0.27  | 0.11  | 0.27  | 0.27  |
| Sat Flow, veh/h              | 3456  | 5106  | 1585  | 3456  | 3554  | 1585   | 3456  | 3554  | 1585  | 3456  | 3554  | 1585  |
| Grp Volume(v), veh/h         | 356   | 955   | 0   | 19  | 576   | 192  | 233   | 360   | 18  | 246   | 465   | 289   |
| Grp Sat Flow(s),veh/h/ln     | 1728  | 1702  | 1585  | 1728  | 1777  | 1585   | 1728  | 1777  | 1585  | 1728  | 1777  | 1585  |
| Q Serve(g_s), s              | 7.0   | 10.3  | 0.0   | 0.4   | 10.2  | 7.2  | 4.6   | 5.9   | 0.6   | 4.8   | 7.8   | 11.5  |
| Cycle Q Clear(g_c), s        | 7.0   | 10.3  | 0.0   | 0.4   | 10.2  | 7.2  | 4.6   | 5.9   | 0.6   | 4.8   | 7.8   | 11.5  |
| Prop In Lane                 | 1.00  |   | 1.00  | 1.00  |   | 1.00   | 1.00  |   | 1.00  | 1.00  |   | 1.00  |
| Lane Grp Cap(c), veh/h       | 490   | 1891  |   | 105   | 921   | 411  | 358   | 944   | 421   | 372   | 959   | 428   |
| V/C Ratio(X)                 | 0.73  | 0.50  |   | 0.18  | 0.63  | 0.47   | 0.65  | 0.38  | 0.04  | 0.66  | 0.49  | 0.68  |
| Avail Cap(c_a), veh/h        | 946   | 3370  |   | 273   | 1654  | 738  | 682   | 1869  | 834   | 697   | 1885  | 841   |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 0.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 29.1  | 17.3  | 0.0   | 33.5  | 23.2  | 22.1   | 30.5  | 21.3  | 19.3  | 30.4  | 21.8  | 23.1  |
| Incr Delay (d2), s/veh       | 0.8   | 0.2   | 0.0   | 0.3   | 0.7   | 0.8  | 0.7   | 0.3   | 0.0   | 0.8   | 0.4   | 1.9   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 2.6   | 3.3   | 0.0   | 0.1   | 3.7   | 2.4  | 1.8   | 2.2   | 0.2   | 1.9   | 2.9   | 3.9   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |  |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 29.9  | 17.5  | 0.0   | 33.8  | 23.9  | 23.0   | 31.3  | 21.5  | 19.4  | 31.1  | 22.1  | 25.0  |
| LnGrp LOS                    | C   | B   |   | C   | C   | C  | C   | C   | B   | C   | C   | C   |
| Approach Vol, veh/h          |   | 1311  | A   |   | 787   |  |   | 611   |   |   | 1000  |   |
| Approach Delay, s/veh        |   | 20.9  |   |   | 23.9  |  |   | 25.2  |   |   | 25.2  |   |
| Approach LOS                 |   | C   |   |   | C   |  |   | C   |   |   | C   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6  | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 11.6  | 22.8  | 6.2   | 30.3  | 11.4  | 23.1   | 14.0  | 22.4  |   |   |   |   |
| Change Period (Y+Rc), s      | 4.6   | 5.8   | 4.6   | 6.5   | 4.6   | 5.8  | 4.6   | 6.5   |   |   |   |   |
| Max Green Setting (Gmax), s  | 13.7  | 35.5  | 5.0   | 44.3  | 13.4  | 35.8   | 18.8  | 30.5  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 6.8   | 7.9   | 2.4   | 12.3  | 6.6   | 13.5   | 9.0   | 12.2  |   |   |   |   |
| Green Ext Time (p_c), s      | 0.2   | 2.2   | 0.0   | 6.5   | 0.2   | 3.8  | 0.5   | 3.7   |   |   |   |   |

| Intersection Summary |  |  |      |  |  |  |  |  |  |  |  |  |
|----------------------|--|--|------|--|--|--|--|--|--|--|--|--|
| HCM 6th Ctrl Delay   |  |  | 23.4 |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS          |  |  | C    |  |  |  |  |  |  |  |  |  |

Notes  
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**APPENDIX 3.3:**

**EXISTING (2018) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = Existing (2018) Conditions - Weekday AM Peak Hour

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **887**

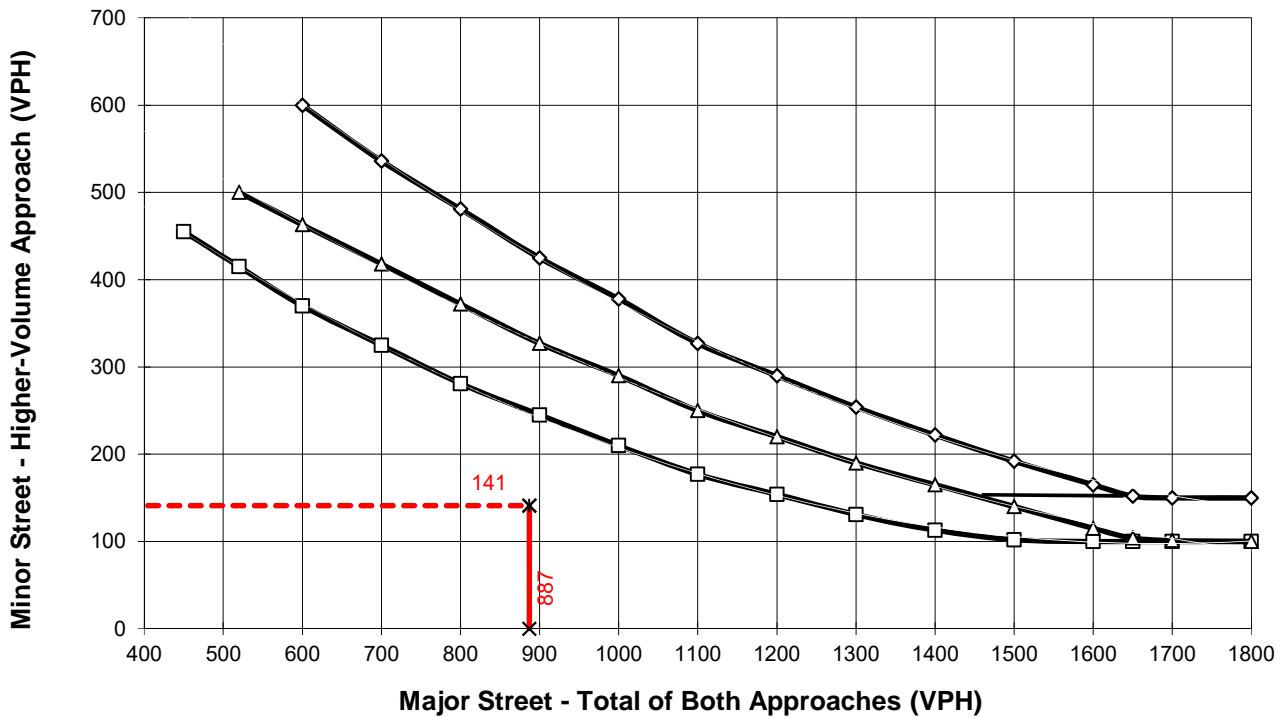
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Colt Way**

High Volume Approach (VPH) = **141**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x- - Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = Existing (2018) Conditions - Weekday AM Peak Hour

Major Street Name = Krameria Avenue

Total of Both Approaches (VPH) = 387

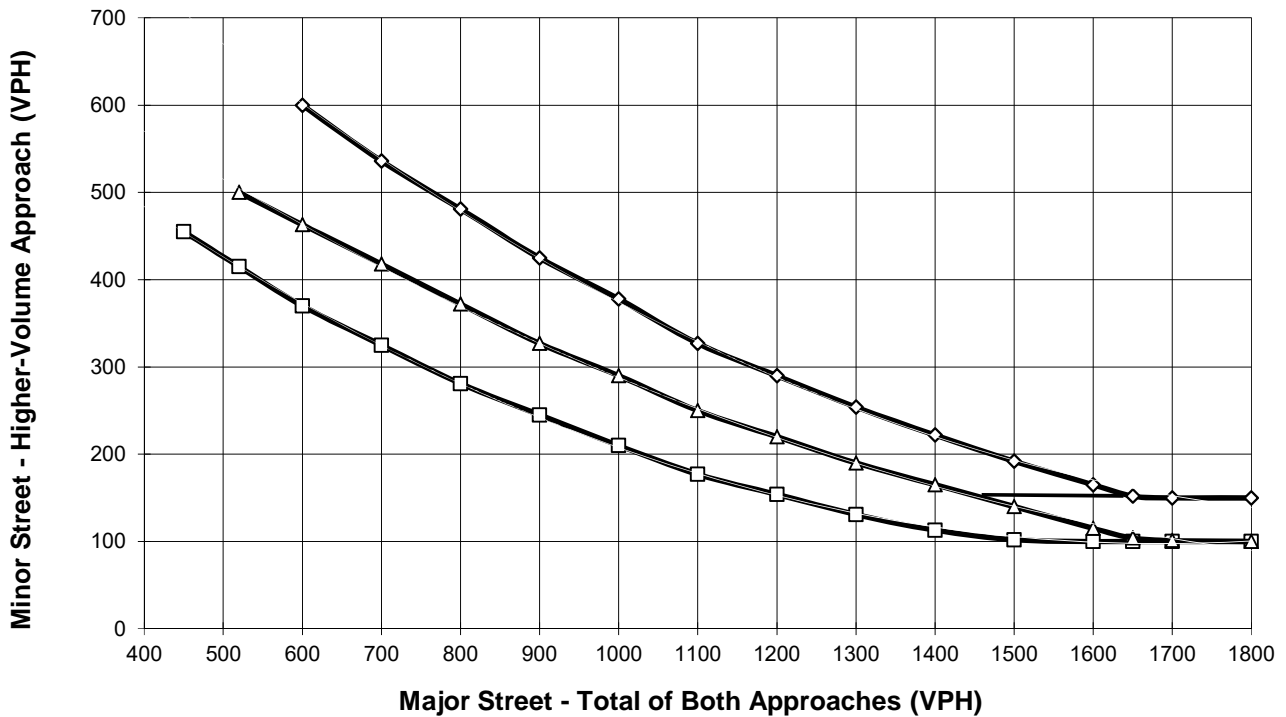
Number of Approach Lanes on Major Street = 2

Minor Street Name = Cahuilla Drive

High Volume Approach (VPH) = 104

Number of Approach Lanes On Minor Street = 1

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = Existing (2018) Conditions - Weekday AM Peak Hour

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **893**

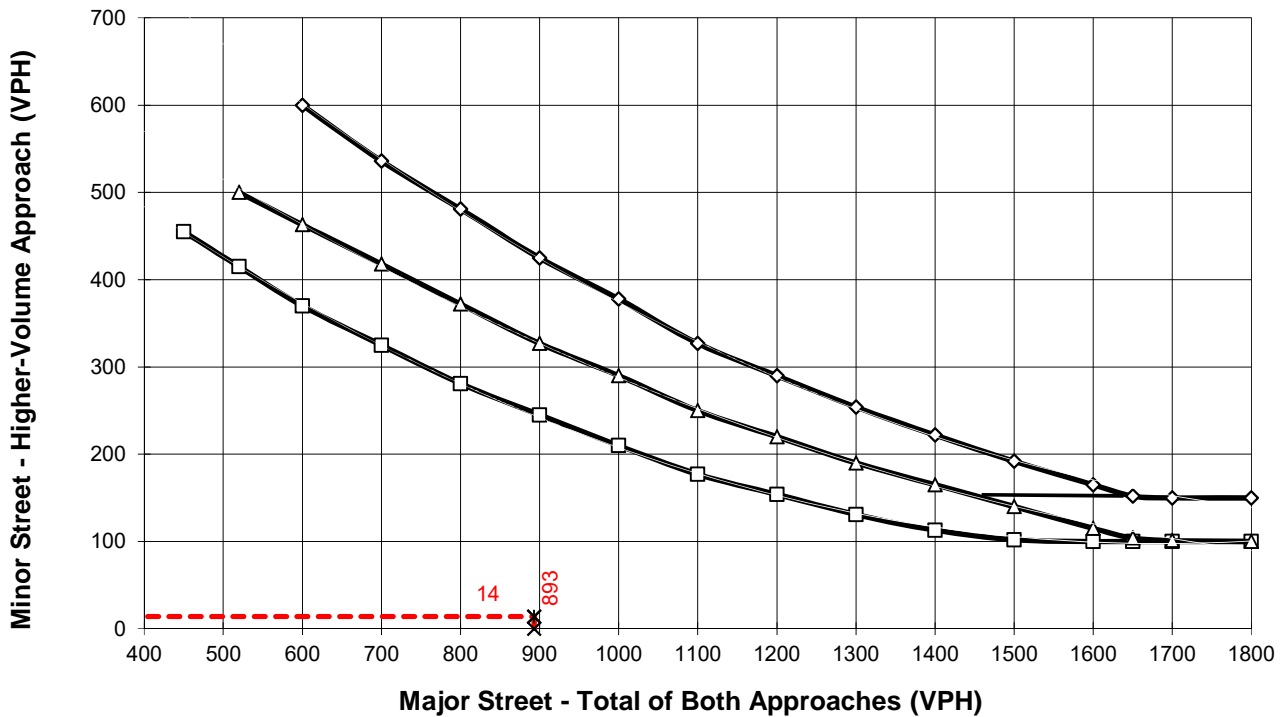
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Quarter Horse Road**

High Volume Approach (VPH) = **14**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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**APPENDIX 3.4:**  
**EXISTING (2018) CONDITIONS QUEUING ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Queuing and Blocking Report  
Existing (2018) - AM Peak Hour

09/20/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  | NB |
|-----------------------|-----|----|
| Directions Served     | R   | R  |
| Maximum Queue (ft)    | 60  | 6  |
| Average Queue (ft)    | 24  | 0  |
| 95th Queue (ft)       | 45  | 4  |
| Link Distance (ft)    | 909 |    |
| Upstream Blk Time (%) |     |    |
| Queuing Penalty (veh) |     |    |
| Storage Bay Dist (ft) | 140 |    |
| Storage Blk Time (%)  |     |    |
| Queuing Penalty (veh) |     |    |

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | EB  | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T    | TR   | L   | T   | TR  | L   | T   | T   | R   | L   |
| Maximum Queue (ft)    | 187 | 203 | 216  | 348  | 178 | 140 | 143 | 150 | 698 | 630 | 205 | 122 |
| Average Queue (ft)    | 98  | 141 | 96   | 181  | 86  | 61  | 58  | 148 | 461 | 398 | 120 | 71  |
| 95th Queue (ft)       | 187 | 199 | 180  | 298  | 160 | 113 | 109 | 155 | 678 | 630 | 254 | 122 |
| Link Distance (ft)    |     |     | 1027 | 1027 |     | 412 | 412 |     | 944 | 944 |     |     |
| Upstream Blk Time (%) |     |     |      |      |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |      |      |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 200 | 200 |      |      | 200 |     |     | 125 |     |     | 180 | 240 |
| Storage Blk Time (%)  | 0   | 1   | 0    |      | 1   |     |     | 58  | 10  | 18  | 0   |     |
| Queuing Penalty (veh) | 0   | 1   | 0    |      | 1   |     |     | 297 | 32  | 42  | 1   |     |

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | SB  | SB  |
|-----------------------|-----|-----|
| Directions Served     | T   | TR  |
| Maximum Queue (ft)    | 151 | 143 |
| Average Queue (ft)    | 124 | 123 |
| 95th Queue (ft)       | 135 | 135 |
| Link Distance (ft)    |     |     |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |



Queuing and Blocking Report  
Existing (2018) - AM Peak Hour

09/20/2018

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB  | WB | NB  |
|-----------------------|-----|----|-----|
| Directions Served     | TR  | L  | LTR |
| Maximum Queue (ft)    | 4   | 34 | 85  |
| Average Queue (ft)    | 0   | 14 | 46  |
| 95th Queue (ft)       | 3   | 38 | 73  |
| Link Distance (ft)    | 412 |    | 151 |
| Upstream Blk Time (%) |     |    |     |
| Queuing Penalty (veh) |     |    |     |
| Storage Bay Dist (ft) |     | 50 |     |
| Storage Blk Time (%)  |     | 0  |     |
| Queuing Penalty (veh) |     | 0  |     |

Intersection: 8: Krameria Av./Driveway & Cahuillia Dr.

| Movement              | EB  | NB  | NB  | SB  | SB  | SB |
|-----------------------|-----|-----|-----|-----|-----|----|
| Directions Served     | LR  | LT  | T   | T   | T   | R  |
| Maximum Queue (ft)    | 59  | 84  | 41  | 54  | 36  | 35 |
| Average Queue (ft)    | 22  | 48  | 16  | 29  | 3   | 17 |
| 95th Queue (ft)       | 42  | 74  | 44  | 48  | 18  | 43 |
| Link Distance (ft)    | 909 | 415 | 415 | 598 | 598 |    |
| Upstream Blk Time (%) |     |     |     |     |     |    |
| Queuing Penalty (veh) |     |     |     |     |     |    |
| Storage Bay Dist (ft) |     |     |     |     | 105 |    |
| Storage Blk Time (%)  |     |     |     |     |     |    |
| Queuing Penalty (veh) |     |     |     |     |     |    |

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | WB  | NB | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|----|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | L  | T   | TR  | L   | T   |
| Maximum Queue (ft)    | 32  | 31  | 26 | 71  | 48  | 28  | 80  |
| Average Queue (ft)    | 7   | 11  | 3  | 14  | 7   | 2   | 12  |
| 95th Queue (ft)       | 25  | 32  | 17 | 50  | 30  | 15  | 48  |
| Link Distance (ft)    | 233 | 137 |    | 656 | 656 |     | 453 |
| Upstream Blk Time (%) |     |     |    |     |     |     |     |
| Queuing Penalty (veh) |     |     |    |     |     |     |     |
| Storage Bay Dist (ft) |     |     | 50 |     |     | 100 |     |
| Storage Blk Time (%)  |     |     |    | 1   |     |     | 0   |
| Queuing Penalty (veh) |     |     |    | 0   |     |     | 0   |

Zone Summary

Zone wide Queuing Penalty: 373

Queuing and Blocking Report  
Existing (2018) - PM Peak Hour

09/20/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 76  |
| Average Queue (ft)    | 31  |
| 95th Queue (ft)       | 56  |
| Link Distance (ft)    | 909 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | EB  | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  |
|-----------------------|-----|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | L   | T    | TR   | L   | T   | TR  | L   | T   | T   | R   | L   |
| Maximum Queue (ft)    | 57  | 130 | 66   | 152  | 107 | 64  | 60  | 149 | 250 | 210 | 53  | 130 |
| Average Queue (ft)    | 10  | 61  | 22   | 60   | 47  | 21  | 20  | 68  | 147 | 110 | 20  | 68  |
| 95th Queue (ft)       | 36  | 112 | 53   | 113  | 89  | 51  | 43  | 137 | 226 | 189 | 46  | 122 |
| Link Distance (ft)    |     |     | 1027 | 1027 |     | 412 | 412 |     | 944 | 944 |     |     |
| Upstream Blk Time (%) |     |     |      |      |     |     |     |     |     |     |     |     |
| Queuing Penalty (veh) |     |     |      |      |     |     |     |     |     |     |     |     |
| Storage Bay Dist (ft) | 200 | 200 |      |      | 200 |     |     | 125 |     |     | 180 | 240 |
| Storage Blk Time (%)  |     |     |      |      |     |     |     | 1   | 11  | 0   |     |     |
| Queuing Penalty (veh) |     |     |      |      |     |     |     | 2   | 9   | 0   |     |     |

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | SB  | SB  |
|-----------------------|-----|-----|
| Directions Served     | T   | TR  |
| Maximum Queue (ft)    | 150 | 154 |
| Average Queue (ft)    | 124 | 121 |
| 95th Queue (ft)       | 136 | 143 |
| Link Distance (ft)    |     |     |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Queuing and Blocking Report  
Existing (2018) - PM Peak Hour

09/20/2018

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB  | WB | NB  |
|-----------------------|-----|----|-----|
| Directions Served     | TR  | L  | LTR |
| Maximum Queue (ft)    | 12  | 8  | 82  |
| Average Queue (ft)    | 1   | 0  | 40  |
| 95th Queue (ft)       | 8   | 4  | 65  |
| Link Distance (ft)    | 412 |    | 151 |
| Upstream Blk Time (%) |     |    |     |
| Queuing Penalty (veh) |     |    |     |
| Storage Bay Dist (ft) |     | 50 |     |
| Storage Blk Time (%)  |     |    |     |
| Queuing Penalty (veh) |     |    |     |

Intersection: 8: Krameria Av./Driveway & Cahuillia Dr.

| Movement              | EB  | NB  | NB  | SB  | SB  | SB |
|-----------------------|-----|-----|-----|-----|-----|----|
| Directions Served     | LR  | LT  | T   | T   | T   | R  |
| Maximum Queue (ft)    | 46  | 71  | 36  | 60  | 31  | 70 |
| Average Queue (ft)    | 16  | 37  | 8   | 31  | 4   | 22 |
| 95th Queue (ft)       | 29  | 57  | 30  | 49  | 22  | 53 |
| Link Distance (ft)    | 909 | 415 | 415 | 598 | 598 |    |
| Upstream Blk Time (%) |     |     |     |     |     |    |
| Queuing Penalty (veh) |     |     |     |     |     |    |
| Storage Bay Dist (ft) |     |     |     |     | 105 |    |
| Storage Blk Time (%)  |     |     |     |     |     |    |
| Queuing Penalty (veh) |     |     |     |     |     |    |

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  |
|-----------------------|-----|
| Directions Served     | LTR |
| Maximum Queue (ft)    | 23  |
| Average Queue (ft)    | 7   |
| 95th Queue (ft)       | 24  |
| Link Distance (ft)    | 233 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Zone Summary

Zone wide Queuing Penalty: 11

**APPENDIX 4.1:**  
**POST PROCESSING WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Project: Continental Villages  
 Scenario: Horizon Year (2040)

Job #: 11575  
 Analyst: CHS  
 Date: 43363

LOCATION: Perris Boulevard & Krameria Avenue  
 FORECAST YEAR: 2040

| INDIVIDUAL TURN VOLUME GROWTH REVIEW |                  |                         |               |             |             |                         |               |             |             |
|--------------------------------------|------------------|-------------------------|---------------|-------------|-------------|-------------------------|---------------|-------------|-------------|
| APPROACH                             | TURNING MOVEMENT | AM PEAK HOUR INPUT DATA |               |             |             | PM PEAK HOUR INPUT DATA |               |             |             |
|                                      |                  | EXISTING COUNT          | FUTURE VOLUME | DIFF-ERENCE | % CHANGE    | EXISTING COUNT          | FUTURE VOLUME | DIFF-ERENCE | % CHANGE    |
| NORTH BOUND                          | Left             | 304                     | 352           | 48          | 16%         | 89                      | 115           | 26          | 29%         |
|                                      | Through          | 1,003                   | 1,322         | 319         | 32%         | 797                     | 1,231         | 434         | 54%         |
|                                      | Right            | 198                     | 158           | -40         | -20%        | 48                      | 32            | -16         | -33%        |
|                                      | <b>NB Total</b>  | <b>1,505</b>            | <b>1,832</b>  | <b>327</b>  | <b>22%</b>  | <b>934</b>              | <b>1,378</b>  | <b>444</b>  | <b>48%</b>  |
| SOUTH BOUND                          | Left             | 92                      | 97            | 5           | 5%          | 92                      | 81            | -11         | -12%        |
|                                      | Through          | 656                     | 985           | 329         | 50%         | 998                     | 1,432         | 434         | 43%         |
|                                      | Right            | 102                     | 157           | 55          | 54%         | 60                      | 102           | 42          | 70%         |
|                                      | <b>SB Total</b>  | <b>850</b>              | <b>1,239</b>  | <b>389</b>  | <b>46%</b>  | <b>1,150</b>            | <b>1,615</b>  | <b>465</b>  | <b>40%</b>  |
| EAST BOUND                           | Left             | 273                     | 347           | 74          | 27%         | 125                     | 217           | 92          | 74%         |
|                                      | Through          | 191                     | 147           | -44         | -23%        | 49                      | 37            | -12         | -24%        |
|                                      | Right            | 307                     | 335           | 28          | 9%          | 140                     | 172           | 32          | 23%         |
|                                      | <b>EB Total</b>  | <b>771</b>              | <b>829</b>    | <b>58</b>   | <b>8%</b>   | <b>314</b>              | <b>426</b>    | <b>112</b>  | <b>36%</b>  |
| WEST BOUND                           | Left             | 74                      | 56            | -18         | -24%        | 54                      | 36            | -18         | -33%        |
|                                      | Through          | 121                     | 94            | -27         | -22%        | 28                      | 22            | -6          | -21%        |
|                                      | Right            | 67                      | 59            | -8          | -12%        | 55                      | 53            | -2          | -4%         |
|                                      | <b>WB Total</b>  | <b>262</b>              | <b>209</b>    | <b>-53</b>  | <b>-20%</b> | <b>137</b>              | <b>111</b>    | <b>-26</b>  | <b>-19%</b> |
| <b>TOTAL ENTERING VOLUME</b>         |                  | <b>3,388</b>            | <b>4,109</b>  | <b>721</b>  | <b>21%</b>  | <b>2,535</b>            | <b>3,530</b>  | <b>995</b>  | <b>39%</b>  |

| FORECAST PEAK HOUR TO ADT COMPARISON |              |              |              |                |            |               |
|--------------------------------------|--------------|--------------|--------------|----------------|------------|---------------|
|                                      |              | VOLUMES      |              | PERCENT OF ADT |            | ADT           |
|                                      |              | AM           | PM           | AM             | PM         |               |
| North Leg                            | Inbound      | 1,239        | 1,615        |                |            |               |
| North Leg                            | Outbound     | 1,728        | 1,501        |                |            |               |
| <b>North Leg</b>                     | <b>TOTAL</b> | <b>2,967</b> | <b>3,116</b> | <b>9%</b>      | <b>10%</b> | <b>31,969</b> |
| South Leg                            | Inbound      | 1,832        | 1,378        |                |            |               |
| South Leg                            | Outbound     | 1,376        | 1,640        |                |            |               |
| <b>South Leg</b>                     | <b>TOTAL</b> | <b>3,208</b> | <b>3,018</b> | <b>12%</b>     | <b>11%</b> | <b>27,815</b> |
| East Leg                             | Inbound      | 209          | 111          |                |            |               |
| East Leg                             | Outbound     | 402          | 150          |                |            |               |
| <b>East Leg</b>                      | <b>TOTAL</b> | <b>611</b>   | <b>261</b>   | <b>9%</b>      | <b>4%</b>  | <b>6,539</b>  |
| West Leg                             | Inbound      | 829          | 426          |                |            |               |
| West Leg                             | Outbound     | 603          | 239          |                |            |               |
| <b>West Leg</b>                      | <b>TOTAL</b> | <b>1,432</b> | <b>665</b>   | <b>25%</b>     | <b>12%</b> | <b>5,758</b>  |
| <b>OVERALL TOTAL</b>                 |              | <b>8,218</b> | <b>7,060</b> | <b>11%</b>     | <b>10%</b> | <b>72,081</b> |

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Project: Continental Villages  
 Scenario: Horizon Year (2040)

Job #: 11575  
 Analyst: CHS  
 Date: 43363

LOCATION: Kitching Street & Krameria Avenue  
 FORECAST YEAR: 2040

| INDIVIDUAL TURN VOLUME GROWTH REVIEW |                  |                         |               |             |             |                         |               |             |             |
|--------------------------------------|------------------|-------------------------|---------------|-------------|-------------|-------------------------|---------------|-------------|-------------|
| APPROACH                             | TURNING MOVEMENT | AM PEAK HOUR INPUT DATA |               |             |             | PM PEAK HOUR INPUT DATA |               |             |             |
|                                      |                  | EXISTING COUNT          | FUTURE VOLUME | DIFF-ERENCE | % CHANGE    | EXISTING COUNT          | FUTURE VOLUME | DIFF-ERENCE | % CHANGE    |
| NORTH BOUND                          | Left             | 54                      | 264           | 210         | 389%        | 25                      | 222           | 197         | 788%        |
|                                      | Through          | 112                     | 505           | 393         | 351%        | 73                      | 646           | 573         | 785%        |
|                                      | Right            | 67                      | 270           | 203         | 303%        | 17                      | 126           | 109         | 641%        |
|                                      | <b>NB Total</b>  | <b>233</b>              | <b>1,039</b>  | <b>806</b>  | <b>346%</b> | <b>115</b>              | <b>994</b>    | <b>879</b>  | <b>764%</b> |
| SOUTH BOUND                          | Left             | 253                     | 247           | -6          | -2%         | 81                      | 20            | -61         | -75%        |
|                                      | Through          | 144                     | 600           | 456         | 317%        | 78                      | 441           | 363         | 465%        |
|                                      | Right            | 80                      | 95            | 15          | 19%         | 84                      | 25            | -59         | -70%        |
|                                      | <b>SB Total</b>  | <b>477</b>              | <b>942</b>    | <b>465</b>  | <b>97%</b>  | <b>243</b>              | <b>486</b>    | <b>243</b>  | <b>100%</b> |
| EAST BOUND                           | Left             | 71                      | 43            | -28         | -39%        | 83                      | 36            | -47         | -57%        |
|                                      | Through          | 408                     | 223           | -185        | -45%        | 232                     | 84            | -148        | -64%        |
|                                      | Right            | 109                     | 254           | 145         | 133%        | 32                      | 268           | 236         | 738%        |
|                                      | <b>EB Total</b>  | <b>588</b>              | <b>520</b>    | <b>-68</b>  | <b>-12%</b> | <b>347</b>              | <b>388</b>    | <b>41</b>   | <b>12%</b>  |
| WEST BOUND                           | Left             | 84                      | 193           | 109         | 130%        | 19                      | 97            | 78          | 411%        |
|                                      | Through          | 411                     | 268           | -143        | -35%        | 202                     | 53            | -149        | -74%        |
|                                      | Right            | 181                     | 109           | -72         | -40%        | 81                      | 21            | -60         | -74%        |
|                                      | <b>WB Total</b>  | <b>676</b>              | <b>570</b>    | <b>-106</b> | <b>-16%</b> | <b>302</b>              | <b>171</b>    | <b>-131</b> | <b>-43%</b> |
| <b>TOTAL ENTERING VOLUME</b>         |                  | <b>1,974</b>            | <b>3,071</b>  | <b>1097</b> | <b>56%</b>  | <b>1,007</b>            | <b>2,039</b>  | <b>1032</b> | <b>102%</b> |

| FORECAST PEAK HOUR TO ADT COMPARISON |              |              |              |                |            |               |
|--------------------------------------|--------------|--------------|--------------|----------------|------------|---------------|
|                                      |              | VOLUMES      |              | PERCENT OF ADT |            | ADT           |
|                                      |              | AM           | PM           | AM             | PM         |               |
| North Leg                            | Inbound      | 942          | 486          |                |            |               |
| North Leg                            | Outbound     | 657          | 703          |                |            |               |
| <b>North Leg</b>                     | <b>TOTAL</b> | <b>1,599</b> | <b>1,189</b> | <b>8%</b>      | <b>6%</b>  | <b>20,018</b> |
| South Leg                            | Inbound      | 1,039        | 994          |                |            |               |
| South Leg                            | Outbound     | 1,047        | 806          |                |            |               |
| <b>South Leg</b>                     | <b>TOTAL</b> | <b>2,086</b> | <b>1,800</b> | <b>8%</b>      | <b>7%</b>  | <b>24,841</b> |
| East Leg                             | Inbound      | 570          | 171          |                |            |               |
| East Leg                             | Outbound     | 740          | 230          |                |            |               |
| <b>East Leg</b>                      | <b>TOTAL</b> | <b>1,310</b> | <b>401</b>   | <b>30%</b>     | <b>9%</b>  | <b>4,431</b>  |
| West Leg                             | Inbound      | 520          | 388          |                |            |               |
| West Leg                             | Outbound     | 627          | 300          |                |            |               |
| <b>West Leg</b>                      | <b>TOTAL</b> | <b>1,147</b> | <b>688</b>   | <b>18%</b>     | <b>11%</b> | <b>6,539</b>  |
| <b>OVERALL TOTAL</b>                 |              | <b>6,142</b> | <b>4,078</b> | <b>11%</b>     | <b>7%</b>  | <b>55,829</b> |

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Project: Continental Villages  
 Scenario: Horizon Year (2040)

Job #: 11575  
 Analyst: CHS  
 Date: 43363

LOCATION: Lasselie Street & iris Avenue  
 FORECAST YEAR: 2040

| INDIVIDUAL TURN VOLUME GROWTH REVIEW |                  |                         |               |             |            |                         |               |             |            |
|--------------------------------------|------------------|-------------------------|---------------|-------------|------------|-------------------------|---------------|-------------|------------|
| APPROACH                             | TURNING MOVEMENT | AM PEAK HOUR INPUT DATA |               |             |            | PM PEAK HOUR INPUT DATA |               |             |            |
|                                      |                  | EXISTING COUNT          | FUTURE VOLUME | DIFF-ERENCE | % CHANGE   | EXISTING COUNT          | FUTURE VOLUME | DIFF-ERENCE | % CHANGE   |
| NORTH BOUND                          | Left             | 369                     | 446           | 77          | 21%        | 248                     | 326           | 78          | 31%        |
|                                      | Through          | 582                     | 506           | -76         | -13%       | 538                     | 521           | -17         | -3%        |
|                                      | Right            | 471                     | 403           | -68         | -14%       | 402                     | 408           | 6           | 1%         |
|                                      | <b>NB Total</b>  | <b>1,422</b>            | <b>1,355</b>  | <b>-67</b>  | <b>-5%</b> | <b>1,188</b>            | <b>1,255</b>  | <b>67</b>   | <b>6%</b>  |
| SOUTH BOUND                          | Left             | 116                     | 132           | 16          | 14%        | 192                     | 226           | 34          | 18%        |
|                                      | Through          | 560                     | 576           | 16          | 3%         | 666                     | 532           | -134        | -20%       |
|                                      | Right            | 97                      | 156           | 59          | 61%        | 96                      | 146           | 50          | 52%        |
|                                      | <b>SB Total</b>  | <b>773</b>              | <b>864</b>    | <b>91</b>   | <b>12%</b> | <b>954</b>              | <b>904</b>    | <b>-50</b>  | <b>-5%</b> |
| EAST BOUND                           | Left             | 134                     | 184           | 50          | 37%        | 142                     | 259           | 117         | 82%        |
|                                      | Through          | 478                     | 645           | 167         | 35%        | 396                     | 757           | 361         | 91%        |
|                                      | Right            | 316                     | 386           | 70          | 22%        | 316                     | 410           | 94          | 30%        |
|                                      | <b>EB Total</b>  | <b>928</b>              | <b>1,215</b>  | <b>287</b>  | <b>31%</b> | <b>854</b>              | <b>1,426</b>  | <b>572</b>  | <b>67%</b> |
| WEST BOUND                           | Left             | 510                     | 508           | -2          | 0%         | 587                     | 549           | -38         | -6%        |
|                                      | Through          | 583                     | 908           | 325         | 56%        | 554                     | 988           | 434         | 78%        |
|                                      | Right            | 98                      | 110           | 12          | 12%        | 91                      | 120           | 29          | 32%        |
|                                      | <b>WB Total</b>  | <b>1,191</b>            | <b>1,526</b>  | <b>335</b>  | <b>28%</b> | <b>1,232</b>            | <b>1,657</b>  | <b>425</b>  | <b>34%</b> |
| <b>TOTAL ENTERING VOLUME</b>         |                  | <b>4,314</b>            | <b>4,960</b>  | <b>646</b>  | <b>15%</b> | <b>4,228</b>            | <b>5,242</b>  | <b>1014</b> | <b>24%</b> |

| FORECAST PEAK HOUR TO ADT COMPARISON |              |              |               |                |            |               |
|--------------------------------------|--------------|--------------|---------------|----------------|------------|---------------|
|                                      |              | VOLUMES      |               | PERCENT OF ADT |            | ADT           |
|                                      |              | AM           | PM            | AM             | PM         |               |
| North Leg                            | Inbound      | 864          | 904           |                |            |               |
| North Leg                            | Outbound     | 800          | 900           |                |            |               |
| <b>North Leg</b>                     | <b>TOTAL</b> | <b>1,664</b> | <b>1,804</b>  | <b>12%</b>     | <b>13%</b> | <b>14,166</b> |
| South Leg                            | Inbound      | 1,355        | 1,255         |                |            |               |
| South Leg                            | Outbound     | 1,470        | 1,491         |                |            |               |
| <b>South Leg</b>                     | <b>TOTAL</b> | <b>2,825</b> | <b>2,746</b>  | <b>11%</b>     | <b>10%</b> | <b>26,736</b> |
| East Leg                             | Inbound      | 1,526        | 1,657         |                |            |               |
| East Leg                             | Outbound     | 1,180        | 1,391         |                |            |               |
| <b>East Leg</b>                      | <b>TOTAL</b> | <b>2,706</b> | <b>3,048</b>  | <b>9%</b>      | <b>10%</b> | <b>29,226</b> |
| West Leg                             | Inbound      | 1,215        | 1,426         |                |            |               |
| West Leg                             | Outbound     | 1,510        | 1,460         |                |            |               |
| <b>West Leg</b>                      | <b>TOTAL</b> | <b>2,725</b> | <b>2,886</b>  | <b>14%</b>     | <b>15%</b> | <b>19,729</b> |
| <b>OVERALL TOTAL</b>                 |              | <b>9,920</b> | <b>10,484</b> | <b>11%</b>     | <b>12%</b> | <b>89,857</b> |

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Project: Continental Villages  
 Scenario: Horizon Year (2040)

Job #: 11575  
 Analyst: CHS  
 Date: 43363

LOCATION: Lasselie Street & Krameria Avenue  
 FORECAST YEAR: 2040

| INDIVIDUAL TURN VOLUME GROWTH REVIEW |                  |                         |               |             |            |                         |               |             |            |
|--------------------------------------|------------------|-------------------------|---------------|-------------|------------|-------------------------|---------------|-------------|------------|
| APPROACH                             | TURNING MOVEMENT | AM PEAK HOUR INPUT DATA |               |             |            | PM PEAK HOUR INPUT DATA |               |             |            |
|                                      |                  | EXISTING COUNT          | FUTURE VOLUME | DIFF-ERENCE | % CHANGE   | EXISTING COUNT          | FUTURE VOLUME | DIFF-ERENCE | % CHANGE   |
| NORTH BOUND                          | Left             | 322                     | 357           | 35          | 11%        | 84                      | 63            | -21         | -25%       |
|                                      | Through          | 1,018                   | 1,206         | 188         | 18%        | 741                     | 1,072         | 331         | 45%        |
|                                      | Right            | 191                     | 169           | -22         | -12%       | 67                      | 63            | -4          | -6%        |
|                                      | <b>NB Total</b>  | <b>1,531</b>            | <b>1,732</b>  | <b>201</b>  | <b>13%</b> | <b>892</b>              | <b>1,198</b>  | <b>306</b>  | <b>34%</b> |
| SOUTH BOUND                          | Left             | 71                      | 100           | 29          | 41%        | 91                      | 101           | 10          | 11%        |
|                                      | Through          | 722                     | 971           | 249         | 34%        | 1,019                   | 1,270         | 251         | 25%        |
|                                      | Right            | 107                     | 187           | 80          | 75%        | 57                      | 50            | -7          | -12%       |
|                                      | <b>SB Total</b>  | <b>900</b>              | <b>1,258</b>  | <b>358</b>  | <b>40%</b> | <b>1,167</b>            | <b>1,421</b>  | <b>254</b>  | <b>22%</b> |
| EAST BOUND                           | Left             | 254                     | 334           | 80          | 31%        | 118                     | 179           | 61          | 52%        |
|                                      | Through          | 195                     | 192           | -3          | -2%        | 57                      | 56            | -1          | -2%        |
|                                      | Right            | 332                     | 313           | -19         | -6%        | 149                     | 165           | 16          | 11%        |
|                                      | <b>EB Total</b>  | <b>781</b>              | <b>839</b>    | <b>58</b>   | <b>7%</b>  | <b>324</b>              | <b>400</b>    | <b>76</b>   | <b>23%</b> |
| WEST BOUND                           | Left             | 73                      | 59            | -14         | -19%       | 82                      | 80            | -2          | -2%        |
|                                      | Through          | 111                     | 117           | 6           | 5%         | 39                      | 27            | -12         | -31%       |
|                                      | Right            | 65                      | 73            | 8           | 12%        | 48                      | 64            | 16          | 33%        |
|                                      | <b>WB Total</b>  | <b>249</b>              | <b>249</b>    | <b>0</b>    | <b>0%</b>  | <b>169</b>              | <b>171</b>    | <b>2</b>    | <b>1%</b>  |
| <b>TOTAL ENTERING VOLUME</b>         |                  | <b>3,461</b>            | <b>4,078</b>  | <b>617</b>  | <b>18%</b> | <b>2,552</b>            | <b>3,190</b>  | <b>638</b>  | <b>25%</b> |

| FORECAST PEAK HOUR TO ADT COMPARISON |              |              |              |                |                |               |
|--------------------------------------|--------------|--------------|--------------|----------------|----------------|---------------|
|                                      |              | VOLUMES      |              | PERCENT OF ADT |                | ADT           |
|                                      |              | AM           | PM           | AM             | PM             |               |
| North Leg                            | Inbound      | 1,258        | 1,421        |                |                |               |
| North Leg                            | Outbound     | 1,613        | 1,315        |                |                |               |
| <b>North Leg</b>                     | <b>TOTAL</b> | <b>2,871</b> | <b>2,736</b> | <b>11%</b>     | <b>10%</b>     | <b>27,205</b> |
| South Leg                            | Inbound      | 1,732        | 1,198        |                |                |               |
| South Leg                            | Outbound     | 1,343        | 1,515        |                |                |               |
| <b>South Leg</b>                     | <b>TOTAL</b> | <b>3,075</b> | <b>2,713</b> | <b>14%</b>     | <b>12%</b>     | <b>22,442</b> |
| East Leg                             | Inbound      | 249          | 171          |                |                |               |
| East Leg                             | Outbound     | 461          | 220          |                |                |               |
| <b>East Leg</b>                      | <b>TOTAL</b> | <b>710</b>   | <b>391</b>   | <b>#DIV/0!</b> | <b>#DIV/0!</b> | <b>-</b>      |
| West Leg                             | Inbound      | 839          | 400          |                |                |               |
| West Leg                             | Outbound     | 661          | 140          |                |                |               |
| <b>West Leg</b>                      | <b>TOTAL</b> | <b>1,500</b> | <b>540</b>   | <b>35%</b>     | <b>12%</b>     | <b>4,339</b>  |
| <b>OVERALL TOTAL</b>                 |              | <b>8,156</b> | <b>6,380</b> | <b>15%</b>     | <b>12%</b>     | <b>53,986</b> |

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Project: Continental Villages  
 Scenario: Horizon Year (2040)

Job #: 11575  
 Analyst: CHS  
 Date: 43363

LOCATION: Evans Road & Ramona Expressway  
 FORECAST YEAR: 2040

| INDIVIDUAL TURN VOLUME GROWTH REVIEW |                  |                         |               |             |            |                         |               |             |            |
|--------------------------------------|------------------|-------------------------|---------------|-------------|------------|-------------------------|---------------|-------------|------------|
| APPROACH                             | TURNING MOVEMENT | AM PEAK HOUR INPUT DATA |               |             |            | PM PEAK HOUR INPUT DATA |               |             |            |
|                                      |                  | EXISTING COUNT          | FUTURE VOLUME | DIFF-ERENCE | % CHANGE   | EXISTING COUNT          | FUTURE VOLUME | DIFF-ERENCE | % CHANGE   |
| NORTH BOUND                          | Left             | 397                     | 515           | 118         | 30%        | 217                     | 207           | -10         | -5%        |
|                                      | Through          | 550                     | 963           | 413         | 75%        | 335                     | 631           | 296         | 88%        |
|                                      | Right            | 25                      | 96            | 71          | 284%       | 17                      | 95            | 78          | 459%       |
|                                      | <b>NB Total</b>  | <b>972</b>              | <b>1,574</b>  | <b>602</b>  | <b>62%</b> | <b>569</b>              | <b>933</b>    | <b>364</b>  | <b>64%</b> |
| SOUTH BOUND                          | Left             | 205                     | 386           | 181         | 88%        | 229                     | 552           | 323         | 141%       |
|                                      | Through          | 370                     | 617           | 247         | 67%        | 432                     | 874           | 442         | 102%       |
|                                      | Right            | 371                     | 237           | -134        | -36%       | 269                     | 111           | -158        | -59%       |
|                                      | <b>SB Total</b>  | <b>946</b>              | <b>1,240</b>  | <b>294</b>  | <b>31%</b> | <b>930</b>              | <b>1,537</b>  | <b>607</b>  | <b>65%</b> |
| EAST BOUND                           | Left             | 254                     | 143           | -111        | -44%       | 331                     | 181           | -150        | -45%       |
|                                      | Through          | 338                     | 414           | 76          | 22%        | 888                     | 1,433         | 545         | 61%        |
|                                      | Right            | 155                     | 168           | 13          | 8%         | 339                     | 459           | 120         | 35%        |
|                                      | <b>EB Total</b>  | <b>747</b>              | <b>725</b>    | <b>-22</b>  | <b>-3%</b> | <b>1,558</b>            | <b>2,073</b>  | <b>515</b>  | <b>33%</b> |
| WEST BOUND                           | Left             | 23                      | 90            | 67          | 291%       | 18                      | 107           | 89          | 494%       |
|                                      | Through          | 1,030                   | 1,537         | 507         | 49%        | 536                     | 651           | 115         | 21%        |
|                                      | Right            | 325                     | 654           | 329         | 101%       | 179                     | 429           | 250         | 140%       |
|                                      | <b>WB Total</b>  | <b>1,378</b>            | <b>2,281</b>  | <b>903</b>  | <b>66%</b> | <b>733</b>              | <b>1,187</b>  | <b>454</b>  | <b>62%</b> |
| <b>TOTAL ENTERING VOLUME</b>         |                  | <b>4,043</b>            | <b>5,820</b>  | <b>1777</b> | <b>44%</b> | <b>3,790</b>            | <b>5,730</b>  | <b>1940</b> | <b>51%</b> |

| FORECAST PEAK HOUR TO ADT COMPARISON |              |               |               |                |            |                |
|--------------------------------------|--------------|---------------|---------------|----------------|------------|----------------|
|                                      |              | VOLUMES       |               | PERCENT OF ADT |            | ADT            |
|                                      |              | AM            | PM            | AM             | PM         |                |
| North Leg                            | Inbound      | 1,240         | 1,537         |                |            |                |
| North Leg                            | Outbound     | 1,760         | 1,241         |                |            |                |
| <b>North Leg</b>                     | <b>TOTAL</b> | <b>3,000</b>  | <b>2,778</b>  | <b>11%</b>     | <b>10%</b> | <b>28,029</b>  |
| South Leg                            | Inbound      | 1,574         | 933           |                |            |                |
| South Leg                            | Outbound     | 875           | 1,440         |                |            |                |
| <b>South Leg</b>                     | <b>TOTAL</b> | <b>2,449</b>  | <b>2,373</b>  | <b>8%</b>      | <b>8%</b>  | <b>29,301</b>  |
| East Leg                             | Inbound      | 2,281         | 1,187         |                |            |                |
| East Leg                             | Outbound     | 896           | 2,080         |                |            |                |
| <b>East Leg</b>                      | <b>TOTAL</b> | <b>3,177</b>  | <b>3,267</b>  | <b>10%</b>     | <b>11%</b> | <b>31,110</b>  |
| West Leg                             | Inbound      | 725           | 2,073         |                |            |                |
| West Leg                             | Outbound     | 2,289         | 969           |                |            |                |
| <b>West Leg</b>                      | <b>TOTAL</b> | <b>3,014</b>  | <b>3,042</b>  | <b>8%</b>      | <b>8%</b>  | <b>36,383</b>  |
| <b>OVERALL TOTAL</b>                 |              | <b>11,640</b> | <b>11,460</b> | <b>9%</b>      | <b>9%</b>  | <b>124,823</b> |

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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**APPENDIX 5.1:**

**E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



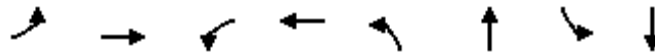
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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

2: Kitching St. & Krameria Av.

10/23/2018

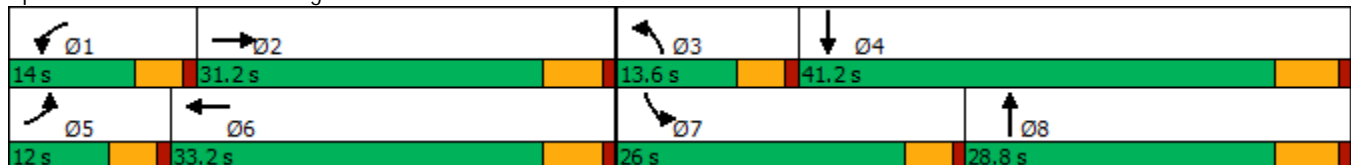


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↶     | ↷     | ↶     | ↷     | ↶     | ↷     | ↶     | ↷     |
| Traffic Volume (vph) | 71    | 421   | 87    | 425   | 54    | 112   | 269   | 144   |
| Future Volume (vph)  | 71    | 421   | 87    | 425   | 54    | 112   | 269   | 144   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 12.0  | 31.2  | 14.0  | 33.2  | 13.6  | 28.8  | 26.0  | 41.2  |
| Total Split (%)      | 12.0% | 31.2% | 14.0% | 33.2% | 13.6% | 28.8% | 26.0% | 41.2% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary





















Cycle Length: 100  
 Actuated Cycle Length: 76  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Kitching St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
 2: Kitching St. & Krameria Av.

10/23/2018

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |   |  |  |   |  |  |   |  |  |   |
| Traffic Volume (veh/h)       | 71  | 421   | 109   | 87  | 425   | 192   | 54  | 112   | 72  | 269   | 144   | 80  |
| Future Volume (veh/h)        | 71  | 421   | 109   | 87  | 425   | 192   | 54  | 112   | 72  | 269   | 144   | 80  |
| Initial Q (Qb), veh          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)          | 1.00  |   | 0.96  | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00  |   | 0.98  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach        |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 81  | 478   | 107   | 99  | 483   | 168   | 61  | 127   | 55  | 306   | 164   | 61  |
| Peak Hour Factor             | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 119   | 787   | 175   | 142   | 744   | 257   | 103   | 522   | 214   | 366   | 921   | 328   |
| Arrive On Green              | 0.07  | 0.27  | 0.25  | 0.08  | 0.29  | 0.27  | 0.06  | 0.21  | 0.19  | 0.21  | 0.36  | 0.34  |
| Sat Flow, veh/h              | 1781  | 2866  | 637   | 1781  | 2588  | 894   | 1781  | 2441  | 1001  | 1781  | 2550  | 910   |
| Grp Volume(v), veh/h         | 81  | 295   | 290   | 99  | 331   | 320   | 61  | 91  | 91  | 306   | 112   | 113   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1777  | 1726  | 1781  | 1777  | 1705  | 1781  | 1777  | 1665  | 1781  | 1777  | 1683  |
| Q Serve(g_s), s              | 3.1   | 10.2  | 10.4  | 3.8   | 11.5  | 11.7  | 2.4   | 3.0   | 3.3   | 11.6  | 3.0   | 3.3   |
| Cycle Q Clear(g_c), s        | 3.1   | 10.2  | 10.4  | 3.8   | 11.5  | 11.7  | 2.4   | 3.0   | 3.3   | 11.6  | 3.0   | 3.3   |
| Prop In Lane                 | 1.00  |   | 0.37  | 1.00  |   | 0.52  | 1.00  |   | 0.60  | 1.00  |   | 0.54  |
| Lane Grp Cap(c), veh/h       | 119   | 488   | 474   | 142   | 511   | 490   | 103   | 380   | 356   | 366   | 641   | 608   |
| V/C Ratio(X)                 | 0.68  | 0.60  | 0.61  | 0.70  | 0.65  | 0.65  | 0.59  | 0.24  | 0.26  | 0.84  | 0.17  | 0.19  |
| Avail Cap(c_a), veh/h        | 202   | 685   | 666   | 253   | 736   | 706   | 243   | 625   | 586   | 556   | 937   | 888   |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 32.2  | 22.2  | 22.5  | 31.6  | 22.0  | 22.4  | 32.4  | 23.0  | 23.5  | 26.9  | 15.4  | 15.8  |
| Incr Delay (d2), s/veh       | 2.6   | 1.2   | 1.3   | 2.3   | 1.4   | 1.5   | 2.0   | 0.3   | 0.4   | 4.2   | 0.1   | 0.1   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 1.4   | 4.0   | 4.0   | 1.6   | 4.5   | 4.5   | 1.0   | 1.2   | 1.2   | 4.9   | 1.1   | 1.1   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 34.8  | 23.5  | 23.8  | 34.0  | 23.4  | 23.9  | 34.4  | 23.3  | 23.9  | 31.0  | 15.5  | 15.9  |
| LnGrp LOS                    | C   | C   | C   | C   | C   | C   | C   | C   | C   | C   | B   | B   |
| Approach Vol, veh/h          |   | 666   |   |   | 750   |   |   | 243   |   |   | 531   |   |
| Approach Delay, s/veh        |   | 25.0  |   |   | 25.0  |   |   | 26.3  |   |   | 24.6  |   |
| Approach LOS                 |   | C   |   |   | C   |   |   | C   |   |   | C   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 9.6   | 23.4  | 8.1   | 29.5  | 8.7   | 24.3  | 18.5  | 19.1  |   |   |   |   |
| Change Period (Y+Rc), s      | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   |   |   |   |   |
| Max Green Setting (Gmax), s  | 9.4   | 25.8  | 9.0   | 35.4  | 7.4   | 27.8  | 21.4  | 23.0  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 5.8   | 12.4  | 4.4   | 5.3   | 5.1   | 13.7  | 13.6  | 5.3   |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 2.8   | 0.0   | 1.2   | 0.0   | 3.3   | 0.3   | 0.8   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay           |   |   | 25.0  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS                  |   |   | C   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

3: Lasselle St. & Iris Av.

10/23/2018

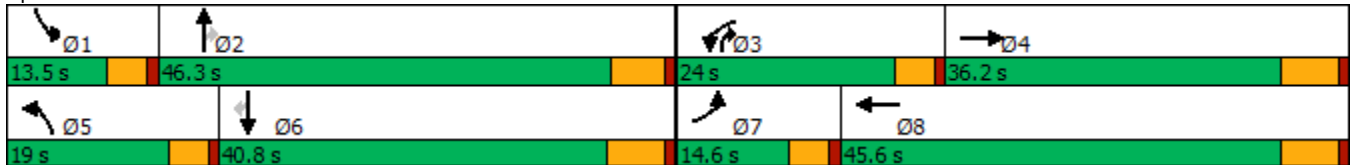


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕↔    | ↖↗    | ↕↔    | ↖↗    | ↕↕    | ↖     | ↖↗    | ↕↕    | ↖     |
| Traffic Volume (vph) | 134   | 478   | 527   | 583   | 384   | 597   | 486   | 116   | 577   | 97    |
| Future Volume (vph)  | 134   | 478   | 527   | 583   | 384   | 597   | 486   | 116   | 577   | 97    |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 14.6  | 36.2  | 24.0  | 45.6  | 19.0  | 46.3  | 24.0  | 13.5  | 40.8  | 40.8  |
| Total Split (%)      | 12.2% | 30.2% | 20.0% | 38.0% | 15.8% | 38.6% | 20.0% | 11.3% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 105.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Lasselle St. & Iris Av.





HCM 6th Signalized Intersection Summary  
 3: Lasselle St. & Iris Av.

10/23/2018

| Movement   | EBL  | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--|------|-------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations  |      |       |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)   | 134  | 478   | 333  | 527  | 583  | 98   | 384  | 597  | 486  | 116  | 577  | 97   |
| Future Volume (veh/h)  | 134  | 478   | 333  | 527  | 583  | 98   | 384  | 597  | 486  | 116  | 577  | 97   |
| Initial Q (Qb), veh  | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 1.00 | 1.00 |      | 0.98 | 1.00 |      | 0.98 | 1.00 |      | 0.95 |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  |      | No    |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 151  | 537   | 226  | 592  | 655  | 67   | 431  | 671  | 317  | 130  | 648  | 49   |
| Peak Hour Factor   | 0.89 | 0.89  | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 232  | 845   | 345  | 649  | 1686 | 171  | 487  | 1279 | 839  | 209  | 1007 | 427  |
| Arrive On Green  | 0.07 | 0.24  | 0.22 | 0.19 | 0.36 | 0.34 | 0.14 | 0.36 | 0.35 | 0.06 | 0.28 | 0.28 |
| Sat Flow, veh/h  | 3456 | 3558  | 1451 | 3456 | 4703 | 477  | 3456 | 3554 | 1552 | 3456 | 3554 | 1507 |
| Grp Volume(v), veh/h   | 151  | 513   | 250  | 592  | 472  | 250  | 431  | 671  | 317  | 130  | 648  | 49   |
| Grp Sat Flow(s),veh/h/ln   | 1728 | 1702  | 1604 | 1728 | 1702 | 1776 | 1728 | 1777 | 1552 | 1728 | 1777 | 1507 |
| Q Serve(g_s), s  | 4.5  | 14.4  | 15.1 | 17.9 | 11.0 | 11.2 | 13.0 | 15.9 | 12.7 | 3.9  | 17.0 | 2.6  |
| Cycle Q Clear(g_c), s  | 4.5  | 14.4  | 15.1 | 17.9 | 11.0 | 11.2 | 13.0 | 15.9 | 12.7 | 3.9  | 17.0 | 2.6  |
| Prop In Lane   | 1.00 |       | 0.90 | 1.00 |      | 0.27 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h   | 232  | 809   | 381  | 649  | 1220 | 637  | 487  | 1279 | 839  | 209  | 1007 | 427  |
| V/C Ratio(X)   | 0.65 | 0.63  | 0.66 | 0.91 | 0.39 | 0.39 | 0.88 | 0.52 | 0.38 | 0.62 | 0.64 | 0.11 |
| Avail Cap(c_a), veh/h  | 344  | 1030  | 485  | 649  | 1331 | 694  | 487  | 1412 | 897  | 308  | 1229 | 521  |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 48.4 | 36.4  | 37.6 | 42.3 | 25.4 | 25.7 | 44.9 | 26.9 | 14.4 | 48.8 | 33.4 | 28.3 |
| Incr Delay (d2), s/veh   | 1.2  | 0.8   | 2.1  | 16.8 | 0.2  | 0.4  | 16.9 | 0.3  | 0.3  | 1.1  | 0.8  | 0.1  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 1.9  | 5.8   | 5.9  | 8.7  | 4.2  | 4.5  | 6.5  | 6.4  | 4.0  | 1.7  | 7.0  | 0.9  |
| Unsig. Movement Delay, s/veh   |      |       |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh   | 49.6 | 37.3  | 39.7 | 59.2 | 25.6 | 26.1 | 61.8 | 27.2 | 14.6 | 49.9 | 34.3 | 28.4 |
| LnGrp LOS  | D    | D     | D    | E    | C    | C    | E    | C    | B    | D    | C    | C    |
| Approach Vol, veh/h  |      | 914   |      |      | 1314 |      |      | 1419 |      |      | 827  |      |
| Approach Delay, s/veh  |      | 40.0  |      |      | 40.8 |      |      | 34.9 |      |      | 36.4 |      |
| Approach LOS   |      | D     |      |      | D    |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 10.4 | 42.7  | 24.0 | 29.3 | 19.0 | 34.2 | 11.1 | 42.1 |      |      |      |      |
| Change Period (Y+Rc), s  | 4.6  | * 6.2 | 4.6  | 6.2  | 4.6  | 6.2  | 4.6  | 6.2  |      |      |      |      |
| Max Green Setting (Gmax), s  | 8.9  | * 41  | 19.4 | 30.0 | 14.4 | 34.6 | 10.0 | 39.4 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 5.9  | 17.9  | 19.9 | 17.1 | 15.0 | 19.0 | 6.5  | 13.2 |      |      |      |      |
| Green Ext Time (p_c), s  | 0.1  | 5.5   | 0.0  | 3.7  | 0.0  | 3.6  | 0.1  | 4.3  |      |      |      |      |
| <b>Intersection Summary</b>  |      |       |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay   |      |       |      | 38.0 |      |      |      |      |      |      |      |      |
| HCM 6th LOS  |      |       |      | D    |      |      |      |      |      |      |      |      |
| <b>Notes</b>   |      |       |      |      |      |      |      |      |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |      |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
4: Lasselie St. & Cahuillia Dr.

10/23/2018

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      | ↗    | ↕    | ↗    |      | ↕    |
| Traffic Vol, veh/h       | 0    | 80   | 1262 | 150  | 0    | 948  |
| Future Vol, veh/h        | 0    | 80   | 1262 | 150  | 0    | 948  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 3    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 91   | 1434 | 170  | 0    | 1077 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 720    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 370    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | -      | 369    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 17.9 | 0  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 369   |
| HCM Lane V/C Ratio    | -   | -        | 0.246 |
| HCM Control Delay (s) | -   | -        | 17.9  |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 1     |

HCM 6th TWSC  
5: Lasselie St. & Driveway 1

10/23/2018

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      | ↗    | ↕    |      |      | ↕    |
| Traffic Vol, veh/h       | 0    | 37   | 1360 | 27   | 0    | 970  |
| Future Vol, veh/h        | 0    | 37   | 1360 | 27   | 0    | 970  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 40   | 1478 | 29   | 0    | 1054 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 754    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 352    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | -      | 352    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 16.5 | 0  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 352   |
| HCM Lane V/C Ratio    | -   | -        | 0.114 |
| HCM Control Delay (s) | -   | -        | 16.5  |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 0.4   |

Timings

6: Lasselie St. & Krameria Av.

10/25/2018



| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕↗    | ↖     | ↖     | ↕↗    |
| Traffic Volume (vph) | 257   | 271   | 121   | 178   | 322   | 1042  | 237   | 141   | 722   |
| Future Volume (vph)  | 257   | 271   | 121   | 178   | 322   | 1042  | 237   | 141   | 722   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 14.6  | 34.8  | 11.0  | 31.2  | 28.0  | 51.4  | 11.0  | 12.8  | 36.2  |
| Total Split (%)      | 13.3% | 31.6% | 10.0% | 28.4% | 25.5% | 46.7% | 10.0% | 11.6% | 32.9% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 100.7  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated

































Splits and Phases: 6: Lasselie St. & Krameria Av.





HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

10/25/2018

|  |    |    |  |    |    |  |   |    |    |    |    |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |   |   |   |   |   |   |   |   |   |   |   |
| Traffic Volume (veh/h)   | 257   | 271   | 332   | 121   | 178   | 88  | 322   | 1042  | 237   | 141   | 722   | 107   |
| Future Volume (veh/h)  | 257   | 271   | 332   | 121   | 178   | 88  | 322   | 1042  | 237   | 141   | 722   | 107   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.98  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 299   | 315   | 210   | 141   | 207   | 75  | 374   | 1212  | 191   | 164   | 840   | 97  |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 382   | 448   | 291   | 130   | 456   | 160   | 414   | 1600  | 800   | 163   | 991   | 114   |
| Arrive On Green  | 0.11  | 0.22  | 0.20  | 0.07  | 0.18  | 0.17  | 0.23  | 0.45  | 0.44  | 0.09  | 0.31  | 0.29  |
| Sat Flow, veh/h  | 3456  | 2055  | 1335  | 1781  | 2570  | 901   | 1781  | 3554  | 1562  | 1781  | 3201  | 370   |
| Grp Volume(v), veh/h   | 299   | 271   | 254   | 141   | 141   | 141   | 374   | 1212  | 191   | 164   | 466   | 471   |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1777  | 1614  | 1781  | 1777  | 1694  | 1781  | 1777  | 1562  | 1781  | 1777  | 1794  |
| Q Serve(g_s), s  | 8.1   | 13.5  | 14.1  | 7.0   | 6.8   | 7.2   | 19.6  | 27.3  | 6.5   | 8.8   | 23.6  | 23.6  |
| Cycle Q Clear(g_c), s  | 8.1   | 13.5  | 14.1  | 7.0   | 6.8   | 7.2   | 19.6  | 27.3  | 6.5   | 8.8   | 23.6  | 23.6  |
| Prop In Lane   | 1.00  |   | 0.83  | 1.00  |   | 0.53  | 1.00  |   | 1.00  | 1.00  |   | 0.21  |
| Lane Grp Cap(c), veh/h   | 382   | 388   | 352   | 130   | 316   | 301   | 414   | 1600  | 800   | 163   | 550   | 555   |
| V/C Ratio(X)   | 0.78  | 0.70  | 0.72  | 1.08  | 0.45  | 0.47  | 0.90  | 0.76  | 0.24  | 1.00  | 0.85  | 0.85  |
| Avail Cap(c_a), veh/h  | 382   | 571   | 518   | 130   | 504   | 480   | 446   | 1756  | 868   | 163   | 596   | 602   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 41.5  | 34.6  | 35.3  | 44.5  | 35.2  | 35.7  | 35.8  | 22.0  | 13.1  | 43.6  | 31.0  | 31.2  |
| Incr Delay (d2), s/veh   | 9.3   | 2.3   | 2.8   | 103.4   | 1.0   | 1.1   | 19.7  | 1.8   | 0.2   | 71.3  | 10.4  | 10.3  |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 3.8   | 5.8   | 5.6   | 6.8   | 3.0   | 3.0   | 10.3  | 10.6  | 2.2   | 7.0   | 11.0  | 11.1  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 50.9  | 36.9  | 38.1  | 147.9   | 36.2  | 36.8  | 55.4  | 23.8  | 13.2  | 114.9   | 41.4  | 41.5  |
| LnGrp LOS  | D   | D   | D   | F   | D   | D   | E   | C   | B   | F   | D   | D   |
| Approach Vol, veh/h  |   | 824   |   |   | 423   |   |   | 1777  |   |   | 1101  |   |
| Approach Delay, s/veh  |   | 42.3  |   |   | 73.6  |   |   | 29.3  |   |   | 52.4  |   |
| Approach LOS   |   | D   |   |   | E   |   |   | C   |   |   | D   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 12.8  | 47.2  | 11.0  | 24.9  | 26.3  | 33.7  | 14.6  | 21.3  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 8.2   | 45.6  | 6.4   | 29.4  | 23.4  | 30.4  | 10.0  | * 26  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 10.8  | 29.3  | 9.0   | 16.1  | 21.6  | 25.6  | 10.1  | 9.2   |   |   |   |   |
| Green Ext Time (p_c), s  | 0.0   | 8.0   | 0.0   | 2.5   | 0.1   | 2.3   | 0.0   | 1.4   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 42.6  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | D   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

6: Lasselie St. & Krameria Av.

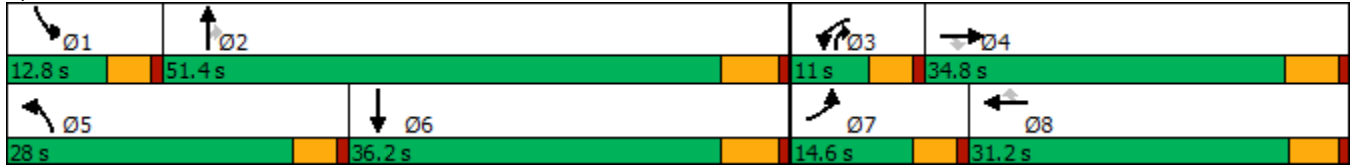
10/23/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 257   | 271   | 332   | 121   | 178   | 88    | 322   | 1042  | 237   | 141   | 722   |
| Future Volume (vph)  | 257   | 271   | 332   | 121   | 178   | 88    | 322   | 1042  | 237   | 141   | 722   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 14.6  | 34.8  | 34.8  | 11.0  | 31.2  | 31.2  | 28.0  | 51.4  | 11.0  | 12.8  | 36.2  |
| Total Split (%)      | 13.3% | 31.6% | 31.6% | 10.0% | 28.4% | 28.4% | 25.5% | 46.7% | 10.0% | 11.6% | 32.9% |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 102.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

10/23/2018

| Movement   | EBL   | EBT   | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL   | SBT  | SBR  |
|--|-------|-------|------|-------|------|------|------|-------|------|-------|------|------|
| Lane Configurations  |       |       |      |       |      |      |      |       |      |       |      |      |
| Traffic Volume (veh/h)   | 257   | 271   | 332  | 121   | 178  | 88   | 322  | 1042  | 237  | 141   | 722  | 107  |
| Future Volume (veh/h)  | 257   | 271   | 332  | 121   | 178  | 88   | 322  | 1042  | 237  | 141   | 722  | 107  |
| Initial Q (Qb), veh  | 0     | 0     | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00  |       | 0.99 | 1.00  |      | 0.99 | 1.00 |       | 0.98 | 1.00  |      | 0.96 |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach  |       | No    |      |       | No   |      |      | No    |      |       | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 299   | 315   | 210  | 141   | 207  | 75   | 374  | 1212  | 191  | 164   | 840  | 97   |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86 | 0.86  | 0.86 | 0.86 | 0.86 | 0.86  | 0.86 | 0.86  | 0.86 | 0.86 |
| Percent Heavy Veh, %   | 2     | 2     | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2     | 2    | 2    |
| Cap, veh/h   | 195   | 415   | 326  | 129   | 340  | 267  | 413  | 1599  | 791  | 162   | 986  | 114  |
| Arrive On Green  | 0.11  | 0.22  | 0.21 | 0.07  | 0.18 | 0.17 | 0.23 | 0.45  | 0.44 | 0.09  | 0.31 | 0.29 |
| Sat Flow, veh/h  | 1781  | 1870  | 1569 | 1781  | 1870 | 1564 | 1781 | 3554  | 1547 | 1781  | 3195 | 369  |
| Grp Volume(v), veh/h   | 299   | 315   | 210  | 141   | 207  | 75   | 374  | 1212  | 191  | 164   | 467  | 470  |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1569 | 1781  | 1870 | 1564 | 1781 | 1777  | 1547 | 1781  | 1777 | 1787 |
| Q Serve(g_s), s  | 10.6  | 15.3  | 11.9 | 7.0   | 9.9  | 4.1  | 19.8 | 27.6  | 6.7  | 8.8   | 23.9 | 23.9 |
| Cycle Q Clear(g_c), s  | 10.6  | 15.3  | 11.9 | 7.0   | 9.9  | 4.1  | 19.8 | 27.6  | 6.7  | 8.8   | 23.9 | 23.9 |
| Prop In Lane   | 1.00  |       | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00  |      | 0.21 |
| Lane Grp Cap(c), veh/h   | 195   | 415   | 326  | 129   | 340  | 267  | 413  | 1599  | 791  | 162   | 548  | 551  |
| V/C Ratio(X)   | 1.54  | 0.76  | 0.64 | 1.10  | 0.61 | 0.28 | 0.90 | 0.76  | 0.24 | 1.01  | 0.85 | 0.85 |
| Avail Cap(c_a), veh/h  | 195   | 594   | 476  | 129   | 525  | 421  | 441  | 1738  | 852  | 162   | 590  | 594  |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 43.2  | 35.3  | 35.1 | 45.0  | 36.5 | 35.0 | 36.2 | 22.3  | 13.3 | 44.1  | 31.4 | 31.6 |
| Incr Delay (d2), s/veh   | 264.9 | 3.5   | 2.1  | 107.5 | 1.8  | 0.6  | 20.2 | 1.8   | 0.2  | 74.6  | 10.9 | 10.9 |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 18.8  | 7.1   | 4.6  | 6.9   | 4.6  | 1.6  | 10.4 | 10.8  | 2.2  | 7.1   | 11.2 | 11.3 |
| Unsig. Movement Delay, s/veh   |       |       |      |       |      |      |      |       |      |       |      |      |
| LnGrp Delay(d),s/veh   | 308.1 | 38.7  | 37.3 | 152.5 | 38.2 | 35.6 | 56.4 | 24.1  | 13.5 | 118.6 | 42.4 | 42.5 |
| LnGrp LOS  | F     | D     | D    | F     | D    | D    | E    | C     | B    | F     | D    | D    |
| Approach Vol, veh/h  |       | 824   |      |       | 423  |      |      | 1777  |      |       | 1101 |      |
| Approach Delay, s/veh  |       | 136.1 |      |       | 75.8 |      |      | 29.7  |      |       | 53.8 |      |
| Approach LOS   |       | F     |      |       | E    |      |      | C     |      |       | D    |      |
| Timer - Assigned Phs   | 1     | 2     | 3    | 4     | 5    | 6    | 7    | 8     |      |       |      |      |
| Phs Duration (G+Y+Rc), s   | 12.8  | 47.6  | 11.0 | 25.5  | 26.5 | 33.9 | 14.6 | 21.9  |      |       |      |      |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6  | 5.4   | 4.6  | 5.8  | 4.6  | * 5.4 |      |       |      |      |
| Max Green Setting (Gmax), s  | 8.2   | 45.6  | 6.4  | 29.4  | 23.4 | 30.4 | 10.0 | * 26  |      |       |      |      |
| Max Q Clear Time (g_c+I1), s   | 10.8  | 29.6  | 9.0  | 17.3  | 21.8 | 25.9 | 12.6 | 11.9  |      |       |      |      |
| Green Ext Time (p_c), s  | 0.0   | 7.9   | 0.0  | 2.0   | 0.1  | 2.2  | 0.0  | 1.1   |      |       |      |      |
| <b>Intersection Summary</b>  |       |       |      |       |      |      |      |       |      |       |      |      |
| HCM 6th Ctrl Delay   |       |       | 62.1 |       |      |      |      |       |      |       |      |      |
| HCM 6th LOS  |       |       | E    |       |      |      |      |       |      |       |      |      |
| <b>Notes</b>   |       |       |      |       |      |      |      |       |      |       |      |      |
| User approved pedestrian interval to be less than phase max green.                                 |       |       |      |       |      |      |      |       |      |       |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |       |       |      |       |      |      |      |       |      |       |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

10/23/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.4  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↶    | ↷    |      | ↶    | ↷    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 80   | 523  | 46   | 48   | 278  | 3    | 62   | 1    | 79   | 4    | 1    | 47   |
| Future Vol, veh/h        | 80   | 523  | 46   | 48   | 278  | 3    | 62   | 1    | 79   | 4    | 1    | 47   |
| Conflicting Peds, #/hr   | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 104  | 679  | 60   | 62   | 361  | 4    | 81   | 1    | 103  | 5    | 1    | 61   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 365    | 0 | 0 | 741    | 0 | 0 | 1437   | 1408  | 711   | 1456   | 1436  | 363   |
| Stage 1              | -      | - | - | -      | - | - | 919    | 919   | -     | 487    | 487   | -     |
| Stage 2              | -      | - | - | -      | - | - | 518    | 489   | -     | 969    | 949   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 5      | 6.52  | 5     | 5      | 6.52  | 5     |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1194   | - | - | 866    | - | - | 259    | 139   | 551   | 254    | 133   | 771   |
| Stage 1              | -      | - | - | -      | - | - | 325    | 350   | -     | 562    | 550   | -     |
| Stage 2              | -      | - | - | -      | - | - | 541    | 549   | -     | 305    | 339   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1194   | - | - | 864    | - | - | 209    | 118   | 550   | 182    | 113   | 771   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 266    | 260   | -     | 156    | 224   | -     |
| Stage 1              | -      | - | - | -      | - | - | 296    | 319   | -     | 513    | 510   | -     |
| Stage 2              | -      | - | - | -      | - | - | 461    | 509   | -     | 226    | 309   | -     |

| Approach             | EB |  |  | WB  |  |  | NB   |  |  | SB   |  |  |
|----------------------|----|--|--|-----|--|--|------|--|--|------|--|--|
| HCM Control Delay, s | 1  |  |  | 1.4 |  |  | 23.7 |  |  | 12.1 |  |  |
| HCM LOS              |    |  |  |     |  |  | C    |  |  | B    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 373   | 1194  | -   | -   | 864   | -   | -   | 571   |
| HCM Lane V/C Ratio    | 0.494 | 0.087 | -   | -   | 0.072 | -   | -   | 0.118 |
| HCM Control Delay (s) | 23.7  | 8.3   | -   | -   | 9.5   | -   | -   | 12.1  |
| HCM Lane LOS          | C     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 2.6   | 0.3   | -   | -   | 0.2   | -   | -   | 0.4   |



HCM 6th TWSC  
 9: Krameria Av. & Driveway/Quarter Horse Rd.

