
PLANNING COMMISSIONERS

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Commissioner

PLANNING COMMISSION Regular Meeting

Agenda

Thursday, December 10, 2020 at 7:00 PM

TELECONFERENCED MEETING

[Pursuant to Governor Executive Order N-29-20]

There Will Not Be a Physical Location for Attending the Meeting

The Public May Observe the Meeting and Offer Public Comment As Follows:

STEP 1

Install the Free Zoom App or Visit the Free Zoom Website at [<https://zoom.us/>](https://zoom.us/)

STEP 2

Get Meeting ID Number, Password and On the List to Speak by emailing zoom@moval.org or calling (951) 413-3206, no later than 6:00 p.m. on Thursday, December 10, 2020

STEP 3

Select Audio Source

Computer Speakers/Microphone

or

Telephone

STEP 4

Public Comments May be Made Via Zoom

During the Meeting, the Chairperson Will Explain the Process for Submitting Public Comments

ALTERNATIVE

If you do not wish to make public comments, you can view the meeting on Channel MVTV-3, the City's website at www.moval.org or YouTube

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.

CALL TO ORDER

ROLL CALL

PLEDGE OF ALLEGIANCE

APPROVAL OF AGENDA

PUBLIC COMMENTS PROCEDURE

During the public comment period for each item, as well as during the public comment period for items not on the agenda, the clerk will call upon each person who is on the Zoom application that has requested to speak. Each member of the public wishing to speak will have a maximum of 3 minutes to speak on any agenda item, 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. Those wishing to speak should follow the teleconference procedures. If you are absent at the time your name is called, you will forfeit the opportunity to speak on the items.

PUBLIC COMMENTS ON ANY ITEM NOT ON THE AGENDA

CONSENT CALENDAR

All matters listed under Consent Calendar are considered to be routine and non-controversial, and may be enacted by one roll call vote. There will be no discussion of these items unless a member of the Planning Commission requests that an item be removed for separate action.

NON-PUBLIC HEARING ITEMS

No items for discussion.

PUBLIC HEARING ITEMS

- 1. Case: PEN20-0066 - General Plan Amendment
PEN20-0067 - Change of Zone
PEN20-0063 - Tentative Tract Map 37909
PEN20-0065 - Conditional Use Permit for a
Planned Unit Development
(Continued from November 12, 2020)
- Applicant: Passco Pacifica LLC
- Property Owner: Maple Lane Group, LLC
- Representative: Rafik Albert, EPD Solutions
- Location: South side of Iris Avenue east of Perris Boulevard
APN. 312-020-025
- Case Planner: Julia Descoteaux
- Council District: 4

Proposal

The Application requests approval of the following entitlements for an 10.82-acre site: 1) General Plan Amendment (GPA) amending Figure 2-2 “Land Use Map” of the Moreno Valley General Plan to change the land use designation of the Project site from Residential 5 (R5) to Residential 10 (R10); 2) Change of Zone amending the City of Moreno Valley Zoning Atlas to rezone the Project site from Residential 5 (R5) District to Residential Single-Family 10 (RS10) District; 3) Tentative Tract Map 37909 to subdivide into eighty-one (81) single family lots; and 4) Conditional Use Permit for a Planned Unit Development with associated amenities and public improvements.

OTHER COMMISSION BUSINESS

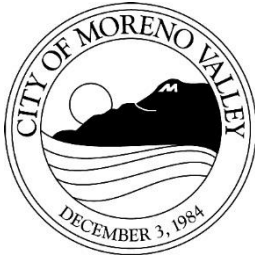
No items for discussion.

STAFF COMMENTS

PLANNING COMMISSIONER COMMENTS

ADJOURNMENT

Planning Commission Regular Meeting, December 24, 2020 at 7:00 P.M., City of Moreno Valley, City Hall Council Chamber, 14177 Frederick Street, Moreno Valley, CA 92553.



PLANNING COMMISSION

STAFF REPORT

Meeting Date: December 10, 2020

PROPOSED GENERAL PLAN AMENDMENT AND CHANGE OF ZONE AMENDING FIGURE 2-2-"LAND USE MAP" OF THE MORENO VALLEY GENERAL PLAN AND THE CITY ZONING ATLAS, RESPECTIVELY, AND PROPOSED TENTATIVE TRACT MAP AND CONDITIONAL USE PERMIT FOR AN 81-LOT SINGLE FAMILY PLANNED UNIT DEVELOPMENT AND TENTATIVE TRACT MAP FOR A 81-UNIT SINGLE FAMILY SUBDIVISION CONTINUED FROM NOVEMBER 12, 2020

Case: PEN20-0066 -General Plan Amendment
 PEN20-0067 -Change of Zone
 PEN20-0063 -Tentative Tract Map 37909
 PEN20-0065 -Conditional Use Permit for a Planned Unit Development

Applicant: Passco Pacifica LLC

Property Owner: Maple Lane Group, LLC

Representative: Rafik Albert, EPD Solutions

Location: South side of Iris Avenue east of Perris Boulevard
 APN. 312-020-025

Case Planner: Julia Descoteaux

Council District: 4

Proposal: The Application requests approval of the following entitlements for an 10.82-acre site: 1) General Plan Amendment (GPA) amending Figure 2-2 "Land Use Map" of the Moreno Valley General Plan to change the land use designation of the Project site from Residential 5 (R5) to Residential 10 (R10); 2) Change of Zone amending the City of Moreno Valley Zoning

Atlas to rezone the Project site from Residential 5 (R5) District to Residential Single-Family 10 (RS10) District; 3) Tentative Tract Map 37909 to subdivide into eighty-one (81) single family lots; and 4) Conditional Use Permit for a Planned Unit Development with associated amenities and public improvements.

SUMMARY

The Applicant, Passco Pacifica LLC, submitted: 1) a General Plan Amendment (PEN20-0066), to change the General Plan land use designation of the Project site from Residential 5 (R5) to Residential 10 (R10), 2) a Change of Zone (PEN20-0067) to change the City Zoning Atlas pertaining to the Iris Park Community from Residential 5 (R5) District to Residential Single-Family 10 (RS10) District, 3) a Tentative Tract Map (TTM 37909) to subdivide the 10.82-acre Project site into eighty-one (81) single family lots, and 4) a Conditional Use Permit for a Planned Unit Development with associated amenities and public improvements.

The project was noticed and agendized for the November 12, 2020 Planning Commission meeting. The applicant requested a continuance to the December 10, 2020 Planning Commission meeting which was approved by the Planning Commission at the November 12, 2020 public hearing.

PROJECT DESCRIPTION

The Project consists of a General Plan Amendment, a Change of Zone, a Tentative Tract Map and a Conditional Use Permit for a Planned Unit Development.

General Plan Amendment

The City of Moreno Valley General Plan land use designates the Project site as Residential 5 (R5) and the proposal would change this to Residential 10 (R10).

The primary purpose of Residential 10 (R10) is to provide for a variety of residential products and to encourage innovation in housing types with enhanced amenities such as common open space and recreation areas. Within the General Plan designation these areas are intended for attached residential dwelling units with a maximum density of ten (10) dwelling units per acre.

The Applicant is proposing a General Plan Amendment to amend the General Plan land use designation boundaries to align with the zoning boundaries and correspond to the parcel boundaries of the proposed Project. The proposed General Plan amendment will result in a total increase of approximately 10.82 acres of Residential 10 (R10) and a corresponding reduction of approximately 10.82 acres of Residential 5 (R5).

Change of Zone

The Project site is currently zoned Residential 5 (R5) District. The primary purpose of the Residential 5 (R5) District is to provide residential development on common sized suburban lots with an allowable density of five units per acres.

The Applicant is proposing a Change of Zone to Residential Single-Family 10 (RS10) District. The primary purpose of the Residential Single-Family 10 (RS10) District is to provide for residential development on small single-family lots with amenities not generally found in suburban subdivisions. The district is intended for subdivisions.

Tentative Tract Map

Tentative Tract Map 37909 will subdivide the approximately 10.82 acre site into eighty-one (81) single-family residential lots. The map will include the associated interior streets, open space, a water quality feature and off-site improvements as required.

Conditional Use Permit for a Planned Unit Development

The proposed Project includes a Conditional Use Permit for a Planned Unit Development (PUD). The purpose of the PUD is to provide specific development guidelines for the Project. A PUD provides for greater innovation in housing development such as a variation in lot sizes and amenities not found in standard housing tracts.

The proposed PUD provides guidelines for multiple architectural styles of housing that meet or exceed City-wide standards in the Municipal Code. All development within the tract is required to meet the standards as stated in the PUD including plotting, setbacks, open space areas and architecture. The PUD includes a Community Park with a pavilion gathering area, picnic tables and barbeques for the residents. A smaller park offers benches and exercise equipment.

With the approval of the General Plan Amendment, the Change of Zone and the Tentative Tract Map, the Project would meet the objectives of the Conditional Use Permit for a Planned Unit Development.

Site and Surrounding Area

The approximately 10.82 acre site is located on the south side of Iris Avenue east of Perris Boulevard. The parcel is triangular in shape with the larger portion fronting Iris Avenue and narrowing to the south. All properties to the north and east are zoned Residential 5 (R5) District with existing single family residential units. Directly south is an existing elementary school with small lot subdivisions further south.

The westerly portion of the site on the diagonal is the 100-foot State of California Aqueduct easement known as the Juan Bautista de Anza Aqueduct Bike Trail. The easement is included in the tract map. No development can occur on the site. In partnering with the City, the Developer will provide landscaping for the trail site and the City will construct the proposed meandering trail along the mid to westerly portion of the

easement. The Project will provide access to the open trail for residents. The trail will be open to the public and in the future connect to the trail existing south of the Project.

Access/Parking

The Project will be accessed by a main driveway along Iris Avenue at the easterly portion of the Project frontage. This driveway has been designed to accommodate gated access with a call box and adequate turnaround if unable to access the site, and decorative paving. A second westerly driveway is exit only and provide fire access when needed.

All units include a two-car garage with no on-street parking allowed. The Project includes guest parking with 55 spaces which is 14 spaces more than required.

Design/Landscaping

Consistent with the PUD guidelines three building footprints are proposed with four different building styles, which include Spanish, Farmhouse and French. Each of the four different building styles will have three color combinations to provide interest among the housing types. Each lot will have a front facing garage with a minimum back yard setback of twelve feet from back of house to the property line. The minimum separation between structures is six feet, with a minimum of three feet to any property line.

All front yards will be landscaped per the City's Landscape Requirements and the Planned Unit Development Guidelines. All community landscaping will be designed per the PUD and maintained by the required Homeowners Association (HOA).

ENVIRONMENTAL

An Initial Study was prepared by EPD Solutions, Inc. in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The Initial Study examined the potential of the proposed Project having any significant impacts on the environment. The Initial Study/Mitigated Negative Declaration (IS/MND) provides information in support of the finding that a Mitigated Negative Declaration serves as the appropriate CEQA documentation for the proposed Project, in that the proposed Project, with the implementation of the proposed mitigation measures, will not have a significant effect on the environment. Technical studies prepared in support of the IS/MND include the following: Air Quality – GHG, Cultural Resources Assessment, Hydrology Report, Noise Analysis, Paleontological Resources, Phase I Environmental Assessment and a Traffic Generation Analysis. Copies of all of the appendices to the IS/MND are attached to this staff report. The documents may also be reviewed at City Hall.

Mitigation measures are recommended for the proposed Project in the following areas: Biological Resources and Cultural/Tribal Resources, which are incorporated in the Mitigation Monitoring and Report Program. The measures for cultural resources have been included to address input from the Tribal governments. The measures are

intended to ensure that potential cultural resources that might be discovered are protected. However, these measures are not required to address a known significant impact. Based on the Initial Study, and the proposed mitigation measures, the Project will not cause substantial impacts or environmental damage.

The public comment period for Notice of Availability for the Initial Study/Mitigated Negative Declaration began on October 23, 2020, and ends on November 12, 2020, which satisfies the required 20-day review period. As of the preparation of this staff report, no comments have been received. Should comments regarding the Project be received prior to the Planning Commission they will be provided at the public hearing.

REVIEW PROCESS

The application for this Project was submitted in April 2020. The Project has been considered by all appropriate agencies within and outside of the City, which is part of the standard review process with these types of development applications. The Project was reviewed by the Project Review Staff Committee as required by the Municipal Code. Following subsequent revisions and reviews by staff, the Project was determined to be complete with a recommendation to approve the Project as designed and conditioned.

NOTIFICATION

Public notice was sent to all property owners of record within 600' of the Project. The public hearing notice for this Project was also posted on the Project site and published in the local newspaper.

REVIEW AGENCY COMMENTS

Staff has coordinated with outside agencies where applicable, as is the standard review process with these types of development applications.

STAFF RECOMMENDATION

Staff recommends that the Planning Commission take the following actions:

- A. That the Planning Commission **ADOPT** Resolution No. 2020-49, attached hereto, **RECOMMENDING** that the City Council:
 1. **APPROVE** the Initial Study/Mitigated Negative Declaration prepared for General Plan Amendment PEN20-0066, Change of Zone PEN20-0067, Tentative Tract Map 37909 PEN20-0063 and Conditional Use Permit PEN20-0065 on file with the Community Development Department, incorporated herein by this reference, which was completed in compliance with CEQA and the CEQA Guidelines, and reflects that the Planning Commission reviewed and considered the information contained in the Initial Study/Mitigated Negative Declaration, and exercised its independent

judgment and analysis of the proposed Project's potential environmental impacts; and

2. **ADOPT** the Mitigation Monitoring and Reporting Program prepared for the Project, which consists of General Plan Amendment PEN20-0066, Change of Zone PEN20-0067, Tentative Tract Map 37909 PEN20-0063 and Conditional Use Permit PEN20-0065 pursuant to CEQA and the CEQA Guidelines.
- B. That the Planning Commission **ADOPT** Resolution No. 2020-50, attached hereto, **RECOMMENDING** that the City Council:
1. **APPROVE** PEN20-0066 General Plan Amendment based on the Recitals, Evidence contained in the Administrative Record and Findings as set forth in Resolution No. 2020-50.
- C. That the Planning Commission **ADOPT** Resolution No. 2020-51, attached hereto, **RECOMMENDING** that the City Council:
1. **APPROVE** PEN20-0067 Change of Zone based on the Recitals, Evidence contained in the Administrative Records and Findings as set forth in Resolution No. 2020-51.
- D. That the Planning Commission **ADOPT** Resolution No. 2020-52, attached hereto, **RECOMMENDING** that the City Council:
1. **APPROVE** PEN20-0063 Tentative Tract Map 37909 based on the Recitals, Evidence contained in the Administrative Records and Findings as set forth in Resolution No. 2020-52.
- E. That the Planning Commission **ADOPT** Resolution No. 2020-53, attached hereto, **RECOMMENDING** that the City Council:
1. **APPROVE** PEN20-0065 Conditional Use Permit for a Planned Unit Development based on the Recitals, Evidence contained in the Administrative Records and Findings as set forth in Resolution No. 2020-53.

Prepared by:
Julia Descoteaux
Associate Planner

Approved by:
Patty Nevins
Planning Official

ATTACHMENTS

1. Resolution No. 2020-49 Initial Study MND
2. Exhibit A to Resolution No. 2020-49 Initial Study MND
3. Appendix A to Initial Study CalEEMod Emission Summary

4. Appendix B to Initial Study Habitat Assessment_R
5. Appendix C to Initial Study Phase I Cultural Resources Assessment_R
6. Appendix D to Initial Study Phase I Paleontological Resources Assessment
7. Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation_R
8. Appendix F to Initial Study Phase I Environmental Site Assessment_R
9. Appendix G to Initial Study Preliminary Hydrology Report_R
10. Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R
11. Appendix I to Initial Study Noise Impact Analysis_R
12. Appendix J to Initial Study Trip Generation Analysis
13. Appendix K to Initial Study VMT Memo
14. Exhibit B to Resolution No. 2020-49 Initial Study Notice
15. Exhibit C to Resolution No. 2020-49 Initial Study MMRP
16. Resolution No. 2020-50 General Plan Amendment
17. Resolution No. 2020-51 Change of Zone
18. Resolution No. 2020-52 Tentative Tract Map 37909
19. Exhibit A to Resolution No. 2020-52 Tentative Tract Map 37909
20. Resolution No. 2020-53 Conditional Use Permit
21. Exhibit A to Resolution No. 2020-53 Conditional Use Permit
22. Planned Unit Development Document
23. Project Plans
24. Aerial Map
25. 600 Foot Mailing Notice
26. 600 foot Radius Map
27. Applicants Continuance Request for 11-12-2020 PC Meeting
28. Preliminary Grading Plan
29. Tentative Tract Map 37909

HISTORY:

11/12/20

Planning Commission

CONTINUED

Next: 12/10/20

RESOLUTION NUMBER 2020-49

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL ADOPT A MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING PLAN FOR IRIS PARK COMMUNITY PROJECT LOCATED ON THE SOUTH SIDE OF IRIS AVENUE EAST OF PERRIS BOULEVARD (APN 312-020-025)

WHEREAS, the City of Moreno Valley (“City”) is a general law city and a municipal corporation of the State of California, and the lead agency for the preparation and consideration of environmental documents for local projects that are subject to requirements of the California Environmental Quality Act (CEQA¹) and CEQA Guidelines²; and

WHEREAS, Passco Pacifica LLC., (“Developer”) is seeking approval for the development of the Iris Park Community, an eighty-one- (81) lot, single-family residential development on a 10.82-acre site that includes: 1) a General Plan Amendment (PEN20-0066) (GPA) amending Figure 2-2 “Land Use Map” of the Moreno Valley General Plan to change the land use designation of the Project site from Residential 5 (R5) to Residential 10 (R10); 2) a Change of Zone (PEN20-0067) amending the City of Moreno Valley Zoning Atlas to rezone the project site from Residential 5 (R5) District to Residential Single-Family 10 (RS10) District; 3) a Tentative Tract Map (TTM 37909) (PEN20-0063) to subdivide the subject property into eighty-two (82) single family lots; and 4) a Conditional Use Permit (PEN20-0065) for a Planned Unit Development with associated amenities and public improvements (“Project”) located on the south side of Iris Avenue east of Perris Boulevard (APN 312-020-025) (“Site”); and

WHEREAS, Planning Division Staff completed an environmental assessment for the proposed Project, and, based on the assessment, decided to prepare an Initial Study (“IS”) and a Mitigated Negative Declaration (“MND”) in accordance with Section 6 (ND Procedures) of the City’s Rules and Procedures for the Implementation of the California Environmental Quality Act and the requirements of the CEQA Guidelines Sections 15070 – 15075; and

WHEREAS, a Notice of Intent to Adopt a Mitigated Negative Declaration was duly noticed and circulated for public review for a period of 20 days commencing on October 23, 2020, through November 12, 2020; and

WHEREAS, in conformance with CEQA and the CEQA Guidelines, a Mitigation Monitoring Plan (“MMP”) that includes a program for reporting on and monitoring Project mitigation measures was prepared for the proposed Project and circulated with the Mitigated Negative Declaration; and

¹ Public Resources Code §§ 21000-21177

² 14 California Code of Regulations §§15000-15387

WHEREAS, on November 12, 2020 a duly noticed public hearing was conducted by the Planning Commission where the item was continued to the December 10, 2020 Planning Commission meeting; and

WHEREAS, on December 10, 2020 a hearing was conducted by the Planning Commission to consider a recommendation that the City Council approve the Mitigated Negative Declaration and the Mitigation Monitoring Plan and approve the proposed Project; and

WHEREAS, at the conclusion of the public hearing, in the exercise of its own independent judgment, the Planning Commission determined that the Mitigated Negative Declaration and the Mitigation Monitoring Plan would reduce the environmental impacts of the Project to levels of insignificance and that there is no substantial evidence supporting a fair argument that the Project will have a significant effect on the environment.

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

Section 1. Recitals and Exhibits

That the foregoing Recitals and attached exhibits are true and correct and are hereby incorporated by this reference.

Section 2. Evidence

That the Planning Commission has considered all of the evidence submitted into the Administrative Record for the Mitigated Negative Declaration and Mitigation Monitoring Plan, including, but not limited to, the following:

- (a) Initial Study prepared for the proposed Project, attached hereto as Exhibit A;
- (b) Notice of Intent to Adopt a Mitigated Negative Declaration/Newspaper Notice, attached hereto as Exhibit B;
- (c) Mitigation Monitoring Plan, attached hereto as Exhibit C;
- (d) Staff Report prepared for the Planning Commission's consideration and all documents, records and references related thereto, and Staff's presentation at the public hearing; and
- (e) Testimony, comments and correspondence from all persons that were provided at, or prior to, the public hearing.

Section 3. Findings

That based on the content of the foregoing Recitals and the Evidence contained in the Administrative Record as set forth above, the Planning Commission makes the following findings:

- (a) That the City has independently reviewed, analyzed, and considered the Mitigated Negative Declaration and Mitigation Monitoring Plan, and the whole record before it, including, the Initial Study and comments received;
- (b) That the proposed mitigation measures will reduce all environmental impacts of the proposed Project to levels of insignificance and there is no substantial evidence supporting a fair argument that the Project will have a significant effect on the environment;
- (c) That the Mitigated Negative Declaration and Mitigation Monitoring Plan have been completed in compliance with CEQA and the CEQA Guidelines consistent the City's Rules and Procedures for the Implementation of the California Environmental Quality Act.
- (d) That the Mitigated Negative Declaration and Mitigation Monitoring Plan reflect the independent judgment and analysis of the City as lead agency for the proposed Project; and
- (e) That the Mitigated Negative Declaration and Mitigation Monitoring Plan are adequate to serve as the required CEQA environmental documentation for the proposed Project.