10/23/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 8    | 0    | 16   | 8    | 1    | 6    | 19   | 564  | 14   | 5    | 297  | 0    |
| Future Vol, veh/h        | 8    | 0    | 16   | 8    | 1    | 6    | 19   | 564  | 14   | 5    | 297  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 69   | 0    | 0    | 21   | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 11   | 0    | 22   | 11   | 1    | 8    | 26   | 783  | 19   | 7    | 413  | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1345   | 1302  | 413    | 1304  | 1293   | 883   | 413    | 0 | 0 | 823   | 0 | 0 |
| Stage 1              | 427    | 427   | -      | 866   | 866    | -     | -      | - | - | -     | - | - |
| Stage 2              | 918    | 875   | -      | 438   | 427    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 129    | 161   | 639    | 137   | 163    | 345   | 1146   | - | - | 807   | - | - |
| Stage 1              | 606    | 585   | -      | 348   | 370    | -     | -      | - | - | -     | - | - |
| Stage 2              | 326    | 367   | -      | 597   | 585    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 114    | 153   | 639    | 126   | 155    | 316   | 1146   | - | - | 791   | - | - |
| Mov Cap-2 Maneuver   | 218    | 260   | -      | 241   | 263    | -     | -      | - | - | -     | - | - |
| Stage 1              | 592    | 580   | -      | 333   | 354    | -     | -      | - | - | -     | - | - |
| Stage 2              | 289    | 351   | -      | 571   | 580    | -     | -      | - | - | -     | - | - |

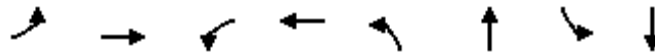
| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 15.1 | 19.6 | 0.3 | 0.2 |
| HCM LOS              | C    | C    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 1146  | -   | -   | 389        | 268   | 791   | -   |
| HCM Lane V/C Ratio    | 0.023 | -   | -   | 0.086      | 0.078 | 0.009 | -   |
| HCM Control Delay (s) | 8.2   | -   | -   | 15.1       | 19.6  | 9.6   | -   |
| HCM Lane LOS          | A     | -   | -   | C          | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.3        | 0.3   | 0     | -   |

Timings

2: Kitching St. & Krameria Av.

10/25/2018

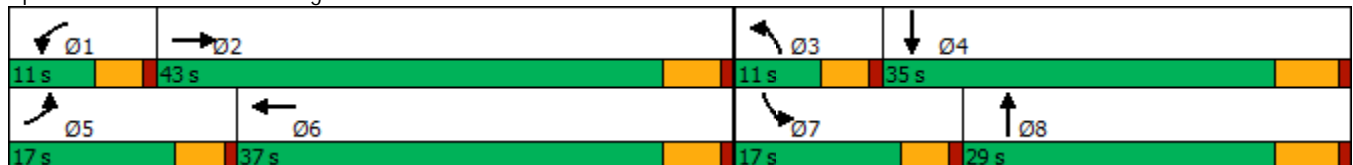


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 83    | 245   | 22    | 212   | 25    | 73    | 90    | 78    |
| Future Volume (vph)  | 83    | 245   | 22    | 212   | 25    | 73    | 90    | 78    |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 17.0  | 43.0  | 11.0  | 37.0  | 11.0  | 29.0  | 17.0  | 35.0  |
| Total Split (%)      | 17.0% | 43.0% | 11.0% | 37.0% | 11.0% | 29.0% | 17.0% | 35.0% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 58.3  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Kitching St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
 2: Kitching St. & Krameria Av.

10/25/2018

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 83   | 245  | 32   | 22   | 212  | 90   | 25   | 73   | 19   | 90   | 78   | 84   |
| Future Volume (veh/h)        | 83   | 245  | 32   | 22   | 212  | 90   | 25   | 73   | 19   | 90   | 78   | 84   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 0.98 | 1.00 |      | 0.98 | 1.00 |      | 1.00 | 1.00 |      | 0.98 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 86   | 253  | 27   | 23   | 219  | 75   | 26   | 75   | 14   | 93   | 80   | 51   |
| Peak Hour Factor             | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 148  | 933  | 99   | 71   | 638  | 212  | 76   | 765  | 139  | 153  | 639  | 373  |
| Arrive On Green              | 0.08 | 0.29 | 0.26 | 0.04 | 0.24 | 0.22 | 0.04 | 0.25 | 0.22 | 0.09 | 0.30 | 0.26 |
| Sat Flow, veh/h              | 1781 | 3237 | 342  | 1781 | 2609 | 866  | 1781 | 3002 | 546  | 1781 | 2143 | 1251 |
| Grp Volume(v), veh/h         | 86   | 138  | 142  | 23   | 147  | 147  | 26   | 44   | 45   | 93   | 65   | 66   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1803 | 1781 | 1777 | 1698 | 1781 | 1777 | 1771 | 1781 | 1777 | 1617 |
| Q Serve(g_s), s              | 2.2  | 2.9  | 3.0  | 0.6  | 3.3  | 3.5  | 0.7  | 0.9  | 1.0  | 2.4  | 1.3  | 1.5  |
| Cycle Q Clear(g_c), s        | 2.2  | 2.9  | 3.0  | 0.6  | 3.3  | 3.5  | 0.7  | 0.9  | 1.0  | 2.4  | 1.3  | 1.5  |
| Prop In Lane                 | 1.00 |      | 0.19 | 1.00 |      | 0.51 | 1.00 |      | 0.31 | 1.00 |      | 0.77 |
| Lane Grp Cap(c), veh/h       | 148  | 512  | 519  | 71   | 435  | 416  | 76   | 453  | 452  | 153  | 530  | 482  |
| V/C Ratio(X)                 | 0.58 | 0.27 | 0.27 | 0.32 | 0.34 | 0.35 | 0.34 | 0.10 | 0.10 | 0.61 | 0.12 | 0.14 |
| Avail Cap(c_a), veh/h        | 479  | 1433 | 1454 | 258  | 1213 | 1159 | 258  | 919  | 916  | 479  | 1139 | 1037 |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 21.3 | 13.3 | 13.4 | 22.6 | 15.0 | 15.4 | 22.5 | 13.8 | 14.0 | 21.3 | 12.4 | 12.9 |
| Incr Delay (d2), s/veh       | 1.3  | 0.3  | 0.3  | 1.0  | 0.5  | 0.5  | 1.0  | 0.1  | 0.1  | 1.4  | 0.1  | 0.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.9  | 1.0  | 1.0  | 0.2  | 1.1  | 1.2  | 0.3  | 0.3  | 0.3  | 0.9  | 0.4  | 0.4  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 22.7 | 13.6 | 13.7 | 23.5 | 15.5 | 15.9 | 23.4 | 13.8 | 14.1 | 22.7 | 12.5 | 13.1 |
| LnGrp LOS                    | C    | B    | B    | C    | B    | B    | C    | B    | B    | C    | B    | B    |
| Approach Vol, veh/h          |      | 366  |      |      | 317  |      |      | 115  |      |      | 224  |      |
| Approach Delay, s/veh        |      | 15.8 |      |      | 16.3 |      |      | 16.1 |      |      | 16.9 |      |
| Approach LOS                 |      | B    |      |      | B    |      |      | B    |      |      | B    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 5.9  | 17.9 | 6.1  | 18.4 | 8.0  | 15.8 | 8.2  | 16.3 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  |      |      |      |      |
| Max Green Setting (Gmax), s  | 6.4  | 37.6 | 6.4  | 29.2 | 12.4 | 31.6 | 12.4 | 23.2 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 2.6  | 5.0  | 2.7  | 3.5  | 4.2  | 5.5  | 4.4  | 3.0  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 1.5  | 0.0  | 0.6  | 0.0  | 1.6  | 0.1  | 0.3  |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 16.2 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | B    |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

3: Lasselle St. & Iris Av.

10/25/2018

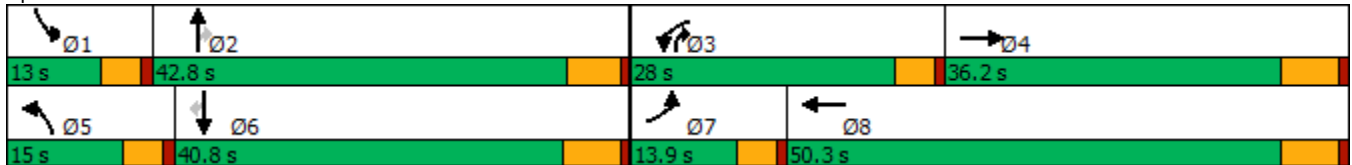


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕↗    | ↖↗    | ↕↗    | ↖↗    | ↕↕    | ↖     | ↖↗    | ↕↕    | ↖     |
| Traffic Volume (vph) | 142   | 396   | 600   | 554   | 260   | 550   | 414   | 192   | 679   | 96    |
| Future Volume (vph)  | 142   | 396   | 600   | 554   | 260   | 550   | 414   | 192   | 679   | 96    |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 13.9  | 36.2  | 28.0  | 50.3  | 15.0  | 42.8  | 28.0  | 13.0  | 40.8  | 40.8  |
| Total Split (%)      | 11.6% | 30.2% | 23.3% | 41.9% | 12.5% | 35.7% | 23.3% | 10.8% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 101.1  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated


































Splits and Phases: 3: Lasselle St. & Iris Av.





HCM 6th Signalized Intersection Summary  
 3: Lasselle St. & Iris Av.

10/25/2018

|  |    |    |  |    |    |  |    |    |  |    |    |    |
|--|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |    |   |   |    |   |   |   |  |   |   |   |
| Traffic Volume (veh/h)   | 142   | 396   | 329   | 600   | 554   | 91  | 260  | 550   | 414   | 192   | 679   | 96  |
| Future Volume (veh/h)  | 142   | 396   | 329   | 600   | 554   | 91  | 260  | 550   | 414   | 192   | 679   | 96  |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 0.98  | 1.00  |   | 0.95  | 1.00   |   | 0.96  | 1.00  |   | 0.96  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |  | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870   | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 149   | 417   | 259   | 632   | 583   | 68  | 274  | 579   | 233   | 202   | 715   | 49  |
| Peak Hour Factor   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2  | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 227   | 875   | 400   | 708   | 1829  | 210   | 348  | 1091  | 777   | 279   | 1033  | 445   |
| Arrive On Green  | 0.07  | 0.26  | 0.24  | 0.20  | 0.40  | 0.38  | 0.10   | 0.31  | 0.30  | 0.08  | 0.29  | 0.29  |
| Sat Flow, veh/h  | 3456  | 3404  | 1556  | 3456  | 4617  | 530   | 3456   | 3554  | 1526  | 3456  | 3554  | 1529  |
| Grp Volume(v), veh/h   | 149   | 417   | 259   | 632   | 427   | 224   | 274  | 579   | 233   | 202   | 715   | 49  |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1702  | 1556  | 1728  | 1702  | 1743  | 1728   | 1777  | 1526  | 1728  | 1777  | 1529  |
| Q Serve(g_s), s  | 4.6   | 11.3  | 16.4  | 19.4  | 9.5   | 9.8   | 8.5  | 14.7  | 9.8   | 6.2   | 19.5  | 2.6   |
| Cycle Q Clear(g_c), s  | 4.6   | 11.3  | 16.4  | 19.4  | 9.5   | 9.8   | 8.5  | 14.7  | 9.8   | 6.2   | 19.5  | 2.6   |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 0.30  | 1.00   |   | 1.00  | 1.00  |   | 1.00  |
| Lane Grp Cap(c), veh/h   | 227   | 875   | 400   | 708   | 1349  | 691   | 348  | 1091  | 777   | 279   | 1033  | 445   |
| V/C Ratio(X)   | 0.66  | 0.48  | 0.65  | 0.89  | 0.32  | 0.32  | 0.79   | 0.53  | 0.30  | 0.72  | 0.69  | 0.11  |
| Avail Cap(c_a), veh/h  | 313   | 1004  | 459   | 760   | 1443  | 739   | 348  | 1263  | 850   | 285   | 1198  | 515   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 49.8  | 34.3  | 37.2  | 42.2  | 22.8  | 23.1  | 47.9   | 31.3  | 16.0  | 49.0  | 34.4  | 28.4  |
| Incr Delay (d2), s/veh   | 1.2   | 0.4   | 2.6   | 11.7  | 0.1   | 0.3   | 10.5   | 0.4   | 0.2   | 7.4   | 1.4   | 0.1   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 1.9   | 4.5   | 6.3   | 9.0   | 3.6   | 3.8   | 4.0  | 6.1   | 3.2   | 2.9   | 8.1   | 0.9   |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |  |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 51.0  | 34.7  | 39.8  | 54.0  | 22.9  | 23.4  | 58.4   | 31.7  | 16.3  | 56.4  | 35.8  | 28.5  |
| LnGrp LOS  | D   | C   | D   | D   | C   | C   | E  | C   | B   | E   | D   | C   |
| Approach Vol, veh/h  |   | 825   |   |   | 1283  |   |  | 1086  |   |   | 966   |   |
| Approach Delay, s/veh  |   | 39.3  |   |   | 38.3  |   |  | 35.1  |   |   | 39.7  |   |
| Approach LOS   |   | D   |   |   | D   |   |  | D   |   |   | D   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 12.8  | 37.9  | 26.4  | 32.1  | 15.0  | 35.7  | 11.2   | 47.3  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | * 6.2   | 4.6   | 6.2   | 4.6   | 6.2   | 4.6  | 6.2   |   |   |   |   |
| Max Green Setting (Gmax), s  | 8.4   | * 37  | 23.4  | 30.0  | 10.4  | 34.6  | 9.3  | 44.1  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 8.2   | 16.7  | 21.4  | 18.4  | 10.5  | 21.5  | 6.6  | 11.8  |   |   |   |   |
| Green Ext Time (p_c), s  | 0.0   | 4.3   | 0.3   | 3.1   | 0.0   | 3.7   | 0.1  | 4.0   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |  |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   |   | 38.0  |   |   |  |   |   |   |   |   |
| HCM 6th LOS  |   |   |   | D   |   |   |  |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |  |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |  |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
4: Lasselle St. & Cahuillia Dr.

10/25/2018

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      | ↗    | ↕    | ↗    |      | ↕    |
| Traffic Vol, veh/h       | 0    | 109  | 861  | 75   | 0    | 1214 |
| Future Vol, veh/h        | 0    | 109  | 861  | 75   | 0    | 1214 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 2    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 112  | 888  | 77   | 0    | 1252 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 446    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 560    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | -      | 559    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 13.1 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 559   |
| HCM Lane V/C Ratio    | -   | -        | 0.201 |
| HCM Control Delay (s) | -   | -        | 13.1  |
| HCM Lane LOS          | -   | -        | B     |
| HCM 95th %tile Q(veh) | -   | -        | 0.7   |

HCM 6th TWSC  
5: Lasselie St. & Driveway 1

10/25/2018

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      | ↗    | ↕    |      |      | ↕    |
| Traffic Vol, veh/h       | 0    | 54   | 882  | 57   | 0    | 1211 |
| Future Vol, veh/h        | 0    | 54   | 882  | 57   | 0    | 1211 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 59   | 959  | 62   | 0    | 1316 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 511    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 508    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | -      | 508    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB | NB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 13 | 0  | 0  |
| HCM LOS              | B  |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 508   |
| HCM Lane V/C Ratio    | -   | -        | 0.116 |
| HCM Control Delay (s) | -   | -        | 13    |
| HCM Lane LOS          | -   | -        | B     |
| HCM 95th %tile Q(veh) | -   | -        | 0.4   |

Timings

6: Lasselie St. & Krameria Av.

10/25/2018

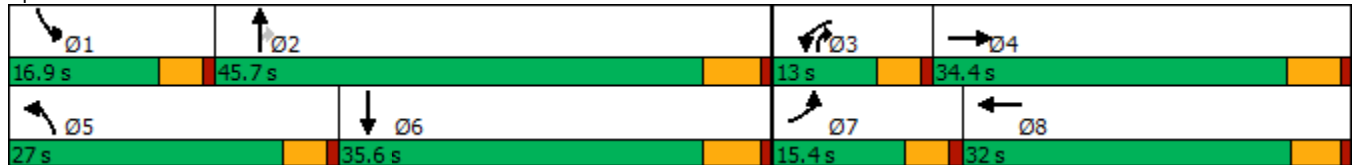


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕↗    | ↖     | ↖     | ↕↗    |
| Traffic Volume (vph) | 257   | 271   | 121   | 178   | 322   | 1042  | 237   | 141   | 722   |
| Future Volume (vph)  | 257   | 271   | 121   | 178   | 322   | 1042  | 237   | 141   | 722   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 15.4  | 34.4  | 13.0  | 32.0  | 27.0  | 45.7  | 13.0  | 16.9  | 35.6  |
| Total Split (%)      | 14.0% | 31.3% | 11.8% | 29.1% | 24.5% | 41.5% | 11.8% | 15.4% | 32.4% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 96.4  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.





HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

10/25/2018

| Movement   | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|--|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations  |      |      |      |      |      |      |      |       |      |      |      |      |
| Traffic Volume (veh/h)   | 257  | 271  | 332  | 121  | 178  | 88   | 322  | 1042  | 237  | 141  | 722  | 107  |
| Future Volume (veh/h)  | 257  | 271  | 332  | 121  | 178  | 88   | 322  | 1042  | 237  | 141  | 722  | 107  |
| Initial Q (Qb), veh  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |      | 1.00 | 1.00 |      | 0.98 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  |      | No   |      |      | No   |      |      | No    |      |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 271  | 285  | 254  | 127  | 187  | 60   | 339  | 1097  | 229  | 148  | 760  | 101  |
| Peak Hour Factor   | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 364  | 398  | 344  | 168  | 547  | 170  | 383  | 1437  | 768  | 191  | 936  | 124  |
| Arrive On Green  | 0.11 | 0.22 | 0.21 | 0.09 | 0.21 | 0.19 | 0.21 | 0.40  | 0.39 | 0.11 | 0.30 | 0.28 |
| Sat Flow, veh/h  | 3456 | 1805 | 1561 | 1781 | 2658 | 825  | 1781 | 3554  | 1581 | 1781 | 3152 | 419  |
| Grp Volume(v), veh/h   | 271  | 280  | 259  | 127  | 123  | 124  | 339  | 1097  | 229  | 148  | 428  | 433  |
| Grp Sat Flow(s),veh/h/ln   | 1728 | 1777 | 1589 | 1781 | 1777 | 1706 | 1781 | 1777  | 1581 | 1781 | 1777 | 1794 |
| Q Serve(g_s), s  | 7.0  | 13.5 | 14.0 | 6.4  | 5.4  | 5.8  | 17.0 | 24.5  | 8.0  | 7.4  | 20.6 | 20.6 |
| Cycle Q Clear(g_c), s  | 7.0  | 13.5 | 14.0 | 6.4  | 5.4  | 5.8  | 17.0 | 24.5  | 8.0  | 7.4  | 20.6 | 20.6 |
| Prop In Lane   | 1.00 |      | 0.98 | 1.00 |      | 0.48 | 1.00 |       | 1.00 | 1.00 |      | 0.23 |
| Lane Grp Cap(c), veh/h   | 364  | 391  | 350  | 168  | 366  | 351  | 383  | 1437  | 768  | 191  | 528  | 533  |
| V/C Ratio(X)   | 0.74 | 0.72 | 0.74 | 0.76 | 0.34 | 0.35 | 0.89 | 0.76  | 0.30 | 0.77 | 0.81 | 0.81 |
| Avail Cap(c_a), veh/h  | 428  | 587  | 525  | 174  | 540  | 519  | 445  | 1609  | 845  | 250  | 610  | 616  |
| HCM Platoon Ratio  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 40.0 | 33.2 | 34.1 | 40.7 | 31.2 | 31.6 | 35.1 | 23.6  | 14.2 | 40.0 | 30.0 | 30.2 |
| Incr Delay (d2), s/veh   | 4.5  | 2.5  | 3.1  | 14.8 | 0.5  | 0.6  | 15.7 | 2.0   | 0.2  | 7.6  | 7.2  | 7.2  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 3.1  | 5.8  | 5.5  | 3.4  | 2.3  | 2.4  | 8.6  | 9.7   | 2.7  | 3.5  | 9.2  | 9.3  |
| Unsig. Movement Delay, s/veh   |      |      |      |      |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh   | 44.5 | 35.7 | 37.2 | 55.4 | 31.7 | 32.2 | 50.8 | 25.6  | 14.5 | 47.6 | 37.2 | 37.4 |
| LnGrp LOS  | D    | D    | D    | E    | C    | C    | D    | C     | B    | D    | D    | D    |
| Approach Vol, veh/h  |      | 810  |      |      | 374  |      |      | 1665  |      |      | 1009 |      |
| Approach Delay, s/veh  |      | 39.1 |      |      | 39.9 |      |      | 29.2  |      |      | 38.8 |      |
| Approach LOS   |      | D    |      |      | D    |      |      | C     |      |      | D    |      |
| Timer - Assigned Phs   | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 13.9 | 41.2 | 12.7 | 24.3 | 23.8 | 31.3 | 13.7 | 23.3  |      |      |      |      |
| Change Period (Y+Rc), s  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | * 5.4 |      |      |      |      |
| Max Green Setting (Gmax), s  | 12.3 | 39.9 | 8.4  | 29.0 | 22.4 | 29.8 | 10.8 | * 27  |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 9.4  | 26.5 | 8.4  | 16.0 | 19.0 | 22.6 | 9.0  | 7.8   |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0  | 6.6  | 0.0  | 2.6  | 0.2  | 2.9  | 0.1  | 1.2   |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |       |      |      |      |      |
| HCM 6th Ctrl Delay   |      |      |      | 34.8 |      |      |      |       |      |      |      |      |
| HCM 6th LOS  |      |      |      | C    |      |      |      |       |      |      |      |      |
| <b>Notes</b>   |      |      |      |      |      |      |      |       |      |      |      |      |
| User approved pedestrian interval to be less than phase max green.                                 |      |      |      |      |      |      |      |       |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |      |      |      |      |      |      |       |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

6: Lasselle St. & Krameria Av.

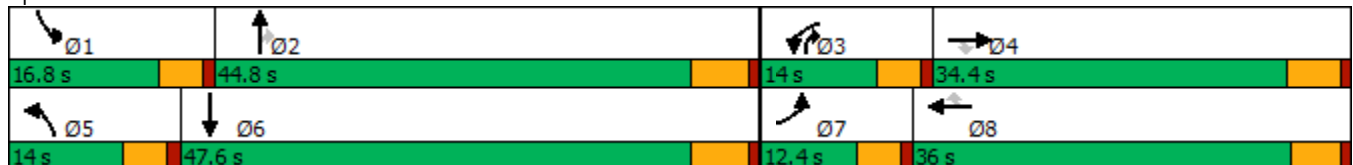
10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |  |
| Traffic Volume (vph) | 128   | 74    | 149   | 100   | 61    | 48    | 84    | 763   | 69    | 135   | 1019  |  |
| Future Volume (vph)  | 128   | 74    | 149   | 100   | 61    | 48    | 84    | 763   | 69    | 135   | 1019  |  |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |  |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |  |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |  |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |  |
| Total Split (s)      | 12.4  | 34.4  | 34.4  | 14.0  | 36.0  | 36.0  | 14.0  | 44.8  | 14.0  | 16.8  | 47.6  |  |
| Total Split (%)      | 11.3% | 31.3% | 31.3% | 12.7% | 32.7% | 32.7% | 12.7% | 40.7% | 12.7% | 15.3% | 43.3% |  |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |  |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |  |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |  |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |  |

Intersection Summary

























Cycle Length: 110  
 Actuated Cycle Length: 83  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselle St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

10/25/2018

|  |  |  |  |  |  |  |   |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)   | 128   | 74  | 149   | 100   | 61  | 48  | 84  | 763   | 69  | 135   | 1019  | 57  |
| Future Volume (veh/h)  | 128   | 74  | 149   | 100   | 61  | 48  | 84  | 763   | 69  | 135   | 1019  | 57  |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00  |   | 1.00  | 1.00  |   | 1.00  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 135   | 78  | 62  | 105   | 64  | 18  | 88  | 803   | 53  | 142   | 1073  | 48  |
| Peak Hour Factor   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 185   | 356   | 270   | 150   | 311   | 234   | 128   | 1359  | 709   | 194   | 1453  | 65  |
| Arrive On Green  | 0.10  | 0.19  | 0.17  | 0.08  | 0.17  | 0.15  | 0.07  | 0.38  | 0.36  | 0.11  | 0.42  | 0.39  |
| Sat Flow, veh/h  | 1781  | 1870  | 1585  | 1781  | 1870  | 1558  | 1781  | 3554  | 1579  | 1781  | 3464  | 155   |
| Grp Volume(v), veh/h   | 135   | 78  | 62  | 105   | 64  | 18  | 88  | 803   | 53  | 142   | 550   | 571   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1585  | 1781  | 1870  | 1558  | 1781  | 1777  | 1579  | 1781  | 1777  | 1842  |
| Q Serve(g_s), s  | 5.0   | 2.4   | 2.3   | 3.9   | 2.0   | 0.7   | 3.3   | 12.3  | 1.3   | 5.3   | 17.8  | 17.9  |
| Cycle Q Clear(g_c), s  | 5.0   | 2.4   | 2.3   | 3.9   | 2.0   | 0.7   | 3.3   | 12.3  | 1.3   | 5.3   | 17.8  | 17.9  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 0.08  |
| Lane Grp Cap(c), veh/h   | 185   | 356   | 270   | 150   | 311   | 234   | 128   | 1359  | 709   | 194   | 745   | 773   |
| V/C Ratio(X)   | 0.73  | 0.22  | 0.23  | 0.70  | 0.21  | 0.08  | 0.69  | 0.59  | 0.07  | 0.73  | 0.74  | 0.74  |
| Avail Cap(c_a), veh/h  | 219   | 831   | 672   | 260   | 875   | 704   | 260   | 2120  | 1047  | 333   | 1133  | 1174  |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 29.7  | 23.4  | 24.5  | 30.5  | 24.6  | 25.0  | 31.0  | 16.8  | 10.7  | 29.5  | 16.7  | 16.8  |
| Incr Delay (d2), s/veh   | 7.4   | 0.3   | 0.4   | 2.2   | 0.3   | 0.1   | 2.4   | 0.4   | 0.0   | 2.0   | 1.5   | 1.4   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 2.4   | 1.0   | 0.8   | 1.7   | 0.9   | 0.2   | 1.4   | 4.3   | 0.4   | 2.2   | 6.3   | 6.5   |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 37.1  | 23.7  | 24.9  | 32.7  | 24.9  | 25.1  | 33.4  | 17.3  | 10.8  | 31.5  | 18.2  | 18.2  |
| LnGrp LOS  | D   | C   | C   | C   | C   | C   | C   | B   | B   | C   | B   | B   |
| Approach Vol, veh/h  |   | 275   |   |   | 187   |   |   | 944   |   |   | 1263  |   |
| Approach Delay, s/veh  |   | 30.5  |   |   | 29.3  |   |   | 18.4  |   |   | 19.7  |   |
| Approach LOS   |   | C   |   |   | C   |   |   | B   |   |   | B   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 11.5  | 30.2  | 9.7   | 17.0  | 8.9   | 32.7  | 11.1  | 15.7  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 12.2  | 39.0  | 9.4   | 29.0  | 9.4   | 41.8  | 7.8   | * 31  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 7.3   | 14.3  | 5.9   | 4.4   | 5.3   | 19.9  | 7.0   | 4.0   |   |   |   |   |
| Green Ext Time (p_c), s  | 0.1   | 5.5   | 0.0   | 0.5   | 0.0   | 7.0   | 0.0   | 0.3   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 21.0  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | C   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↶    | ↷    |      | ↶    | ↷    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 47   | 154  | 76   | 5    | 128  | 1    | 44   | 0    | 10   | 3    | 1    | 37   |
| Future Vol, veh/h        | 47   | 154  | 76   | 5    | 128  | 1    | 44   | 0    | 10   | 3    | 1    | 37   |
| Conflicting Peds, #/hr   | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 54   | 177  | 87   | 6    | 147  | 1    | 51   | 0    | 11   | 3    | 1    | 43   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 148    | 0 | 0 | 267    | 0 | 0 | 514    | 492   | 224   | 494    | 535   | 148   |
| Stage 1              | -      | - | - | -      | - | - | 332    | 332   | -     | 160    | 160   | -     |
| Stage 2              | -      | - | - | -      | - | - | 182    | 160   | -     | 334    | 375   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 5      | 6.52  | 5     | 5      | 6.52  | 5     |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1434   | - | - | 1297   | - | - | 638    | 478   | 880   | 650    | 452   | 945   |
| Stage 1              | -      | - | - | -      | - | - | 681    | 644   | -     | 842    | 766   | -     |
| Stage 2              | -      | - | - | -      | - | - | 820    | 766   | -     | 680    | 617   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1434   | - | - | 1293   | - | - | 587    | 456   | 877   | 621    | 431   | 945   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 612    | 556   | -     | 607    | 537   | -     |
| Stage 1              | -      | - | - | -      | - | - | 654    | 618   | -     | 810    | 762   | -     |
| Stage 2              | -      | - | - | -      | - | - | 778    | 762   | -     | 646    | 592   | -     |

| Approach             | EB  |  | WB  |  | NB   |  | SB  |  |
|----------------------|-----|--|-----|--|------|--|-----|--|
| HCM Control Delay, s | 1.3 |  | 0.3 |  | 11.1 |  | 9.3 |  |
| HCM LOS              |     |  |     |  | B    |  | A   |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 648   | 1434  | -   | -   | 1293  | -   | -   | 892   |
| HCM Lane V/C Ratio    | 0.096 | 0.038 | -   | -   | 0.004 | -   | -   | 0.053 |
| HCM Control Delay (s) | 11.1  | 7.6   | -   | -   | 7.8   | -   | -   | 9.3   |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.3   | 0.1   | -   | -   | 0     | -   | -   | 0.2   |



HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 11   | 0    | 10   | 0    | 0    | 0    | 10   | 111  | 1    | 1    | 122  | 12   |
| Future Vol, veh/h        | 11   | 0    | 10   | 0    | 0    | 0    | 10   | 111  | 1    | 1    | 122  | 12   |
| Conflicting Peds, #/hr   | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 6    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 14   | 0    | 12   | 0    | 0    | 0    | 12   | 137  | 1    | 1    | 151  | 15   |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 329    | 331   | 166    | 332   | 338    | 140   | 172    | 0 | 0 | 140   | 0 | 0 |
| Stage 1              | 167    | 167   | -      | 164   | 164    | -     | -      | - | - | -     | - | - |
| Stage 2              | 162    | 164   | -      | 168   | 174    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 624    | 588   | 878    | 621   | 583    | 908   | 1405   | - | - | 1443  | - | - |
| Stage 1              | 835    | 760   | -      | 838   | 762    | -     | -      | - | - | -     | - | - |
| Stage 2              | 840    | 762   | -      | 834   | 755    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 616    | 577   | 872    | 606   | 573    | 906   | 1397   | - | - | 1440  | - | - |
| Mov Cap-2 Maneuver   | 659    | 608   | -      | 650   | 602    | -     | -      | - | - | -     | - | - |
| Stage 1              | 823    | 755   | -      | 830   | 754    | -     | -      | - | - | -     | - | - |
| Stage 2              | 833    | 754   | -      | 821   | 750    | -     | -      | - | - | -     | - | - |

| Approach             | EB | WB | NB  | SB  |
|----------------------|----|----|-----|-----|
| HCM Control Delay, s | 10 | 0  | 0.6 | 0.1 |
| HCM LOS              | B  | A  |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-----|-----|
| Capacity (veh/h)      | 1397  | -   | -   | 746        | 1440  | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | -   | 0.035      | 0.001 | -   | -   |
| HCM Control Delay (s) | 7.6   | -   | -   | 10         | 0     | 7.5 | -   |
| HCM Lane LOS          | A     | -   | -   | B          | A     | A   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.1        | 0     | -   | -   |

**APPENDIX 5.2:**  
**E+P CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **E+P Conditions - Weekday AM Peak Hour**

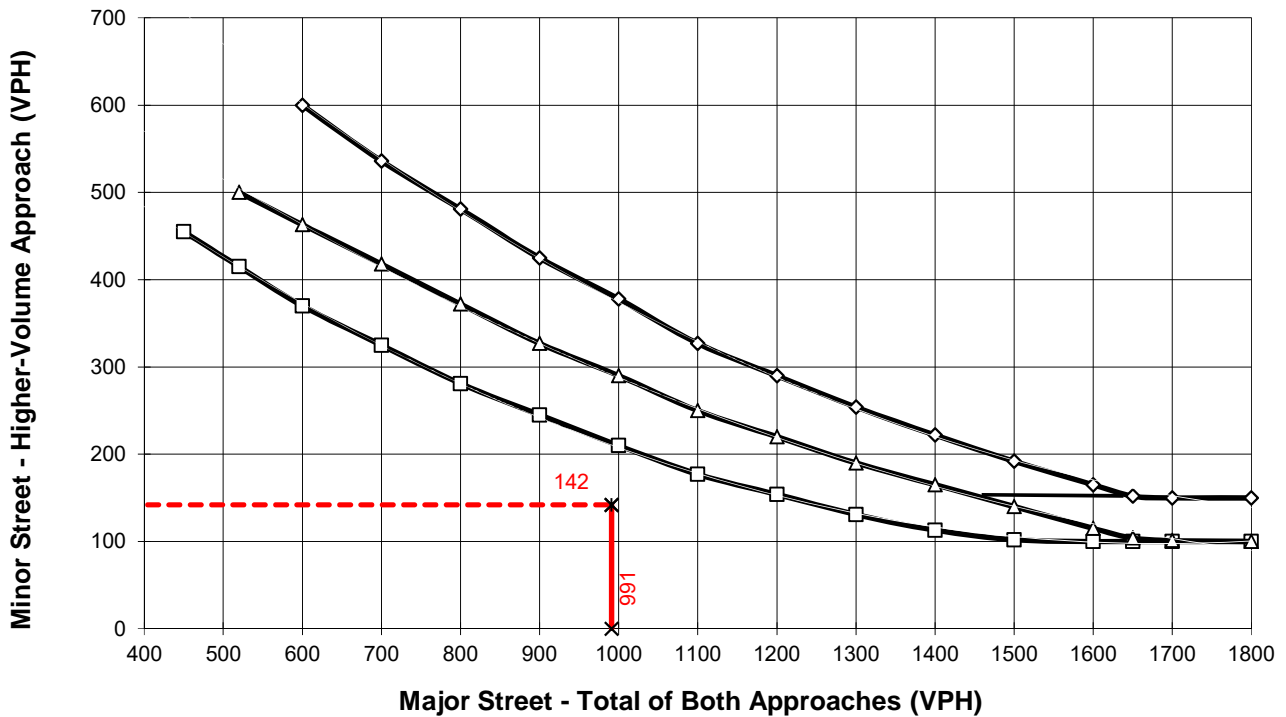
Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **991**  
 Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Colt Way**

High Volume Approach (VPH) = **142**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **E+P Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **397**

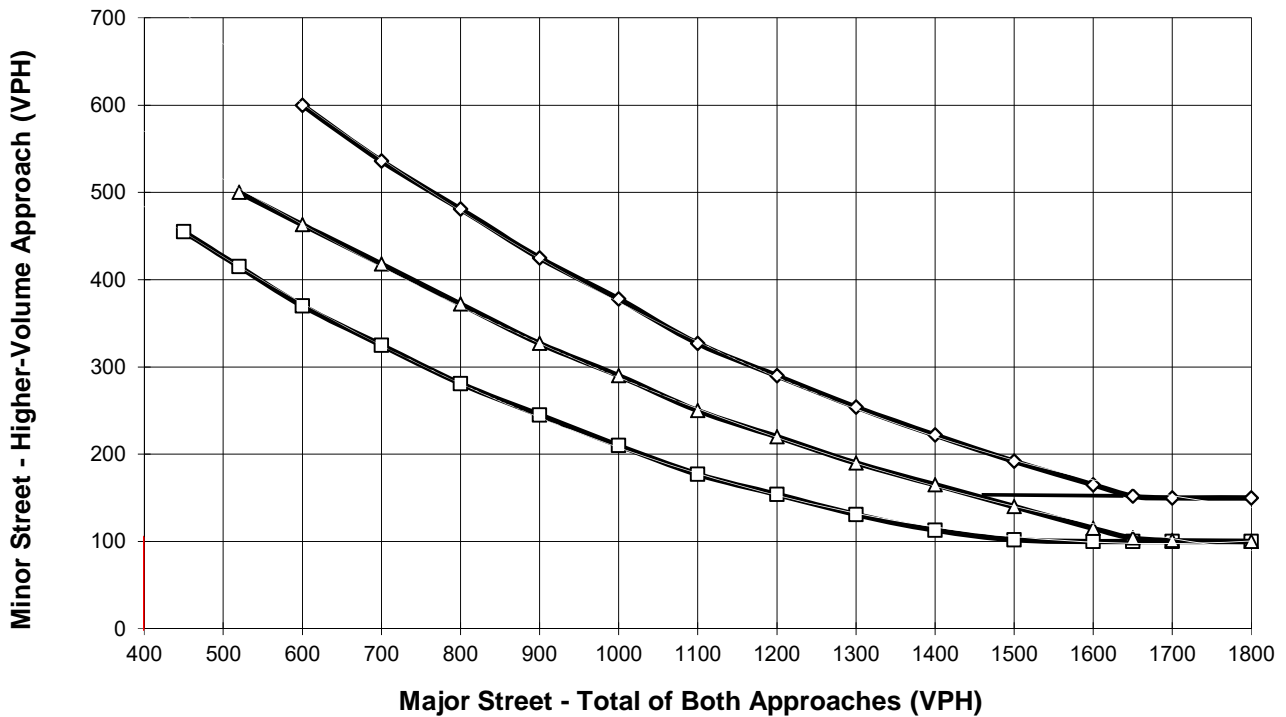
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Cahuilla Drive**

High Volume Approach (VPH) = **104**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **E+P Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **900**

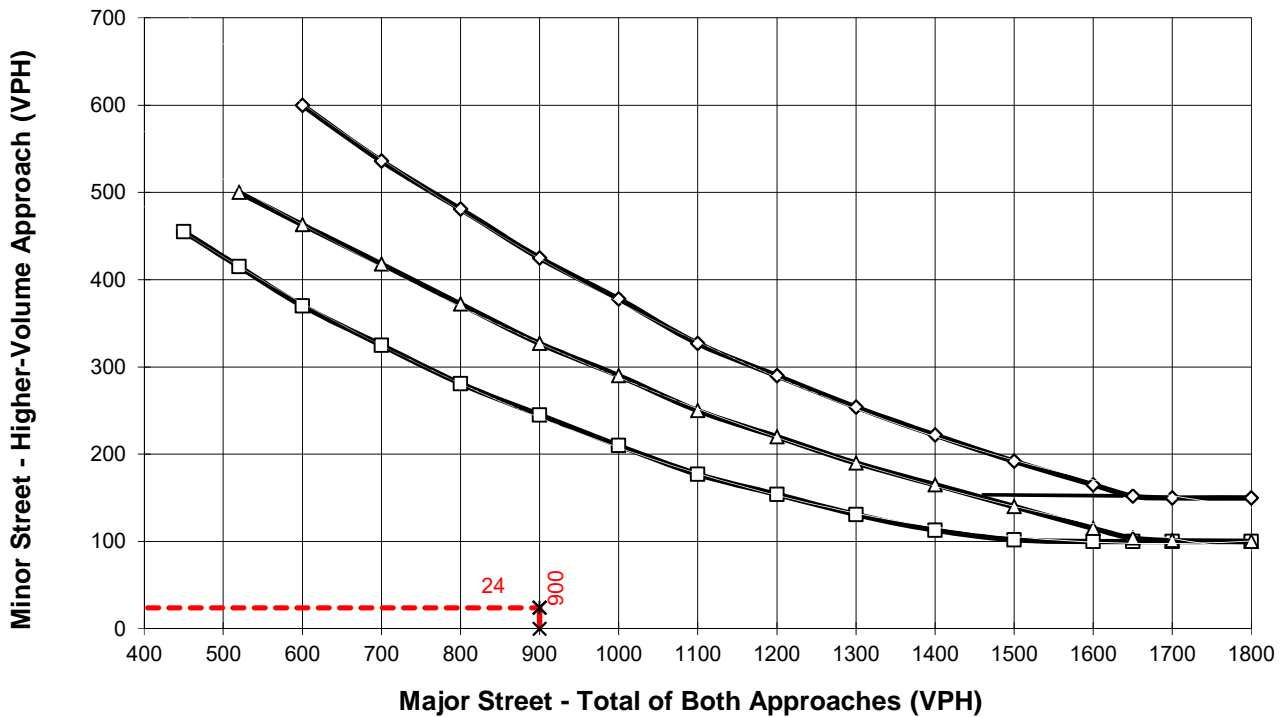
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Quarter Horse Road**

High Volume Approach (VPH) = **24**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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**APPENDIX 5.3:**  
**E+P CONDITIONS QUEUING ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Queuing and Blocking Report  
E+P - AM Peak Hour

Continental Villages (JN 11575)

10/24/2018

Intersection: 4: Lasselie St. & Cahuillia Dr.

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | R   | R   |
| Maximum Queue (ft)    | 91  | 12  |
| Average Queue (ft)    | 31  | 0   |
| 95th Queue (ft)       | 64  | 6   |
| Link Distance (ft)    | 458 |     |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     | 140 |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Intersection: 5: Lasselie St. & Driveway 1

| Movement              | WB  | SB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | R   | T   | T   |
| Maximum Queue (ft)    | 69  | 252 | 251 |
| Average Queue (ft)    | 25  | 82  | 68  |
| 95th Queue (ft)       | 53  | 242 | 222 |
| Link Distance (ft)    | 202 | 975 | 975 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

Queuing and Blocking Report  
E+P - AM Peak Hour

Continental Villages (JN 11575)

10/24/2018

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T   | T   | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1072 | 1072 | 200 | 316 | 90  | 150 | 757 | 739 | 205 | 225 | 282 |
| Average Queue (ft)    | 224 | 1046 | 1038 | 105 | 126 | 35  | 149 | 476 | 420 | 136 | 163 | 218 |
| 95th Queue (ft)       | 226 | 1058 | 1092 | 197 | 261 | 71  | 152 | 770 | 735 | 269 | 258 | 296 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953 | 953 |     |     | 225 |
| Upstream Blk Time (%) |     | 91   | 51   |     | 0   |     |     | 0   | 0   |     | 13  | 26  |
| Queuing Penalty (veh) |     | 0    | 0    |     | 1   |     |     | 0   | 0   |     | 0   | 128 |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |     |     | 180 | 240 |     |
| Storage Blk Time (%)  | 85  | 6    |      | 8   | 0   |     | 57  | 12  | 22  | 0   | 13  | 26  |
| Queuing Penalty (veh) | 231 | 16   |      | 15  | 0   |     | 294 | 37  | 53  | 1   | 48  | 37  |

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 263 |
| Average Queue (ft)    | 207 |
| 95th Queue (ft)       | 275 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 11  |
| Queuing Penalty (veh) | 52  |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | EB  | WB | WB  | NB  | SB  |
|-----------------------|----|-----|----|-----|-----|-----|
| Directions Served     | L  | TR  | L  | TR  | LTR | LTR |
| Maximum Queue (ft)    | 52 | 8   | 26 | 44  | 106 | 64  |
| Average Queue (ft)    | 14 | 0   | 8  | 2   | 52  | 28  |
| 95th Queue (ft)       | 39 | 5   | 24 | 25  | 89  | 54  |
| Link Distance (ft)    |    | 401 |    | 282 | 164 | 252 |
| Upstream Blk Time (%) |    |     |    |     |     |     |
| Queuing Penalty (veh) |    |     |    |     |     |     |
| Storage Bay Dist (ft) | 50 |     | 50 |     |     |     |
| Storage Blk Time (%)  | 0  |     | 0  | 0   |     |     |
| Queuing Penalty (veh) | 1  |     | 0  | 0   |     |     |

Queuing and Blocking Report  
E+P - AM Peak Hour

Continental Villages (JN 11575)

10/24/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | WB  | NB | NB  | SB  | SB  |
|-----------------------|-----|-----|----|-----|-----|-----|
| Directions Served     | LTR | LTR | L  | TR  | L   | TR  |
| Maximum Queue (ft)    | 44  | 37  | 36 | 90  | 30  | 55  |
| Average Queue (ft)    | 17  | 10  | 5  | 16  | 2   | 11  |
| 95th Queue (ft)       | 43  | 32  | 24 | 58  | 16  | 42  |
| Link Distance (ft)    | 245 | 150 |    | 658 |     | 453 |
| Upstream Blk Time (%) |     |     |    |     |     |     |
| Queuing Penalty (veh) |     |     |    |     |     |     |
| Storage Bay Dist (ft) |     |     | 50 |     | 100 |     |
| Storage Blk Time (%)  |     |     | 0  | 1   |     |     |
| Queuing Penalty (veh) |     |     | 0  | 0   |     |     |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | EB  | EB  | EB   | EB   | EB   | EB  | WB  | WB  | WB   | WB   | WB  | NB  |
|-----------------------|-----|-----|------|------|------|-----|-----|-----|------|------|-----|-----|
| Directions Served     | L   | L   | T    | T    | T    | R   | L   | L   | T    | T    | R   | L   |
| Maximum Queue (ft)    | 162 | 175 | 119  | 104  | 83   | 44  | 27  | 277 | 508  | 516  | 225 | 212 |
| Average Queue (ft)    | 84  | 110 | 62   | 47   | 15   | 2   | 3   | 36  | 314  | 297  | 166 | 152 |
| 95th Queue (ft)       | 149 | 163 | 106  | 88   | 48   | 19  | 18  | 156 | 457  | 463  | 284 | 229 |
| Link Distance (ft)    |     |     | 2427 | 2427 | 2427 |     |     |     | 1304 | 1304 |     |     |
| Upstream Blk Time (%) |     |     |      |      |      |     |     |     |      |      |     |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |     |      |      |     |     |
| Storage Bay Dist (ft) | 325 | 325 |      |      |      | 300 | 310 | 310 |      |      | 200 | 200 |
| Storage Blk Time (%)  |     |     |      |      |      |     |     |     | 11   | 18   | 0   | 1   |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |     | 2    | 60   | 1   | 3   |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | NB  | NB   | NB   | NB   | SB  | SB  | SB   | SB   | SB  |
|-----------------------|-----|------|------|------|-----|-----|------|------|-----|
| Directions Served     | L   | T    | T    | R    | L   | L   | T    | T    | R   |
| Maximum Queue (ft)    | 224 | 346  | 266  | 41   | 157 | 170 | 232  | 298  | 239 |
| Average Queue (ft)    | 181 | 174  | 150  | 9    | 68  | 103 | 112  | 118  | 158 |
| 95th Queue (ft)       | 237 | 299  | 232  | 30   | 137 | 158 | 179  | 237  | 254 |
| Link Distance (ft)    |     | 1103 | 1103 | 1103 |     |     | 2298 | 2298 |     |
| Upstream Blk Time (%) |     |      |      |      |     |     |      |      |     |
| Queuing Penalty (veh) |     |      |      |      |     |     |      |      |     |
| Storage Bay Dist (ft) | 200 |      |      |      | 215 | 215 |      |      | 215 |
| Storage Blk Time (%)  | 6   | 2    |      |      |     | 0   | 0    |      | 5   |
| Queuing Penalty (veh) | 17  | 8    |      |      |     | 0   | 0    |      | 9   |

Network Summary

Network wide Queuing Penalty: 1016



Queuing and Blocking Report  
E+P - PM Peak Hour

10/24/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 58  |
| Average Queue (ft)    | 26  |
| 95th Queue (ft)       | 48  |
| Link Distance (ft)    | 908 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 5: Lasselle St. & Driveway 1

| Movement              | WB  | SB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | R   | T   | T   |
| Maximum Queue (ft)    | 57  | 39  | 40  |
| Average Queue (ft)    | 23  | 2   | 2   |
| 95th Queue (ft)       | 50  | 15  | 16  |
| Link Distance (ft)    | 202 | 975 | 975 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

## Queuing and Blocking Report

### E+P - PM Peak Hour

10/24/2018

#### Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB   | NB   | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T    | T    | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1075 | 1063 | 203 | 236 | 85  | 150 | 1003 | 989  | 205 | 192 | 240 |
| Average Queue (ft)    | 224 | 1047 | 1037 | 81  | 100 | 28  | 149 | 972  | 927  | 76  | 92  | 150 |
| 95th Queue (ft)       | 225 | 1062 | 1124 | 158 | 183 | 62  | 150 | 987  | 1176 | 211 | 155 | 220 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953  | 953  |     |     | 225 |
| Upstream Blk Time (%) |     | 94   | 51   |     |     |     |     | 98   | 13   |     | 0   | 0   |
| Queuing Penalty (veh) |     | 0    | 0    |     |     |     |     | 0    | 0    |     | 0   | 2   |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |      |      | 180 | 240 |     |
| Storage Blk Time (%)  | 92  | 5    |      | 0   | 1   |     | 92  | 4    | 16   | 0   | 0   | 0   |
| Queuing Penalty (veh) | 248 | 14   |      | 0   | 1   |     | 482 | 13   | 39   | 0   | 0   | 1   |

#### Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 235 |
| Average Queue (ft)    | 152 |
| 95th Queue (ft)       | 225 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 1   |
| Queuing Penalty (veh) | 3   |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

#### Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | EB  | WB | NB  | SB  |
|-----------------------|----|-----|----|-----|-----|
| Directions Served     | L  | TR  | L  | LTR | LTR |
| Maximum Queue (ft)    | 40 | 19  | 29 | 123 | 58  |
| Average Queue (ft)    | 12 | 1   | 9  | 53  | 28  |
| 95th Queue (ft)       | 36 | 9   | 25 | 92  | 51  |
| Link Distance (ft)    |    | 401 |    | 164 | 252 |
| Upstream Blk Time (%) |    |     |    |     |     |
| Queuing Penalty (veh) |    |     |    |     |     |
| Storage Bay Dist (ft) | 50 |     | 50 |     |     |
| Storage Blk Time (%)  | 0  | 0   | 0  |     |     |
| Queuing Penalty (veh) | 1  | 0   | 0  |     |     |

Queuing and Blocking Report  
E+P - PM Peak Hour

10/24/2018

Intersection: 8: Krameria Av./Driveway & Cahuillia Dr.

| Movement              | EB  | NB  | NB  | SB  | SB  | SB |
|-----------------------|-----|-----|-----|-----|-----|----|
| Directions Served     | LR  | LT  | T   | T   | T   | R  |
| Maximum Queue (ft)    | 50  | 100 | 52  | 60  | 43  | 40 |
| Average Queue (ft)    | 19  | 52  | 21  | 30  | 4   | 14 |
| 95th Queue (ft)       | 40  | 81  | 47  | 52  | 22  | 40 |
| Link Distance (ft)    | 908 | 415 | 415 | 598 | 598 |    |
| Upstream Blk Time (%) |     |     |     |     |     |    |
| Queuing Penalty (veh) |     |     |     |     |     |    |
| Storage Bay Dist (ft) |     |     |     |     | 105 |    |
| Storage Blk Time (%)  |     |     |     |     |     |    |
| Queuing Penalty (veh) |     |     |     |     |     |    |

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | WB  | NB | NB  | SB  | SB  |
|-----------------------|-----|-----|----|-----|-----|-----|
| Directions Served     | LTR | LTR | L  | TR  | L   | TR  |
| Maximum Queue (ft)    | 40  | 33  | 22 | 10  | 30  | 19  |
| Average Queue (ft)    | 18  | 10  | 3  | 1   | 2   | 1   |
| 95th Queue (ft)       | 44  | 31  | 17 | 8   | 15  | 14  |
| Link Distance (ft)    | 245 | 150 |    | 658 |     | 453 |
| Upstream Blk Time (%) |     |     |    |     |     |     |
| Queuing Penalty (veh) |     |     |    |     |     |     |
| Storage Bay Dist (ft) |     |     | 50 |     | 100 |     |
| Storage Blk Time (%)  |     |     |    | 0   |     | 0   |
| Queuing Penalty (veh) |     |     |    | 0   |     | 0   |

## Queuing and Blocking Report

### E+P - PM Peak Hour

10/24/2018

#### Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | EB  | EB  | EB   | EB   | EB   | EB  | WB  | WB  | WB   | WB   | WB  | NB  |
|-----------------------|-----|-----|------|------|------|-----|-----|-----|------|------|-----|-----|
| Directions Served     | L   | L   | T    | T    | T    | R   | L   | L   | T    | T    | R   | L   |
| Maximum Queue (ft)    | 174 | 180 | 121  | 108  | 79   | 53  | 32  | 335 | 1351 | 1356 | 225 | 212 |
| Average Queue (ft)    | 83  | 108 | 60   | 48   | 16   | 5   | 4   | 67  | 1291 | 1295 | 214 | 170 |
| 95th Queue (ft)       | 150 | 165 | 101  | 95   | 49   | 31  | 21  | 265 | 1492 | 1491 | 274 | 240 |
| Link Distance (ft)    |     |     | 2427 | 2427 | 2427 |     |     |     | 1304 | 1304 |     |     |
| Upstream Blk Time (%) |     |     |      |      |      |     |     |     | 52   | 79   |     |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |     | 0    | 0    |     |     |
| Storage Bay Dist (ft) | 325 | 325 |      |      |      | 300 | 310 | 310 |      |      | 200 | 200 |
| Storage Blk Time (%)  |     |     |      |      |      |     |     |     | 67   | 64   | 2   | 2   |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |     | 15   | 213  | 12  | 7   |

#### Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | NB  | NB   | NB   | NB   | SB  | SB  | SB   | SB   | SB  |
|-----------------------|-----|------|------|------|-----|-----|------|------|-----|
| Directions Served     | L   | T    | T    | R    | L   | L   | T    | T    | R   |
| Maximum Queue (ft)    | 225 | 389  | 282  | 33   | 134 | 152 | 236  | 279  | 239 |
| Average Queue (ft)    | 191 | 175  | 134  | 8    | 54  | 91  | 104  | 97   | 148 |
| 95th Queue (ft)       | 245 | 321  | 222  | 25   | 109 | 139 | 178  | 198  | 233 |
| Link Distance (ft)    |     | 1103 | 1103 | 1103 |     |     | 2298 | 2298 |     |
| Upstream Blk Time (%) |     |      |      |      |     |     |      |      |     |
| Queuing Penalty (veh) |     |      |      |      |     |     |      |      |     |
| Storage Bay Dist (ft) | 200 |      |      |      | 215 | 215 |      |      | 215 |
| Storage Blk Time (%)  | 11  | 1    |      |      |     |     | 0    |      | 2   |
| Queuing Penalty (veh) | 31  | 5    |      |      |     |     | 0    |      | 3   |

#### Network Summary

Network wide Queuing Penalty: 1089



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**APPENDIX 6.1:**

**OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT CONDITIONS INTERSECTION  
OPERATIONS ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

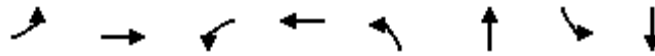
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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

2: Kitching St. & Krameria Av.

10/25/2018

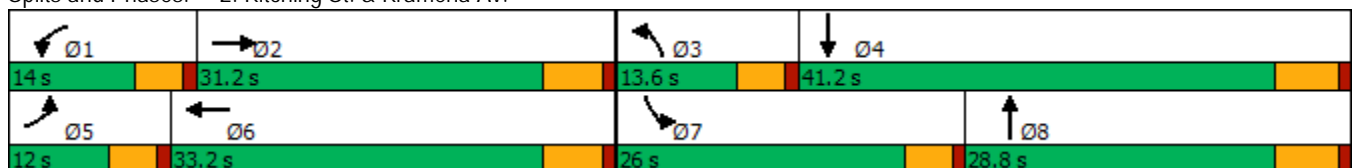


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 92    | 572   | 103   | 673   | 83    | 124   | 291   | 159   |
| Future Volume (vph)  | 92    | 572   | 103   | 673   | 83    | 124   | 291   | 159   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 12.0  | 31.2  | 14.0  | 33.2  | 13.6  | 28.8  | 26.0  | 41.2  |
| Total Split (%)      | 12.0% | 31.2% | 14.0% | 33.2% | 13.6% | 28.8% | 26.0% | 41.2% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |
| Act Effect Green (s) | 7.8   | 27.9  | 9.2   | 29.4  | 8.5   | 14.2  | 20.0  | 27.9  |
| Actuated g/C Ratio   | 0.09  | 0.32  | 0.11  | 0.34  | 0.10  | 0.16  | 0.23  | 0.32  |
| v/c Ratio            | 0.67  | 0.72  | 0.63  | 0.86  | 0.55  | 0.39  | 0.82  | 0.27  |
| Control Delay        | 62.3  | 31.3  | 55.0  | 36.1  | 51.6  | 20.9  | 50.5  | 14.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 62.3  | 31.3  | 55.0  | 36.1  | 51.6  | 20.9  | 50.5  | 14.0  |
| LOS                  | E     | C     | D     | D     | D     | C     | D     | B     |
| Approach Delay       |       | 34.9  |       | 38.1  |       | 29.5  |       | 32.9  |
| Approach LOS         |       | C     |       | D     |       | C     |       | C     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 87.5  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 35.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 69.9%  
 ICU Level of Service C  
 Analysis Period (min) 15






















Splits and Phases: 2: Kitching St. & Krameria Av.





HCM 6th Signalized Intersection Summary  
2: Kitching St. & Krameria Av.

10/25/2018

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |   |  |  |   |  |  |   |  |  |  |
| Traffic Volume (veh/h)       | 92  | 572   | 134   | 103   | 673   | 209   | 83  | 124   | 86  | 291   | 159   | 111   |
| Future Volume (veh/h)        | 92  | 572   | 134   | 103   | 673   | 209   | 83  | 124   | 86  | 291   | 159   | 111   |
| Initial Q (Qb), veh          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)          | 1.00  |   | 0.97  | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00  |   | 0.98  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach        |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 105   | 650   | 135   | 117   | 765   | 188   | 94  | 141   | 71  | 331   | 181   | 96  |
| Peak Hour Factor             | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 146   | 920   | 191   | 160   | 916   | 225   | 133   | 435   | 207   | 380   | 741   | 373   |
| Arrive On Green              | 0.08  | 0.32  | 0.30  | 0.09  | 0.32  | 0.31  | 0.07  | 0.19  | 0.17  | 0.21  | 0.33  | 0.30  |
| Sat Flow, veh/h              | 1781  | 2910  | 603   | 1781  | 2825  | 694   | 1781  | 2319  | 1101  | 1781  | 2268  | 1141  |
| Grp Volume(v), veh/h         | 105   | 397   | 388   | 117   | 481   | 472   | 94  | 106   | 106   | 331   | 140   | 137   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1777  | 1736  | 1781  | 1777  | 1742  | 1781  | 1777  | 1643  | 1781  | 1777  | 1632  |
| Q Serve(g_s), s              | 4.8   | 16.3  | 16.4  | 5.3   | 20.8  | 20.9  | 4.3   | 4.3   | 4.7   | 14.9  | 4.8   | 5.2   |
| Cycle Q Clear(g_c), s        | 4.8   | 16.3  | 16.4  | 5.3   | 20.8  | 20.9  | 4.3   | 4.3   | 4.7   | 14.9  | 4.8   | 5.2   |
| Prop In Lane                 | 1.00  |   | 0.35  | 1.00  |   | 0.40  | 1.00  |   | 0.67  | 1.00  |   | 0.70  |
| Lane Grp Cap(c), veh/h       | 146   | 562   | 549   | 160   | 576   | 565   | 133   | 333   | 308   | 380   | 580   | 533   |
| V/C Ratio(X)                 | 0.72  | 0.71  | 0.71  | 0.73  | 0.84  | 0.84  | 0.71  | 0.32  | 0.34  | 0.87  | 0.24  | 0.26  |
| Avail Cap(c_a), veh/h        | 172   | 583   | 570   | 215   | 626   | 614   | 206   | 531   | 491   | 473   | 797   | 732   |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 37.2  | 24.9  | 25.2  | 36.8  | 26.0  | 26.2  | 37.5  | 29.1  | 29.8  | 31.5  | 20.4  | 21.0  |
| Incr Delay (d2), s/veh       | 8.5   | 3.7   | 3.9   | 4.8   | 9.0   | 9.2   | 2.6   | 0.5   | 0.7   | 11.9  | 0.2   | 0.3   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 2.3   | 6.9   | 6.9   | 2.4   | 9.5   | 9.4   | 1.9   | 1.8   | 1.8   | 7.2   | 1.8   | 1.9   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 45.7  | 28.7  | 29.1  | 41.6  | 35.0  | 35.4  | 40.1  | 29.6  | 30.5  | 43.4  | 20.6  | 21.3  |
| LnGrp LOS                    | D   | C   | C   | D   | C   | D   | D   | C   | C   | D   | C   | C   |
| Approach Vol, veh/h          |   | 890   |   |   | 1070  |   |   | 306   |   |   | 608   |   |
| Approach Delay, s/veh        |   | 30.8  |   |   | 35.9  |   |   | 33.1  |   |   | 33.2  |   |
| Approach LOS                 |   | C   |   |   | D   |   |   | C   |   |   | C   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 11.4  | 30.2  | 10.2  | 31.1  | 10.8  | 30.9  | 21.7  | 19.6  |   |   |   |   |
| Change Period (Y+Rc), s      | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   |   |   |   |   |
| Max Green Setting (Gmax), s  | 9.4   | 25.8  | 9.0   | 35.4  | 7.4   | 27.8  | 21.4  | 23.0  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 7.3   | 18.4  | 6.3   | 7.2   | 6.8   | 22.9  | 16.9  | 6.7   |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 2.7   | 0.0   | 1.5   | 0.0   | 2.5   | 0.2   | 0.9   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay           |   |   |   | 33.4  |   |   |   |   |   |   |   |   |
| HCM 6th LOS                  |   |   |   | C   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

3: Lasselle St. & Iris Av.

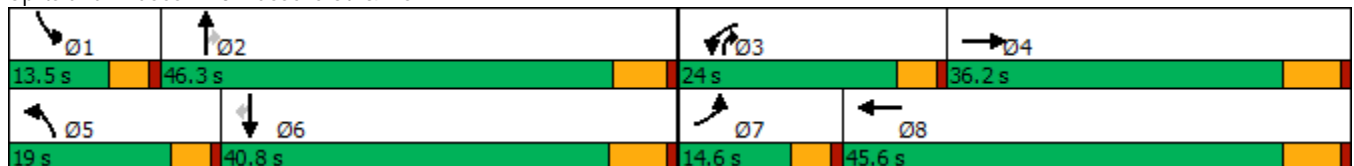
10/25/2018

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 153   | 619   | 611   | 688   | 433   | 721   | 584   | 275   | 735   | 123   |
| Future Volume (vph)  | 153   | 619   | 611   | 688   | 433   | 721   | 584   | 275   | 735   | 123   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 14.6  | 36.2  | 24.0  | 45.6  | 19.0  | 46.3  | 24.0  | 13.5  | 40.8  | 40.8  |
| Total Split (%)      | 12.2% | 30.2% | 20.0% | 38.0% | 15.8% | 38.6% | 20.0% | 11.3% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |
| Act Effect Green (s) | 9.7   | 30.9  | 20.1  | 41.2  | 15.0  | 39.4  | 59.4  | 9.5   | 33.9  | 33.9  |
| Actuated g/C Ratio   | 0.08  | 0.27  | 0.17  | 0.36  | 0.13  | 0.34  | 0.51  | 0.08  | 0.29  | 0.29  |
| v/c Ratio            | 0.60  | 0.82  | 1.16  | 0.54  | 1.09  | 0.67  | 0.79  | 1.10  | 0.80  | 0.24  |
| Control Delay        | 61.1  | 41.5  | 131.5 | 29.9  | 117.7 | 36.1  | 26.2  | 131.6 | 44.6  | 2.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 61.1  | 41.5  | 131.5 | 29.9  | 117.7 | 36.1  | 26.2  | 131.6 | 44.6  | 2.0   |
| LOS                  | E     | D     | F     | C     | F     | D     | C     | F     | D     | A     |
| Approach Delay       |       | 44.1  |       | 72.4  |       | 53.1  |       |       | 61.1  |       |
| Approach LOS         |       | D     |       | E     |       | D     |       |       | E     |       |

Intersection Summary

































|   |                        |
|---|------------------------|
| Cycle Length: 120                       |                        |
| Actuated Cycle Length: 115.9            |                        |
| Natural Cycle: 120                      |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 1.16                 |                        |
| Intersection Signal Delay: 58.0         | Intersection LOS: E    |
| Intersection Capacity Utilization 89.7% | ICU Level of Service E |
| Analysis Period (min) 15                |                        |

Splits and Phases: 3: Lasselle St. & Iris Av.



HCM 6th Signalized Intersection Summary  
 3: Lasselle St. & Iris Av.