Section 4. Adoption

That based on the foregoing Recitals, Evidence contained in the Administrative Record and Findings, as set forth herein, the Planning Commission hereby recommends that the City Council adopt the Mitigated Negative Declaration/Initial Study attached hereto as Exhibit A and the Mitigation Monitoring Plan attached hereto as Exhibit C.

Section 5. Repeal of Conflicting Provisions

That all the provisions as heretofore adopted by the Planning Commission that are in conflict with the provisions of this Resolution are hereby repealed.

Section 6. Severability

That the Planning Commission declares that, should any provision, section, paragraph, sentence or word of this Resolution be rendered or declared invalid by any final court action in a court of competent jurisdiction or by reason of any preemptive legislation, the remaining provisions, sections, paragraphs, sentences or words of this Resolution as hereby adopted shall remain in full force and effect.

Section 7. Effective Date

That this Resolution shall take effect immediately upon the date of adoption.

Section 8. Certification

That the Secretary of the Planning Commission shall certify to the passage of this Resolution.

PASSED AND ADOPTED THIS _____ day of _____, 2020.

CITY OF MORENO VALLEY
PLANNING COMMISSION

Patricia Korzec, Chairperson

ATTEST:

Patty Nevins,
Planning Official

APPROVED AS TO FORM:

Steven B. Quintanilla,
Interim City Attorney

- Exhibits:
- Exhibit A: Initial Study
- Exhibit B: Notice of Intent to Adopt a Mitigated Negative Declaration/Newspaper Notice
- Exhibit C: Mitigation Monitoring Plan

Attachment: Resolution No. 2020-49 Initial Study MND [Revision 2] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

Exhibit A
INITIAL STUDY

Attachment: Resolution No. 2020-49 Initial Study MND [Revision 2] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

Exhibit B

**NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION/NEWSPAPER
NOTICE**

Attachment: Resolution No. 2020-49 Initial Study MND [Revision 2] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

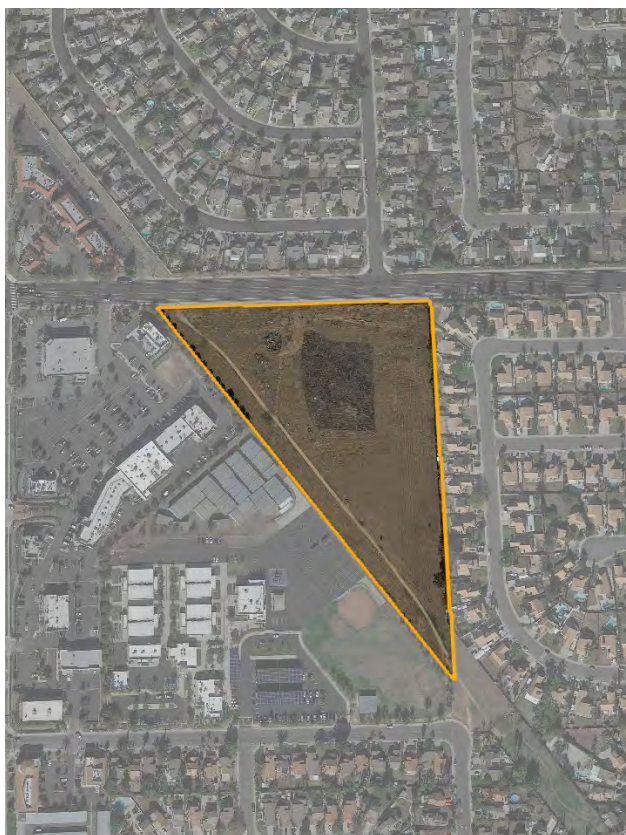
Exhibit C
MITIGATION MONITORING PLAN

Attachment: Resolution No. 2020-49 Initial Study MND [Revision 2] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a



CITY OF MORENO VALLEY

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR IRIS PARK PROJECT



Iris Park Project - Case Numbers PEN20-0063, PEN20-0065, PEN20-0066, PEN20-0067, PEN20-0068

October 20, 2020

**Lead Agency
CITY OF MORENO VALLEY
14177 Frederick Street
Moreno Valley, CA 92552**

**Prepared By
EPD Solutions, Inc.
2 Park Plaza, Suite 1120
Irvine, CA 92614 (949)794-1180**

Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

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- D Phase I Paleontological Resources Assessment
- E Preliminary Geotechnical and Infiltration Feasibility Investigation
- F Phase I Environmental Site Assessment
- G Preliminary Hydrology Report
- H Preliminary Project Specific Water Quality Management Plan
- I Noise Impact Analysis
- J Trip Generation Analysis
- K VMT Memo



INITIAL STUDY/MITIGATED NEGATIVE DECLARATION (IS/MND) FOR IRIS PARK

MITIGATED NEGATIVE DECLARATION

Project Name: Iris Park

Findings: It is hereby determined that, based on the information contained in the attached Initial Study, the project would not have a significant adverse effect on the environment.

Mitigation measures necessary to avoid the potentially significant effects on the environment are included in the attached Initial Study, which is hereby incorporated and fully made part of this Mitigated Negative Declaration. The City of Moreno Valley has hereby agreed to implement each of the identified mitigation measures, which would be adopted as part of the attached Mitigation Monitoring and Reporting Program.

BACKGROUND INFORMATION AND PROJECT DESCRIPTION:

1. **Project Case Number(s):** PEN20-0063, PEN20-0065, PEN20-0066, PEN20-0067, PEN20-0068
2. **Project Title:** Iris Park
3. **Public Comment Period:** October 23, 2020 through November 11, 2020
4. **Lead Agency:** City of Moreno Valley
Julia Descoteaux, Planning Department
14177 Frederick Street
Moreno Valley, California 92552
(951) 413-3209
juilad@moval.org
5. **Documents Posted At:** A copy is available at City Hall
6. **Prepared By:** Konnie Dobрева, JD, Director of Environmental Planning
Meghan Macias, T.E., Director of Transportation Planning
Rafik Albert, Director of Planning
Meaghan Truman, Project Planner
EPD Solutions, Inc.
2 Park Plaza, Suite 1120, Irvine, California 92614
(949) 794-1180
rafik@epdsolutions.com

7. Project Sponsor:

Applicant/Developer
Pacifica Investments
333 City Boulevard West
Suite 1700
Orange, California 92868

Property Owner
Maple Lane Group, LLC
2005 Winston Court
Upland, California 91784

8. **Project Location:** The project site is located southeast of the intersection of Iris Avenue and Perris Boulevard and directly south of the intersection of Iris Avenue and Wedow Drive in the city of Moreno Valley at Assessor's Parcel Number 312-020-025, and southeast of the southeasterly corner of Iris Avenue and Perris Boulevard. Moreno Valley is located in Riverside County and encompasses approximately 52 square miles of land. It is bounded by the city of Riverside to the east; the city of Perris to the south; the San Jacinto mountains to the east; and the cities of Redlands and San Bernardino to the north.

As shown on Figure 1, Regional Location, regional access to the project site is provided by Interstate 215 (I-215). Iris Avenue provides local access to the project site. The project site is located in Section 29, Township 3 South, Range 3 West, San Bernardino Baseline and Meridian, and is mapped on the U.S. Geological Survey (USGS) Sunnymead 7.5' topographic quadrangle.

9. **General Plan Designation:** Residential (5 du/ac) and Commercial

Residential 5: The primary purpose of areas designated Residential 5 is to provide for single-family detached housing on standard sized suburban lots.

Commercial: The primary purpose of areas designated Commercial is to provide commercial properties and distribute commercial areas citywide to encourage walking and bicycling.

10. **Specific Plan Name and Designation:** N/A

11. **Existing Zoning:** Residential 5 District (R5) and Community Commercial (CC)

Residential 5 District: The primary purpose of the R5 district is to provide for residential development on common sized suburban lots. This district is intended as an area for development of single-family residential and mobile home subdivisions at a maximum allowable density of 5 du/ac, as indicated in Section 9.03.020 of the Municipal Code.

Community Commercial: The primary purpose of the community commercial (CC) district is to provide for the general shopping needs of area residents and workers with a variety of business, retail, personal and related or similar services.

To implement the proposed development, the project includes a General Plan Amendment to change the Land Use designation of the site from Residential: Max. 5 du/ac (R5) and Commercial (C) to Residential: Max. 10 du/ac (R10) and a Change of Zone to reclassify the site from Residential 5 (R5) District and Community Commercial (CC) District to Residential Single-Family 10 (RS10) District.

12. **Surrounding Land Uses and Setting:**

	Land Use	General Plan	Zoning
Project Site	Vacant	Residential: 5 max du/ac (R5) Commercial (C)	Residential 5 (R5) District Community Commercial (CC) District
North	Single-Family Residential	Residential: Max. 5 du/ac (R5)	Residential 5 (R5) District
South	Single-Family Residential	Residential: Max. 5 du/ac (R5) Residential: Max. 10 du/ac (R10)	Residential 5 (R5) District Residential 10 (R10) District
East	Single-Family Residential	Residential: Max. 5 du/ac (R5)	Residential 5 (R5) District
West	Commercial Shopping Center, Val Verde Academy	Commercial (C) Residential: Max. 5 du/ac (R5)	Community Commercial (CC) District Residential 5 (R5) District

13. **Description of the Site and Project:**

Environmental Setting

The approximately 10.82-acre project site consists of one parcel (Assessor's Parcel Number 312-020-025) and is a vacant lot. A 100-foot-wide easement in favor of the State of California for the California Aqueduct is located along the western edge of the site, covering 3.02 acres. Vehicular access to the site is provided by Iris Avenue. The perimeter

of the site is partially secured by wall and fencing on adjacent properties along the eastern, western, and southern portions of the site.

Vegetation on the site consists of a light moderate to growth of weeds. The topography of the site is relatively flat, with a very gentle fall towards the southeast. The project site is located within a relatively flat valley, with elevations averaging approximately 1496 feet above mean sea level. Figure 1, *Aerial View*, provides an aerial of the existing project site.

Project Description

Project Characteristics

The Iris Park project (“project” or “proposed project”) would construct 81 new single-family residences, as well as onsite roadways, sidewalks, a detention basin, common open space, and private open space areas on the project site. Figure 6, Conceptual Site Plan, illustrates the proposed site configuration following project implementation.

The proposed project site totals approximately 10.82 acres in size, which includes the 100-foot-wide California Aqueduct easement on the western portion of the site. In conjunction with the project, the City intends to construct a public park along this easement. The proposed public park would include landscaping and an extension of the existing trail located along segments of the California Aqueduct easement in the city.

To implement the proposed development, the project includes a General Plan Amendment to change the Land Use designation of the site from Residential: Max. 5 du/ac (R5), which currently composes approximately 9.87 acres on the site, and Commercial (C), which currently composes approximately 0.95 acres on the site, to Residential: Max. 10 du/ac (R10); a Change of Zone to reclassify the site from Residential 5 (R5) and Community Commercial (CC) to Residential Single-Family 10 (RS10); a Tentative Tract Map (TTM 37909) to subdivide the project site into 81 lots; and a Conditional Use Permit for a Planned Unit Development.

Project Features

The proposed residential development would include 81 single-family residences on the 10.82-acre project site, yielding a density of 7.48 du/acre. Residential lots would range from 2,197 SF to 4,741 SF. The single-family residences would range in size from 1,848 square feet (SF) to 2,201 SF, with 3-bedroom to 5-bedroom floor plans, private yards, and two-car garages. Overall, the project proposes a total residential building footprint of 164,549 SF. The minimum residential lot area would be 2,250 SF, with a range from 2,250 SF to 4,293 SF. Table 1 below provides a breakdown of the proposed development features on the project site.

Table 1. Proposed Development

Floor Plan Type	Percent of the project site	No. of Plans	Total Livable Area (SF)
3 bedroom/2.5 bath	30%	26	48,048
4 bedroom/2.5 bath	30%	23	46,069
4 bedroom/3 bath	40%	32	70,432
Totals:	100%	81	164,549

The project also proposes to construct common open space areas, private open space areas, and a detention basin, as detailed in Table 2 below. A 17,996 square-foot common open space area is proposed within the northeastern portion of the residential development and would include landscaping, walkways, and seating areas. Smaller open space areas, including a 4,619 square-foot fitness park, would be located along the western edge of the site, adjacent to the California Aqueduct easement. The easement itself would provide a trail and landscaped areas. New walkways are also proposed throughout the residential development. The project would provide private yards within the single-family residential lots.

Table 2. Proposed Open Space

Description	Area (SF)
Common Open Space	29,185
Private Open Space	51,572
Total	80,757

New 6-foot high walls would be constructed along the northern boundary of the site adjacent to Iris Avenue, in addition to new 4-foot high tubular steel fencing along the western boundary of the site adjacent to the California Aqueduct easement. The existing fence along the eastern boundary of the site would remain. The proposed residential project will have a gated entry along Iris Avenue, with a gate set back sixty feet from the street.

Architectural Design

The proposed two-story single-family residences would include three different architectural styles to provide aesthetic variation throughout the community. The single-family residences would be designed with various architectural elements, multi-level rooflines, and an earth tone color scheme. In addition, the residences would incorporate stucco finishes, detailed roof elements, awnings, metal railings, and decorative windows and doors in the exterior design. Enhanced elevations would be incorporated where building sides or rears are visible from streets. The tallest roofline of the two-story residences would be less than 30 feet in height.

Access and Circulation

Vehicular access to the project site would be provided via two gated driveways on Iris Avenue, which would provide access to the community's internal roadways. The proposed residential project will have a gated main entrance along Iris Avenue, with a gate set back sixty feet from the street and a secondary gated access point off of Iris Avenue. The main entrance area will have a turnaround area before the gate and will feature a storage lane for visitors to use a call box for permission to enter the community. The single-family residences would be accessed by private driveways along the internal roadways, as shown on Figure 6, *Conceptual Site Plan*. The project also includes pedestrian paths to provide for non-vehicular on-site circulation and for connection to existing sidewalks and bike lanes adjacent to the proposed project.

Parking

The proposed project would provide garage, driveway, and on-street parking. Each residence would have a two-car garage. The project would also provide 49 on-street parking spaces. Table 3 shows the parking to be provided by the project.

Table 3. Proposed Parking

Type of Parking	Required	Provided
Enclosed Parking Spaces	162	162
Guest Parking	41	49
Total Parking Spaces Provided	203	211
Parking to Unit Ratio		2.6/dwelling unit

Recreation and Open Space

The project includes the development of 29,185 SF of common open space. As part of the common open space, a 17,996 SF community park is proposed within the northeastern portion of the project site, and a 4,619 SF fitness park is proposed within the western portion of the project site. The community park would provide amenities for future residents, such as walking paths, seating areas, picnic tables, and a group shade structure with picnic tables and communal barbeques. The fitness park would provide four community fitness stations, picnic benches, and walking paths. The project includes connections to a future public linear park, to be developed by the City, along the California Aqueduct easement. The future linear park would provide walking trails and landscaped areas. Figure 7, *Conceptual Landscape Plan*, illustrates the proposed recreational and open space areas within the project.

Landscaping

Landscaping proposed as part of the project would consist of drought-tolerant ornamental trees, shrubbery, and groundcover. Turf would be provided in active use areas in common open spaces. In total, the project would include 67,646 SF of total landscaping on the project site. The landscape plan would be consistent with the City's landscape and irrigation design standards, as provided in Section 9.17.030 of the City's Municipal Code.

Landscaping improvements would also be provided along Iris Avenue to City standards, which would include a 10-foot landscape setback between then existing sidewalk on Iris Avenue and the proposed community wall along the northern portion of the site. The street trees within the setback would consist of 36-inch and 24-inch ornamental box trees to enhance the frontage on Iris Avenue and allow for additional privacy within the proposed community. In addition, the roadway entrances into the proposed residential community would include decorative pavement, as well as decorative signage and matching height palm trees to aesthetically enhance the entrance to the residential community.

Overall, landscaping throughout the complex would be consistent and provide a cohesive design. Landscaping improvements at the perimeter of the complex are intended to integrate the proposed project with the surrounding neighborhood context and streetscape character. Figure 7, *Conceptual Landscape Plan*, illustrates the proposed landscape areas and landscape pallet.

Lighting

Outdoor lighting included as part of future development on the project site would be typical of single-family residential uses and would consist of wall-mounted lighting as well as pole-mounted lights along the proposed internal roadways. Nighttime lighting would be used as accent/security lighting in the park area. All of the project's outdoor lighting would

be directed downward and shielded to minimize off-site spill. The location of all exterior lighting would comply with lighting standards established in the City's Municipal Code.

Infrastructure Improvements

Water and Sewer

The proposed project would install new sewer lines within the project's proposed onsite streets that would connect to the existing sewer manholes and 18-inch sewer line in the 100-foot wide easement to the west. The project would also install new water lines within the project's proposed onsite streets that would connect to the existing 12-inch water line in Iris Avenue.

Drainage

In the existing condition, the topography of the project site is planar, with a small elevation change towards the southeast. Thus, the project site's current surface runoff flows generally as sheet flow to the south-southeast. In the developed condition, the project site would consist of several drainage sub-areas where storm flows would flow towards the proposed internal roadways and would ultimately be conveyed to the proposed infiltration basin system within the southeast corner of the property. The infiltration basin would be installed within the proposed landscape area onsite adjacent to the easement areas along the westerly portion of the property and would discharge to the existing point of discharge within the existing easements.

SUBDIVISION

As part of the project, TTM 37858 would be required to subdivide the existing parcel (APN 312- 020-025) to create 81 residential lots, as shown on Figure 8, *Tentative Tract Map*. The project site would consist of the residential development and associated infrastructure. Existing parcels in the project vicinity would not be impacted by the proposed parcel reconfiguration.

GENERAL PLAN AND ZONING

The project site currently has existing General Plan land use designations of Residential: Max. 5 du/ac (R5) and Commercial (C). As part of the project, a General Plan Amendment is proposed to change the designation of the site to Residential: Max. 10 du/ac (R10), which would allow the proposed single-family residences at a density of approximately 7.58 du/acre. In addition, the project site currently has zoning designations of Residential 5 (R5) District and Community Commercial (CC) District. As such, the project includes a zone change to Residential Single-Family 10 (RS10) to implement the proposed single-family residential uses. Section 9.03.020 of the City's Municipal Code states that the Residential Single-Family 10 District (RS10) zoning district is to provide for residential development on small single-family lots with amenities not generally found in suburban subdivisions. The district is intended for subdivisions at a maximum allowable density of 10 dwelling units per net acre.

Following approval of the General Plan Amendment and zone change, the land use designation and zoning classification associated with the project site would be consistent with the proposed use. As a result of project implementation, all other land use designations and zoning classifications in the project vicinity would remain the same as under existing conditions. Any General Plan Amendment or zone change proposed as

part of a future project (that is subject to discretionary approval) would be subject to separate environmental review on a project-specific basis, in accordance with the provisions of CEQA and the State CEQA Guidelines.

Table 4. Current General Plan Designation and Zoning Designation

Current General Plan Designation	Current Zoning Designation	Acreage
Residential: Max 5 du/ac (R5)	Residential 5 (R5) District	9.87
Commercial (C)	Community Commercial (CC) District	0.95

CONSTRUCTION DURATION AND ZONING

Construction activities include demolition of the existing structures, pavement, and the existing utility infrastructure; grubbing, grading, excavation and re-compaction of soils; utility and infrastructure installation; building construction; roadway pavement; and architectural coatings. Approximately 6,042 cy of soil is proposed to be exported during grading activities.

Construction activities for the project would occur over 26 months and would begin in 2021 with the opening for project occupancy in 2023. Construction activities would occur in the following stages: site preparation, grading, building construction, architectural coating, and paving. Pursuant to the Chapter 11.80.030 of the Moreno Valley Municipal Code, construction activities would be limited to between the hours of 7:00 a.m. to 8:00 p.m. Monday through Friday, excluding holidays unless written approval is obtained from the City Building Official or City Engineer.