10/25/2018

|  |    |    |  |    |    |  |    |    |  |    |    |  |
|--|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |    |   |   |    |   |   |   |  |   |   |  |
| Traffic Volume (veh/h)   | 153   | 619   | 379   | 611   | 688   | 162   | 433  | 721   | 584   | 275   | 735   | 123   |
| Future Volume (veh/h)  | 153   | 619   | 379   | 611   | 688   | 162   | 433  | 721   | 584   | 275   | 735   | 123   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 1.00  | 1.00  |   | 0.99  | 1.00   |   | 0.98  | 1.00  |   | 0.95  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |  | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870   | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 172   | 696   | 278   | 687   | 773   | 139   | 487  | 810   | 427   | 309   | 826   | 78  |
| Peak Hour Factor   | 0.89  | 0.89  | 0.89  | 0.89  | 0.89  | 0.89  | 0.89   | 0.89  | 0.89  | 0.89  | 0.89  | 0.89  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2  | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 248   | 924   | 364   | 604   | 1565  | 279   | 453  | 1215  | 791   | 287   | 1057  | 449   |
| Arrive On Green  | 0.07  | 0.26  | 0.24  | 0.17  | 0.36  | 0.34  | 0.13   | 0.34  | 0.33  | 0.08  | 0.30  | 0.30  |
| Sat Flow, veh/h  | 3456  | 3599  | 1417  | 3456  | 4347  | 775   | 3456   | 3554  | 1552  | 3456  | 3554  | 1509  |
| Grp Volume(v), veh/h   | 172   | 658   | 316   | 687   | 604   | 308   | 487  | 810   | 427   | 309   | 826   | 78  |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1702  | 1611  | 1728  | 1702  | 1717  | 1728   | 1777  | 1552  | 1728  | 1777  | 1509  |
| Q Serve(g_s), s  | 5.6   | 20.4  | 20.9  | 20.0  | 15.8  | 16.1  | 15.0   | 22.2  | 21.4  | 9.5   | 24.3  | 4.4   |
| Cycle Q Clear(g_c), s  | 5.6   | 20.4  | 20.9  | 20.0  | 15.8  | 16.1  | 15.0   | 22.2  | 21.4  | 9.5   | 24.3  | 4.4   |
| Prop In Lane   | 1.00  |   | 0.88  | 1.00  |   | 0.45  | 1.00   |   | 1.00  | 1.00  |   | 1.00  |
| Lane Grp Cap(c), veh/h   | 248   | 874   | 414   | 604   | 1225  | 618   | 453  | 1215  | 791   | 287   | 1057  | 449   |
| V/C Ratio(X)   | 0.69  | 0.75  | 0.76  | 1.14  | 0.49  | 0.50  | 1.07   | 0.67  | 0.54  | 1.08  | 0.78  | 0.17  |
| Avail Cap(c_a), veh/h  | 320   | 958   | 454   | 604   | 1238  | 624   | 453  | 1314  | 835   | 287   | 1143  | 486   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 51.9  | 39.2  | 40.3  | 47.2  | 28.5  | 29.0  | 49.7   | 32.1  | 19.2  | 52.4  | 36.8  | 29.8  |
| Incr Delay (d2), s/veh   | 2.4   | 3.1   | 7.0   | 80.6  | 0.3   | 0.6   | 63.7   | 1.2   | 0.6   | 75.0  | 3.3   | 0.2   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 2.4   | 8.5   | 8.8   | 15.0  | 6.1   | 6.4   | 10.3   | 9.3   | 7.1   | 7.0   | 10.5  | 1.5   |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |  |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 54.3  | 42.3  | 47.2  | 127.8   | 28.8  | 29.6  | 113.4  | 33.2  | 19.9  | 127.4   | 40.1  | 30.0  |
| LnGrp LOS  | D   | D   | D   | F   | C   | C   | F  | C   | B   | F   | D   | C   |
| Approach Vol, veh/h  |   | 1146  |   |   | 1599  |   |  | 1724  |   |   | 1213  |   |
| Approach Delay, s/veh  |   | 45.4  |   |   | 71.5  |   |  | 52.6  |   |   | 61.7  |   |
| Approach LOS   |   | D   |   |   | E   |   |  | D   |   |   | E   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 13.5  | 43.5  | 24.0  | 33.4  | 19.0  | 38.0  | 12.2   | 45.2  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | * 6.2   | 4.6   | 6.2   | 4.6   | 6.2   | 4.6  | 6.2   |   |   |   |   |
| Max Green Setting (Gmax), s  | 8.9   | * 41  | 19.4  | 30.0  | 14.4  | 34.6  | 10.0   | 39.4  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 11.5  | 24.2  | 22.0  | 22.9  | 17.0  | 26.3  | 7.6  | 18.1  |   |   |   |   |
| Green Ext Time (p_c), s  | 0.0   | 6.2   | 0.0   | 3.3   | 0.0   | 3.3   | 0.1  | 5.4   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |  |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 58.4  |   |   |   |  |   |   |   |   |   |
| HCM 6th LOS  |   |   | E   |   |   |   |  |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |  |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |  |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

# HCM 6th TWSC

## 4: Lasselle St. & Cahuillia Dr.

10/25/2018

| Intersection             |        |          |      |        |      |      |
|--------------------------|--------|----------|------|--------|------|------|
| Int Delay, s/veh         | 0.7    |          |      |        |      |      |
| Movement                 | WBL    | WBR      | NBT  | NBR    | SBL  | SBT  |
| Lane Configurations      |        | ↗        | ↕    | ↗      |      | ↕    |
| Traffic Vol, veh/h       | 0      | 88       | 1414 | 166    | 0    | 1044 |
| Future Vol, veh/h        | 0      | 88       | 1414 | 166    | 0    | 1044 |
| Conflicting Peds, #/hr   | 0      | 0        | 0    | 3      | 0    | 0    |
| Sign Control             | Stop   | Stop     | Free | Free   | Free | Free |
| RT Channelized           | -      | None     | -    | None   | -    | None |
| Storage Length           | -      | 0        | -    | 140    | -    | -    |
| Veh in Median Storage, # | 0      | -        | 0    | -      | -    | 0    |
| Grade, %                 | 0      | -        | 0    | -      | -    | 0    |
| Peak Hour Factor         | 88     | 88       | 88   | 88     | 88   | 88   |
| Heavy Vehicles, %        | 2      | 2        | 2    | 2      | 2    | 2    |
| Mvmt Flow                | 0      | 100      | 1607 | 189    | 0    | 1186 |
| Major/Minor              | Minor1 | Major1   |      | Major2 |      |      |
| Conflicting Flow All     | -      | 807      | 0    | 0      | -    | -    |
| Stage 1                  | -      | -        | -    | -      | -    | -    |
| Stage 2                  | -      | -        | -    | -      | -    | -    |
| Critical Hdwy            | -      | 6.94     | -    | -      | -    | -    |
| Critical Hdwy Stg 1      | -      | -        | -    | -      | -    | -    |
| Critical Hdwy Stg 2      | -      | -        | -    | -      | -    | -    |
| Follow-up Hdwy           | -      | 3.32     | -    | -      | -    | -    |
| Pot Cap-1 Maneuver       | 0      | 324      | -    | -      | 0    | -    |
| Stage 1                  | 0      | -        | -    | -      | 0    | -    |
| Stage 2                  | 0      | -        | -    | -      | 0    | -    |
| Platoon blocked, %       |        |          | -    | -      | -    | -    |
| Mov Cap-1 Maneuver       | -      | 323      | -    | -      | -    | -    |
| Mov Cap-2 Maneuver       | -      | -        | -    | -      | -    | -    |
| Stage 1                  | -      | -        | -    | -      | -    | -    |
| Stage 2                  | -      | -        | -    | -      | -    | -    |
| Approach                 | WB     | NB       |      | SB     |      |      |
| HCM Control Delay, s     | 21.1   | 0        |      | 0      |      |      |
| HCM LOS                  | C      |          |      |        |      |      |
| Minor Lane/Major Mvmt    | NBT    | NBRWBLn1 |      | SBT    |      |      |
| Capacity (veh/h)         | -      | -        |      | 323    |      |      |
| HCM Lane V/C Ratio       | -      | -        |      | 0.31   |      |      |
| HCM Control Delay (s)    | -      | -        |      | 21.1   |      |      |
| HCM Lane LOS             | -      | -        |      | C      |      |      |
| HCM 95th %tile Q(veh)    | -      | -        |      | 1.3    |      |      |



Timings

6: Lasselie St. & Krameria Av.

10/25/2018

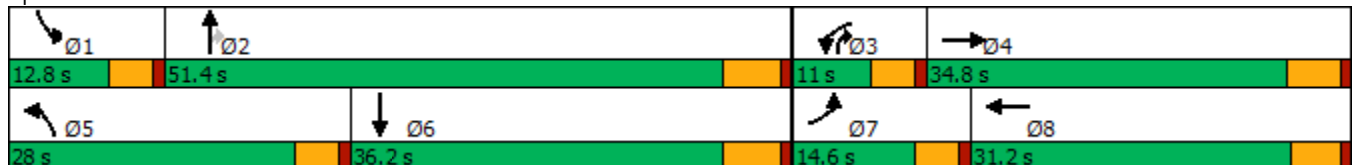


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕     | ↗     | ↖     | ↕     |
| Traffic Volume (vph) | 385   | 267   | 120   | 176   | 416   | 1173  | 262   | 104   | 819   |
| Future Volume (vph)  | 385   | 267   | 120   | 176   | 416   | 1173  | 262   | 104   | 819   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 14.6  | 34.8  | 11.0  | 31.2  | 28.0  | 51.4  | 11.0  | 12.8  | 36.2  |
| Total Split (%)      | 13.3% | 31.6% | 10.0% | 28.4% | 25.5% | 46.7% | 10.0% | 11.6% | 32.9% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 102.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

10/25/2018

| Movement   | EBL   | EBT   | EBR  | WBL   | WBT  | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR   |
|--|-------|-------|------|-------|------|------|-------|-------|------|------|-------|-------|
| Lane Configurations  |       |       |      |       |      |      |       |       |      |      |       |       |
| Traffic Volume (veh/h)   | 385   | 267   | 407  | 120   | 176  | 97   | 416   | 1173  | 262  | 104  | 819   | 286   |
| Future Volume (veh/h)  | 385   | 267   | 407  | 120   | 176  | 97   | 416   | 1173  | 262  | 104  | 819   | 286   |
| Initial Q (Qb), veh  | 0     | 0     | 0    | 0     | 0    | 0    | 0     | 0     | 0    | 0    | 0     | 0     |
| Ped-Bike Adj(A_pbT)  | 1.00  |       | 0.99 | 1.00  |      | 0.99 | 1.00  |       | 0.99 | 1.00 |       | 0.98  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Work Zone On Approach  |       | No    |      |       | No   |      |       | No    |      |      | No    |       |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870 | 1870  | 1870 | 1870 | 1870  | 1870  | 1870 | 1870 | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 448   | 310   | 297  | 140   | 205  | 86   | 484   | 1364  | 220  | 121  | 952   | 306   |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86 | 0.86  | 0.86 | 0.86 | 0.86  | 0.86  | 0.86 | 0.86 | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2     | 2     | 2    | 2     | 2    | 2    | 2     | 2     | 2    | 2    | 2     | 2     |
| Cap, veh/h   | 352   | 426   | 376  | 120   | 497  | 201  | 410   | 1617  | 800  | 151  | 814   | 260   |
| Arrive On Green  | 0.10  | 0.24  | 0.23 | 0.07  | 0.20 | 0.19 | 0.23  | 0.46  | 0.44 | 0.08 | 0.31  | 0.29  |
| Sat Flow, veh/h  | 3456  | 1777  | 1570 | 1781  | 2459 | 994  | 1781  | 3554  | 1562 | 1781 | 2632  | 841   |
| Grp Volume(v), veh/h   | 448   | 310   | 297  | 140   | 146  | 145  | 484   | 1364  | 220  | 121  | 641   | 617   |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1777  | 1570 | 1781  | 1777 | 1676 | 1781  | 1777  | 1562 | 1781 | 1777  | 1697  |
| Q Serve(g_s), s  | 10.6  | 16.7  | 18.6 | 7.0   | 7.4  | 7.9  | 24.0  | 35.4  | 8.4  | 6.9  | 32.2  | 32.2  |
| Cycle Q Clear(g_c), s  | 10.6  | 16.7  | 18.6 | 7.0   | 7.4  | 7.9  | 24.0  | 35.4  | 8.4  | 6.9  | 32.2  | 32.2  |
| Prop In Lane   | 1.00  |       | 1.00 | 1.00  |      | 0.59 | 1.00  |       | 1.00 | 1.00 |       | 0.50  |
| Lane Grp Cap(c), veh/h   | 352   | 426   | 376  | 120   | 359  | 339  | 410   | 1617  | 800  | 151  | 549   | 525   |
| V/C Ratio(X)   | 1.27  | 0.73  | 0.79 | 1.17  | 0.41 | 0.43 | 1.18  | 0.84  | 0.28 | 0.80 | 1.17  | 1.18  |
| Avail Cap(c_a), veh/h  | 352   | 525   | 464  | 120   | 464  | 438  | 410   | 1617  | 800  | 151  | 549   | 525   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 46.8  | 36.5  | 37.8 | 48.6  | 36.1 | 36.6 | 40.1  | 25.1  | 14.5 | 46.8 | 36.0  | 36.4  |
| Incr Delay (d2), s/veh   | 143.6 | 3.9   | 7.2  | 134.9 | 0.7  | 0.9  | 103.2 | 4.3   | 0.2  | 24.5 | 93.5  | 97.9  |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 11.4  | 7.5   | 7.7  | 7.5   | 3.2  | 3.3  | 21.7  | 14.5  | 2.9  | 4.0  | 27.3  | 26.8  |
| Unsig. Movement Delay, s/veh   |       |       |      |       |      |      |       |       |      |      |       |       |
| LnGrp Delay(d),s/veh   | 190.4 | 40.4  | 45.1 | 183.5 | 36.9 | 37.5 | 143.2 | 29.4  | 14.7 | 71.4 | 129.5 | 134.3 |
| LnGrp LOS  | F     | D     | D    | F     | D    | D    | F     | C     | B    | E    | F     | F     |
| Approach Vol, veh/h  |       | 1055  |      |       | 431  |      |       | 2068  |      |      | 1379  |       |
| Approach Delay, s/veh  |       | 105.4 |      |       | 84.7 |      |       | 54.4  |      |      | 126.5 |       |
| Approach LOS   |       | F     |      |       | F    |      |       | D     |      |      | F     |       |
| Timer - Assigned Phs   | 1     | 2     | 3    | 4     | 5    | 6    | 7     | 8     |      |      |       |       |
| Phs Duration (G+Y+Rc), s   | 12.8  | 51.4  | 11.0 | 29.0  | 28.0 | 36.2 | 14.6  | 25.4  |      |      |       |       |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6  | 5.4   | 4.6  | 5.8  | 4.6   | * 5.4 |      |      |       |       |
| Max Green Setting (Gmax), s  | 8.2   | 45.6  | 6.4  | 29.4  | 23.4 | 30.4 | 10.0  | * 26  |      |      |       |       |
| Max Q Clear Time (g_c+I1), s   | 8.9   | 37.4  | 9.0  | 20.6  | 26.0 | 34.2 | 12.6  | 9.9   |      |      |       |       |
| Green Ext Time (p_c), s  | 0.0   | 5.6   | 0.0  | 2.4   | 0.0  | 0.0  | 0.0   | 1.4   |      |      |       |       |
| <b>Intersection Summary</b>  |       |       |      |       |      |      |       |       |      |      |       |       |
| HCM 6th Ctrl Delay   |       |       |      | 88.1  |      |      |       |       |      |      |       |       |
| HCM 6th LOS  |       |       |      | F     |      |      |       |       |      |      |       |       |
| <b>Notes</b>   |       |       |      |       |      |      |       |       |      |      |       |       |
| User approved pedestrian interval to be less than phase max green.                                 |       |       |      |       |      |      |       |       |      |      |       |       |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |       |       |      |       |      |      |       |       |      |      |       |       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

6: Lasselle St. & Krameria Av.

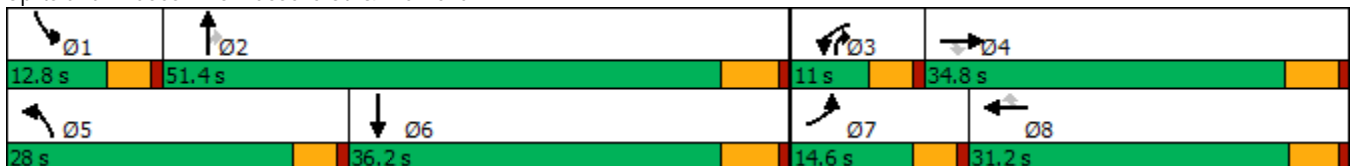
10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 385   | 267   | 407   | 120   | 176   | 97    | 416   | 1173  | 262   | 104   | 819   |
| Future Volume (vph)  | 385   | 267   | 407   | 120   | 176   | 97    | 416   | 1173  | 262   | 104   | 819   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 14.6  | 34.8  | 34.8  | 11.0  | 31.2  | 31.2  | 28.0  | 51.4  | 11.0  | 12.8  | 36.2  |
| Total Split (%)      | 13.3% | 31.6% | 31.6% | 10.0% | 28.4% | 28.4% | 25.5% | 46.7% | 10.0% | 11.6% | 32.9% |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |
| Act Effct Green (s)  | 10.6  | 24.4  | 23.0  | 7.0   | 20.8  | 19.7  | 24.1  | 47.5  | 54.6  | 8.8   | 32.3  |
| Actuated g/C Ratio   | 0.10  | 0.24  | 0.22  | 0.07  | 0.20  | 0.19  | 0.23  | 0.46  | 0.53  | 0.08  | 0.31  |
| v/c Ratio            | 2.48  | 0.71  | 0.74  | 1.18  | 0.55  | 0.26  | 1.18  | 0.84  | 0.33  | 0.81  | 1.19  |
| Control Delay        | 703.3 | 45.7  | 15.4  | 181.1 | 42.8  | 3.0   | 140.5 | 31.8  | 5.1   | 85.1  | 128.3 |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 703.3 | 45.7  | 15.4  | 181.1 | 42.8  | 3.0   | 140.5 | 31.8  | 5.1   | 85.1  | 128.3 |
| LOS                  | F     | D     | B     | F     | D     | A     | F     | C     | A     | F     | F     |
| Approach Delay       |       | 273.4 |       |       | 75.2  |       |       | 52.4  |       |       | 124.5 |
| Approach LOS         |       | F     |       |       | E     |       |       | D     |       |       | F     |

Intersection Summary

























Cycle Length: 110  
 Actuated Cycle Length: 103.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.48  
 Intersection Signal Delay: 125.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 98.9%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 6: Lasselle St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

10/25/2018

|  |  |  |  |  |  |  |   |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)   | 385   | 267   | 407   | 120   | 176   | 97  | 416   | 1173  | 262   | 104   | 819   | 286   |
| Future Volume (veh/h)  | 385   | 267   | 407   | 120   | 176   | 97  | 416   | 1173  | 262   | 104   | 819   | 286   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.96  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 448   | 310   | 297   | 140   | 205   | 86  | 484   | 1364  | 220   | 121   | 952   | 306   |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 182   | 445   | 352   | 120   | 374   | 296   | 411   | 1621  | 802   | 151   | 812   | 260   |
| Arrive On Green  | 0.10  | 0.24  | 0.22  | 0.07  | 0.20  | 0.19  | 0.23  | 0.46  | 0.44  | 0.08  | 0.31  | 0.29  |
| Sat Flow, veh/h  | 1781  | 1870  | 1570  | 1781  | 1870  | 1564  | 1781  | 3554  | 1562  | 1781  | 2621  | 838   |
| Grp Volume(v), veh/h   | 448   | 310   | 297   | 140   | 205   | 86  | 484   | 1364  | 220   | 121   | 644   | 614   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1570  | 1781  | 1870  | 1564  | 1781  | 1777  | 1562  | 1781  | 1777  | 1682  |
| Q Serve(g_s), s  | 10.6  | 15.7  | 18.8  | 7.0   | 10.2  | 4.9   | 24.0  | 35.2  | 8.3   | 6.9   | 32.2  | 32.2  |
| Cycle Q Clear(g_c), s  | 10.6  | 15.7  | 18.8  | 7.0   | 10.2  | 4.9   | 24.0  | 35.2  | 8.3   | 6.9   | 32.2  | 32.2  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 0.50  |
| Lane Grp Cap(c), veh/h   | 182   | 445   | 352   | 120   | 374   | 296   | 411   | 1621  | 802   | 151   | 551   | 521   |
| V/C Ratio(X)   | 2.46  | 0.70  | 0.84  | 1.17  | 0.55  | 0.29  | 1.18  | 0.84  | 0.27  | 0.80  | 1.17  | 1.18  |
| Avail Cap(c_a), veh/h  | 182   | 554   | 444   | 120   | 490   | 393   | 411   | 1621  | 802   | 151   | 551   | 521   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 46.6  | 36.2  | 38.6  | 48.4  | 37.3  | 36.1  | 39.9  | 24.9  | 14.4  | 46.7  | 35.8  | 36.3  |
| Incr Delay (d2), s/veh   | 675.5   | 2.8   | 11.4  | 133.8   | 1.3   | 0.5   | 102.0   | 4.2   | 0.2   | 24.2  | 94.1  | 98.9  |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 38.7  | 7.3   | 8.2   | 7.5   | 4.7   | 1.9   | 21.6  | 14.4  | 2.8   | 4.0   | 27.4  | 26.8  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 722.2   | 39.0  | 50.0  | 182.2   | 38.6  | 36.6  | 141.9   | 29.1  | 14.6  | 70.8  | 130.0   | 135.2   |
| LnGrp LOS  | F   | D   | D   | F   | D   | D   | F   | C   | B   | E   | F   | F   |
| Approach Vol, veh/h  |   | 1055  |   |   | 431   |   |   | 2068  |   |   | 1379  |   |
| Approach Delay, s/veh  |   | 332.2   |   |   | 84.8  |   |   | 54.0  |   |   | 127.1   |   |
| Approach LOS   |   | F   |   |   | F   |   |   | D   |   |   | F   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 12.8  | 51.4  | 11.0  | 28.7  | 28.0  | 36.2  | 14.6  | 25.1  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 8.2   | 45.6  | 6.4   | 29.4  | 23.4  | 30.4  | 10.0  | * 26  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 8.9   | 37.2  | 9.0   | 20.8  | 26.0  | 34.2  | 12.6  | 12.2  |   |   |   |   |
| Green Ext Time (p_c), s  | 0.0   | 5.7   | 0.0   | 1.9   | 0.0   | 0.0   | 0.0   | 1.1   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 136.6   |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | F   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 7    | 575  | 51   | 53   | 324  | 0    | 68   | 0    | 87   | 0    | 0    | 0    |
| Future Vol, veh/h        | 7    | 575  | 51   | 53   | 324  | 0    | 68   | 0    | 87   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 9    | 747  | 66   | 69   | 421  | 0    | 88   | 0    | 113  | 0    | 0    | 0    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |      | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 421    | 0 | 0 | 815    | 0 | 0 | 1149   | 1359 | 409  | 951    | 1392 | 211  |
| Stage 1              | -      | - | - | -      | - | - | 800    | 800  | -    | 559    | 559  | -    |
| Stage 2              | -      | - | - | -      | - | - | 349    | 559  | -    | 392    | 833  | -    |
| Critical Hdwy        | 4.14   | - | - | 4.14   | - | - | 5      | 6.54 | 5    | 5      | 6.54 | 5    |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 5      | 5.54 | -    | 6.54   | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 5      | 5.54 | -    | 6.54   | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | - | - | 2.22   | - | - | 3.52   | 4.02 | 3.32 | 3.52   | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 1135   | - | - | 808    | - | - | 345    | 147  | 738  | 419    | 141  | 890  |
| Stage 1              | -      | - | - | -      | - | - | 485    | 395  | -    | 481    | 509  | -    |
| Stage 2              | -      | - | - | -      | - | - | 743    | 509  | -    | 604    | 382  | -    |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -    | -    | -      | -    | -    |
| Mov Cap-1 Maneuver   | 1135   | - | - | 806    | - | - | 320    | 133  | 737  | 330    | 128  | 890  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 436    | 307  | -    | 391    | 266  | -    |
| Stage 1              | -      | - | - | -      | - | - | 480    | 391  | -    | 477    | 465  | -    |
| Stage 2              | -      | - | - | -      | - | - | 679    | 465  | -    | 507    | 378  | -    |

| Approach             | EB  | WB  | NB   | SB |
|----------------------|-----|-----|------|----|
| HCM Control Delay, s | 0.1 | 1.4 | 14.8 | 0  |
| HCM LOS              |     |     | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 566   | 1135  | -   | -   | 806   | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.356 | 0.008 | -   | -   | 0.085 | -   | -   | -     |
| HCM Control Delay (s) | 14.8  | 8.2   | -   | -   | 9.9   | -   | -   | 0     |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | A     |
| HCM 95th %tile Q(veh) | 1.6   | 0     | -   | -   | 0.3   | -   | -   | -     |

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 7    | 575  | 51   | 53   | 324  | 0    | 68   | 0    | 87   | 0    | 0    | 0    |
| Future Vol, veh/h        | 7    | 575  | 51   | 53   | 324  | 0    | 68   | 0    | 87   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 9    | 747  | 66   | 69   | 421  | 0    | 88   | 0    | 113  | 0    | 0    | 0    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 421    | 0 | 0 | 815    | 0 | 0 | 1359   | 1359  | 782   | 1414   | 1392  | 421   |
| Stage 1              | -      | - | - | -      | - | - | 800    | 800   | -     | 559    | 559   | -     |
| Stage 2              | -      | - | - | -      | - | - | 559    | 559   | -     | 855    | 833   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 5      | 6.52  | 5     | 5      | 6.52  | 5     |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 5      | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 5      | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1138   | - | - | 812    | - | - | 280    | 149   | 514   | 265    | 142   | 729   |
| Stage 1              | -      | - | - | -      | - | - | 486    | 397   | -     | 513    | 511   | -     |
| Stage 2              | -      | - | - | -      | - | - | 611    | 511   | -     | 353    | 384   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1138   | - | - | 810    | - | - | 260    | 135   | 513   | 192    | 129   | 729   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 404    | 309   | -     | 194    | 268   | -     |
| Stage 1              | -      | - | - | -      | - | - | 481    | 393   | -     | 509    | 468   | -     |
| Stage 2              | -      | - | - | -      | - | - | 559    | 468   | -     | 273    | 380   | -     |

| Approach             | EB  | WB  | NB   | SB |
|----------------------|-----|-----|------|----|
| HCM Control Delay, s | 0.1 | 1.4 | 18.8 | 0  |
| HCM LOS              |     |     | C    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 459   | 1138  | -   | -   | 810   | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.439 | 0.008 | -   | -   | 0.085 | -   | -   | -     |
| HCM Control Delay (s) | 18.8  | 8.2   | -   | -   | 9.9   | -   | -   | 0     |
| HCM Lane LOS          | C     | A     | -   | -   | A     | -   | -   | A     |
| HCM 95th %tile Q(veh) | 2.2   | 0     | -   | -   | 0.3   | -   | -   | -     |

HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 11   | 8    | 1    | 7    | 19   | 620  | 14   | 6    | 351  | 0    |
| Future Vol, veh/h        | 0    | 0    | 11   | 8    | 1    | 7    | 19   | 620  | 14   | 6    | 351  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 69   | 0    | 0    | 21   | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 15   | 11   | 1    | 10   | 26   | 861  | 19   | 8    | 488  | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1501   | 1457  | 488    | 1456  | 1448   | 961   | 488    | 0 | 0 | 901   | 0 | 0 |
| Stage 1              | 504    | 504   | -      | 944   | 944    | -     | -      | - | - | -     | - | - |
| Stage 2              | 997    | 953   | -      | 512   | 504    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 100    | 130   | 580    | 108   | 131    | 311   | 1075   | - | - | 754   | - | - |
| Stage 1              | 550    | 541   | -      | 315   | 341    | -     | -      | - | - | -     | - | - |
| Stage 2              | 294    | 338   | -      | 545   | 541    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 88     | 123   | 580    | 100   | 124    | 285   | 1075   | - | - | 739   | - | - |
| Mov Cap-2 Maneuver   | 189    | 232   | -      | 213   | 234    | -     | -      | - | - | -     | - | - |
| Stage 1              | 537    | 535   | -      | 301   | 326    | -     | -      | - | - | -     | - | - |
| Stage 2              | 258    | 323   | -      | 525   | 535    | -     | -      | - | - | -     | - | - |

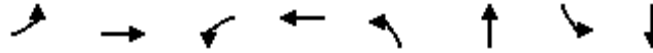
| Approach             | EB   |  | WB   |  | NB  |  | SB  |  |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 11.4 |  | 21.4 |  | 0.2 |  | 0.2 |  |
| HCM LOS              | B    |  | C    |  |     |  |     |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 1075  | -   | -   | 580        | 241   | 739   | -   |
| HCM Lane V/C Ratio    | 0.025 | -   | -   | 0.026      | 0.092 | 0.011 | -   |
| HCM Control Delay (s) | 8.4   | -   | -   | 11.4       | 21.4  | 9.9   | -   |
| HCM Lane LOS          | A     | -   | -   | B          | C     | A     | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1        | 0.3   | 0     | -   |

Timings  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

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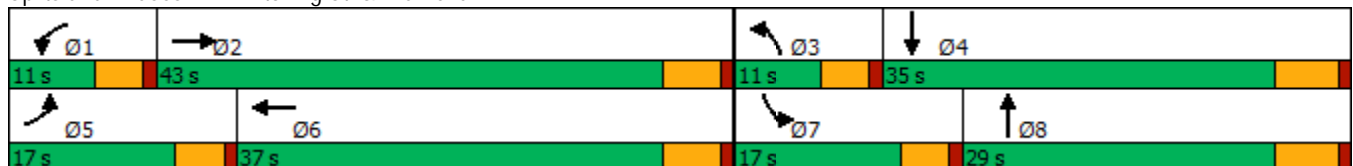


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 106   | 407   | 30    | 375   | 44    | 81    | 99    | 86    |
| Future Volume (vph)  | 106   | 407   | 30    | 375   | 44    | 81    | 99    | 86    |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 17.0  | 43.0  | 11.0  | 37.0  | 11.0  | 29.0  | 17.0  | 35.0  |
| Total Split (%)      | 17.0% | 43.0% | 11.0% | 37.0% | 11.0% | 29.0% | 17.0% | 35.0% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |
| Act Effect Green (s) | 9.4   | 24.1  | 6.9   | 17.5  | 7.1   | 15.1  | 9.2   | 19.5  |
| Actuated g/C Ratio   | 0.15  | 0.39  | 0.11  | 0.28  | 0.11  | 0.24  | 0.15  | 0.32  |
| v/c Ratio            | 0.41  | 0.34  | 0.16  | 0.49  | 0.22  | 0.14  | 0.39  | 0.19  |
| Control Delay        | 34.3  | 15.8  | 35.1  | 21.6  | 35.7  | 18.4  | 34.1  | 10.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 34.3  | 15.8  | 35.1  | 21.6  | 35.7  | 18.4  | 34.1  | 10.5  |
| LOS                  | C     | B     | D     | C     | D     | B     | C     | B     |
| Approach Delay       |       | 19.3  |       | 22.4  |       | 23.3  |       | 18.5  |
| Approach LOS         |       | B     |       | C     |       | C     |       | B     |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 100                       |                        |
| Actuated Cycle Length: 61.8             |                        |
| Natural Cycle: 85                       |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 0.49                 |                        |
| Intersection Signal Delay: 20.6         | Intersection LOS: C    |
| Intersection Capacity Utilization 47.5% | ICU Level of Service A |
| Analysis Period (min) 15                |                        |

Splits and Phases: 2: Kitching St. & Krameria Av.

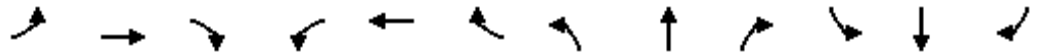




HCM 6th Signalized Intersection Summary  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018



| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↖    | ↕    |      | ↖    | ↕    |      | ↖    | ↕    |      | ↖    | ↕    |      |
| Traffic Volume (veh/h)       | 106  | 407  | 49   | 30   | 375  | 97   | 44   | 81   | 31   | 99   | 86   | 109  |
| Future Volume (veh/h)        | 106  | 407  | 49   | 30   | 375  | 97   | 44   | 81   | 31   | 99   | 86   | 109  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 0.98 | 1.00 |      | 0.98 | 1.00 |      | 1.00 | 1.00 |      | 0.98 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 109  | 420  | 45   | 31   | 387  | 82   | 45   | 84   | 26   | 102  | 89   | 76   |
| Peak Hour Factor             | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 161  | 943  | 100  | 84   | 723  | 152  | 105  | 673  | 200  | 157  | 529  | 406  |
| Arrive On Green              | 0.09 | 0.29 | 0.26 | 0.05 | 0.25 | 0.22 | 0.06 | 0.25 | 0.21 | 0.09 | 0.28 | 0.24 |
| Sat Flow, veh/h              | 1781 | 3234 | 345  | 1781 | 2915 | 611  | 1781 | 2700 | 802  | 1781 | 1897 | 1455 |
| Grp Volume(v), veh/h         | 109  | 230  | 235  | 31   | 234  | 235  | 45   | 54   | 56   | 102  | 83   | 82   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1802 | 1781 | 1777 | 1749 | 1781 | 1777 | 1725 | 1781 | 1777 | 1575 |
| Q Serve(g_s), s              | 2.9  | 5.2  | 5.3  | 0.8  | 5.6  | 5.8  | 1.2  | 1.2  | 1.3  | 2.7  | 1.7  | 2.0  |
| Cycle Q Clear(g_c), s        | 2.9  | 5.2  | 5.3  | 0.8  | 5.6  | 5.8  | 1.2  | 1.2  | 1.3  | 2.7  | 1.7  | 2.0  |
| Prop In Lane                 | 1.00 |      | 0.19 | 1.00 |      | 0.35 | 1.00 |      | 0.46 | 1.00 |      | 0.92 |
| Lane Grp Cap(c), veh/h       | 161  | 518  | 525  | 84   | 441  | 434  | 105  | 443  | 430  | 157  | 496  | 440  |
| V/C Ratio(X)                 | 0.68 | 0.44 | 0.45 | 0.37 | 0.53 | 0.54 | 0.43 | 0.12 | 0.13 | 0.65 | 0.17 | 0.19 |
| Avail Cap(c_a), veh/h        | 468  | 1401 | 1421 | 252  | 1186 | 1167 | 252  | 898  | 872  | 468  | 1114 | 988  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 21.8 | 14.3 | 14.4 | 22.8 | 16.1 | 16.4 | 22.5 | 14.4 | 14.7 | 21.8 | 13.5 | 14.2 |
| Incr Delay (d2), s/veh       | 1.8  | 0.6  | 0.6  | 1.0  | 1.0  | 1.1  | 1.0  | 0.1  | 0.1  | 1.7  | 0.2  | 0.2  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.1  | 1.8  | 1.8  | 0.3  | 2.0  | 2.0  | 0.5  | 0.4  | 0.4  | 1.0  | 0.6  | 0.6  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 23.6 | 14.9 | 15.0 | 23.8 | 17.1 | 17.4 | 23.5 | 14.5 | 14.9 | 23.5 | 13.6 | 14.4 |
| LnGrp LOS                    | C    | B    | B    | C    | B    | B    | C    | B    | B    | C    | B    | B    |
| Approach Vol, veh/h          |      | 574  |      |      | 500  |      |      | 155  |      |      | 267  |      |
| Approach Delay, s/veh        |      | 16.6 |      |      | 17.7 |      |      | 17.2 |      |      | 17.6 |      |
| Approach LOS                 |      | B    |      |      | B    |      |      | B    |      |      | B    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 6.3  | 18.4 | 6.9  | 17.8 | 8.5  | 16.3 | 8.4  | 16.3 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  |      |      |      |      |
| Max Green Setting (Gmax), s  | 6.4  | 37.6 | 6.4  | 29.2 | 12.4 | 31.6 | 12.4 | 23.2 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 2.8  | 7.3  | 3.2  | 4.0  | 4.9  | 7.8  | 4.7  | 3.3  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.7  | 0.0  | 0.8  | 0.1  | 2.6  | 0.1  | 0.4  |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 17.2 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | B    |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

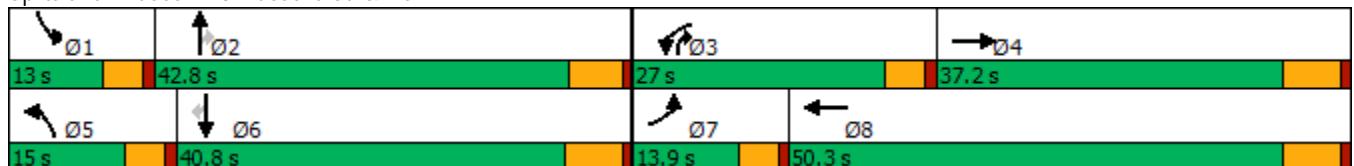


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕↔    | ↖↗    | ↕↔    | ↖↗    | ↕↔    | ↖     | ↖↗    | ↕↔    | ↖     |
| Traffic Volume (vph) | 173   | 497   | 726   | 721   | 297   | 680   | 498   | 293   | 824   | 116   |
| Future Volume (vph)  | 173   | 497   | 726   | 721   | 297   | 680   | 498   | 293   | 824   | 116   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 13.9  | 37.2  | 27.0  | 50.3  | 15.0  | 42.8  | 27.0  | 13.0  | 40.8  | 40.8  |
| Total Split (%)      | 11.6% | 31.0% | 22.5% | 41.9% | 12.5% | 35.7% | 22.5% | 10.8% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |
| Act Effect Green (s) | 9.3   | 27.4  | 23.2  | 41.2  | 11.1  | 35.7  | 58.8  | 9.1   | 33.6  | 33.6  |
| Actuated g/C Ratio   | 0.08  | 0.25  | 0.21  | 0.37  | 0.10  | 0.32  | 0.53  | 0.08  | 0.30  | 0.30  |
| v/c Ratio            | 0.63  | 0.72  | 1.07  | 0.57  | 0.92  | 0.63  | 0.62  | 1.10  | 0.81  | 0.21  |
| Control Delay        | 61.4  | 35.1  | 97.5  | 27.0  | 83.3  | 35.5  | 17.8  | 133.0 | 43.3  | 3.1   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 61.4  | 35.1  | 97.5  | 27.0  | 83.3  | 35.5  | 17.8  | 133.0 | 43.3  | 3.1   |
| LOS                  | E     | D     | F     | C     | F     | D     | B     | F     | D     | A     |
| Approach Delay       |       | 39.5  |       | 56.8  |       | 39.2  |       |       | 60.8  |       |
| Approach LOS         |       | D     |       | E     |       | D     |       |       | E     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.10  
 Intersection Signal Delay: 49.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 86.8%  
 ICU Level of Service E  
 Analysis Period (min) 15

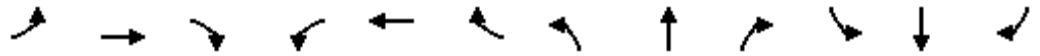
Splits and Phases: 3: Lasselle St. & Iris Av.



HCM 6th Signalized Intersection Summary  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018



| Movement                     | EBL  | EBT   | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR  | SBL   | SBT  | SBR  |
|------------------------------|------|-------|------|-------|------|------|------|------|------|-------|------|------|
| Lane Configurations          | ↔↔   | ↑↑↔   |      | ↔↔    | ↑↑↔  |      | ↔↔   | ↑↑   | ↔    | ↔↔    | ↑↑   | ↔    |
| Traffic Volume (veh/h)       | 173  | 497   | 376  | 726   | 721  | 270  | 297  | 680  | 498  | 293   | 824  | 116  |
| Future Volume (veh/h)        | 173  | 497   | 376  | 726   | 721  | 270  | 297  | 680  | 498  | 293   | 824  | 116  |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 0.98 | 1.00  |      | 0.95 | 1.00 |      | 0.96 | 1.00  |      | 0.97 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach        |      | No    |      |       | No   |      |      | No   |      |       | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 182  | 523   | 309  | 764   | 759  | 256  | 313  | 716  | 321  | 308   | 867  | 70   |
| Peak Hour Factor             | 0.95 | 0.95  | 0.95 | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    |
| Cap, veh/h                   | 256  | 899   | 411  | 690   | 1455 | 484  | 330  | 1121 | 782  | 270   | 1071 | 461  |
| Arrive On Green              | 0.07 | 0.26  | 0.25 | 0.20  | 0.39 | 0.37 | 0.10 | 0.32 | 0.30 | 0.08  | 0.30 | 0.30 |
| Sat Flow, veh/h              | 3456 | 3404  | 1556 | 3456  | 3733 | 1242 | 3456 | 3554 | 1527 | 3456  | 3554 | 1531 |
| Grp Volume(v), veh/h         | 182  | 523   | 309  | 764   | 691  | 324  | 313  | 716  | 321  | 308   | 867  | 70   |
| Grp Sat Flow(s),veh/h/ln     | 1728 | 1702  | 1556 | 1728  | 1702 | 1571 | 1728 | 1777 | 1527 | 1728  | 1777 | 1531 |
| Q Serve(g_s), s              | 5.9  | 15.4  | 21.2 | 23.0  | 17.9 | 18.5 | 10.4 | 19.9 | 15.2 | 9.0   | 26.0 | 3.9  |
| Cycle Q Clear(g_c), s        | 5.9  | 15.4  | 21.2 | 23.0  | 17.9 | 18.5 | 10.4 | 19.9 | 15.2 | 9.0   | 26.0 | 3.9  |
| Prop In Lane                 | 1.00 |       | 1.00 | 1.00  |      | 0.79 | 1.00 |      | 1.00 | 1.00  |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 256  | 899   | 411  | 690   | 1327 | 612  | 330  | 1121 | 782  | 270   | 1071 | 461  |
| V/C Ratio(X)                 | 0.71 | 0.58  | 0.75 | 1.11  | 0.52 | 0.53 | 0.95 | 0.64 | 0.41 | 1.14  | 0.81 | 0.15 |
| Avail Cap(c_a), veh/h        | 297  | 982   | 449  | 690   | 1369 | 632  | 330  | 1198 | 815  | 270   | 1136 | 489  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 52.1 | 36.8  | 40.0 | 46.1  | 26.9 | 27.7 | 51.8 | 33.8 | 17.9 | 53.1  | 37.2 | 29.4 |
| Incr Delay (d2), s/veh       | 4.8  | 0.7   | 6.4  | 67.3  | 0.3  | 0.8  | 35.6 | 1.0  | 0.3  | 98.0  | 4.3  | 0.2  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 2.6  | 6.2   | 8.5  | 15.9  | 6.9  | 6.7  | 6.0  | 8.4  | 5.0  | 7.4   | 11.3 | 1.4  |
| Unsig. Movement Delay, s/veh |      |       |      |       |      |      |      |      |      |       |      |      |
| LnGrp Delay(d),s/veh         | 56.8 | 37.6  | 46.4 | 113.3 | 27.2 | 28.5 | 87.4 | 34.8 | 18.2 | 151.0 | 41.4 | 29.6 |
| LnGrp LOS                    | E    | D     | D    | F     | C    | C    | F    | C    | B    | F     | D    | C    |
| Approach Vol, veh/h          |      | 1014  |      |       | 1779 |      |      | 1350 |      |       | 1245 |      |
| Approach Delay, s/veh        |      | 43.7  |      |       | 64.4 |      |      | 43.1 |      |       | 67.9 |      |
| Approach LOS                 |      | D     |      |       | E    |      |      | D    |      |       | E    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4     | 5    | 6    | 7    | 8    |      |       |      |      |
| Phs Duration (G+Y+Rc), s     | 13.0 | 40.7  | 27.0 | 34.4  | 15.0 | 38.7 | 12.5 | 48.9 |      |       |      |      |
| Change Period (Y+Rc), s      | 4.6  | * 6.2 | 4.6  | 6.2   | 4.6  | 6.2  | 4.6  | 6.2  |      |       |      |      |
| Max Green Setting (Gmax), s  | 8.4  | * 37  | 22.4 | 31.0  | 10.4 | 34.6 | 9.3  | 44.1 |      |       |      |      |
| Max Q Clear Time (g_c+I1), s | 11.0 | 21.9  | 25.0 | 23.2  | 12.4 | 28.0 | 7.9  | 20.5 |      |       |      |      |
| Green Ext Time (p_c), s      | 0.0  | 5.0   | 0.0  | 3.0   | 0.0  | 3.0  | 0.0  | 6.5  |      |       |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 56.0 |
| HCM 6th LOS        | E    |

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC  
4: Lassel St. & Cahuillia Dr.

Continental Villages (JN 11575)

10/25/2018

Intersection

Int Delay, s/veh 0.7

| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      |      | ↗    | ↕    | ↗    |      | ↕    |
| Traffic Vol, veh/h       | 0    | 120  | 982  | 83   | 0    | 1386 |
| Future Vol, veh/h        | 0    | 120  | 982  | 83   | 0    | 1386 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 2    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 124  | 1012 | 86   | 0    | 1429 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 508    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 510    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | -      | 509    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 14.3 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 509   |
| HCM Lane V/C Ratio    | -   | -        | 0.243 |
| HCM Control Delay (s) | -   | -        | 14.3  |
| HCM Lane LOS          | -   | -        | B     |
| HCM 95th %tile Q(veh) | -   | -        | 0.9   |



Timings

6: Lasselle St. & Krameria Av.

10/25/2018



| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕↗    | ↖     | ↖     | ↕↗    |
| Traffic Volume (vph) | 260   | 67    | 99    | 50    | 137   | 861   | 76    | 124   | 1180  |
| Future Volume (vph)  | 260   | 67    | 99    | 50    | 137   | 861   | 76    | 124   | 1180  |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 12.4  | 34.4  | 14.0  | 36.0  | 14.0  | 44.8  | 14.0  | 16.8  | 47.6  |
| Total Split (%)      | 11.3% | 31.3% | 12.7% | 32.7% | 12.7% | 40.7% | 12.7% | 15.3% | 43.3% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

































Cycle Length: 110  
 Actuated Cycle Length: 94.2  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselle St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

10/25/2018

|  |    |    |  |    |    |  |   |    |    |    |    |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |   |   |   |   |   |   |   |   |   |   |   |
| Traffic Volume (veh/h)   | 260   | 67  | 205   | 99  | 50  | 53  | 137   | 861   | 76  | 124   | 1180  | 182   |
| Future Volume (veh/h)  | 260   | 67  | 205   | 99  | 50  | 53  | 137   | 861   | 76  | 124   | 1180  | 182   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00  |   | 1.00  | 1.00  |   | 1.00  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 274   | 71  | 121   | 104   | 53  | 23  | 144   | 906   | 60  | 131   | 1242  | 180   |
| Peak Hour Factor   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 341   | 278   | 248   | 144   | 331   | 134   | 189   | 1693  | 860   | 175   | 1461  | 211   |
| Arrive On Green  | 0.10  | 0.16  | 0.14  | 0.08  | 0.13  | 0.12  | 0.11  | 0.48  | 0.46  | 0.10  | 0.47  | 0.45  |
| Sat Flow, veh/h  | 3456  | 1777  | 1585  | 1781  | 2452  | 994   | 1781  | 3554  | 1582  | 1781  | 3117  | 449   |
| Grp Volume(v), veh/h   | 274   | 71  | 121   | 104   | 37  | 39  | 144   | 906   | 60  | 131   | 705   | 717   |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1777  | 1585  | 1781  | 1777  | 1669  | 1781  | 1777  | 1582  | 1781  | 1777  | 1789  |
| Q Serve(g_s), s  | 6.6   | 3.0   | 6.0   | 4.8   | 1.6   | 1.8   | 6.7   | 15.2  | 1.5   | 6.1   | 29.7  | 30.3  |
| Cycle Q Clear(g_c), s  | 6.6   | 3.0   | 6.0   | 4.8   | 1.6   | 1.8   | 6.7   | 15.2  | 1.5   | 6.1   | 29.7  | 30.3  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 0.60  | 1.00  |   | 1.00  | 1.00  |   | 0.25  |
| Lane Grp Cap(c), veh/h   | 341   | 278   | 248   | 144   | 240   | 225   | 189   | 1693  | 860   | 175   | 833   | 839   |
| V/C Ratio(X)   | 0.80  | 0.26  | 0.49  | 0.72  | 0.16  | 0.17  | 0.76  | 0.54  | 0.07  | 0.75  | 0.85  | 0.85  |
| Avail Cap(c_a), veh/h  | 341   | 635   | 566   | 209   | 668   | 628   | 209   | 1704  | 865   | 268   | 910   | 917   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 37.5  | 31.5  | 33.5  | 38.2  | 32.5  | 32.9  | 37.0  | 15.7  | 9.2   | 37.3  | 19.9  | 20.2  |
| Incr Delay (d2), s/veh   | 12.1  | 0.5   | 1.5   | 2.5   | 0.3   | 0.4   | 11.8  | 0.3   | 0.0   | 2.4   | 7.0   | 7.4   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 3.2   | 1.3   | 2.3   | 2.2   | 0.7   | 0.7   | 3.4   | 5.4   | 0.5   | 2.6   | 12.1  | 12.6  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 49.6  | 32.0  | 35.0  | 40.7  | 32.8  | 33.2  | 48.8  | 16.0  | 9.3   | 39.7  | 26.9  | 27.7  |
| LnGrp LOS  | D   | C   | C   | D   | C   | C   | D   | B   | A   | D   | C   | C   |
| Approach Vol, veh/h  |   | 466   |   |   | 180   |   |   | 1110  |   |   | 1553  |   |
| Approach Delay, s/veh  |   | 43.1  |   |   | 37.5  |   |   | 19.9  |   |   | 28.3  |   |
| Approach LOS   |   | D   |   |   | D   |   |   | B   |   |   | C   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 12.4  | 44.5  | 10.9  | 17.3  | 13.0  | 43.9  | 12.4  | 15.8  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 12.2  | 39.0  | 9.4   | 29.0  | 9.4   | 41.8  | 7.8   | * 31  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 8.1   | 17.2  | 6.8   | 8.0   | 8.7   | 32.3  | 8.6   | 3.8   |   |   |   |   |
| Green Ext Time (p_c), s  | 0.1   | 6.2   | 0.0   | 1.0   | 0.0   | 5.8   | 0.0   | 0.3   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   |   | 28.1  |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   |   | C   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

Continental Villages (JN 11575)

6: Lasselie St. & Krameria Av.

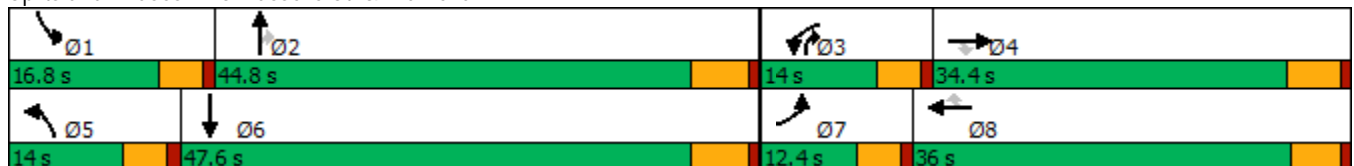
10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 260   | 67    | 205   | 99    | 50    | 53    | 137   | 861   | 76    | 124   | 1180  |
| Future Volume (vph)  | 260   | 67    | 205   | 99    | 50    | 53    | 137   | 861   | 76    | 124   | 1180  |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 12.4  | 34.4  | 34.4  | 14.0  | 36.0  | 36.0  | 14.0  | 44.8  | 14.0  | 16.8  | 47.6  |
| Total Split (%)      | 11.3% | 31.3% | 31.3% | 12.7% | 32.7% | 32.7% | 12.7% | 40.7% | 12.7% | 15.3% | 43.3% |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |
| Act Effect Green (s) | 11.4  | 14.7  | 13.3  | 9.2   | 15.7  | 14.6  | 10.1  | 43.0  | 52.2  | 10.9  | 43.9  |
| Actuated g/C Ratio   | 0.12  | 0.16  | 0.14  | 0.10  | 0.17  | 0.16  | 0.11  | 0.46  | 0.56  | 0.12  | 0.47  |
| v/c Ratio            | 1.27  | 0.24  | 0.53  | 0.60  | 0.17  | 0.16  | 0.76  | 0.56  | 0.09  | 0.64  | 0.88  |
| Control Delay        | 193.8 | 36.2  | 9.8   | 57.6  | 33.7  | 1.0   | 68.3  | 21.8  | 3.2   | 55.4  | 31.4  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 193.8 | 36.2  | 9.8   | 57.6  | 33.7  | 1.0   | 68.3  | 21.8  | 3.2   | 55.4  | 31.4  |
| LOS                  | F     | D     | A     | E     | C     | A     | E     | C     | A     | E     | C     |
| Approach Delay       |       | 103.0 |       |       | 36.7  |       |       | 26.4  |       |       | 33.4  |
| Approach LOS         |       | F     |       |       | D     |       |       | C     |       |       | C     |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 110                       |                        |
| Actuated Cycle Length: 94               |                        |
| Natural Cycle: 120                      |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 1.27                 |                        |
| Intersection Signal Delay: 42.6         | Intersection LOS: D    |
| Intersection Capacity Utilization 77.1% | ICU Level of Service D |
| Analysis Period (min) 15                |                        |

























Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

|  |  |  |  |  |  |  |   |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)   | 260   | 67  | 205   | 99  | 50  | 53  | 137   | 861   | 76  | 124   | 1180  | 182   |
| Future Volume (veh/h)  | 260   | 67  | 205   | 99  | 50  | 53  | 137   | 861   | 76  | 124   | 1180  | 182   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00  |   | 1.00  | 1.00  |   | 1.00  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 274   | 71  | 121   | 104   | 53  | 23  | 144   | 906   | 60  | 131   | 1242  | 180   |
| Peak Hour Factor   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 176   | 292   | 222   | 144   | 252   | 190   | 189   | 1693  | 859   | 175   | 1461  | 211   |
| Arrive On Green  | 0.10  | 0.16  | 0.14  | 0.08  | 0.13  | 0.12  | 0.11  | 0.48  | 0.46  | 0.10  | 0.47  | 0.45  |
| Sat Flow, veh/h  | 1781  | 1870  | 1585  | 1781  | 1870  | 1556  | 1781  | 3554  | 1580  | 1781  | 3116  | 449   |
| Grp Volume(v), veh/h   | 274   | 71  | 121   | 104   | 53  | 23  | 144   | 906   | 60  | 131   | 705   | 717   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1585  | 1781  | 1870  | 1556  | 1781  | 1777  | 1580  | 1781  | 1777  | 1789  |
| Q Serve(g_s), s  | 8.4   | 2.8   | 6.0   | 4.8   | 2.1   | 1.1   | 6.7   | 15.2  | 1.5   | 6.1   | 29.7  | 30.3  |
| Cycle Q Clear(g_c), s  | 8.4   | 2.8   | 6.0   | 4.8   | 2.1   | 1.1   | 6.7   | 15.2  | 1.5   | 6.1   | 29.7  | 30.3  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 0.25  |
| Lane Grp Cap(c), veh/h   | 176   | 292   | 222   | 144   | 252   | 190   | 189   | 1693  | 859   | 175   | 833   | 839   |
| V/C Ratio(X)   | 1.56  | 0.24  | 0.55  | 0.72  | 0.21  | 0.12  | 0.76  | 0.54  | 0.07  | 0.75  | 0.85  | 0.85  |
| Avail Cap(c_a), veh/h  | 176   | 668   | 540   | 209   | 703   | 565   | 209   | 1704  | 864   | 268   | 910   | 917   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 38.3  | 31.5  | 34.1  | 38.2  | 32.8  | 33.3  | 37.0  | 15.7  | 9.2   | 37.3  | 19.9  | 20.2  |
| Incr Delay (d2), s/veh   | 277.1   | 0.4   | 2.1   | 2.5   | 0.4   | 0.3   | 11.8  | 0.3   | 0.0   | 2.4   | 7.0   | 7.4   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 17.0  | 1.3   | 2.4   | 2.2   | 1.0   | 0.4   | 3.4   | 5.4   | 0.5   | 2.6   | 12.1  | 12.6  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 315.4   | 31.9  | 36.2  | 40.7  | 33.2  | 33.6  | 48.8  | 16.0  | 9.3   | 39.7  | 26.9  | 27.7  |
| LnGrp LOS  | F   | C   | D   | D   | C   | C   | D   | B   | A   | D   | C   | C   |
| Approach Vol, veh/h  |   | 466   |   |   | 180   |   |   | 1110  |   |   | 1553  |   |
| Approach Delay, s/veh  |   | 199.7   |   |   | 37.6  |   |   | 19.9  |   |   | 28.3  |   |
| Approach LOS   |   | F   |   |   | D   |   |   | B   |   |   | C   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 12.4  | 44.5  | 10.9  | 17.3  | 13.0  | 43.9  | 12.4  | 15.8  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 12.2  | 39.0  | 9.4   | 29.0  | 9.4   | 41.8  | 7.8   | * 31  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 8.1   | 17.2  | 6.8   | 8.0   | 8.7   | 32.3  | 10.4  | 4.1   |   |   |   |   |
| Green Ext Time (p_c), s  | 0.1   | 6.2   | 0.0   | 0.7   | 0.0   | 5.8   | 0.0   | 0.3   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 50.1  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | D   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↵    | ↕    |      | ↵    | ↕    |      |      | ↕    |      |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 22   | 161  | 84   | 6    | 152  | 0    | 49   | 0    | 11   | 0    | 0    | 0    |
| Future Vol, veh/h        | 22   | 161  | 84   | 6    | 152  | 0    | 49   | 0    | 11   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 25   | 185  | 97   | 7    | 175  | 0    | 56   | 0    | 13   | 0    | 0    | 0    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |      | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 175    | 0 | 0 | 285    | 0 | 0 | 389    | 476  | 144  | 332    | 524  | 88   |
| Stage 1              | -      | - | - | -      | - | - | 287    | 287  | -    | 189    | 189  | -    |
| Stage 2              | -      | - | - | -      | - | - | 102    | 189  | -    | 143    | 335  | -    |
| Critical Hdwy        | 4.14   | - | - | 4.14   | - | - | 5      | 6.54 | 5    | 5      | 6.54 | 5    |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 5      | 5.54 | -    | 6.54   | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 5      | 5.54 | -    | 6.54   | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | - | - | 2.22   | - | - | 3.52   | 4.02 | 3.32 | 3.52   | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 1399   | - | - | 1274   | - | - | 716    | 486  | 948  | 755    | 457  | 999  |
| Stage 1              | -      | - | - | -      | - | - | 787    | 673  | -    | 795    | 743  | -    |
| Stage 2              | -      | - | - | -      | - | - | 933    | 743  | -    | 845    | 641  | -    |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -    | -    | -      | -    | -    |
| Mov Cap-1 Maneuver   | 1399   | - | - | 1270   | - | - | 701    | 473  | 945  | 732    | 445  | 999  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 726    | 581  | -    | 732    | 559  | -    |
| Stage 1              | -      | - | - | -      | - | - | 770    | 659  | -    | 781    | 739  | -    |
| Stage 2              | -      | - | - | -      | - | - | 928    | 739  | -    | 819    | 628  | -    |

| Approach             | EB  | WB  | NB   | SB |
|----------------------|-----|-----|------|----|
| HCM Control Delay, s | 0.6 | 0.3 | 10.2 | 0  |
| HCM LOS              |     |     | B    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 758   | 1399  | -   | -   | 1270  | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.091 | 0.018 | -   | -   | 0.005 | -   | -   | -     |
| HCM Control Delay (s) | 10.2  | 7.6   | -   | -   | 7.8   | -   | -   | 0     |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.3   | 0.1   | -   | -   | 0     | -   | -   | -     |

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↶    | ↷    |      | ↶    | ↷    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 22   | 161  | 84   | 6    | 152  | 0    | 49   | 0    | 11   | 0    | 0    | 0    |
| Future Vol, veh/h        | 22   | 161  | 84   | 6    | 152  | 0    | 49   | 0    | 11   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 25   | 185  | 97   | 7    | 175  | 0    | 56   | 0    | 13   | 0    | 0    | 0    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 175    | 0 | 0 | 285    | 0 | 0 | 476    | 476   | 237   | 479    | 524   | 175   |
| Stage 1              | -      | - | - | -      | - | - | 287    | 287   | -     | 189    | 189   | -     |
| Stage 2              | -      | - | - | -      | - | - | 189    | 189   | -     | 290    | 335   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 5      | 6.52  | 5     | 5      | 6.52  | 5     |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1401   | - | - | 1277   | - | - | 661    | 488   | 869   | 659    | 458   | 921   |
| Stage 1              | -      | - | - | -      | - | - | 720    | 674   | -     | 813    | 744   | -     |
| Stage 2              | -      | - | - | -      | - | - | 813    | 744   | -     | 718    | 643   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1401   | - | - | 1273   | - | - | 647    | 475   | 867   | 638    | 446   | 921   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 663    | 582   | -     | 650    | 560   | -     |
| Stage 1              | -      | - | - | -      | - | - | 705    | 660   | -     | 798    | 740   | -     |
| Stage 2              | -      | - | - | -      | - | - | 809    | 740   | -     | 695    | 629   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|----|--|--|
| HCM Control Delay, s | 0.6 |  |  | 0.3 |  |  | 10.8 |  |  | 0  |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | A  |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 693   | 1401  | -   | -   | 1273  | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.1   | 0.018 | -   | -   | 0.005 | -   | -   | -     |
| HCM Control Delay (s) | 10.8  | 7.6   | -   | -   | 7.8   | -   | -   | 0     |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.3   | 0.1   | -   | -   | 0     | -   | -   | -     |

HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 7    | 0    | 8    | 0    | 0    | 0    | 2    | 120  | 0    | 1    | 149  | 13   |
| Future Vol, veh/h        | 7    | 0    | 8    | 0    | 0    | 0    | 2    | 120  | 0    | 1    | 149  | 13   |
| Conflicting Peds, #/hr   | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 6    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 9    | 0    | 10   | 0    | 0    | 0    | 2    | 148  | 0    | 1    | 184  | 16   |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       |       | Major2 |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 352    | 354   | 199    | 354   | 362    | 150   | 206   | 0      | 0 | 150   | 0 | 0 |
| Stage 1              | 200    | 200   | -      | 154   | 154    | -     | -     | -      | - | -     | - | - |
| Stage 2              | 152    | 154   | -      | 200   | 208    | -     | -     | -      | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12  | -      | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -     | -      | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -     | -      | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218 | -      | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 603    | 571   | 842    | 601   | 565    | 896   | 1365  | -      | - | 1431  | - | - |
| Stage 1              | 802    | 736   | -      | 848   | 770    | -     | -     | -      | - | -     | - | - |
| Stage 2              | 850    | 770   | -      | 802   | 730    | -     | -     | -      | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |       | -      | - | -     | - | - |
| Mov Cap-1 Maneuver   | 599    | 565   | 836    | 591   | 559    | 894   | 1357  | -      | - | 1428  | - | - |
| Mov Cap-2 Maneuver   | 647    | 599   | -      | 641   | 594    | -     | -     | -      | - | -     | - | - |
| Stage 1              | 796    | 731   | -      | 845   | 768    | -     | -     | -      | - | -     | - | - |
| Stage 2              | 849    | 768   | -      | 791   | 725    | -     | -     | -      | - | -     | - | - |

| Approach             | EB | WB | NB  | SB |
|----------------------|----|----|-----|----|
| HCM Control Delay, s | 10 | 0  | 0.1 | 0  |
| HCM LOS              | B  | A  |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-----|-------|-----|
| Capacity (veh/h)      | 1357  | -   | -   | 736        | -   | 1428  | -   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | 0.025      | -   | 0.001 | -   |
| HCM Control Delay (s) | 7.7   | -   | -   | 10         | 0   | 7.5   | -   |
| HCM Lane LOS          | A     | -   | -   | B          | A   | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.1        | -   | 0     | -   |

**APPENDIX 6.2:**

**OPENING YEAR CUMULATIVE (2023) WITH PROJECT CONDITIONS INTERSECTION  
OPERATIONS ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



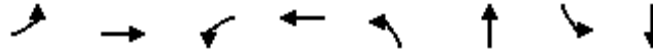
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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

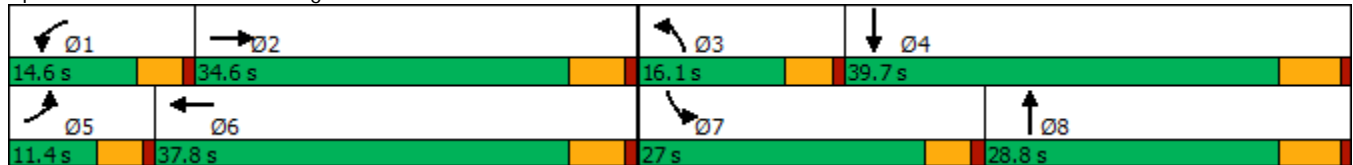


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 92    | 585   | 106   | 687   | 83    | 124   | 307   | 159   |
| Future Volume (vph)  | 92    | 585   | 106   | 687   | 83    | 124   | 307   | 159   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 11.4  | 34.6  | 14.6  | 37.8  | 16.1  | 28.8  | 27.0  | 39.7  |
| Total Split (%)      | 10.9% | 33.0% | 13.9% | 36.0% | 15.3% | 27.4% | 25.7% | 37.8% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary

Cycle Length: 105  
 Actuated Cycle Length: 92.2  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Kitching St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 92   | 585  | 134  | 106  | 687  | 220  | 83   | 124  | 91   | 307  | 159  | 111  |
| Future Volume (veh/h)        | 92   | 585  | 134  | 106  | 687  | 220  | 83   | 124  | 91   | 307  | 159  | 111  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 0.97 | 1.00 |      | 1.00 | 1.00 |      | 0.98 | 1.00 |      | 0.98 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 105  | 665  | 135  | 120  | 781  | 200  | 94   | 141  | 76   | 349  | 181  | 96   |
| Peak Hour Factor             | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 144  | 955  | 194  | 162  | 942  | 241  | 132  | 405  | 205  | 395  | 740  | 373  |
| Arrive On Green              | 0.08 | 0.33 | 0.31 | 0.09 | 0.34 | 0.32 | 0.07 | 0.18 | 0.16 | 0.22 | 0.33 | 0.31 |
| Sat Flow, veh/h              | 1781 | 2923 | 593  | 1781 | 2798 | 717  | 1781 | 2263 | 1146 | 1781 | 2268 | 1141 |
| Grp Volume(v), veh/h         | 105  | 404  | 396  | 120  | 496  | 485  | 94   | 109  | 108  | 349  | 140  | 137  |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1739 | 1781 | 1777 | 1738 | 1781 | 1777 | 1633 | 1781 | 1777 | 1632 |
| Q Serve(g_s), s              | 5.1  | 17.4 | 17.5 | 5.8  | 22.6 | 22.6 | 4.5  | 4.7  | 5.2  | 16.7 | 5.1  | 5.5  |
| Cycle Q Clear(g_c), s        | 5.1  | 17.4 | 17.5 | 5.8  | 22.6 | 22.6 | 4.5  | 4.7  | 5.2  | 16.7 | 5.1  | 5.5  |
| Prop In Lane                 | 1.00 |      | 0.34 | 1.00 |      | 0.41 | 1.00 |      | 0.70 | 1.00 |      | 0.70 |
| Lane Grp Cap(c), veh/h       | 144  | 581  | 568  | 162  | 598  | 585  | 132  | 318  | 292  | 395  | 580  | 533  |
| V/C Ratio(X)                 | 0.73 | 0.70 | 0.70 | 0.74 | 0.83 | 0.83 | 0.71 | 0.34 | 0.37 | 0.88 | 0.24 | 0.26 |
| Avail Cap(c_a), veh/h        | 150  | 618  | 605  | 215  | 683  | 668  | 245  | 501  | 460  | 466  | 721  | 662  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 39.5 | 25.8 | 26.0 | 39.0 | 26.8 | 27.1 | 39.8 | 31.6 | 32.3 | 33.2 | 21.7 | 22.3 |
| Incr Delay (d2), s/veh       | 13.5 | 3.2  | 3.3  | 5.8  | 7.6  | 7.7  | 2.7  | 0.6  | 0.8  | 14.7 | 0.2  | 0.3  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 2.7  | 7.4  | 7.3  | 2.7  | 10.1 | 10.0 | 2.0  | 2.0  | 2.0  | 8.3  | 2.0  | 2.0  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 53.0 | 29.0 | 29.3 | 44.7 | 34.4 | 34.9 | 42.5 | 32.2 | 33.1 | 47.8 | 21.9 | 22.5 |
| LnGrp LOS                    | D    | C    | C    | D    | C    | C    | D    | C    | C    | D    | C    | C    |
| Approach Vol, veh/h          |      | 905  |      |      | 1101 |      |      | 311  |      |      | 626  |      |
| Approach Delay, s/veh        |      | 31.9 |      |      | 35.7 |      |      | 35.6 |      |      | 36.5 |      |
| Approach LOS                 |      | C    |      |      | D    |      |      | D    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 12.0 | 32.8 | 10.5 | 32.7 | 11.1 | 33.6 | 23.5 | 19.7 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  |      |      |      |      |
| Max Green Setting (Gmax), s  | 10.0 | 29.2 | 11.5 | 33.9 | 6.8  | 32.4 | 22.4 | 23.0 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 7.8  | 19.5 | 6.5  | 7.5  | 7.1  | 24.6 | 18.7 | 7.2  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 3.3  | 0.0  | 1.5  | 0.0  | 3.6  | 0.2  | 0.9  |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 34.7 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | C    |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

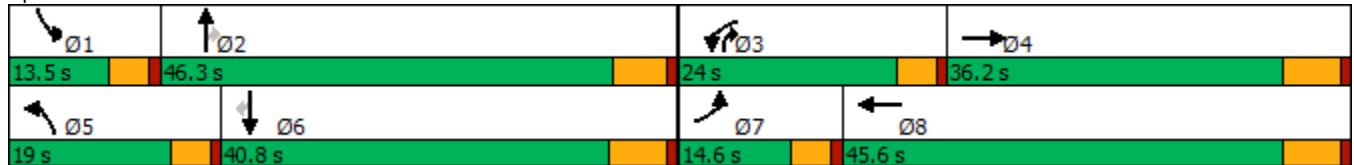


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕↔    | ↖↗    | ↕↔    | ↖↗    | ↕↔    | ↖     | ↖↗    | ↕↔    | ↖     |
| Traffic Volume (vph) | 153   | 619   | 628   | 688   | 448   | 736   | 599   | 275   | 752   | 123   |
| Future Volume (vph)  | 153   | 619   | 628   | 688   | 448   | 736   | 599   | 275   | 752   | 123   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 14.6  | 36.2  | 24.0  | 45.6  | 19.0  | 46.3  | 24.0  | 13.5  | 40.8  | 40.8  |
| Total Split (%)      | 12.2% | 30.2% | 20.0% | 38.0% | 15.8% | 38.6% | 20.0% | 11.3% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Lasselle St. & Iris Av.