DISCRETIONARY APPROVALS

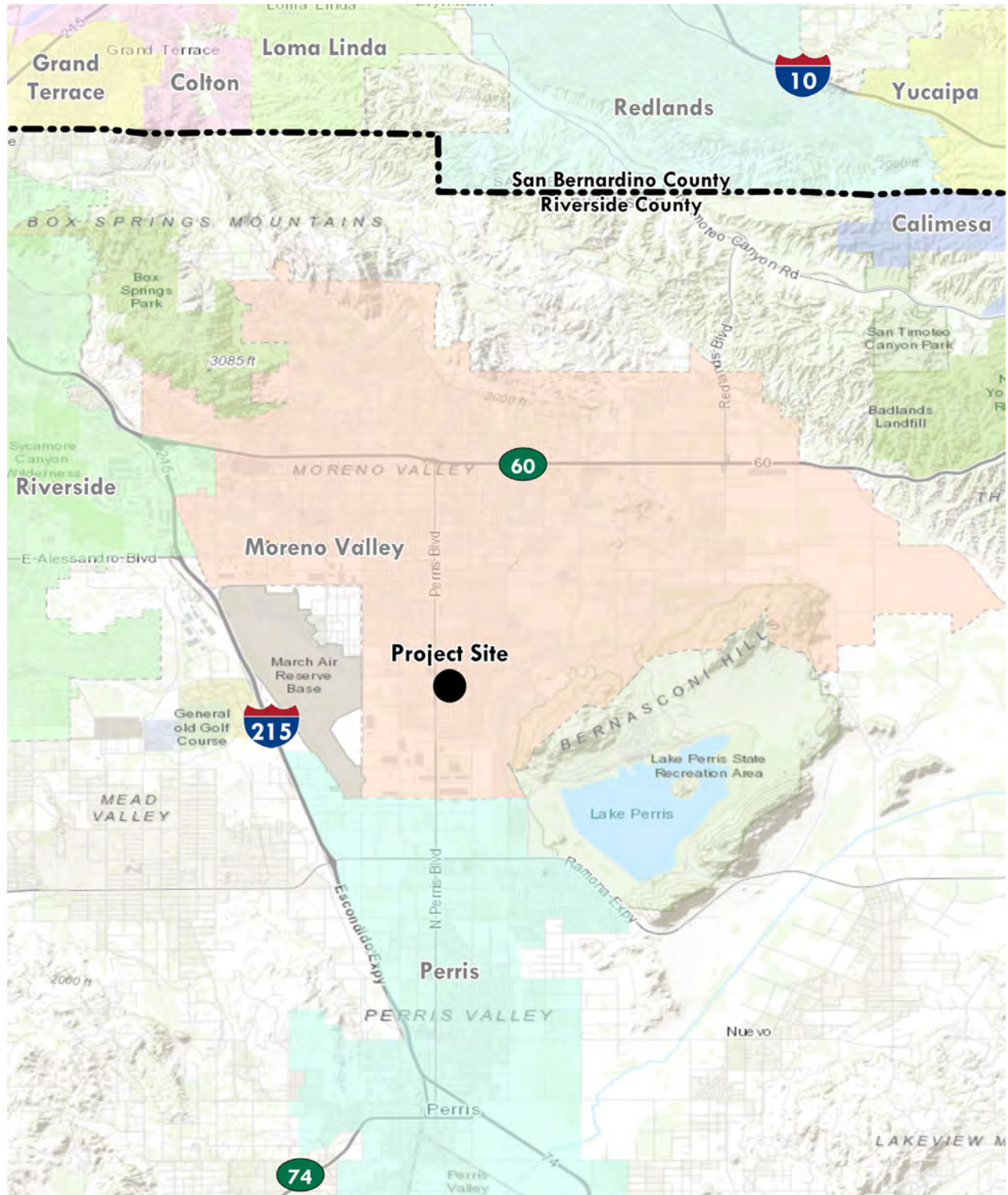
In accordance with Sections 15050 and 15367 of the State CEQA Guidelines, the City is the designated Lead Agency for the proposed project and has principal authority and jurisdiction for CEQA actions and project approval. Responsible Agencies are those agencies that have jurisdiction or authority over one or more aspects associated with the development of a proposed project and/or mitigation. Trustee Agencies are State agencies that have jurisdiction by law over natural resources affected by a proposed project.

The following discretionary approvals by the City of Moreno Valley, as Lead Agency, are anticipated to be necessary for implementation of the proposed project:

City of Moreno Valley

- General Plan Amendment to change the site's land use designation from Residential: Max. 5 du/ac (R5) and Commercial (C) to Residential: Max. 10 du/ac (R10)
- Zone change from Residential 5 District (R5) and Community Commercial (CC) to Residential Single Family 10 District (RS10)
- Approval of Tentative Tract Map (TTM 37909)
- Approval of a Conditional Use Permit (CUP) for a Planned Unit Development (PUD)

Regional Location



Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

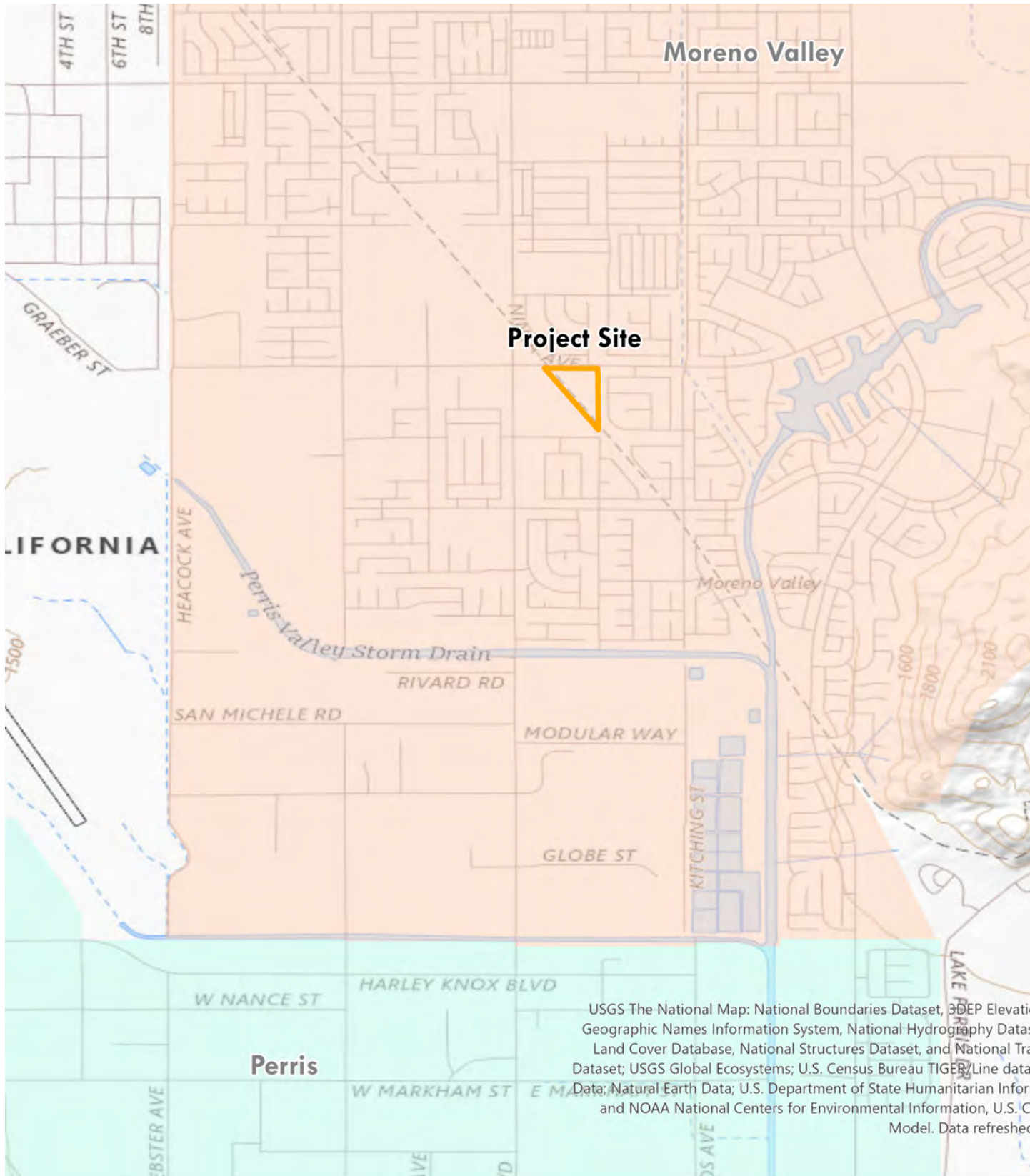
Iris Park IS/MND

Figure 1

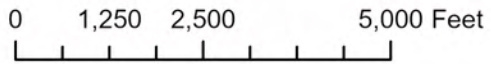
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Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

USGS Map with Project Location



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Data, National Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; U.S. Department of State Humanitarian Information; Natural Earth Data; U.S. Department of State Humanitarian Information and NOAA National Centers for Environmental Information, U.S. Coastal Model. Data refreshed 12/2019.



Iris Park IS/MND

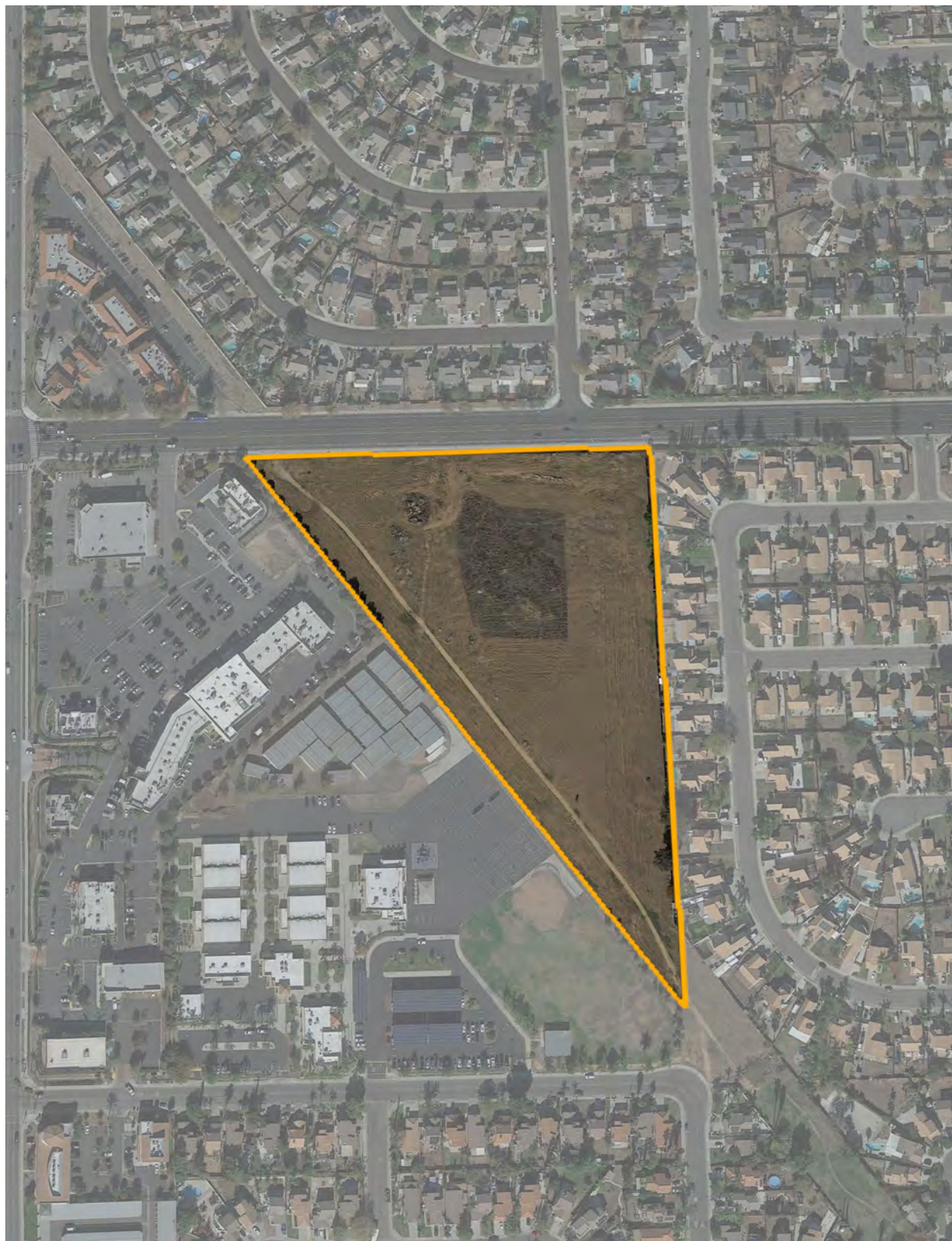
Figure 2

Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

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Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

Aerial View



Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

Iris Park IS/MND

Figure 3

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Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

Surrounding Land Uses

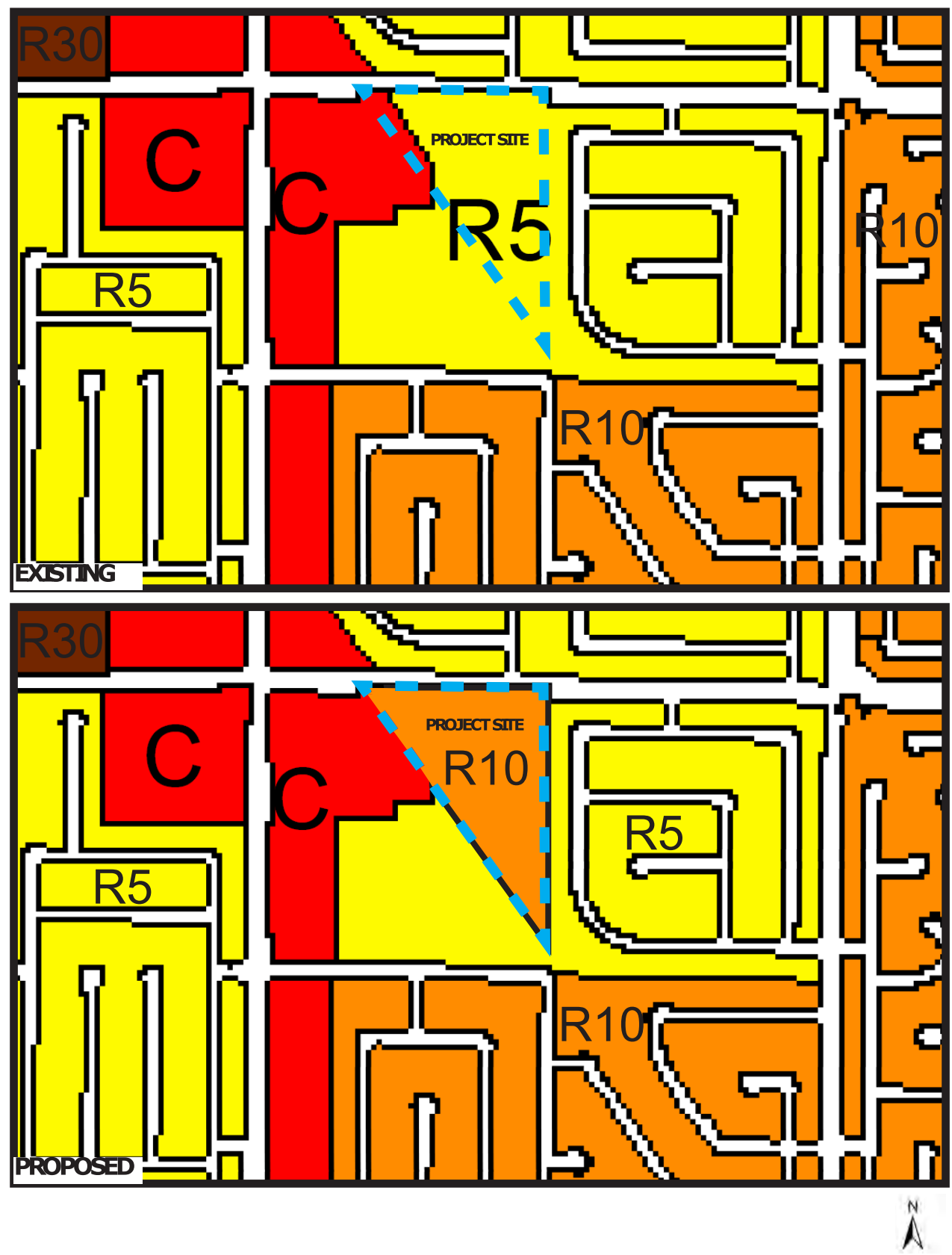


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Existing and Proposed General Plan Land Uses

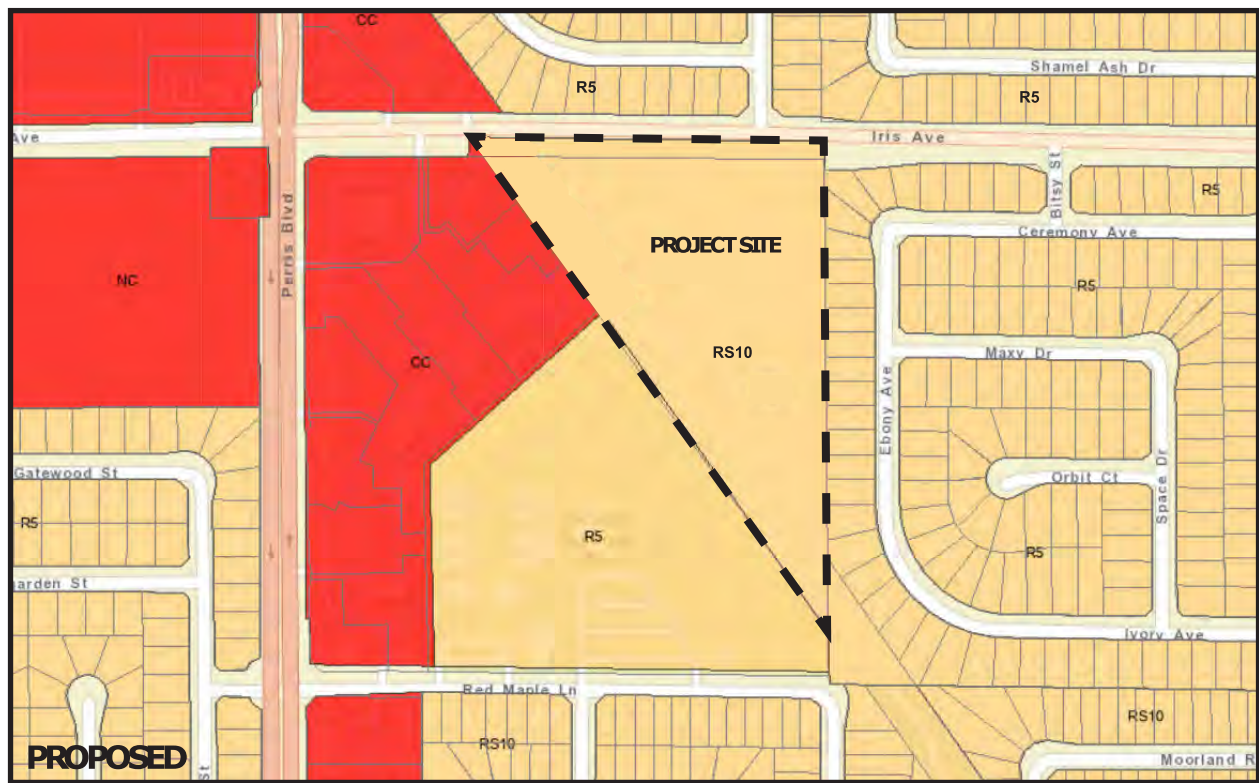
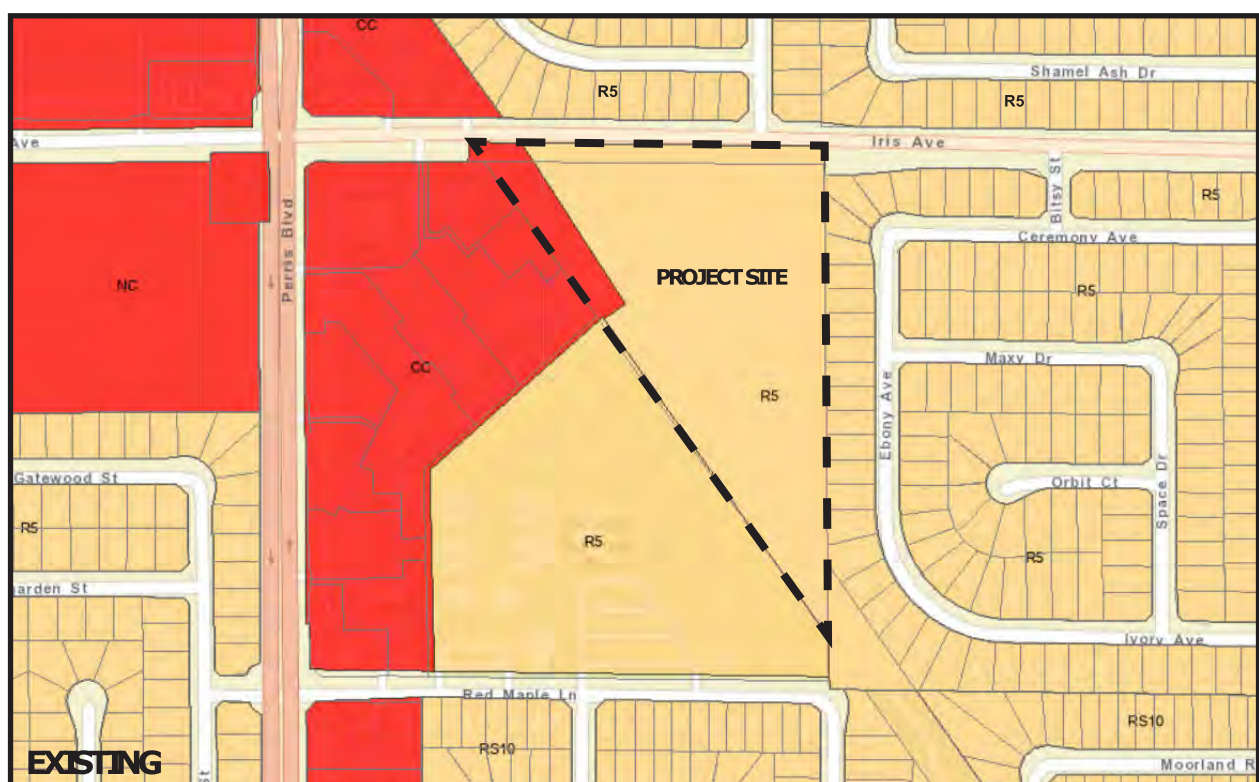