HCM 6th Signalized Intersection Summary  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL  | EBT   | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|--|------|-------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations  |      |       |      |       |      |      |       |      |      |       |      |      |
| Traffic Volume (veh/h)   | 153  | 619   | 396  | 628   | 688  | 162  | 448   | 736  | 599  | 275   | 752  | 123  |
| Future Volume (veh/h)  | 153  | 619   | 396  | 628   | 688  | 162  | 448   | 736  | 599  | 275   | 752  | 123  |
| Initial Q (Qb), veh  | 0    | 0     | 0    | 0     | 0    | 0    | 0     | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 1.00 | 1.00  |      | 0.99 | 1.00  |      | 0.98 | 1.00  |      | 0.95 |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach  |      | No    |      |       | No   |      |       | No   |      |       | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 172  | 696   | 297  | 706   | 773  | 139  | 503   | 827  | 444  | 309   | 845  | 78   |
| Peak Hour Factor   | 0.89 | 0.89  | 0.89 | 0.89  | 0.89 | 0.89 | 0.89  | 0.89 | 0.89 | 0.89  | 0.89 | 0.89 |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2     | 2    | 2    | 2     | 2    | 2    | 2     | 2    | 2    |
| Cap, veh/h   | 247  | 910   | 383  | 600   | 1567 | 279  | 450   | 1218 | 791  | 285   | 1061 | 451  |
| Arrive On Green  | 0.07 | 0.26  | 0.24 | 0.17  | 0.36 | 0.34 | 0.13  | 0.34 | 0.33 | 0.08  | 0.30 | 0.30 |
| Sat Flow, veh/h  | 3456 | 3522  | 1481 | 3456  | 4347 | 775  | 3456  | 3554 | 1552 | 3456  | 3554 | 1510 |
| Grp Volume(v), veh/h   | 172  | 672   | 321  | 706   | 604  | 308  | 503   | 827  | 444  | 309   | 845  | 78   |
| Grp Sat Flow(s),veh/h/ln   | 1728 | 1702  | 1599 | 1728  | 1702 | 1717 | 1728  | 1777 | 1552 | 1728  | 1777 | 1510 |
| Q Serve(g_s), s  | 5.6  | 21.0  | 21.5 | 20.0  | 15.9 | 16.2 | 15.0  | 22.9 | 22.8 | 9.5   | 25.2 | 4.4  |
| Cycle Q Clear(g_c), s  | 5.6  | 21.0  | 21.5 | 20.0  | 15.9 | 16.2 | 15.0  | 22.9 | 22.8 | 9.5   | 25.2 | 4.4  |
| Prop In Lane   | 1.00 |       | 0.93 | 1.00  |      | 0.45 | 1.00  |      | 1.00 | 1.00  |      | 1.00 |
| Lane Grp Cap(c), veh/h   | 247  | 879   | 413  | 600   | 1228 | 619  | 450   | 1218 | 791  | 285   | 1061 | 451  |
| V/C Ratio(X)   | 0.70 | 0.76  | 0.78 | 1.18  | 0.49 | 0.50 | 1.12  | 0.68 | 0.56 | 1.08  | 0.80 | 0.17 |
| Avail Cap(c_a), veh/h  | 318  | 952   | 447  | 600   | 1230 | 621  | 450   | 1306 | 829  | 285   | 1136 | 483  |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 52.2 | 39.4  | 40.6 | 47.5  | 28.6 | 29.1 | 50.0  | 32.4 | 19.7 | 52.8  | 37.1 | 29.9 |
| Incr Delay (d2), s/veh   | 2.5  | 3.5   | 7.8  | 95.7  | 0.3  | 0.6  | 78.3  | 1.3  | 0.8  | 77.3  | 3.8  | 0.2  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 2.4  | 8.8   | 9.1  | 16.2  | 6.2  | 6.5  | 11.2  | 9.6  | 7.6  | 7.0   | 10.9 | 1.6  |
| Unsig. Movement Delay, s/veh   |      |       |      |       |      |      |       |      |      |       |      |      |
| LnGrp Delay(d),s/veh   | 54.7 | 42.9  | 48.4 | 143.2 | 28.9 | 29.7 | 128.3 | 33.7 | 20.4 | 130.1 | 41.0 | 30.0 |
| LnGrp LOS  | D    | D     | D    | F     | C    | C    | F     | C    | C    | F     | D    | C    |
| Approach Vol, veh/h  |      | 1165  |      |       | 1618 |      |       | 1774 |      |       | 1232 |      |
| Approach Delay, s/veh  |      | 46.2  |      |       | 78.9 |      |       | 57.2 |      |       | 62.6 |      |
| Approach LOS   |      | D     |      |       | E    |      |       | E    |      |       | E    |      |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4     | 5    | 6    | 7     | 8    |      |       |      |      |
| Phs Duration (G+Y+Rc), s   | 13.5 | 43.9  | 24.0 | 33.7  | 19.0 | 38.4 | 12.2  | 45.5 |      |       |      |      |
| Change Period (Y+Rc), s  | 4.6  | * 6.2 | 4.6  | 6.2   | 4.6  | 6.2  | 4.6   | 6.2  |      |       |      |      |
| Max Green Setting (Gmax), s  | 8.9  | * 41  | 19.4 | 30.0  | 14.4 | 34.6 | 10.0  | 39.4 |      |       |      |      |
| Max Q Clear Time (g_c+I1), s   | 11.5 | 24.9  | 22.0 | 23.5  | 17.0 | 27.2 | 7.6   | 18.2 |      |       |      |      |
| Green Ext Time (p_c), s  | 0.0  | 6.3   | 0.0  | 3.1   | 0.0  | 3.2  | 0.1   | 5.4  |      |       |      |      |
| <b>Intersection Summary</b>  |      |       |      |       |      |      |       |      |      |       |      |      |
| HCM 6th Ctrl Delay   |      |       |      | 62.2  |      |      |       |      |      |       |      |      |
| HCM 6th LOS  |      |       |      | E     |      |      |       |      |      |       |      |      |
| <b>Notes</b>   |      |       |      |       |      |      |       |      |      |       |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |       |      |      |       |      |      |       |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
4: Lasselle St. & Cahuillia Dr.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      | ↗    | ↕↕   | ↗    |      | ↕↕   |
| Traffic Vol, veh/h       | 0    | 98   | 1451 | 166  | 0    | 1096 |
| Future Vol, veh/h        | 0    | 98   | 1451 | 166  | 0    | 1096 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 3    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 111  | 1649 | 189  | 0    | 1245 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 828    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 314    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | -      | 313    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 22.7 | 0  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 313   |
| HCM Lane V/C Ratio    | -   | -        | 0.356 |
| HCM Control Delay (s) | -   | -        | 22.7  |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 1.6   |

HCM 6th TWSC  
5: Lassel St. & Driveway 1

Continental Villages (JN 11575)

10/25/2018

Intersection

Int Delay, s/veh 0.3

| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      |      | ↗    | ↕    |      |      | ↕    |
| Traffic Vol, veh/h       | 0    | 46   | 1556 | 34   | 0    | 1121 |
| Future Vol, veh/h        | 0    | 46   | 1556 | 34   | 0    | 1121 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 50   | 1691 | 37   | 0    | 1218 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 864    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 297    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | -      | 297    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 19.6 | 0  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 297   |
| HCM Lane V/C Ratio    | -   | -        | 0.168 |
| HCM Control Delay (s) | -   | -        | 19.6  |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 0.6   |

Timings

Continental Villages (JN 11575)

6: Lasselie St. & Krameria Av.

10/25/2018

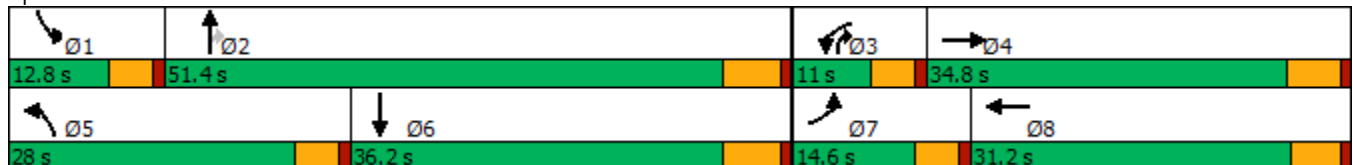


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕↕    | ↗     | ↖     | ↕↕    |
| Traffic Volume (vph) | 388   | 297   | 144   | 205   | 416   | 1197  | 262   | 156   | 819   |
| Future Volume (vph)  | 388   | 297   | 144   | 205   | 416   | 1197  | 262   | 156   | 819   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 14.6  | 34.8  | 11.0  | 31.2  | 28.0  | 51.4  | 11.0  | 12.8  | 36.2  |
| Total Split (%)      | 13.3% | 31.6% | 10.0% | 28.4% | 25.5% | 46.7% | 10.0% | 11.6% | 32.9% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 104.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.





HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR   |
|--|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|-------|
| Lane Configurations  |       |       |      |       |       |      |       |       |      |       |       |       |
| Traffic Volume (veh/h)   | 388   | 297   | 407  | 144   | 205   | 97   | 416   | 1197  | 262  | 156   | 819   | 286   |
| Future Volume (veh/h)  | 388   | 297   | 407  | 144   | 205   | 97   | 416   | 1197  | 262  | 156   | 819   | 286   |
| Initial Q (Qb), veh  | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0     |
| Ped-Bike Adj(A_pbT)  | 1.00  |       | 0.99 | 1.00  |       | 0.99 | 1.00  |       | 0.99 | 1.00  |       | 0.98  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |       | No    |      |       | No    |      |       | No    |      |       | No    |       |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870 | 1870  | 1870  | 1870 | 1870  | 1870  | 1870 | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 451   | 345   | 297  | 167   | 238   | 86   | 484   | 1392  | 220  | 181   | 952   | 306   |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2     | 2     | 2    | 2     | 2     | 2    | 2     | 2     | 2    | 2     | 2     | 2     |
| Cap, veh/h   | 350   | 442   | 374  | 119   | 529   | 186  | 408   | 1610  | 796  | 150   | 810   | 259   |
| Arrive On Green  | 0.10  | 0.24  | 0.23 | 0.07  | 0.21  | 0.20 | 0.23  | 0.45  | 0.44 | 0.08  | 0.31  | 0.29  |
| Sat Flow, veh/h  | 3456  | 1817  | 1537 | 1781  | 2569  | 901  | 1781  | 3554  | 1562 | 1781  | 2632  | 841   |
| Grp Volume(v), veh/h   | 451   | 337   | 305  | 167   | 162   | 162  | 484   | 1392  | 220  | 181   | 641   | 617   |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1777  | 1577 | 1781  | 1777  | 1694 | 1781  | 1777  | 1562 | 1781  | 1777  | 1696  |
| Q Serve(g_s), s  | 10.6  | 18.6  | 19.1 | 7.0   | 8.4   | 8.8  | 24.0  | 36.9  | 8.4  | 8.8   | 32.2  | 32.2  |
| Cycle Q Clear(g_c), s  | 10.6  | 18.6  | 19.1 | 7.0   | 8.4   | 8.8  | 24.0  | 36.9  | 8.4  | 8.8   | 32.2  | 32.2  |
| Prop In Lane   | 1.00  |       | 0.97 | 1.00  |       | 0.53 | 1.00  |       | 1.00 | 1.00  |       | 0.50  |
| Lane Grp Cap(c), veh/h   | 350   | 432   | 384  | 119   | 366   | 349  | 408   | 1610  | 796  | 150   | 547   | 522   |
| V/C Ratio(X)   | 1.29  | 0.78  | 0.79 | 1.40  | 0.44  | 0.46 | 1.18  | 0.86  | 0.28 | 1.21  | 1.17  | 1.18  |
| Avail Cap(c_a), veh/h  | 350   | 523   | 464  | 119   | 462   | 440  | 408   | 1610  | 796  | 150   | 547   | 522   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 47.0  | 37.0  | 37.8 | 48.8  | 36.3  | 36.7 | 40.3  | 25.7  | 14.7 | 47.9  | 36.2  | 36.7  |
| Incr Delay (d2), s/veh   | 149.7 | 6.2   | 7.7  | 223.4 | 0.8   | 1.0  | 105.5 | 5.2   | 0.2  | 140.3 | 95.8  | 100.2 |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 11.7  | 8.5   | 8.0  | 10.5  | 3.7   | 3.7  | 22.0  | 15.3  | 2.9  | 9.6   | 27.6  | 27.1  |
| Unsig. Movement Delay, s/veh   |       |       |      |       |       |      |       |       |      |       |       |       |
| LnGrp Delay(d),s/veh   | 196.8 | 43.2  | 45.6 | 272.2 | 37.2  | 37.7 | 145.8 | 30.9  | 14.9 | 188.3 | 132.0 | 136.9 |
| LnGrp LOS  | F     | D     | D    | F     | D     | D    | F     | C     | B    | F     | F     | F     |
| Approach Vol, veh/h  |       | 1093  |      |       | 491   |      |       | 2096  |      |       | 1439  |       |
| Approach Delay, s/veh  |       | 107.2 |      |       | 117.3 |      |       | 55.8  |      |       | 141.2 |       |
| Approach LOS   |       | F     |      |       | F     |      |       | E     |      |       | F     |       |
| Timer - Assigned Phs   | 1     | 2     | 3    | 4     | 5     | 6    | 7     | 8     |      |       |       |       |
| Phs Duration (G+Y+Rc), s   | 12.8  | 51.4  | 11.0 | 29.5  | 28.0  | 36.2 | 14.6  | 25.9  |      |       |       |       |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6  | 5.4   | 4.6   | 5.8  | 4.6   | * 5.4 |      |       |       |       |
| Max Green Setting (Gmax), s  | 8.2   | 45.6  | 6.4  | 29.4  | 23.4  | 30.4 | 10.0  | * 26  |      |       |       |       |
| Max Q Clear Time (g_c+I1), s   | 10.8  | 38.9  | 9.0  | 21.1  | 26.0  | 34.2 | 12.6  | 10.8  |      |       |       |       |
| Green Ext Time (p_c), s  | 0.0   | 4.8   | 0.0  | 2.5   | 0.0   | 0.0  | 0.0   | 1.6   |      |       |       |       |
| <b>Intersection Summary</b>  |       |       |      |       |       |      |       |       |      |       |       |       |
| HCM 6th Ctrl Delay   |       |       | 96.7 |       |       |      |       |       |      |       |       |       |
| HCM 6th LOS  |       |       | F    |       |       |      |       |       |      |       |       |       |
| <b>Notes</b>   |       |       |      |       |       |      |       |       |      |       |       |       |
| User approved pedestrian interval to be less than phase max green.                                 |       |       |      |       |       |      |       |       |      |       |       |       |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |       |       |      |       |       |      |       |       |      |       |       |       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

Continental Villages (JN 11575)

6: Lasselie St. & Krameria Av.

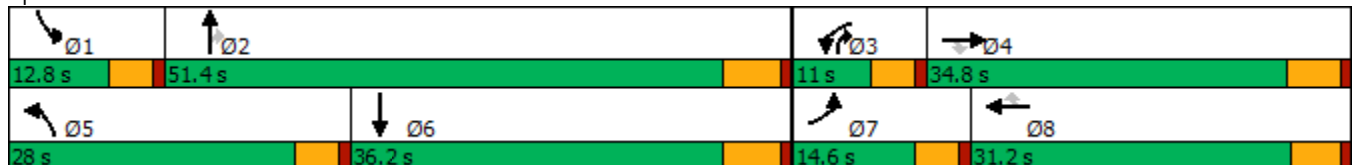
10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 388   | 297   | 407   | 144   | 205   | 97    | 416   | 1197  | 262   | 156   | 819   |
| Future Volume (vph)  | 388   | 297   | 407   | 144   | 205   | 97    | 416   | 1197  | 262   | 156   | 819   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 14.6  | 34.8  | 34.8  | 11.0  | 31.2  | 31.2  | 28.0  | 51.4  | 11.0  | 12.8  | 36.2  |
| Total Split (%)      | 13.3% | 31.6% | 31.6% | 10.0% | 28.4% | 28.4% | 25.5% | 46.7% | 10.0% | 11.6% | 32.9% |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 105.2  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

























Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

|  |  |  |  |  |  |  |   |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)   | 388   | 297   | 407   | 144   | 205   | 97  | 416   | 1197  | 262   | 156   | 819   | 286   |
| Future Volume (veh/h)  | 388   | 297   | 407   | 144   | 205   | 97  | 416   | 1197  | 262   | 156   | 819   | 286   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.98  | 1.00  |   | 0.96  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 451   | 345   | 297   | 167   | 238   | 86  | 484   | 1392  | 220   | 181   | 952   | 306   |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 182   | 446   | 354   | 120   | 376   | 298   | 411   | 1619  | 794   | 151   | 811   | 259   |
| Arrive On Green  | 0.10  | 0.24  | 0.23  | 0.07  | 0.20  | 0.19  | 0.23  | 0.46  | 0.44  | 0.08  | 0.31  | 0.29  |
| Sat Flow, veh/h  | 1781  | 1870  | 1570  | 1781  | 1870  | 1564  | 1781  | 3554  | 1547  | 1781  | 2621  | 838   |
| Grp Volume(v), veh/h   | 451   | 345   | 297   | 167   | 238   | 86  | 484   | 1392  | 220   | 181   | 644   | 614   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1570  | 1781  | 1870  | 1564  | 1781  | 1777  | 1547  | 1781  | 1777  | 1682  |
| Q Serve(g_s), s  | 10.6  | 17.9  | 18.8  | 7.0   | 12.1  | 4.9   | 24.0  | 36.5  | 8.4   | 8.8   | 32.2  | 32.2  |
| Cycle Q Clear(g_c), s  | 10.6  | 17.9  | 18.8  | 7.0   | 12.1  | 4.9   | 24.0  | 36.5  | 8.4   | 8.8   | 32.2  | 32.2  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 0.50  |
| Lane Grp Cap(c), veh/h   | 182   | 446   | 354   | 120   | 376   | 298   | 411   | 1619  | 794   | 151   | 550   | 521   |
| V/C Ratio(X)   | 2.48  | 0.77  | 0.84  | 1.39  | 0.63  | 0.29  | 1.18  | 0.86  | 0.28  | 1.20  | 1.17  | 1.18  |
| Avail Cap(c_a), veh/h  | 182   | 554   | 444   | 120   | 489   | 392   | 411   | 1619  | 794   | 151   | 550   | 521   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 46.7  | 37.0  | 38.5  | 48.5  | 38.0  | 36.1  | 40.0  | 25.3  | 14.5  | 47.6  | 35.9  | 36.4  |
| Incr Delay (d2), s/veh   | 684.3   | 5.3   | 11.1  | 219.8   | 1.8   | 0.5   | 102.6   | 4.9   | 0.2   | 137.5   | 94.7  | 99.6  |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 39.1  | 8.5   | 8.1   | 10.4  | 5.6   | 1.9   | 21.7  | 15.0  | 2.9   | 9.5   | 27.5  | 26.9  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 731.0   | 42.3  | 49.6  | 268.3   | 39.8  | 36.6  | 142.6   | 30.3  | 14.7  | 185.1   | 130.6   | 135.9   |
| LnGrp LOS  | F   | D   | D   | F   | D   | D   | F   | C   | B   | F   | F   | F   |
| Approach Vol, veh/h  |   | 1093  |   |   | 491   |   |   | 2096  |   |   | 1439  |   |
| Approach Delay, s/veh  |   | 328.5   |   |   | 117.0   |   |   | 54.6  |   |   | 139.7   |   |
| Approach LOS   |   | F   |   |   | F   |   |   | D   |   |   | F   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 12.8  | 51.4  | 11.0  | 28.8  | 28.0  | 36.2  | 14.6  | 25.2  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 8.2   | 45.6  | 6.4   | 29.4  | 23.4  | 30.4  | 10.0  | * 26  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 10.8  | 38.5  | 9.0   | 20.8  | 26.0  | 34.2  | 12.6  | 14.1  |   |   |   |   |
| Green Ext Time (p_c), s  | 0.0   | 5.0   | 0.0   | 2.0   | 0.0   | 0.0   | 0.0   | 1.2   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 143.0   |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | F   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

Intersection

Int Delay, s/veh 3.6

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↔    | ↕    |      | ↔    | ↕    |      |      | ↕    |      |      | ↕    | ↔    |
| Traffic Vol, veh/h       | 87   | 577  | 51   | 53   | 330  | 3    | 68   | 1    | 87   | 4    | 1    | 47   |
| Future Vol, veh/h        | 87   | 577  | 51   | 53   | 330  | 3    | 68   | 1    | 87   | 4    | 1    | 47   |
| Conflicting Peds, #/hr   | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 113  | 749  | 66   | 69   | 429  | 4    | 88   | 1    | 113  | 5    | 1    | 61   |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 433    | 0      | 0      | 817    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1123   | -      | -      | 807    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1123   | -      | -      | 805    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB | WB  | NB   | SB   |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 1  | 1.4 | 18.5 | 10.7 |
| HCM LOS              |    |     | C    | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 467   | 1123  | -   | -   | 805   | -   | -   | 704   |
| HCM Lane V/C Ratio    | 0.434 | 0.101 | -   | -   | 0.086 | -   | -   | 0.096 |
| HCM Control Delay (s) | 18.5  | 8.6   | -   | -   | 9.9   | -   | -   | 10.7  |
| HCM Lane LOS          | C     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 2.2   | 0.3   | -   | -   | 0.3   | -   | -   | 0.3   |



HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

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| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↶    | ↷    |      | ↶    | ↷    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 87   | 577  | 51   | 53   | 330  | 3    | 68   | 1    | 87   | 4    | 1    | 47   |
| Future Vol, veh/h        | 87   | 577  | 51   | 53   | 330  | 3    | 68   | 1    | 87   | 4    | 1    | 47   |
| Conflicting Peds, #/hr   | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 113  | 749  | 66   | 69   | 429  | 4    | 88   | 1    | 113  | 5    | 1    | 61   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 433    | 0 | 0 | 817    | 0 | 0 | 1610   | 1581  | 784   | 1634   | 1612  | 431   |
| Stage 1              | -      | - | - | -      | - | - | 1010   | 1010  | -     | 569    | 569   | -     |
| Stage 2              | -      | - | - | -      | - | - | 600    | 571   | -     | 1065   | 1043  | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 5      | 6.52  | 5     | 5      | 6.52  | 5     |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1127   | - | - | 811    | - | - | 217    | 109   | 513   | 212    | 104   | 723   |
| Stage 1              | -      | - | - | -      | - | - | 289    | 317   | -     | 507    | 506   | -     |
| Stage 2              | -      | - | - | -      | - | - | 488    | 505   | -     | 269    | 306   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1127   | - | - | 809    | - | - | 170    | 90    | 512   | 142    | 85    | 723   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 227    | 225   | -     | 113    | 187   | -     |
| Stage 1              | -      | - | - | -      | - | - | 260    | 285   | -     | 456    | 463   | -     |
| Stage 2              | -      | - | - | -      | - | - | 408    | 462   | -     | 188    | 275   | -     |

| Approach             | EB |  |  | WB  |  |  | NB |  |  | SB   |  |  |
|----------------------|----|--|--|-----|--|--|----|--|--|------|--|--|
| HCM Control Delay, s | 1  |  |  | 1.4 |  |  | 32 |  |  | 13.5 |  |  |
| HCM LOS              |    |  |  |     |  |  | D  |  |  | B    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 329   | 1127 | -   | -   | 809   | -   | -   | 492   |
| HCM Lane V/C Ratio    | 0.616 | 0.1  | -   | -   | 0.085 | -   | -   | 0.137 |
| HCM Control Delay (s) | 32    | 8.6  | -   | -   | 9.9   | -   | -   | 13.5  |
| HCM Lane LOS          | D     | A    | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 3.9   | 0.3  | -   | -   | 0.3   | -   | -   | 0.5   |

HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 8    | 0    | 17   | 9    | 1    | 7    | 21   | 622  | 15   | 6    | 352  | 0    |
| Future Vol, veh/h        | 8    | 0    | 17   | 9    | 1    | 7    | 21   | 622  | 15   | 6    | 352  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 69   | 0    | 0    | 21   | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 11   | 0    | 24   | 13   | 1    | 10   | 29   | 864  | 21   | 8    | 489  | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1512   | 1469  | 489    | 1471  | 1459   | 965   | 489    | 0 | 0 | 906   | 0 | 0 |
| Stage 1              | 505    | 505   | -      | 954   | 954    | -     | -      | - | - | -     | - | - |
| Stage 2              | 1007   | 964   | -      | 517   | 505    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 98     | 127   | 579    | 105   | 129    | 309   | 1074   | - | - | 751   | - | - |
| Stage 1              | 549    | 540   | -      | 311   | 337    | -     | -      | - | - | -     | - | - |
| Stage 2              | 290    | 334   | -      | 541   | 540    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 85     | 120   | 579    | 96    | 122    | 283   | 1074   | - | - | 736   | - | - |
| Mov Cap-2 Maneuver   | 185    | 229   | -      | 209   | 231    | -     | -      | - | - | -     | - | - |
| Stage 1              | 534    | 534   | -      | 297   | 321    | -     | -      | - | - | -     | - | - |
| Stage 2              | 253    | 319   | -      | 513   | 534    | -     | -      | - | - | -     | - | - |

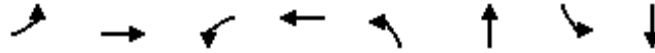
| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 16.6 | 21.9 | 0.3 | 0.2 |
| HCM LOS              | C    | C    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL  | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|------|-------|-----|
| Capacity (veh/h)      | 1074  | -   | -   | 344        | 236  | 736   | -   |
| HCM Lane V/C Ratio    | 0.027 | -   | -   | 0.101      | 0.1  | 0.011 | -   |
| HCM Control Delay (s) | 8.4   | -   | -   | 16.6       | 21.9 | 9.9   | -   |
| HCM Lane LOS          | A     | -   | -   | C          | C    | A     | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.3        | 0.3  | 0     | -   |

Timings  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

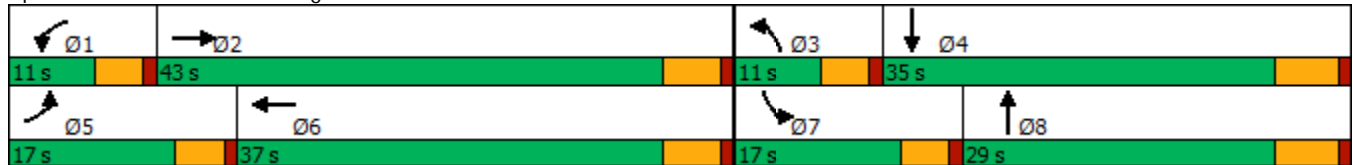


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 106   | 420   | 33    | 385   | 44    | 81    | 108   | 86    |
| Future Volume (vph)  | 106   | 420   | 33    | 385   | 44    | 81    | 108   | 86    |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 17.0  | 43.0  | 11.0  | 37.0  | 11.0  | 29.0  | 17.0  | 35.0  |
| Total Split (%)      | 17.0% | 43.0% | 11.0% | 37.0% | 11.0% | 29.0% | 17.0% | 35.0% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 62.3  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated

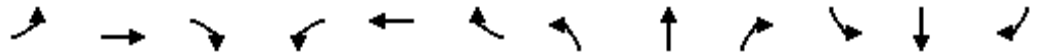
Splits and Phases: 2: Kitching St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018



| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↖    | ↕    |      | ↖    | ↕    |      | ↖    | ↕    |      | ↖    | ↕    |      |
| Traffic Volume (veh/h)       | 106  | 420  | 49   | 33   | 385  | 106  | 44   | 81   | 33   | 108  | 86   | 109  |
| Future Volume (veh/h)        | 106  | 420  | 49   | 33   | 385  | 106  | 44   | 81   | 33   | 108  | 86   | 109  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 0.98 | 1.00 |      | 0.98 | 1.00 |      | 1.00 | 1.00 |      | 0.98 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 109  | 433  | 45   | 34   | 397  | 91   | 45   | 84   | 28   | 111  | 89   | 76   |
| Peak Hour Factor             | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 161  | 955  | 99   | 88   | 726  | 165  | 104  | 651  | 208  | 164  | 530  | 406  |
| Arrive On Green              | 0.09 | 0.29 | 0.27 | 0.05 | 0.25 | 0.23 | 0.06 | 0.25 | 0.21 | 0.09 | 0.28 | 0.24 |
| Sat Flow, veh/h              | 1781 | 3245 | 336  | 1781 | 2868 | 650  | 1781 | 2649 | 845  | 1781 | 1897 | 1455 |
| Grp Volume(v), veh/h         | 109  | 236  | 242  | 34   | 244  | 244  | 45   | 55   | 57   | 111  | 83   | 82   |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1777 | 1804 | 1781 | 1777 | 1741 | 1781 | 1777 | 1717 | 1781 | 1777 | 1575 |
| Q Serve(g_s), s              | 3.0  | 5.4  | 5.5  | 0.9  | 6.0  | 6.1  | 1.2  | 1.2  | 1.3  | 3.0  | 1.8  | 2.1  |
| Cycle Q Clear(g_c), s        | 3.0  | 5.4  | 5.5  | 0.9  | 6.0  | 6.1  | 1.2  | 1.2  | 1.3  | 3.0  | 1.8  | 2.1  |
| Prop In Lane                 | 1.00 |      | 0.19 | 1.00 |      | 0.37 | 1.00 |      | 0.49 | 1.00 |      | 0.92 |
| Lane Grp Cap(c), veh/h       | 161  | 523  | 531  | 88   | 450  | 441  | 104  | 437  | 422  | 164  | 496  | 440  |
| V/C Ratio(X)                 | 0.68 | 0.45 | 0.46 | 0.39 | 0.54 | 0.55 | 0.43 | 0.13 | 0.13 | 0.68 | 0.17 | 0.19 |
| Avail Cap(c_a), veh/h        | 461  | 1380 | 1401 | 248  | 1168 | 1144 | 248  | 885  | 855  | 461  | 1097 | 973  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 22.1 | 14.4 | 14.6 | 23.1 | 16.2 | 16.5 | 22.8 | 14.7 | 15.1 | 22.1 | 13.7 | 14.4 |
| Incr Delay (d2), s/veh       | 1.9  | 0.6  | 0.6  | 1.0  | 1.0  | 1.1  | 1.1  | 0.1  | 0.1  | 1.8  | 0.2  | 0.2  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.2  | 1.9  | 1.9  | 0.4  | 2.1  | 2.2  | 0.5  | 0.4  | 0.4  | 1.2  | 0.6  | 0.6  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 24.0 | 15.0 | 15.2 | 24.1 | 17.3 | 17.6 | 23.9 | 14.9 | 15.3 | 23.9 | 13.8 | 14.6 |
| LnGrp LOS                    | C    | B    | B    | C    | B    | B    | C    | B    | B    | C    | B    | B    |
| Approach Vol, veh/h          |      | 587  |      |      | 522  |      |      | 157  |      |      |      | 276  |
| Approach Delay, s/veh        |      | 16.8 |      |      | 17.9 |      |      | 17.6 |      |      |      | 18.1 |
| Approach LOS                 |      | B    |      |      | B    |      |      | B    |      |      |      | B    |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 6.5  | 18.8 | 6.9  | 18.0 | 8.5  | 16.7 | 8.6  | 16.3 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  |      |      |      |      |
| Max Green Setting (Gmax), s  | 6.4  | 37.6 | 6.4  | 29.2 | 12.4 | 31.6 | 12.4 | 23.2 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 2.9  | 7.5  | 3.2  | 4.1  | 5.0  | 8.1  | 5.0  | 3.3  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.8  | 0.0  | 0.8  | 0.1  | 2.8  | 0.1  | 0.4  |      |      |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 17.5 |
| HCM 6th LOS        | B    |



Timings  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

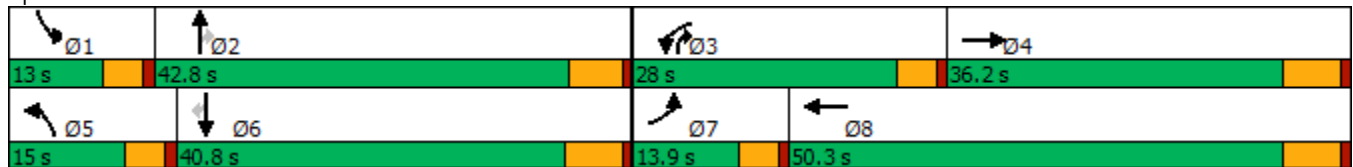


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↑↑↓   | ↔↔    | ↑↑↓   | ↔↔    | ↑↑    | ↔     | ↔↔    | ↑↑    | ↔     |
| Traffic Volume (vph) | 173   | 497   | 739   | 721   | 309   | 692   | 510   | 293   | 837   | 116   |
| Future Volume (vph)  | 173   | 497   | 739   | 721   | 309   | 692   | 510   | 293   | 837   | 116   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 13.9  | 36.2  | 28.0  | 50.3  | 15.0  | 42.8  | 28.0  | 13.0  | 40.8  | 40.8  |
| Total Split (%)      | 11.6% | 30.2% | 23.3% | 41.9% | 12.5% | 35.7% | 23.3% | 10.8% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 112.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Lasselle St. & Iris Av.



HCM 6th Signalized Intersection Summary  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

| Movement                     | EBL  | EBT   | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|------------------------------|------|-------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations          |      |       |      |       |      |      |       |      |      |       |      |      |
| Traffic Volume (veh/h)       | 173  | 497   | 389  | 739   | 721  | 270  | 309   | 692  | 510  | 293   | 837  | 116  |
| Future Volume (veh/h)        | 173  | 497   | 389  | 739   | 721  | 270  | 309   | 692  | 510  | 293   | 837  | 116  |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0     | 0    | 0    | 0     | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 0.98 | 1.00  |      | 0.95 | 1.00  |      | 0.96 | 1.00  |      | 0.97 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach        |      | No    |      |       | No   |      |       | No   |      |       | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 182  | 523   | 322  | 778   | 759  | 256  | 325   | 728  | 334  | 308   | 881  | 70   |
| Peak Hour Factor             | 0.95 | 0.95  | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2     | 2    | 2    | 2     | 2    | 2    | 2     | 2    | 2    |
| Cap, veh/h                   | 255  | 897   | 410  | 710   | 1475 | 491  | 325   | 1115 | 789  | 266   | 1066 | 459  |
| Arrive On Green              | 0.07 | 0.26  | 0.24 | 0.21  | 0.40 | 0.38 | 0.09  | 0.31 | 0.30 | 0.08  | 0.30 | 0.30 |
| Sat Flow, veh/h              | 3456 | 3404  | 1556 | 3456  | 3734 | 1242 | 3456  | 3554 | 1527 | 3456  | 3554 | 1530 |
| Grp Volume(v), veh/h         | 182  | 523   | 322  | 778   | 691  | 324  | 325   | 728  | 334  | 308   | 881  | 70   |
| Grp Sat Flow(s),veh/h/ln     | 1728 | 1702  | 1556 | 1728  | 1702 | 1572 | 1728  | 1777 | 1527 | 1728  | 1777 | 1530 |
| Q Serve(g_s), s              | 6.0  | 15.6  | 22.6 | 24.0  | 18.0 | 18.6 | 11.0  | 20.7 | 16.1 | 9.0   | 27.0 | 3.9  |
| Cycle Q Clear(g_c), s        | 6.0  | 15.6  | 22.6 | 24.0  | 18.0 | 18.6 | 11.0  | 20.7 | 16.1 | 9.0   | 27.0 | 3.9  |
| Prop In Lane                 | 1.00 |       | 1.00 | 1.00  |      | 0.79 | 1.00  |      | 1.00 | 1.00  |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 255  | 897   | 410  | 710   | 1345 | 621  | 325   | 1115 | 789  | 266   | 1066 | 459  |
| V/C Ratio(X)                 | 0.71 | 0.58  | 0.79 | 1.10  | 0.51 | 0.52 | 1.00  | 0.65 | 0.42 | 1.16  | 0.83 | 0.15 |
| Avail Cap(c_a), veh/h        | 293  | 938   | 429  | 710   | 1349 | 623  | 325   | 1180 | 817  | 266   | 1119 | 482  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 52.9 | 37.4  | 41.0 | 46.4  | 26.8 | 27.7 | 52.9  | 34.6 | 18.0 | 53.9  | 38.1 | 30.0 |
| Incr Delay (d2), s/veh       | 5.1  | 0.9   | 9.0  | 63.1  | 0.3  | 0.8  | 49.6  | 1.2  | 0.4  | 104.5 | 5.0  | 0.2  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 2.7  | 6.3   | 9.4  | 16.0  | 6.9  | 6.8  | 6.9   | 8.7  | 5.3  | 7.6   | 11.8 | 1.4  |
| Unsig. Movement Delay, s/veh |      |       |      |       |      |      |       |      |      |       |      |      |
| LnGrp Delay(d),s/veh         | 58.0 | 38.3  | 50.0 | 109.5 | 27.2 | 28.5 | 102.6 | 35.8 | 18.4 | 158.4 | 43.1 | 30.2 |
| LnGrp LOS                    | E    | D     | D    | F     | C    | C    | F     | D    | B    | F     | D    | C    |
| Approach Vol, veh/h          |      | 1027  |      |       | 1793 |      |       | 1387 |      |       | 1259 |      |
| Approach Delay, s/veh        |      | 45.5  |      |       | 63.1 |      |       | 47.3 |      |       | 70.6 |      |
| Approach LOS                 |      | D     |      |       | E    |      |       | D    |      |       | E    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4     | 5    | 6    | 7     | 8    |      |       |      |      |
| Phs Duration (G+Y+Rc), s     | 13.0 | 41.1  | 28.0 | 34.8  | 15.0 | 39.1 | 12.6  | 50.2 |      |       |      |      |
| Change Period (Y+Rc), s      | 4.6  | * 6.2 | 4.6  | 6.2   | 4.6  | 6.2  | 4.6   | 6.2  |      |       |      |      |
| Max Green Setting (Gmax), s  | 8.4  | * 37  | 23.4 | 30.0  | 10.4 | 34.6 | 9.3   | 44.1 |      |       |      |      |
| Max Q Clear Time (g_c+I1), s | 11.0 | 22.7  | 26.0 | 24.6  | 13.0 | 29.0 | 8.0   | 20.6 |      |       |      |      |
| Green Ext Time (p_c), s      | 0.0  | 5.0   | 0.0  | 2.3   | 0.0  | 2.7  | 0.0   | 6.5  |      |       |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 57.5 |
| HCM 6th LOS        | E    |

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC  
4: Lasselie St. & Cahuillia Dr.

Continental Villages (JN 11575)

10/25/2018

Intersection

Int Delay, s/veh 0.7

| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      |      | ↗    | ↕    | ↗    |      | ↕    |
| Traffic Vol, veh/h       | 0    | 126  | 1011 | 83   | 0    | 1427 |
| Future Vol, veh/h        | 0    | 126  | 1011 | 83   | 0    | 1427 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 2    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 130  | 1042 | 86   | 0    | 1471 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 523    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 499    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | -      | 498    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 14.8 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 498   |
| HCM Lane V/C Ratio    | -   | -        | 0.261 |
| HCM Control Delay (s) | -   | -        | 14.8  |
| HCM Lane LOS          | -   | -        | B     |
| HCM 95th %tile Q(veh) | -   | -        | 1     |

HCM 6th TWSC  
5: Lasselie St. & Driveway 1

Continental Villages (JN 11575)

10/25/2018

Intersection

Int Delay, s/veh 0.3

| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      |      | ↗    | ↕    |      |      | ↕    |
| Traffic Vol, veh/h       | 0    | 59   | 1033 | 79   | 0    | 1424 |
| Future Vol, veh/h        | 0    | 59   | 1033 | 79   | 0    | 1424 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 64   | 1123 | 86   | 0    | 1548 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 605    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 441    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | -      | 441    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 14.5 | 0  | 0  |
| HCM LOS              | B    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 441   |
| HCM Lane V/C Ratio    | -   | -        | 0.145 |
| HCM Control Delay (s) | -   | -        | 14.5  |
| HCM Lane LOS          | -   | -        | B     |
| HCM 95th %tile Q(veh) | -   | -        | 0.5   |



Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018



| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕↕    | ↗     | ↖     | ↕↕    |
| Traffic Volume (vph) | 270   | 82    | 117   | 72    | 137   | 883   | 76    | 165   | 1180  |
| Future Volume (vph)  | 270   | 82    | 117   | 72    | 137   | 883   | 76    | 165   | 1180  |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 12.4  | 34.4  | 14.0  | 36.0  | 14.0  | 44.8  | 14.0  | 16.8  | 47.6  |
| Total Split (%)      | 11.3% | 31.3% | 12.7% | 32.7% | 12.7% | 40.7% | 12.7% | 15.3% | 43.3% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 94.4  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|--|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations  |      |      |      |      |      |      |      |       |      |      |      |      |
| Traffic Volume (veh/h)   | 270  | 82   | 205  | 117  | 72   | 53   | 137  | 883   | 76   | 165  | 1180 | 182  |
| Future Volume (veh/h)  | 270  | 82   | 205  | 117  | 72   | 53   | 137  | 883   | 76   | 165  | 1180 | 182  |
| Initial Q (Qb), veh  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |      | 1.00 | 1.00 |      | 0.98 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  |      | No   |      |      | No   |      |      | No    |      |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 284  | 86   | 121  | 123  | 76   | 23   | 144  | 929   | 60   | 174  | 1242 | 180  |
| Peak Hour Factor   | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 341  | 256  | 228  | 166  | 365  | 106  | 189  | 1602  | 838  | 221  | 1461 | 211  |
| Arrive On Green  | 0.10 | 0.14 | 0.13 | 0.09 | 0.13 | 0.12 | 0.11 | 0.45  | 0.44 | 0.12 | 0.47 | 0.45 |
| Sat Flow, veh/h  | 3456 | 1777 | 1585 | 1781 | 2707 | 782  | 1781 | 3554  | 1582 | 1781 | 3117 | 449  |
| Grp Volume(v), veh/h   | 284  | 86   | 121  | 123  | 49   | 50   | 144  | 929   | 60   | 174  | 705  | 717  |
| Grp Sat Flow(s),veh/h/ln   | 1728 | 1777 | 1585 | 1781 | 1777 | 1712 | 1781 | 1777  | 1582 | 1781 | 1777 | 1789 |
| Q Serve(g_s), s  | 6.9  | 3.7  | 6.1  | 5.7  | 2.1  | 2.2  | 6.7  | 16.5  | 1.6  | 8.1  | 29.7 | 30.3 |
| Cycle Q Clear(g_c), s  | 6.9  | 3.7  | 6.1  | 5.7  | 2.1  | 2.2  | 6.7  | 16.5  | 1.6  | 8.1  | 29.7 | 30.3 |
| Prop In Lane   | 1.00 |      | 1.00 | 1.00 |      | 0.46 | 1.00 |       | 1.00 | 1.00 |      | 0.25 |
| Lane Grp Cap(c), veh/h   | 341  | 256  | 228  | 166  | 240  | 231  | 189  | 1602  | 838  | 221  | 833  | 839  |
| V/C Ratio(X)   | 0.83 | 0.34 | 0.53 | 0.74 | 0.20 | 0.22 | 0.76 | 0.58  | 0.07 | 0.79 | 0.85 | 0.85 |
| Avail Cap(c_a), veh/h  | 341  | 635  | 566  | 209  | 668  | 644  | 209  | 1704  | 884  | 268  | 910  | 917  |
| HCM Platoon Ratio  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 37.7 | 32.8 | 34.4 | 37.6 | 32.7 | 33.0 | 37.0 | 17.4  | 9.8  | 36.2 | 19.9 | 20.2 |
| Incr Delay (d2), s/veh   | 15.1 | 0.8  | 1.9  | 7.1  | 0.4  | 0.5  | 11.8 | 0.4   | 0.0  | 9.7  | 7.0  | 7.4  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 3.5  | 1.6  | 2.4  | 2.7  | 0.9  | 0.9  | 3.4  | 6.0   | 0.5  | 3.9  | 12.1 | 12.6 |
| Unsig. Movement Delay, s/veh   |      |      |      |      |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh   | 52.8 | 33.5 | 36.3 | 44.7 | 33.1 | 33.5 | 48.8 | 17.8  | 9.8  | 45.9 | 26.9 | 27.7 |
| LnGrp LOS  | D    | C    | D    | D    | C    | C    | D    | B     | A    | D    | C    | C    |
| Approach Vol, veh/h  |      | 491  |      |      | 222  |      |      | 1133  |      |      | 1596 |      |
| Approach Delay, s/veh  |      | 45.3 |      |      | 39.6 |      |      | 21.3  |      |      | 29.3 |      |
| Approach LOS   |      | D    |      |      | D    |      |      | C     |      |      | C    |      |
| Timer - Assigned Phs   | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 14.6 | 42.4 | 11.9 | 16.3 | 13.0 | 43.9 | 12.4 | 15.8  |      |      |      |      |
| Change Period (Y+Rc), s  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | * 5.4 |      |      |      |      |
| Max Green Setting (Gmax), s  | 12.2 | 39.0 | 9.4  | 29.0 | 9.4  | 41.8 | 7.8  | * 31  |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 10.1 | 18.5 | 7.7  | 8.1  | 8.7  | 32.3 | 8.9  | 4.2   |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0  | 6.2  | 0.0  | 1.0  | 0.0  | 5.8  | 0.0  | 0.5   |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |       |      |      |      |      |
| HCM 6th Ctrl Delay   |      |      |      | 29.6 |      |      |      |       |      |      |      |      |
| HCM 6th LOS  |      |      |      | C    |      |      |      |       |      |      |      |      |
| <b>Notes</b>   |      |      |      |      |      |      |      |       |      |      |      |      |
| User approved pedestrian interval to be less than phase max green.                                 |      |      |      |      |      |      |      |       |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |      |      |      |      |      |      |       |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 270   | 82    | 205   | 117   | 72    | 53    | 137   | 883   | 76    | 165   | 1180  |
| Future Volume (vph)  | 270   | 82    | 205   | 117   | 72    | 53    | 137   | 883   | 76    | 165   | 1180  |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 12.4  | 34.4  | 34.4  | 14.0  | 36.0  | 36.0  | 14.0  | 44.8  | 14.0  | 16.8  | 47.6  |
| Total Split (%)      | 11.3% | 31.3% | 31.3% | 12.7% | 32.7% | 32.7% | 12.7% | 40.7% | 12.7% | 15.3% | 43.3% |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 94.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement                     | EBL   | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|-------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations          |       |       |      |      |      |      |      |       |      |      |      |      |
| Traffic Volume (veh/h)       | 270   | 82    | 205  | 117  | 72   | 53   | 137  | 883   | 76   | 165  | 1180 | 182  |
| Future Volume (veh/h)        | 270   | 82    | 205  | 117  | 72   | 53   | 137  | 883   | 76   | 165  | 1180 | 182  |
| Initial Q (Qb), veh          | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00  |       | 1.00 | 1.00 |      | 0.98 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |       | No    |      |      | No   |      |      | No    |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 284   | 86    | 121  | 123  | 76   | 23   | 144  | 929   | 60   | 174  | 1242 | 180  |
| Peak Hour Factor             | 0.95  | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, %         | 2     | 2     | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 176   | 269   | 202  | 166  | 252  | 190  | 189  | 1602  | 837  | 221  | 1461 | 211  |
| Arrive On Green              | 0.10  | 0.14  | 0.13 | 0.09 | 0.13 | 0.12 | 0.11 | 0.45  | 0.44 | 0.12 | 0.47 | 0.45 |
| Sat Flow, veh/h              | 1781  | 1870  | 1585 | 1781 | 1870 | 1556 | 1781 | 3554  | 1580 | 1781 | 3116 | 449  |
| Grp Volume(v), veh/h         | 284   | 86    | 121  | 123  | 76   | 23   | 144  | 929   | 60   | 174  | 705  | 717  |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1870  | 1585 | 1781 | 1870 | 1556 | 1781 | 1777  | 1580 | 1781 | 1777 | 1789 |
| Q Serve(g_s), s              | 8.4   | 3.5   | 6.1  | 5.7  | 3.1  | 1.1  | 6.7  | 16.5  | 1.6  | 8.1  | 29.7 | 30.3 |
| Cycle Q Clear(g_c), s        | 8.4   | 3.5   | 6.1  | 5.7  | 3.1  | 1.1  | 6.7  | 16.5  | 1.6  | 8.1  | 29.7 | 30.3 |
| Prop In Lane                 | 1.00  |       | 1.00 | 1.00 |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 0.25 |
| Lane Grp Cap(c), veh/h       | 176   | 269   | 202  | 166  | 252  | 190  | 189  | 1602  | 837  | 221  | 833  | 839  |
| V/C Ratio(X)                 | 1.62  | 0.32  | 0.60 | 0.74 | 0.30 | 0.12 | 0.76 | 0.58  | 0.07 | 0.79 | 0.85 | 0.85 |
| Avail Cap(c_a), veh/h        | 176   | 668   | 540  | 209  | 703  | 565  | 209  | 1704  | 883  | 268  | 910  | 917  |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 38.3  | 32.7  | 35.1 | 37.6 | 33.2 | 33.3 | 37.0 | 17.4  | 9.8  | 36.2 | 19.9 | 20.2 |
| Incr Delay (d2), s/veh       | 301.5 | 0.7   | 2.8  | 7.1  | 0.7  | 0.3  | 11.8 | 0.4   | 0.0  | 9.7  | 7.0  | 7.4  |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 18.2  | 1.6   | 2.5  | 2.7  | 1.4  | 0.4  | 3.4  | 6.0   | 0.5  | 3.9  | 12.1 | 12.6 |
| Unsig. Movement Delay, s/veh |       |       |      |      |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh         | 339.8 | 33.3  | 37.9 | 44.7 | 33.9 | 33.6 | 48.8 | 17.8  | 9.8  | 45.9 | 26.9 | 27.7 |
| LnGrp LOS                    | F     | C     | D    | D    | C    | C    | D    | B     | A    | D    | C    | C    |
| Approach Vol, veh/h          |       | 491   |      |      | 222  |      |      | 1133  |      |      | 1596 |      |
| Approach Delay, s/veh        |       | 211.7 |      |      | 39.8 |      |      | 21.3  |      |      | 29.3 |      |
| Approach LOS                 |       | F     |      |      | D    |      |      | C     |      |      | C    |      |
| Timer - Assigned Phs         | 1     | 2     | 3    | 4    | 5    | 6    | 7    | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 14.6  | 42.4  | 11.9 | 16.3 | 13.0 | 43.9 | 12.4 | 15.8  |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6   | 5.8   | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | * 5.4 |      |      |      |      |
| Max Green Setting (Gmax), s  | 12.2  | 39.0  | 9.4  | 29.0 | 9.4  | 41.8 | 7.8  | * 31  |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 10.1  | 18.5  | 7.7  | 8.1  | 8.7  | 32.3 | 10.4 | 5.1   |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0   | 6.2   | 0.0  | 0.7  | 0.0  | 5.8  | 0.0  | 0.4   |      |      |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 53.4 |
| HCM 6th LOS        | D    |

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 69   | 169  | 84   | 6    | 155  | 1    | 49   | 0    | 11   | 3    | 1    | 37   |
| Future Vol, veh/h        | 69   | 169  | 84   | 6    | 155  | 1    | 49   | 0    | 11   | 3    | 1    | 37   |
| Conflicting Peds, #/hr   | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 79   | 194  | 97   | 7    | 178  | 1    | 56   | 0    | 13   | 3    | 1    | 43   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |      | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 179    | 0 | 0 | 294    | 0 | 0 | 508    | 597  | 149  | 448    | 645  | 90   |
| Stage 1              | -      | - | - | -      | - | - | 404    | 404  | -    | 193    | 193  | -    |
| Stage 2              | -      | - | - | -      | - | - | 104    | 193  | -    | 255    | 452  | -    |
| Critical Hdwy        | 4.14   | - | - | 4.14   | - | - | 5      | 6.54 | 5    | 5      | 6.54 | 5    |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.54   | 5.54 | -    | 6.54   | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.54   | 5.54 | -    | 6.54   | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | - | - | 2.22   | - | - | 3.52   | 4.02 | 3.32 | 3.52   | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 1394   | - | - | 1264   | - | - | 641    | 415  | 944  | 678    | 389  | 997  |
| Stage 1              | -      | - | - | -      | - | - | 594    | 598  | -    | 790    | 740  | -    |
| Stage 2              | -      | - | - | -      | - | - | 890    | 740  | -    | 727    | 569  | -    |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -    | -    | -      | -    | -    |
| Mov Cap-1 Maneuver   | 1394   | - | - | 1260   | - | - | 582    | 388  | 941  | 637    | 364  | 997  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 531    | 500  | -    | 634    | 483  | -    |
| Stage 1              | -      | - | - | -      | - | - | 559    | 562  | -    | 745    | 736  | -    |
| Stage 2              | -      | - | - | -      | - | - | 846    | 736  | -    | 677    | 535  | -    |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB  |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|-----|--|--|
| HCM Control Delay, s | 1.7 |  |  | 0.3 |  |  | 12.1 |  |  | 9.1 |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | A   |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 577   | 1394  | -   | -   | 1260  | -   | -   | 934   |
| HCM Lane V/C Ratio    | 0.12  | 0.057 | -   | -   | 0.005 | -   | -   | 0.05  |
| HCM Control Delay (s) | 12.1  | 7.7   | -   | -   | 7.9   | -   | -   | 9.1   |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.4   | 0.2   | -   | -   | 0     | -   | -   | 0.2   |

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↶    | ↷    |      | ↶    | ↷    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 69   | 169  | 84   | 6    | 155  | 1    | 49   | 0    | 11   | 3    | 1    | 37   |
| Future Vol, veh/h        | 69   | 169  | 84   | 6    | 155  | 1    | 49   | 0    | 11   | 3    | 1    | 37   |
| Conflicting Peds, #/hr   | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 79   | 194  | 97   | 7    | 178  | 1    | 56   | 0    | 13   | 3    | 1    | 43   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 179    | 0 | 0 | 294    | 0 | 0 | 619    | 597   | 246   | 600    | 645   | 179   |
| Stage 1              | -      | - | - | -      | - | - | 404    | 404   | -     | 193    | 193   | -     |
| Stage 2              | -      | - | - | -      | - | - | 215    | 193   | -     | 407    | 452   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 5      | 6.52  | 5     | 5      | 6.52  | 5     |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1397   | - | - | 1268   | - | - | 577    | 416   | 862   | 588    | 391   | 918   |
| Stage 1              | -      | - | - | -      | - | - | 623    | 599   | -     | 809    | 741   | -     |
| Stage 2              | -      | - | - | -      | - | - | 787    | 741   | -     | 621    | 570   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1397   | - | - | 1264   | - | - | 522    | 389   | 860   | 552    | 366   | 918   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 549    | 501   | -     | 541    | 484   | -     |
| Stage 1              | -      | - | - | -      | - | - | 586    | 563   | -     | 763    | 737   | -     |
| Stage 2              | -      | - | - | -      | - | - | 745    | 737   | -     | 577    | 536   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB  |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|-----|--|--|
| HCM Control Delay, s | 1.7 |  |  | 0.3 |  |  | 11.9 |  |  | 9.5 |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | A   |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 588   | 1397  | -   | -   | 1264  | -   | -   | 856   |
| HCM Lane V/C Ratio    | 0.117 | 0.057 | -   | -   | 0.005 | -   | -   | 0.055 |
| HCM Control Delay (s) | 11.9  | 7.7   | -   | -   | 7.9   | -   | -   | 9.5   |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.4   | 0.2   | -   | -   | 0     | -   | -   | 0.2   |

HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 12   | 0    | 11   | 0    | 0    | 0    | 10   | 122  | 1    | 1    | 149  | 13   |
| Future Vol, veh/h        | 12   | 0    | 11   | 0    | 0    | 0    | 10   | 122  | 1    | 1    | 149  | 13   |
| Conflicting Peds, #/hr   | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 6    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 15   | 0    | 14   | 0    | 0    | 0    | 12   | 151  | 1    | 1    | 184  | 16   |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 376    | 378   | 199    | 380   | 386    | 154   | 206    | 0 | 0 | 154   | 0 | 0 |
| Stage 1              | 200    | 200   | -      | 178   | 178    | -     | -      | - | - | -     | - | - |
| Stage 2              | 176    | 178   | -      | 202   | 208    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 581    | 554   | 842    | 578   | 548    | 892   | 1365   | - | - | 1426  | - | - |
| Stage 1              | 802    | 736   | -      | 824   | 752    | -     | -      | - | - | -     | - | - |
| Stage 2              | 826    | 752   | -      | 800   | 730    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 573    | 544   | 836    | 563   | 538    | 890   | 1357   | - | - | 1423  | - | - |
| Mov Cap-2 Maneuver   | 628    | 585   | -      | 619   | 578    | -     | -      | - | - | -     | - | - |
| Stage 1              | 790    | 731   | -      | 815   | 744    | -     | -      | - | - | -     | - | - |
| Stage 2              | 819    | 744   | -      | 786   | 725    | -     | -      | - | - | -     | - | - |

| Approach             | EB   | WB | NB  | SB |
|----------------------|------|----|-----|----|
| HCM Control Delay, s | 10.3 | 0  | 0.6 | 0  |
| HCM LOS              | B    | A  |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-----|-------|-----|
| Capacity (veh/h)      | 1357  | -   | -   | 713        | -   | 1423  | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | -   | 0.04       | -   | 0.001 | -   |
| HCM Control Delay (s) | 7.7   | -   | -   | 10.3       | 0   | 7.5   | -   |
| HCM Lane LOS          | A     | -   | -   | B          | A   | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.1        | -   | 0     | -   |

**APPENDIX 6.3:**

**OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT CONDITIONS TRAFFIC  
SIGNAL WARRANT ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
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### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2023 Without Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **1083**

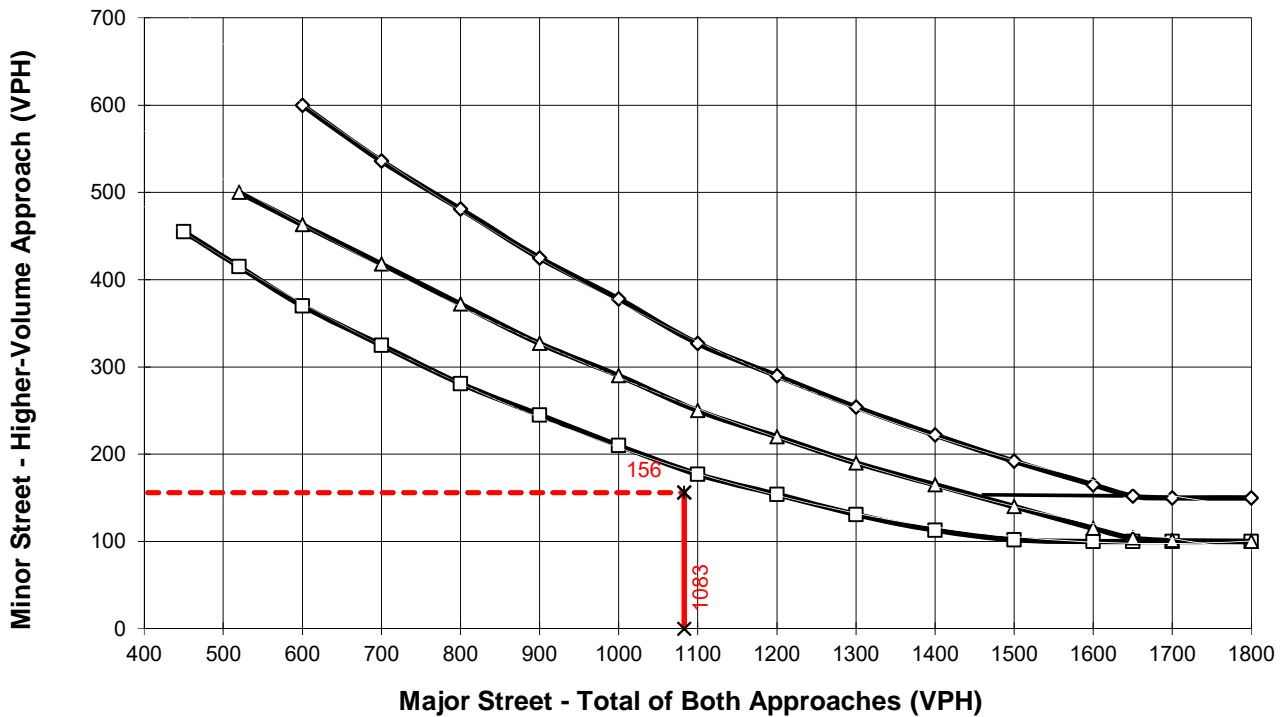
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Colt Way**

High Volume Approach (VPH) = **156**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2023 Without Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **437**

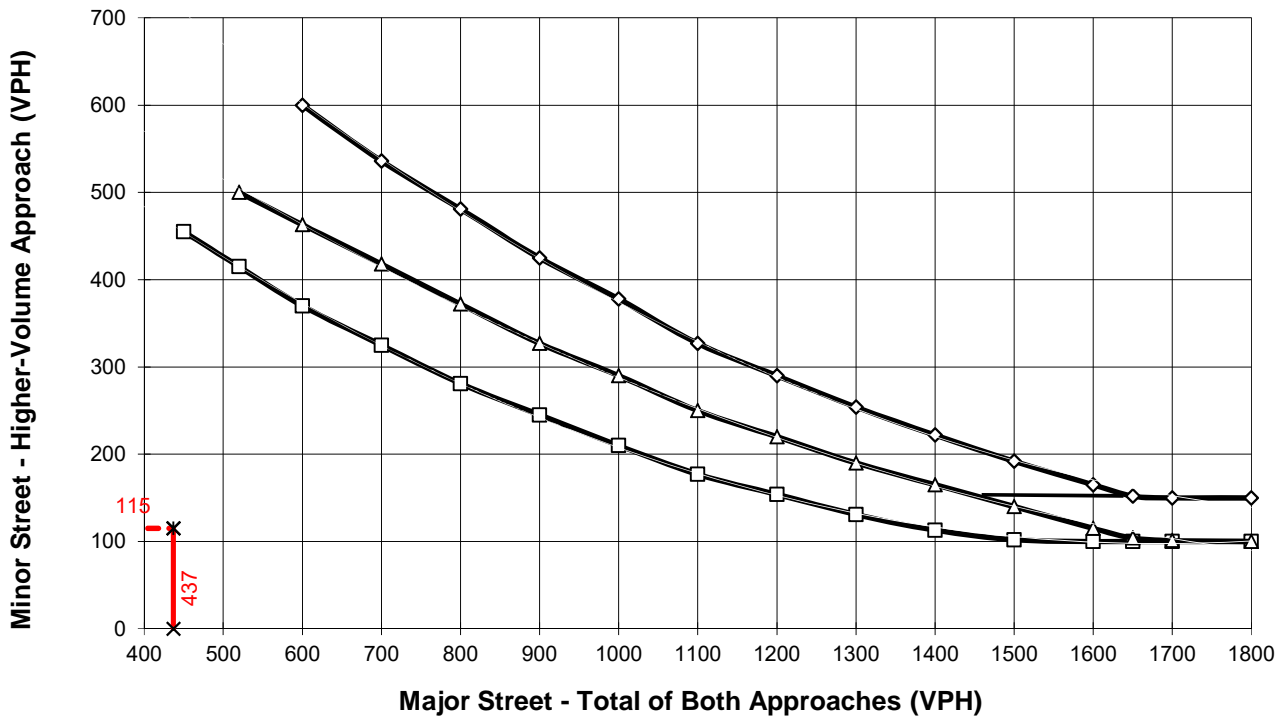
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Cahuilla Drive**

High Volume Approach (VPH) = **115**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- -x- - Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

California MUTCD 2014 Edition  
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### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2023 Without Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **993**

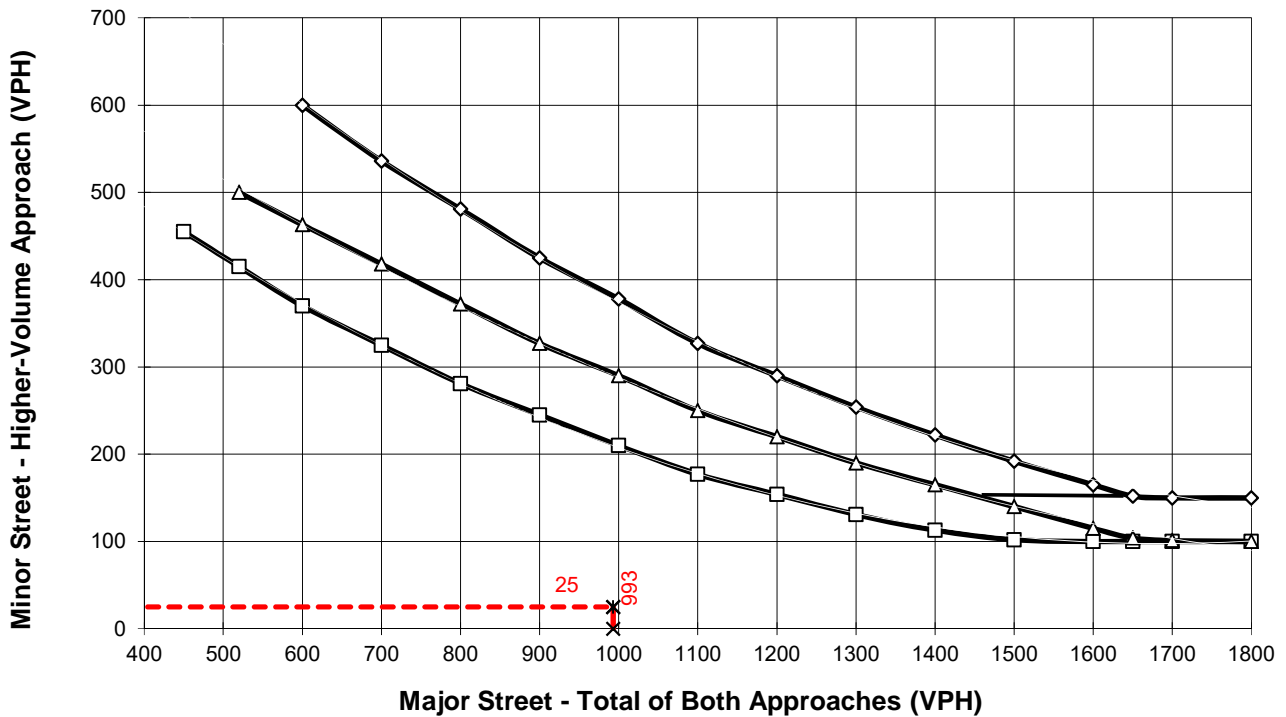
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Quarter Horse Road**

High Volume Approach (VPH) = **25**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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**APPENDIX 6.4:**

**OPENING YEAR CUMULATIVE (2023) WITH PROJECT CONDITIONS TRAFFIC SIGNAL  
WARRANT ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2023 With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **1092**

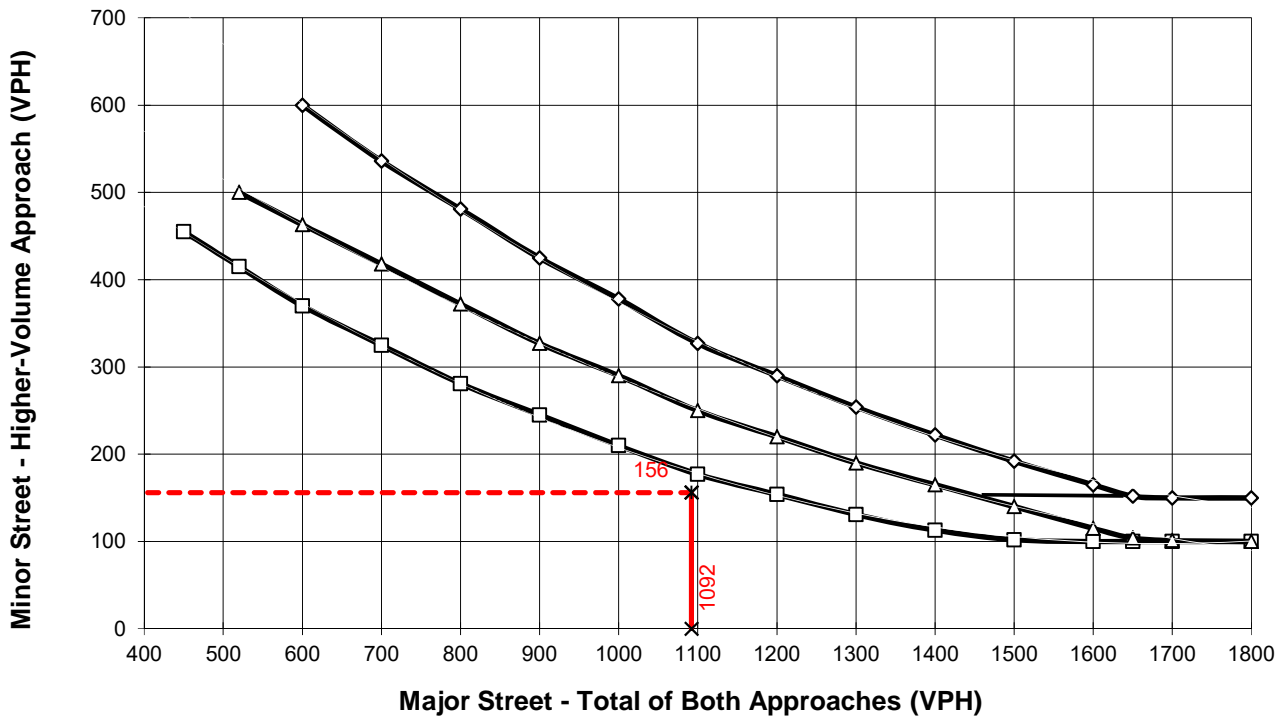
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Colt Way**

High Volume Approach (VPH) = **156**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2023 With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **437**

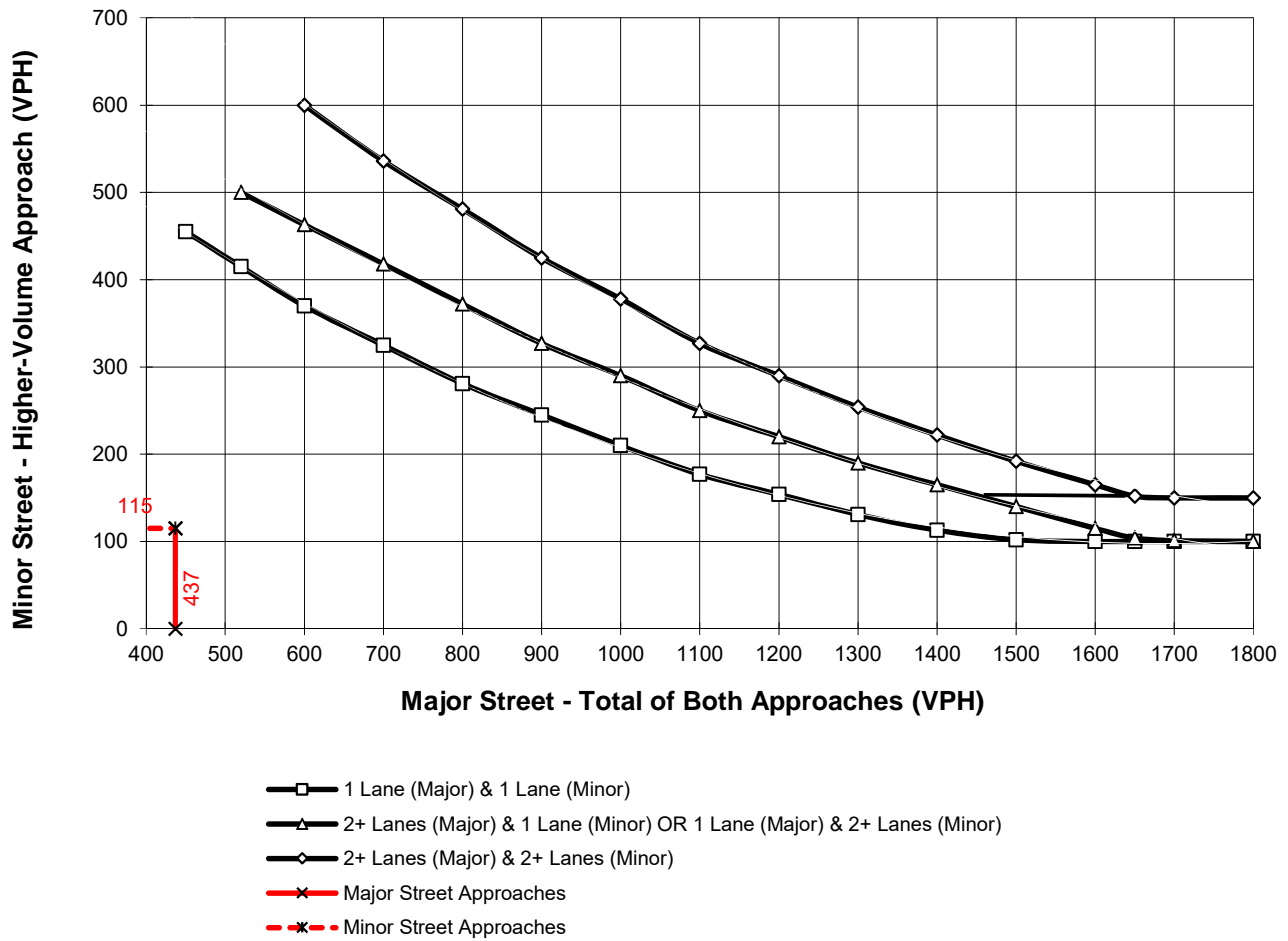
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Cahuilla Drive**

High Volume Approach (VPH) = **115**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2023 With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **993**

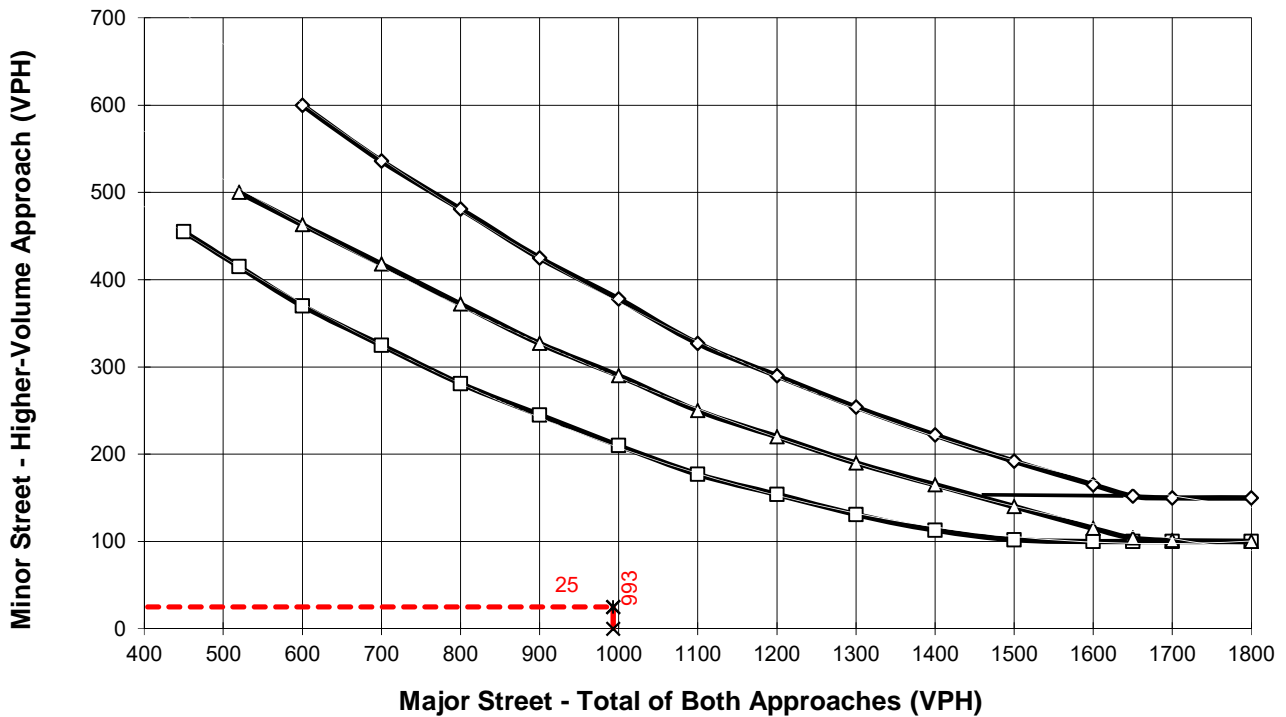
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Quarter Horse Road**

High Volume Approach (VPH) = **25**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x- - Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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**APPENDIX 6.5:**

**OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT CONDITIONS QUEUING  
ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Queuing and Blocking Report  
 Opening Year Cumulative (2023) Without Project - AM Peak Hour

10/25/2018

Intersection: 4: Lasselie St. & Cahuillia Dr.