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Existing and Proposed Zoning

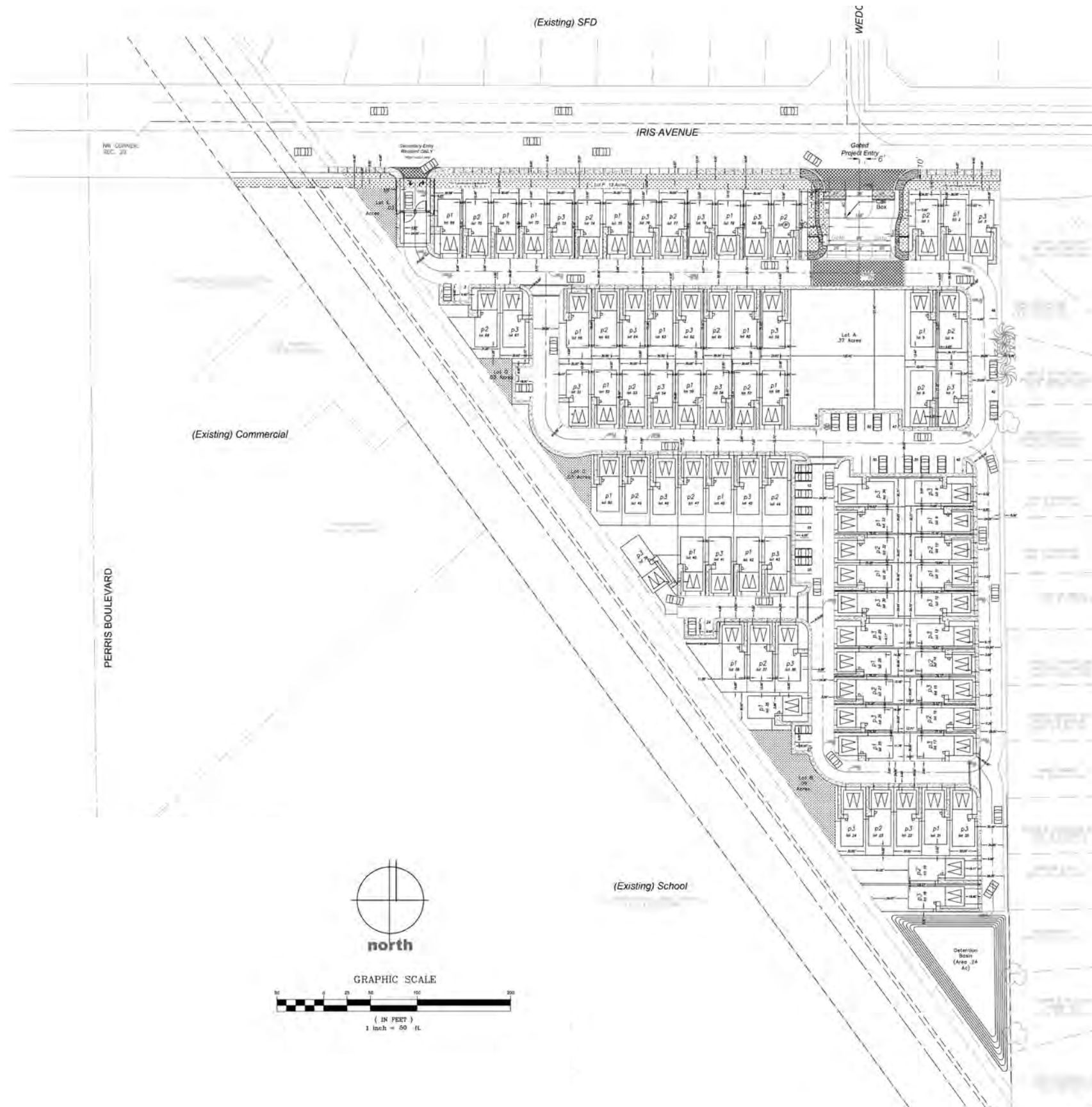


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Conceptual Site Plan



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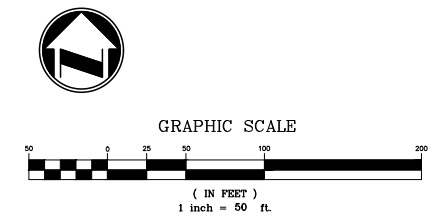
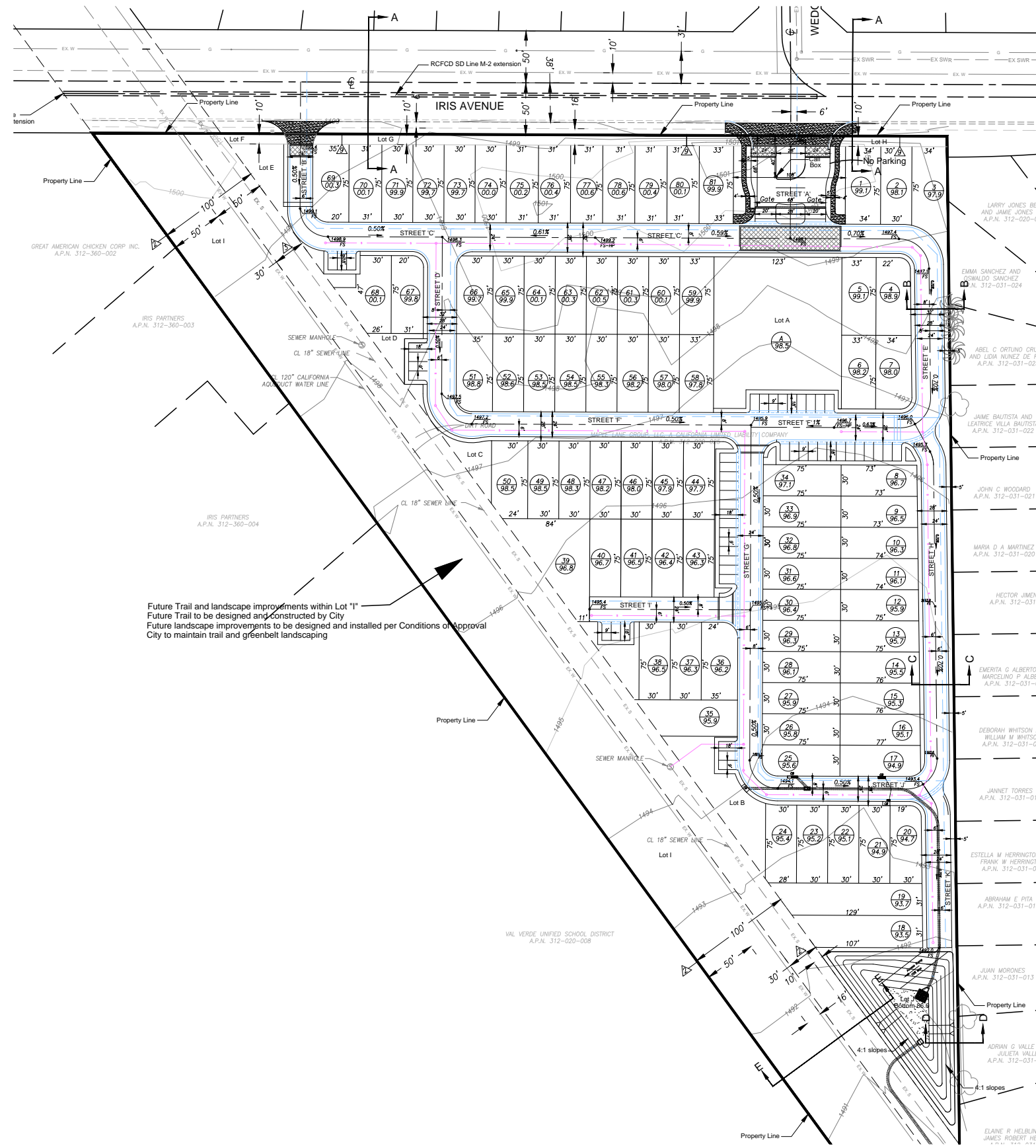
Landscape Plan



Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

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Tentative Tract Map No. 37909



Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

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14. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

The City sent notices regarding the project to the following Native American tribes that may have knowledge regarding tribal cultural resources in the project vicinity:

- Agua Caliente Band of Cahuilla Indians
- Cahuilla Band of Indians
- Desert Cahuilla Indians
- Los Coyotes Band of Cahuilla Mission Indians
- Morongo Band of Mission Indians
- Pechanga Band of Luiseño Indians
- Rincon Band of Luiseño Indians
- San Manuel Band of Mission Indians
- Santa Rosa Band of Mission Indians
- Serrano Nation of Mission Indians
- Soboba Band of Luiseño Indians

The Agua Caliente Band of Cahuilla Indians, Pechanga Band of Luiseño Indians, Rincon Band of Luiseño Indians, and Soboba Band of Luiseño Indians requested consultation regarding the proposed Project. The consulting tribes consider the area sensitive for cultural resources as several sites are located nearby. Although no information for site specific tribal cultural resources was provided (and there are no known tribal cultural resources on or adjacent to the project site), the consulting tribes requested inclusion of mitigation due to the potential of the Project to unearth previously undocumented tribal cultural resources during construction. These mitigation measures are incorporated in this Initial Study.

15. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

N/A

16. Other Technical Studies Referenced in this Initial Study (Provided as Appendices):

Appendix A	CalEEMod Emissions Summary
Appendix B	Habitat Assessment
Appendix C	Phase I Cultural Resources Assessment
Appendix D	Phase I Paleontological Resources Assessment
Appendix E	Preliminary Geotechnical and Infiltration Feasibility Investigation
Appendix F	Phase I Environmental Site Assessment
Appendix G	Preliminary Hydrology Report
Appendix H	Preliminary Project Specific Water Quality Management Plan
Appendix I	Noise Impact Analysis

Appendix J Trip Generation Analysis
Appendix K VMT Memo

17. Acronyms:

ADA -	American with Disabilities Act
ALUC -	Airport Land Use Commission
ALUCP -	Airport Land Use Compatibility Plan
AQMP -	Air Quality Management Plan
CEQA -	California Environmental Quality Act
CIWMD -	California Integrated Waste Management District
CMP -	Congestion Management Plan
DTSC -	Department of Toxic Substance Control
DWR -	Department of Water Resources
EIR -	Environmental Impact Report
EMWD -	Eastern Municipal Water District
EOP -	Emergency Operations Plan
FEMA -	Federal Emergency Management Agency
FMMP -	Farmland Mapping and Monitoring Program
GIS -	Geographic Information System
GHG -	Greenhouse Gas
GP -	General Plan
HCM	Highway Capacity Manual
HOA -	Homeowners Association
IS -	Initial Study
LHMP -	Local Hazard Mitigation Plan
LOS -	Level of Service
LST -	Localized Significance Threshold
MARB -	March Air Reserve Base
MARB/IPA-	March Air Reserve Base/Inland Port Airport
MSHCP -	Multiple Species Habitat Conservation Plan
MVFP -	Moreno Valley Fire Department
MVPD -	Moreno Valley Police Department
MVUSD -	Moreno Valley Unified School District
MWD -	Metropolitan Water District
NCCP -	Natural Communities Conservation Plan
NPDES -	National Pollutant Discharge Elimination System
OEM -	Office of Emergency Services
OPR -	Office of Planning & Research, State
PEIR -	Program Environmental Impact Report
PW -	Public Works
RCEH -	Riverside County Environmental Health
RCFCWCD -	Riverside County Flood Control & Water Conservation District
RCP -	Regional Comprehensive Plan
RCTC -	Riverside County Transportation Commission
RCWMD -	Riverside County Waste Management District
RTA -	Riverside Transit Agency
RTIP -	Regional Transportation Improvement Plan
RTP -	Regional Transportation Plan
SAWPA -	Santa Ana Watershed Project Authority
SCAG -	Southern California Association of Governments

SCAQMD -	South Coast Air Quality Management District
SCE -	Southern California Edison
SCH -	State Clearinghouse
SKRHCP -	Stephens' Kangaroo Rat Habitat Conservation Plan
SWPPP -	Stormwater Pollution Prevention Plan
SWRCB -	State Water Resources Control Board
USFWS -	United States Fish and Wildlife
USGS -	United States Geologic Survey
VMT -	Vehicle Miles Traveled
VVUSD -	Valley Verde Unified School District
WQMP -	Water Quality Management Plan
WRCOG -	Western Riverside Council of Government

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

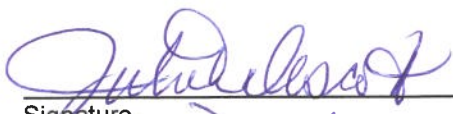
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | | | | |
|--------------------------|-----------------------------|--------------------------|----------------------------------|--------------------------|------------------------------------|
| <input type="checkbox"/> | Aesthetics | <input type="checkbox"/> | Agriculture & Forestry Resources | <input type="checkbox"/> | Air Quality |
| <input type="checkbox"/> | Biological Resources | <input type="checkbox"/> | Cultural Resources | <input type="checkbox"/> | Energy |
| <input type="checkbox"/> | Geology & Soils | <input type="checkbox"/> | Greenhouse Gas Emissions | <input type="checkbox"/> | Hazards & Hazardous Materials |
| <input type="checkbox"/> | Hydrology & Water Quality | <input type="checkbox"/> | Land Use & Planning | <input type="checkbox"/> | Mineral Resources |
| <input type="checkbox"/> | Noise | <input type="checkbox"/> | Population & Housing | <input type="checkbox"/> | Public Services |
| <input type="checkbox"/> | Recreation | <input type="checkbox"/> | Transportation | <input type="checkbox"/> | Tribal Cultural Resources |
| <input type="checkbox"/> | Utilities & Service Systems | <input type="checkbox"/> | Wildfire | <input type="checkbox"/> | Mandatory Findings of Significance |

DETERMINATION (To be completed by the Lead Agency):

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.


 Signature
 Julia Roscoff
 Printed Name

10/20/2020
 Date
 City of Moreno Valley
 For

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a Lead Agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the Lead Agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The Lead Agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or another CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analyses Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources. A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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I. AESTHETICS – Except as provided in [Public Resources Code §21099](#) – Modernization of Transportation Analysis for Transit-Oriented Infill Projects – **Would the project:**

a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:
No Impact. Scenic vistas consist of expansive, panoramic views of important, unique, or highly valued visual features that are seen from public viewing areas. This definition combines visual quality with information about view exposure to describe the level of interest or concern that viewers may have for the quality of a particular view or visual setting. A scenic vista can be impacted in two ways: a development project can have visual impacts by either directly diminishing the scenic quality of the vista or by blocking the view corridors or “vista” of the scenic resource. Important factors in determining whether the proposed project would block scenic vistas include the project’s proposed height, mass, and location relative to surrounding land uses and travel corridors.

The project site is located within a developed area of the city of Moreno Valley and is not within or adjacent to a scenic vista. The site is adjacent to roadways and existing residential, commercial, and educational land uses. The Moreno Valley General Plan Figure 6-2, Major Scenic Resources identifies the scenic resources within the City that include: Box Springs Mountains, Moreno Peak, Russell Mountains, Reche Mountains, and the Badlands.

The site is located approximately 1.5 miles west of the Russell Mountains. However, only partial views of the Russell Mountains are present on the project site between the existing single-family residences to the east. The proposed single-family residences would be a maximum of approximately 30 feet in height and would be the same height as existing single-family residences to the north and south.

In addition, Figure 6-2, *Major Scenic Resources* of the General Plan designates various view corridors throughout the city. The proposed project is not within or adjacent to a designated view corridor. Thus, development of the project site with single-family residences would not obstruct, interrupt, or diminish a scenic vista; and impacts would not occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:
No Impact. There are no designated state scenic highways in Moreno Valley. The closest eligible state scenic highway is State Route (SR) 74, which travels east/west and is approximately 9 miles to the south of the project site. The closest officially designated state scenic highway is SR-243, 24 miles from the project site, which runs from Interstate 10 (I-10) south of the city of Banning limits and through Idyllwild to Mountain Center (Caltrans 2018). Neither of the scenic highways discussed above are visible from the project site, therefore, no impacts to state scenic highways would occur from implementation of the proposed project.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. As described previously, the project site is located in a developing portion of Moreno Valley and is adjacent to roadways to the north, single-family residences to the east, commercial and educational uses to the west, and single-family residences to the south. Nearby parcels are developed with single-family residential, commercial, and educational uses. The project site is vacant. The existing character of the site and surrounding area is neither unique nor of special aesthetic value or quality.

Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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The project would develop the project site to contain 81 new single-family residences, which would be similar to the single-family residential uses that are adjacent to the east of the site, to the south of the site beyond the Val Verde Academy, and to the north of the site beyond Iris Avenue.

Zoning. The project site is currently zoned as Residential 5 District (R5) and Community Commercial District (CC). The project includes a zone change to Residential Single-Family 10 District (RS10) to implement the proposed single-family residential uses. Section 9.03.020 of the City’s Municipal Code states that the Residential Single-Family 10 District (RS10) zoning district is to provide for residential development on small single-family lots with amenities not generally found in suburban subdivisions. The district is intended for subdivisions at a maximum allowable density of 10 du/ac.

The proposed development would also require approval of a Conditional Use Permit (CUP) for a Planned Unit Development (PUD), which allows for a development to establish unique criteria for such things as setbacks, lot width and depth, building separation, and lot size. This is allowed in exchange for a higher level of detail and amenities within the project than typically required for standard residential development. The project would include a higher level of detail and amenities than standard residential development, including recreational amenities. Therefore, the project would be consistent with the standards for approval of a PUD listed in Section 9.03.060 of the City’s Municipal Code.

In addition, as required within the RS10 district, the project shall provide small lot single-family subdivisions on less than 15 gross acres with landscaping and decorative walls along the street side of corner lots and at least two of the following amenities throughout the project; front porches; automatic garage door openers; and/or electronic security systems. The proposed project would install landscaping and decorative walls throughout the project site, as seen in Figure 7, *Landscape Plan*. The project would also provide front porches and automatic garage door openers for compliance with Section 9.03.040 of the Municipal Code.

As detailed in Table AES-1, with approval of a PUD, the proposed project would be consistent with the development standards for the RS10 zoning district listed in Municipal Code Section 9.03.040. Thus, the proposed project would not conflict with applicable zoning regulations governing scenic quality.

Table AES-1: Project Consistency with Residential 10 District (RS10) Development Standards

Standard	Municipal Code	Proposed
Minimum lot size	4,500 SF	2,250 SF*
Lot width	45 ft.	30 ft.*
Lot depth	85 ft.	75 ft.*
Maximum density	10 du/acre	7.58 du/acre
Height limit	35 feet/2 stories	30 feet/2 stories
*consistent with approval of a PUD		

General Plan. The project site currently has a General Plan land use designation of Residential: Max. 5 du/ac (R5) and Commercial (C). The proposed project includes a General Plan Amendment to change the designation of the site to Residential: Max. 10 du/ac (R10). According to the General Plan Land Use Element, the Residential: Max. 10 du/ac (R10) General Plan land use designation allows for development of residential uses to a maximum density of 10 dwelling units per acre. According to the General Plan Land Use Element, the Commercial General Plan land use designation allows for development of commercial uses.

The project’s proposed density of approximately 7.48 du/ac would be consistent with the maximum allowable density of 10 du/ac with approval of a PUD. In addition, the project would be consistent with the General Plan Land Use Element goals and policies related to scenic quality, as shown in Table AES-2.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Table AES-2: Consistency with Land Use Element Goals and Policies Related to Scenic Quality

Goal or Policy	Project Consistency
<p>Goal 2.1: A pattern of land uses, which organizes future growth, minimizes conflicts between land uses, and which promotes the rational utilization of presently underdeveloped and undeveloped parcels.</p>	<p>Consistent. The proposed project is a residential community on an infill parcel that creates a transition between the lower-density residential development to the east and the commercial and institutional uses to the west. This infill project would support the goal of minimizing conflict between land uses as it would contribute to the overall cohesiveness of the city by developing an underutilized plot of land. Therefore, the project would be consistent with Goal 2.1.</p>
<p>Goal 2.4: A supply of housing in sufficient numbers suitable to meet the diverse needs of future residents and to support healthy economic development without creating an oversupply of any particular type of housing.</p>	<p>Consistent. The proposed project would develop the vacant site with 81 new single-family residences, which would assist in meeting the diverse needs of future residents. In addition, the project would provide varying plans and architectural styles for the single-family residences, which would support healthy economic development ensuring an oversupply of a particular type of housing would not occur. Therefore, the project would be consistent with Goal 2.4.</p>
<p>Policy 2.2.8: The primary purpose of areas designated Residential 10 is to provide for a variety of residential products and to encourage innovation in housing types. Developments within Residential 10 areas are typically expected to provide amenities not generally found in suburban subdivisions, such as common open space and recreational areas. The maximum allowable density shall be 10.0 dwelling units per acre.</p>	<p>Consistent. This project involves a General Plan Amendment from R5 and C to R10 and a proposed Zone Change from R5 and CC to RS10. These land use changes allow for an increase in residential density from maximum 5 du/ac to 10 du/ac. The project implements an innovative housing type, detached single-family homes with attached garages on compact lots, and includes common open space areas and recreational features. Therefore, the project would be consistent with Policy 2.2.8.</p>
<p>Policy 2.2.12: Planned Unit Developments (PUD) shall be encouraged for residential construction in order to provide housing that is varied by type, design, form of ownership, and size. PUD's shall also provide opportunities to cluster units to protect significant environmental features and/or provide unique recreational facilities.</p>	<p>Consistent. As described in the Project Description, the proposed project would provide various plans and architectural styles for the single-family residences to provide housing that is varied by type, design, and size. In addition, the project would provide sidewalks and landscaping along the streets and within common areas provide unique recreational</p>

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>Policy 2.2.13: Discourage costly "leap-frog" development patterns by encouraging in-fill development wherever feasible, thereby reducing overall housing costs. Development within an area designated as SP 212-1 (Moreno Highlands) is not considered to be leapfrog development.</p>				
<p>Policy 2.2.14: Encourage a diversity of housing types, including conventional, factory built, mobile home, and multiple family dwelling units.</p>				
<p>Policy 2.3.1: Within individual residential projects, a variety of floor plans and elevations should be offered.</p>				
<p>Policy 2.3.2: Encourage building placement variations, roofline variations, architectural projections, and other embellishments to enhance the visual interest along residential streets.</p>				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>Policy 2.3.3: Discourage the development of single-family residences with a bulk (building mass) that is out of scale with the size of the parcels on which they are located.</p>	<p>Consistent. The proposed project would construct the proposed single-family residences with 3 different plans designed to conform to the size of the parcel on which they are located. Therefore, the project would be consistent with Policy 2.3.3.</p>			
<p>Policy 2.3.4: Design large-scale small lot single family and multiple family residential projects to group dwellings around individual open space and/or recreational features.</p>	<p>Consistent. The proposed project would construct the proposed single-family residences with approximately 40,200 SF of private open space, as well as approximately 26,136 SF of common open space within the designated community park and fitness park proposed for the project site. Therefore, the project would be consistent with Policy 2.3.4.</p>			
<p>Policy 2.10.1: Encourage a design theme for each new development that is compatible with surrounding existing and planned developments.</p>	<p>Consistent. The proposed project includes architectural styles, colors, and materials that are consistent with surrounding development, while providing enhancements that are consistent with contemporary architectural trends, allowing the community to be both compatible and distinctive. The overall theme encourages a seamless transition between the adjacent developments. Therefore, the project would be consistent with Policy 2.10.1.</p>			

Overall, the proposed project would be consistent with development standards required by the Residential Single-Family 10 Zoning District (RS10) with the approval of a CUP for a PUD, the Residential: Max. 10 du/ac (R10) General Plan land use designation, as well as the Land Use Element goals and policies related to scenic quality. Thus, the project would not conflict with applicable zoning and other regulations governing scenic quality. Furthermore, the project would increase the visual cohesion between the project site and the surrounding single-family residential area. Hence, the proposed project would not degrade the visual character of the project site and surrounding area; and impacts would be less than significant.

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"/>
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Response:
Less Than Significant Impact. The project site is undeveloped and has no existing source of nighttime lighting. However, the project site is surrounded by sources of nighttime lighting including streetlights along Iris Avenue, illumination from vehicle headlights, offsite exterior residential related lighting, offsite exterior commercial lighting, offsite exterior institutional lighting, and interior illumination passing through windows. Sensitive receptors relative to lighting and glare include residents, motorists, and pedestrians.

The proposed project would include the provision of street lighting and nighttime lighting for security purposes around all of the residences. Implementation of the proposed project would contribute additional sources to the overall ambient

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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nighttime lighting conditions. However, all outdoor lighting would be hooded, appropriately angled away from adjacent land uses, and would comply with the Moreno Valley Municipal Code, Section 9.16.280 that will highlight building features and add emphasis to important spaces and entryways, while limiting glare and light trespass onto adjacent properties. Because the project site is within an urban area with various sources of existing nighttime lighting, and the project would be required to comply with the City’s lighting regulations that would be verified by the City’s Building and Safety Division during the permitting process, the lighting increase in light that would be generated by the project would not adversely affect day or nighttime views in the area. Overall, lighting impacts would be less than significant.

Reflective light (glare) can be caused by sunlight or artificial light reflecting from finished surfaces such as window glass or other reflective materials. Generally, darker or mirrored glass would have a higher visible light reflectance than clear glass. Buildings constructed of highly reflective materials from which the sun reflects at a low angle can cause adverse glare. The proposed project would not use highly reflective surfaces, or glass sided buildings. Although the residences would contain windows, the windows would be separated by stucco and architectural elements, which would limit the potential of glare. In addition, as described previously, onsite lighting would be angled down and shielded, which would avoid the potential on onsite lighting to generate glare. Therefore, the project would not generate substantial sources of glare, and impacts would be less than significant.

Existing Plans, Programs, or Policies

None.

Mitigation Measures

None.

Sources:

1. Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 2 – Community Development Element – Section 2.3 – Community Design
 - Chapter 7 – Conservation Element – Section 7.8 – Scenic Resources
 - Figure 6-2 – Major Scenic Resources
2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Section 5.11 – Aesthetics
 - Figure 4.11-1 – Major Scenic Resources
3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
 - Section 9.10.110 – Light and Glare of the Moreno Valley Municipal Code.
 - Chapter 9.16 – Design Guidelines
 - Section 9.17.030 G – Heritage Trees
4. California Department of Transportation, California Scenic Highway Mapping System. 2020. Accessed: at http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/ (Accessed April 22, 2020).

II. 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 type="checkbox"/>	<input checked="" type="checkbox"/>
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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>Response: No Impact. The project site is identified by the California Department of Conservation (CDC) Important Farmland Finder as “Urban and Built-Up Land” (CDC 2020). “Urban and Built-Up Land” is occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. The project site is not designated as Prime, Unique, or Farmland of Statewide Importance. Thus, the proposed project would not result in impacts related to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.</p>				
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. The project site has an existing zoning designation of Residential 5 (R5) District and Community Commercial (CC) District. The project site is not zoned for agricultural use and is not subject to a Williamson Act contract. Thus, the proposed project would not result in impacts related to conflict with an existing agricultural zoning or Williamson Act contract, and impacts would not occur.</p>				
<p>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))?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. No forest land exists on or adjacent to the project site. The project is not zoned for forest land or timberland uses. Thus, the proposed project would not result in impacts related to conflict with an existing forest land or timberland zoning, and impacts would not occur.</p>				
<p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. No forest land exists on the project site. Thus, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use, and impacts would not occur.</p>				
<p>e) Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. As described in the responses above, the project area does not include farmland or forest land; thus, implementation of the proposed project would not 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. Impacts would not occur.</p>				
<p>Existing Plans, Programs, or Policies None.</p>				
<p>Mitigation Measure None.</p>				
<p>Sources:</p> <ol style="list-style-type: none"> 1. Moreno Valley General Plan, adopted July 11, 2006 <ul style="list-style-type: none"> • Chapter 7 – Conservation Element – Section 7.7 – Agricultural Resources 2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006 <ul style="list-style-type: none"> • Section 5.8 – Agricultural Resources <ul style="list-style-type: none"> - Figure 4.8-1 – Important Farmlands 3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code 				

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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4. California Department of Conservation, Important Farmland Finder. 2016. Available: https://maps.conservation.ca.gov/dlrp/ciff/ (Accessed April 22, 2020).				
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III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management district 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"/>
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Response: Less Than Significant Impact. The project site is located in the South Coast Air Basin (SCAB), which is under the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD). The SCAQMD and Southern California Association of Governments (SCAG) are responsible for preparing the Air Quality Management Plan (AQMP), which addresses federal and state Clean Air Act (CAA) requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin. In preparation of the AQMP, SCAQMD and SCAG uses regional growth projections to forecast, inventory, and allocate regional emissions from land use and development-related sources.

As described in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD’s CEQA Air Quality Handbook (1993), for purposes of analyzing consistency with the AQMP, if a proposed project would result in growth that is substantially greater than what was anticipated, then the proposed project would conflict with the AQMP. On the other hand, if a project’s density is within the anticipated growth of a jurisdiction, its emissions would be consistent with the assumptions in the AQMP, and the project would not conflict with SCAQMD’s attainment plans. In addition, the SCAQMD considers projects consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause a new violation.

The proposed project is a residential development project on currently vacant site. The site is located within a residential area of Moreno Valley. As further described in Section 14, *Population and Housing*, the 81 new residences would result in the addition of 321 new residents, which would represent a population increase of approximately 0.15 percent and a 0.14 percent increase in residential units within the city. This limited level of growth would not exceed growth projections and would be consistent with the assumptions in the AQMP.

In addition, emissions generated by construction and operation of the proposed project would not exceed thresholds. As described in the analysis below, the project would not result in an increase in the frequency or severity of existing air quality violations or cause a new violation. Therefore, impacts related to conflict with the AQMP from the proposed project would be less than significant.

b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. The SCAB is in a non-attainment status for federal ozone standards, federal carbon monoxide standards, and state and federal particulate matter standards. Any development in the SCAB, including the proposed project, could cumulatively contribute to these pollutant violations. The methodologies from the SCAQMD CEQA Air Quality Handbook are used in evaluating project impacts. SCAQMD has established daily mass thresholds for regional pollutant emissions, which are shown in Table AQ-1. Should construction or operation of the proposed project exceed these thresholds a significant impact could occur; however, if estimated emissions are less than the thresholds, impacts would be considered less than significant.

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**ISSUES & SUPPORTING
INFORMATION SOURCES:**
Potentially
Significant
ImpactLess Than
Significant with
Mitigation
IncorporatedLess Than
Significant
ImpactNo
Impact
Table AQ-1: SCAQMD Regional Daily Emissions Thresholds

Pollutant	Construction (lbs/day)	Operations (lbs/day)
NOx	100	55
VOC	75	55
PM-10	150	150
PM-2.5	55	55
SOx	150	150
CO	550	550

Source: CalEEMod Emission Summary (Appendix A)

Construction

Construction activities associated with the proposed project would generate pollutant emissions from the following: (1) demolition and removal of the existing onsite improvements and recycling debris; (2) grading and excavation; (3) construction workers traveling to and from project site; (4) delivery and hauling of construction supplies to, and debris from, the project site; (5) fuel combustion by onsite construction equipment; (6) building construction; application of architectural coatings; and paving. The amount of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring.

It is mandatory for all construction projects to comply with several SCAQMD Rules, including Rule 823 for controlling fugitive dust, PM-10, and PM-2.5 emissions from construction activities. Rule 823 requirements include, but are not limited to: applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site, covering all trucks hauling soil with a fabric cover and maintaining a freeboard height of 12 inches, and maintaining effective cover over exposed areas. Compliance with Rule 823 was accounted for in the construction emissions modeling for the project. In addition, implementation of SCAQMD Rule 1113 that governs the VOC content in architectural coating, paint, thinners, and solvents, was accounted for in the construction emissions modeling for the project. As shown in Table AQ-2, CalEEMod results indicate that construction emissions generated by the proposed project would not exceed SCAQMD regional thresholds. Therefore, emissions from construction activities would be less than significant.

ISSUES & SUPPORTING INFORMATION SOURCES:

Potentially Significant Impact

Less Than Significant with Mitigation Incorporated

Less Than Significant Impact

No Impact

Table AQ-2: Construction Emissions Summary

Construction Activity	Maximum Daily Emissions (pounds/day)					
	ROG	NOx	CO	SOx	PM-10	PM-2.5
2021						
Site Preparation	5.4	60.8	22.6	0.1	9.8	6.4
Grading	5.1	62.0	32.7	0.1	6.4	3.7
Building Construction	2.7	22.4	22.4	0.0	2.8	1.4
Paving 1	2.1	12.9	15.3	0.0	0.9	0.6
Maximum Daily Emission	5.4	62.0	37.7	0.1	9.8	6.4
2022						
Building Construction	2.4	20.3	21.8	0.0	2.6	1.3
Architectural Coating 1	60.5	1.5	2.7	0.0	0.4	0.2
Architectural Coating 2	60.5	1.5	2.7	0.0	0.4	0.2
Architectural Coating 3	60.5	1.5	2.7	0.0	0.4	0.2
Maximum Daily Emission	62.9	21.8	24.5	0.0	3.0	1.5
2023						
Building Construction	2.2	18.0	21.1	0.0	3.2	1.0
Paving 2	1.9	10.2	15.1	0.0	0.7	0.5
Architectural Coating 4	60.5	1.5	2.7	0.0	0.4	0.2
Maximum Daily Emissions	60.5	18.0	21.1	0.0	3.2	1.0
2021 to 2023 Maximum Daily Emissions	62.9	62.0	37.7	0.1	9.8	6.4
SCAQMD Significance Thresholds	75	100	550	150	150	55
Emissions Exceed Thresholds?	No	No	No	No	No	No
Notes: ROG=reactive organic gases NOx=oxides of nitrogen PM-10= particulate matter 10 microns or less in diameter PM-2.5=particulate matter 2.5 microns or less in diameter CO=carbon monoxide SOx= sulfure oxides PM emissions reflect SCAQMD Rule 823 reductions Source: see CalEEMod model output						

Source: CalEEMod Emission Summary (Appendix A)

Operation

Operation of the 81 single-family residences would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products. However, vehicular emissions would generate a majority of the operational emissions from the project.

Operational emissions associated with the proposed project were modeled using CalEEMod and are presented in Table AQ-3. As shown, the proposed project would result in long-term regional emissions of the criteria pollutants that would be below the SCAQMD's applicable thresholds. Therefore, operation of the project would not result in a cumulatively considerable net increase of any criteria pollutant impacts, and operational impacts would be less than significant.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Table AQ-3: Summary of Peak Operational Emissions

Operational Activity	Maximum Daily Regional Emissions (pounds/day)				
	ROG	NOx	CO	PM-10	PM-2.5
Area	4.3	0.1	6.7	0.0	0.0
Energy	0.1	0.6	0.3	0.1	0.1
Mobile	1.1	8.1	14.3	5.9	1.6
Total Project Operational Emissions	5.5	8.8	24.3	6.0	1.7
SCAQMD Significance Threshold	55	55	550	150	55
Exceed Threshold?	No	No	No	No	No

Notes:
 NOx = oxides of nitrogen PM10 = particulate matter 10 microns or less in diameter ROG = reactive organic gases
 PM2.5 = particulate matter 2.5 microns or less in diameter CO = carbon monoxide
 Source: see CalEEMod model output

Source: CalEEMod Emission Summary (Appendix A)

c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:

Less Than Significant Impact. The SCAQMD’s *Final Localized Significance Threshold Methodology* (SCAQMD 2008) recommends the evaluation of localized NO2, CO, PM-10, and PM-2.5 construction-related impacts to sensitive receptors in the immediate vicinity of the project site. Such an evaluation is referred to as a localized significance threshold (LST) analysis. According to the SCAQMD’s *Final Localized Significance Threshold Methodology*, “off-site mobile emissions from the project should not be included in the emissions compared to the LSTs” (SCAQMD 2008). SCAQMD has developed LSTs that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards, and thus would not cause or contribute to localized air quality impacts. LSTs are developed based on the ambient concentrations of NOx, CO, PM-10, and PM-2.5 pollutants for each of the 38 source receptor areas (SRAs) in the SCAB. The project site is located within SRA 24, Perris Valley. The LSTs for this SRA were applied to the project.

Sensitive receptors can include residences, schools, playgrounds, childcare centers, athletic facilities. The project location is surrounded by several residential areas to the north and east with a shopping center and Val Verde Academy to the west of the project. The closest sensitive receptors where such a receptor could reside for 24 hours or longer are located at existing residences along the project’s eastern property line. Therefore, the distance for sensitive receptors in the LST assessment was set at 25 meters, the shortest distance contained in the SCAQMD LST emission look-up tables (AQ 2020).

Construction

The localized thresholds from the mass rate look-up tables in SCAQMD’s *Final Localized Significance Threshold Methodology* document, were developed for use on projects that are less than or equal to 5-acres in size or have a disturbance of less than or equal to 5 acres daily. The maximum daily area disturbed during construction is 4.0 acres, which occurs during grading activities. Therefore, the maximum daily disturbed area during construction was set as 4.0 acres for the localized assessment of construction impacts (AQ 2020).

Table AQ-4 identifies the localized impacts at the nearest receptor location in the vicinity of the project. As shown, project construction-source emissions would not exceed the applicable SCAQMD LSTs for emissions of any criteria pollutant. Thus, implementation of the project would not result in a localized air quality impact.

**ISSUES & SUPPORTING
INFORMATION SOURCES:**
Potentially
Significant
ImpactLess Than
Significant with
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IncorporatedLess Than
Significant
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Impact
Table AQ-4: Localized Significance Summary of Construction

Construction Activity	Maximum Daily Emissions (pounds/day)			
	NOx	CO	PM-10	PM-2.5
2021				
Site Preparation	60.8	21.9	9.6	5.3
Grading	56.5	31.2	5.7	3.5
Building Construction	17.4	16.6	1.0	0.9
Paving 1	12.9	14.7	0.7	0.6
Maximum Daily Emission	60.8	31.3	9.6	0.9
2022				
Building Construction	15.6	16.4	0.8	0.8
Architectural Coating 1	1.4	1.8	0.1	0.1
Architectural Coating 2	1.4	1.8	0.1	0.1
Architectural Coating 3	1.4	1.8	0.1	0.1
Maximum Daily Emission	17.0	18.2	0.9	0.9
2023				
Building Construction	14.4	16.2	1.4	0.5
Paving 2	10.2	14.6	0.5	0.5
Architectural Coating 4	1.4	1.8	0.1	0.1
Maximum Daily Emissions	14.4	16.2	1.4	0.5
2021 to 2023 Maximum Daily Emissions	60.8	31.3	9.8	6.4
SCAQMD Significance Thresholds	239	1,346	11	7
Emissions Exceed Thresholds?	No	No	No	No
Notes: ROG=reactive organic gases NOx=oxides of nitrogen PM-10= particulate matter 10 microns or less in diameter PM-2.5=particulate matter 2.5 microns or less in diameter CO=carbon monoxide SOx= sulfure oxides PM emissions reflect SCAQMD Rule 823 reductions Source: see CalEEMod model output				

As described in Response 4.3(a), the proposed project would not significantly increase long-term emissions within the project area. Construction of the proposed project may expose nearby residential sensitive receptors to airborne particulates as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement measures to reduce or eliminate emissions by following SCAQMD's standard construction practices (Rules 822 and 823, as included as PPP AQ-1 and PPP AQ-2). Rule 822 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Rule 823 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during construction, and impacts would be less than significant.

Operation

For operational LSTs, onsite passenger car and truck travel emissions were modeled. 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. As shown on Table AQ-5, operational emissions would not exceed the SCAQMD's localized significance thresholds for any criteria pollutant at the nearest sensitive receptor. Therefore, localized air quality impacts from operational activities would be less than significant.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Table AQ-5: Localized Significance Summary of Operations

Operational Activity	Maximum Daily Localized Emissions (pounds/day)			
	NOx	CO	PM-10	PM-2.5
Area	0.1	6.8	0.0	0.0
Energy	0.6	0.3	0.1	0.1
Mobile	6.4	3.2	0.1	0.0
Total Project Operational Emissions	7.1	10.3	0.2	0.1
SCAQMD Significance Threshold	270	1,577	4	2
Exceed Threshold?	No	No	No	No
Notes: NOx = oxides of nitrogen PM-10 = particulate matter 10 microns or less in diameter PM-2.5 = particulate matter 2.5 microns or less in diameter CO = carbon monoxide Source: see CalEEMod model output				
Source: CalEEMod Emission Summary (Appendix A)				

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
No Impact. The proposed project would not emit other emissions, such as those generating objectionable odors, that would affect a substantial number of people. The threshold for odor is identified by SCAQMD Rule 822, Nuisance, which states:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to result in other emissions, such as objectionable odors, include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities.

The proposed project would implement residential development within the project area that does not involve the types of uses that would emit objectionable odors affecting a substantial number of people. In addition, odors generated by non-residential land uses are required to be in compliance with SCAQMD Rule 822, which would prevent nuisance odors.

During construction, emissions from construction equipment, architectural coatings, and paving activities may generate odors. However, these odors would be temporary, intermittent in nature, and would not affect a substantial number of people. The noxious odors would be confined to the immediate vicinity of the construction equipment. Also, the short-term construction-related odors would cease upon the drying or hardening of the odor-producing materials. Therefore, impacts associated with other emissions, such as odors, would not adversely affect a substantial number of people.

Existing Plans, Programs, or Policies

PPP AQ-1: Rule 822. The project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 822. The project shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

PPP AQ-2: Rule 823. The project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 823, which includes the following:

- 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, with complete coverage of disturbed areas, at least 3 times daily during dry weather; 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.