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | R   |
| Maximum Queue (ft)    | 76  |
| Average Queue (ft)    | 30  |
| 95th Queue (ft)       | 60  |
| Link Distance (ft)    | 458 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 5: Lasselie St. & Driveway 1

| Movement              | WB  | SB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | R   | T   | T   |
| Maximum Queue (ft)    | 34  | 674 | 668 |
| Average Queue (ft)    | 9   | 371 | 380 |
| 95th Queue (ft)       | 31  | 657 | 663 |
| Link Distance (ft)    | 202 | 975 | 975 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

Queuing and Blocking Report  
Opening Year Cumulative (2023) Without Project - AM Peak Hour

10/25/2018

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB   | NB   | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T    | T    | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1078 | 1055 | 194 | 208 | 108 | 150 | 1004 | 1004 | 205 | 225 | 262 |
| Average Queue (ft)    | 224 | 1048 | 1032 | 93  | 100 | 40  | 149 | 971  | 969  | 147 | 98  | 235 |
| 95th Queue (ft)       | 227 | 1065 | 1116 | 172 | 170 | 83  | 150 | 991  | 989  | 279 | 209 | 251 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 950  | 950  |     |     | 225 |
| Upstream Blk Time (%) |     | 94   | 46   |     |     |     |     | 77   | 47   |     | 0   | 55  |
| Queuing Penalty (veh) |     | 0    | 0    |     |     |     |     | 0    | 0    |     | 0   | 292 |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |      |      | 180 | 240 |     |
| Storage Blk Time (%)  | 88  | 4    |      | 1   | 0   |     | 73  | 7    | 36   | 0   | 0   | 55  |
| Queuing Penalty (veh) | 235 | 17   |      | 1   | 0   |     | 428 | 28   | 95   | 1   | 1   | 57  |

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 261 |
| Average Queue (ft)    | 237 |
| 95th Queue (ft)       | 250 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 56  |
| Queuing Penalty (veh) | 302 |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | EB  | WB | NB  |
|-----------------------|----|-----|----|-----|
| Directions Served     | L  | TR  | L  | LTR |
| Maximum Queue (ft)    | 27 | 11  | 38 | 104 |
| Average Queue (ft)    | 2  | 0   | 12 | 52  |
| 95th Queue (ft)       | 12 | 6   | 32 | 86  |
| Link Distance (ft)    |    | 401 |    | 152 |
| Upstream Blk Time (%) |    |     |    |     |
| Queuing Penalty (veh) |    |     |    |     |
| Storage Bay Dist (ft) | 50 |     | 50 |     |
| Storage Blk Time (%)  |    |     | 0  |     |
| Queuing Penalty (veh) |    |     | 0  |     |

Queuing and Blocking Report  
 Opening Year Cumulative (2023) Without Project - AM Peak Hour

10/25/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | WB  | NB | NB  | NB  | SB  | SB  |
|-----------------------|-----|-----|----|-----|-----|-----|-----|
| Directions Served     | LTR | LTR | L  | T   | TR  | L   | T   |
| Maximum Queue (ft)    | 28  | 44  | 26 | 94  | 72  | 29  | 65  |
| Average Queue (ft)    | 7   | 12  | 5  | 19  | 8   | 3   | 14  |
| 95th Queue (ft)       | 25  | 37  | 22 | 61  | 40  | 18  | 44  |
| Link Distance (ft)    | 233 | 137 |    | 656 | 656 |     | 453 |
| Upstream Blk Time (%) |     |     |    |     |     |     |     |
| Queuing Penalty (veh) |     |     |    |     |     |     |     |
| Storage Bay Dist (ft) |     |     | 50 |     |     | 100 |     |
| Storage Blk Time (%)  |     |     |    | 1   |     |     | 0   |
| Queuing Penalty (veh) |     |     |    | 0   |     |     | 0   |



Queuing and Blocking Report  
 Opening Year Cumulative (2023) Without Project - PM Peak Hour

10/24/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  | NB |
|-----------------------|-----|----|
| Directions Served     | R   | R  |
| Maximum Queue (ft)    | 86  | 6  |
| Average Queue (ft)    | 34  | 0  |
| 95th Queue (ft)       | 66  | 4  |
| Link Distance (ft)    | 458 |    |
| Upstream Blk Time (%) |     |    |
| Queuing Penalty (veh) |     |    |
| Storage Bay Dist (ft) | 140 |    |
| Storage Blk Time (%)  |     |    |
| Queuing Penalty (veh) |     |    |

Intersection: 5: Lasselle St. & Driveway 1

| Movement              | WB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | R   | TR  | T   | T   |
| Maximum Queue (ft)    | 30  | 8   | 217 | 225 |
| Average Queue (ft)    | 6   | 0   | 59  | 60  |
| 95th Queue (ft)       | 25  | 5   | 169 | 170 |
| Link Distance (ft)    | 202 | 225 | 975 | 975 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Queuing and Blocking Report  
 Opening Year Cumulative (2023) Without Project - PM Peak Hour

10/24/2018

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T   | T   | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1062 | 1000 | 149 | 116 | 56  | 149 | 354 | 304 | 130 | 210 | 257 |
| Average Queue (ft)    | 223 | 847  | 492  | 67  | 37  | 20  | 106 | 175 | 141 | 20  | 94  | 216 |
| 95th Queue (ft)       | 240 | 1303 | 1264 | 121 | 82  | 41  | 172 | 300 | 256 | 77  | 187 | 271 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953 | 953 |     |     | 225 |
| Upstream Blk Time (%) |     | 48   | 15   |     |     |     |     |     |     |     | 0   | 9   |
| Queuing Penalty (veh) |     | 0    | 0    |     |     |     |     |     |     |     | 0   | 62  |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |     |     | 180 | 240 |     |
| Storage Blk Time (%)  | 90  | 0    |      | 0   |     |     | 10  | 11  | 2   | 0   | 0   | 9   |
| Queuing Penalty (veh) | 60  | 1    |      | 0   |     |     | 42  | 16  | 2   | 0   | 0   | 11  |

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 257 |
| Average Queue (ft)    | 216 |
| 95th Queue (ft)       | 272 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 10  |
| Queuing Penalty (veh) | 70  |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | WB | NB  |
|-----------------------|----|----|-----|
| Directions Served     | L  | L  | LTR |
| Maximum Queue (ft)    | 27 | 14 | 50  |
| Average Queue (ft)    | 3  | 1  | 28  |
| 95th Queue (ft)       | 16 | 9  | 49  |
| Link Distance (ft)    |    |    | 164 |
| Upstream Blk Time (%) |    |    |     |
| Queuing Penalty (veh) |    |    |     |
| Storage Bay Dist (ft) | 50 | 50 |     |
| Storage Blk Time (%)  |    |    |     |
| Queuing Penalty (veh) |    |    |     |

Queuing and Blocking Report  
 Opening Year Cumulative (2023) Without Project - PM Peak Hour

10/24/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | NB |
|-----------------------|-----|----|
| Directions Served     | LTR | L  |
| Maximum Queue (ft)    | 31  | 11 |
| Average Queue (ft)    | 12  | 0  |
| 95th Queue (ft)       | 36  | 6  |
| Link Distance (ft)    | 245 |    |
| Upstream Blk Time (%) |     |    |
| Queuing Penalty (veh) |     |    |
| Storage Bay Dist (ft) | 50  |    |
| Storage Blk Time (%)  |     |    |
| Queuing Penalty (veh) |     |    |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | EB  | EB  | EB   | EB   | EB   | EB  | WB  | WB  | WB   | WB   | WB  | NB  |     |
|-----------------------|-----|-----|------|------|------|-----|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | L   | T    | T    | T    | R   | L   | L   | T    | T    | R   | L   |     |
| Maximum Queue (ft)    | 234 | 226 | 266  | 260  | 244  | 184 | 36  | 119 | 327  | 306  | 225 | 184 |     |
| Average Queue (ft)    | 133 | 153 | 174  | 172  | 147  | 39  | 4   | 25  | 209  | 181  | 80  | 78  |     |
| 95th Queue (ft)       | 205 | 211 | 244  | 241  | 218  | 116 | 21  | 78  | 290  | 271  | 188 | 169 |     |
| Link Distance (ft)    |     |     | 2427 | 2427 | 2427 |     |     |     | 1304 | 1304 |     |     |     |
| Upstream Blk Time (%) |     |     |      |      |      |     |     |     |      |      |     |     |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |     |      |      |     |     |     |
| Storage Bay Dist (ft) | 325 | 325 |      |      |      | 300 | 310 | 310 |      |      |     | 200 | 200 |
| Storage Blk Time (%)  |     |     |      |      |      |     |     |     | 0    | 4    | 0   | 0   |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |     | 0    | 10   | 0   | 0   |     |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | NB   | NB  | NB   | NB   | SB  | SB  | SB   | SB   | SB  |     |
|-----------------------|------|-----|------|------|-----|-----|------|------|-----|-----|
| Directions Served     | L    | T   | T    | R    | L   | L   | T    | T    | R   |     |
| Maximum Queue (ft)    | 203  | 199 | 172  | 31   | 165 | 191 | 220  | 254  | 226 |     |
| Average Queue (ft)    | 130  | 114 | 89   | 9    | 89  | 117 | 130  | 120  | 106 |     |
| 95th Queue (ft)       | 188  | 181 | 153  | 25   | 151 | 168 | 188  | 190  | 194 |     |
| Link Distance (ft)    | 1103 |     | 1103 | 1103 |     |     | 2298 | 2298 |     |     |
| Upstream Blk Time (%) |      |     |      |      |     |     |      |      |     |     |
| Queuing Penalty (veh) |      |     |      |      |     |     |      |      |     |     |
| Storage Bay Dist (ft) | 200  |     |      |      | 215 | 215 |      |      |     | 215 |
| Storage Blk Time (%)  | 0    | 0   |      |      |     |     | 0    | 0    | 1   |     |
| Queuing Penalty (veh) | 0    | 1   |      |      |     |     | 1    | 1    | 1   |     |

Network Summary

Network wide Queuing Penalty: 278

**APPENDIX 6.6:**

**OPENING YEAR CUMULATIVE (2023) WITH PROJECT CONDITIONS QUEUING  
ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Queuing and Blocking Report  
Opening Year Cumulative (2023) With Project - AM Peak Hour

10/24/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  | NB  | SB   | SB   |
|-----------------------|-----|-----|------|------|
| Directions Served     | R   | R   | T    | T    |
| Maximum Queue (ft)    | 80  | 6   | 168  | 164  |
| Average Queue (ft)    | 32  | 0   | 34   | 27   |
| 95th Queue (ft)       | 60  | 4   | 171  | 156  |
| Link Distance (ft)    | 458 |     | 1025 | 1025 |
| Upstream Blk Time (%) |     |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |
| Storage Bay Dist (ft) |     | 140 |      |      |
| Storage Blk Time (%)  |     |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |

Intersection: 5: Lasselle St. & Driveway 1

| Movement              | WB  | SB   | SB   |
|-----------------------|-----|------|------|
| Directions Served     | R   | T    | T    |
| Maximum Queue (ft)    | 65  | 879  | 884  |
| Average Queue (ft)    | 26  | 616  | 617  |
| 95th Queue (ft)       | 55  | 1131 | 1125 |
| Link Distance (ft)    | 202 | 975  | 975  |
| Upstream Blk Time (%) |     | 6    | 5    |
| Queuing Penalty (veh) |     | 33   | 29   |
| Storage Bay Dist (ft) |     |      |      |
| Storage Blk Time (%)  |     |      |      |
| Queuing Penalty (veh) |     |      |      |

Queuing and Blocking Report  
Opening Year Cumulative (2023) With Project - AM Peak Hour

10/24/2018

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB   | NB   | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T    | T    | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1080 | 1061 | 224 | 279 | 90  | 150 | 1007 | 1004 | 205 | 225 | 293 |
| Average Queue (ft)    | 224 | 1047 | 1037 | 107 | 118 | 39  | 149 | 976  | 973  | 137 | 193 | 254 |
| 95th Queue (ft)       | 225 | 1063 | 1091 | 199 | 214 | 78  | 150 | 996  | 997  | 279 | 266 | 291 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953  | 953  |     |     | 225 |
| Upstream Blk Time (%) |     | 95   | 44   |     |     |     |     | 71   | 53   |     | 23  | 62  |
| Queuing Penalty (veh) |     | 0    | 0    |     |     |     |     | 0    | 0    |     | 0   | 346 |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |      |      | 180 | 240 |     |
| Storage Blk Time (%)  | 90  | 3    |      | 4   | 1   |     | 69  | 14   | 38   | 0   | 23  | 62  |
| Queuing Penalty (veh) | 266 | 11   |      | 7   | 1   |     | 410 | 57   | 99   | 1   | 93  | 96  |

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 284 |
| Average Queue (ft)    | 242 |
| 95th Queue (ft)       | 266 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 46  |
| Queuing Penalty (veh) | 260 |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | EB  | WB | WB  | NB  | SB  |
|-----------------------|----|-----|----|-----|-----|-----|
| Directions Served     | L  | TR  | L  | TR  | LTR | LTR |
| Maximum Queue (ft)    | 48 | 6   | 38 | 3   | 131 | 54  |
| Average Queue (ft)    | 13 | 0   | 9  | 0   | 60  | 29  |
| 95th Queue (ft)       | 39 | 5   | 26 | 2   | 104 | 51  |
| Link Distance (ft)    |    | 401 |    | 282 | 164 | 252 |
| Upstream Blk Time (%) |    |     |    |     | 0   |     |
| Queuing Penalty (veh) |    |     |    |     | 0   |     |
| Storage Bay Dist (ft) | 50 |     | 50 |     |     |     |
| Storage Blk Time (%)  | 0  |     | 0  |     |     |     |
| Queuing Penalty (veh) | 1  |     | 0  |     |     |     |

Queuing and Blocking Report  
 Opening Year Cumulative (2023) With Project - AM Peak Hour

10/24/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | WB  | NB | NB  | SB | SB  |
|-----------------------|-----|-----|----|-----|----|-----|
| Directions Served     | LTR | LTR | L  | TR  | L  | TR  |
| Maximum Queue (ft)    | 39  | 50  | 28 | 118 | 30 | 74  |
| Average Queue (ft)    | 18  | 15  | 5  | 20  | 4  | 13  |
| 95th Queue (ft)       | 43  | 42  | 23 | 73  | 20 | 47  |
| Link Distance (ft)    | 245 | 150 |    | 658 |    | 453 |
| Upstream Blk Time (%) |     |     |    |     |    |     |
| Queuing Penalty (veh) |     |     |    |     |    |     |
| Storage Bay Dist (ft) | 50  |     |    | 100 |    |     |
| Storage Blk Time (%)  |     |     |    | 1   | 0  |     |
| Queuing Penalty (veh) |     |     |    | 0   | 0  |     |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | EB  | EB  | EB   | EB   | EB   | EB | WB  | WB  | WB   | WB   | WB   | NB  |     |     |
|-----------------------|-----|-----|------|------|------|----|-----|-----|------|------|------|-----|-----|-----|
| Directions Served     | L   | L   | T    | T    | T    | R  | L   | L   | T    | T    | R    | L   |     |     |
| Maximum Queue (ft)    | 225 | 227 | 143  | 130  | 95   | 50 | 40  | 327 | 1356 | 1363 | 225  | 212 |     |     |
| Average Queue (ft)    | 131 | 149 | 78   | 70   | 28   | 3  | 6   | 47  | 1323 | 1326 | 212  | 182 |     |     |
| 95th Queue (ft)       | 211 | 219 | 127  | 120  | 69   | 23 | 27  | 206 | 1345 | 1347 | 283  | 237 |     |     |
| Link Distance (ft)    |     |     | 2427 | 2427 | 2427 |    |     |     |      | 1304 | 1304 |     |     |     |
| Upstream Blk Time (%) |     |     |      |      |      |    |     |     | 53   | 78   |      |     |     |     |
| Queuing Penalty (veh) |     |     |      |      |      |    |     |     | 0    | 0    |      |     |     |     |
| Storage Bay Dist (ft) | 325 | 325 |      |      |      |    | 300 | 310 | 310  |      |      |     | 200 | 200 |
| Storage Blk Time (%)  |     |     |      |      |      |    |     |     | 0    | 61   | 58   | 3   | 3   |     |
| Queuing Penalty (veh) |     |     |      |      |      |    |     |     | 0    | 17   | 229  | 18  | 9   |     |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | NB   | NB  | NB   | NB   | SB   | SB  | SB  | SB  | SB   |
|-----------------------|------|-----|------|------|------|-----|-----|-----|------|
| Directions Served     | L    | T   | T    | R    | L    | L   | T   | T   | R    |
| Maximum Queue (ft)    | 225  | 449 | 403  | 40   | 179  | 195 | 463 | 586 | 240  |
| Average Queue (ft)    | 203  | 235 | 183  | 13   | 105  | 128 | 201 | 290 | 211  |
| 95th Queue (ft)       | 245  | 396 | 309  | 32   | 180  | 196 | 464 | 611 | 287  |
| Link Distance (ft)    | 1103 |     | 1103 | 1103 | 2298 |     |     |     | 2298 |
| Upstream Blk Time (%) |      |     |      |      |      |     |     |     |      |
| Queuing Penalty (veh) |      |     |      |      |      |     |     |     |      |
| Storage Bay Dist (ft) | 200  |     |      |      | 215  | 215 | 215 |     |      |
| Storage Blk Time (%)  | 16   | 3   |      |      | 0    | 1   | 0   | 0   | 34   |
| Queuing Penalty (veh) | 50   | 13  |      |      | 0    | 1   | 0   | 1   | 71   |

Network Summary

Network wide Queuing Penalty: 2121



Queuing and Blocking Report  
 Opening Year Cumulative (2023) With Project - PM Peak Hour

10/24/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  | NB  |
|-----------------------|-----|-----|
| Directions Served     | R   | R   |
| Maximum Queue (ft)    | 82  | 12  |
| Average Queue (ft)    | 38  | 0   |
| 95th Queue (ft)       | 71  | 6   |
| Link Distance (ft)    | 458 |     |
| Upstream Blk Time (%) |     |     |
| Queuing Penalty (veh) |     |     |
| Storage Bay Dist (ft) |     | 140 |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Intersection: 5: Lasselle St. & Driveway 1

| Movement              | WB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | R   | T   | T   | T   |
| Maximum Queue (ft)    | 62  | 8   | 279 | 302 |
| Average Queue (ft)    | 28  | 0   | 95  | 98  |
| 95th Queue (ft)       | 54  | 5   | 258 | 261 |
| Link Distance (ft)    | 202 | 225 | 975 | 975 |
| Upstream Blk Time (%) |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Queuing and Blocking Report  
Opening Year Cumulative (2023) With Project - PM Peak Hour

10/24/2018

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T   | T   | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1078 | 1064 | 178 | 111 | 52  | 150 | 370 | 327 | 205 | 225 | 258 |
| Average Queue (ft)    | 224 | 1046 | 981  | 82  | 44  | 19  | 112 | 199 | 165 | 29  | 135 | 220 |
| 95th Queue (ft)       | 225 | 1060 | 1316 | 149 | 87  | 43  | 175 | 322 | 278 | 111 | 234 | 267 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953 | 953 |     |     | 225 |
| Upstream Blk Time (%) |     | 96   | 32   |     |     |     |     |     |     |     | 1   | 13  |
| Queuing Penalty (veh) |     | 0    | 0    |     |     |     |     |     |     |     | 0   | 93  |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |     |     | 180 | 240 |     |
| Storage Blk Time (%)  | 93  | 2    |      | 0   |     |     | 12  | 17  | 4   | 0   | 1   | 13  |
| Queuing Penalty (veh) | 76  | 4    |      | 0   |     |     | 52  | 23  | 3   | 0   | 3   | 22  |

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 267 |
| Average Queue (ft)    | 224 |
| 95th Queue (ft)       | 275 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 16  |
| Queuing Penalty (veh) | 114 |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | WB | NB  | SB  |
|-----------------------|----|----|-----|-----|
| Directions Served     | L  | L  | LTR | LTR |
| Maximum Queue (ft)    | 40 | 7  | 67  | 48  |
| Average Queue (ft)    | 7  | 0  | 31  | 23  |
| 95th Queue (ft)       | 28 | 4  | 57  | 47  |
| Link Distance (ft)    |    |    | 164 | 252 |
| Upstream Blk Time (%) |    |    |     |     |
| Queuing Penalty (veh) |    |    |     |     |
| Storage Bay Dist (ft) | 50 | 50 |     |     |
| Storage Blk Time (%)  | 0  |    |     |     |
| Queuing Penalty (veh) | 0  |    |     |     |

Queuing and Blocking Report  
 Opening Year Cumulative (2023) With Project - PM Peak Hour

10/24/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | NB |
|-----------------------|-----|----|
| Directions Served     | LTR | L  |
| Maximum Queue (ft)    | 39  | 11 |
| Average Queue (ft)    | 18  | 1  |
| 95th Queue (ft)       | 44  | 9  |
| Link Distance (ft)    | 245 |    |
| Upstream Blk Time (%) |     |    |
| Queuing Penalty (veh) |     |    |
| Storage Bay Dist (ft) | 50  |    |
| Storage Blk Time (%)  |     |    |
| Queuing Penalty (veh) |     |    |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | EB  | EB  | EB   | EB   | EB   | EB  | WB  | WB  | WB   | WB   | WB  | NB  |     |
|-----------------------|-----|-----|------|------|------|-----|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | L   | T    | T    | T    | R   | L   | L   | T    | T    | R   | L   |     |
| Maximum Queue (ft)    | 242 | 248 | 246  | 242  | 224  | 137 | 36  | 116 | 340  | 318  | 222 | 193 |     |
| Average Queue (ft)    | 140 | 157 | 167  | 170  | 147  | 34  | 4   | 20  | 214  | 186  | 78  | 80  |     |
| 95th Queue (ft)       | 216 | 223 | 232  | 233  | 222  | 104 | 22  | 73  | 304  | 284  | 177 | 177 |     |
| Link Distance (ft)    |     |     | 2427 | 2427 | 2427 |     |     |     | 1304 | 1304 |     |     |     |
| Upstream Blk Time (%) |     |     |      |      |      |     |     |     |      |      |     |     |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |     |      |      |     |     |     |
| Storage Bay Dist (ft) | 325 | 325 |      |      |      | 300 | 310 | 310 |      |      |     | 200 | 200 |
| Storage Blk Time (%)  |     |     |      |      |      |     |     |     | 1    | 4    | 0   | 0   |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |     | 0    | 10   | 0   | 0   |     |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | NB   | NB  | NB   | NB   | SB  | SB  | SB   | SB   | SB  |     |
|-----------------------|------|-----|------|------|-----|-----|------|------|-----|-----|
| Directions Served     | L    | T   | T    | R    | L   | L   | T    | T    | R   |     |
| Maximum Queue (ft)    | 206  | 226 | 173  | 30   | 172 | 190 | 215  | 222  | 205 |     |
| Average Queue (ft)    | 132  | 117 | 88   | 7    | 87  | 113 | 130  | 122  | 103 |     |
| 95th Queue (ft)       | 193  | 189 | 153  | 24   | 151 | 165 | 194  | 192  | 186 |     |
| Link Distance (ft)    | 1103 |     | 1103 | 1103 |     |     | 2298 | 2298 |     |     |
| Upstream Blk Time (%) |      |     |      |      |     |     |      |      |     |     |
| Queuing Penalty (veh) |      |     |      |      |     |     |      |      |     |     |
| Storage Bay Dist (ft) | 200  |     |      |      | 215 | 215 |      |      |     | 215 |
| Storage Blk Time (%)  | 1    | 0   |      |      | 0   | 0   | 0    | 0    | 0   |     |
| Queuing Penalty (veh) | 1    | 1   |      |      | 0   | 0   | 1    | 0    | 1   |     |

Network Summary

Network wide Queuing Penalty: 406

**APPENDIX 6.7:****OPENING YEAR CUMULATIVE (2023) WITH PROJECT CONDITIONS INTERSECTION  
OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS**



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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

3: Lasselle St. & Iris Av.

10/25/2018

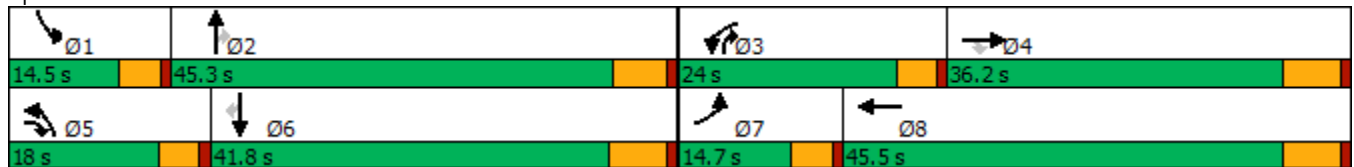


| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↑↑↑   | ↗     | ↖↗    | ↑↑↑   | ↖↗    | ↑↑    | ↗     | ↖↗    | ↑↑    | ↗     |
| Traffic Volume (vph) | 153   | 619   | 396   | 628   | 688   | 448   | 736   | 599   | 275   | 752   | 123   |
| Future Volume (vph)  | 153   | 619   | 396   | 628   | 688   | 448   | 736   | 599   | 275   | 752   | 123   |
| Turn Type            | Prot  | NA    | pm+ov | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 5     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 5     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 14.7  | 36.2  | 18.0  | 24.0  | 45.5  | 18.0  | 45.3  | 24.0  | 14.5  | 41.8  | 41.8  |
| Total Split (%)      | 12.3% | 30.2% | 15.0% | 20.0% | 37.9% | 15.0% | 37.8% | 20.0% | 12.1% | 34.8% | 34.8% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | 0.0   | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.6   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Lasselle St. & Iris Av.



HCM 6th Signalized Intersection Summary  
 3: Lasselle St. & Iris Av.

10/25/2018

| Movement   | EBL  | EBT   | EBR  | WBL  | WBT  | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR  |
|--|------|-------|------|------|------|------|-------|------|------|------|------|------|
| Lane Configurations  |      |       |      |      |      |      |       |      |      |      |      |      |
| Traffic Volume (veh/h)   | 153  | 619   | 396  | 628  | 688  | 162  | 448   | 736  | 599  | 275  | 752  | 123  |
| Future Volume (veh/h)  | 153  | 619   | 396  | 628  | 688  | 162  | 448   | 736  | 599  | 275  | 752  | 123  |
| Initial Q (Qb), veh  | 0    | 0     | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 1.00 | 1.00 |      | 0.98 | 1.00  |      | 0.98 | 1.00 |      | 0.95 |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  |      | No    |      |      | No   |      |       | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 172  | 696   | 184  | 706  | 773  | 83   | 503   | 827  | 331  | 309  | 845  | 78   |
| Peak Hour Factor   | 0.89 | 0.89  | 0.89 | 0.89 | 0.89 | 0.89 | 0.89  | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 255  | 1150  | 520  | 660  | 1585 | 169  | 462   | 1210 | 805  | 347  | 1108 | 471  |
| Arrive On Green  | 0.07 | 0.23  | 0.20 | 0.19 | 0.34 | 0.32 | 0.13  | 0.34 | 0.33 | 0.10 | 0.31 | 0.31 |
| Sat Flow, veh/h  | 3563 | 5106  | 1580 | 3563 | 4676 | 499  | 3563  | 3554 | 1552 | 3563 | 3554 | 1512 |
| Grp Volume(v), veh/h   | 172  | 696   | 184  | 706  | 561  | 295  | 503   | 827  | 331  | 309  | 845  | 78   |
| Grp Sat Flow(s),veh/h/ln   | 1781 | 1702  | 1580 | 1781 | 1702 | 1771 | 1781  | 1777 | 1552 | 1781 | 1777 | 1512 |
| Q Serve(g_s), s  | 5.1  | 13.2  | 9.5  | 20.0 | 14.1 | 14.3 | 14.0  | 21.6 | 14.2 | 9.3  | 23.2 | 4.0  |
| Cycle Q Clear(g_c), s  | 5.1  | 13.2  | 9.5  | 20.0 | 14.1 | 14.3 | 14.0  | 21.6 | 14.2 | 9.3  | 23.2 | 4.0  |
| Prop In Lane   | 1.00 |       | 1.00 | 1.00 |      | 0.28 | 1.00  |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h   | 255  | 1150  | 520  | 660  | 1154 | 600  | 462   | 1210 | 805  | 347  | 1108 | 471  |
| V/C Ratio(X)   | 0.67 | 0.61  | 0.35 | 1.07 | 0.49 | 0.49 | 1.09  | 0.68 | 0.41 | 0.89 | 0.76 | 0.17 |
| Avail Cap(c_a), veh/h  | 353  | 1523  | 636  | 660  | 1309 | 681  | 462   | 1360 | 870  | 347  | 1244 | 529  |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 48.9 | 37.5  | 27.5 | 44.0 | 28.2 | 28.6 | 47.0  | 30.6 | 16.2 | 48.2 | 33.5 | 27.0 |
| Incr Delay (d2), s/veh   | 1.2  | 0.5   | 0.4  | 55.1 | 0.3  | 0.6  | 68.0  | 1.2  | 0.3  | 23.2 | 2.5  | 0.2  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 2.2  | 5.3   | 3.5  | 13.4 | 5.4  | 5.8  | 10.3  | 8.9  | 4.6  | 5.1  | 9.7  | 1.4  |
| Unsig. Movement Delay, s/veh   |      |       |      |      |      |      |       |      |      |      |      |      |
| LnGrp Delay(d),s/veh   | 50.1 | 38.0  | 27.9 | 99.1 | 28.6 | 29.2 | 114.9 | 31.8 | 16.5 | 71.4 | 36.1 | 27.1 |
| LnGrp LOS  | D    | D     | C    | F    | C    | C    | F     | C    | B    | E    | D    | C    |
| Approach Vol, veh/h  |      | 1052  |      |      | 1562 |      |       | 1661 |      |      | 1232 |      |
| Approach Delay, s/veh  |      | 38.2  |      |      | 60.6 |      |       | 53.9 |      |      | 44.4 |      |
| Approach LOS   |      | D     |      |      | E    |      |       | D    |      |      | D    |      |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4    | 5    | 6    | 7     | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 14.5 | 41.1  | 24.0 | 28.3 | 18.0 | 37.6 | 11.7  | 40.6 |      |      |      |      |
| Change Period (Y+Rc), s  | 4.6  | * 6.2 | 4.6  | 6.2  | 4.6  | 6.2  | 4.6   | 6.2  |      |      |      |      |
| Max Green Setting (Gmax), s  | 9.9  | * 40  | 19.4 | 30.0 | 13.4 | 35.6 | 10.1  | 39.3 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 11.3 | 23.6  | 22.0 | 15.2 | 16.0 | 25.2 | 7.1   | 16.3 |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0  | 5.9   | 0.0  | 4.2  | 0.0  | 4.0  | 0.1   | 5.1  |      |      |      |      |
| <b>Intersection Summary</b>  |      |       |      |      |      |      |       |      |      |      |      |      |
| HCM 6th Ctrl Delay   |      |       | 50.7 |      |      |      |       |      |      |      |      |      |
| HCM 6th LOS  |      |       | D    |      |      |      |       |      |      |      |      |      |
| <b>Notes</b>   |      |       |      |      |      |      |       |      |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |      |      |      |       |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376) : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

|                      | ↖     |       | →     |       | ↘     |       | ↙     |       | ←     |       | ↖     |  | ↗ |  | ↑ |  | ↘ |  | ↙ |  | ↓ |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|---|--|---|--|---|--|---|--|---|--|
| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |  |   |  |   |  |   |  |   |  |   |  |
| Lane Configurations  | ↖↖    | ↑     | ↖     | ↖     | ↑     | ↖     | ↖↖    | ↑↑    | ↖     | ↖     | ↑↖    |  |   |  |   |  |   |  |   |  |   |  |
| Traffic Volume (vph) | 388   | 297   | 407   | 144   | 205   | 97    | 416   | 1197  | 262   | 156   | 819   |  |   |  |   |  |   |  |   |  |   |  |
| Future Volume (vph)  | 388   | 297   | 407   | 144   | 205   | 97    | 416   | 1197  | 262   | 156   | 819   |  |   |  |   |  |   |  |   |  |   |  |
| Turn Type            | Prot  | NA    | pm+ov | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |  |   |  |   |  |   |  |   |  |   |  |
| Protected Phases     | 7     | 4     | 5     | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |  |   |  |   |  |   |  |   |  |   |  |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |  |   |  |   |  |   |  |   |  |   |  |
| Detector Phase       | 7     | 4     | 5     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |  |   |  |   |  |   |  |   |  |   |  |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |  |   |  |   |  |   |  |   |  |   |  |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |  |   |  |   |  |   |  |   |  |   |  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |  |   |  |   |  |   |  |   |  |   |  |
| Total Split (s)      | 19.6  | 34.5  | 21.0  | 16.2  | 31.1  | 31.1  | 21.0  | 52.5  | 16.2  | 16.8  | 48.3  |  |   |  |   |  |   |  |   |  |   |  |
| Total Split (%)      | 16.3% | 28.8% | 17.5% | 13.5% | 25.9% | 25.9% | 17.5% | 43.8% | 13.5% | 14.0% | 40.3% |  |   |  |   |  |   |  |   |  |   |  |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |  |   |  |   |  |   |  |   |  |   |  |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |  |   |  |   |  |   |  |   |  |   |  |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |  |   |  |   |  |   |  |   |  |   |  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.6   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |  |   |  |   |  |   |  |   |  |   |  |
| Lead/Lag             | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |  |   |  |   |  |   |  |   |  |   |  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |   |  |   |  |   |  |   |  |   |  |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |  |   |  |   |  |   |  |   |  |   |  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.2  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.







































HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

|  |    |  |    |    |  |    |   |    |    |    |    |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |  |   |   |  |   |   |   |   |   |   |   |
| Traffic Volume (veh/h)   | 388   | 297   | 407   | 144   | 205   | 97  | 416   | 1197  | 262   | 156   | 819   | 286   |
| Future Volume (veh/h)  | 388   | 297   | 407   | 144   | 205   | 97  | 416   | 1197  | 262   | 156   | 819   | 286   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.99  | 1.00  |   | 0.98  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 451   | 345   | 181   | 167   | 238   | 86  | 484   | 1392  | 220   | 181   | 952   | 306   |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 485   | 418   | 558   | 190   | 357   | 284   | 528   | 1568  | 807   | 199   | 1033  | 330   |
| Arrive On Green  | 0.14  | 0.22  | 0.21  | 0.11  | 0.19  | 0.18  | 0.15  | 0.42  | 0.41  | 0.11  | 0.38  | 0.37  |
| Sat Flow, veh/h  | 3563  | 1870  | 1569  | 1781  | 1870  | 1564  | 3563  | 3741  | 1562  | 1781  | 2701  | 863   |
| Grp Volume(v), veh/h   | 451   | 345   | 181   | 167   | 238   | 86  | 484   | 1392  | 220   | 181   | 658   | 600   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1569  | 1781  | 1870  | 1564  | 1781  | 1870  | 1562  | 1781  | 1870  | 1694  |
| Q Serve(g_s), s  | 14.4  | 20.1  | 9.7   | 10.6  | 13.5  | 5.5   | 15.3  | 39.5  | 9.1   | 11.5  | 38.4  | 38.9  |
| Cycle Q Clear(g_c), s  | 14.4  | 20.1  | 9.7   | 10.6  | 13.5  | 5.5   | 15.3  | 39.5  | 9.1   | 11.5  | 38.4  | 38.9  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00  |   | 0.51  |
| Lane Grp Cap(c), veh/h   | 485   | 418   | 558   | 190   | 357   | 284   | 528   | 1568  | 807   | 199   | 715   | 648   |
| V/C Ratio(X)   | 0.93  | 0.83  | 0.32  | 0.88  | 0.67  | 0.30  | 0.92  | 0.89  | 0.27  | 0.91  | 0.92  | 0.93  |
| Avail Cap(c_a), veh/h  | 485   | 498   | 625   | 190   | 442   | 355   | 528   | 1583  | 813   | 199   | 723   | 655   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 49.0  | 42.4  | 27.0  | 50.5  | 43.0  | 40.6  | 48.1  | 30.8  | 15.7  | 50.3  | 33.7  | 34.3  |
| Incr Delay (d2), s/veh   | 24.3  | 9.5   | 0.3   | 33.7  | 2.7   | 0.6   | 20.4  | 6.5   | 0.2   | 38.9  | 16.8  | 19.3  |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 7.9   | 10.1  | 3.6   | 6.4   | 6.4   | 2.1   | 8.1   | 18.0  | 3.2   | 7.1   | 19.7  | 18.6  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 73.3  | 51.9  | 27.4  | 84.2  | 45.7  | 41.2  | 68.5  | 37.3  | 15.9  | 89.3  | 50.5  | 53.6  |
| LnGrp LOS  | E   | D   | C   | F   | D   | D   | E   | D   | B   | F   | D   | D   |
| Approach Vol, veh/h  |   | 977   |   |   | 491   |   |   | 2096  |   |   | 1439  |   |
| Approach Delay, s/veh  |   | 57.2  |   |   | 58.0  |   |   | 42.3  |   |   | 56.7  |   |
| Approach LOS   |   | E   |   |   | E   |   |   | D   |   |   | E   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 16.8  | 52.0  | 16.2  | 29.6  | 21.0  | 47.8  | 19.6  | 26.2  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 12.2  | 46.7  | 11.6  | 29.1  | 16.4  | 42.5  | 15.0  | * 26  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 13.5  | 41.5  | 12.6  | 22.1  | 17.3  | 40.9  | 16.4  | 15.5  |   |   |   |   |
| Green Ext Time (p_c), s  | 0.0   | 3.9   | 0.0   | 1.5   | 0.0   | 1.1   | 0.0   | 1.1   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 50.9  |   |   |   |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | D   |   |   |   |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

3: Lasselle St. & Iris Av.

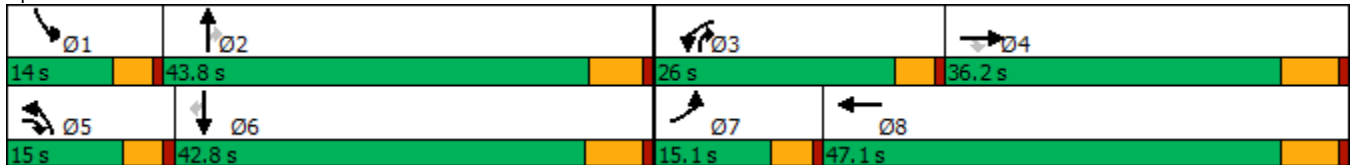
10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |  |
| Traffic Volume (vph) | 173   | 497   | 389   | 739   | 721   | 309   | 692   | 510   | 293   | 837   | 116   |  |
| Future Volume (vph)  | 173   | 497   | 389   | 739   | 721   | 309   | 692   | 510   | 293   | 837   | 116   |  |
| Turn Type            | Prot  | NA    | pm+ov | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |  |
| Protected Phases     | 7     | 4     | 5     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |  |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       | 6     |  |
| Detector Phase       | 7     | 4     | 5     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |  |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |  |
| Total Split (s)      | 15.1  | 36.2  | 15.0  | 26.0  | 47.1  | 15.0  | 43.8  | 26.0  | 14.0  | 42.8  | 42.8  |  |
| Total Split (%)      | 12.6% | 30.2% | 12.5% | 21.7% | 39.3% | 12.5% | 36.5% | 21.7% | 11.7% | 35.7% | 35.7% |  |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |  |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |  |
| Lost Time Adjust (s) | -0.6  | -2.2  | 0.0   | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.6   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |  |
| Lead/Lag             | Lead  | Lag   | Lead  | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode          | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103.9  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Lasselle St. & Iris Av.



HCM 6th Signalized Intersection Summary

3: Lasselle St. & Iris Av.

10/25/2018

| Movement   | EBL  | EBT   | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--|------|-------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations  |      |       |      |       |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)   | 173  | 497   | 389  | 739   | 721  | 270  | 309  | 692  | 510  | 293  | 837  | 116  |
| Future Volume (veh/h)  | 173  | 497   | 389  | 739   | 721  | 270  | 309  | 692  | 510  | 293  | 837  | 116  |
| Initial Q (Qb), veh  | 0    | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 0.98 | 1.00  |      | 0.95 | 1.00 |      | 0.96 | 1.00 |      | 0.97 |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  |      | No    |      |       | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 182  | 523   | 216  | 778   | 759  | 150  | 325  | 728  | 334  | 308  | 881  | 70   |
| Peak Hour Factor   | 0.95 | 0.95  | 0.95 | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 264  | 1220  | 491  | 714   | 1550 | 303  | 357  | 1138 | 790  | 324  | 1119 | 482  |
| Arrive On Green  | 0.07 | 0.24  | 0.22 | 0.20  | 0.37 | 0.35 | 0.10 | 0.32 | 0.31 | 0.09 | 0.31 | 0.31 |
| Sat Flow, veh/h  | 3563 | 5106  | 1555 | 3563  | 4244 | 828  | 3563 | 3554 | 1528 | 3563 | 3554 | 1532 |
| Grp Volume(v), veh/h   | 182  | 523   | 216  | 778   | 607  | 302  | 325  | 728  | 334  | 308  | 881  | 70   |
| Grp Sat Flow(s),veh/h/ln   | 1781 | 1702  | 1555 | 1781  | 1702 | 1668 | 1781 | 1777 | 1528 | 1781 | 1777 | 1532 |
| Q Serve(g_s), s  | 5.5  | 9.5   | 12.2 | 22.0  | 15.1 | 15.6 | 9.9  | 19.2 | 15.1 | 9.4  | 24.8 | 3.6  |
| Cycle Q Clear(g_c), s  | 5.5  | 9.5   | 12.2 | 22.0  | 15.1 | 15.6 | 9.9  | 19.2 | 15.1 | 9.4  | 24.8 | 3.6  |
| Prop In Lane   | 1.00 |       | 1.00 | 1.00  |      | 0.50 | 1.00 |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h   | 264  | 1220  | 491  | 714   | 1244 | 609  | 357  | 1138 | 790  | 324  | 1119 | 482  |
| V/C Ratio(X)   | 0.69 | 0.43  | 0.44 | 1.09  | 0.49 | 0.50 | 0.91 | 0.64 | 0.42 | 0.95 | 0.79 | 0.15 |
| Avail Cap(c_a), veh/h  | 360  | 1497  | 575  | 714   | 1336 | 655  | 357  | 1288 | 855  | 324  | 1256 | 541  |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 49.6 | 35.4  | 30.0 | 43.9  | 26.9 | 27.5 | 48.9 | 31.9 | 16.9 | 49.7 | 34.3 | 27.0 |
| Incr Delay (d2), s/veh   | 1.4  | 0.2   | 0.6  | 60.8  | 0.3  | 0.6  | 26.1 | 0.9  | 0.4  | 36.3 | 3.1  | 0.1  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 2.4  | 3.8   | 4.4  | 15.2  | 5.8  | 6.0  | 5.6  | 8.0  | 4.9  | 5.7  | 10.5 | 1.3  |
| Unsig. Movement Delay, s/veh   |      |       |      |       |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh   | 51.0 | 35.7  | 30.7 | 104.7 | 27.2 | 28.1 | 75.0 | 32.8 | 17.3 | 86.0 | 37.4 | 27.2 |
| LnGrp LOS  | D    | D     | C    | F     | C    | C    | E    | C    | B    | F    | D    | C    |
| Approach Vol, veh/h  |      | 921   |      |       | 1687 |      |      | 1387 |      |      | 1259 |      |
| Approach Delay, s/veh  |      | 37.5  |      |       | 63.1 |      |      | 38.9 |      |      | 48.7 |      |
| Approach LOS   |      | D     |      |       | E    |      |      | D    |      |      | D    |      |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4     | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 14.0 | 39.6  | 26.0 | 30.2  | 15.0 | 38.6 | 12.1 | 44.1 |      |      |      |      |
| Change Period (Y+Rc), s  | 4.6  | * 6.2 | 4.6  | 6.2   | 4.6  | 6.2  | 4.6  | 6.2  |      |      |      |      |
| Max Green Setting (Gmax), s  | 9.4  | * 38  | 21.4 | 30.0  | 10.4 | 36.6 | 10.5 | 40.9 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 11.4 | 21.2  | 24.0 | 14.2  | 11.9 | 26.8 | 7.5  | 17.6 |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0  | 5.4   | 0.0  | 3.5   | 0.0  | 4.0  | 0.1  | 5.6  |      |      |      |      |
| <b>Intersection Summary</b>  |      |       |      |       |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay   |      |       |      | 48.8  |      |      |      |      |      |      |      |      |
| HCM 6th LOS  |      |       |      | D     |      |      |      |      |      |      |      |      |
| <b>Notes</b>   |      |       |      |       |      |      |      |      |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |       |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |      |       |       |       |       |
| Traffic Volume (vph) | 270   | 82    | 205   | 117   | 72    | 53    | 137  | 883   | 76    | 165   | 1180  |
| Future Volume (vph)  | 270   | 82    | 205   | 117   | 72    | 53    | 137  | 883   | 76    | 165   | 1180  |
| Turn Type            | Prot  | NA    | pm+ov | Prot  | NA    | Perm  | Prot | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 5     | 3     | 8     |       | 5    | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |      |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 5     | 3     | 8     | 8     | 5    | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |      |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  | 5.0  | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 9.6   | 31.1  | 31.1  | 9.6  | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 18.4  | 34.4  | 11.4  | 16.0  | 32.0  | 32.0  | 11.4 | 46.8  | 16.0  | 22.8  | 58.2  |
| Total Split (%)      | 15.3% | 28.7% | 9.5%  | 13.3% | 26.7% | 26.7% | 9.5% | 39.0% | 13.3% | 19.0% | 48.5% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 3.6   | 4.1   | 4.1   | 3.6  | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0  | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6 | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.6   | 4.0   | 4.0   | 5.1   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lead | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91.3  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.

































HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

|  |    |  |  |  |  |  |    |    |  |  |    |  |
|--|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |  |  |  |  |  |   |   |  |  |   |  |
| Traffic Volume (veh/h)   | 270   | 82  | 205   | 117   | 72  | 53  | 137  | 883   | 76  | 165   | 1180  | 182   |
| Future Volume (veh/h)  | 270   | 82  | 205   | 117   | 72  | 53  | 137  | 883   | 76  | 165   | 1180  | 182   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00   |   | 1.00  | 1.00  |   | 1.00  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |  | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870   | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 284   | 86  | 58  | 123   | 76  | 23  | 144  | 929   | 60  | 174   | 1242  | 180   |
| Peak Hour Factor   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2  | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 395   | 294   | 320   | 167   | 255   | 192   | 243  | 1625  | 813   | 223   | 1570  | 226   |
| Arrive On Green  | 0.11  | 0.16  | 0.14  | 0.09  | 0.14  | 0.12  | 0.07   | 0.43  | 0.42  | 0.13  | 0.49  | 0.47  |
| Sat Flow, veh/h  | 3563  | 1870  | 1585  | 1781  | 1870  | 1556  | 3563   | 3741  | 1582  | 1781  | 3197  | 461   |
| Grp Volume(v), veh/h   | 284   | 86  | 58  | 123   | 76  | 23  | 144  | 929   | 60  | 174   | 724   | 698   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1585  | 1781  | 1870  | 1556  | 1781   | 1870  | 1582  | 1781  | 1870  | 1787  |
| Q Serve(g_s), s  | 6.5   | 3.4   | 2.6   | 5.7   | 3.1   | 1.1   | 3.3  | 15.7  | 1.6   | 8.0   | 27.1  | 27.6  |
| Cycle Q Clear(g_c), s  | 6.5   | 3.4   | 2.6   | 5.7   | 3.1   | 1.1   | 3.3  | 15.7  | 1.6   | 8.0   | 27.1  | 27.6  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00   |   | 1.00  | 1.00  |   | 0.26  |
| Lane Grp Cap(c), veh/h   | 395   | 294   | 320   | 167   | 255   | 192   | 243  | 1625  | 813   | 223   | 919   | 878   |
| V/C Ratio(X)   | 0.72  | 0.29  | 0.18  | 0.74  | 0.30  | 0.12  | 0.59   | 0.57  | 0.07  | 0.78  | 0.79  | 0.80  |
| Avail Cap(c_a), veh/h  | 609   | 675   | 642   | 254   | 621   | 497   | 313  | 1900  | 929   | 397   | 1203  | 1149  |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 36.2  | 31.4  | 27.9  | 37.2  | 32.8  | 32.9  | 38.1   | 17.9  | 10.4  | 35.7  | 17.8  | 18.1  |
| Incr Delay (d2), s/veh   | 0.9   | 0.5   | 0.3   | 2.4   | 0.6   | 0.3   | 0.9  | 0.3   | 0.0   | 2.3   | 2.7   | 3.0   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 2.7   | 1.5   | 1.0   | 2.5   | 1.4   | 0.4   | 1.4  | 6.0   | 0.5   | 3.4   | 10.5  | 10.4  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |  |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 37.1  | 31.9  | 28.1  | 39.6  | 33.4  | 33.2  | 39.0   | 18.2  | 10.4  | 38.0  | 20.4  | 21.1  |
| LnGrp LOS  | D   | C   | C   | D   | C   | C   | D  | B   | B   | D   | C   | C   |
| Approach Vol, veh/h  |   | 428   |   |   | 222   |   |  | 1133  |   |   | 1596  |   |
| Approach Delay, s/veh  |   | 34.9  |   |   | 36.8  |   |  | 20.5  |   |   | 22.6  |   |
| Approach LOS   |   | C   |   |   | D   |   |  | C   |   |   | C   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 14.5  | 40.6  | 11.9  | 17.2  | 9.8   | 45.4  | 13.3   | 15.8  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6  | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 18.2  | 41.0  | 11.4  | 29.0  | 6.8   | 52.4  | 13.8   | * 27  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 10.0  | 17.7  | 7.7   | 5.4   | 5.3   | 29.6  | 8.5  | 5.1   |   |   |   |   |
| Green Ext Time (p_c), s  | 0.1   | 6.5   | 0.0   | 0.5   | 0.0   | 10.0  | 0.3  | 0.4   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |  |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   |   | 24.4  |   |   |  |   |   |   |   |   |
| HCM 6th LOS  |   |   |   | C   |   |   |  |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |  |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |  |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |  |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

**APPENDIX 7.1:**

**HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS  
ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

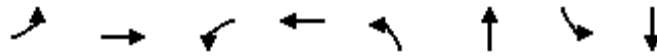
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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

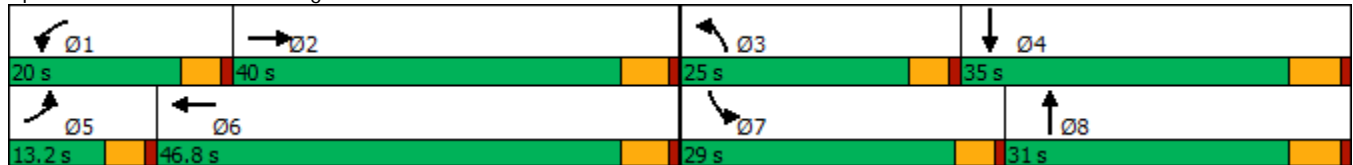


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 102   | 630   | 193   | 740   | 264   | 505   | 320   | 600   |
| Future Volume (vph)  | 102   | 630   | 193   | 740   | 264   | 505   | 320   | 600   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 13.2  | 40.0  | 20.0  | 46.8  | 25.0  | 31.0  | 29.0  | 35.0  |
| Total Split (%)      | 11.0% | 33.3% | 16.7% | 39.0% | 20.8% | 25.8% | 24.2% | 29.2% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 117.1  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Kitching St. & Krameria Av.





HCM 6th Signalized Intersection Summary  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 102  | 630  | 254  | 193  | 740  | 230  | 264  | 505  | 270  | 320  | 600  | 122  |
| Future Volume (veh/h)        | 102  | 630  | 254  | 193  | 740  | 230  | 264  | 505  | 270  | 320  | 600  | 122  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 0.96 | 1.00 |      | 1.00 | 1.00 |      | 0.98 | 1.00 |      | 0.97 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1945 | 1945 | 1870 | 1945 | 1945 | 1945 | 1945 | 1945 | 1945 | 1945 | 1945 |
| Adj Flow Rate, veh/h         | 116  | 716  | 158  | 219  | 841  | 97   | 300  | 574  | 166  | 364  | 682  | 53   |
| Peak Hour Factor             | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 144  | 843  | 186  | 250  | 1147 | 132  | 334  | 663  | 191  | 397  | 936  | 73   |
| Arrive On Green              | 0.10 | 0.34 | 0.33 | 0.18 | 0.42 | 0.40 | 0.23 | 0.29 | 0.27 | 0.27 | 0.33 | 0.31 |
| Sat Flow, veh/h              | 1781 | 3062 | 675  | 1781 | 3423 | 395  | 1853 | 2888 | 832  | 1853 | 3555 | 276  |
| Grp Volume(v), veh/h         | 116  | 455  | 419  | 219  | 478  | 460  | 300  | 386  | 354  | 364  | 373  | 362  |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1945 | 1792 | 1781 | 1945 | 1872 | 1853 | 1945 | 1775 | 1853 | 1945 | 1886 |
| Q Serve(g_s), s              | 7.3  | 24.7 | 24.7 | 13.6 | 23.5 | 23.5 | 17.9 | 21.4 | 21.6 | 21.7 | 19.3 | 19.3 |
| Cycle Q Clear(g_c), s        | 7.3  | 24.7 | 24.7 | 13.6 | 23.5 | 23.5 | 17.9 | 21.4 | 21.6 | 21.7 | 19.3 | 19.3 |
| Prop In Lane                 | 1.00 |      | 0.38 | 1.00 |      | 0.21 | 1.00 |      | 0.47 | 1.00 |      | 0.15 |
| Lane Grp Cap(c), veh/h       | 144  | 536  | 494  | 250  | 652  | 627  | 334  | 446  | 407  | 397  | 512  | 496  |
| V/C Ratio(X)                 | 0.81 | 0.85 | 0.85 | 0.87 | 0.73 | 0.73 | 0.90 | 0.86 | 0.87 | 0.92 | 0.73 | 0.73 |
| Avail Cap(c_a), veh/h        | 144  | 615  | 567  | 250  | 731  | 704  | 342  | 461  | 421  | 407  | 530  | 514  |
| HCM Platoon Ratio            | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 50.3 | 35.1 | 35.5 | 45.9 | 28.8 | 29.0 | 43.1 | 38.9 | 39.5 | 40.7 | 34.6 | 34.8 |
| Incr Delay (d2), s/veh       | 25.7 | 9.8  | 10.5 | 26.3 | 3.4  | 3.5  | 24.1 | 15.3 | 17.1 | 24.6 | 4.9  | 5.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 4.1  | 12.1 | 11.3 | 7.5  | 10.4 | 10.1 | 9.8  | 11.2 | 10.6 | 11.7 | 8.9  | 8.7  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 76.0 | 44.9 | 46.0 | 72.2 | 32.2 | 32.5 | 67.2 | 54.2 | 56.6 | 65.3 | 39.5 | 39.8 |
| LnGrp LOS                    | E    | D    | D    | E    | C    | C    | E    | D    | E    | E    | D    | D    |
| Approach Vol, veh/h          |      | 990  |      |      | 1157 |      |      | 1040 |      |      | 1099 |      |
| Approach Delay, s/veh        |      | 49.0 |      |      | 39.9 |      |      | 58.8 |      |      | 48.1 |      |
| Approach LOS                 |      | D    |      |      | D    |      |      | E    |      |      | D    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 20.0 | 35.3 | 24.5 | 34.0 | 13.2 | 42.1 | 28.4 | 30.1 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  |      |      |      |      |
| Max Green Setting (Gmax), s  | 15.4 | 34.6 | 20.4 | 29.2 | 8.6  | 41.4 | 24.4 | 25.2 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 15.6 | 26.7 | 19.9 | 21.3 | 9.3  | 25.5 | 23.7 | 23.6 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 3.2  | 0.0  | 2.5  | 0.0  | 5.2  | 0.1  | 0.7  |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 48.7 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | D    |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

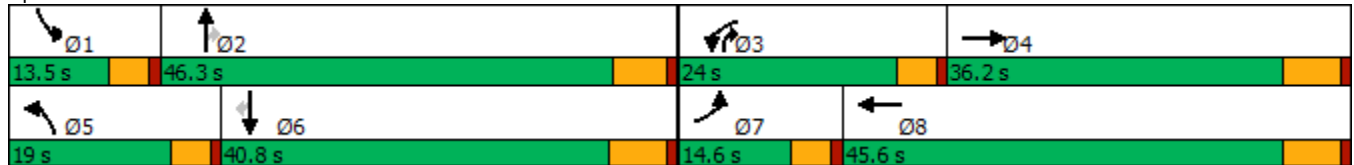


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↑↑↓   | ↖↗    | ↑↑↓   | ↖↗    | ↑↑    | ↖     | ↖↗    | ↑↑    | ↖     |
| Traffic Volume (vph) | 184   | 681   | 672   | 908   | 477   | 793   | 642   | 303   | 809   | 156   |
| Future Volume (vph)  | 184   | 681   | 672   | 908   | 477   | 793   | 642   | 303   | 809   | 156   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 14.6  | 36.2  | 24.0  | 45.6  | 19.0  | 46.3  | 24.0  | 13.5  | 40.8  | 40.8  |
| Total Split (%)      | 12.2% | 30.2% | 20.0% | 38.0% | 15.8% | 38.6% | 20.0% | 11.3% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 118.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

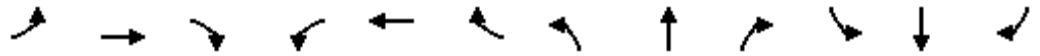
Splits and Phases: 3: Lasselle St. & Iris Av.



HCM 6th Signalized Intersection Summary  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018



| Movement                     | EBL  | EBT   | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|------------------------------|------|-------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations          | ↔↔   | ↑↑↔   |      | ↔↔    | ↑↑↔  |      | ↔↔    | ↑↑   | ↔    | ↔↔    | ↑↑   | ↔    |
| Traffic Volume (veh/h)       | 184  | 681   | 417  | 672   | 908  | 178  | 477   | 793  | 642  | 303   | 809  | 156  |
| Future Volume (veh/h)        | 184  | 681   | 417  | 672   | 908  | 178  | 477   | 793  | 642  | 303   | 809  | 156  |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0     | 0    | 0    | 0     | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00  |      | 0.98 | 1.00  |      | 0.98 | 1.00  |      | 0.95 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach        |      | No    |      |       | No   |      |       | No   |      |       | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 207  | 765   | 321  | 755   | 1020 | 157  | 536   | 891  | 492  | 340   | 909  | 115  |
| Peak Hour Factor             | 0.89 | 0.89  | 0.89 | 0.89  | 0.89 | 0.89 | 0.89  | 0.89 | 0.89 | 0.89  | 0.89 | 0.89 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2     | 2    | 2    | 2     | 2    | 2    | 2     | 2    | 2    |
| Cap, veh/h                   | 280  | 934   | 388  | 588   | 1575 | 242  | 441   | 1227 | 790  | 279   | 1072 | 456  |
| Arrive On Green              | 0.08 | 0.26  | 0.25 | 0.17  | 0.35 | 0.33 | 0.13  | 0.35 | 0.33 | 0.08  | 0.30 | 0.30 |
| Sat Flow, veh/h              | 3456 | 3535  | 1470 | 3456  | 4455 | 684  | 3456  | 3554 | 1552 | 3456  | 3554 | 1510 |
| Grp Volume(v), veh/h         | 207  | 736   | 350  | 755   | 779  | 398  | 536   | 891  | 492  | 340   | 909  | 115  |
| Grp Sat Flow(s),veh/h/ln     | 1728 | 1702  | 1601 | 1728  | 1702 | 1735 | 1728  | 1777 | 1552 | 1728  | 1777 | 1510 |
| Q Serve(g_s), s              | 6.9  | 23.9  | 24.3 | 20.0  | 22.5 | 22.7 | 15.0  | 25.7 | 27.0 | 9.5   | 28.2 | 6.8  |
| Cycle Q Clear(g_c), s        | 6.9  | 23.9  | 24.3 | 20.0  | 22.5 | 22.7 | 15.0  | 25.7 | 27.0 | 9.5   | 28.2 | 6.8  |
| Prop In Lane                 | 1.00 |       | 0.92 | 1.00  |      | 0.39 | 1.00  |      | 1.00 | 1.00  |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 280  | 899   | 423  | 588   | 1203 | 613  | 441   | 1227 | 790  | 279   | 1072 | 456  |
| V/C Ratio(X)                 | 0.74 | 0.82  | 0.83 | 1.28  | 0.65 | 0.65 | 1.22  | 0.73 | 0.62 | 1.22  | 0.85 | 0.25 |
| Avail Cap(c_a), veh/h        | 312  | 933   | 439  | 588   | 1205 | 614  | 441   | 1279 | 812  | 279   | 1113 | 473  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 52.8 | 40.6  | 41.7 | 48.8  | 31.8 | 32.3 | 51.3  | 33.6 | 21.1 | 54.0  | 38.5 | 31.0 |
| Incr Delay (d2), s/veh       | 6.6  | 5.7   | 12.0 | 140.3 | 1.2  | 2.4  | 116.1 | 2.0  | 1.4  | 125.7 | 6.1  | 0.3  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 3.1  | 10.2  | 10.6 | 19.7  | 8.9  | 9.5  | 13.4  | 10.9 | 9.2  | 8.9   | 12.5 | 2.4  |
| Unsig. Movement Delay, s/veh |      |       |      |       |      |      |       |      |      |       |      |      |
| LnGrp Delay(d),s/veh         | 59.4 | 46.2  | 53.7 | 189.0 | 33.1 | 34.7 | 167.3 | 35.6 | 22.5 | 179.8 | 44.6 | 31.3 |
| LnGrp LOS                    | E    | D     | D    | F     | C    | C    | F     | D    | C    | F     | D    | C    |
| Approach Vol, veh/h          |      | 1293  |      |       | 1932 |      |       | 1919 |      |       | 1364 |      |
| Approach Delay, s/veh        |      | 50.4  |      |       | 94.4 |      |       | 69.0 |      |       | 77.2 |      |
| Approach LOS                 |      | D     |      |       | F    |      |       | E    |      |       | E    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4     | 5    | 6    | 7     | 8    |      |       |      |      |
| Phs Duration (G+Y+Rc), s     | 13.5 | 45.0  | 24.0 | 35.1  | 19.0 | 39.5 | 13.5  | 45.5 |      |       |      |      |
| Change Period (Y+Rc), s      | 4.6  | * 6.2 | 4.6  | 6.2   | 4.6  | 6.2  | 4.6   | 6.2  |      |       |      |      |
| Max Green Setting (Gmax), s  | 8.9  | * 41  | 19.4 | 30.0  | 14.4 | 34.6 | 10.0  | 39.4 |      |       |      |      |
| Max Q Clear Time (g_c+I1), s | 11.5 | 29.0  | 22.0 | 26.3  | 17.0 | 30.2 | 8.9   | 24.7 |      |       |      |      |
| Green Ext Time (p_c), s      | 0.0  | 5.8   | 0.0  | 2.1   | 0.0  | 2.3  | 0.0   | 6.1  |      |       |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 74.5 |
| HCM 6th LOS        | E    |

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC  
4: Lasselie St. & Cahuillia Dr.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.8  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      | ↗    | ↕    | ↗    |      | ↕    |
| Traffic Vol, veh/h       | 0    | 97   | 1556 | 182  | 0    | 1149 |
| Future Vol, veh/h        | 0    | 97   | 1556 | 182  | 0    | 1149 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 3    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 110  | 1768 | 207  | 0    | 1306 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 887    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.7    | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 305    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | -      | 304    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 23.4 | 0  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 304   |
| HCM Lane V/C Ratio    | -   | -        | 0.363 |
| HCM Control Delay (s) | -   | -        | 23.4  |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 1.6   |



Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018



| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕     | ↗     | ↖     | ↕     |
| Traffic Volume (vph) | 424   | 294   | 132   | 193   | 457   | 1290  | 288   | 115   | 971   |
| Future Volume (vph)  | 424   | 294   | 132   | 193   | 457   | 1290  | 288   | 115   | 971   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 17.2  | 36.3  | 12.0  | 31.1  | 26.0  | 58.0  | 12.0  | 13.7  | 45.7  |
| Total Split (%)      | 14.3% | 30.3% | 10.0% | 25.9% | 21.7% | 48.3% | 10.0% | 11.4% | 38.1% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 116.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR   |
|--|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|-------|
| Lane Configurations  |       |       |      |       |       |      |       |       |      |       |       |       |
| Traffic Volume (veh/h)   | 424   | 294   | 447  | 132   | 193   | 107  | 457   | 1290  | 288  | 115   | 971   | 315   |
| Future Volume (veh/h)  | 424   | 294   | 447  | 132   | 193   | 107  | 457   | 1290  | 288  | 115   | 971   | 315   |
| Initial Q (Qb), veh  | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0     |
| Ped-Bike Adj(A_pbT)  | 1.00  |       | 0.99 | 1.00  |       | 0.99 | 1.00  |       | 0.99 | 1.00  |       | 0.98  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |       | No    |      |       | No    |      |       | No    |      |       | No    |       |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870 | 1870  | 1870  | 1870 | 1870  | 1870  | 1870 | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 493   | 342   | 344  | 153   | 224   | 97   | 531   | 1500  | 250  | 134   | 1129  | 339   |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2     | 2     | 2    | 2     | 2     | 2    | 2     | 2     | 2    | 2     | 2     | 2     |
| Cap, veh/h   | 388   | 450   | 398  | 121   | 502   | 210  | 334   | 1634  | 810  | 147   | 955   | 282   |
| Arrive On Green  | 0.11  | 0.25  | 0.24 | 0.07  | 0.21  | 0.20 | 0.19  | 0.46  | 0.45 | 0.08  | 0.36  | 0.34  |
| Sat Flow, veh/h  | 3456  | 1777  | 1571 | 1781  | 2432  | 1016 | 1781  | 3554  | 1562 | 1781  | 2689  | 795   |
| Grp Volume(v), veh/h   | 493   | 342   | 344  | 153   | 161   | 160  | 531   | 1500  | 250  | 134   | 740   | 728   |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1777  | 1571 | 1781  | 1777  | 1671 | 1781  | 1777  | 1562 | 1781  | 1777  | 1707  |
| Q Serve(g_s), s  | 13.2  | 20.9  | 24.6 | 8.0   | 9.3   | 9.9  | 22.0  | 46.3  | 10.8 | 8.8   | 41.7  | 41.7  |
| Cycle Q Clear(g_c), s  | 13.2  | 20.9  | 24.6 | 8.0   | 9.3   | 9.9  | 22.0  | 46.3  | 10.8 | 8.8   | 41.7  | 41.7  |
| Prop In Lane   | 1.00  |       | 1.00 | 1.00  |       | 0.61 | 1.00  |       | 1.00 | 1.00  |       | 0.47  |
| Lane Grp Cap(c), veh/h   | 388   | 450   | 398  | 121   | 367   | 345  | 334   | 1634  | 810  | 147   | 631   | 606   |
| V/C Ratio(X)   | 1.27  | 0.76  | 0.86 | 1.26  | 0.44  | 0.46 | 1.59  | 0.92  | 0.31 | 0.91  | 1.17  | 1.20  |
| Avail Cap(c_a), veh/h  | 388   | 489   | 432  | 121   | 410   | 386  | 334   | 1634  | 810  | 147   | 631   | 606   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 52.1  | 40.5  | 42.6 | 54.7  | 40.7  | 41.2 | 47.7  | 29.7  | 16.3 | 53.4  | 37.9  | 38.3  |
| Incr Delay (d2), s/veh   | 140.1 | 6.3   | 15.6 | 167.6 | 0.8   | 1.0  | 279.9 | 8.7   | 0.2  | 47.7  | 94.0  | 105.4 |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 13.2  | 9.7   | 11.1 | 9.2   | 4.1   | 4.1  | 35.4  | 20.2  | 3.8  | 5.8   | 33.6  | 34.3  |
| Unsig. Movement Delay, s/veh   |       |       |      |       |       |      |       |       |      |       |       |       |
| LnGrp Delay(d),s/veh   | 192.2 | 46.9  | 58.2 | 222.4 | 41.5  | 42.2 | 327.6 | 38.4  | 16.5 | 101.2 | 131.9 | 143.7 |
| LnGrp LOS  | F     | D     | E    | F     | D     | D    | F     | D     | B    | F     | F     | F     |
| Approach Vol, veh/h  |       | 1179  |      |       | 474   |      |       | 2281  |      |       | 1602  |       |
| Approach Delay, s/veh  |       | 111.0 |      |       | 100.1 |      |       | 103.3 |      |       | 134.7 |       |
| Approach LOS   |       | F     |      |       | F     |      |       | F     |      |       | F     |       |
| Timer - Assigned Phs   | 1     | 2     | 3    | 4     | 5     | 6    | 7     | 8     |      |       |       |       |
| Phs Duration (G+Y+Rc), s   | 13.7  | 58.0  | 12.0 | 33.7  | 26.0  | 45.7 | 17.2  | 28.5  |      |       |       |       |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6  | 5.4   | 4.6   | 5.8  | 4.6   | * 5.4 |      |       |       |       |
| Max Green Setting (Gmax), s  | 9.1   | 52.2  | 7.4  | 30.9  | 21.4  | 39.9 | 12.6  | * 26  |      |       |       |       |
| Max Q Clear Time (g_c+I1), s   | 10.8  | 48.3  | 10.0 | 26.6  | 24.0  | 43.7 | 15.2  | 11.9  |      |       |       |       |
| Green Ext Time (p_c), s  | 0.0   | 3.1   | 0.0  | 1.6   | 0.0   | 0.0  | 0.0   | 1.5   |      |       |       |       |
| <b>Intersection Summary</b>  |       |       |      |       |       |      |       |       |      |       |       |       |
| HCM 6th Ctrl Delay   |       |       |      |       | 113.7 |      |       |       |      |       |       |       |
| HCM 6th LOS  |       |       |      |       | F     |      |       |       |      |       |       |       |
| <b>Notes</b>   |       |       |      |       |       |      |       |       |      |       |       |       |
| User approved pedestrian interval to be less than phase max green.                                 |       |       |      |       |       |      |       |       |      |       |       |       |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |       |       |      |       |       |      |       |       |      |       |       |       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 424   | 294   | 447   | 132   | 193   | 107   | 457   | 1290  | 288   | 115   | 971   |
| Future Volume (vph)  | 424   | 294   | 447   | 132   | 193   | 107   | 457   | 1290  | 288   | 115   | 971   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 14.6  | 34.8  | 34.8  | 11.0  | 31.2  | 31.2  | 28.0  | 51.4  | 11.0  | 12.8  | 36.2  |
| Total Split (%)      | 13.3% | 31.6% | 31.6% | 10.0% | 28.4% | 28.4% | 25.5% | 46.7% | 10.0% | 11.6% | 32.9% |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 105.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