PPP AQ-3: Rule 1113. The project is required to comply with the provisions of South Coast Air Quality Management District Rule (SCAQMD) Rule 1113. Only “Low-Volatile Organic Compounds” paints (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications shall be used.

Mitigation Measure

None.

Sources:

1. Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 5 – Circulation Element
 - Chapter 6 – Safety Element – Section 6.6 – Air Quality
2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Section 5.3 – Air Quality
 - Figure 4.3-1 – South Coast Air Basin
 - Appendix C – Air Quality Analysis, P&D Consultants, July 2003
3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
 - Section 9.10.050 – Air Quality of the Moreno Valley Municipal Code
 - Section 9.10.150 – Odors of the Moreno Valley Municipal Code
 - Section 9.10.170 – Vibration of the Moreno Valley Municipal Code
4. Moreno Valley Municipal Code Section 12.50.040 – Limitations on Engine Idling
5. Summary of CalEEMod Model Runs and Output for the Iris Park Residential Project. April 8, 2020. Prepared by Vince Mirabella (Appendix A).
6. South Coast Air Quality Management District Final Localized Significance Threshold Methodology (SCAQMD 2008). Accessed: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-1st-methodology-document.pdf> (Accessed May 5, 2020).

IV. 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Response:

Less Than Significant Impact with Mitigation Incorporated. The project site is vacant and undeveloped and has been disturbed. A Biological Habitat Assessment was prepared for the proposed project, which included a literature search to identify special status plants, wildlife, and habitats known to occur in the vicinity of the project site. General plant and wildlife surveys were also conducted to identify any biological resources on or adjacent to the project site. The project site is within the Western Riverside County MSHCP Reche Canyon/Badlands Area Plan.

ISSUES & SUPPORTING INFORMATION SOURCES:

Potentially Significant Impact

Less Than Significant with Mitigation Incorporated

Less Than Significant Impact

No Impact

The Habitat Assessment identified 18 special-status wildlife species and one special-status plant species. Special-status wildlife species identified in the literature review that were determined to have a potential for occurrence (PFO) within the survey area include California horned lark (*Eremophila alpestris actia*), California glossy snake (*Arizona elegans occidentalis*) and Western yellow bat (*Lasiurus xanthinus*). Species PFO was determined based on proximity of historical records and quality of habitat on site. Of the 18 target wildlife species documented to occur within the project vicinity, one (California horned lark) was determined to have a moderate potential for occurrence, and two (glossy snake and western yellow bat) had a low potential for occurrence based on proximity of historical records and quality of habitat on site.

California horned lark is a covered species under the MSHCP. This species may be subject to both temporary and permanent, direct, and indirect impacts, as a result of the proposed project (Blackhawk 2020). Thus, Mitigation Measure BIO-1 has been included to ensure compliance with the MSHCP through the payment of MSCHP mitigation fees. With implementation of Mitigation Measures BIO-1, impacts related to MSCHP covered special-status species would be less than significant.

Western yellow bat was determined to have a low potential for roosting within the survey area based on the presence of Mexican fan palms (*Washingtonia robusta*) present on lands immediately adjacent to the project site. However, suitable roosting sites for this species do not occur directly within the project and this species is presumed absent from the project site (Blackhawk 2020).

Based on California Natural Diversity Database, U.S. Fish and Wildlife Service, and California Native Plant Society-documented occurrences within five miles of the project site, the literature review identified one special-status plant species requiring evaluation for its potential to occur on the project site (smooth tarplant; *Centromadia pungens ssp. laevis*). Smooth tarplant was determined to be absent from the project site and survey area, based on lack of individuals observed on site, proximity of historic records, and quality of habitat on site.

In addition, a Habitat Assessment for burrowing owl was performed throughout the survey area, as the entirety of the project falls within areas designated as MSHCP survey areas for the species. Blackhawk performed a habitat assessment for burrowing owl concurrently with the habitat assessment on February 24, 2020. The assessment was performed per the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area – Step 1 Habitat Assessment (2005, by walking meandering transects through the entire survey area (excluding urban development). At the time of the assessment, the project site did not support suitable habitat for burrowing owl; however, two rubble piles containing shallow cavities were identified on the site and were occupied by desert cottontail and a domestic cat during the 2020 breeding season, precluding occupation by burrowing owl. The habitat assessment determined that the survey area does not support suitable habitat for burrowing owl. Though, occupied by other species at the time of the assessment, these rubble piles have a low potential to support migrating burrowing owls as temporary roost sites, if they become vacant (prior to construction. Following the MSHCP recommendation of a preconstruction burrowing owl survey within 30 days prior to construction, no negative impacts to burrowing owl are anticipated. If burrowing owls are present during the nonbreeding season (September 1 through February 28), burrowing owl exclusion measures may be implemented in accordance with the Plan.

The Habitat Assessment performed by Blackhawk Environmental identified suitable habitat and substrate for migratory birds that are protected under the Migratory Bird Treaty Act and California Department of Fish and Wildlife (CDFW) Codes 3503 and 3503.5 (Blackhawk 2020). Therefore, Mitigation Measure BIO-2 has been included to require pre-construction nesting bird surveys, as well as recommendations for vegetation removal outside of the nesting bird season. With implementation of Mitigation Measure BIO-2, impacts related to protected bird species would also be reduced to a less than significant level.

Thus, through adherence to the recommendations provided in the Habitat Assessment, payment of the MSHCP mitigation fees, and implementation of pre-construction nesting bird surveys, the project would be fully consistent with the MSCHP, CDFW, and USFWS, and impacts would be less than significant with implementation of MM BIO-1 and MM BIO-2.

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. The project site consists of vacant land that has been heavily disturbed by grading. The Habitat Assessment performed by Blackhawk Environmental identified that the presence of any potentially jurisdictional features, including associated vegetation/communities, presence of ordinary high watermarks (OHWMs) or streambeds, substrates, hydrological indicators and potential connectivity was not observed during the Habitat Assessment. In addition, riparian/riverine habitats were not identified within the project site. Due to the lack of habitat which supports riparian species, riparian/riverine-associated species listed in section 6.1.2 of the Plan are not expected to occur. No MSHCP-covered or riparian-associated species were directly observed during the February 24, 2020 field survey (Blackhawk 2020). Thus, impacts to riparian habitat or other sensitive natural community would not occur from implementation of the proposed project.</p>				
c) Have a substantial adverse effect on state or federally protected wetlands (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 type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. As described in the response above, the project site does not contain any drainages, creeks, rivers, or other wetland areas, or any potentially jurisdictional water bodies that may be subject to USACE, RWQCB, and/or CDFW jurisdictions. In addition, no vernal pools or habitat that could potentially support fairy shrimp species were observed on the project site. Thus, impacts to state or federally protected wetlands would not occur from implementation of the proposed project.</p>				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with an 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"/>
<p>Response: Less Than Significant Impact with Mitigation Incorporated. The project site is vacant and undeveloped but is adjacent to roadways, disturbed, and developed land uses. Due to the existing conditions of the project site and the surrounding land uses, the project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. There are no native wildlife nursery sites. However, as described previously, the site includes areas that are suitable for nesting birds that are protected under the Migratory Bird Treaty Act and California Department of Fish and Wildlife (CDFW) Codes 3503 and 3503.5 (Blackhawk 2020). Therefore, Mitigation Measure BIO-2 has been included to require pre-construction nesting bird surveys.</p>				
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 type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. There are no local biological related policies or ordinances, such as a tree preservation policy or ordinance that is applicable to the proposed project. The project site is adjacent existing non-native ornamental trees that are on the right-of-way on Iris Avenue and adjacent to the single-family residential areas to the east and are not subject to any ordinances. The project site contains non-protected native shrubs and herbs as well as non-native grasses and shrubs, but there are no trees on the project site. Therefore, implementation of the proposed project would not conflict with local polices or ordinances protecting trees and no impact would occur.</p>				

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or another approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. See Response 4(a) above. The project site occurs within the Western Riverside County MSHCP. As required by the MSHCP, a Habitat Assessment for burrowing owl was performed throughout the survey area, as the entirety of the project falls within areas designated as MSHCP survey areas for the species. Furthermore, MM BIO-1 includes payment of MSHCP mitigation fees. With performance of the Habitat Assessment for burrowing owl and payment of MSHCP mitigation fees, the project is consistent with the provisions of the MSHCP. Development of the project site would not conflict with local, regional, or state resource preservation and/or conservation policies. Therefore, no significant impacts would occur as a result of project implementation.</p>				
<p>Existing Plans, Programs, or Policies None.</p>				
<p>Mitigation Measures MM-BIO 1: Payment of MSHCP Mitigation Fees. Prior to issuance of a grading or building permit, the applicant will be required to pay relevant MSHCP mitigation fees per the Final Mitigation Fee Nexus Report. These fees will be determined in consultation with the Riverside Conservation Authority based on final project classification and impacts. Payment of all mitigation fees will be required as part of the project approval process.</p> <p>MM-BIO 2: Preconstruction Nesting Bird Surveys. To the extent feasible, conduct vegetation removal outside of the nesting bird season (generally between March 1 and August 31). If vegetation removal is required during the nesting bird season, conduct take avoidance surveys for nesting birds within 100-feet of areas proposed for vegetation removal. Surveys should be conducted by a qualified biologist(s) within 14 days of vegetation removal. If active nests are observed, a qualified biologist will determine appropriate minimum disturbance buffers or other adaptive mitigation techniques (e.g., biological monitoring of active nests during construction-related activities, staggered schedules, etc.) to ensure that impacts to nesting birds are avoided until the nest is no longer active.</p>				
<p>Sources:</p> <ol style="list-style-type: none"> 1. Moreno Valley General Plan, adopted July 11, 2006 <ul style="list-style-type: none"> • Chapter 7 – Conservation Element – Section 7.1 – Biological Resources 2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006 <ul style="list-style-type: none"> • Section 5.9 – Biological Resources <ul style="list-style-type: none"> - Figure 4.9-1 – Planning Area Biological Geographic Sections - Figure 4.9-2 – Planning Area Vegetation Community - Figure 4.9-3 – Project Site Location within the MSHCP Area - Figure 4.9-4 – Reche Canyon/Badlands Area Plan • Appendix E – Biological Resources Study, Appendix E 3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code <ul style="list-style-type: none"> • Section 9.17.030 G – Heritage Trees 4. Moreno Valley Municipal Code Chapter 8.60 – Threatened and Endangered Species 5. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), http://www.wrc-rca.org/about-rca/multiple-species-habitat-conservation-plan/ 6. Stephens' Kangaroo Rat Habitat Conservation Plan (SKRHCP), Governing Documents RCHCA, CA 7. Iris Park Project, Western Riverside MSHCP Habitat Assessment and Consistency Analysis. March 31, 2020. Prepared by Blackhawk Environmental, Inc. (Appendix B). 				

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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V. CULTURAL RESOURCES – Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5 ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:
Less than Significant. According to the *State CEQA Guidelines*, a historical resource is defined as something that meets one or more of the following criteria:

- 1) Listed in, or determined eligible for listing in, the California Register of Historical Resources;
- 2) Listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k);
- 3) Identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or
- 4) Determined to be a historical resource by the project’s Lead Agency.

As described previously, the project site is currently vacant. A review of historical aerial photographs and topographic maps indicate that prior to 1990s, the project area was agricultural. By the late 1990s, the surrounding area saw increased commercial and residential development that has continued up to the present day. Based on the results of the cultural resources search and survey, the proposed project area is considered to have a low sensitivity for presence of significant prehistoric or historical archaeological deposits or features (CUL 2020). Therefore, the project would not cause a substantial adverse change in the significance of a historical resource, and no impact would occur.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Response:
Less than Significant Impact with Mitigation Incorporated. The Phase 1 Cultural Resources Assessment prepared for the project site included an archaeological records check that was completed at the University of California, Riverside, Eastern Information Center (UCR-EIC). The UCR-EIC is the countywide clearing house/repository for all archaeological and cultural studies completed within the Riverside County. All pertinent data was researched, including previous studies for a one-mile radius surrounding the project area and the identification of recorded resources within one mile. In addition, the research included review of the current listings (federal, state, and local) for evaluated resources and reviewed historic maps. The record search indicated five previously recorded resources located within a one-mile radius of the area, with no resources located directly within the project area (CUL 2020). However, because previous resources have been identified within a one-mile radius of the project area, MM CUL-1 has been included to require contractors to halt work within 50 feet of any inadvertent finds of potential archaeological resource and to have the find evaluated by a qualified archaeologist.

Furthermore, as required for compliance with CEQA guidelines and the data requirements of the Office of Historic Preservation (OHP), an intensive field survey was conducted to adequately identify, describe, report , and, if possible, evaluate any cultural resources identified within the project area boundaries. This intensive field survey was conducted on March 6, 2020 by MCC Archaeologist Zachary White. During the course of fieldwork, survey conditions were fair and ground visibility was poor to good (10-80%) throughout the 10.8-acre project area, due to prior ground disturbance and vegetation coverage. The field survey determined that the property has been disturbed due to vehicular activity and modern dumping activity. No cultural resources were identified during the investigation (CUL 2020).

Based on the negative findings presented above, there are no cultural resources, significant or not, within or adjacent to the project area. In addition, as discussed previously, based on the results of the cultural resources search and survey, the proposed project area is considered to have a low sensitivity for presence of significant prehistoric or historical archaeological deposits or features Further, implementation of MM CUL-1 would ensure the proper treatment of any unknown resources that might be identified during construction activities. Thus, potential impacts related to archaeological resources would be less than significant.

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of formally dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. The project site has not been previously used as a cemetery. Thus, human remains are not anticipated to be uncovered during project construction. In addition, procedures of conduct following the discovery of human remains on non-federal lands have been mandated by California Health and Safety Code §7050.5, PRC §5097.98 and the California Code of Regulations (CCR) §15064.5(e), which have been included as PPP CUL-1. According to the provisions in CEQA, should human remains be encountered, all work in the immediate vicinity of the burial must cease and any necessary steps to ensure the integrity of the immediate area must be taken. The Riverside County Coroner shall be immediately notified and must then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner has 24 hours to notify the NAHC, who will in turn, notify the person they identify as the Most-Likely-Descendent (MLD) of any human remains. Further actions will be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD’s recommendations, the owner or the descendent may request mediation by the NAHC (CUL 2020). Thus, with compliance with PPP CUL-1, no impacts would occur.</p>				
<p>Existing Plans, Programs, or Policies PPP CUL-1: Human Remains. Should human remains be encountered, all work in the immediate vicinity of the burial must cease and any necessary steps to ensure the integrity of the immediate area must be taken. The Riverside County Coroner shall be immediately notified and must then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner has 24 hours to notify the NAHC, who will in turn, notify the person they identify as the Most-Likely-Descendent (MLD) of any human remains. Further actions will be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD’s recommendations, the owner or the descendent may request mediation by the NAHC.</p>				
<p>Mitigation Measures MM CUL-1: Inadvertent Discoveries. In the event that buried archaeological resources are inadvertently discovered during ground-disturbing activities, work must be halted within 50 feet of the find until it can be evaluated by a qualified archaeologist. Construction activities could continue in other areas. If the discovery proves to be significant, additional work, such as data recovery excavation or fossil recovery, may be warranted and would be discussed in consultation with the appropriate regulatory agency(ies).</p>				
<p>Sources:</p> <ol style="list-style-type: none"> 1. Moreno Valley General Plan, adopted July 11, 2006 <ul style="list-style-type: none"> • Chapter 7 – Conservation Element – Section 7.2 – Cultural and Historical Resources 2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006 <ul style="list-style-type: none"> • Section 5.10 – Cultural Resources <ul style="list-style-type: none"> - Figure 4.10-1 – Locations of Listed Historic Resource Inventory Structures - Figure 4.10-2 – Location of Prehistoric Sites - Figure 4.10-3 – Paleontological Resource Sensitive Areas • Appendix F – Cultural Resources Analysis, Study of Historical and Archaeological Resources for the Revised General Plan, City of Moreno Valley, Archaeological Associates, August 2003. 3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code 4. Moreno Valley Municipal Code Title 7 – Cultural Preservation 5. Cultural Resources Inventory for the City of Moreno Valley, Riverside County, California, prepared by Daniel F. McCarthy, Archaeological Research Unit, University of California, Riverside, October 1987 (<i>This document</i> 				

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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cannot be provided to the public due to the inclusion of confidential information pursuant to Government Code Section 6254.10.)

- 6. Phase I Cultural Resources Assessment: Iris Park Project, City of Moreno Valley, Riverside County, California. March 2020. Prepared by Material Culture Consulting, Inc. (Appendix C).

VI. ENERGY – Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. The project site is currently vacant. The Southern California Gas Company provides natural gas to the surrounding area. Additionally, Southern California Edison and Moreno Valley Utility currently provides electricity services to the surrounding area. The proposed project would install onsite electrical and natural gas infrastructure that would connect to the existing offsite lines.

Construction

During construction of the proposed project, energy would be consumed in three general forms:

1. Petroleum-based fuels used to power off-road construction vehicles and equipment on the project sites, construction worker travel to and from the project sites, as well as delivery truck trips;
2. Electricity associated with providing temporary power for lighting and electric equipment; and
3. Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Construction activities related to the proposed building and the associated infrastructure would not be expected to result in demand for fuel greater on a per-unit-of-development basis than other development projects in southern California. In addition, the extent of construction activities that would occur is limited to an 18-month period, and the demand for construction-related electricity and fuels would be limited to that time frame.

Construction contractors are required to demonstrate compliance with applicable California Air Resources Board (CARB) regulations governing the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment as part of the City’s construction permitting process. In addition, compliance with existing CARB idling restrictions would reduce fuel combustion and energy consumption. The energy modeling shows that project construction electricity usage over the 26-month construction period is estimated to use 31,154 gallons of diesel fuel, as shown in Table E-1.

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**ISSUES & SUPPORTING
INFORMATION SOURCES:**
Potentially
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ImpactLess Than
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Significant
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Impact
Table E-1: Estimated Construction Equipment Diesel Fuel Consumption

Activity	Equipment	Project Number	Project Hours per day	Default Horsepower	Default Load Factor	Days of Construction	Total Horsepower-hours	Fuel Rate (gal/hp-hr)	Fuel Use (gallons)
Site Preparation	Rubber Tired Dozer	3	8	247	0.40	10	23,712	0.02046	485
	Crawler Tractor	4	8	212	0.43	10	29,171	0.02217	647
Grading	Excavators	2	8	158	0.38	30	28,819	0.01976	570
	Graders	2	8	187	0.41	30	36,802	0.02114	778
	Rubber Tired Dozers	1	8	247	0.40	30	23,712	0.02046	485
	Crawler Tractor	2	8	212	0.43	30	43,757	0.02217	970
	Scrapers	2	8	367	0.48	30	84,557	0.02498	2,112
Building Construction	Crane	1	7	231	0.29	520	243,844	0.01489	3,631
	Forklifts	3	8	89	0.20	520	222,144	0.02396	5,324
	Tractors/Loaders/Bulldozers	3	7	97	0.37	520	391,919	0.01911	7,491
	Welders	1	8	46	0.46	520	88,026	0.02147	1,890
	Generator Set	1	8	84	0.74	520	258,586	0.02147	5,552
Paving 1	Pavers	2	8	130	0.42	10	8,736	0.02151	188
	Paving Equipment	2	8	132	0.36	10	7,603	0.01833	139
	Rollers	2	8	80	0.36	10	4,608	0.01942	89
Architectural Coating 1	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
Architectural Coating 2	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
Architectural Coating 3	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
Architectural Coating 4	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
Paving 2	Pavers	2	8	130	0.42	10	8,736	0.02151	188
	Paving Equipment	2	8	132	0.36	10	7,603	0.01833	139
	Rollers	2	8	80	0.36	10	4,608	0.01942	89
TOTAL									31,154
Source: CalEEMod Emission Summary (Appendix A)									

Table E-2 shows that construction workers would use approximately 38,210 gallons of fuel to travel to and from the project site, and haul trucks and vendor trucks would use approximately 19,888 gallons of diesel fuel.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Table E-2: Estimated Construction Vehicle Trip Related Fuel Consumption

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Haul Trucks	2,165	0
Vendor Trucks	17,723	0
Worker Vehicles	0	38,210
Construction Vehicles Total	19,888	38,210

Source: CalEEMod Emission Summary (Appendix A)

Overall, construction activities would comply with all existing regulations, and would therefore not be expected to use fuel in a wasteful, inefficient, and unnecessary manner. Thus, no impacts related to construction energy usage would occur.

Operation

Once operational, the project would generate demand for electricity, natural gas, as well as gasoline for motor vehicle trips. Operational use of energy includes the heating, cooling, and lighting of the residences, water heating, operation of electrical systems and plug-in appliances, and outdoor lighting, and the transport of electricity, natural gas, and water to the residences where they would be consumed. This use of energy is typical for urban development, no additional energy infrastructure would be required to be built to operate the project, and no operational activities would occur that would result in extraordinary energy consumption.

The proposed project would be required to meet the current Title 24 energy efficiency standards. The City’s administration of the Title 24 requirements includes review of design components and energy conservation measures that occurs during the permitting process, which ensures that all requirements are met. Typical Title 24 measures include insulation; use of energy-efficient heating, ventilation and air conditioning equipment (HVAC); solar-reflective roofing materials; energy-efficient indoor and outdoor lighting systems; reclamation of heat rejection from refrigeration equipment to generate hot water; and incorporation of skylights, etc. In complying with the Title 24 standards, impacts to peak energy usage periods would be minimized, and impacts on statewide and regional energy needs would be reduced. Thus, operation of the project would not use large amounts of energy or fuel in a wasteful manner, and no operational energy impacts would occur. As detailed in Table E-3, operation of the proposed project is estimated to result in the annual use of approximately 32,304 gallons of diesel fuel, 87,330 gallons of gas, approximately 706,035 kilowatt-hour (kWh) of electricity, and approximately 2,478,290 thousand British thermal units (kBtu) of natural gas.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Table E-3: Estimated Annual Operational Energy Consumption

Operational Source		
Energy Source	Annual VMT	Gallons of Gasoline Fuel
Transportation – Project	278,145 (Diesel)	32,304 (Diesel)
	2,314,975 (Gas)	87,330 (Gas)
	2,593,120(Total)	
Thousands Kilowatt-Hours		
Electricity – Project	706,035	
Thousands British Thermal Units		
Natural Gas – Project	2,478,290	
Source: see Fuel Usage Spreadsheet and CalEEMod output		

Source: CalEEMod Emission Summary (Appendix A)

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:

No Impact. The proposed project would be required to meet the CalGreen energy efficiency standards in effect during permitting of the project. The City’s administration of the requirements includes review of design components and energy conservation measures during the permitting process, which ensures that all requirements are met. In addition, the project would not conflict with or obstruct opportunities to use renewable energy, such as solar energy. As discussed, the project proposes to use photovoltaic (PV) solar panels on each of the residences to offset their energy demand in accordance with Title 24. As such, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would not occur.

Existing Plans, Programs, or Policies

PPP GHG-1: CalGreen Compliance, provided in Section 8, *Greenhouse Gas Emissions*.

Mitigation Measures

None.

- Sources:**
- Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 7 – Conservation Element – Section 7.6 – Energy Resources
 - Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
 - Summary of CalEEMod Model Runs and Output for the Iris Park Residential Project. April 8, 2020. Prepared by Vince Mirabella (Appendix A).
 - City of Moreno Valley Energy Efficiency and Climate Action Strategy. Accessed at: <http://www.moval.org/pdf/efficiency-climate112012nr.pdf> (Accessed April 28, 2020).

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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VII. GEOLOGY AND SOILS – Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

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 https://www.conservation.ca.gov/cgs/Documents/SP_04_2.pdf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:
No Impact. The project site is not located within a designated Alquist-Priolo Earthquake Fault Zone or County of Riverside Fault zone. As described by the Preliminary Geotechnical and Infiltration Feasibility Investigation prepared for the proposed project, the nearest known active fault zone is the San Jacinto fault zone located approximately 6.1 miles northeast of the project site. Other major faults within the region include the Elsinore fault zone located approximately 16.2 miles to the southwest, and the San Andreas fault zone located approximately 17 miles to the northeast of the project site (GEO 2020). Thus, the proposed project would not expose people or structures to potential substantial adverse effects from rupture of a known earthquake fault that is delineated on an Alquist-Priolo Earthquake Fault Zoning Map, and impacts would not occur.

ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. The project site is located within a seismically active region of Southern California. As mentioned previously, San Jacinto Fault is located approximately 6.1 miles northeast of the project site (GEO 2020). Thus, moderate to strong ground shaking can be expected at the site. The amount of motion can vary depending upon the distance to the fault, the magnitude of the earthquake, and the local geology. Greater movement can be expected at sites located closer to an earthquake epicenter, that consists of poorly consolidated material such as alluvium, and in response to an earthquake of great magnitude.

Structures built in the City are required to be built in compliance with the California Building Code (CBC [California Code of Regulations, Title 24, Part 2]), included in the Municipal Code as Chapter 8.20. In addition, PPP GEO-1 has been included to provide provisions for earthquake safety based on factors including occupancy type, the types of soils onsite, and the probable strength of the ground motion. Compliance with the CBC would include the incorporation of: 1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; 2) proper building footings and foundations; and 3) construction of the building structures so that it would withstand the effects of strong ground shaking. Because the proposed project would be constructed in compliance with the CBC, the proposed project would result in a less than significant impact related to strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. Soil liquefaction is a phenomenon in which saturated, cohesionless soils layers, located within approximately 50 feet of the ground surface, lose strength due to cyclic pore water pressure generation from seismic shaking or other large cyclic loading. During the loss of stress, the soil acquires “mobility” sufficient to permit both horizontal and vertical movements. Soil properties and soil conditions such as type, age, texture, color, and consistency, along with historical depths to ground water are used to identify, characterize, and correlate liquefaction susceptible soils.

According to the Preliminary Geotechnical and Infiltration Feasibility Investigation for the proposed project, the County of Riverside has mapped the overall site area as having low liquefaction potential. Liquefaction is a process in which strong ground shaking causes saturated soils to lose their strength and behave as a fluid. Ground failure associated with liquefaction can result in severe damage to structures. Soil types susceptible to liquefaction include sand, silty sand, sandy silt, and silt, as well as soils having a plasticity and a moisture content greater than 85 percent of the liquid limit.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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The geologic conditions for increased susceptibility to liquefaction are: 1) shallow groundwater (generally less than 50 feet in depth); 2) the presence of unconsolidated sandy alluvium, typically Holocene in age; and 3) strong ground shaking. All three of these conditions must be present for liquefaction to occur.

Both the liquefaction potential index (LPI) and the liquefaction severity number (LSN) indices were calculated for the soil profiles of exploratory borings taken on the project site. The results indicate that the liquefaction risk of the site is “very low” to “low” per the LPI index of 0. In addition, the site exhibits “little to no expression of liquefaction, minor effects” per the LSN index of 0 (GEO 2020).

Furthermore, as described previously, structures built in the City are required to be built in compliance with the CBC, as included in the City’s Municipal Code as Chapter 8.20 (and herein as PPP GEO-1), which implements specific requirements for seismic safety, excavation, foundations, retaining walls and site demolition. Compliance with the CBC, as included as PPP GEO-1, would require specific engineering design recommendations be incorporated into grading plans and building specifications as a condition of construction permit approval to ensure that project structures would withstand the effects of seismic ground movement, including liquefaction and settlement. Compliance with the requirements of the CBC and City’s municipal code for structural safety (included as PPP GEO-1) would reduce hazards from seismic-related ground failure, including liquefaction and settlement to a less than significant level.

iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:
No Impact. Landslides and other slope failures are secondary seismic effects that are common during or soon after earthquakes. Areas that are most susceptible to earthquake-induced landslides are steep slopes underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits.

As described above, the project site is located in a seismically active region subject to strong ground shaking. However, the project site is flat and does not contain any steep slopes or any other areas that could be subject to landslides. In addition, the site is located in a flat and developed area. Therefore, the project would not cause potential substantial adverse effects related to slope instability or seismically induced landslides.

b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. Construction of the project has the potential to contribute to soil erosion and the loss of topsoil. Grading and excavation activities that would be required for the proposed project would expose and loosen topsoil, which could be eroded by wind or water.

The City’s Municipal Code Section 8.21.170 implements the requirements of the all applicable requirements of the State Water Resources Control Board (SWRCB) and the Santa Ana Regional Water Quality Control Board (SARWQCB), and all projects in the City are required to conform to the permit requirements. This includes installation of Best Management Practices (BMPs) in compliance with the NPDES permit, which establishes minimum stormwater management requirements and controls that are required to be implemented for the proposed project. To reduce the potential for soil erosion and the loss of topsoil, a Stormwater Pollution Prevention Plan (SWPPP) is required by the Regional Water Quality Control Board (RWQCB) regulations to be developed by a QSD (Qualified SWPPP Developer). The SWPPP is required to address site-specific conditions related to specific grading and construction activities. The SWPPP is required to identify potential sources of erosion and sedimentation loss of topsoil during construction, identify erosion control BMPs to reduce or eliminate the erosion and loss of topsoil, such as use of silt fencing, fiber rolls, or gravel bags, stabilized construction entrance/exit, hydroseeding. With compliance with the City’s Municipal Code, RWQCB requirements, and the BMPs in the SWPPP that is required to be prepared to implement the project included as PPP WQ-1, construction impacts related to erosion and loss of topsoil would be less than significant.

In addition, the proposed project includes installation of landscaping, such that during operation of the project substantial areas of loose topsoil that could erode would not exist. In addition, as described in Section 10, *Hydrology and Water*

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Quality, the onsite drainage features that would be installed by the project have been designed to slow, filter, and slowly discharge stormwater into the offsite drainage system, which would also reduce the potential for stormwater to erode topsoil during project operations. Furthermore, implementation of the project requires City approval of a site specific Water Quality Management Plan (WQMP), which would ensure that the City’s Municipal Code, RWQCB requirements, and appropriate operational BMPs would be implemented to minimize or eliminate the potential for soil erosion or loss of topsoil to occur. As a result, potential impacts related to substantial soil erosion or loss of topsoil would be less than significant.

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"/>
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Response:
Less Than Significant Impact. As described above, the project site is flat, and does not contain nor is adjacent to any slope or hillside area. The project would not create slopes. Thus, on or off-site landslides would not occur from implementation of the project.

Differential settlement or subsidence could occur if buildings or other improvements are built on low-strength foundation materials (including imported fill) or if improvements straddle the boundary between different types of subsurface materials (e.g., a boundary between native material and fill). Although differential settlement generally occurs slowly enough that its effects are not dangerous to inhabitants, it can cause building damage over time. Seismic settlement in dry soils generally occurs in loose sands and silty sands, with cohesive soils being less prone to significant settlement. The Idriss and Boulanger (2008) and Pradel (1998) methods were used to evaluate liquefaction-induced settlement and dry sand settlement. The results indicate that a maximum seismic settlement of less than one-half inch can be anticipated. Based on the relative uniformity of soil materials encountered, differential seismic settlement is anticipated to be approximately one-half of the total seismic settlement. Overall, since the site is underlain by dense/stiff to dense/hard older alluvial materials, the potential for settlement is considered low. In addition, the earthwork operations recommended to be conducted during the development of the site will mitigate any near surface loose soil conditions. Thus, impacts would be less than significant (GEO 2020).

Liquefaction also involves lateral or horizontal displacement (lateral spreading) of essentially intact blocks of surficial soils on slopes or toward a free-face slope such as river or canal bank. The potential for and magnitude of lateral spreading is dependent upon many conditions, including the presence of a relatively thick, continuous, potentially liquefiable sand layer and high slopes. As discussed previously, Both the liquefaction potential index (LPI) and the liquefaction severity number (LSN) indices were calculated for the soil profiles of exploratory borings taken on the project site. The results indicate that the liquefaction risk of the site is “very low” to “low” per the LPI index of 0. In addition, the site exhibits “little to no expression of liquefaction, minor effects” per the LSN index of 0. In addition, site reconnaissance and review of aerial imagery of the site and vicinity indicates that there are no known or suspected landslides at the site or in close proximity to the site and, therefore, the potential for seismically induced landslides occurring at the site is considered very low (GEO 2020).

Also, as described previously, compliance with the CBC, as included as PPP GEO-1, would require specific engineering design recommendations be incorporated into grading plans and building specifications as a condition of construction permit approval to ensure that project structures would withstand the effects of related to ground movement, including lateral spreading. Thus, with compliance with the CBC, as included as PPP GEO-1, would reduce potential impacts to a less than significant level.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. Expansive soils contain certain types of clay minerals that shrink or well as the moisture content changes; the shrinking or swelling can shift, crack, or break structures built on such soils. Arid or semiarid areas

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>with seasonal changes of soil moisture experiences, such as southern California, have a higher potential of expansive soils than areas with higher rainfall and more constant soil moisture.</p> <p>The Preliminary Geotechnical and Infiltration Feasibility Investigation performed an evaluation of the potential for expansive soils at the site. The laboratory testing performed found the soils tested to have a very low expansion potential. For very low expansive soils, no specialized construction procedures to resist expansive soil activity are necessary. However, careful evaluation of on-site soils and any import fill for their expansion potential should be conducted during the grading operation (GEO 2020). As described previously, compliance with the CBC, as included as PPP GEO-1, would require specific engineering design recommendations be incorporated into grading plans and building specifications as a condition of construction permit approval to ensure that project structures would withstand the effects of related to ground movement, including expansive soils. Thus, impacts would be less than significant.</p>				
<p>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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. The project would not use septic tanks or alternative methods for disposal of wastewater into subsurface soils. Furthermore, the proposed project would connect to existing public wastewater infrastructure. Therefore, the project would not result in any impacts related to septic tanks or alternative wastewater disposal methods.</p>				
<p>f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Response: Less than Significant Impact with Mitigation Incorporated. The Phase 1 Paleontological Resources Assessment prepared for the project included a locality search conducted through the Natural History Museum of Los Angeles County (LACM) to identify any previously identified paleontological resources near the project site.</p> <p>The Phase 1 Paleontological Resources Assessment found that no significant paleontological resources were identified within the project area during the locality search or field survey. The uppermost layers of soil within the project area are of recently disturbed Quaternary alluvium that is unlikely to contain significant fossil vertebrates. However, LACM notes that significant fossils have been found within similar alluvial mapped units, and that any excavations that extend deeper and into older and finer-grained Quaternary deposits may encounter significant fossil vertebrate remains. In addition, the project area is mapped in RCLIS as High B is based on geologic formations or mapped rock units that are known to contain (or have the correct age and depositional conditions to contain) significant paleontological resources at a depth below 5 feet (PALEO 2020).</p> <p>Therefore, based on the results of the Phase I Paleontological Resources Assessment, the project area is considered to have high sensitivity for the potential to impact paleontological resources during construction activities at or below 5 feet in undisturbed sedimentary deposits. MCC recommends preparation of a Paleontological Resource Management Plan (PRMP) prior to construction excavation. Thus, Mitigation Measure PAL-1 has been included to require preparation of a PRMP and that a professional paleontologist be hired to oversee monitoring. With implementation of Mitigation Measure PAL-1, impacts to paleontological resources would be less than significant.</p>				
<p>Existing Plans, Programs, or Policies PPP GEO-1: California Building Code. The project is required to comply with the California Building Code as included in the City’s Municipal Code Chapter 8.20 to preclude significant adverse effects associated with seismic hazards. California Building Code related and geologist and/or civil engineer specifications for the project are required to be incorporated into grading plans and specifications as a condition of project approval. PPP WQ-1: Stormwater Pollution Prevention Plan, provided in Section 10, <i>Hydrology and Water Quality</i>. PPP WQ-2: Water Quality Management Plan, provided in Section 10, <i>Hydrology and Water Quality</i>.</p>				
<p>Mitigation Measures</p>				

Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

ISSUES & SUPPORTING INFORMATION SOURCES:

Potentially Significant Impact

Less Than Significant with Mitigation Incorporated

Less Than Significant Impact

No Impact

MM PAL-1: Paleontological Resources. Prior to issuance of grading permits, the developer will retain a qualified paleontologist to provide the following monitoring and reporting services during construction:

- A trained and qualified paleontological monitor will perform full-time monitoring of any excavations on the project that have the potential to impact paleontological resources in undisturbed native sediments below 5 feet in depth. The monitor will have the ability to redirect construction activities to ensure avoidance of adverse impacts to paleontological resources.
- The project paleontologist may re-evaluate the necessity for paleontological monitoring after examination of the affected sediments during excavation.
- Any potentially significant fossils observed shall be collected and recorded in conjunction with best management practices and SVP professional standards.
- Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.
- A report documenting the results of the monitoring, including any salvage activities and the significance of any fossils, will be prepared and submitted to the appropriate City personnel.

Sources:

1. Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 6 – Safety Element – Section 6.5 – Geologic Hazards
 - Figure 5-3 – Geologic Faults & Liquefaction
 - Chapter 7 – Conservation Element – Section 7.4 -- Soils
2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Section 5.6 – Geology and Soils
 - Figure 4.6-1 – Geology
 - Figure 4.6-2 – Seismic Hazards
3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
4. Moreno Valley Municipal Code Chapter 8.21 – Grading Regulations
5. Local Hazard Mitigation Plan, City of Moreno Valley Fire Department, adopted October 4, 2011, amended 2017, http://www.moval.org/city_hall/departments/fire/pdfs/haz-mit-plan.pdf
 - Chapter 4 – Earthquake
 - Figure 3-1 – Right-Lateral Strike -Slip Fault
 - Figure 3-1.1 – Moreno Valley Geologic Faults and Liquefaction 2016
 - Figure 3-1.2 – Moreno Valley Area Ground Shaking Map
 - Chapter 8 – Landslide
 - Figure 7-1 – Moreno Valley Slope Analysis 2016
6. Emergency Operations Plan, City of Moreno Valley, March 2009, http://www.moval.org/city_hall/departments/fire/pdfs/mv-eop-0309.pdf
 - Threat Assessment 1 – Major Earthquakes
 - Figure 8 – Types of Faults
 - Figure 9 – Earthquake Faults
 - Figure 11 – Comparison of Richter Magnitude and Modified Mercalli Intensity
 - Figure 12 – Magnitude 4.5 or Greater Earthquake Map
 - Figure 13 – Geologic Faults and Liquefaction
7. Phase I Paleontological Resources Assessment, Iris Park Project, City of Moreno Valley, Riverside County, California. March 2020. Prepared by Material Culture Consulting, Inc. (Appendix D).
8. Preliminary Geotechnical and Infiltration Feasibility Investigation, Proposed Iris Park Residential Development, Moreno Valley, California. November 25, 2019. Prepared by LOR Geotechnical Group, Inc. (Appendix E).

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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VIII. GREENHOUSE GAS EMISSIONS – Would the project:

GHG Thresholds

The City of Moreno Valley has not adopted a numerical significance threshold to evaluate greenhouse gas (GHG) impacts. SCAQMD does not have approved thresholds; however, it does have draft thresholds that provides a tiered approach to evaluate GHG impacts, which includes the following:

- 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 MTCO₂e per year
 - Industrial land use: 10,000 MTCO₂e per year
 - Based on land use type: residential: 3,500 MTCO₂e per year; commercial: 1,820 MTCO₂e per year; or mixed use: 3,000 MTCO₂e per year

The SCAQMD’s draft threshold uses 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 CO₂ concentrations at 450 ppm, thus stabilizing global climate. Therefore, for purposes of examining potential GHG impacts from implementation of the proposed project, and to provide a conservative analysis of potential impacts, the Tier 3 screening level for all land use projects of 3,000 MTCO₂e was selected as the significance threshold (AQ 2020).

In addition, SCAQMD methodology for project’s construction are to average them over 30-years and then add them to the project’s operational emissions to determine if the project would exceed the screening values listed above (AQ 2020).

Climate Action Plan

The City of Moreno Valley adopted an Energy Efficiency and Climate Action Strategy document in 2012. The Energy Efficiency and Climate Action Strategy is a policy document which identifies ways that the City can reduce energy and water consumption and GHG 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 GHG emissions. The project involves the construction and operation of an automobile dealership that would fall under the scope of these policies.

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"/>
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Response:

Less Than Significant Impact. Construction activities produce GHG emissions from various sources, such as site excavation, grading, utility engines, heavy-duty construction vehicles onsite, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew.

In addition, operation of the proposed residences would result in area and indirect sources of operational GHG emissions that would primarily result from vehicle trips, electricity and natural gas consumption, water transport (the energy used to pump water), and solid waste generation. GHG emissions from electricity consumed by the residences would be generated off-site by fuel combustion at the electricity provider. GHG emissions from water transport are also indirect emissions resulting from the energy required to transport water from its source.

The estimated operational GHG emissions that would be generated from implementation of the proposed project are shown in Table GHG-1. Additionally, in accordance with SCAQMD recommendation, the project’s amortized construction

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

related GHG emissions are added to the operational emissions estimate in order to determine the project's total annual GHG emissions.

Table GHG-1: Greenhouse Gas Emissions

Activity	Annual GHG Emissions (MTCO ₂ e)
Project Operational Emissions	
Area	1
Energy	305
Mobile	1,142
Waste	48
Water	43
Total	1,538
Project Construction Emissions	47
Project Construction and Operation	1,585
Significance Threshold	3,000
Project Exceeds Threshold?	No

Source: CalEEMod Emission Summary (Appendix A)

As shown on Table GHG-1, the project would result in approximately 1,585 MTCO₂e per year, below the screening threshold of 3,000 MTCO₂e per year. Therefore, impacts related to greenhouse gas emissions would be less than significant.

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 type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:

No Impact. The proposed project would develop the site with single-family residences that would comply with state programs that are designed to be energy efficient. The proposed project would comply with all mandatory measures under the California Title 24, California Energy Code, and the CalGreen Code, which would provide efficient energy and water consumption. The City's administration of the requirements includes review of the energy conservation measures during the permitting process, which ensures that all requirements are met. In addition, the project includes photovoltaic (PV) solar panels to offset the energy demand. Therefore, the proposed project would not conflict with existing plans, policies, and regulations adopted for the purpose of reducing the emissions of greenhouse gas.

Existing Plans, Programs, or Policies

PPP GHG-1: CalGreen Compliance. The project is required to comply with the CalGreen Building Code as included in the City's Municipal Code to ensure efficient use of energy. CalGreen specifications are required to be incorporated into building plans as a condition of building permit approval.