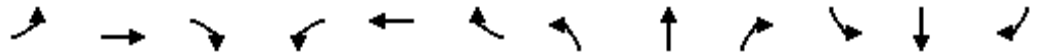
Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018



| Movement                     | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL  | SBT   | SBR   |
|------------------------------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|-------|
| Lane Configurations          | ↖     | ↗     | ↘    | ↖     | ↗     | ↘    | ↖     | ↗↘    | ↘    | ↖    | ↗↘    | ↘     |
| Traffic Volume (veh/h)       | 424   | 294   | 447  | 132   | 193   | 107  | 457   | 1290  | 288  | 115  | 971   | 315   |
| Future Volume (veh/h)        | 424   | 294   | 447  | 132   | 193   | 107  | 457   | 1290  | 288  | 115  | 971   | 315   |
| Initial Q (Qb), veh          | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0    | 0    | 0     | 0     |
| Ped-Bike Adj(A_pbT)          | 1.00  |       | 0.99 | 1.00  |       | 0.99 | 1.00  |       | 0.98 | 1.00 |       | 0.96  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Work Zone On Approach        |       | No    |      |       | No    |      |       | No    |      |      | No    |       |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870  | 1870 | 1870  | 1870  | 1870 | 1870  | 1870  | 1870 | 1870 | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 493   | 342   | 344  | 153   | 224   | 97   | 531   | 1500  | 250  | 134  | 1129  | 339   |
| Peak Hour Factor             | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86 | 0.86 | 0.86  | 0.86  |
| Percent Heavy Veh, %         | 2     | 2     | 2    | 2     | 2     | 2    | 2     | 2     | 2    | 2    | 2     | 2     |
| Cap, veh/h                   | 177   | 485   | 387  | 117   | 417   | 333  | 400   | 1575  | 772  | 147  | 806   | 238   |
| Arrive On Green              | 0.10  | 0.26  | 0.25 | 0.07  | 0.22  | 0.21 | 0.22  | 0.44  | 0.43 | 0.08 | 0.30  | 0.28  |
| Sat Flow, veh/h              | 1781  | 1870  | 1572 | 1781  | 1870  | 1564 | 1781  | 3554  | 1547 | 1781 | 2678  | 791   |
| Grp Volume(v), veh/h         | 493   | 342   | 344  | 153   | 224   | 97   | 531   | 1500  | 250  | 134  | 743   | 725   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1870  | 1572 | 1781  | 1870  | 1564 | 1781  | 1777  | 1547 | 1781 | 1777  | 1692  |
| Q Serve(g_s), s              | 10.6  | 17.7  | 22.6 | 7.0   | 11.3  | 5.6  | 24.0  | 43.5  | 10.4 | 8.0  | 32.2  | 32.2  |
| Cycle Q Clear(g_c), s        | 10.6  | 17.7  | 22.6 | 7.0   | 11.3  | 5.6  | 24.0  | 43.5  | 10.4 | 8.0  | 32.2  | 32.2  |
| Prop In Lane                 | 1.00  |       | 1.00 | 1.00  |       | 1.00 | 1.00  |       | 1.00 | 1.00 |       | 0.47  |
| Lane Grp Cap(c), veh/h       | 177   | 485   | 387  | 117   | 417   | 333  | 400   | 1575  | 772  | 147  | 535   | 509   |
| V/C Ratio(X)                 | 2.79  | 0.70  | 0.89 | 1.31  | 0.54  | 0.29 | 1.33  | 0.95  | 0.32 | 0.91 | 1.39  | 1.42  |
| Avail Cap(c_a), veh/h        | 177   | 539   | 432  | 117   | 476   | 382  | 400   | 1575  | 772  | 147  | 535   | 509   |
| HCM Platoon Ratio            | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 48.2  | 35.9  | 38.9 | 50.0  | 36.7  | 35.3 | 41.5  | 28.7  | 16.1 | 48.7 | 37.4  | 37.8  |
| Incr Delay (d2), s/veh       | 822.0 | 3.7   | 18.5 | 188.8 | 1.1   | 0.5  | 164.1 | 13.1  | 0.2  | 48.7 | 186.0 | 201.8 |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 44.9  | 8.3   | 10.5 | 9.2   | 5.2   | 2.1  | 28.3  | 19.7  | 3.6  | 5.4  | 40.8  | 41.2  |
| Unsig. Movement Delay, s/veh |       |       |      |       |       |      |       |       |      |      |       |       |
| LnGrp Delay(d),s/veh         | 870.2 | 39.6  | 57.4 | 238.7 | 37.8  | 35.8 | 205.6 | 41.8  | 16.3 | 97.4 | 223.4 | 239.6 |
| LnGrp LOS                    | F     | D     | E    | F     | D     | D    | F     | D     | B    | F    | F     | F     |
| Approach Vol, veh/h          |       | 1179  |      |       | 474   |      |       | 2281  |      |      | 1602  |       |
| Approach Delay, s/veh        |       | 392.1 |      |       | 102.2 |      |       | 77.1  |      |      | 220.2 |       |
| Approach LOS                 |       | F     |      |       | F     |      |       | E     |      |      | F     |       |
| Timer - Assigned Phs         | 1     | 2     | 3    | 4     | 5     | 6    | 7     | 8     |      |      |       |       |
| Phs Duration (G+Y+Rc), s     | 12.8  | 51.4  | 11.0 | 31.7  | 28.0  | 36.2 | 14.6  | 28.1  |      |      |       |       |
| Change Period (Y+Rc), s      | 4.6   | 5.8   | 4.6  | 5.4   | 4.6   | 5.8  | 4.6   | * 5.4 |      |      |       |       |
| Max Green Setting (Gmax), s  | 8.2   | 45.6  | 6.4  | 29.4  | 23.4  | 30.4 | 10.0  | * 26  |      |      |       |       |
| Max Q Clear Time (g_c+I1), s | 10.0  | 45.5  | 9.0  | 24.6  | 26.0  | 34.2 | 12.6  | 13.3  |      |      |       |       |
| Green Ext Time (p_c), s      | 0.0   | 0.1   | 0.0  | 1.5   | 0.0   | 0.0  | 0.0   | 1.2   |      |      |       |       |

Intersection Summary

|                    |       |
|--------------------|-------|
| HCM 6th Ctrl Delay | 187.8 |
| HCM 6th LOS        | F     |

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

Intersection

Int Delay, s/veh 2.7

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 8    | 633  | 56   | 58   | 357  | 0    | 75   | 0    | 96   | 0    | 0    | 0    |
| Future Vol, veh/h        | 8    | 633  | 56   | 58   | 357  | 0    | 75   | 0    | 96   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 10   | 822  | 73   | 75   | 464  | 0    | 97   | 0    | 125  | 0    | 0    | 0    |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 464    | 0      | 0      | 897    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Critical Hdwy        | 4.14   | -      | -      | 4.14   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      | -      |
| Follow-up Hdwy       | 2.22   | -      | -      | 2.22   |
| Pot Cap-1 Maneuver   | 1094   | -      | -      | 753    |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |
| Platoon blocked, %   | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | 1094   | -      | -      | 752    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      |
| Stage 1              | -      | -      | -      | -      |
| Stage 2              | -      | -      | -      | -      |

| Approach             | EB  | WB  | NB   | SB |
|----------------------|-----|-----|------|----|
| HCM Control Delay, s | 0.1 | 1.4 | 16.6 | 0  |
| HCM LOS              |     |     | C    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 531   | 1094  | -   | -   | 752  | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.418 | 0.009 | -   | -   | 0.1  | -   | -   | -     |
| HCM Control Delay (s) | 16.6  | 8.3   | -   | -   | 10.3 | -   | -   | 0     |
| HCM Lane LOS          | C     | A     | -   | -   | B    | -   | -   | A     |
| HCM 95th %tile Q(veh) | 2     | 0     | -   | -   | 0.3  | -   | -   | -     |

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↵    | ↵    |      | ↵    | ↵    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 8    | 633  | 56   | 58   | 357  | 0    | 75   | 0    | 96   | 0    | 0    | 0    |
| Future Vol, veh/h        | 8    | 633  | 56   | 58   | 357  | 0    | 75   | 0    | 96   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 10   | 822  | 73   | 75   | 464  | 0    | 97   | 0    | 125  | 0    | 0    | 0    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 464    | 0 | 0 | 897    | 0 | 0 | 1495   | 1495  | 861   | 1555   | 1531  | 464   |
| Stage 1              | -      | - | - | -      | - | - | 881    | 881   | -     | 614    | 614   | -     |
| Stage 2              | -      | - | - | -      | - | - | 614    | 614   | -     | 941    | 917   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 5      | 6.52  | 5     | 5      | 6.52  | 5     |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 5      | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 5      | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1097   | - | - | 757    | - | - | 244    | 123   | 475   | 230    | 117   | 700   |
| Stage 1              | -      | - | - | -      | - | - | 449    | 365   | -     | 479    | 483   | -     |
| Stage 2              | -      | - | - | -      | - | - | 580    | 483   | -     | 316    | 351   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1097   | - | - | 756    | - | - | 224    | 110   | 474   | 155    | 104   | 700   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 369    | 280   | -     | 148    | 235   | -     |
| Stage 1              | -      | - | - | -      | - | - | 444    | 361   | -     | 475    | 435   | -     |
| Stage 2              | -      | - | - | -      | - | - | 522    | 435   | -     | 231    | 347   | -     |

| Approach             | EB  | WB  | NB   | SB |
|----------------------|-----|-----|------|----|
| HCM Control Delay, s | 0.1 | 1.4 | 22.7 | 0  |
| HCM LOS              |     |     | C    | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 421   | 1097  | -   | -   | 756  | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.528 | 0.009 | -   | -   | 0.1  | -   | -   | -     |
| HCM Control Delay (s) | 22.7  | 8.3   | -   | -   | 10.3 | -   | -   | 0     |
| HCM Lane LOS          | C     | A     | -   | -   | B    | -   | -   | A     |
| HCM 95th %tile Q(veh) | 3     | 0     | -   | -   | 0.3  | -   | -   | -     |

HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

Continental Villages (JN 11575)

10/25/2018

Intersection

Int Delay, s/veh 0.7

| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 12   | 9    | 1    | 7    | 21   | 683  | 16   | 6    | 386  | 0    |
| Future Vol, veh/h        | 0    | 0    | 12   | 9    | 1    | 7    | 21   | 683  | 16   | 6    | 386  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 69   | 0    | 0    | 21   | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 0    | 17   | 13   | 1    | 10   | 29   | 949  | 22   | 8    | 536  | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1645   | 1602  | 536    | 1600  | 1591   | 1050  | 536    | 0 | 0 | 992   | 0 | 0 |
| Stage 1              | 552    | 552   | -      | 1039  | 1039   | -     | -      | - | - | -     | - | - |
| Stage 2              | 1093   | 1050  | -      | 561   | 552    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 79     | 106   | 545    | 85    | 107    | 276   | 1032   | - | - | 697   | - | - |
| Stage 1              | 518    | 515   | -      | 279   | 308    | -     | -      | - | - | -     | - | - |
| Stage 2              | 260    | 304   | -      | 512   | 515    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 68     | 100   | 545    | 78    | 101    | 253   | 1032   | - | - | 683   | - | - |
| Mov Cap-2 Maneuver   | 164    | 206   | -      | 187   | 209    | -     | -      | - | - | -     | - | - |
| Stage 1              | 503    | 509   | -      | 266   | 294    | -     | -      | - | - | -     | - | - |
| Stage 2              | 226    | 290   | -      | 491   | 509    | -     | -      | - | - | -     | - | - |

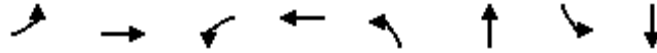
| Approach             | EB   | WB   | NB  | SB  |
|----------------------|------|------|-----|-----|
| HCM Control Delay, s | 11.8 | 24.2 | 0.3 | 0.2 |
| HCM LOS              | B    | C    |     |     |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 1032  | -   | -   | 545        | 211   | 683   | -   |
| HCM Lane V/C Ratio    | 0.028 | -   | -   | 0.031      | 0.112 | 0.012 | -   |
| HCM Control Delay (s) | 8.6   | -   | -   | 11.8       | 24.2  | 10.3  | -   |
| HCM Lane LOS          | A     | -   | -   | B          | C     | B     | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.1        | 0.4   | 0     | -   |

Timings  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

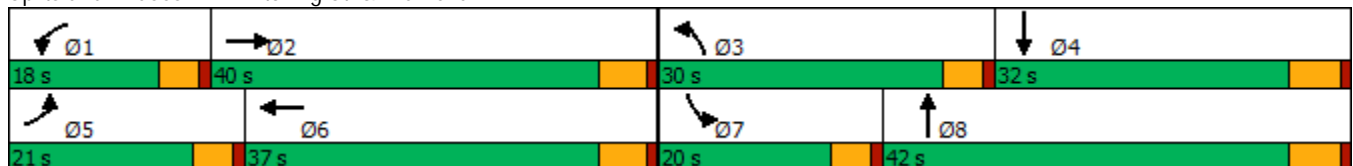


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 116   | 448   | 97    | 413   | 222   | 646   | 109   | 441   |
| Future Volume (vph)  | 116   | 448   | 97    | 413   | 222   | 646   | 109   | 441   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 21.0  | 40.0  | 18.0  | 37.0  | 30.0  | 42.0  | 20.0  | 32.0  |
| Total Split (%)      | 17.5% | 33.3% | 15.0% | 30.8% | 25.0% | 35.0% | 16.7% | 26.7% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |
| Act Effect Green (s) | 11.2  | 26.0  | 10.0  | 21.8  | 16.2  | 27.0  | 10.6  | 21.4  |
| Actuated g/C Ratio   | 0.13  | 0.30  | 0.11  | 0.25  | 0.18  | 0.31  | 0.12  | 0.24  |
| v/c Ratio            | 0.50  | 0.60  | 0.47  | 0.55  | 0.64  | 0.66  | 0.48  | 0.60  |
| Control Delay        | 47.9  | 26.2  | 49.3  | 30.6  | 44.6  | 29.9  | 47.9  | 32.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 47.9  | 26.2  | 49.3  | 30.6  | 44.6  | 29.9  | 47.9  | 32.7  |
| LOS                  | D     | C     | D     | C     | D     | C     | D     | C     |
| Approach Delay       |       | 29.2  |       | 33.6  |       | 33.2  |       | 35.1  |
| Approach LOS         |       | C     |       | C     |       | C     |       | D     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 87.6  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.66  
 Intersection Signal Delay: 32.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 68.8%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 2: Kitching St. & Krameria Av.





HCM 6th Signalized Intersection Summary  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 116  | 448  | 268  | 97   | 413  | 107  | 222  | 646  | 126  | 109  | 441  | 120  |
| Future Volume (veh/h)        | 116  | 448  | 268  | 97   | 413  | 107  | 222  | 646  | 126  | 109  | 441  | 120  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 0.99 | 1.00 |      | 0.98 | 1.00 |      | 1.00 | 1.00 |      | 0.98 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1945 | 1945 | 1870 | 1945 | 1945 | 1945 | 1945 | 1945 | 1945 | 1945 | 1945 |
| Adj Flow Rate, veh/h         | 120  | 462  | 270  | 100  | 426  | 92   | 229  | 666  | 124  | 112  | 455  | 88   |
| Peak Hour Factor             | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 169  | 677  | 393  | 144  | 870  | 186  | 293  | 979  | 182  | 161  | 746  | 143  |
| Arrive On Green              | 0.09 | 0.29 | 0.27 | 0.08 | 0.28 | 0.26 | 0.16 | 0.31 | 0.28 | 0.09 | 0.24 | 0.21 |
| Sat Flow, veh/h              | 1781 | 2295 | 1332 | 1781 | 3097 | 663  | 1853 | 3190 | 593  | 1853 | 3160 | 606  |
| Grp Volume(v), veh/h         | 120  | 391  | 341  | 100  | 266  | 252  | 229  | 406  | 384  | 112  | 279  | 264  |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1945 | 1682 | 1781 | 1945 | 1814 | 1853 | 1945 | 1838 | 1853 | 1945 | 1821 |
| Q Serve(g_s), s              | 4.5  | 12.3 | 12.6 | 3.8  | 7.9  | 8.1  | 8.3  | 12.7 | 12.8 | 4.1  | 8.9  | 9.1  |
| Cycle Q Clear(g_c), s        | 4.5  | 12.3 | 12.6 | 3.8  | 7.9  | 8.1  | 8.3  | 12.7 | 12.8 | 4.1  | 8.9  | 9.1  |
| Prop In Lane                 | 1.00 |      | 0.79 | 1.00 |      | 0.37 | 1.00 |      | 0.32 | 1.00 |      | 0.33 |
| Lane Grp Cap(c), veh/h       | 169  | 574  | 496  | 144  | 546  | 510  | 293  | 597  | 564  | 161  | 459  | 430  |
| V/C Ratio(X)                 | 0.71 | 0.68 | 0.69 | 0.70 | 0.49 | 0.49 | 0.78 | 0.68 | 0.68 | 0.69 | 0.61 | 0.61 |
| Avail Cap(c_a), veh/h        | 436  | 1008 | 871  | 359  | 924  | 862  | 693  | 1064 | 1005 | 427  | 784  | 734  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 30.5 | 21.6 | 22.2 | 31.1 | 20.8 | 21.1 | 28.1 | 21.1 | 21.4 | 30.8 | 23.7 | 24.0 |
| Incr Delay (d2), s/veh       | 2.1  | 1.4  | 1.7  | 2.3  | 0.7  | 0.7  | 1.7  | 1.4  | 1.5  | 2.0  | 1.3  | 1.4  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.9  | 5.3  | 4.7  | 1.6  | 3.4  | 3.2  | 3.5  | 5.3  | 5.1  | 1.8  | 3.8  | 3.7  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 32.6 | 23.1 | 23.9 | 33.4 | 21.5 | 21.8 | 29.8 | 22.4 | 22.8 | 32.8 | 25.0 | 25.4 |
| LnGrp LOS                    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    | C    |
| Approach Vol, veh/h          |      | 852  |      |      | 618  |      |      | 1019 |      |      | 655  |      |
| Approach Delay, s/veh        |      | 24.7 |      |      | 23.5 |      |      | 24.3 |      |      | 26.5 |      |
| Approach LOS                 |      | C    |      |      | C    |      |      | C    |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 9.6  | 24.5 | 15.0 | 20.4 | 10.6 | 23.5 | 10.0 | 25.3 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  |      |      |      |      |
| Max Green Setting (Gmax), s  | 13.4 | 34.6 | 25.4 | 26.2 | 16.4 | 31.6 | 15.4 | 36.2 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 5.8  | 14.6 | 10.3 | 11.1 | 6.5  | 10.1 | 6.1  | 14.8 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.1  | 4.4  | 0.3  | 2.6  | 0.1  | 2.9  | 0.1  | 4.5  |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 24.7 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | C    |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

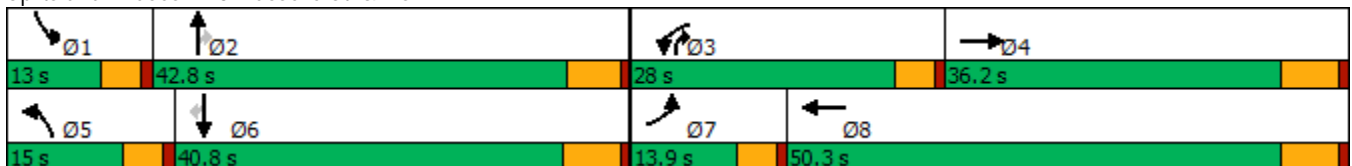


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↕↕↕   | ↔↔    | ↕↕↕   | ↔↔    | ↕↕    | ↔     | ↔↔    | ↕↕    | ↔     |
| Traffic Volume (vph) | 259   | 757   | 799   | 988   | 326   | 748   | 548   | 322   | 907   | 146   |
| Future Volume (vph)  | 259   | 757   | 799   | 988   | 326   | 748   | 548   | 322   | 907   | 146   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 13.9  | 36.2  | 28.0  | 50.3  | 15.0  | 42.8  | 28.0  | 13.0  | 40.8  | 40.8  |
| Total Split (%)      | 11.6% | 30.2% | 23.3% | 41.9% | 12.5% | 35.7% | 23.3% | 10.8% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |
| Act Effct Green (s)  | 9.9   | 32.2  | 24.0  | 46.3  | 11.0  | 38.2  | 62.2  | 9.0   | 36.2  | 36.2  |
| Actuated g/C Ratio   | 0.08  | 0.27  | 0.20  | 0.39  | 0.09  | 0.32  | 0.52  | 0.08  | 0.30  | 0.30  |
| v/c Ratio            | 0.96  | 0.90  | 1.22  | 0.71  | 1.09  | 0.70  | 0.69  | 1.31  | 0.89  | 0.27  |
| Control Delay        | 99.0  | 48.1  | 152.4 | 31.5  | 126.1 | 39.4  | 21.3  | 208.2 | 51.2  | 6.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 99.0  | 48.1  | 152.4 | 31.5  | 126.1 | 39.4  | 21.3  | 208.2 | 51.2  | 6.0   |
| LOS                  | F     | D     | F     | C     | F     | D     | C     | F     | D     | A     |
| Approach Delay       |       | 57.3  |       | 77.8  |       | 50.7  |       |       | 83.2  |       |
| Approach LOS         |       | E     |       | E     |       | D     |       |       | F     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 119.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.31  
 Intersection Signal Delay: 67.7  
 Intersection LOS: E  
 Intersection Capacity Utilization 96.2%  
 ICU Level of Service F  
 Analysis Period (min) 15

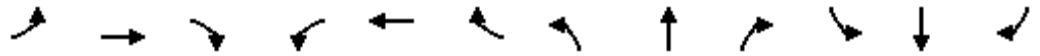
Splits and Phases: 3: Lasselle St. & Iris Av.



HCM 6th Signalized Intersection Summary  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018



| Movement                     | EBL  | EBT   | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|------------------------------|------|-------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations          | ↔↔   | ↑↑↔   |      | ↔↔    | ↑↑↔  |      | ↔↔    | ↑↑   | ↔    | ↔↔    | ↑↑   | ↔    |
| Traffic Volume (veh/h)       | 259  | 757   | 413  | 799   | 988  | 298  | 326   | 748  | 548  | 322   | 907  | 146  |
| Future Volume (veh/h)        | 259  | 757   | 413  | 799   | 988  | 298  | 326   | 748  | 548  | 322   | 907  | 146  |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0     | 0    | 0    | 0     | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 0.98 | 1.00  |      | 0.95 | 1.00  |      | 0.96 | 1.00  |      | 0.97 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach        |      | No    |      |       | No   |      |       | No   |      |       | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 273  | 797   | 348  | 841   | 1040 | 286  | 343   | 787  | 374  | 339   | 955  | 102  |
| Peak Hour Factor             | 0.95 | 0.95  | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2     | 2    | 2    | 2     | 2    | 2    | 2     | 2    | 2    |
| Cap, veh/h                   | 287  | 931   | 403  | 697   | 1521 | 418  | 319   | 1125 | 788  | 261   | 1077 | 464  |
| Arrive On Green              | 0.08 | 0.27  | 0.25 | 0.20  | 0.39 | 0.37 | 0.09  | 0.32 | 0.31 | 0.08  | 0.30 | 0.30 |
| Sat Flow, veh/h              | 3456 | 3468  | 1503 | 3456  | 3933 | 1081 | 3456  | 3554 | 1527 | 3456  | 3554 | 1531 |
| Grp Volume(v), veh/h         | 273  | 782   | 363  | 841   | 900  | 426  | 343   | 787  | 374  | 339   | 955  | 102  |
| Grp Sat Flow(s),veh/h/ln     | 1728 | 1702  | 1567 | 1728  | 1702 | 1610 | 1728  | 1777 | 1527 | 1728  | 1777 | 1531 |
| Q Serve(g_s), s              | 9.4  | 26.0  | 26.3 | 24.0  | 26.2 | 26.5 | 11.0  | 23.1 | 19.0 | 9.0   | 30.5 | 5.9  |
| Cycle Q Clear(g_c), s        | 9.4  | 26.0  | 26.3 | 24.0  | 26.2 | 26.5 | 11.0  | 23.1 | 19.0 | 9.0   | 30.5 | 5.9  |
| Prop In Lane                 | 1.00 |       | 0.96 | 1.00  |      | 0.67 | 1.00  |      | 1.00 | 1.00  |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 287  | 914   | 421  | 697   | 1317 | 623  | 319   | 1125 | 788  | 261   | 1077 | 464  |
| V/C Ratio(X)                 | 0.95 | 0.86  | 0.86 | 1.21  | 0.68 | 0.68 | 1.07  | 0.70 | 0.47 | 1.30  | 0.89 | 0.22 |
| Avail Cap(c_a), veh/h        | 287  | 921   | 424  | 697   | 1324 | 626  | 319   | 1159 | 802  | 261   | 1099 | 473  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 54.3 | 41.4  | 42.5 | 47.5  | 30.4 | 31.1 | 54.0  | 35.7 | 19.1 | 55.0  | 39.5 | 31.0 |
| Incr Delay (d2), s/veh       | 39.3 | 8.0   | 16.4 | 106.3 | 1.5  | 3.1  | 71.4  | 1.8  | 0.4  | 159.1 | 8.8  | 0.2  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 5.5  | 11.4  | 11.7 | 20.1  | 10.3 | 10.3 | 7.8   | 9.9  | 6.3  | 9.6   | 13.9 | 2.1  |
| Unsig. Movement Delay, s/veh |      |       |      |       |      |      |       |      |      |       |      |      |
| LnGrp Delay(d),s/veh         | 93.6 | 49.3  | 58.9 | 153.8 | 31.9 | 34.2 | 125.4 | 37.5 | 19.5 | 214.1 | 48.4 | 31.2 |
| LnGrp LOS                    | F    | D     | E    | F     | C    | C    | F     | D    | B    | F     | D    | C    |
| Approach Vol, veh/h          |      | 1418  |      |       | 2167 |      |       | 1504 |      |       | 1396 |      |
| Approach Delay, s/veh        |      | 60.3  |      |       | 79.6 |      |       | 53.1 |      |       | 87.3 |      |
| Approach LOS                 |      | E     |      |       | E    |      |       | D    |      |       | F    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4     | 5    | 6    | 7     | 8    |      |       |      |      |
| Phs Duration (G+Y+Rc), s     | 13.0 | 42.1  | 28.0 | 35.9  | 15.0 | 40.1 | 13.9  | 50.0 |      |       |      |      |
| Change Period (Y+Rc), s      | 4.6  | * 6.2 | 4.6  | 6.2   | 4.6  | 6.2  | 4.6   | 6.2  |      |       |      |      |
| Max Green Setting (Gmax), s  | 8.4  | * 37  | 23.4 | 30.0  | 10.4 | 34.6 | 9.3   | 44.1 |      |       |      |      |
| Max Q Clear Time (g_c+I1), s | 11.0 | 25.1  | 26.0 | 28.3  | 13.0 | 32.5 | 11.4  | 28.5 |      |       |      |      |
| Green Ext Time (p_c), s      | 0.0  | 5.0   | 0.0  | 1.1   | 0.0  | 1.3  | 0.0   | 7.4  |      |       |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 70.9 |
| HCM 6th LOS        | E    |

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC  
4: Lasselle St. & Cahuillia Dr.

Continental Villages (JN 11575)

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Intersection

Int Delay, s/veh 0.7

| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      |      | ↗    | ↕    | ↗    |      | ↕    |
| Traffic Vol, veh/h       | 0    | 132  | 1080 | 91   | 0    | 1525 |
| Future Vol, veh/h        | 0    | 132  | 1080 | 91   | 0    | 1525 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 2    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 136  | 1113 | 94   | 0    | 1572 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 559    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 472    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | -      | 471    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 15.7 | 0  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 471   |
| HCM Lane V/C Ratio    | -   | -        | 0.289 |
| HCM Control Delay (s) | -   | -        | 15.7  |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 1.2   |



Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

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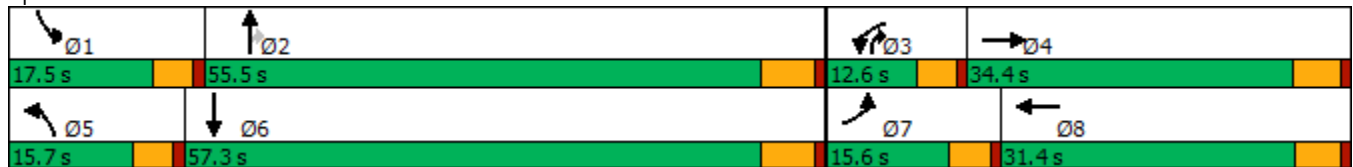


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕     | ↗     | ↖     | ↕     |
| Traffic Volume (vph) | 286   | 74    | 108   | 55    | 150   | 1072  | 84    | 136   | 1298  |
| Future Volume (vph)  | 286   | 74    | 108   | 55    | 150   | 1072  | 84    | 136   | 1298  |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 15.6  | 34.4  | 12.6  | 31.4  | 15.7  | 55.5  | 12.6  | 17.5  | 57.3  |
| Total Split (%)      | 13.0% | 28.7% | 10.5% | 26.2% | 13.1% | 46.3% | 10.5% | 14.6% | 47.8% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|--|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations  |      |      |      |      |      |      |      |       |      |      |      |      |
| Traffic Volume (veh/h)   | 286  | 74   | 225  | 108  | 55   | 64   | 150  | 1072  | 84   | 136  | 1298 | 200  |
| Future Volume (veh/h)  | 286  | 74   | 225  | 108  | 55   | 64   | 150  | 1072  | 84   | 136  | 1298 | 200  |
| Initial Q (Qb), veh  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |      | 1.00 | 1.00 |      | 0.98 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  |      | No   |      |      | No   |      |      | No    |      |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 301  | 78   | 142  | 114  | 58   | 34   | 158  | 1128  | 68   | 143  | 1366 | 199  |
| Peak Hour Factor   | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 384  | 256  | 229  | 151  | 255  | 137  | 198  | 1806  | 920  | 183  | 1557 | 225  |
| Arrive On Green  | 0.11 | 0.14 | 0.13 | 0.09 | 0.12 | 0.10 | 0.11 | 0.51  | 0.50 | 0.10 | 0.50 | 0.48 |
| Sat Flow, veh/h  | 3456 | 1777 | 1585 | 1781 | 2216 | 1189 | 1781 | 3554  | 1582 | 1781 | 3116 | 450  |
| Grp Volume(v), veh/h   | 301  | 78   | 142  | 114  | 45   | 47   | 158  | 1128  | 68   | 143  | 773  | 792  |
| Grp Sat Flow(s),veh/h/ln   | 1728 | 1777 | 1585 | 1781 | 1777 | 1628 | 1781 | 1777  | 1582 | 1781 | 1777 | 1789 |
| Q Serve(g_s), s  | 8.5  | 3.9  | 8.5  | 6.3  | 2.3  | 2.6  | 8.7  | 22.9  | 1.9  | 7.8  | 38.6 | 39.8 |
| Cycle Q Clear(g_c), s  | 8.5  | 3.9  | 8.5  | 6.3  | 2.3  | 2.6  | 8.7  | 22.9  | 1.9  | 7.8  | 38.6 | 39.8 |
| Prop In Lane   | 1.00 |      | 1.00 | 1.00 |      | 0.73 | 1.00 |       | 1.00 | 1.00 |      | 0.25 |
| Lane Grp Cap(c), veh/h   | 384  | 256  | 229  | 151  | 205  | 188  | 198  | 1806  | 920  | 183  | 888  | 894  |
| V/C Ratio(X)   | 0.78 | 0.30 | 0.62 | 0.75 | 0.22 | 0.25 | 0.80 | 0.62  | 0.07 | 0.78 | 0.87 | 0.89 |
| Avail Cap(c_a), veh/h  | 400  | 539  | 481  | 153  | 486  | 445  | 208  | 1826  | 929  | 240  | 945  | 952  |
| HCM Platoon Ratio  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 43.4 | 38.4 | 41.0 | 44.8 | 40.3 | 40.8 | 43.4 | 17.8  | 9.2  | 43.8 | 22.2 | 22.7 |
| Incr Delay (d2), s/veh   | 8.5  | 0.7  | 2.7  | 16.7 | 0.5  | 0.7  | 16.8 | 0.7   | 0.0  | 8.3  | 8.5  | 9.6  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 4.0  | 1.7  | 3.4  | 3.4  | 1.0  | 1.1  | 4.6  | 8.5   | 0.6  | 3.7  | 16.3 | 17.2 |
| Unsig. Movement Delay, s/veh   |      |      |      |      |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh   | 51.9 | 39.0 | 43.7 | 61.5 | 40.8 | 41.4 | 60.3 | 18.4  | 9.2  | 52.1 | 30.7 | 32.3 |
| LnGrp LOS  | D    | D    | D    | E    | D    | D    | E    | B     | A    | D    | C    | C    |
| Approach Vol, veh/h  |      | 521  |      |      | 206  |      |      | 1354  |      |      | 1708 |      |
| Approach Delay, s/veh  |      | 47.7 |      |      | 52.4 |      |      | 22.8  |      |      | 33.3 |      |
| Approach LOS   |      | D    |      |      | D    |      |      | C     |      |      | C    |      |
| Timer - Assigned Phs   | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 14.3 | 54.9 | 12.5 | 18.5 | 15.1 | 54.1 | 15.1 | 15.8  |      |      |      |      |
| Change Period (Y+Rc), s  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | * 5.4 |      |      |      |      |
| Max Green Setting (Gmax), s  | 12.9 | 49.7 | 8.0  | 29.0 | 11.1 | 51.5 | 11.0 | * 26  |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 9.8  | 24.9 | 8.3  | 10.5 | 10.7 | 41.8 | 10.5 | 4.6   |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0  | 8.5  | 0.0  | 1.1  | 0.0  | 6.4  | 0.0  | 0.4   |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |       |      |      |      |      |
| HCM 6th Ctrl Delay   |      |      |      | 32.6 |      |      |      |       |      |      |      |      |
| HCM 6th LOS  |      |      |      | C    |      |      |      |       |      |      |      |      |
| <b>Notes</b>   |      |      |      |      |      |      |      |       |      |      |      |      |
| User approved pedestrian interval to be less than phase max green.                                 |      |      |      |      |      |      |      |       |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |      |      |      |      |      |      |       |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

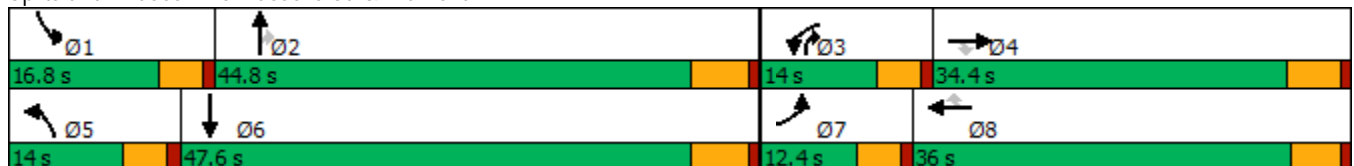
10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 286   | 74    | 225   | 108   | 55    | 64    | 150   | 1072  | 84    | 136   | 1298  |
| Future Volume (vph)  | 286   | 74    | 225   | 108   | 55    | 64    | 150   | 1072  | 84    | 136   | 1298  |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 12.4  | 34.4  | 34.4  | 14.0  | 36.0  | 36.0  | 14.0  | 44.8  | 14.0  | 16.8  | 47.6  |
| Total Split (%)      | 11.3% | 31.3% | 31.3% | 12.7% | 32.7% | 32.7% | 12.7% | 40.7% | 12.7% | 15.3% | 43.3% |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |
| Act Effect Green (s) | 11.5  | 14.8  | 13.4  | 9.4   | 16.0  | 14.9  | 10.1  | 42.5  | 52.0  | 11.4  | 43.9  |
| Actuated g/C Ratio   | 0.12  | 0.16  | 0.14  | 0.10  | 0.17  | 0.16  | 0.11  | 0.45  | 0.55  | 0.12  | 0.47  |
| v/c Ratio            | 1.39  | 0.27  | 0.58  | 0.65  | 0.18  | 0.19  | 0.84  | 0.71  | 0.10  | 0.67  | 0.97  |
| Control Delay        | 239.4 | 36.6  | 12.3  | 60.0  | 33.8  | 2.0   | 77.9  | 25.5  | 4.1   | 56.8  | 43.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 239.4 | 36.6  | 12.3  | 60.0  | 33.8  | 2.0   | 77.9  | 25.5  | 4.1   | 56.8  | 43.0  |
| LOS                  | F     | D     | B     | E     | C     | A     | E     | C     | A     | E     | D     |
| Approach Delay       |       | 126.4 |       |       | 37.4  |       |       | 30.2  |       |       | 44.1  |
| Approach LOS         |       | F     |       |       | D     |       |       | C     |       |       | D     |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 94.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.39  
 Intersection Signal Delay: 51.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 83.1%  
 ICU Level of Service E  
 Analysis Period (min) 15

























Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

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|  |  |  |  |  |  |   |   |  |  |  |  |  |
|--|---|---|---|---|---|--|---|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)   | 286   | 74  | 225   | 108   | 55  | 64   | 150   | 1072  | 84  | 136   | 1298  | 200   |
| Future Volume (veh/h)  | 286   | 74  | 225   | 108   | 55  | 64   | 150   | 1072  | 84  | 136   | 1298  | 200   |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 1.00  | 1.00  |   | 0.98   | 1.00  |   | 1.00  | 1.00  |   | 1.00  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |  |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 301   | 78  | 142   | 114   | 58  | 34   | 158   | 1128  | 68  | 143   | 1366  | 199   |
| Peak Hour Factor   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2  | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 168   | 262   | 197   | 155   | 241   | 181  | 200   | 1737  | 889   | 187   | 1501  | 217   |
| Arrive On Green  | 0.09  | 0.14  | 0.12  | 0.09  | 0.13  | 0.12   | 0.11  | 0.49  | 0.48  | 0.10  | 0.48  | 0.46  |
| Sat Flow, veh/h  | 1781  | 1870  | 1585  | 1781  | 1870  | 1555   | 1781  | 3554  | 1580  | 1781  | 3116  | 450   |
| Grp Volume(v), veh/h   | 301   | 78  | 142   | 114   | 58  | 34   | 158   | 1128  | 68  | 143   | 774   | 791   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1585  | 1781  | 1870  | 1555   | 1781  | 1777  | 1580  | 1781  | 1777  | 1789  |
| Q Serve(g_s), s  | 8.4   | 3.3   | 7.7   | 5.6   | 2.5   | 1.8  | 7.7   | 21.2  | 1.8   | 7.0   | 35.6  | 36.7  |
| Cycle Q Clear(g_c), s  | 8.4   | 3.3   | 7.7   | 5.6   | 2.5   | 1.8  | 7.7   | 21.2  | 1.8   | 7.0   | 35.6  | 36.7  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 1.00   | 1.00  |   | 1.00  | 1.00  |   | 0.25  |
| Lane Grp Cap(c), veh/h   | 168   | 262   | 197   | 155   | 241   | 181  | 200   | 1737  | 889   | 187   | 856   | 862   |
| V/C Ratio(X)   | 1.79  | 0.30  | 0.72  | 0.74  | 0.24  | 0.19   | 0.79  | 0.65  | 0.08  | 0.77  | 0.90  | 0.92  |
| Avail Cap(c_a), veh/h  | 168   | 638   | 516   | 200   | 672   | 539  | 200   | 1737  | 889   | 256   | 869   | 875   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 40.4  | 34.4  | 37.5  | 39.7  | 34.9  | 35.5   | 38.5  | 17.1  | 8.9   | 38.8  | 21.2  | 21.7  |
| Incr Delay (d2), s/veh   | 379.5   | 0.6   | 4.9   | 6.5   | 0.5   | 0.5  | 17.6  | 0.9   | 0.0   | 5.6   | 12.7  | 14.4  |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 21.2  | 1.5   | 3.2   | 2.7   | 1.1   | 0.7  | 4.2   | 7.7   | 0.6   | 3.2   | 15.7  | 16.7  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |  |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 419.9   | 35.0  | 42.5  | 46.2  | 35.4  | 36.0   | 56.1  | 17.9  | 9.0   | 44.4  | 33.9  | 36.1  |
| LnGrp LOS  | F   | D   | D   | D   | D   | D  | E   | B   | A   | D   | C   | D   |
| Approach Vol, veh/h  |   | 521   |   |   | 206   |  |   | 1354  |   |   | 1708  |   |
| Approach Delay, s/veh  |   | 259.4   |   |   | 41.5  |  |   | 21.9  |   |   | 35.8  |   |
| Approach LOS   |   | F   |   |   | D   |  |   | C   |   |   | D   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6  | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 13.4  | 47.6  | 11.7  | 16.5  | 14.0  | 46.9   | 12.4  | 15.8  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8  | 4.6   | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 12.2  | 39.0  | 9.4   | 29.0  | 9.4   | 41.8   | 7.8   | * 31  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 9.0   | 23.2  | 7.6   | 9.7   | 9.7   | 38.7   | 10.4  | 4.5   |   |   |   |   |
| Green Ext Time (p_c), s  | 0.0   | 6.9   | 0.0   | 0.7   | 0.0   | 2.4  | 0.0   | 0.3   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |  |   |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   | 61.9  |   |   |  |   |   |   |   |   |   |
| HCM 6th LOS  |   |   | E   |   |   |  |   |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |  |   |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |  |   |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |  |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

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| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↖↗   |      | ↖    | ↖↗   |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 24   | 177  | 92   | 6    | 167  | 0    | 53   | 0    | 12   | 0    | 0    | 0    |
| Future Vol, veh/h        | 24   | 177  | 92   | 6    | 167  | 0    | 53   | 0    | 12   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 28   | 203  | 106  | 7    | 192  | 0    | 61   | 0    | 14   | 0    | 0    | 0    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |      | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 192    | 0 | 0 | 312    | 0 | 0 | 425    | 521  | 158  | 364    | 574  | 96   |
| Stage 1              | -      | - | - | -      | - | - | 315    | 315  | -    | 206    | 206  | -    |
| Stage 2              | -      | - | - | -      | - | - | 110    | 206  | -    | 158    | 368  | -    |
| Critical Hdwy        | 4.14   | - | - | 4.14   | - | - | 5      | 6.54 | 5    | 5      | 6.54 | 5    |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 5      | 5.54 | -    | 6.54   | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 5      | 5.54 | -    | 6.54   | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | - | - | 2.22   | - | - | 3.52   | 4.02 | 3.32 | 3.52   | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 1379   | - | - | 1245   | - | - | 693    | 458  | 936  | 733    | 428  | 992  |
| Stage 1              | -      | - | - | -      | - | - | 767    | 654  | -    | 777    | 730  | -    |
| Stage 2              | -      | - | - | -      | - | - | 926    | 730  | -    | 828    | 620  | -    |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -    | -    | -      | -    | -    |
| Mov Cap-1 Maneuver   | 1379   | - | - | 1241   | - | - | 677    | 445  | 933  | 708    | 416  | 992  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 705    | 560  | -    | 712    | 537  | -    |
| Stage 1              | -      | - | - | -      | - | - | 749    | 639  | -    | 761    | 726  | -    |
| Stage 2              | -      | - | - | -      | - | - | 921    | 726  | -    | 799    | 606  | -    |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|----|--|--|
| HCM Control Delay, s | 0.6 |  |  | 0.3 |  |  | 10.4 |  |  | 0  |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | A  |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 738   | 1379 | -   | -   | 1241  | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.101 | 0.02 | -   | -   | 0.006 | -   | -   | -     |
| HCM Control Delay (s) | 10.4  | 7.7  | -   | -   | 7.9   | -   | -   | 0     |
| HCM Lane LOS          | B     | A    | -   | -   | A     | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.3   | 0.1  | -   | -   | 0     | -   | -   | -     |



HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

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| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.8  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↗    |      | ↖    | ↗    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 24   | 177  | 92   | 6    | 167  | 0    | 53   | 0    | 12   | 0    | 0    | 0    |
| Future Vol, veh/h        | 24   | 177  | 92   | 6    | 167  | 0    | 53   | 0    | 12   | 0    | 0    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 28   | 203  | 106  | 7    | 192  | 0    | 61   | 0    | 14   | 0    | 0    | 0    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 192    | 0 | 0 | 312    | 0 | 0 | 521    | 521   | 259   | 525    | 574   | 192   |
| Stage 1              | -      | - | - | -      | - | - | 315    | 315   | -     | 206    | 206   | -     |
| Stage 2              | -      | - | - | -      | - | - | 206    | 206   | -     | 319    | 368   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 5      | 6.52  | 5     | 5      | 6.52  | 5     |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1381   | - | - | 1248   | - | - | 633    | 460   | 851   | 631    | 429   | 907   |
| Stage 1              | -      | - | - | -      | - | - | 696    | 656   | -     | 796    | 731   | -     |
| Stage 2              | -      | - | - | -      | - | - | 796    | 731   | -     | 693    | 621   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1381   | - | - | 1244   | - | - | 619    | 447   | 849   | 608    | 417   | 907   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 639    | 562   | -     | 624    | 538   | -     |
| Stage 1              | -      | - | - | -      | - | - | 680    | 641   | -     | 780    | 727   | -     |
| Stage 2              | -      | - | - | -      | - | - | 792    | 727   | -     | 668    | 607   | -     |

| Approach             | EB  | WB  | NB | SB |
|----------------------|-----|-----|----|----|
| HCM Control Delay, s | 0.6 | 0.3 | 11 | 0  |
| HCM LOS              |     |     | B  | A  |

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 670   | 1381 | -   | -   | 1244  | -   | -   | -     |
| HCM Lane V/C Ratio    | 0.112 | 0.02 | -   | -   | 0.006 | -   | -   | -     |
| HCM Control Delay (s) | 11    | 7.7  | -   | -   | 7.9   | -   | -   | 0     |
| HCM Lane LOS          | B     | A    | -   | -   | A     | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.4   | 0.1  | -   | -   | 0     | -   | -   | -     |

HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 7    | 0    | 9    | 0    | 0    | 0    | 2    | 132  | 0    | 1    | 164  | 15   |
| Future Vol, veh/h        | 7    | 0    | 9    | 0    | 0    | 0    | 2    | 132  | 0    | 1    | 164  | 15   |
| Conflicting Peds, #/hr   | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 6    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 9    | 0    | 11   | 0    | 0    | 0    | 2    | 163  | 0    | 1    | 202  | 19   |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 387    | 389   | 219    | 389   | 398    | 165   | 227    | 0 | 0 | 165   | 0 | 0 |
| Stage 1              | 220    | 220   | -      | 169   | 169    | -     | -      | - | - | -     | - | - |
| Stage 2              | 167    | 169   | -      | 220   | 229    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 572    | 546   | 821    | 570   | 540    | 879   | 1341   | - | - | 1413  | - | - |
| Stage 1              | 782    | 721   | -      | 833   | 759    | -     | -      | - | - | -     | - | - |
| Stage 2              | 835    | 759   | -      | 782   | 715    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 568    | 540   | 816    | 560   | 534    | 877   | 1333   | - | - | 1410  | - | - |
| Mov Cap-2 Maneuver   | 625    | 581   | -      | 619   | 577    | -     | -      | - | - | -     | - | - |
| Stage 1              | 777    | 716   | -      | 831   | 756    | -     | -      | - | - | -     | - | - |
| Stage 2              | 834    | 756   | -      | 770   | 710    | -     | -      | - | - | -     | - | - |

| Approach             | EB   |  | WB |  | NB  |  | SB |  |
|----------------------|------|--|----|--|-----|--|----|--|
| HCM Control Delay, s | 10.1 |  | 0  |  | 0.1 |  | 0  |  |
| HCM LOS              | B    |  | A  |  |     |  |    |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-----|-----|
| Capacity (veh/h)      | 1333  | -   | -   | 720        | 1410  | -   | -   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | 0.027      | 0.001 | -   | -   |
| HCM Control Delay (s) | 7.7   | -   | -   | 10.1       | 0     | 7.6 | -   |
| HCM Lane LOS          | A     | -   | -   | B          | A     | A   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.1        | 0     | -   | -   |

**APPENDIX 7.2:**

**HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS  
ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

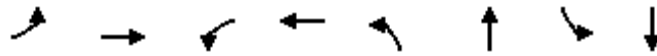
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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

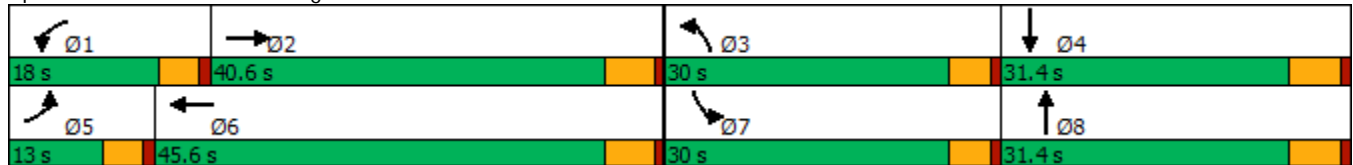


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 102   | 643   | 196   | 754   | 264   | 505   | 336   | 600   |
| Future Volume (vph)  | 102   | 643   | 196   | 754   | 264   | 505   | 336   | 600   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 13.0  | 40.6  | 18.0  | 45.6  | 30.0  | 31.4  | 30.0  | 31.4  |
| Total Split (%)      | 10.8% | 33.8% | 15.0% | 38.0% | 25.0% | 26.2% | 25.0% | 26.2% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 118.6  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Kitching St. & Krameria Av.


























HCM 6th Signalized Intersection Summary  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

|                              |  |  |  |  |  |  |   |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |   |  |  |   |  |  |   |  |  |  |
| Traffic Volume (veh/h)       | 102   | 643   | 254   | 196   | 754   | 241   | 264   | 505   | 275   | 336   | 600   | 122   |
| Future Volume (veh/h)        | 102   | 643   | 254   | 196   | 754   | 241   | 264   | 505   | 275   | 336   | 600   | 122   |
| Initial Q (Qb), veh          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)          | 1.00  |   | 0.96  | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00  |   | 0.97  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach        |   | No  |   |   | No  |   |   | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 116   | 731   | 158   | 223   | 857   | 110   | 300   | 574   | 171   | 382   | 682   | 53  |
| Peak Hour Factor             | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  | 0.88  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 138   | 841   | 182   | 214   | 1063  | 136   | 334   | 646   | 192   | 398   | 925   | 72  |
| Arrive On Green              | 0.10  | 0.36  | 0.34  | 0.15  | 0.41  | 0.39  | 0.23  | 0.29  | 0.27  | 0.28  | 0.34  | 0.32  |
| Sat Flow, veh/h              | 1781  | 2958  | 639   | 1781  | 3247  | 417   | 1781  | 2756  | 818   | 1781  | 3418  | 265   |
| Grp Volume(v), veh/h         | 116   | 462   | 427   | 223   | 494   | 473   | 300   | 389   | 356   | 382   | 373   | 362   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1870  | 1727  | 1781  | 1870  | 1793  | 1781  | 1870  | 1704  | 1781  | 1870  | 1813  |
| Q Serve(g_s), s              | 7.4   | 26.8  | 26.9  | 14.0  | 27.1  | 27.1  | 19.0  | 23.1  | 23.3  | 24.6  | 20.4  | 20.5  |
| Cycle Q Clear(g_c), s        | 7.4   | 26.8  | 26.9  | 14.0  | 27.1  | 27.1  | 19.0  | 23.1  | 23.3  | 24.6  | 20.4  | 20.5  |
| Prop In Lane                 | 1.00  |   | 0.37  | 1.00  |   | 0.23  | 1.00  |   | 0.48  | 1.00  |   | 0.15  |
| Lane Grp Cap(c), veh/h       | 138   | 532   | 491   | 214   | 612   | 587   | 334   | 438   | 399   | 398   | 506   | 490   |
| V/C Ratio(X)                 | 0.84  | 0.87  | 0.87  | 1.04  | 0.81  | 0.81  | 0.90  | 0.89  | 0.89  | 0.96  | 0.74  | 0.74  |
| Avail Cap(c_a), veh/h        | 138   | 589   | 543   | 214   | 669   | 641   | 398   | 441   | 401   | 398   | 506   | 490   |
| HCM Platoon Ratio            | 1.25  | 1.25  | 1.25  | 1.25  | 1.25  | 1.25  | 1.25  | 1.25  | 1.25  | 1.25  | 1.25  | 1.25  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 51.8  | 35.5  | 35.8  | 49.4  | 31.1  | 31.3  | 43.5  | 39.7  | 40.3  | 41.4  | 34.9  | 35.0  |
| Incr Delay (d2), s/veh       | 33.5  | 12.3  | 13.2  | 72.4  | 6.7   | 7.0   | 18.6  | 19.2  | 21.3  | 34.3  | 5.6   | 5.8   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 4.5   | 12.9  | 12.2  | 10.2  | 12.1  | 11.7  | 9.4   | 12.0  | 11.3  | 13.6  | 9.2   | 9.0   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |   |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 85.3  | 47.8  | 49.1  | 121.8   | 37.8  | 38.3  | 62.1  | 58.9  | 61.6  | 75.7  | 40.5  | 40.9  |
| LnGrp LOS                    | F   | D   | D   | F   | D   | D   | E   | E   | E   | E   | D   | D   |
| Approach Vol, veh/h          |   | 1005  |   |   | 1190  |   |   | 1045  |   |   | 1117  |   |
| Approach Delay, s/veh        |   | 52.7  |   |   | 53.7  |   |   | 60.7  |   |   | 52.6  |   |
| Approach LOS                 |   | D   |   |   | D   |   |   | E   |   |   | D   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 18.0  | 37.1  | 25.8  | 35.5  | 13.0  | 42.1  | 30.0  | 31.2  |   |   |   |   |
| Change Period (Y+Rc), s      | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   |   |   |   |   |
| Max Green Setting (Gmax), s  | 13.4  | 35.2  | 25.4  | 25.6  | 8.4   | 40.2  | 25.4  | 25.6  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 16.0  | 28.9  | 21.0  | 22.5  | 9.4   | 29.1  | 26.6  | 25.3  |   |   |   |   |
| Green Ext Time (p_c), s      | 0.0   | 2.8   | 0.2   | 1.2   | 0.0   | 4.4   | 0.0   | 0.1   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |   |   |   |   |   |   |
| HCM 6th Ctrl Delay           |   |   |   | 54.9  |   |   |   |   |   |   |   |   |
| HCM 6th LOS                  |   |   |   | D   |   |   |   |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
3: Lasselie St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

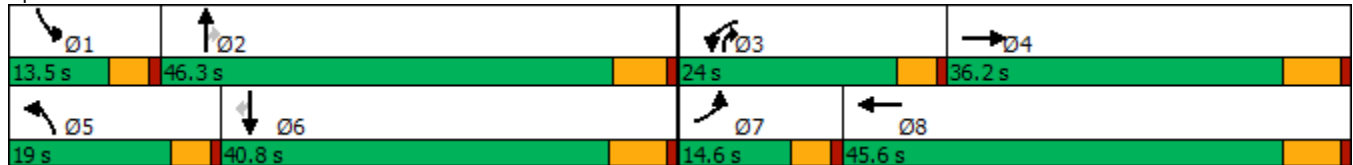


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↑↑↓   | ↖↗    | ↑↑↓   | ↖↗    | ↑↑    | ↖     | ↖↗    | ↑↑    | ↖     |
| Traffic Volume (vph) | 184   | 681   | 689   | 908   | 492   | 808   | 657   | 303   | 826   | 156   |
| Future Volume (vph)  | 184   | 681   | 689   | 908   | 492   | 808   | 657   | 303   | 826   | 156   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 14.6  | 36.2  | 24.0  | 45.6  | 19.0  | 46.3  | 24.0  | 13.5  | 40.8  | 40.8  |
| Total Split (%)      | 12.2% | 30.2% | 20.0% | 38.0% | 15.8% | 38.6% | 20.0% | 11.3% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 119.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

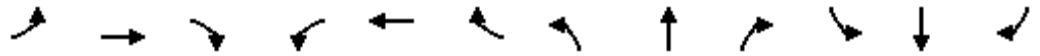
Splits and Phases: 3: Lasselie St. & Iris Av.



HCM 6th Signalized Intersection Summary  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018



| Movement                     | EBL  | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|------------------------------|------|-------|------|-------|-------|------|-------|------|------|-------|------|------|
| Lane Configurations          | ↔↔   | ↑↑↔   |      | ↔↔    | ↑↑↔   |      | ↔↔    | ↑↑   | ↔    | ↔↔    | ↑↑   | ↔    |
| Traffic Volume (veh/h)       | 184  | 681   | 434  | 689   | 908   | 178  | 492   | 808  | 657  | 303   | 826  | 156  |
| Future Volume (veh/h)        | 184  | 681   | 434  | 689   | 908   | 178  | 492   | 808  | 657  | 303   | 826  | 156  |
| Initial Q (Qb), veh          | 0    | 0     | 0    | 0     | 0     | 0    | 0     | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |       | 1.00 | 1.00  |       | 0.98 | 1.00  |      | 0.98 | 1.00  |      | 0.95 |
| Parking Bus, Adj             | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach        |      | No    |      |       | No    |      |       | No   |      |       | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870  | 1870 | 1870  | 1870  | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 207  | 765   | 340  | 774   | 1020  | 157  | 553   | 908  | 509  | 340   | 928  | 115  |
| Peak Hour Factor             | 0.89 | 0.89  | 0.89 | 0.89  | 0.89  | 0.89 | 0.89  | 0.89 | 0.89 | 0.89  | 0.89 | 0.89 |
| Percent Heavy Veh, %         | 2    | 2     | 2    | 2     | 2     | 2    | 2     | 2    | 2    | 2     | 2    | 2    |
| Cap, veh/h                   | 279  | 920   | 405  | 586   | 1576  | 242  | 439   | 1229 | 790  | 278   | 1076 | 457  |
| Arrive On Green              | 0.08 | 0.27  | 0.25 | 0.17  | 0.35  | 0.34 | 0.13  | 0.35 | 0.34 | 0.08  | 0.30 | 0.30 |
| Sat Flow, veh/h              | 3456 | 3467  | 1528 | 3456  | 4455  | 684  | 3456  | 3554 | 1552 | 3456  | 3554 | 1510 |
| Grp Volume(v), veh/h         | 207  | 751   | 354  | 774   | 779   | 398  | 553   | 908  | 509  | 340   | 928  | 115  |
| Grp Sat Flow(s),veh/h/ln     | 1728 | 1702  | 1591 | 1728  | 1702  | 1735 | 1728  | 1777 | 1552 | 1728  | 1777 | 1510 |
| Q Serve(g_s), s              | 6.9  | 24.5  | 24.9 | 20.0  | 22.6  | 22.8 | 15.0  | 26.5 | 28.5 | 9.5   | 29.1 | 6.8  |
| Cycle Q Clear(g_c), s        | 6.9  | 24.5  | 24.9 | 20.0  | 22.6  | 22.8 | 15.0  | 26.5 | 28.5 | 9.5   | 29.1 | 6.8  |
| Prop In Lane                 | 1.00 |       | 0.96 | 1.00  |       | 0.39 | 1.00  |      | 1.00 | 1.00  |      | 1.00 |
| Lane Grp Cap(c), veh/h       | 279  | 903   | 422  | 586   | 1205  | 614  | 439   | 1229 | 790  | 278   | 1076 | 457  |
| V/C Ratio(X)                 | 0.74 | 0.83  | 0.84 | 1.32  | 0.65  | 0.65 | 1.26  | 0.74 | 0.64 | 1.22  | 0.86 | 0.25 |
| Avail Cap(c_a), veh/h        | 310  | 929   | 434  | 586   | 1205  | 614  | 439   | 1273 | 809  | 278   | 1108 | 471  |
| HCM Platoon Ratio            | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 53.0 | 40.9  | 42.0 | 49.0  | 32.0  | 32.4 | 51.5  | 33.9 | 21.5 | 54.3  | 38.8 | 31.1 |
| Incr Delay (d2), s/veh       | 6.7  | 6.4   | 13.3 | 156.5 | 1.2   | 2.4  | 134.0 | 2.2  | 1.7  | 127.9 | 7.0  | 0.3  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 3.2  | 10.6  | 11.0 | 21.0  | 9.0   | 9.5  | 14.5  | 11.3 | 9.8  | 8.9   | 13.0 | 2.4  |
| Unsig. Movement Delay, s/veh |      |       |      |       |       |      |       |      |      |       |      |      |
| LnGrp Delay(d),s/veh         | 59.8 | 47.2  | 55.4 | 205.6 | 33.2  | 34.8 | 185.5 | 36.2 | 23.2 | 182.2 | 45.9 | 31.4 |
| LnGrp LOS                    | E    | D     | E    | F     | C     | C    | F     | D    | C    | F     | D    | C    |
| Approach Vol, veh/h          |      | 1312  |      |       | 1951  |      |       | 1970 |      |       | 1383 |      |
| Approach Delay, s/veh        |      | 51.4  |      |       | 101.9 |      |       | 74.7 |      |       | 78.2 |      |
| Approach LOS                 |      | D     |      |       | F     |      |       | E    |      |       | E    |      |
| Timer - Assigned Phs         | 1    | 2     | 3    | 4     | 5     | 6    | 7     | 8    |      |       |      |      |
| Phs Duration (G+Y+Rc), s     | 13.5 | 45.2  | 24.0 | 35.3  | 19.0  | 39.7 | 13.5  | 45.8 |      |       |      |      |
| Change Period (Y+Rc), s      | 4.6  | * 6.2 | 4.6  | 6.2   | 4.6   | 6.2  | 4.6   | 6.2  |      |       |      |      |
| Max Green Setting (Gmax), s  | 8.9  | * 41  | 19.4 | 30.0  | 14.4  | 34.6 | 10.0  | 39.4 |      |       |      |      |
| Max Q Clear Time (g_c+I1), s | 11.5 | 30.5  | 22.0 | 26.9  | 17.0  | 31.1 | 8.9   | 24.8 |      |       |      |      |
| Green Ext Time (p_c), s      | 0.0  | 5.4   | 0.0  | 1.8   | 0.0   | 1.9  | 0.0   | 6.1  |      |       |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 78.8 |
| HCM 6th LOS        | E    |

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th TWSC  
4: Lassel St. & Cahuillia Dr.

Continental Villages (JN 11575)

10/25/2018

Intersection

Int Delay, s/veh 0.9

| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      |      | ↗    | ↕    | ↗    |      | ↕    |
| Traffic Vol, veh/h       | 0    | 107  | 1593 | 182  | 0    | 1201 |
| Future Vol, veh/h        | 0    | 107  | 1593 | 182  | 0    | 1201 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 3    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 88   | 88   | 88   | 88   | 88   | 88   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 122  | 1810 | 207  | 0    | 1365 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 908    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.6    | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 303    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | 302    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 24.7 | 0  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 302   |
| HCM Lane V/C Ratio    | -   | -        | 0.403 |
| HCM Control Delay (s) | -   | -        | 24.7  |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 1.9   |

HCM 6th TWSC  
5: Lassel St. & Driveway 1

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
| Lane Configurations      |      | ↗    | ↕    |      |      | ↕    |
| Traffic Vol, veh/h       | 0    | 37   | 1821 | 27   | 0    | 1452 |
| Future Vol, veh/h        | 0    | 37   | 1821 | 27   | 0    | 1452 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 40   | 1979 | 29   | 0    | 1578 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 1004   | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 240    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | -      | 240    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB | NB | SB |
|----------------------|----|----|----|
| HCM Control Delay, s | 23 | 0  | 0  |
| HCM LOS              | C  |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 240   |
| HCM Lane V/C Ratio    | -   | -        | 0.168 |
| HCM Control Delay (s) | -   | -        | 23    |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 0.6   |



Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

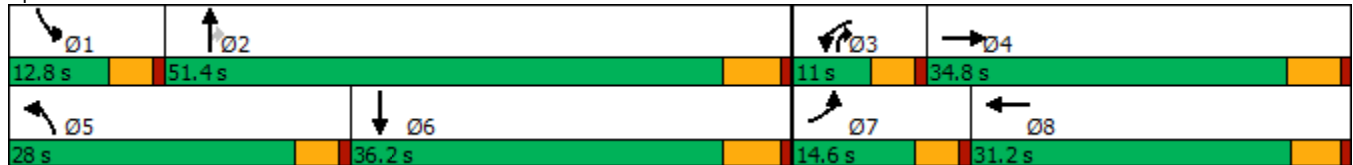


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕     | ↗     | ↖     | ↕     |
| Traffic Volume (vph) | 337   | 366   | 172   | 248   | 391   | 1293  | 288   | 232   | 971   |
| Future Volume (vph)  | 337   | 366   | 172   | 248   | 391   | 1293  | 288   | 232   | 971   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 14.6  | 34.8  | 11.0  | 31.2  | 28.0  | 51.4  | 11.0  | 12.8  | 36.2  |
| Total Split (%)      | 13.3% | 31.6% | 10.0% | 28.4% | 25.5% | 46.7% | 10.0% | 11.6% | 32.9% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 107.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR   |
|--|-------|------|------|-------|-------|------|-------|-------|------|-------|-------|-------|
| Lane Configurations  |       |      |      |       |       |      |       |       |      |       |       |       |
| Traffic Volume (veh/h)   | 337   | 366  | 403  | 172   | 248   | 107  | 391   | 1293  | 288  | 232   | 971   | 187   |
| Future Volume (veh/h)  | 337   | 366  | 403  | 172   | 248   | 107  | 391   | 1293  | 288  | 232   | 971   | 187   |
| Initial Q (Qb), veh  | 0     | 0    | 0    | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0     |
| Ped-Bike Adj(A_pbT)  | 1.00  |      | 0.99 | 1.00  |       | 0.99 | 1.00  |       | 0.99 | 1.00  |       | 0.98  |
| Parking Bus, Adj   | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |       | No   |      |       | No    |      |       | No    |      |       | No    |       |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870 | 1870 | 1870  | 1870  | 1870 | 1870  | 1870  | 1870 | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 392   | 426  | 293  | 200   | 288   | 97   | 455   | 1503  | 250  | 270   | 1129  | 190   |
| Peak Hour Factor   | 0.86  | 0.86 | 0.86 | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2     | 2    | 2    | 2     | 2     | 2    | 2     | 2     | 2    | 2     | 2     | 2     |
| Cap, veh/h   | 343   | 518  | 353  | 117   | 578   | 190  | 401   | 1580  | 781  | 147   | 916   | 154   |
| Arrive On Green  | 0.10  | 0.26 | 0.24 | 0.07  | 0.22  | 0.21 | 0.23  | 0.44  | 0.43 | 0.08  | 0.30  | 0.29  |
| Sat Flow, veh/h  | 3456  | 2013 | 1373 | 1781  | 2617  | 862  | 1781  | 3554  | 1562 | 1781  | 3034  | 508   |
| Grp Volume(v), veh/h   | 392   | 376  | 343  | 200   | 193   | 192  | 455   | 1503  | 250  | 270   | 659   | 660   |
| Grp Sat Flow(s),veh/h/ln   | 1728  | 1777 | 1609 | 1781  | 1777  | 1702 | 1781  | 1777  | 1562 | 1781  | 1777  | 1765  |
| Q Serve(g_s), s  | 10.6  | 21.2 | 21.6 | 7.0   | 10.2  | 10.6 | 24.0  | 43.4  | 10.2 | 8.8   | 32.2  | 32.2  |
| Cycle Q Clear(g_c), s  | 10.6  | 21.2 | 21.6 | 7.0   | 10.2  | 10.6 | 24.0  | 43.4  | 10.2 | 8.8   | 32.2  | 32.2  |
| Prop In Lane   | 1.00  |      | 0.85 | 1.00  |       | 0.51 | 1.00  |       | 1.00 | 1.00  |       | 0.29  |
| Lane Grp Cap(c), veh/h   | 343   | 457  | 414  | 117   | 392   | 376  | 401   | 1580  | 781  | 147   | 537   | 533   |
| V/C Ratio(X)   | 1.14  | 0.82 | 0.83 | 1.71  | 0.49  | 0.51 | 1.13  | 0.95  | 0.32 | 1.84  | 1.23  | 1.24  |
| Avail Cap(c_a), veh/h  | 343   | 513  | 465  | 117   | 453   | 434  | 401   | 1580  | 781  | 147   | 537   | 533   |
| HCM Platoon Ratio  | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 48.0  | 37.3 | 38.0 | 49.8  | 36.3  | 36.7 | 41.3  | 28.5  | 15.9 | 48.9  | 37.2  | 37.5  |
| Incr Delay (d2), s/veh   | 92.6  | 9.4  | 10.9 | 353.3 | 1.0   | 1.1  | 87.1  | 13.0  | 0.2  | 401.8 | 118.6 | 122.3 |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 8.9   | 10.1 | 9.5  | 14.5  | 4.4   | 4.5  | 19.7  | 19.6  | 3.5  | 20.2  | 30.8  | 31.2  |
| Unsig. Movement Delay, s/veh   |       |      |      |       |       |      |       |       |      |       |       |       |
| LnGrp Delay(d),s/veh   | 140.6 | 46.7 | 48.9 | 403.1 | 37.3  | 37.8 | 128.4 | 41.5  | 16.2 | 450.7 | 155.9 | 159.8 |
| LnGrp LOS  | F     | D    | D    | F     | D     | D    | F     | D     | B    | F     | F     | F     |
| Approach Vol, veh/h  |       | 1111 |      |       | 585   |      |       | 2208  |      |       | 1589  |       |
| Approach Delay, s/veh  |       | 80.5 |      |       | 162.5 |      |       | 56.5  |      |       | 207.6 |       |
| Approach LOS   |       | F    |      |       | F     |      |       | E     |      |       | F     |       |
| Timer - Assigned Phs   | 1     | 2    | 3    | 4     | 5     | 6    | 7     | 8     |      |       |       |       |
| Phs Duration (G+Y+Rc), s   | 12.8  | 51.4 | 11.0 | 31.4  | 28.0  | 36.2 | 14.6  | 27.8  |      |       |       |       |
| Change Period (Y+Rc), s  | 4.6   | 5.8  | 4.6  | 5.4   | 4.6   | 5.8  | 4.6   | * 5.4 |      |       |       |       |
| Max Green Setting (Gmax), s  | 8.2   | 45.6 | 6.4  | 29.4  | 23.4  | 30.4 | 10.0  | * 26  |      |       |       |       |
| Max Q Clear Time (g_c+I1), s   | 10.8  | 45.4 | 9.0  | 23.6  | 26.0  | 34.2 | 12.6  | 12.6  |      |       |       |       |
| Green Ext Time (p_c), s  | 0.0   | 0.2  | 0.0  | 2.2   | 0.0   | 0.0  | 0.0   | 1.8   |      |       |       |       |
| <b>Intersection Summary</b>  |       |      |      |       |       |      |       |       |      |       |       |       |
| HCM 6th Ctrl Delay   | 116.4 |      |      |       |       |      |       |       |      |       |       |       |
| HCM 6th LOS  | F     |      |      |       |       |      |       |       |      |       |       |       |
| <b>Notes</b>   |       |      |      |       |       |      |       |       |      |       |       |       |
| User approved pedestrian interval to be less than phase max green.                                 |       |      |      |       |       |      |       |       |      |       |       |       |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |       |      |      |       |       |      |       |       |      |       |       |       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 427   | 324   | 447   | 156   | 222   | 107   | 457   | 1314  | 288   | 167   | 971   |
| Future Volume (vph)  | 427   | 324   | 447   | 156   | 222   | 107   | 457   | 1314  | 288   | 167   | 971   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 14.6  | 34.8  | 34.8  | 11.0  | 31.2  | 31.2  | 28.0  | 51.4  | 11.0  | 12.8  | 36.2  |
| Total Split (%)      | 13.3% | 31.6% | 31.6% | 10.0% | 28.4% | 28.4% | 25.5% | 46.7% | 10.0% | 11.6% | 32.9% |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 106.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR   |
|--|-------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |      |       |       |      |       |       |       |
| Traffic Volume (veh/h)   | 427   | 324   | 447   | 156   | 222   | 107  | 457   | 1314  | 288  | 167   | 971   | 315   |
| Future Volume (veh/h)  | 427   | 324   | 447   | 156   | 222   | 107  | 457   | 1314  | 288  | 167   | 971   | 315   |
| Initial Q (Qb), veh  | 0     | 0     | 0     | 0     | 0     | 0    | 0     | 0     | 0    | 0     | 0     | 0     |
| Ped-Bike Adj(A_pbT)  | 1.00  |       | 0.99  | 1.00  |       | 0.99 | 1.00  |       | 0.98 | 1.00  |       | 0.96  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |       | No    |       |       | No    |      |       | No    |      |       | No    |       |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870 | 1870  | 1870  | 1870 | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 497   | 377   | 344   | 181   | 258   | 97   | 531   | 1528  | 250  | 194   | 1129  | 339   |
| Peak Hour Factor   | 0.86  | 0.86  | 0.86  | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86 | 0.86  | 0.86  | 0.86  |
| Percent Heavy Veh, %   | 2     | 2     | 2     | 2     | 2     | 2    | 2     | 2     | 2    | 2     | 2     | 2     |
| Cap, veh/h   | 176   | 486   | 388   | 117   | 418   | 334  | 399   | 1574  | 771  | 146   | 806   | 238   |
| Arrive On Green  | 0.10  | 0.26  | 0.25  | 0.07  | 0.22  | 0.21 | 0.22  | 0.44  | 0.43 | 0.08  | 0.30  | 0.28  |
| Sat Flow, veh/h  | 1781  | 1870  | 1572  | 1781  | 1870  | 1564 | 1781  | 3554  | 1547 | 1781  | 2678  | 791   |
| Grp Volume(v), veh/h   | 497   | 377   | 344   | 181   | 258   | 97   | 531   | 1528  | 250  | 194   | 743   | 725   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1572  | 1781  | 1870  | 1564 | 1781  | 1777  | 1547 | 1781  | 1777  | 1692  |
| Q Serve(g_s), s  | 10.6  | 20.0  | 22.6  | 7.0   | 13.3  | 5.6  | 24.0  | 45.0  | 10.4 | 8.8   | 32.2  | 32.2  |
| Cycle Q Clear(g_c), s  | 10.6  | 20.0  | 22.6  | 7.0   | 13.3  | 5.6  | 24.0  | 45.0  | 10.4 | 8.8   | 32.2  | 32.2  |
| Prop In Lane   | 1.00  |       | 1.00  | 1.00  |       | 1.00 | 1.00  |       | 1.00 | 1.00  |       | 0.47  |
| Lane Grp Cap(c), veh/h   | 176   | 486   | 388   | 117   | 418   | 334  | 399   | 1574  | 771  | 146   | 535   | 509   |
| V/C Ratio(X)   | 2.82  | 0.78  | 0.89  | 1.55  | 0.62  | 0.29 | 1.33  | 0.97  | 0.32 | 1.32  | 1.39  | 1.42  |
| Avail Cap(c_a), veh/h  | 176   | 538   | 432   | 117   | 475   | 382  | 399   | 1574  | 771  | 146   | 535   | 509   |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 48.2  | 36.7  | 38.9  | 50.0  | 37.4  | 35.3 | 41.5  | 29.1  | 16.1 | 49.1  | 37.4  | 37.8  |
| Incr Delay (d2), s/veh   | 833.2 | 6.4   | 18.2  | 286.8 | 1.9   | 0.5  | 164.6 | 16.2  | 0.2  | 185.5 | 186.5 | 202.3 |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 45.4  | 9.7   | 10.4  | 12.4  | 6.2   | 2.1  | 28.3  | 21.0  | 3.6  | 11.3  | 40.9  | 41.2  |
| Unsig. Movement Delay, s/veh   |       |       |       |       |       |      |       |       |      |       |       |       |
| LnGrp Delay(d),s/veh   | 881.4 | 43.1  | 57.1  | 336.8 | 39.4  | 35.8 | 206.1 | 45.4  | 16.4 | 234.6 | 224.0 | 240.1 |
| LnGrp LOS  | F     | D     | E     | F     | D     | D    | F     | D     | B    | F     | F     | F     |
| Approach Vol, veh/h  |       | 1218  |       |       | 536   |      |       | 2309  |      |       | 1662  |       |
| Approach Delay, s/veh  |       | 389.1 |       |       | 139.2 |      |       | 79.2  |      |       | 232.3 |       |
| Approach LOS   |       | F     |       |       | F     |      |       | E     |      |       | F     |       |
| Timer - Assigned Phs   | 1     | 2     | 3     | 4     | 5     | 6    | 7     | 8     |      |       |       |       |
| Phs Duration (G+Y+Rc), s   | 12.8  | 51.4  | 11.0  | 31.8  | 28.0  | 36.2 | 14.6  | 28.2  |      |       |       |       |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8  | 4.6   | * 5.4 |      |       |       |       |
| Max Green Setting (Gmax), s  | 8.2   | 45.6  | 6.4   | 29.4  | 23.4  | 30.4 | 10.0  | * 26  |      |       |       |       |
| Max Q Clear Time (g_c+I1), s   | 10.8  | 47.0  | 9.0   | 24.6  | 26.0  | 34.2 | 12.6  | 15.3  |      |       |       |       |
| Green Ext Time (p_c), s  | 0.0   | 0.0   | 0.0   | 1.6   | 0.0   | 0.0  | 0.0   | 1.3   |      |       |       |       |
| <b>Intersection Summary</b>  |       |       |       |       |       |      |       |       |      |       |       |       |
| HCM 6th Ctrl Delay   |       |       | 195.2 |       |       |      |       |       |      |       |       |       |
| HCM 6th LOS  |       |       | F     |       |       |      |       |       |      |       |       |       |
| <b>Notes</b>   |       |       |       |       |       |      |       |       |      |       |       |       |
| User approved pedestrian interval to be less than phase max green.                                 |       |       |       |       |       |      |       |       |      |       |       |       |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |       |       |       |       |       |      |       |       |      |       |       |       |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

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| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↵    | ↕    |      | ↵    | ↕    |      |      | ↕    |      |      | ↕    | ↕    |
| Traffic Vol, veh/h       | 193  | 637  | 56   | 58   | 343  | 8    | 75   | 2    | 96   | 8    | 2    | 109  |
| Future Vol, veh/h        | 193  | 637  | 56   | 58   | 343  | 8    | 75   | 2    | 96   | 8    | 2    | 109  |
| Conflicting Peds, #/hr   | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 251  | 827  | 73   | 75   | 445  | 10   | 97   | 3    | 125  | 10   | 3    | 142  |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |      | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 455    | 0 | 0 | 902    | 0 | 0 | 1742   | 1973 | 452  | 1517   | 2004 | 228  |
| Stage 1              | -      | - | - | -      | - | - | 1368   | 1368 | -    | 600    | 600  | -    |
| Stage 2              | -      | - | - | -      | - | - | 374    | 605  | -    | 917    | 1404 | -    |
| Critical Hdwy        | 4.14   | - | - | 4.14   | - | - | 4      | 6.54 | 5    | 5      | 6.54 | 5    |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 4      | 5.54 | -    | 6.54   | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 4      | 5.54 | -    | 6.54   | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | - | - | 2.22   | - | - | 3.52   | 4.02 | 3.32 | 3.52   | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 1102   | - | - | 749    | - | - | 307    | 62   | 708  | 239    | 59   | 876  |
| Stage 1              | -      | - | - | -      | - | - | 406    | 213  | -    | 455    | 488  | -    |
| Stage 2              | -      | - | - | -      | - | - | 806    | 486  | -    | 293    | 204  | -    |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -    | -    | -      | -    | -    |
| Mov Cap-1 Maneuver   | 1102   | - | - | 748    | - | - | 192    | 43   | 707  | 148    | 41   | 876  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 269    | 124  | -    | 104    | 77   | -    |
| Stage 1              | -      | - | - | -      | - | - | 313    | 164  | -    | 351    | 439  | -    |
| Stage 2              | -      | - | - | -      | - | - | 604    | 437  | -    | 183    | 157  | -    |

| Approach             | EB |  | WB  |  | NB   |  | SB   |  |
|----------------------|----|--|-----|--|------|--|------|--|
| HCM Control Delay, s | 2  |  | 1.5 |  | 24.7 |  | 14.7 |  |
| HCM LOS              |    |  |     |  | C    |  | B    |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 402   | 1102  | -   | -   | 748   | -   | -   | 523   |
| HCM Lane V/C Ratio    | 0.559 | 0.227 | -   | -   | 0.101 | -   | -   | 0.295 |
| HCM Control Delay (s) | 24.7  | 9.2   | -   | -   | 10.4  | -   | -   | 14.7  |
| HCM Lane LOS          | C     | A     | -   | -   | B     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 3.3   | 0.9   | -   | -   | 0.3   | -   | -   | 1.2   |



HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 7.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↶    | ↷    |      | ↶    | ↷    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 88   | 635  | 56   | 58   | 363  | 3    | 75   | 1    | 96   | 4    | 1    | 47   |
| Future Vol, veh/h        | 88   | 635  | 56   | 58   | 363  | 3    | 75   | 1    | 96   | 4    | 1    | 47   |
| Conflicting Peds, #/hr   | 0    | 0    | 2    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   | 77   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 114  | 825  | 73   | 75   | 471  | 4    | 97   | 1    | 125  | 5    | 1    | 61   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 475    | 0 | 0 | 900    | 0 | 0 | 1746   | 1717  | 864   | 1776   | 1751  | 473   |
| Stage 1              | -      | - | - | -      | - | - | 1092   | 1092  | -     | 623    | 623   | -     |
| Stage 2              | -      | - | - | -      | - | - | 654    | 625   | -     | 1153   | 1128  | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 5      | 6.52  | 5     | 5      | 6.52  | 5     |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1087   | - | - | 755    | - | - | 189    | 90    | 474   | 183    | 86    | 694   |
| Stage 1              | -      | - | - | -      | - | - | 260    | 291   | -     | 474    | 478   | -     |
| Stage 2              | -      | - | - | -      | - | - | 456    | 477   | -     | 240    | 279   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1087   | - | - | 754    | - | - | 146    | 72    | 473   | 114    | 69    | 694   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 200    | 202   | -     | 78     | 159   | -     |
| Stage 1              | -      | - | - | -      | - | - | 232    | 260   | -     | 424    | 431   | -     |
| Stage 2              | -      | - | - | -      | - | - | 373    | 430   | -     | 157    | 249   | -     |

| Approach             | EB |  |  | WB  |  |  | NB   |  |  | SB   |  |  |
|----------------------|----|--|--|-----|--|--|------|--|--|------|--|--|
| HCM Control Delay, s | 1  |  |  | 1.4 |  |  | 47.1 |  |  | 15.4 |  |  |
| HCM LOS              |    |  |  |     |  |  | E    |  |  | C    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 295   | 1087  | -   | -   | 754  | -   | -   | 415   |
| HCM Lane V/C Ratio    | 0.757 | 0.105 | -   | -   | 0.1  | -   | -   | 0.163 |
| HCM Control Delay (s) | 47.1  | 8.7   | -   | -   | 10.3 | -   | -   | 15.4  |
| HCM Lane LOS          | E     | A     | -   | -   | B    | -   | -   | C     |
| HCM 95th %tile Q(veh) | 5.7   | 0.4   | -   | -   | 0.3  | -   | -   | 0.6   |

HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 8    | 0    | 18   | 10   | 1    | 7    | 23   | 685  | 17   | 6    | 387  | 0    |
| Future Vol, veh/h        | 8    | 0    | 18   | 10   | 1    | 7    | 23   | 685  | 17   | 6    | 387  | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 69   | 0    | 0    | 21   | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   | 72   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 11   | 0    | 25   | 14   | 1    | 10   | 32   | 951  | 24   | 8    | 538  | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1656   | 1614  | 538    | 1615  | 1602   | 1053  | 538    | 0 | 0 | 996   | 0 | 0 |
| Stage 1              | 554    | 554   | -      | 1048  | 1048   | -     | -      | - | - | -     | - | - |
| Stage 2              | 1102   | 1060  | -      | 567   | 554    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 78     | 104   | 543    | 83    | 106    | 275   | 1030   | - | - | 695   | - | - |
| Stage 1              | 517    | 514   | -      | 275   | 305    | -     | -      | - | - | -     | - | - |
| Stage 2              | 257    | 301   | -      | 508   | 514    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 67     | 98    | 543    | 75    | 99     | 252   | 1030   | - | - | 681   | - | - |
| Mov Cap-2 Maneuver   | 162    | 204   | -      | 182   | 206    | -     | -      | - | - | -     | - | - |
| Stage 1              | 501    | 508   | -      | 261   | 290    | -     | -      | - | - | -     | - | - |
| Stage 2              | 223    | 286   | -      | 479   | 508    | -     | -      | - | - | -     | - | - |

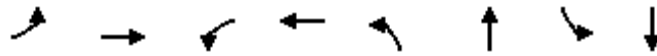
| Approach             | EB   |  | WB   |  | NB  |  | SB  |  |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 17.9 |  | 24.9 |  | 0.3 |  | 0.2 |  |
| HCM LOS              | C    |  | C    |  |     |  |     |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 1030  | -   | -   | 315        | 206   | 681   | -   |
| HCM Lane V/C Ratio    | 0.031 | -   | -   | 0.115      | 0.121 | 0.012 | -   |
| HCM Control Delay (s) | 8.6   | -   | -   | 17.9       | 24.9  | 10.4  | -   |
| HCM Lane LOS          | A     | -   | -   | C          | C     | B     | -   |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | 0.4        | 0.4   | 0     | -   |

Timings  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

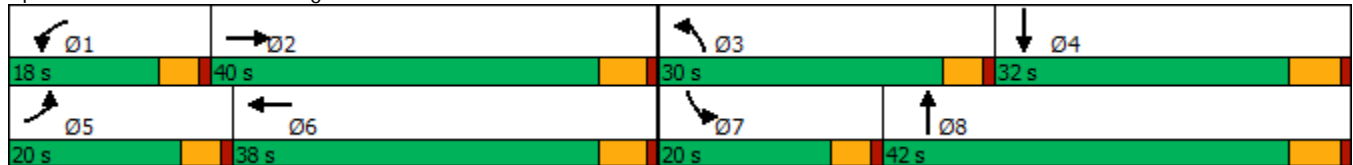


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     | ↙     | ↕     |
| Traffic Volume (vph) | 116   | 461   | 100   | 423   | 222   | 646   | 118   | 441   |
| Future Volume (vph)  | 116   | 461   | 100   | 423   | 222   | 646   | 118   | 441   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 20.0  | 40.0  | 18.0  | 38.0  | 30.0  | 42.0  | 20.0  | 32.0  |
| Total Split (%)      | 16.7% | 33.3% | 15.0% | 31.7% | 25.0% | 35.0% | 16.7% | 26.7% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Kitching St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 116  | 461  | 268  | 100  | 423  | 116  | 222  | 646  | 128  | 118  | 441  | 120  |
| Future Volume (veh/h)        | 116  | 461  | 268  | 100  | 423  | 116  | 222  | 646  | 128  | 118  | 441  | 120  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 0.99 | 1.00 |      | 0.98 | 1.00 |      | 1.00 | 1.00 |      | 0.98 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 120  | 475  | 270  | 103  | 436  | 102  | 229  | 666  | 126  | 122  | 455  | 88   |
| Peak Hour Factor             | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 167  | 666  | 376  | 146  | 840  | 195  | 287  | 940  | 178  | 169  | 734  | 141  |
| Arrive On Green              | 0.09 | 0.30 | 0.28 | 0.08 | 0.29 | 0.27 | 0.16 | 0.31 | 0.28 | 0.10 | 0.24 | 0.22 |
| Sat Flow, veh/h              | 1781 | 2231 | 1260 | 1781 | 2928 | 679  | 1781 | 3058 | 578  | 1781 | 3039 | 583  |
| Grp Volume(v), veh/h         | 120  | 398  | 347  | 103  | 277  | 261  | 229  | 407  | 385  | 122  | 279  | 264  |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1870 | 1621 | 1781 | 1870 | 1736 | 1781 | 1870 | 1766 | 1781 | 1870 | 1751 |
| Q Serve(g_s), s              | 4.8  | 14.0 | 14.2 | 4.2  | 9.2  | 9.4  | 9.1  | 14.2 | 14.3 | 4.9  | 9.8  | 10.0 |
| Cycle Q Clear(g_c), s        | 4.8  | 14.0 | 14.2 | 4.2  | 9.2  | 9.4  | 9.1  | 14.2 | 14.3 | 4.9  | 9.8  | 10.0 |
| Prop In Lane                 | 1.00 |      | 0.78 | 1.00 |      | 0.39 | 1.00 |      | 0.33 | 1.00 |      | 0.33 |
| Lane Grp Cap(c), veh/h       | 167  | 558  | 484  | 146  | 537  | 498  | 287  | 575  | 543  | 169  | 452  | 423  |
| V/C Ratio(X)                 | 0.72 | 0.71 | 0.72 | 0.70 | 0.52 | 0.52 | 0.80 | 0.71 | 0.71 | 0.72 | 0.62 | 0.62 |
| Avail Cap(c_a), veh/h        | 386  | 912  | 790  | 338  | 861  | 799  | 627  | 963  | 909  | 386  | 709  | 664  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 32.5 | 23.1 | 23.6 | 33.0 | 22.0 | 22.3 | 29.8 | 22.6 | 22.9 | 32.5 | 25.0 | 25.3 |
| Incr Delay (d2), s/veh       | 2.2  | 1.7  | 2.0  | 2.3  | 0.8  | 0.9  | 2.0  | 1.6  | 1.7  | 2.2  | 1.4  | 1.5  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 2.1  | 5.8  | 5.3  | 1.8  | 3.8  | 3.6  | 3.7  | 5.8  | 5.6  | 2.1  | 4.1  | 3.9  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 34.7 | 24.8 | 25.6 | 35.3 | 22.8 | 23.2 | 31.8 | 24.2 | 24.6 | 34.6 | 26.3 | 26.8 |
| LnGrp LOS                    | C    | C    | C    | D    | C    | C    | C    | C    | C    | C    | C    | C    |
| Approach Vol, veh/h          |      | 865  |      |      | 641  |      |      | 1021 |      |      | 665  |      |
| Approach Delay, s/veh        |      | 26.5 |      |      | 25.0 |      |      | 26.1 |      |      | 28.0 |      |
| Approach LOS                 |      | C    |      |      | C    |      |      | C    |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 10.1 | 26.0 | 15.9 | 21.8 | 10.9 | 25.2 | 11.0 | 26.7 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  |      |      |      |      |
| Max Green Setting (Gmax), s  | 13.4 | 34.6 | 25.4 | 26.2 | 15.4 | 32.6 | 15.4 | 36.2 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 6.2  | 16.2 | 11.1 | 12.0 | 6.8  | 11.4 | 6.9  | 16.3 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.1  | 4.3  | 0.2  | 2.5  | 0.1  | 3.0  | 0.1  | 4.4  |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 26.4 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | C    |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

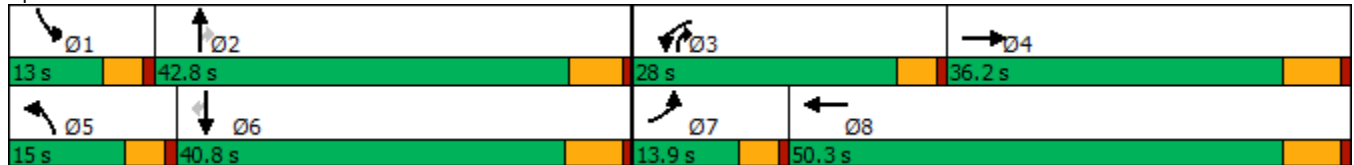


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↑↑↓   | ↖↗    | ↑↑↓   | ↖↗    | ↑↑    | ↖     | ↖↗    | ↑↑    | ↖     |
| Traffic Volume (vph) | 259   | 757   | 812   | 988   | 338   | 760   | 560   | 322   | 920   | 146   |
| Future Volume (vph)  | 259   | 757   | 812   | 988   | 338   | 760   | 560   | 322   | 920   | 146   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 13.9  | 36.2  | 28.0  | 50.3  | 15.0  | 42.8  | 28.0  | 13.0  | 40.8  | 40.8  |
| Total Split (%)      | 11.6% | 30.2% | 23.3% | 41.9% | 12.5% | 35.7% | 23.3% | 10.8% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 119.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Lasselle St. & Iris Av.





HCM 6th Signalized Intersection Summary  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL  | EBT   | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|--|------|-------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations  |      |       |      |       |      |      |       |      |      |       |      |      |
| Traffic Volume (veh/h)   | 259  | 757   | 426  | 812   | 988  | 298  | 338   | 760  | 560  | 322   | 920  | 146  |
| Future Volume (veh/h)  | 259  | 757   | 426  | 812   | 988  | 298  | 338   | 760  | 560  | 322   | 920  | 146  |
| Initial Q (Qb), veh  | 0    | 0     | 0    | 0     | 0    | 0    | 0     | 0    | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 0.98 | 1.00  |      | 0.95 | 1.00  |      | 0.96 | 1.00  |      | 0.97 |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach  |      | No    |      |       | No   |      |       | No   |      |       | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 273  | 797   | 361  | 855   | 1040 | 286  | 356   | 800  | 386  | 339   | 968  | 102  |
| Peak Hour Factor   | 0.95 | 0.95  | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2     | 2    | 2    | 2     | 2    | 2    | 2     | 2    | 2    |
| Cap, veh/h   | 287  | 919   | 414  | 696   | 1521 | 418  | 319   | 1127 | 788  | 261   | 1079 | 465  |
| Arrive On Green  | 0.08 | 0.27  | 0.25 | 0.20  | 0.39 | 0.37 | 0.09  | 0.32 | 0.31 | 0.08  | 0.30 | 0.30 |
| Sat Flow, veh/h  | 3456 | 3424  | 1540 | 3456  | 3933 | 1081 | 3456  | 3554 | 1527 | 3456  | 3554 | 1531 |
| Grp Volume(v), veh/h   | 273  | 792   | 366  | 855   | 900  | 426  | 356   | 800  | 386  | 339   | 968  | 102  |
| Grp Sat Flow(s),veh/h/ln   | 1728 | 1702  | 1560 | 1728  | 1702 | 1610 | 1728  | 1777 | 1527 | 1728  | 1777 | 1531 |
| Q Serve(g_s), s  | 9.4  | 26.5  | 26.8 | 24.0  | 26.3 | 26.5 | 11.0  | 23.7 | 19.8 | 9.0   | 31.1 | 5.9  |
| Cycle Q Clear(g_c), s  | 9.4  | 26.5  | 26.8 | 24.0  | 26.3 | 26.5 | 11.0  | 23.7 | 19.8 | 9.0   | 31.1 | 5.9  |
| Prop In Lane   | 1.00 |       | 0.99 | 1.00  |      | 0.67 | 1.00  |      | 1.00 | 1.00  |      | 1.00 |
| Lane Grp Cap(c), veh/h   | 287  | 914   | 419  | 696   | 1317 | 623  | 319   | 1127 | 788  | 261   | 1079 | 465  |
| V/C Ratio(X)   | 0.95 | 0.87  | 0.87 | 1.23  | 0.68 | 0.68 | 1.12  | 0.71 | 0.49 | 1.30  | 0.90 | 0.22 |
| Avail Cap(c_a), veh/h  | 287  | 919   | 421  | 696   | 1322 | 625  | 319   | 1156 | 801  | 261   | 1097 | 472  |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 54.4 | 41.6  | 42.7 | 47.6  | 30.5 | 31.2 | 54.1  | 35.9 | 19.3 | 55.1  | 39.7 | 31.0 |
| Incr Delay (d2), s/veh   | 39.7 | 8.8   | 17.9 | 115.6 | 1.5  | 3.1  | 85.7  | 2.0  | 0.5  | 160.1 | 9.8  | 0.2  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 5.5  | 11.7  | 12.0 | 21.0  | 10.4 | 10.3 | 8.4   | 10.1 | 6.6  | 9.6   | 14.3 | 2.1  |
| Unsig. Movement Delay, s/veh   |      |       |      |       |      |      |       |      |      |       |      |      |
| LnGrp Delay(d),s/veh   | 94.2 | 50.3  | 60.6 | 163.2 | 31.9 | 34.2 | 139.8 | 37.9 | 19.8 | 215.2 | 49.5 | 31.2 |
| LnGrp LOS  | F    | D     | E    | F     | C    | C    | F     | D    | B    | F     | D    | C    |
| Approach Vol, veh/h  |      | 1431  |      |       | 2181 |      |       | 1542 |      |       | 1409 |      |
| Approach Delay, s/veh  |      | 61.3  |      |       | 83.8 |      |       | 56.9 |      |       | 88.0 |      |
| Approach LOS   |      | E     |      |       | F    |      |       | E    |      |       | F    |      |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4     | 5    | 6    | 7     | 8    |      |       |      |      |
| Phs Duration (G+Y+Rc), s   | 13.0 | 42.2  | 28.0 | 36.0  | 15.0 | 40.2 | 13.9  | 50.1 |      |       |      |      |
| Change Period (Y+Rc), s  | 4.6  | * 6.2 | 4.6  | 6.2   | 4.6  | 6.2  | 4.6   | 6.2  |      |       |      |      |
| Max Green Setting (Gmax), s  | 8.4  | * 37  | 23.4 | 30.0  | 10.4 | 34.6 | 9.3   | 44.1 |      |       |      |      |
| Max Q Clear Time (g_c+I1), s   | 11.0 | 25.7  | 26.0 | 28.8  | 13.0 | 33.1 | 11.4  | 28.5 |      |       |      |      |
| Green Ext Time (p_c), s  | 0.0  | 5.0   | 0.0  | 0.8   | 0.0  | 0.9  | 0.0   | 7.3  |      |       |      |      |
| <b>Intersection Summary</b>  |      |       |      |       |      |      |       |      |      |       |      |      |
| HCM 6th Ctrl Delay   |      |       |      | 73.5  |      |      |       |      |      |       |      |      |
| HCM 6th LOS  |      |       |      | E     |      |      |       |      |      |       |      |      |
| <b>Notes</b>   |      |       |      |       |      |      |       |      |      |       |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |       |      |      |       |      |      |       |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
4: Lassel St. & Cahuillia Dr.

Continental Villages (JN 11575)

10/25/2018

Intersection

Int Delay, s/veh 0.8

| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      |      | ↗    | ↕    | ↗    |      | ↕    |
| Traffic Vol, veh/h       | 0    | 138  | 1109 | 91   | 0    | 1566 |
| Future Vol, veh/h        | 0    | 138  | 1109 | 91   | 0    | 1566 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 2    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | 140  | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 97   | 97   | 97   | 97   | 97   | 97   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 142  | 1143 | 94   | 0    | 1614 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 574    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 462    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | -      | 461    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 16.3 | 0  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 461   |
| HCM Lane V/C Ratio    | -   | -        | 0.309 |
| HCM Control Delay (s) | -   | -        | 16.3  |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 1.3   |

HCM 6th TWSC  
5: Lassel St. & Driveway 1

Continental Villages (JN 11575)

10/25/2018

Intersection

Int Delay, s/veh 0.3

| Movement                 | WBL  | WBR  | NBT  | NBR  | SBL  | SBT  |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations      |      | ↗    | ↕    |      |      | ↕    |
| Traffic Vol, veh/h       | 0    | 54   | 1397 | 57   | 0    | 1675 |
| Future Vol, veh/h        | 0    | 54   | 1397 | 57   | 0    | 1675 |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Free | Free | Free | Free |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | 0    | -    | -    | -    | -    |
| Veh in Median Storage, # | 0    | -    | 0    | -    | -    | 0    |
| Grade, %                 | 0    | -    | 0    | -    | -    | 0    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0    | 59   | 1518 | 62   | 0    | 1821 |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | -      | 790    | 0      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |
| Critical Hdwy        | -      | 6.94   | -      |
| Critical Hdwy Stg 1  | -      | -      | -      |
| Critical Hdwy Stg 2  | -      | -      | -      |
| Follow-up Hdwy       | -      | 3.32   | -      |
| Pot Cap-1 Maneuver   | 0      | 333    | -      |
| Stage 1              | 0      | -      | -      |
| Stage 2              | 0      | -      | -      |
| Platoon blocked, %   |        |        |        |
| Mov Cap-1 Maneuver   | -      | 333    | -      |
| Mov Cap-2 Maneuver   | -      | -      | -      |
| Stage 1              | -      | -      | -      |
| Stage 2              | -      | -      | -      |

| Approach             | WB   | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 18.1 | 0  | 0  |
| HCM LOS              | C    |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT   |
|-----------------------|-----|----------|-------|
| Capacity (veh/h)      | -   | -        | 333   |
| HCM Lane V/C Ratio    | -   | -        | 0.176 |
| HCM Control Delay (s) | -   | -        | 18.1  |
| HCM Lane LOS          | -   | -        | C     |
| HCM 95th %tile Q(veh) | -   | -        | 0.6   |

Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

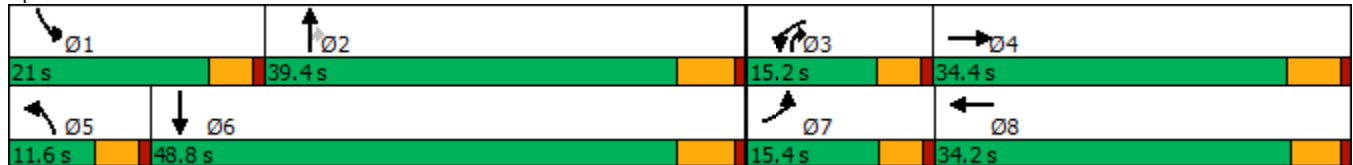


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↕     | ↖     | ↕     | ↖     | ↕     | ↗     | ↖     | ↕     |
| Traffic Volume (vph) | 189   | 149   | 173   | 146   | 102   | 1109  | 84    | 272   | 1270  |
| Future Volume (vph)  | 189   | 149   | 173   | 146   | 102   | 1109  | 84    | 272   | 1270  |
| Turn Type            | Prot  | NA    | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       |       |       |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 15.4  | 34.4  | 15.2  | 34.2  | 11.6  | 39.4  | 15.2  | 21.0  | 48.8  |
| Total Split (%)      | 14.0% | 31.3% | 13.8% | 31.1% | 10.5% | 35.8% | 13.8% | 19.1% | 44.4% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | -0.6  | -1.1  | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 95.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

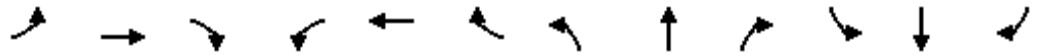
Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018



| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations          | ↔↔   | ↕↔   |      | ↔    | ↕↔   |      | ↔    | ↕↕    | ↔    | ↔    | ↕↔   | ↕↔   |
| Traffic Volume (veh/h)       | 189  | 149  | 181  | 173  | 146  | 64   | 102  | 1109  | 84   | 272  | 1270 | 69   |
| Future Volume (veh/h)        | 189  | 149  | 181  | 173  | 146  | 64   | 102  | 1109  | 84   | 272  | 1270 | 69   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 1.00 | 1.00 |      | 0.98 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No    |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 199  | 157  | 96   | 182  | 154  | 34   | 107  | 1167  | 68   | 286  | 1337 | 61   |
| Peak Hour Factor             | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 296  | 288  | 166  | 223  | 490  | 105  | 146  | 1344  | 775  | 330  | 1665 | 76   |
| Arrive On Green              | 0.09 | 0.13 | 0.12 | 0.13 | 0.17 | 0.16 | 0.08 | 0.38  | 0.36 | 0.19 | 0.48 | 0.46 |
| Sat Flow, veh/h              | 3456 | 2168 | 1254 | 1781 | 2899 | 623  | 1781 | 3554  | 1581 | 1781 | 3461 | 158  |
| Grp Volume(v), veh/h         | 199  | 127  | 126  | 182  | 93   | 95   | 107  | 1167  | 68   | 286  | 685  | 713  |
| Grp Sat Flow(s),veh/h/ln     | 1728 | 1777 | 1645 | 1781 | 1777 | 1745 | 1781 | 1777  | 1581 | 1781 | 1777 | 1842 |
| Q Serve(g_s), s              | 5.0  | 6.0  | 6.5  | 8.9  | 4.1  | 4.3  | 5.2  | 27.2  | 2.1  | 13.9 | 29.1 | 29.3 |
| Cycle Q Clear(g_c), s        | 5.0  | 6.0  | 6.5  | 8.9  | 4.1  | 4.3  | 5.2  | 27.2  | 2.1  | 13.9 | 29.1 | 29.3 |
| Prop In Lane                 | 1.00 |      | 0.76 | 1.00 |      | 0.36 | 1.00 |       | 1.00 | 1.00 |      | 0.09 |
| Lane Grp Cap(c), veh/h       | 296  | 236  | 218  | 223  | 300  | 295  | 146  | 1344  | 775  | 330  | 855  | 886  |
| V/C Ratio(X)                 | 0.67 | 0.54 | 0.58 | 0.82 | 0.31 | 0.32 | 0.73 | 0.87  | 0.09 | 0.87 | 0.80 | 0.80 |
| Avail Cap(c_a), veh/h        | 440  | 604  | 559  | 223  | 600  | 589  | 151  | 1406  | 803  | 339  | 890  | 922  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 39.7 | 36.2 | 36.9 | 38.1 | 32.6 | 32.9 | 40.1 | 25.8  | 12.2 | 35.4 | 19.6 | 19.7 |
| Incr Delay (d2), s/veh       | 1.0  | 1.9  | 2.4  | 19.2 | 0.6  | 0.6  | 13.9 | 5.9   | 0.0  | 19.3 | 5.2  | 5.1  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 2.1  | 2.6  | 2.7  | 5.0  | 1.8  | 1.8  | 2.8  | 11.4  | 0.7  | 7.4  | 11.6 | 12.1 |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh         | 40.7 | 38.1 | 39.3 | 57.3 | 33.2 | 33.5 | 54.0 | 31.7  | 12.2 | 54.7 | 24.8 | 24.8 |
| LnGrp LOS                    | D    | D    | D    | E    | C    | C    | D    | C     | B    | D    | C    | C    |
| Approach Vol, veh/h          |      | 452  |      |      | 370  |      |      | 1342  |      |      | 1684 |      |
| Approach Delay, s/veh        |      | 39.6 |      |      | 45.1 |      |      | 32.5  |      |      | 29.9 |      |
| Approach LOS                 |      | D    |      |      | D    |      |      | C     |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 20.6 | 37.8 | 15.2 | 15.9 | 11.3 | 47.0 | 11.7 | 19.4  |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | * 5.4 |      |      |      |      |
| Max Green Setting (Gmax), s  | 16.4 | 33.6 | 10.6 | 29.0 | 7.0  | 43.0 | 10.8 | * 29  |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 15.9 | 29.2 | 10.9 | 8.5  | 7.2  | 31.3 | 7.0  | 6.3   |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 2.8  | 0.0  | 1.3  | 0.0  | 6.6  | 0.1  | 1.0   |      |      |      |      |

Intersection Summary

|                    |      |
|--------------------|------|
| HCM 6th Ctrl Delay | 33.4 |
| HCM 6th LOS        | C    |

Notes

User approved pedestrian interval to be less than phase max green.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 296   | 89    | 225   | 126   | 77    | 64    | 150   | 1094  | 84    | 177   | 1298  |
| Future Volume (vph)  | 296   | 89    | 225   | 126   | 77    | 64    | 150   | 1094  | 84    | 177   | 1298  |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 34.4  | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 12.4  | 34.4  | 34.4  | 14.0  | 36.0  | 36.0  | 14.0  | 44.8  | 14.0  | 16.8  | 47.6  |
| Total Split (%)      | 11.3% | 31.3% | 31.3% | 12.7% | 32.7% | 32.7% | 12.7% | 40.7% | 12.7% | 15.3% | 43.3% |
| Yellow Time (s)      | 3.6   | 4.4   | 4.4   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 5.4   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 94.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL   | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |
|--|-------|-------|------|------|------|------|------|-------|------|------|------|------|
| Lane Configurations  |       |       |      |      |      |      |      |       |      |      |      |      |
| Traffic Volume (veh/h)   | 296   | 89    | 225  | 126  | 77   | 64   | 150  | 1094  | 84   | 177  | 1298 | 200  |
| Future Volume (veh/h)  | 296   | 89    | 225  | 126  | 77   | 64   | 150  | 1094  | 84   | 177  | 1298 | 200  |
| Initial Q (Qb), veh  | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00  |       | 1.00 | 1.00 |      | 0.98 | 1.00 |       | 1.00 | 1.00 |      | 1.00 |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  |       | No    |      |      | No   |      |      | No    |      |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 312   | 94    | 142  | 133  | 81   | 34   | 158  | 1152  | 68   | 186  | 1366 | 199  |
| Peak Hour Factor   | 0.95  | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, %   | 2     | 2     | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 165   | 258   | 194  | 175  | 263  | 200  | 197  | 1626  | 858  | 230  | 1485 | 214  |
| Arrive On Green  | 0.09  | 0.14  | 0.12 | 0.10 | 0.14 | 0.13 | 0.11 | 0.46  | 0.44 | 0.13 | 0.48 | 0.46 |
| Sat Flow, veh/h  | 1781  | 1870  | 1585 | 1781 | 1870 | 1556 | 1781 | 3554  | 1580 | 1781 | 3116 | 450  |
| Grp Volume(v), veh/h   | 312   | 94    | 142  | 133  | 81   | 34   | 158  | 1152  | 68   | 186  | 774  | 791  |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1870  | 1585 | 1781 | 1870 | 1556 | 1781 | 1777  | 1580 | 1781 | 1777 | 1789 |
| Q Serve(g_s), s  | 8.4   | 4.1   | 7.8  | 6.6  | 3.5  | 1.8  | 7.8  | 23.6  | 1.9  | 9.2  | 36.6 | 37.7 |
| Cycle Q Clear(g_c), s  | 8.4   | 4.1   | 7.8  | 6.6  | 3.5  | 1.8  | 7.8  | 23.6  | 1.9  | 9.2  | 36.6 | 37.7 |
| Prop In Lane   | 1.00  |       | 1.00 | 1.00 |      | 1.00 | 1.00 |       | 1.00 | 1.00 |      | 0.25 |
| Lane Grp Cap(c), veh/h   | 165   | 258   | 194  | 175  | 263  | 200  | 197  | 1626  | 858  | 230  | 847  | 853  |
| V/C Ratio(X)   | 1.89  | 0.36  | 0.73 | 0.76 | 0.31 | 0.17 | 0.80 | 0.71  | 0.08 | 0.81 | 0.91 | 0.93 |
| Avail Cap(c_a), veh/h  | 165   | 628   | 507  | 197  | 661  | 531  | 197  | 1626  | 858  | 252  | 855  | 861  |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 41.1  | 35.4  | 38.3 | 39.8 | 35.0 | 35.2 | 39.3 | 19.7  | 9.9  | 38.3 | 22.0 | 22.5 |
| Incr Delay (d2), s/veh   | 421.9 | 0.9   | 5.2  | 11.9 | 0.7  | 0.4  | 19.6 | 1.4   | 0.0  | 14.6 | 14.0 | 16.0 |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 22.9  | 1.9   | 3.2  | 3.4  | 1.6  | 0.7  | 4.3  | 8.9   | 0.6  | 4.7  | 16.5 | 17.6 |
| Unsig. Movement Delay, s/veh   |       |       |      |      |      |      |      |       |      |      |      |      |
| LnGrp Delay(d),s/veh   | 463.0 | 36.3  | 43.5 | 51.7 | 35.6 | 35.6 | 58.9 | 21.2  | 9.9  | 52.9 | 36.0 | 38.5 |
| LnGrp LOS  | F     | D     | D    | D    | D    | D    | E    | C     | A    | D    | D    | D    |
| Approach Vol, veh/h  |       | 548   |      |      | 248  |      |      | 1378  |      |      | 1751 |      |
| Approach Delay, s/veh  |       | 281.1 |      |      | 44.2 |      |      | 24.9  |      |      | 38.9 |      |
| Approach LOS   |       | F     |      |      | D    |      |      | C     |      |      | D    |      |
| Timer - Assigned Phs   | 1     | 2     | 3    | 4    | 5    | 6    | 7    | 8     |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 15.7  | 45.5  | 12.9 | 16.5 | 14.0 | 47.2 | 12.4 | 17.0  |      |      |      |      |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | * 5.4 |      |      |      |      |
| Max Green Setting (Gmax), s  | 12.2  | 39.0  | 9.4  | 29.0 | 9.4  | 41.8 | 7.8  | * 31  |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 11.2  | 25.6  | 8.6  | 9.8  | 9.8  | 39.7 | 10.4 | 5.5   |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0   | 6.4   | 0.0  | 0.8  | 0.0  | 1.7  | 0.0  | 0.5   |      |      |      |      |
| <b>Intersection Summary</b>  |       |       |      |      |      |      |      |       |      |      |      |      |
| HCM 6th Ctrl Delay   |       |       | 68.2 |      |      |      |      |       |      |      |      |      |
| HCM 6th LOS  |       |       | E    |      |      |      |      |       |      |      |      |      |
| <b>Notes</b>   |       |       |      |      |      |      |      |       |      |      |      |      |
| User approved pedestrian interval to be less than phase max green.                                 |       |       |      |      |      |      |      |       |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |       |       |      |      |      |      |      |       |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 5.6  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖    | ↖↗   |      | ↖    | ↖↗   |      |      | ↔    |      |      | ↔    |      |
| Traffic Vol, veh/h       | 216  | 194  | 92   | 6    | 158  | 8    | 53   | 2    | 12   | 17   | 2    | 166  |
| Future Vol, veh/h        | 216  | 194  | 92   | 6    | 158  | 8    | 53   | 2    | 12   | 17   | 2    | 166  |
| Conflicting Peds, #/hr   | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 248  | 223  | 106  | 7    | 182  | 9    | 61   | 2    | 14   | 20   | 2    | 191  |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |      |      | Minor2 |      |      |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 191    | 0 | 0 | 332    | 0 | 0 | 881    | 980  | 168  | 810    | 1029 | 96   |
| Stage 1              | -      | - | - | -      | - | - | 775    | 775  | -    | 201    | 201  | -    |
| Stage 2              | -      | - | - | -      | - | - | 106    | 205  | -    | 609    | 828  | -    |
| Critical Hdwy        | 4.14   | - | - | 4.14   | - | - | 5      | 6.54 | 5    | 5      | 6.54 | 5    |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.54   | 5.54 | -    | 6.54   | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.54   | 5.54 | -    | 6.54   | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | - | - | 2.22   | - | - | 3.52   | 4.02 | 3.32 | 3.52   | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 1380   | - | - | 1224   | - | - | 449    | 248  | 927  | 481    | 232  | 992  |
| Stage 1              | -      | - | - | -      | - | - | 357    | 406  | -    | 782    | 734  | -    |
| Stage 2              | -      | - | - | -      | - | - | 888    | 731  | -    | 449    | 384  | -    |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -    | -    | -      | -    | -    |
| Mov Cap-1 Maneuver   | 1380   | - | - | 1221   | - | - | 308    | 202  | 924  | 405    | 189  | 992  |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 277    | 299  | -    | 338    | 287  | -    |
| Stage 1              | -      | - | - | -      | - | - | 292    | 332  | -    | 641    | 730  | -    |
| Stage 2              | -      | - | - | -      | - | - | 711    | 727  | -    | 360    | 314  | -    |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB   |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|------|--|--|
| HCM Control Delay, s | 3.5 |  |  | 0.3 |  |  | 19.9 |  |  | 10.9 |  |  |
| HCM LOS              |     |  |  |     |  |  | C    |  |  | B    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 318   | 1380 | -   | -   | 1221  | -   | -   | 824   |
| HCM Lane V/C Ratio    | 0.242 | 0.18 | -   | -   | 0.006 | -   | -   | 0.258 |
| HCM Control Delay (s) | 19.9  | 8.2  | -   | -   | 8     | -   | -   | 10.9  |
| HCM Lane LOS          | C     | A    | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.9   | 0.7  | -   | -   | 0     | -   | -   | 1     |

HCM 6th TWSC  
7: Colt Wy./Driveway 2 & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↔    | ↔    |      | ↔    | ↔    |      |      | ↔    |      |      | ↔    | ↔    |
| Traffic Vol, veh/h       | 71   | 185  | 92   | 6    | 170  | 1    | 53   | 0    | 12   | 3    | 1    | 37   |
| Future Vol, veh/h        | 71   | 185  | 92   | 6    | 170  | 1    | 53   | 0    | 12   | 3    | 1    | 37   |
| Conflicting Peds, #/hr   | 0    | 0    | 3    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | 50   | -    | -    | 50   | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 2    | -    | -    | 2    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 82   | 213  | 106  | 7    | 195  | 1    | 61   | 0    | 14   | 3    | 1    | 43   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 196    | 0 | 0 | 322    | 0 | 0 | 665    | 643   | 269   | 647    | 696   | 196   |
| Stage 1              | -      | - | - | -      | - | - | 433    | 433   | -     | 210    | 210   | -     |
| Stage 2              | -      | - | - | -      | - | - | 232    | 210   | -     | 437    | 486   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 5      | 6.52  | 5     | 5      | 6.52  | 5     |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1377   | - | - | 1238   | - | - | 553    | 392   | 843   | 562    | 365   | 903   |
| Stage 1              | -      | - | - | -      | - | - | 601    | 582   | -     | 792    | 728   | -     |
| Stage 2              | -      | - | - | -      | - | - | 771    | 728   | -     | 598    | 551   | -     |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -     | -     | -      | -     | -     |
| Mov Cap-1 Maneuver   | 1377   | - | - | 1234   | - | - | 498    | 365   | 841   | 525    | 340   | 903   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 528    | 482   | -     | 518    | 464   | -     |
| Stage 1              | -      | - | - | -      | - | - | 564    | 545   | -     | 744    | 724   | -     |
| Stage 2              | -      | - | - | -      | - | - | 729    | 724   | -     | 553    | 516   | -     |

| Approach             | EB  |  |  | WB  |  |  | NB   |  |  | SB  |  |  |
|----------------------|-----|--|--|-----|--|--|------|--|--|-----|--|--|
| HCM Control Delay, s | 1.6 |  |  | 0.3 |  |  | 12.3 |  |  | 9.6 |  |  |
| HCM LOS              |     |  |  |     |  |  | B    |  |  | A   |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 567   | 1377  | -   | -   | 1234  | -   | -   | 838   |
| HCM Lane V/C Ratio    | 0.132 | 0.059 | -   | -   | 0.006 | -   | -   | 0.056 |
| HCM Control Delay (s) | 12.3  | 7.8   | -   | -   | 7.9   | -   | -   | 9.6   |
| HCM Lane LOS          | B     | A     | -   | -   | A     | -   | -   | A     |
| HCM 95th %tile Q(veh) | 0.5   | 0.2   | -   | -   | 0     | -   | -   | 0.2   |

HCM 6th TWSC  
9: Krameria Av. & Driveway/Quarter Horse Rd.

Continental Villages (JN 11575)

10/25/2018

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.9  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      | ↕    | ↕    |      | ↕    | ↕    |      |
| Traffic Vol, veh/h       | 12   | 0    | 12   | 0    | 0    | 0    | 10   | 134  | 1    | 1    | 164  | 15   |
| Future Vol, veh/h        | 12   | 0    | 12   | 0    | 0    | 0    | 10   | 134  | 1    | 1    | 164  | 15   |
| Conflicting Peds, #/hr   | 0    | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 6    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | 50   | -    | -    | 100  | -    | -    |
| Veh in Median Storage, # | -    | 1    | -    | -    | 1    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   | 81   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 15   | 0    | 15   | 0    | 0    | 0    | 12   | 165  | 1    | 1    | 202  | 19   |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 410    | 412   | 219    | 414   | 421    | 168   | 227    | 0 | 0 | 168   | 0 | 0 |
| Stage 1              | 220    | 220   | -      | 192   | 192    | -     | -      | - | - | -     | - | - |
| Stage 2              | 190    | 192   | -      | 222   | 229    | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 552    | 530   | 821    | 549   | 524    | 876   | 1341   | - | - | 1410  | - | - |
| Stage 1              | 782    | 721   | -      | 810   | 742    | -     | -      | - | - | -     | - | - |
| Stage 2              | 812    | 742   | -      | 780   | 715    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - | -     | - | - |
| Mov Cap-1 Maneuver   | 545    | 520   | 816    | 534   | 515    | 874   | 1333   | - | - | 1407  | - | - |
| Mov Cap-2 Maneuver   | 608    | 568   | -      | 597   | 561    | -     | -      | - | - | -     | - | - |
| Stage 1              | 770    | 716   | -      | 801   | 734    | -     | -      | - | - | -     | - | - |
| Stage 2              | 805    | 734   | -      | 765   | 710    | -     | -      | - | - | -     | - | - |

| Approach             | EB   | WB | NB  | SB |
|----------------------|------|----|-----|----|
| HCM Control Delay, s | 10.4 | 0  | 0.5 | 0  |
| HCM LOS              | B    | A  |     |    |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-----|-----|
| Capacity (veh/h)      | 1333  | -   | -   | 697        | 1407  | -   | -   |
| HCM Lane V/C Ratio    | 0.009 | -   | -   | 0.043      | 0.001 | -   | -   |
| HCM Control Delay (s) | 7.7   | -   | -   | 10.4       | 0     | 7.6 | -   |
| HCM Lane LOS          | A     | -   | -   | B          | A     | A   | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0.1        | 0     | -   | -   |



**APPENDIX 7.3:**

**HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT  
ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2040 Without Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **1191**

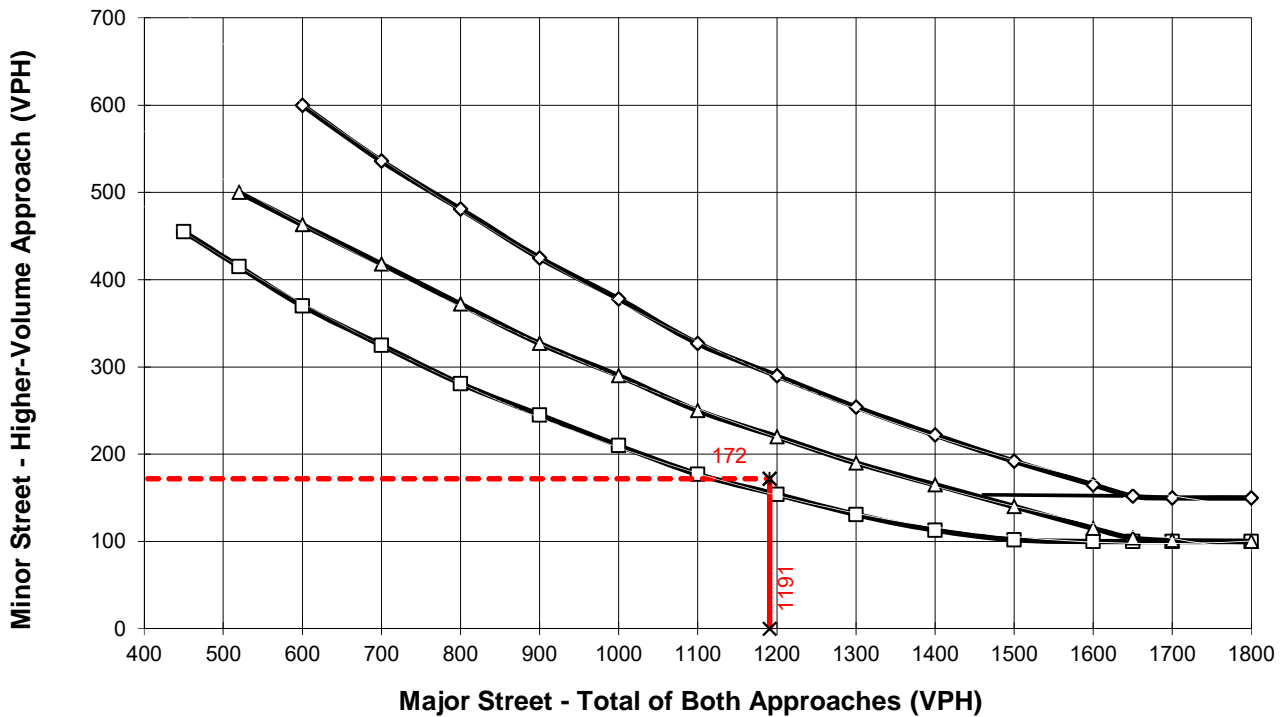
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Colt Way**

High Volume Approach (VPH) = **172**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △ 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇ 2+ Lanes (Major) & 2+ Lanes (Minor)
- × Major Street Approaches
- ×- - Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2040 Without Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **480**

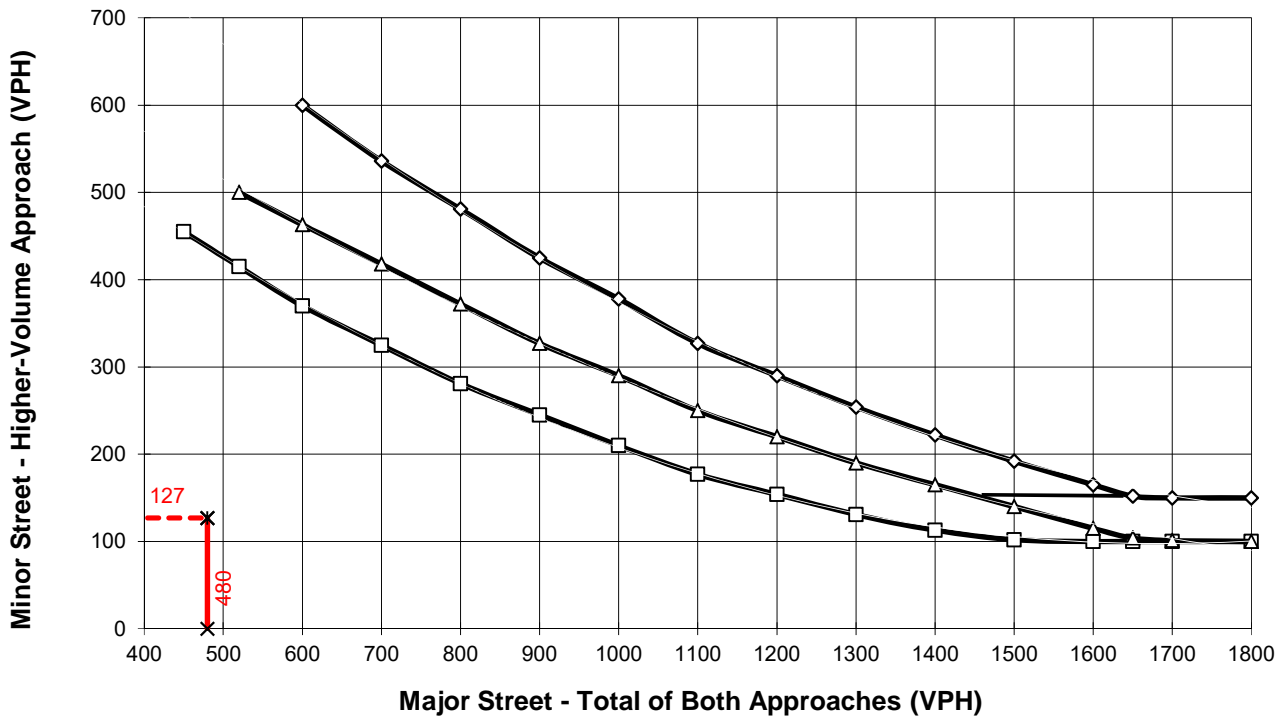
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Cahuilla Drive**

High Volume Approach (VPH) = **127**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- - -x- - - Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2040 Without Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **1093**

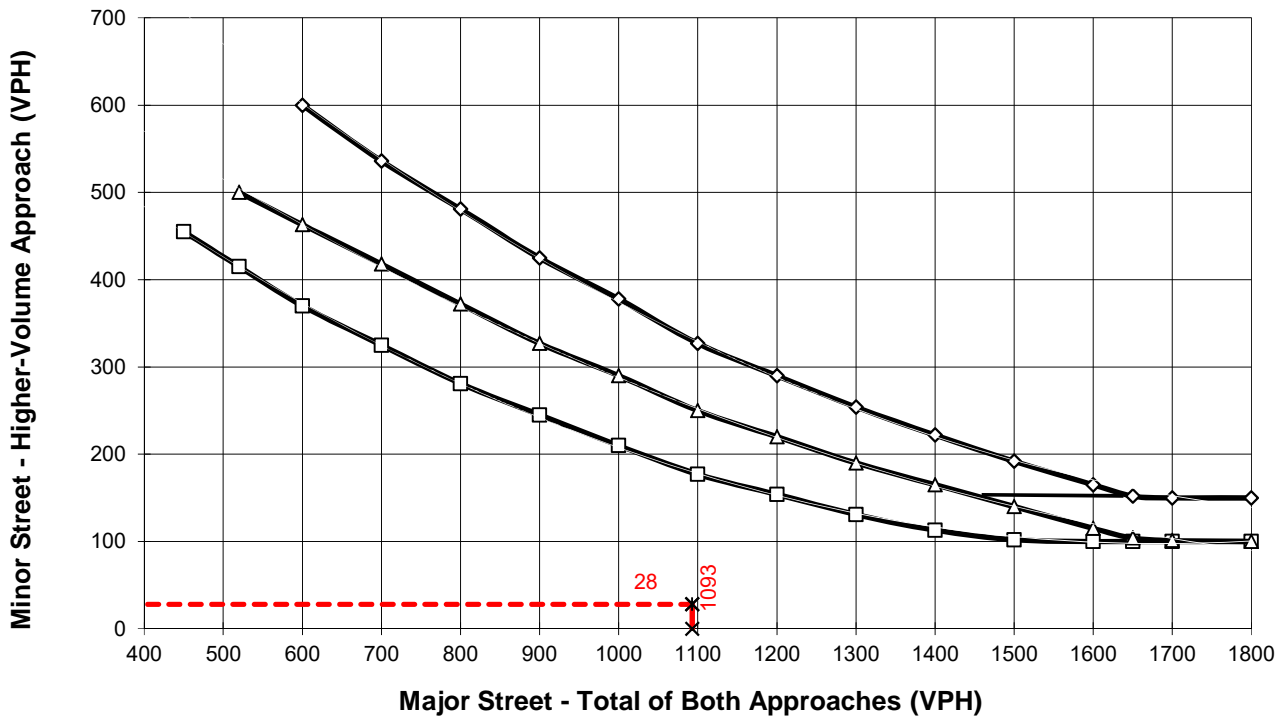
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Quarter Horse Road**

High Volume Approach (VPH) = **28**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x- - Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane



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**APPENDIX 7.4:**

**HORIZON YEAR (2040) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT  
ANALYSIS WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
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### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2040 With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **1295**

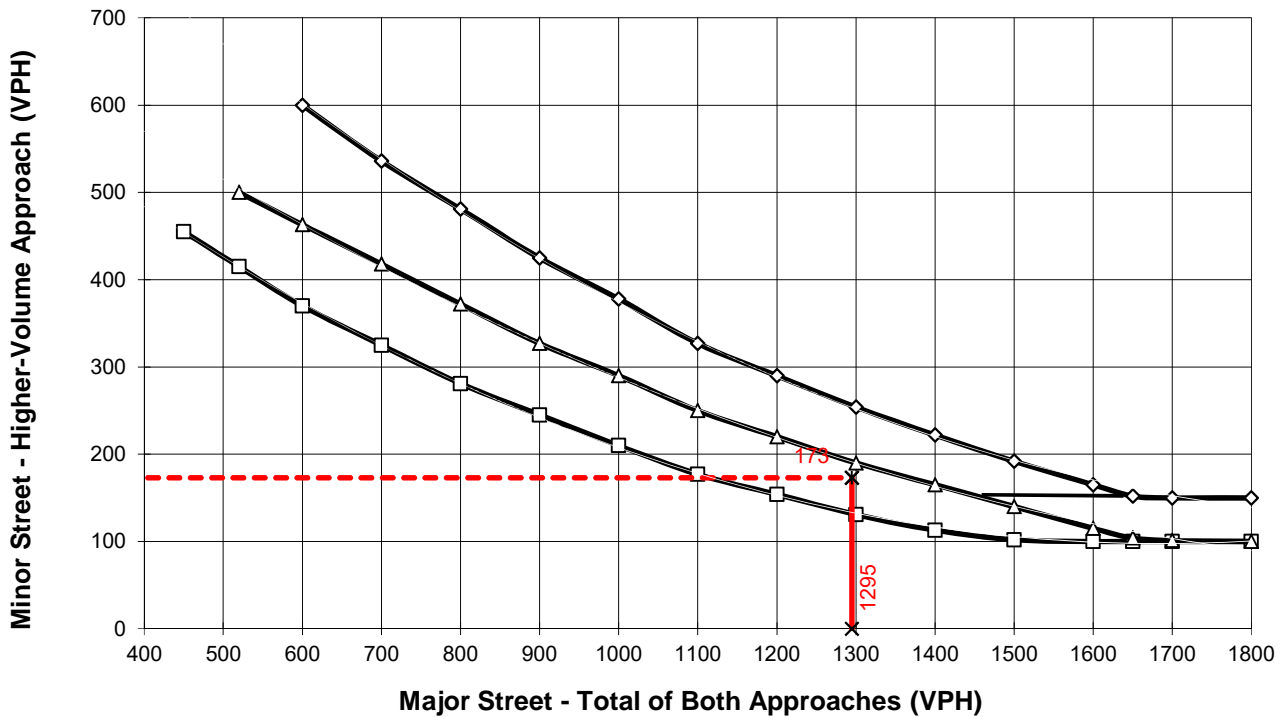
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Colt Way**

High Volume Approach (VPH) = **173**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x- - Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2040 With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **490**

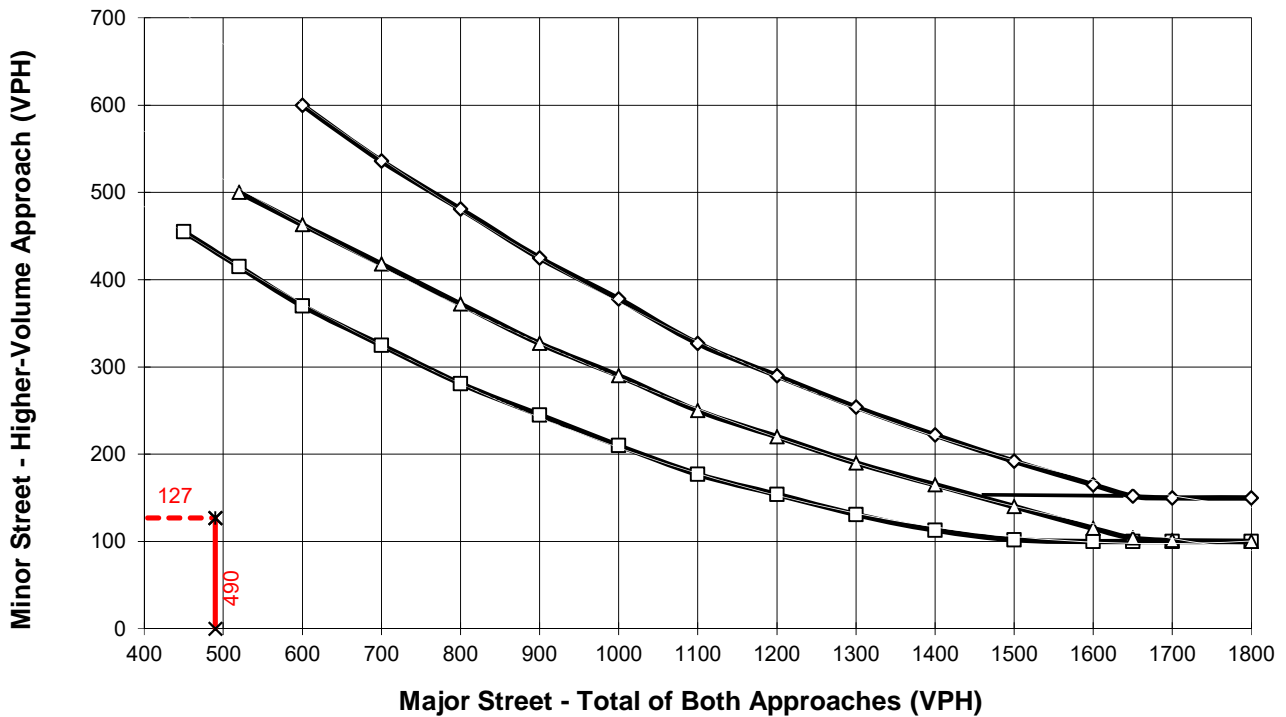
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Cahuilla Drive**

High Volume Approach (VPH) = **127**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- - -x- - - Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



California MUTCD 2014 Edition  
 (FHWA's MUTCD 2009, as amended for use in California)

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **2040 With Project Conditions - Weekday AM Peak Hour**

Major Street Name = **Krameria Avenue**

Total of Both Approaches (VPH) = **1100**

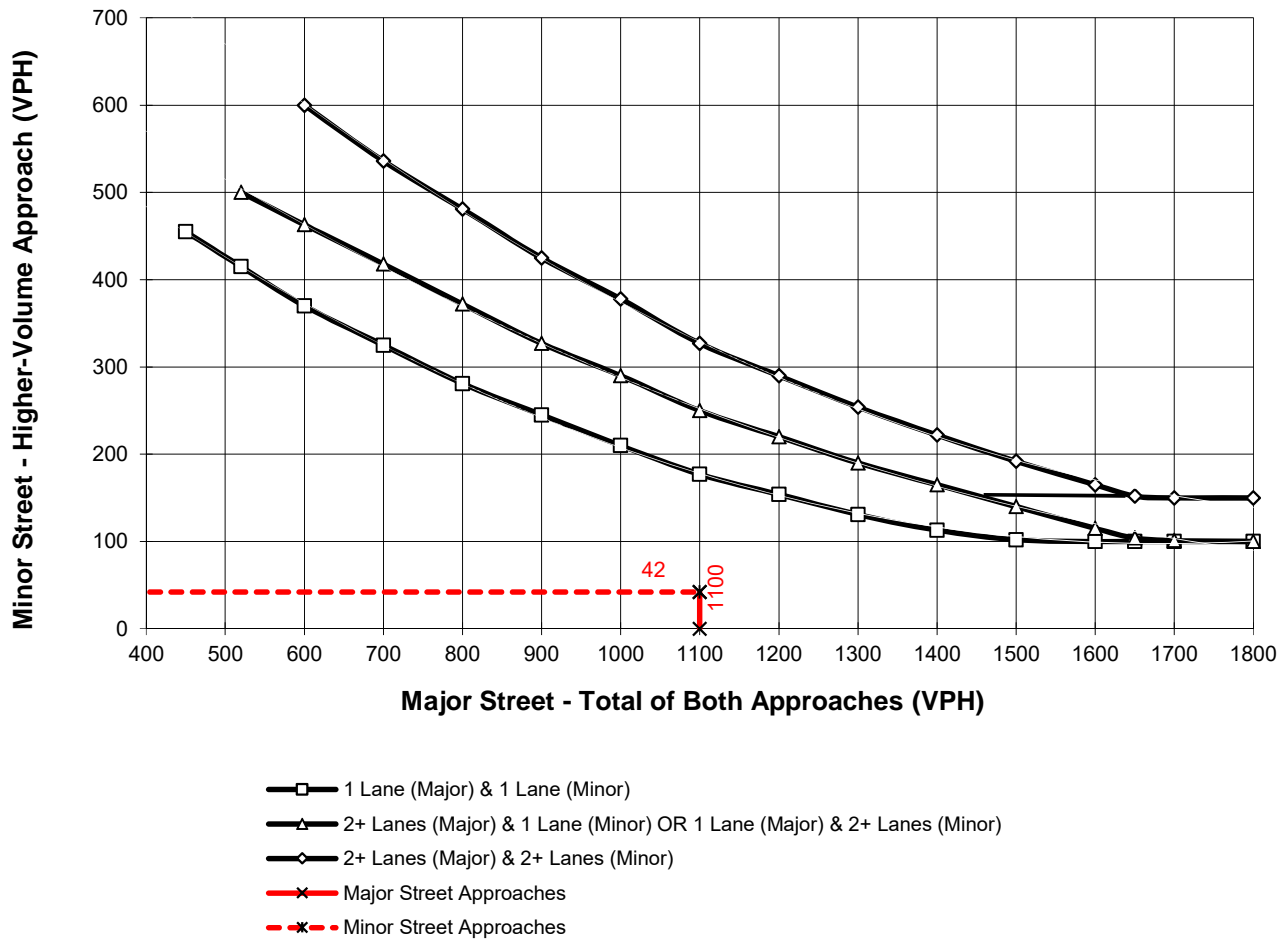
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Quarter Horse Road**

High Volume Approach (VPH) = **42**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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**APPENDIX 7.5:**

**HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS QUEUING ANALYSIS  
WORKSHEETS**

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Queuing and Blocking Report  
 Horizon Year (2040) With Project - AM Peak Hour

10/25/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  | SB   | SB   |
|-----------------------|-----|------|------|
| Directions Served     | R   | T    | T    |
| Maximum Queue (ft)    | 87  | 786  | 760  |
| Average Queue (ft)    | 38  | 351  | 333  |
| 95th Queue (ft)       | 71  | 842  | 809  |
| Link Distance (ft)    | 458 | 1025 | 1025 |
| Upstream Blk Time (%) |     | 0    |      |
| Queuing Penalty (veh) |     | 0    |      |
| Storage Bay Dist (ft) |     |      |      |
| Storage Blk Time (%)  |     |      |      |
| Queuing Penalty (veh) |     |      |      |

Intersection: 5: Lasselle St. & Driveway 1

| Movement              | WB  | SB   | SB   |
|-----------------------|-----|------|------|
| Directions Served     | R   | T    | T    |
| Maximum Queue (ft)    | 65  | 1007 | 1012 |
| Average Queue (ft)    | 25  | 963  | 966  |
| 95th Queue (ft)       | 55  | 1053 | 1053 |
| Link Distance (ft)    | 202 | 975  | 975  |
| Upstream Blk Time (%) |     | 30   | 32   |
| Queuing Penalty (veh) |     | 179  | 193  |
| Storage Bay Dist (ft) |     |      |      |
| Storage Blk Time (%)  |     |      |      |
| Queuing Penalty (veh) |     |      |      |



Queuing and Blocking Report  
Horizon Year (2040) With Project - AM Peak Hour

10/25/2018

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB   | NB   | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T    | T    | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1075 | 1059 | 221 | 322 | 95  | 150 | 1004 | 1002 | 205 | 225 | 287 |
| Average Queue (ft)    | 224 | 1047 | 1017 | 115 | 144 | 40  | 149 | 975  | 974  | 140 | 158 | 241 |
| 95th Queue (ft)       | 226 | 1061 | 1225 | 215 | 267 | 79  | 150 | 993  | 999  | 277 | 264 | 268 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953  | 953  |     |     | 225 |
| Upstream Blk Time (%) |     | 94   | 47   |     | 0   |     |     | 77   | 53   |     | 2   | 56  |
| Queuing Penalty (veh) |     | 0    | 0    |     | 1   |     |     | 0    | 0    |     | 0   | 405 |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |      |      | 180 | 240 |     |
| Storage Blk Time (%)  | 88  | 4    |      | 5   | 1   |     | 73  | 11   | 35   | 0   | 2   | 56  |
| Queuing Penalty (veh) | 286 | 19   |      | 11  | 2   |     | 480 | 51   | 101  | 1   | 12  | 93  |

Intersection: 6: Lasselle St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 266 |
| Average Queue (ft)    | 238 |
| 95th Queue (ft)       | 254 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 56  |
| Queuing Penalty (veh) | 409 |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | EB  | WB | WB  | NB  | SB  |
|-----------------------|----|-----|----|-----|-----|-----|
| Directions Served     | L  | TR  | L  | TR  | LTR | LTR |
| Maximum Queue (ft)    | 35 | 11  | 38 | 37  | 154 | 59  |
| Average Queue (ft)    | 12 | 0   | 11 | 2   | 65  | 27  |
| 95th Queue (ft)       | 34 | 5   | 29 | 24  | 121 | 50  |
| Link Distance (ft)    |    | 401 |    | 282 | 164 | 252 |
| Upstream Blk Time (%) |    |     |    |     | 1   |     |
| Queuing Penalty (veh) |    |     |    |     | 0   |     |
| Storage Bay Dist (ft) | 50 |     | 50 |     |     |     |
| Storage Blk Time (%)  | 0  |     | 0  | 0   |     |     |
| Queuing Penalty (veh) | 0  |     | 0  | 0   |     |     |

Queuing and Blocking Report  
Horizon Year (2040) With Project - AM Peak Hour

10/25/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | WB  | NB | NB  | SB  | SB  |
|-----------------------|-----|-----|----|-----|-----|-----|
| Directions Served     | LTR | LTR | L  | TR  | L   | TR  |
| Maximum Queue (ft)    | 49  | 28  | 42 | 150 | 30  | 73  |
| Average Queue (ft)    | 22  | 13  | 6  | 26  | 4   | 16  |
| 95th Queue (ft)       | 47  | 35  | 28 | 96  | 20  | 53  |
| Link Distance (ft)    | 245 | 150 |    | 658 |     | 453 |
| Upstream Blk Time (%) |     |     |    |     |     |     |
| Queuing Penalty (veh) |     |     |    |     |     |     |
| Storage Bay Dist (ft) |     |     | 50 |     | 100 |     |
| Storage Blk Time (%)  |     |     | 0  | 2   |     | 0   |
| Queuing Penalty (veh) |     |     | 0  | 0   |     | 0   |

Queuing and Blocking Report  
Horizon Year (2040) Without Project - PM Peak Hour

10/24/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  | NB  | SB   | SB   |
|-----------------------|-----|-----|------|------|
| Directions Served     | R   | R   | T    | T    |
| Maximum Queue (ft)    | 95  | 5   | 44   | 33   |
| Average Queue (ft)    | 40  | 0   | 3    | 3    |
| 95th Queue (ft)       | 75  | 4   | 39   | 35   |
| Link Distance (ft)    | 458 |     | 1025 | 1025 |
| Upstream Blk Time (%) |     |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |
| Storage Bay Dist (ft) |     | 140 |      |      |
| Storage Blk Time (%)  |     |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |

Intersection: 5: Lasselle St. & Driveway 1

| Movement              | SB  | SB  |
|-----------------------|-----|-----|
| Directions Served     | T   | T   |
| Maximum Queue (ft)    | 661 | 676 |
| Average Queue (ft)    | 406 | 406 |
| 95th Queue (ft)       | 929 | 917 |
| Link Distance (ft)    | 975 | 975 |
| Upstream Blk Time (%) | 0   | 0   |
| Queuing Penalty (veh) | 2   | 2   |
| Storage Bay Dist (ft) |     |     |
| Storage Blk Time (%)  |     |     |
| Queuing Penalty (veh) |     |     |

Queuing and Blocking Report  
Horizon Year (2040) Without Project - PM Peak Hour

10/24/2018

Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T   | T   | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1072 | 1062 | 148 | 97  | 59  | 150 | 432 | 409 | 205 | 224 | 263 |
| Average Queue (ft)    | 224 | 1047 | 890  | 72  | 35  | 24  | 119 | 230 | 198 | 39  | 118 | 232 |
| 95th Queue (ft)       | 224 | 1060 | 1426 | 132 | 78  | 51  | 182 | 365 | 322 | 143 | 222 | 264 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953 | 953 |     |     | 225 |
| Upstream Blk Time (%) |     | 96   | 29   |     |     |     |     |     |     |     | 0   | 29  |
| Queuing Penalty (veh) |     | 0    | 0    |     |     |     |     |     |     |     | 0   | 238 |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |     |     | 180 | 240 |     |
| Storage Blk Time (%)  | 94  | 2    |      | 0   |     |     | 11  | 20  | 6   | 0   | 0   | 29  |
| Queuing Penalty (veh) | 69  | 6    |      | 0   |     |     | 60  | 30  | 5   | 0   | 1   | 40  |

Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 256 |
| Average Queue (ft)    | 232 |
| 95th Queue (ft)       | 264 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 31  |
| Queuing Penalty (veh) | 255 |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | EB  | WB | NB  |
|-----------------------|----|-----|----|-----|
| Directions Served     | L  | TR  | L  | LTR |
| Maximum Queue (ft)    | 27 | 3   | 17 | 67  |
| Average Queue (ft)    | 4  | 0   | 1  | 32  |
| 95th Queue (ft)       | 20 | 2   | 7  | 56  |
| Link Distance (ft)    |    | 401 |    | 164 |
| Upstream Blk Time (%) |    |     |    |     |
| Queuing Penalty (veh) |    |     |    |     |
| Storage Bay Dist (ft) | 50 |     | 50 |     |
| Storage Blk Time (%)  |    |     |    |     |
| Queuing Penalty (veh) |    |     |    |     |

Queuing and Blocking Report  
 Horizon Year (2040) Without Project - PM Peak Hour

10/24/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | NB |
|-----------------------|-----|----|
| Directions Served     | LTR | L  |
| Maximum Queue (ft)    | 31  | 6  |
| Average Queue (ft)    | 13  | 0  |
| 95th Queue (ft)       | 37  | 4  |
| Link Distance (ft)    | 245 |    |
| Upstream Blk Time (%) |     |    |
| Queuing Penalty (veh) |     |    |
| Storage Bay Dist (ft) | 50  |    |
| Storage Blk Time (%)  |     |    |
| Queuing Penalty (veh) |     |    |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | EB  | EB  | EB   | EB   | EB   | EB  | WB  | WB   | WB   | WB  | WB  | NB  |
|-----------------------|-----|-----|------|------|------|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | L   | T    | T    | T    | R   | L   | L    | T    | T   | R   | L   |
| Maximum Queue (ft)    | 241 | 293 | 330  | 327  | 301  | 287 | 130 | 298  | 402  | 406 | 225 | 203 |
| Average Queue (ft)    | 158 | 174 | 226  | 231  | 211  | 104 | 37  | 94   | 255  | 253 | 186 | 109 |
| 95th Queue (ft)       | 230 | 254 | 305  | 302  | 283  | 233 | 96  | 207  | 361  | 380 | 267 | 195 |
| Link Distance (ft)    |     |     | 2427 | 2427 | 2427 |     |     | 1304 | 1304 |     |     |     |
| Upstream Blk Time (%) |     |     |      |      |      |     |     |      |      |     |     |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |      |      |     |     |     |
| Storage Bay Dist (ft) | 325 | 325 |      |      |      | 300 | 310 | 310  |      |     | 200 | 200 |
| Storage Blk Time (%)  |     |     | 0    | 0    | 0    | 0   |     |      | 3    | 11  | 6   | 0   |
| Queuing Penalty (veh) |     |     | 0    | 1    | 2    | 0   |     |      | 3    | 46  | 21  | 0   |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | NB   | NB  | NB   | NB   | SB  | SB  | SB   | SB   | SB  |  |  |
|-----------------------|------|-----|------|------|-----|-----|------|------|-----|--|--|
| Directions Served     | L    | T   | T    | R    | L   | L   | T    | T    | R   |  |  |
| Maximum Queue (ft)    | 225  | 312 | 269  | 86   | 227 | 240 | 2351 | 2349 | 240 |  |  |
| Average Queue (ft)    | 158  | 185 | 162  | 30   | 226 | 239 | 2320 | 2315 | 172 |  |  |
| 95th Queue (ft)       | 226  | 275 | 245  | 64   | 230 | 239 | 2338 | 2332 | 302 |  |  |
| Link Distance (ft)    | 1103 |     | 1103 | 1103 |     |     | 2298 | 2298 |     |  |  |
| Upstream Blk Time (%) |      |     |      |      |     |     | 88   | 43   |     |  |  |
| Queuing Penalty (veh) |      |     |      |      |     |     | 0    | 0    |     |  |  |
| Storage Bay Dist (ft) | 200  |     |      |      | 215 | 215 |      |      | 215 |  |  |
| Storage Blk Time (%)  | 1    | 5   |      |      | 22  | 76  | 9    | 14   | 1   |  |  |
| Queuing Penalty (veh) | 5    | 14  |      |      | 95  | 331 | 51   | 53   | 5   |  |  |

Network Summary

Network wide Queuing Penalty: 1336



**APPENDIX 7.6:**

**HORIZON YEAR (2040) WITH PROJECT CONDITIONS QUEUING ANALYSIS**

**WORKSHEETS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Queuing and Blocking Report  
 Horizon Year (2040) With Project - AM Peak Hour

10/24/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  | NB  | SB   | SB   |
|-----------------------|-----|-----|------|------|
| Directions Served     | R   | R   | T    | T    |
| Maximum Queue (ft)    | 81  | 11  | 897  | 874  |
| Average Queue (ft)    | 34  | 0   | 518  | 502  |
| 95th Queue (ft)       | 67  | 8   | 1108 | 1086 |
| Link Distance (ft)    | 458 |     | 1025 | 1025 |
| Upstream Blk Time (%) |     |     | 13   | 12   |
| Queuing Penalty (veh) |     |     | 0    | 0    |
| Storage Bay Dist (ft) |     | 140 |      |      |
| Storage Blk Time (%)  |     |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |

Intersection: 5: Lasselle St. & Driveway 1

| Movement              | WB  | NB  | SB   | SB   |
|-----------------------|-----|-----|------|------|
| Directions Served     | R   | T   | T    | T    |
| Maximum Queue (ft)    | 77  | 17  | 1024 | 1017 |
| Average Queue (ft)    | 26  | 1   | 956  | 953  |
| 95th Queue (ft)       | 57  | 9   | 1090 | 1094 |
| Link Distance (ft)    | 202 | 225 | 975  | 975  |
| Upstream Blk Time (%) |     |     | 34   | 38   |
| Queuing Penalty (veh) |     |     | 207  | 230  |
| Storage Bay Dist (ft) |     |     |      |      |
| Storage Blk Time (%)  |     |     |      |      |
| Queuing Penalty (veh) |     |     |      |      |

Queuing and Blocking Report  
Horizon Year (2040) With Project - AM Peak Hour

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Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB   | NB   | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T    | T    | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1072 | 1062 | 224 | 279 | 104 | 150 | 1007 | 1010 | 205 | 225 | 294 |
| Average Queue (ft)    | 224 | 1047 | 1034 | 118 | 130 | 42  | 149 | 976  | 974  | 145 | 179 | 250 |
| 95th Queue (ft)       | 225 | 1060 | 1102 | 218 | 224 | 81  | 150 | 997  | 997  | 283 | 273 | 285 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953  | 953  |     |     | 225 |
| Upstream Blk Time (%) |     | 95   | 45   |     |     |     |     | 75   | 53   |     | 13  | 59  |
| Queuing Penalty (veh) |     | 0    | 0    |     |     |     |     | 0    | 0    |     | 0   | 431 |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |      |      | 180 | 240 |     |
| Storage Blk Time (%)  | 90  | 5    |      | 5   | 1   |     | 71  | 13   | 39   | 0   | 13  | 59  |
| Queuing Penalty (veh) | 291 | 20   |      | 11  | 2   |     | 467 | 61   | 111  | 1   | 61  | 99  |

Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 277 |
| Average Queue (ft)    | 241 |
| 95th Queue (ft)       | 260 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 54  |
| Queuing Penalty (veh) | 394 |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | EB  | WB | NB  | SB  |
|-----------------------|----|-----|----|-----|-----|
| Directions Served     | L  | TR  | L  | LTR | LTR |
| Maximum Queue (ft)    | 47 | 9   | 26 | 130 | 71  |
| Average Queue (ft)    | 13 | 0   | 9  | 61  | 27  |
| 95th Queue (ft)       | 37 | 4   | 24 | 105 | 55  |
| Link Distance (ft)    |    | 401 |    | 164 | 252 |
| Upstream Blk Time (%) |    |     |    | 0   |     |
| Queuing Penalty (veh) |    |     |    | 0   |     |
| Storage Bay Dist (ft) | 50 |     | 50 |     |     |
| Storage Blk Time (%)  | 0  |     | 0  |     |     |
| Queuing Penalty (veh) | 2  |     | 0  |     |     |

Queuing and Blocking Report  
 Horizon Year (2040) With Project - AM Peak Hour

10/24/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | WB  | NB | NB  | SB  | SB  |
|-----------------------|-----|-----|----|-----|-----|-----|
| Directions Served     | LTR | LTR | L  | TR  | L   | TR  |
| Maximum Queue (ft)    | 53  | 49  | 41 | 151 | 30  | 64  |
| Average Queue (ft)    | 20  | 13  | 9  | 25  | 4   | 13  |
| 95th Queue (ft)       | 47  | 37  | 32 | 86  | 20  | 45  |
| Link Distance (ft)    | 245 | 150 |    | 658 |     | 453 |
| Upstream Blk Time (%) |     |     |    |     |     |     |
| Queuing Penalty (veh) |     |     |    |     |     |     |
| Storage Bay Dist (ft) |     |     | 50 |     | 100 |     |
| Storage Blk Time (%)  |     |     | 0  | 1   |     |     |
| Queuing Penalty (veh) |     |     | 0  | 0   |     |     |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | EB  | EB  | EB   | EB   | EB   | EB  | WB  | WB  | WB   | WB   | WB  | NB  |
|-----------------------|-----|-----|------|------|------|-----|-----|-----|------|------|-----|-----|
| Directions Served     | L   | L   | T    | T    | T    | R   | L   | L   | T    | T    | R   | L   |
| Maximum Queue (ft)    | 308 | 318 | 381  | 342  | 127  | 84  | 64  | 335 | 1350 | 1356 | 225 | 212 |
| Average Queue (ft)    | 218 | 232 | 111  | 98   | 48   | 14  | 22  | 154 | 1319 | 1326 | 222 | 206 |
| 95th Queue (ft)       | 339 | 350 | 261  | 214  | 102  | 58  | 55  | 397 | 1344 | 1345 | 252 | 230 |
| Link Distance (ft)    |     |     | 2427 | 2427 | 2427 |     |     |     | 1304 | 1304 |     |     |
| Upstream Blk Time (%) |     |     |      |      |      |     |     | 34  | 73   |      |     |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     | 0   | 0    |      |     |     |
| Storage Bay Dist (ft) | 325 | 325 |      |      |      | 300 | 310 | 310 |      |      | 200 | 200 |
| Storage Blk Time (%)  | 1   | 3   |      |      |      |     |     | 0   | 55   | 50   | 19  | 38  |
| Queuing Penalty (veh) | 1   | 6   |      |      |      |     |     | 0   | 50   | 330  | 145 | 185 |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | NB  | NB   | NB   | NB   | SB  | SB  | SB   | SB   | SB  |
|-----------------------|-----|------|------|------|-----|-----|------|------|-----|
| Directions Served     | L   | T    | T    | R    | L   | L   | T    | T    | R   |
| Maximum Queue (ft)    | 225 | 1152 | 1142 | 1127 | 227 | 240 | 2176 | 2180 | 240 |
| Average Queue (ft)    | 223 | 1123 | 1116 | 994  | 225 | 239 | 1870 | 1845 | 236 |
| 95th Queue (ft)       | 239 | 1141 | 1137 | 1525 | 232 | 240 | 2666 | 2658 | 268 |
| Link Distance (ft)    |     | 1103 | 1103 | 1103 |     |     | 2298 | 2298 |     |
| Upstream Blk Time (%) |     | 84   | 44   | 23   |     |     | 25   | 28   |     |
| Queuing Penalty (veh) |     | 0    | 0    | 0    |     |     | 0    | 0    |     |
| Storage Bay Dist (ft) | 200 |      |      |      | 215 | 215 |      |      | 215 |
| Storage Blk Time (%)  | 59  | 36   |      |      | 23  | 80  | 8    | 13   | 42  |
| Queuing Penalty (veh) | 285 | 184  |      |      | 70  | 249 | 33   | 64   | 130 |

Network Summary

Network wide Queuing Penalty: 4119



Queuing and Blocking Report  
 Horizon Year (2040) With Project - PM Peak Hour

10/24/2018

Intersection: 4: Lasselle St. & Cahuillia Dr.

| Movement              | WB  | SB   | SB   |
|-----------------------|-----|------|------|
| Directions Served     | R   | T    | T    |
| Maximum Queue (ft)    | 92  | 84   | 62   |
| Average Queue (ft)    | 40  | 5    | 3    |
| 95th Queue (ft)       | 74  | 55   | 46   |
| Link Distance (ft)    | 458 | 1025 | 1025 |
| Upstream Blk Time (%) |     |      |      |
| Queuing Penalty (veh) |     |      |      |
| Storage Bay Dist (ft) |     |      |      |
| Storage Blk Time (%)  |     |      |      |
| Queuing Penalty (veh) |     |      |      |

Intersection: 5: Lasselle St. & Driveway 1

| Movement              | WB  | NB  | SB  | SB  |
|-----------------------|-----|-----|-----|-----|
| Directions Served     | R   | TR  | T   | T   |
| Maximum Queue (ft)    | 67  | 10  | 802 | 784 |
| Average Queue (ft)    | 32  | 0   | 482 | 482 |
| 95th Queue (ft)       | 60  | 7   | 931 | 928 |
| Link Distance (ft)    | 202 | 225 | 975 | 975 |
| Upstream Blk Time (%) |     |     | 0   | 0   |
| Queuing Penalty (veh) |     |     | 2   | 2   |
| Storage Bay Dist (ft) |     |     |     |     |
| Storage Blk Time (%)  |     |     |     |     |
| Queuing Penalty (veh) |     |     |     |     |

Queuing and Blocking Report  
 Horizon Year (2040) With Project - PM Peak Hour

10/24/2018

Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | EB  | EB   | EB   | WB  | WB  | WB  | NB  | NB  | NB  | NB  | SB  | SB  |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Directions Served     | L   | T    | R    | L   | T   | R   | L   | T   | T   | R   | L   | T   |
| Maximum Queue (ft)    | 225 | 1076 | 1054 | 176 | 147 | 77  | 149 | 400 | 355 | 205 | 225 | 277 |
| Average Queue (ft)    | 224 | 1047 | 944  | 78  | 48  | 27  | 114 | 230 | 200 | 41  | 138 | 239 |
| 95th Queue (ft)       | 224 | 1062 | 1374 | 148 | 102 | 58  | 178 | 363 | 325 | 151 | 239 | 268 |
| Link Distance (ft)    |     | 1029 | 1029 |     | 401 | 401 |     | 953 | 953 |     |     | 225 |
| Upstream Blk Time (%) |     | 97   | 33   |     |     |     |     |     |     |     | 1   | 35  |
| Queuing Penalty (veh) |     | 0    | 0    |     |     |     |     |     |     |     | 0   | 292 |
| Storage Bay Dist (ft) | 200 |      |      | 200 |     |     | 125 |     |     | 180 | 240 |     |
| Storage Blk Time (%)  | 95  | 2    |      | 0   |     |     | 7   | 24  | 10  | 0   | 1   | 35  |
| Queuing Penalty (veh) | 85  | 6    |      | 0   |     |     | 37  | 35  | 8   | 0   | 8   | 62  |

Intersection: 6: Lasselie St. & Krameria Av.

| Movement              | SB  |
|-----------------------|-----|
| Directions Served     | TR  |
| Maximum Queue (ft)    | 264 |
| Average Queue (ft)    | 238 |
| 95th Queue (ft)       | 259 |
| Link Distance (ft)    | 225 |
| Upstream Blk Time (%) | 36  |
| Queuing Penalty (veh) | 303 |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

Intersection: 7: Colt Wy./Driveway 2 & Krameria Av.

| Movement              | EB | EB  | WB | NB  | SB  |
|-----------------------|----|-----|----|-----|-----|
| Directions Served     | L  | TR  | L  | LTR | LTR |
| Maximum Queue (ft)    | 40 | 8   | 21 | 78  | 57  |
| Average Queue (ft)    | 8  | 0   | 1  | 35  | 24  |
| 95th Queue (ft)       | 30 | 4   | 9  | 65  | 49  |
| Link Distance (ft)    |    | 401 |    | 164 | 252 |
| Upstream Blk Time (%) |    |     |    |     |     |
| Queuing Penalty (veh) |    |     |    |     |     |
| Storage Bay Dist (ft) | 50 |     | 50 |     |     |
| Storage Blk Time (%)  | 0  |     | 0  |     |     |
| Queuing Penalty (veh) | 0  |     | 0  |     |     |

Queuing and Blocking Report  
 Horizon Year (2040) With Project - PM Peak Hour

10/24/2018

Intersection: 9: Krameria Av. & Driveway/Quarter Horse Rd.

| Movement              | EB  | NB |
|-----------------------|-----|----|
| Directions Served     | LTR | L  |
| Maximum Queue (ft)    | 36  | 28 |
| Average Queue (ft)    | 17  | 2  |
| 95th Queue (ft)       | 43  | 12 |
| Link Distance (ft)    | 245 |    |
| Upstream Blk Time (%) |     |    |
| Queuing Penalty (veh) |     |    |
| Storage Bay Dist (ft) | 50  |    |
| Storage Blk Time (%)  |     |    |
| Queuing Penalty (veh) |     |    |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | EB  | EB  | EB   | EB   | EB   | EB  | WB  | WB   | WB   | WB  | WB  | NB  |
|-----------------------|-----|-----|------|------|------|-----|-----|------|------|-----|-----|-----|
| Directions Served     | L   | L   | T    | T    | T    | R   | L   | L    | T    | T   | R   | L   |
| Maximum Queue (ft)    | 293 | 304 | 314  | 332  | 306  | 292 | 126 | 334  | 463  | 494 | 225 | 195 |
| Average Queue (ft)    | 177 | 191 | 228  | 231  | 211  | 105 | 31  | 91   | 266  | 274 | 188 | 108 |
| 95th Queue (ft)       | 265 | 279 | 302  | 307  | 284  | 219 | 80  | 225  | 393  | 430 | 280 | 203 |
| Link Distance (ft)    |     |     | 2427 | 2427 | 2427 |     |     | 1304 | 1304 |     |     |     |
| Upstream Blk Time (%) |     |     |      |      |      |     |     |      |      |     |     |     |
| Queuing Penalty (veh) |     |     |      |      |      |     |     |      |      |     |     |     |
| Storage Bay Dist (ft) | 325 | 325 |      |      |      | 300 | 310 | 310  |      |     | 200 | 200 |
| Storage Blk Time (%)  | 0   | 0   | 0    |      | 0    | 0   |     | 0    | 4    | 13  | 7   | 0   |
| Queuing Penalty (veh) | 0   | 1   | 0    |      | 1    | 0   |     | 0    | 4    | 57  | 27  | 0   |

Intersection: 10: Evans Rd. & Ramona Exwy.

| Movement              | NB   | NB  | NB   | NB   | SB  | SB  | SB   | SB   | SB  |  |  |
|-----------------------|------|-----|------|------|-----|-----|------|------|-----|--|--|
| Directions Served     | L    | T   | T    | R    | L   | L   | T    | T    | R   |  |  |
| Maximum Queue (ft)    | 224  | 330 | 284  | 84   | 227 | 240 | 2352 | 2354 | 240 |  |  |
| Average Queue (ft)    | 154  | 193 | 168  | 32   | 225 | 239 | 2319 | 2318 | 173 |  |  |
| 95th Queue (ft)       | 229  | 286 | 249  | 67   | 234 | 240 | 2338 | 2335 | 304 |  |  |
| Link Distance (ft)    | 1103 |     | 1103 | 1103 |     |     | 2298 | 2298 |     |  |  |
| Upstream Blk Time (%) |      |     |      |      |     |     | 87   | 50   |     |  |  |
| Queuing Penalty (veh) |      |     |      |      |     |     | 0    | 0    |     |  |  |
| Storage Bay Dist (ft) | 200  |     |      |      | 215 | 215 |      |      | 215 |  |  |
| Storage Blk Time (%)  | 2    | 6   |      |      | 21  | 75  | 7    | 13   | 2   |  |  |
| Queuing Penalty (veh) | 6    | 16  |      |      | 93  | 328 | 37   | 50   | 7   |  |  |

Network Summary

Network wide Queuing Penalty: 1468

**APPENDIX 7.7:**

**HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS  
ANALYSIS WORKSHEETS WITH IMPROVEMENTS**

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

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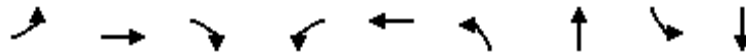
Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Timings  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

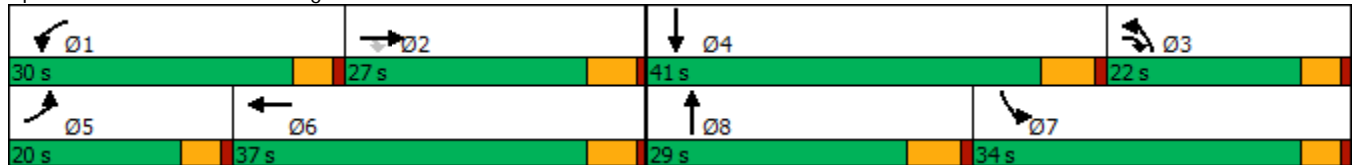


| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↶     | ↷     | ↷     | ↶     | ↷     | ↶     | ↷     | ↶     | ↷     |
| Traffic Volume (vph) | 102   | 643   | 254   | 196   | 754   | 264   | 505   | 336   | 600   |
| Future Volume (vph)  | 102   | 643   | 254   | 196   | 754   | 264   | 505   | 336   | 600   |
| Turn Type            | Prot  | NA    | pm+ov | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 3     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     | 2     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 3     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 15.4  | 9.6   | 9.6   | 15.4  | 9.6   | 15.8  | 9.6   | 15.8  |
| Total Split (s)      | 20.0  | 27.0  | 22.0  | 30.0  | 37.0  | 22.0  | 29.0  | 34.0  | 41.0  |
| Total Split (%)      | 16.7% | 22.5% | 18.3% | 25.0% | 30.8% | 18.3% | 24.2% | 28.3% | 34.2% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.6   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.8  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Kitching St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Volume (veh/h)       | 102  | 643  | 254  | 196  | 754  | 241  | 264  | 505  | 275  | 336  | 600  | 122  |
| Future Volume (veh/h)        | 102  | 643  | 254  | 196  | 754  | 241  | 264  | 505  | 275  | 336  | 600  | 122  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |      | 0.96 | 1.00 |      | 1.00 | 1.00 |      | 0.98 | 1.00 |      | 0.97 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        |      | No   |      |      | No   |      |      | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1945 | 1945 | 1870 | 1945 | 1945 | 1945 | 1945 | 1945 | 1945 | 1945 | 1945 |
| Adj Flow Rate, veh/h         | 116  | 731  | 158  | 223  | 857  | 110  | 300  | 574  | 171  | 382  | 682  | 75   |
| Peak Hour Factor             | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 153  | 899  | 679  | 262  | 987  | 127  | 389  | 673  | 200  | 418  | 858  | 94   |
| Arrive On Green              | 0.15 | 0.40 | 0.38 | 0.26 | 0.51 | 0.49 | 0.37 | 0.41 | 0.38 | 0.39 | 0.44 | 0.41 |
| Sat Flow, veh/h              | 1781 | 3890 | 1578 | 1781 | 3377 | 433  | 1853 | 2866 | 851  | 1853 | 3431 | 377  |
| Grp Volume(v), veh/h         | 116  | 731  | 158  | 223  | 494  | 473  | 300  | 389  | 356  | 382  | 386  | 371  |
| Grp Sat Flow(s),veh/h/ln     | 1781 | 1945 | 1578 | 1781 | 1945 | 1865 | 1853 | 1945 | 1772 | 1853 | 1945 | 1863 |
| Q Serve(g_s), s              | 6.2  | 16.5 | 1.8  | 11.8 | 22.1 | 22.1 | 14.1 | 18.0 | 18.2 | 19.3 | 17.0 | 17.1 |
| Cycle Q Clear(g_c), s        | 6.2  | 16.5 | 1.8  | 11.8 | 22.1 | 22.1 | 14.1 | 18.0 | 18.2 | 19.3 | 17.0 | 17.1 |
| Prop In Lane                 | 1.00 |      | 1.00 | 1.00 |      | 0.23 | 1.00 |      | 0.48 | 1.00 |      | 0.20 |
| Lane Grp Cap(c), veh/h       | 153  | 899  | 679  | 262  | 569  | 545  | 389  | 457  | 416  | 418  | 486  | 466  |
| V/C Ratio(X)                 | 0.76 | 0.81 | 0.23 | 0.85 | 0.87 | 0.87 | 0.77 | 0.85 | 0.86 | 0.91 | 0.79 | 0.80 |
| Avail Cap(c_a), veh/h        | 288  | 904  | 681  | 468  | 648  | 621  | 389  | 491  | 447  | 561  | 727  | 696  |
| HCM Platoon Ratio            | 1.75 | 1.75 | 1.75 | 1.75 | 1.75 | 1.75 | 1.75 | 1.75 | 1.75 | 1.75 | 1.75 | 1.75 |
| Upstream Filter(I)           | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 41.1 | 27.6 | 5.1  | 35.7 | 22.5 | 22.8 | 29.2 | 27.6 | 28.4 | 29.1 | 25.7 | 26.0 |
| Incr Delay (d2), s/veh       | 2.9  | 5.7  | 0.2  | 3.0  | 11.0 | 11.4 | 8.3  | 12.8 | 14.3 | 14.0 | 3.7  | 3.9  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 2.6  | 6.6  | 0.6  | 4.6  | 8.5  | 8.3  | 5.9  | 7.8  | 7.5  | 7.9  | 6.3  | 6.1  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 43.9 | 33.3 | 5.3  | 38.7 | 33.5 | 34.2 | 37.5 | 40.4 | 42.7 | 43.1 | 29.3 | 29.9 |
| LnGrp LOS                    | D    | C    | A    | D    | C    | C    | D    | D    | D    | D    | C    | C    |
| Approach Vol, veh/h          |      | 1005 |      |      | 1190 |      |      | 1045 |      |      | 1139 |      |
| Approach Delay, s/veh        |      | 30.1 |      |      | 34.8 |      |      | 40.4 |      |      | 34.1 |      |
| Approach LOS                 |      | C    |      |      | C    |      |      | D    |      |      | C    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 18.6 | 26.9 | 24.8 | 28.8 | 12.5 | 32.9 | 26.3 | 27.2 |      |      |      |      |
| Change Period (Y+Rc), s      | 4.6  | 5.4  | 4.6  | 5.8  | 4.6  | 5.4  | 4.6  | 5.8  |      |      |      |      |
| Max Green Setting (Gmax), s  | 25.4 | 21.6 | 17.4 | 35.2 | 15.4 | 31.6 | 29.4 | 23.2 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s | 13.8 | 18.5 | 16.1 | 19.1 | 8.2  | 24.1 | 21.3 | 20.2 |      |      |      |      |
| Green Ext Time (p_c), s      | 0.2  | 1.5  | 0.1  | 3.9  | 0.1  | 3.4  | 0.4  | 1.3  |      |      |      |      |
| <b>Intersection Summary</b>  |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 34.9 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | C    |      |      |      |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

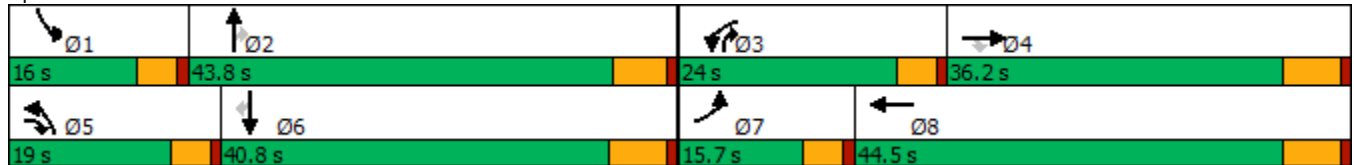


| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↑↑↑   | ↗     | ↖↗    | ↑↑↑   | ↖↗    | ↑↑    | ↗     | ↖↗    | ↑↑    | ↗     |
| Traffic Volume (vph) | 184   | 681   | 434   | 689   | 908   | 492   | 808   | 657   | 303   | 826   | 156   |
| Future Volume (vph)  | 184   | 681   | 434   | 689   | 908   | 492   | 808   | 657   | 303   | 826   | 156   |
| Turn Type            | Prot  | NA    | pm+ov | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     | 5     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       | 6     |
| Detector Phase       | 7     | 4     | 5     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |
| Total Split (s)      | 15.7  | 36.2  | 19.0  | 24.0  | 44.5  | 19.0  | 43.8  | 24.0  | 16.0  | 40.8  | 40.8  |
| Total Split (%)      | 13.1% | 30.2% | 15.8% | 20.0% | 37.1% | 15.8% | 36.5% | 20.0% | 13.3% | 34.0% | 34.0% |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -2.2  | 0.0   | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.6   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 110.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Lasselle St. & Iris Av.



HCM 6th Signalized Intersection Summary  
 3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL  | EBT   | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR  |
|--|------|-------|------|-------|------|------|-------|------|------|------|------|------|
| Lane Configurations  |      |       |      |       |      |      |       |      |      |      |      |      |
| Traffic Volume (veh/h)   | 184  | 681   | 434  | 689   | 908  | 178  | 492   | 808  | 657  | 303  | 826  | 156  |
| Future Volume (veh/h)  | 184  | 681   | 434  | 689   | 908  | 178  | 492   | 808  | 657  | 303  | 826  | 156  |
| Initial Q (Qb), veh  | 0    | 0     | 0    | 0     | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 1.00 | 1.00  |      | 0.98 | 1.00  |      | 0.98 | 1.00 |      | 0.95 |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  |      | No    |      |       | No   |      |       | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 207  | 765   | 227  | 774   | 1020 | 101  | 553   | 908  | 396  | 340  | 928  | 115  |
| Peak Hour Factor   | 0.89 | 0.89  | 0.89 | 0.89  | 0.89 | 0.89 | 0.89  | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2     | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 288  | 1258  | 531  | 649   | 1634 | 161  | 487   | 1252 | 791  | 390  | 1163 | 470  |
| Arrive On Green  | 0.10 | 0.28  | 0.26 | 0.23  | 0.41 | 0.38 | 0.17  | 0.42 | 0.40 | 0.14 | 0.39 | 0.39 |
| Sat Flow, veh/h  | 3563 | 5611  | 1580 | 3563  | 5016 | 496  | 3563  | 3741 | 1551 | 3563 | 3741 | 1512 |
| Grp Volume(v), veh/h   | 207  | 765   | 227  | 774   | 760  | 361  | 553   | 908  | 396  | 340  | 928  | 115  |
| Grp Sat Flow(s),veh/h/ln   | 1781 | 1870  | 1580 | 1781  | 1870 | 1771 | 1781  | 1870 | 1551 | 1781 | 1870 | 1512 |
| Q Serve(g_s), s  | 6.2  | 13.0  | 11.9 | 20.0  | 17.7 | 17.9 | 15.0  | 22.2 | 17.9 | 10.3 | 24.1 | 5.6  |
| Cycle Q Clear(g_c), s  | 6.2  | 13.0  | 11.9 | 20.0  | 17.7 | 17.9 | 15.0  | 22.2 | 17.9 | 10.3 | 24.1 | 5.6  |
| Prop In Lane   | 1.00 |       | 1.00 | 1.00  |      | 0.28 | 1.00  |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h   | 288  | 1258  | 531  | 649   | 1218 | 577  | 487   | 1252 | 791  | 390  | 1163 | 470  |
| V/C Ratio(X)   | 0.72 | 0.61  | 0.43 | 1.19  | 0.62 | 0.63 | 1.14  | 0.73 | 0.50 | 0.87 | 0.80 | 0.24 |
| Avail Cap(c_a), veh/h  | 380  | 1647  | 640  | 649   | 1381 | 654  | 487   | 1357 | 835  | 390  | 1255 | 507  |
| HCM Platoon Ratio  | 1.25 | 1.25  | 1.25 | 1.25  | 1.25 | 1.25 | 1.25  | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Upstream Filter(I)   | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 48.1 | 35.3  | 26.4 | 42.4  | 27.2 | 27.6 | 45.5  | 27.7 | 15.7 | 46.6 | 30.5 | 24.8 |
| Incr Delay (d2), s/veh   | 2.6  | 0.5   | 0.5  | 101.1 | 0.7  | 1.5  | 83.5  | 1.8  | 0.5  | 18.4 | 3.5  | 0.3  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 2.7  | 5.4   | 4.1  | 17.0  | 6.9  | 6.8  | 11.8  | 8.9  | 5.2  | 5.2  | 9.9  | 1.9  |
| Unsig. Movement Delay, s/veh   |      |       |      |       |      |      |       |      |      |      |      |      |
| LnGrp Delay(d),s/veh   | 50.7 | 35.8  | 26.9 | 143.4 | 27.9 | 29.1 | 129.0 | 29.5 | 16.2 | 65.0 | 34.0 | 25.1 |
| LnGrp LOS  | D    | D     | C    | F     | C    | C    | F     | C    | B    | E    | C    | C    |
| Approach Vol, veh/h  |      | 1199  |      |       | 1895 |      |       | 1857 |      |      | 1383 |      |
| Approach Delay, s/veh  |      | 36.7  |      |       | 75.3 |      |       | 56.3 |      |      | 40.8 |      |
| Approach LOS   |      | D     |      |       | E    |      |       | E    |      |      | D    |      |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4     | 5    | 6    | 7     | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 16.0 | 41.1  | 24.0 | 28.6  | 19.0 | 38.1 | 12.9  | 39.7 |      |      |      |      |
| Change Period (Y+Rc), s  | 4.6  | * 6.2 | 4.6  | 6.2   | 4.6  | 6.2  | 4.6   | 6.2  |      |      |      |      |
| Max Green Setting (Gmax), s  | 11.4 | * 38  | 19.4 | 30.0  | 14.4 | 34.6 | 11.1  | 38.3 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 12.3 | 24.2  | 22.0 | 15.0  | 17.0 | 26.1 | 8.2   | 19.9 |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0  | 6.2   | 0.0  | 4.8   | 0.0  | 3.9  | 0.1   | 6.5  |      |      |      |      |
| <b>Intersection Summary</b>  |      |       |      |       |      |      |       |      |      |      |      |      |
| HCM 6th Ctrl Delay   |      |       |      | 54.9  |      |      |       |      |      |      |      |      |
| HCM 6th LOS  |      |       |      | D     |      |      |       |      |      |      |      |      |
| <b>Notes</b>   |      |       |      |       |      |      |       |      |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |       |      |      |       |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings

Continental Villages (JN 11575)

6: Lasselie St. & Krameria Av.

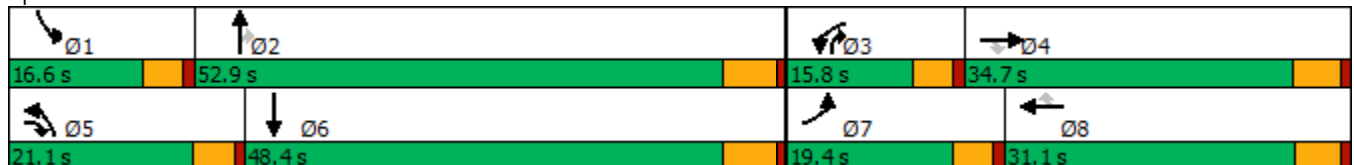
10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Traffic Volume (vph) | 427   | 324   | 447   | 156   | 222   | 107   | 457   | 1314  | 288   | 167   | 971   |
| Future Volume (vph)  | 427   | 324   | 447   | 156   | 222   | 107   | 457   | 1314  | 288   | 167   | 971   |
| Turn Type            | Prot  | NA    | pm+ov | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 5     | 3     | 8     |       | 5     | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 5     | 3     | 8     | 8     | 5     | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 9.6   | 31.1  | 31.1  | 9.6   | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 19.4  | 34.7  | 21.1  | 15.8  | 31.1  | 31.1  | 21.1  | 52.9  | 15.8  | 16.6  | 48.4  |
| Total Split (%)      | 16.2% | 28.9% | 17.6% | 13.2% | 25.9% | 25.9% | 17.6% | 44.1% | 13.2% | 13.8% | 40.3% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 3.6   | 4.1   | 4.1   | 3.6   | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6  | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.6   | 4.0   | 4.0   | 5.1   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 114.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Lasselie St. & Krameria Av.





HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

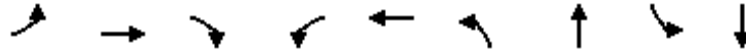
| Movement   | EBL  | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL   | SBT  | SBR  |
|--|------|------|------|-------|------|------|------|-------|------|-------|------|------|
| Lane Configurations  |      |      |      |       |      |      |      |       |      |       |      |      |
| Traffic Volume (veh/h)   | 427  | 324  | 447  | 156   | 222  | 107  | 457  | 1314  | 288  | 167   | 971  | 315  |
| Future Volume (veh/h)  | 427  | 324  | 447  | 156   | 222  | 107  | 457  | 1314  | 288  | 167   | 971  | 315  |
| Initial Q (Qb), veh  | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0     | 0    | 0     | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |      | 0.99 | 1.00  |      | 0.99 | 1.00 |       | 0.99 | 1.00  |      | 0.98 |
| Parking Bus, Adj   | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Work Zone On Approach  |      | No   |      |       | No   |      |      | No    |      |       | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 497  | 377  | 228  | 181   | 258  | 97   | 531  | 1528  | 134  | 194   | 1129 | 223  |
| Peak Hour Factor   | 0.86 | 0.86 | 0.86 | 0.86  | 0.86 | 0.86 | 0.86 | 0.86  | 0.86 | 0.86  | 0.86 | 0.86 |
| Percent Heavy Veh, %   | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2     | 2    | 2    |
| Cap, veh/h   | 485  | 747  | 541  | 186   | 328  | 259  | 539  | 1618  | 825  | 199   | 1188 | 233  |
| Arrive On Green  | 0.17 | 0.26 | 0.25 | 0.13  | 0.22 | 0.21 | 0.19 | 0.54  | 0.53 | 0.14  | 0.49 | 0.47 |
| Sat Flow, veh/h  | 3563 | 3554 | 1568 | 1781  | 1870 | 1564 | 3563 | 3741  | 1562 | 1781  | 3026 | 594  |
| Grp Volume(v), veh/h   | 497  | 377  | 228  | 181   | 258  | 97   | 531  | 1528  | 134  | 194   | 695  | 657  |
| Grp Sat Flow(s),veh/h/ln   | 1781 | 1777 | 1568 | 1781  | 1870 | 1564 | 1781 | 1870  | 1562 | 1781  | 1870 | 1749 |
| Q Serve(g_s), s  | 15.4 | 10.2 | 12.4 | 11.4  | 14.7 | 6.0  | 16.8 | 43.3  | 4.2  | 12.3  | 40.0 | 40.8 |
| Cycle Q Clear(g_c), s  | 15.4 | 10.2 | 12.4 | 11.4  | 14.7 | 6.0  | 16.8 | 43.3  | 4.2  | 12.3  | 40.0 | 40.8 |
| Prop In Lane   | 1.00 |      | 1.00 | 1.00  |      | 1.00 | 1.00 |       | 1.00 | 1.00  |      | 0.34 |
| Lane Grp Cap(c), veh/h   | 485  | 747  | 541  | 186   | 328  | 259  | 539  | 1618  | 825  | 199   | 735  | 687  |
| V/C Ratio(X)   | 1.02 | 0.51 | 0.42 | 0.97  | 0.79 | 0.37 | 0.99 | 0.94  | 0.16 | 0.98  | 0.95 | 0.96 |
| Avail Cap(c_a), veh/h  | 485  | 965  | 638  | 186   | 448  | 360  | 539  | 1618  | 825  | 199   | 735  | 687  |
| HCM Platoon Ratio  | 1.25 | 1.25 | 1.25 | 1.25  | 1.25 | 1.25 | 1.25 | 1.25  | 1.25 | 1.25  | 1.25 | 1.25 |
| Upstream Filter(I)   | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 46.9 | 36.7 | 26.7 | 49.0  | 42.1 | 39.8 | 45.7 | 24.7  | 11.2 | 48.5  | 27.6 | 28.2 |
| Incr Delay (d2), s/veh   | 47.1 | 0.5  | 0.5  | 57.8  | 6.3  | 0.9  | 34.8 | 11.7  | 0.1  | 56.9  | 21.1 | 23.9 |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 9.6  | 4.2  | 4.4  | 7.9   | 7.0  | 2.3  | 9.5  | 18.2  | 1.4  | 8.2   | 19.3 | 19.0 |
| Unsig. Movement Delay, s/veh   |      |      |      |       |      |      |      |       |      |       |      |      |
| LnGrp Delay(d),s/veh   | 94.0 | 37.2 | 27.2 | 106.8 | 48.4 | 40.7 | 80.5 | 36.4  | 11.3 | 105.4 | 48.8 | 52.2 |
| LnGrp LOS  | F    | D    | C    | F     | D    | D    | F    | D     | B    | F     | D    | D    |
| Approach Vol, veh/h  |      | 1102 |      |       | 536  |      |      | 2193  |      |       | 1546 |      |
| Approach Delay, s/veh  |      | 60.8 |      |       | 66.7 |      |      | 45.6  |      |       | 57.3 |      |
| Approach LOS   |      | E    |      |       | E    |      |      | D     |      |       | E    |      |
| Timer - Assigned Phs   | 1    | 2    | 3    | 4     | 5    | 6    | 7    | 8     |      |       |      |      |
| Phs Duration (G+Y+Rc), s   | 16.6 | 52.9 | 15.8 | 27.7  | 21.1 | 48.4 | 19.4 | 24.1  |      |       |      |      |
| Change Period (Y+Rc), s  | 4.6  | 5.8  | 4.6  | 5.4   | 4.6  | 5.8  | 4.6  | * 5.4 |      |       |      |      |
| Max Green Setting (Gmax), s  | 12.0 | 47.1 | 11.2 | 29.3  | 16.5 | 42.6 | 14.8 | * 26  |      |       |      |      |
| Max Q Clear Time (g_c+I1), s   | 14.3 | 45.3 | 13.4 | 14.4  | 18.8 | 42.8 | 17.4 | 16.7  |      |       |      |      |
| Green Ext Time (p_c), s  | 0.0  | 1.5  | 0.0  | 2.7   | 0.0  | 0.0  | 0.0  | 1.2   |      |       |      |      |
| <b>Intersection Summary</b>  |      |      |      |       |      |      |      |       |      |       |      |      |
| HCM 6th Ctrl Delay   |      |      | 54.2 |       |      |      |      |       |      |       |      |      |
| HCM 6th LOS  |      |      | D    |       |      |      |      |       |      |       |      |      |
| <b>Notes</b>   |      |      |      |       |      |      |      |       |      |       |      |      |
| User approved pedestrian interval to be less than phase max green.                                 |      |      |      |       |      |      |      |       |      |       |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |      |      |       |      |      |      |       |      |       |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

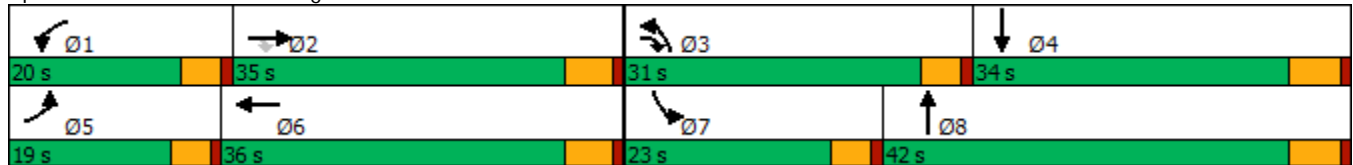


| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↘     | ↑↑    | ↗     | ↘     | ↑↑    | ↘     | ↑↑    | ↘     | ↑↑    |
| Traffic Volume (vph) | 101   | 324   | 268   | 104   | 285   | 222   | 646   | 140   | 441   |
| Future Volume (vph)  | 101   | 324   | 268   | 104   | 285   | 222   | 646   | 140   | 441   |
| Turn Type            | Prot  | NA    | pm+ov | Prot  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     | 5     | 2     | 3     | 1     | 6     | 3     | 8     | 7     | 4     |
| Permitted Phases     | 2     |       |       |       |       |       |       |       |       |
| Detector Phase       | 5     | 2     | 3     | 1     | 6     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 28.4  | 9.6   | 9.6   | 31.4  | 9.6   | 28.8  | 9.6   | 29.8  |
| Total Split (s)      | 19.0  | 35.0  | 31.0  | 20.0  | 36.0  | 31.0  | 42.0  | 23.0  | 34.0  |
| Total Split (%)      | 15.8% | 29.2% | 25.8% | 16.7% | 30.0% | 25.8% | 35.0% | 19.2% | 28.3% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 3.6   | 4.4   | 3.6   | 4.8   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.4  | -0.6  | -1.8  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.6   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | Min   | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80.1  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated























Splits and Phases: 2: Kitching St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
2: Kitching St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement                     | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations          |  |  |  |  |  |   |  |  |   |  |  |  |
| Traffic Volume (veh/h)       | 101   | 324   | 268   | 104   | 285   | 145   | 222  | 646   | 132   | 140   | 441   | 102   |
| Future Volume (veh/h)        | 101   | 324   | 268   | 104   | 285   | 145   | 222  | 646   | 132   | 140   | 441   | 102   |
| Initial Q (Qb), veh          | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)          | 1.00  |   | 0.98  | 1.00  |   | 0.98  | 1.00   |   | 1.00  | 1.00  |   | 0.98  |
| Parking Bus, Adj             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach        |   | No  |   |   | No  |   |  | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln       | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870   | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h         | 104   | 334   | 167   | 107   | 294   | 59  | 229  | 666   | 78  | 144   | 455   | 69  |
| Peak Hour Factor             | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  | 0.97   | 0.97  | 0.97  | 0.97  | 0.97  | 0.97  |
| Percent Heavy Veh, %         | 2   | 2   | 2   | 2   | 2   | 2   | 2  | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h                   | 152   | 766   | 530   | 156   | 626   | 124   | 299  | 1043  | 122   | 202   | 833   | 126   |
| Arrive On Green              | 0.09  | 0.23  | 0.20  | 0.10  | 0.23  | 0.20  | 0.18   | 0.35  | 0.31  | 0.12  | 0.29  | 0.26  |
| Sat Flow, veh/h              | 1781  | 3741  | 1559  | 1781  | 3024  | 597   | 1781   | 3287  | 384   | 1781  | 3167  | 477   |
| Grp Volume(v), veh/h         | 104   | 334   | 167   | 107   | 180   | 173   | 229  | 379   | 365   | 144   | 268   | 256   |
| Grp Sat Flow(s),veh/h/ln     | 1781  | 1870  | 1559  | 1781  | 1870  | 1751  | 1781   | 1870  | 1801  | 1781  | 1870  | 1773  |
| Q Serve(g_s), s              | 3.3   | 4.4   | 4.5   | 3.4   | 4.8   | 5.0   | 7.1  | 9.8   | 9.9   | 4.5   | 7.0   | 7.1   |
| Cycle Q Clear(g_c), s        | 3.3   | 4.4   | 4.5   | 3.4   | 4.8   | 5.0   | 7.1  | 9.8   | 9.9   | 4.5   | 7.0   | 7.1   |
| Prop In Lane                 | 1.00  |   | 1.00  | 1.00  |   | 0.34  | 1.00   |   | 0.21  | 1.00  |   | 0.27  |
| Lane Grp Cap(c), veh/h       | 152   | 766   | 530   | 156   | 387   | 362   | 299  | 593   | 571   | 202   | 492   | 467   |
| V/C Ratio(X)                 | 0.68  | 0.44  | 0.31  | 0.69  | 0.47  | 0.48  | 0.77   | 0.64  | 0.64  | 0.71  | 0.54  | 0.55  |
| Avail Cap(c_a), veh/h        | 463   | 2008  | 1048  | 494   | 1036  | 970   | 833  | 1231  | 1185  | 586   | 972   | 921   |
| HCM Platoon Ratio            | 1.10  | 1.10  | 1.10  | 1.10  | 1.10  | 1.10  | 1.10   | 1.10  | 1.10  | 1.10  | 1.10  | 1.10  |
| Upstream Filter(I)           | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh     | 25.4  | 19.5  | 13.9  | 25.3  | 19.5  | 19.8  | 22.5   | 16.0  | 16.2  | 24.4  | 17.6  | 17.9  |
| Incr Delay (d2), s/veh       | 2.0   | 0.4   | 0.3   | 2.0   | 0.9   | 1.0   | 1.6  | 1.1   | 1.2   | 1.7   | 0.9   | 1.0   |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln     | 1.3   | 1.7   | 1.3   | 1.4   | 1.9   | 1.9   | 2.6  | 3.5   | 3.4   | 1.7   | 2.6   | 2.5   |
| Unsig. Movement Delay, s/veh |   |   |   |   |   |   |  |   |   |   |   |   |
| LnGrp Delay(d),s/veh         | 27.4  | 19.9  | 14.2  | 27.3  | 20.4  | 20.8  | 24.0   | 17.2  | 17.4  | 26.1  | 18.5  | 18.9  |
| LnGrp LOS                    | C   | B   | B   | C   | C   | C   | C  | B   | B   | C   | B   | B   |
| Approach Vol, veh/h          |   | 605   |   |   | 460   |   |  | 973   |   |   | 668   |   |
| Approach Delay, s/veh        |   | 19.6  |   |   | 22.2  |   |  | 18.9  |   |   | 20.3  |   |
| Approach LOS                 |   | B   |   |   | C   |   |  | B   |   |   | C   |   |
| Timer - Assigned Phs         | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s     | 9.1   | 15.8  | 13.7  | 19.2  | 8.9   | 15.9  | 10.6   | 22.3  |   |   |   |   |
| Change Period (Y+Rc), s      | 4.6   | 5.4   | 4.6   | 5.8   | 4.6   | 5.4   | 4.6  | 5.8   |   |   |   |   |
| Max Green Setting (Gmax), s  | 15.4  | 29.6  | 26.4  | 28.2  | 14.4  | 30.6  | 18.4   | 36.2  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s | 5.4   | 6.5   | 9.1   | 9.1   | 5.3   | 7.0   | 6.5  | 11.9  |   |   |   |   |
| Green Ext Time (p_c), s      | 0.1   | 2.6   | 0.3   | 2.7   | 0.1   | 1.9   | 0.1  | 4.3   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |  |   |   |   |   |   |
| HCM 6th Ctrl Delay           |   |   |   | 20.0  |   |   |  |   |   |   |   |   |
| HCM 6th LOS                  |   |   |   | B   |   |   |  |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of

Timings  
3: Lasselie St. & Iris Av.

Continental Villages (JN 11575)

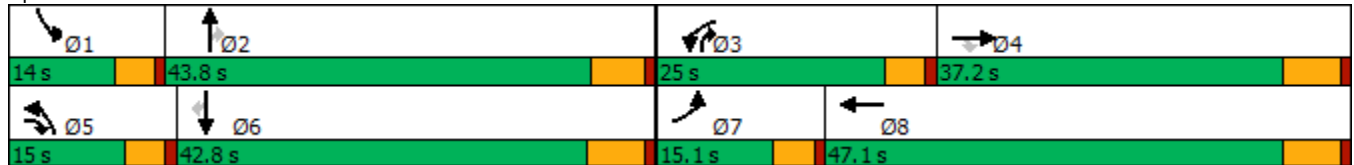
10/25/2018

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |  |
| Traffic Volume (vph) | 259   | 757   | 434   | 763   | 988   | 352   | 704   | 539   | 233   | 859   | 146   |  |
| Future Volume (vph)  | 259   | 757   | 434   | 763   | 988   | 352   | 704   | 539   | 233   | 859   | 146   |  |
| Turn Type            | Prot  | NA    | pm+ov | Prot  | NA    | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |  |
| Protected Phases     | 7     | 4     | 5     | 3     | 8     | 5     | 2     | 3     | 1     | 6     |       |  |
| Permitted Phases     |       |       | 4     |       |       |       |       | 2     |       |       | 6     |  |
| Detector Phase       | 7     | 4     | 5     | 3     | 8     | 5     | 2     | 3     | 1     | 6     | 6     |  |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  |  |
| Minimum Split (s)    | 9.6   | 36.2  | 9.6   | 9.6   | 36.2  | 9.6   | 41.8  | 9.6   | 9.6   | 40.2  | 40.2  |  |
| Total Split (s)      | 15.1  | 37.2  | 15.0  | 25.0  | 47.1  | 15.0  | 43.8  | 25.0  | 14.0  | 42.8  | 42.8  |  |
| Total Split (%)      | 12.6% | 31.0% | 12.5% | 20.8% | 39.3% | 12.5% | 36.5% | 20.8% | 11.7% | 35.7% | 35.7% |  |
| Yellow Time (s)      | 3.6   | 5.2   | 3.6   | 3.6   | 5.2   | 3.6   | 4.8   | 3.6   | 3.6   | 5.2   | 5.2   |  |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |  |
| Lost Time Adjust (s) | -0.6  | -2.2  | 0.0   | -0.6  | -2.2  | -0.6  | -1.8  | -0.6  | -0.6  | -2.2  | -2.2  |  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.6   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |  |
| Lead/Lag             | Lead  | Lag   | Lead  | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode          | None  | None  | None  | None  | None  | None  | Min   | None  | None  | Min   | Min   |  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 106.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Lasselie St. & Iris Av.



HCM 6th Signalized Intersection Summary  
 3: Lasselle St. & Iris Av.

Continental Villages (JN 11575)

10/25/2018

| Movement   | EBL  | EBT   | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL  | SBT  | SBR  |
|--|------|-------|------|-------|------|------|-------|------|------|------|------|------|
| Lane Configurations  |      |       |      |       |      |      |       |      |      |      |      |      |
| Traffic Volume (veh/h)   | 259  | 757   | 434  | 763   | 988  | 120  | 352   | 704  | 539  | 233  | 859  | 146  |
| Future Volume (veh/h)  | 259  | 757   | 434  | 763   | 988  | 120  | 352   | 704  | 539  | 233  | 859  | 146  |
| Initial Q (Qb), veh  | 0    | 0     | 0    | 0     | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pbT)  | 1.00 |       | 0.98 | 1.00  |      | 1.00 | 1.00  |      | 0.96 | 1.00 |      | 0.97 |
| Parking Bus, Adj   | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach  |      | No    |      |       | No   |      |       | No   |      |      | No   |      |
| Adj Sat Flow, veh/h/ln   | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h   | 273  | 797   | 264  | 803   | 1040 | -8   | 371   | 741  | 364  | 245  | 904  | 102  |
| Peak Hour Factor   | 0.95 | 0.95  | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, %   | 2    | 2     | 2    | 2     | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h   | 350  | 1438  | 516  | 674   | 1949 | 0    | 353   | 1184 | 767  | 321  | 1163 | 476  |
| Arrive On Green  | 0.10 | 0.26  | 0.24 | 0.19  | 0.35 | 0.00 | 0.10  | 0.32 | 0.31 | 0.09 | 0.31 | 0.31 |
| Sat Flow, veh/h  | 3563 | 5611  | 1556 | 3563  | 5611 | 0    | 3563  | 3741 | 1527 | 3563 | 3741 | 1532 |
| Grp Volume(v), veh/h   | 273  | 797   | 264  | 803   | 1032 | 0    | 371   | 741  | 364  | 245  | 904  | 102  |
| Grp Sat Flow(s),veh/h/ln   | 1781 | 1870  | 1556 | 1781  | 1870 | 0    | 1781  | 1870 | 1527 | 1781 | 1870 | 1532 |
| Q Serve(g_s), s  | 8.3  | 13.7  | 15.2 | 21.0  | 16.3 | 0.0  | 11.0  | 18.7 | 17.5 | 7.5  | 24.4 | 5.5  |
| Cycle Q Clear(g_c), s  | 8.3  | 13.7  | 15.2 | 21.0  | 16.3 | 0.0  | 11.0  | 18.7 | 17.5 | 7.5  | 24.4 | 5.5  |
| Prop In Lane   | 1.00 |       | 1.00 | 1.00  |      | 0.00 | 1.00  |      | 1.00 | 1.00 |      | 1.00 |
| Lane Grp Cap(c), veh/h   | 350  | 1438  | 516  | 674   | 1949 | 0    | 353   | 1184 | 767  | 321  | 1163 | 476  |
| V/C Ratio(X)   | 0.78 | 0.55  | 0.51 | 1.19  | 0.53 | 0.00 | 1.05  | 0.63 | 0.47 | 0.76 | 0.78 | 0.21 |
| Avail Cap(c_a), veh/h  | 356  | 1679  | 583  | 674   | 2180 | 0    | 353   | 1342 | 831  | 321  | 1308 | 536  |
| HCM Platoon Ratio  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I)   | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 0.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh   | 48.8 | 35.8  | 30.0 | 45.0  | 29.0 | 0.0  | 50.0  | 32.3 | 18.6 | 49.3 | 34.7 | 28.2 |
| Incr Delay (d2), s/veh   | 9.4  | 0.3   | 0.8  | 100.1 | 0.2  | 0.0  | 61.7  | 0.8  | 0.5  | 9.4  | 2.7  | 0.2  |
| Initial Q Delay(d3),s/veh  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/ln   | 4.0  | 6.0   | 5.5  | 18.2  | 6.9  | 0.0  | 7.8   | 8.2  | 5.7  | 3.6  | 10.8 | 1.9  |
| Unsig. Movement Delay, s/veh   |      |       |      |       |      |      |       |      |      |      |      |      |
| LnGrp Delay(d),s/veh   | 58.3 | 36.1  | 30.8 | 145.1 | 29.2 | 0.0  | 111.6 | 33.1 | 19.0 | 58.7 | 37.4 | 28.4 |
| LnGrp LOS  | E    | D     | C    | F     | C    | A    | F     | C    | B    | E    | D    | C    |
| Approach Vol, veh/h  |      | 1334  |      |       | 1835 |      |       | 1476 |      |      | 1251 |      |
| Approach Delay, s/veh  |      | 39.6  |      |       | 79.9 |      |       | 49.4 |      |      | 40.9 |      |
| Approach LOS   |      | D     |      |       | E    |      |       | D    |      |      | D    |      |
| Timer - Assigned Phs   | 1    | 2     | 3    | 4     | 5    | 6    | 7     | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s   | 14.0 | 39.5  | 25.0 | 32.4  | 15.0 | 38.5 | 14.9  | 42.5 |      |      |      |      |
| Change Period (Y+Rc), s  | 4.6  | * 6.2 | 4.6  | 6.2   | 4.6  | 6.2  | 4.6   | 6.2  |      |      |      |      |
| Max Green Setting (Gmax), s  | 9.4  | * 38  | 20.4 | 31.0  | 10.4 | 36.6 | 10.5  | 40.9 |      |      |      |      |
| Max Q Clear Time (g_c+I1), s   | 9.5  | 20.7  | 23.0 | 17.2  | 13.0 | 26.4 | 10.3  | 18.3 |      |      |      |      |
| Green Ext Time (p_c), s  | 0.0  | 5.7   | 0.0  | 4.9   | 0.0  | 4.3  | 0.0   | 6.8  |      |      |      |      |
| <b>Intersection Summary</b>  |      |       |      |       |      |      |       |      |      |      |      |      |
| HCM 6th Ctrl Delay   |      |       | 54.8 |       |      |      |       |      |      |      |      |      |
| HCM 6th LOS  |      |       | D    |       |      |      |       |      |      |      |      |      |
| <b>Notes</b>   |      |       |      |       |      |      |       |      |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |       |      |       |      |      |       |      |      |      |      |      |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of



Timings  
6: Lasselie St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018



| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↑↑    | ↗     | ↖     | ↑     | ↗     | ↔↔   | ↑↑    | ↗     | ↖     | ↑↔    |
| Traffic Volume (vph) | 189   | 149   | 181   | 173   | 146   | 64    | 102  | 1109  | 84    | 272   | 1270  |
| Future Volume (vph)  | 189   | 149   | 181   | 173   | 146   | 64    | 102  | 1109  | 84    | 272   | 1270  |
| Turn Type            | Prot  | NA    | pm+ov | Prot  | NA    | Perm  | Prot | NA    | pm+ov | Prot  | NA    |
| Protected Phases     | 7     | 4     | 5     | 3     | 8     |       | 5    | 2     | 3     | 1     | 6     |
| Permitted Phases     |       |       | 4     |       |       | 8     |      |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 5     | 3     | 8     | 8     | 5    | 2     | 3     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |      |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 5.0   | 10.0  | 10.0  | 5.0  | 10.0  | 5.0   | 5.0   | 10.0  |
| Minimum Split (s)    | 9.6   | 34.4  | 9.6   | 9.6   | 31.1  | 31.1  | 9.6  | 26.8  | 9.6   | 9.6   | 32.8  |
| Total Split (s)      | 16.0  | 34.4  | 10.4  | 17.0  | 35.4  | 35.4  | 10.4 | 44.6  | 17.0  | 24.0  | 58.2  |
| Total Split (%)      | 13.3% | 28.7% | 8.7%  | 14.2% | 29.5% | 29.5% | 8.7% | 37.2% | 14.2% | 20.0% | 48.5% |
| Yellow Time (s)      | 3.6   | 4.4   | 3.6   | 3.6   | 4.1   | 4.1   | 3.6  | 4.8   | 3.6   | 3.6   | 4.8   |
| All-Red Time (s)     | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0  | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s) | -0.6  | -1.4  | 0.0   | -0.6  | -1.1  | 0.0   | -0.6 | -1.8  | -0.6  | -0.6  | -1.8  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.6   | 4.0   | 4.0   | 5.1   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lead | Lag   | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None | Min   | None  | None  | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 105.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated






























Splits and Phases: 6: Lasselie St. & Krameria Av.



HCM 6th Signalized Intersection Summary  
6: Lasselle St. & Krameria Av.

Continental Villages (JN 11575)

10/25/2018

|  |    |    |  |  |  |  |    |    |  |  |    |  |
|--|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement   | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations  |   |   |  |  |  |  |   |   |  |  |   |  |
| Traffic Volume (veh/h)   | 189   | 149   | 181   | 173   | 146   | 64  | 102  | 1109  | 84  | 272   | 1270  | 69  |
| Future Volume (veh/h)  | 189   | 149   | 181   | 173   | 146   | 64  | 102  | 1109  | 84  | 272   | 1270  | 69  |
| Initial Q (Qb), veh  | 0   | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   |
| Ped-Bike Adj(A_pbT)  | 1.00  |   | 1.00  | 1.00  |   | 0.98  | 1.00   |   | 1.00  | 1.00  |   | 1.00  |
| Parking Bus, Adj   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Work Zone On Approach  |   | No  |   |   | No  |   |  | No  |   |   | No  |   |
| Adj Sat Flow, veh/h/ln   | 1870  | 1870  | 1870  | 1870  | 1870  | 1870  | 1870   | 1870  | 1870  | 1870  | 1870  | 1870  |
| Adj Flow Rate, veh/h   | 199   | 157   | 33  | 182   | 154   | 34  | 107  | 1167  | 68  | 286   | 1337  | 61  |
| Peak Hour Factor   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  | 0.95   | 0.95  | 0.95  | 0.95  | 0.95  | 0.95  |
| Percent Heavy Veh, %   | 2   | 2   | 2   | 2   | 2   | 2   | 2  | 2   | 2   | 2   | 2   | 2   |
| Cap, veh/h   | 296   | 451   | 257   | 225   | 313   | 242   | 201  | 1390  | 799   | 329   | 1798  | 82  |
| Arrive On Green  | 0.08  | 0.13  | 0.11  | 0.13  | 0.17  | 0.16  | 0.06   | 0.39  | 0.38  | 0.18  | 0.52  | 0.50  |
| Sat Flow, veh/h  | 3563  | 3554  | 1585  | 1781  | 1870  | 1558  | 3563   | 3554  | 1581  | 1781  | 3461  | 158   |
| Grp Volume(v), veh/h   | 199   | 157   | 33  | 182   | 154   | 34  | 107  | 1167  | 68  | 286   | 685   | 713   |
| Grp Sat Flow(s),veh/h/ln   | 1781  | 1777  | 1585  | 1781  | 1870  | 1558  | 1781   | 1777  | 1581  | 1781  | 1777  | 1842  |
| Q Serve(g_s), s  | 5.1   | 3.8   | 1.7   | 9.3   | 7.0   | 1.8   | 2.7  | 27.9  | 2.1   | 14.6  | 28.3  | 28.5  |
| Cycle Q Clear(g_c), s  | 5.1   | 3.8   | 1.7   | 9.3   | 7.0   | 1.8   | 2.7  | 27.9  | 2.1   | 14.6  | 28.3  | 28.5  |
| Prop In Lane   | 1.00  |   | 1.00  | 1.00  |   | 1.00  | 1.00   |   | 1.00  | 1.00  |   | 0.09  |
| Lane Grp Cap(c), veh/h   | 296   | 451   | 257   | 225   | 313   | 242   | 201  | 1390  | 799   | 329   | 923   | 957   |
| V/C Ratio(X)   | 0.67  | 0.35  | 0.13  | 0.81  | 0.49  | 0.14  | 0.53   | 0.84  | 0.09  | 0.87  | 0.74  | 0.74  |
| Avail Cap(c_a), veh/h  | 456   | 1153  | 570   | 247   | 627   | 504   | 243  | 1539  | 865   | 380   | 1027  | 1065  |
| HCM Platoon Ratio  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Upstream Filter(I)   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Uniform Delay (d), s/veh   | 41.7  | 37.4  | 33.6  | 39.8  | 35.4  | 34.2  | 43.0   | 25.9  | 12.0  | 37.1  | 17.6  | 17.7  |
| Incr Delay (d2), s/veh   | 1.0   | 0.5   | 0.2   | 14.8  | 1.2   | 0.3   | 0.8  | 4.0   | 0.0   | 15.6  | 2.6   | 2.6   |
| Initial Q Delay(d3),s/veh  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| %ile BackOfQ(50%),veh/ln   | 2.2   | 1.6   | 0.6   | 4.9   | 3.2   | 0.7   | 1.2  | 11.4  | 0.7   | 7.4   | 10.7  | 11.1  |
| Unsig. Movement Delay, s/veh   |   |   |   |   |   |   |  |   |   |   |   |   |
| LnGrp Delay(d),s/veh   | 42.7  | 37.8  | 33.8  | 54.7  | 36.6  | 34.4  | 43.8   | 29.9  | 12.1  | 52.7  | 20.2  | 20.3  |
| LnGrp LOS  | D   | D   | C   | D   | D   | C   | D  | C   | B   | D   | C   | C   |
| Approach Vol, veh/h  |   | 389   |   |   | 370   |   |  | 1342  |   |   | 1684  |   |
| Approach Delay, s/veh  |   | 40.0  |   |   | 45.3  |   |  | 30.1  |   |   | 25.8  |   |
| Approach LOS   |   | D   |   |   | D   |   |  | C   |   |   | C   |   |
| Timer - Assigned Phs   | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8   |   |   |   |   |
| Phs Duration (G+Y+Rc), s   | 21.3  | 40.7  | 15.8  | 15.9  | 9.3   | 52.7  | 11.8   | 20.0  |   |   |   |   |
| Change Period (Y+Rc), s  | 4.6   | 5.8   | 4.6   | 5.4   | 4.6   | 5.8   | 4.6  | * 5.4   |   |   |   |   |
| Max Green Setting (Gmax), s  | 19.4  | 38.8  | 12.4  | 29.0  | 5.8   | 52.4  | 11.4   | * 30  |   |   |   |   |
| Max Q Clear Time (g_c+I1), s   | 16.6  | 29.9  | 11.3  | 5.8   | 4.7   | 30.5  | 7.1  | 9.0   |   |   |   |   |
| Green Ext Time (p_c), s  | 0.1   | 4.9   | 0.0   | 0.9   | 0.0   | 9.5   | 0.1  | 0.8   |   |   |   |   |
| <b>Intersection Summary</b>  |   |   |   |   |   |   |  |   |   |   |   |   |
| HCM 6th Ctrl Delay   |   |   |   | 30.7  |   |   |  |   |   |   |   |   |
| HCM 6th LOS  |   |   |   | C   |   |   |  |   |   |   |   |   |
| <b>Notes</b>   |   |   |   |   |   |   |  |   |   |   |   |   |
| User approved pedestrian interval to be less than phase max green.                                 |   |   |   |   |   |   |  |   |   |   |   |   |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |   |   |   |   |   |   |  |   |   |   |   |   |

Attachment: Traffic Assessment Appendices (3376 : The proposal includes a General Plan Amendment, Specific Plan Amendment, Change of