Mitigation Measures

None.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Sources:

1. Moreno Valley General Plan, adopted July 11, 2006
2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
4. California’s 2017 Climate Change Scoping Plan, prepared by the California Air Resources Board, November 2017, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, accessed April 24, 2019
5. Summary of CalEEMod Model Runs and Output for the Iris Park Residential Project. April 8, 2020. Prepared by Vince Mirabella (Appendix A).
6. City of Moreno Valley Energy Efficiency and Climate Action Strategy. Accessed at: <http://www.moval.org/pdf/efficiency-climate112012nr.pdf> (Accessed April 28, 2020)

IX. 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"/>
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Response:

Less Than Significant Impact. A hazardous material is defined as any material that, due to its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that regulatory agencies have a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the home, workplace, or environment. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment.

Construction

The proposed construction activities would involve the routine transport, use, and disposal of hazardous materials such as paints, solvents, oils, grease, and caulking during construction activities. In addition, hazardous materials would routinely be needed for fueling and servicing construction equipment on the site. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and state regulations that are implemented by the City during building permitting for construction activities. Construction would also include temporary dewatering during excavation for utility installations if the excavation is deep enough to encounter groundwater. If such excavations are in the vicinity of the impacted groundwater in the northeast portion of the site, the water would either be contained and transported to a licensed off-site treatment facility or treated on site before discharge under a county permit to the sanitary sewer. As a result, construction of the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and impacts would be less than significant.

Operation

The project involves operation of 81 new single-family residences, which involve routinely using hazardous materials including solvents, cleaning agents, paints, pesticides, batteries, fertilizers, and aerosol cans. These types of materials are not acutely hazardous and would only be used and stored in limited quantities. The normal routine use of these hazardous materials products pursuant to existing regulations would not result in a significant hazard to people or the environment in the vicinity of the project. Therefore, operation of the project would not result in a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste, and impacts would be less than significant.

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"/>
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ISSUES & SUPPORTING INFORMATION SOURCES:

Potentially Significant Impact

Less Than Significant with Mitigation Incorporated

Less Than Significant Impact

No Impact

Response:

Less Than Significant Impact. A Phase I ESA was prepared by AES Due Diligence, Inc. (AES) for the project site. The purpose of the Phase I analysis was to evaluate the project site for potential Recognized Environmental Concerns (RECs) that may be present, off-site conditions that may impact the subject property, and/or conditions indicative of releases or threatened releases of hazardous substances on, at, in, or to the project site.

ASTM defines a Recognized Environmental Condition (REC) as "the presence or likely presence of an hazardous substance or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment."

The project site was evaluated for the presence of Recognized Environmental Condition's (REC), including Controlled Recognized Environmental Conditions (CREC) and Historic Recognized Environmental Conditions (HREC). The project site was also evaluated for Business Environmental Risks (BER) and *de minimis* conditions.

A Controlled Recognized Environmental Condition (CREC) is defined as "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, of meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

A Historic Recognized Environmental Condition (HREC) is defined as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

A *de minimis* environmental condition "generally does 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 government agencies." However, conditions determined to be *de minimis* are not a REC.

Business Environmental Risk (BER) is a risk, which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of the parcel of commercial real estate, not necessarily limited to those environmental issues investigated in this Phase I ESA. Business environmental risk issues may involve addressing one or more non-scope considerations.

The Phase I ESA was performed in general accordance with ASTM Designation E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process and following the Scope of Work outlined in AES Due Diligence, Inc.'s proposal. AES Due Diligence, Inc. (AES) conducted on-site observations on October 31, 2019, interviewed site operations personnel and observed adjacent properties. Environmental Data Resources, Inc. (EDR) conducted database searches following ASTM guidelines. Such searches are generally limited to a radius of one mile from the subject site. Additionally, ASTM non-scope items are addressed in this Assessment, including Asbestos, Lead-Based Paint, Radon Gas, Mold, Wetlands and Lead in Drinking Water. No testing was conducted for ASTM Non-Scope items.

Based on site observations, interviews and review of available documents and the database records search, AES concludes that no HRECs, RECs, BERs, CRECs, or *de minimis* conditions were identified at the subject site. AES recommends no additional investigation at this time (Phase I 2020). Thus, the proposed project would not create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment and impacts would be less than significant.

Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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"/>
<p>Response: Less Than Significant Impact. The project site is adjacent to Val Verde Academy, which is located adjacent to the project site to the south. However, as discussed previously, construction and operation of the project would involve the use, storage and disposal of small amounts of hazardous materials on the project site. These hazardous materials would be limited and used and disposed of in compliance with federal, state, and local regulations, which would reduce the potential for accidental release into the environment near the school. The emissions that would be generated from construction and operation of the project were evaluated in the air quality analysis discussed above, and the emissions generated from the project would not cause or contribute to an exceedance of the federal or state air quality standards. Thus, the project would not emit hazardous or handle acutely hazardous materials, substances, or waste near the school, and impacts would be less than significant.</p>				
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 type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. The Phase I Environmental Site Assessment (Phase I 2019) prepared for the project conducted a database search to determine if the project site or any nearby properties are identified as having hazardous materials. The Phase I record search determined that the project site is not located on or near by a site which is included on a list of hazardous materials sites. As a result, impacts related to hazards from being located on or adjacent to a hazardous materials site would not occur from implementation of the proposed project.</p>				
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 or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Response: Less than Significant Impact. The project site is located approximately 1.2 miles to the east of the March Air Reserve Base (MARB). The project is within the MARB/Inland Port Airport Land Use Compatibility Plan (RCALUC 2014); however, the project is in Zone E, which is beyond the 55-CNEL contour. Therefore, there would be a low noise impact with occasional overflights intrusive to some outdoor activities. In addition, the risk level is low in relation to safety and airspace protection factors, as determined in the MARB/Inland Port Airport Land Use Compatibility Plan (RCALUC 2014). Therefore, the project would not result in a safety hazard for people residing or working in the project area, and impacts would be less than significant.</p>				
f) 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"/>
<p>Response: Less Than Significant Impact. The proposed project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Construction Short-term construction activities would occur within the project site and would not restrict access of emergency vehicles to the project site or adjacent areas. In addition, travel along surrounding roadways would remain open and would not interfere with emergency access in the site vicinity. Any temporary lane closures needed for utility connections to Iris</p>				

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<p>Avenue or driveway access construction would be implemented consistent with the recommendations of the California Joint Utility Traffic Control Manual (Caltrans 2014), as incorporated into the construction permits. In addition, no other roadways outside of the project site would be impacted. Thus, impacts related to an emergency response or evacuation plan during construction would be less than significant.</p> <p>Operation Direct access to the project site is would be provided from Iris Avenue by two driveways. The project is required to provide internal streets and fire suppression facilities (e.g., hydrants and sprinklers) that conform to the California Fire Code requirements, included as Municipal Code Chapter 8.36, as verified through the City’s permitting process. As such, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and impacts would be less than significant.</p>				
<p>g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. As described previously, the project site is vacant and within a developed and urban area that is not within a wildfire hazard zone. In addition, the project site is flat and surrounded by flat areas. There are no slope or hillsides that would become unstable. In addition, the project would install onsite drainage that would be conveyed to the existing flood control channel, which is consistent with the existing condition. Therefore, impacts related to flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would not occur from the proposed project.</p>				
<p>Existing Plans, Programs, or Policies None.</p>				
<p>Mitigation Measures None.</p>				
<p>Sources:</p> <ol style="list-style-type: none"> 1. Moreno Valley General Plan, adopted July 11, 2006 <ul style="list-style-type: none"> • Chapter 6 – Safety Element – Section 6.2.8 – Wildland Urban Interface • Chapter 6 – Safety Element – Section 6.9 – Hazardous Materials • Chapter 6 – Safety Element – Section 6.10 – Air Crash Hazards <ul style="list-style-type: none"> - Figure 5-5 – Air Crash Hazards 2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006 <ul style="list-style-type: none"> • Section 5.5 – Hazards and Hazardous Materials <ul style="list-style-type: none"> - Figure 4.5-1 – Hazardous Materials Sites - Figure 4.5-2 – Floodplains and High Fire Hazard Areas - Figure 4.5-3 – City Areas Affected by Aircraft Hazard Zones 3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code 4. March Air Reserve Base (MARB)/March Inland Port (MIP) Airport Land Use Compatibility Plan (ALUCP) on November 13, 2014, (http://www.rcaluc.org/Portals/13/17%20-%20Vol.%201%20March%20Air%20Reserve%20Base%20Final.pdf?ver=2016-08-15-145812-700) 5. Local Hazard Mitigation Plan, City of Moreno Valley Fire Department, adopted October 4, 2011, amended 2017, http://www.moval.org/city_hall/departments/fire/pdfs/haz-mit-plan.pdf <ul style="list-style-type: none"> • Chapter 5 – Wildland and Urban Fires <ul style="list-style-type: none"> - Figure 4-2 – Moreno Valley High Fire Area Map 2016 • Chapter 12 – Dam Failure/Inundation <ul style="list-style-type: none"> - Figure 12-2 Moreno Valley Evacuation Routes Map 2015 • Chapter 13 – Pipeline <ul style="list-style-type: none"> - Figure 13-1 – Moreno Valley Pipeline Map 2016 • Chapter 14 – Transportation <ul style="list-style-type: none"> - Figure 14-1.1 – Moreno Valley Air Crash Hazard Area Map 2016 • Chapter 16 – Hazardous Materials Accident 				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<ul style="list-style-type: none"> - Moreno Valley Hazardous Materials Site Locations Map 2016 6. Emergency Operations Plan, City of Moreno Valley, March 2009, http://www.moval.org/city_hall/departments/fire/pdfs/mv-eop-0309.pdf <ul style="list-style-type: none"> • Hazard Mitigation and Hazard Analysis • Threat Assessment 2 – Hazardous Materials • Threat Assessment 3 – Wildfire • Threat Assessment 6 – Transportation Emergencies - Figure 17 – Air Crash Hazards 7. California Department of Forestry and Fire Protection (CAL FIRE). 2020. Fire Hazard Severity Zone Map. Accessed: https://forestwatch.maps.arcgis.com/apps/Styler/index.html?appid=5e96315793d445419b6c96f89ce5d153 (Accessed May 5, 2020). 8. Phase I Environmental Site Assessment, Iris Park, Iris Avenue, east of Perris Blvd, Moreno Valley, CA 9255, Project No. 19004122. November 1, 2019. Prepared by AES Due Diligence, Inc. (Appendix F). 9. March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan. November 13, 2014. Adopted by the Riverside County Airport Land Use Commission (RCALUC). Accessed: http://www.rcaluc.org/Portals/13/17%20-%20Vol.%201%20March%20Air%20Reserve%20Base%20Final.pdf?ver=2016-08-15-145812-700 (Accessed May 5, 2020). 				

X. HYDROLOGY AND WATER QUALITY – Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact.
Construction
 Implementation of the proposed project includes site preparation, construction of new buildings, and infrastructure improvements. Grading, stockpiling of materials, excavation, construction of new structures, and landscaping activities would expose and loosen sediment and building materials, which would have the potential to mix with stormwater and urban runoff and degrade surface and receiving water quality.

Additionally, construction generally requires the use of heavy equipment and construction-related materials and chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents, and paints. In the absence of proper controls, these potentially harmful materials could be accidentally spilled or improperly disposed of during construction activities and could wash into and pollute surface waters or groundwater, resulting in a significant impact to water quality.

Pollutants of concern during construction activities generally include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. In addition, chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), and concrete-related waste may be spilled or leaked during construction, which would have the potential to be transported via storm runoff into nearby receiving waters and eventually may affect surface or groundwater quality. During construction activities, excavated soil would be exposed, thereby increasing the potential for soil erosion and sedimentation to occur compared to existing conditions. In addition, during construction, vehicles and equipment are prone to tracking soil and/or spoil from work areas to paved roadways, which is another form of erosion that could affect water quality.

However, the use of BMPs during construction implemented as part of a SWPPP as required by the NPDES General Construction Permit and included as PPP WQ-1 would serve to ensure that project impacts related to construction activities resulting in a degradation of water quality would be less than significant. Furthermore, an Erosion and Sediment Transport Control Plan prepared by a qualified SWPPP developer (QSD) is required to be included in the SWPPP for the

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project, and typically includes the following types of erosion control methods that are designed to minimize potential pollutants entering stormwater during construction:

- Prompt revegetation of proposed landscaped areas;
- Perimeter gravel bags or silt fences to prevent off-site transport of sediment;
- Storm drain inlet protection (filter fabric gravel bags and straw wattles), with gravel bag check dams within paved roadways;
- Regular sprinkling of exposed soils to control dust during construction and soil binders for forecasted wind storms;
- Specifications for construction waste handling and disposal;
- Contained equipment wash-out and vehicle maintenance areas;
- Erosion control measures including soil binders, hydro mulch, geotextiles, and hydro seeding of disturbed areas ahead of forecasted storms;
- Construction of stabilized construction entry/exits to prevent trucks from tracking sediment on City roadways;
- Construction timing to minimize soil exposure to storm events; and
- Training of subcontractors on general site housekeeping.

Therefore, compliance with the Statewide General Construction Activity Stormwater Permit requirements, included as PPP WQ-1, which would be verified during the City’s construction permitting process, would ensure that project impacts related to construction activities resulting in a degradation of water quality would be less than significant.

Operation

The proposed project includes operation of single-family residential uses. Potential pollutants associated with the proposed uses include various chemicals from cleaners, pathogens from pet wastes, nutrients from fertilizer, pesticides and sediment from landscaping, trash and debris, and oil and grease from vehicles. If these pollutants discharge into surface waters, it could result in degradation of water quality.

Rational method hydrology calculations have been prepared for 2, 10 & 100-year existing and proposed condition for the project site. In the existing condition, site drainage sheet flows across the property to southeast towards where it flows offsite across the existing MWD and EMWD easements (Hydrology 2020).

In the proposed condition, the site will be a several sub-areas where storm flows will flow to the internal street section and be conveyed to the southeast corner of the property where they will be directed into an infiltration basin system. The infiltration basin will be located in the proposed landscape area onsite adjacent to the easement areas along the westerly portion of the property and will discharge to the existing point of discharge. Based on the calculations and proposed improvements, onsite flows can be conveyed to suitable points of disposal, and the proposed site development will not impact offsite properties (Hydrology 2020).

As described previously, the WQMP is required to be approved prior to the issuance of a building or grading permit. The project’s WQMP would be reviewed and approved by the City to ensure it complies with the Santa Ana RWQCB MS4 Permit regulations. In addition, the City’s permitting process would ensure that all BMPs in the WQMP would be implemented with the project. Overall, implementation of the WQMP pursuant to the existing regulations (included as PPP WQ-2), would ensure that operation of the proposed project would not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality; and impacts would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:

Less Than Significant Impact. EMWD’s 2015 Urban Water Management Plan (UWMP) describes that EMWD’s local supplies include groundwater, desalinated groundwater, and recycled water. Groundwater is pumped from the Hemet/San Jacinto and West San Jacinto areas of the San Jacinto Groundwater Basin. Groundwater in portions of the West San Jacinto Basin is high in salinity and requires desalination for potable use. EMWD owns and operates two

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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desalination plants that convert brackish groundwater from the West San Jacinto Basin into potable water. EMWD also owns, operates, and maintains its own recycled water system that consists of four Regional Water Reclamation Facilities and several storage ponds spread throughout EMWD’s service area that are all connected through the recycled water system.

As detailed on Table WQ-1, the EMWD’s 2015 Urban Water Management Plan (UWMP) shows that the anticipated production of groundwater would remain the same between 2020 and 2082, however, the anticipated production of desalinated groundwater would increase by 3,100 acre-feet per year (AFY) between 2020 and 2082. In 2082, groundwater and desalinated groundwater would provide 11.4 percent of the District’s water supply.

Table WQ-1: Total Retail Water Supply (AFY)

Source	2015	2020	2025	2030	2035	2082	2082 Percentage
Imported Water	56,397	81,197	89,097	100,497	111,597	122,097	61.7%
Groundwater	15,252	12,303	12,303	12,303	12,303	12,303	6.3%
Desalinated Groundwater	7,288	7,000	10,100	10,100	10,100	10,100	5.1%
Recycled Water	44,150	45,245	48,334	50,017	51,800	53,300	26.9%
Total Retail Supply	123,087	145,745	159,834	172,917	185,800	197,800	100%

Source: 2015 UWMP

As detailed in Section 19, *Utilities and Service Systems*, the supply of water listed in Table WQ-1 would be sufficient during both normal years and multiple dry year conditions between 2020 and 2082 to meet all of the City’s estimated needs, including the proposed project. Therefore, the project would not result in changes to the projected groundwater pumping that would decrease groundwater supplies. Thus, impacts related to groundwater supplies would be less than significant.

In addition, after completion of project construction, the site would be covered by 70 percent impervious surface area and the project would convey stormwater drainage into landscaped areas and the proposed infiltration basin, which would infiltrate into soils and groundwater that occurs onsite. Therefore, impacts related to interference with groundwater recharge would be less than significant.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
- i) Result in substantial erosion or siltation on- or off-site?

Response:
Less than Significant Impact.

Construction

Construction of the project would require grading and excavation of soils, which would loosen sediment and could result in erosion or siltation. However, the project site does not include any slopes, which reduces the erosion potential and the large majority of soil disturbance would be related to excavation and backfill for installation of building foundations and underground utilities.

The NPDES Construction General Permit requires preparation and implementation of a SWPPP by a Qualified SWPPP Developer for the proposed construction activities (included as PPP WQ-1). The SWPPP is required to address site-specific conditions related to potential sources of sedimentation and erosion and would list the required BMPs that are necessary to reduce or eliminate the potential of erosion or alteration of a drainage pattern during construction activities.

In addition, a Qualified SWPPP Practitioner (QSP) is required to ensure compliance with the SWPPP through regular monitoring and visual inspections during construction activities. The SWPPP would be amended and BMPs revised, as determined necessary through field inspections, in order to protect against substantial soil erosion, the loss of topsoil, or alteration of the drainage pattern. Compliance with the Construction General Permit and a SWPPP prepared by a QSD

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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and implemented by a QSP (per PPP WQ-1) would prevent construction-related impacts related to potential alteration of a drainage pattern or erosion from development activities. With implementation of the existing construction regulations that would be verified by the City during the permitting approval process, impacts related to alteration of an existing drainage pattern during construction that could result in substantial erosion, siltation, and increases in stormwater runoff would be less than significant.

Operation.

After completion of project construction, the site would be 70 percent impervious. The impervious areas would not be subject to erosion and the pervious areas would be landscaped with groundcovers that would inhibit erosion.

As discussed previously, in the existing condition, site drainage sheet flows across the generally as sheet flow to the south-southeast. In the developed condition, the project site would consist of several drainage sub-areas where storm flows would flow towards the proposed internal roadways and would ultimately be conveyed to the proposed infiltration basin system within the southeast corner of the property. The infiltration basin would be installed within the proposed landscape area onsite adjacent to the WMD and EMWD easement areas along the westerly portion of the property and would discharge to the existing point of discharge within the existing easements (Hydrology 2020).

Additionally, the MS4 permit requires new development projects to prepare a WQMP (included as PPP WQ-2) that is required to include BMPs to reduce the potential of erosion and/or sedimentation through site design and structural treatment control BMPs. The Preliminary WQMP has been completed and is included as Appendix H. As part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City’s Engineering Division to ensure that the site-specific design limits the potential for erosion and siltation. Overall, the proposed drainage system and adherence to the existing regulations would ensure that project impacts related to alteration of a drainage pattern and erosion/siltation from operational activities would be less than significant.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:

Less Than Significant Impact.

The project site does not include, and is not adjacent to, a stream or river. Implementation of the project would not alter the course of a stream or river.

Construction

Construction of the project would require grading and excavation of soils. These activities could temporarily alter the existing drainage pattern of the site and change runoff flow rates. However, as described previously, implementation of the project requires a SWPPP (included as PPP WQ-1) that would address site specific drainage issues related to construction of the project and include BMPs to eliminate the potential of flooding or alteration of a drainage pattern during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP WQ-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to potential alteration of a drainage pattern or flooding on or off-site from development activities. Therefore, construction impacts would be less than significant.

Operation

As described previously, the proposed project would result in an increase of impervious surfaces that would result in an increase of stormflows. However, the project would maintain the existing drainage pattern and convey runoff to infiltration basins and landscaped areas for treatment and retention that have been designed to accommodate the increased volume pursuant to the MS4 permit requirements. As part of the permitting approval process, the proposed drainage design and engineering plans would be reviewed by the City’s Engineering Division to ensure that the proposed drainage would accommodate the appropriate design flows. Overall, the proposed drainage system and adherence to the existing MS4 permit regulations would ensure that project impacts related to alteration of a drainage pattern or flooding from operational activities would be less than significant.

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Response: Less Than Significant Impact. As described previously, the project site does not include, and is not adjacent to, a stream or river. Implementation of the project would not alter the course of a stream or river.</p> <p>Construction As described in the previous response, construction of the proposed project would require grading and excavation activities that could temporarily alter the existing drainage pattern of the site and could result in increased runoff and polluted runoff if drainage is not properly controlled. However, implementation of the project requires a SWPPP (included as PPP WQ-1) that would address site specific pollutant and drainage issues related to construction of the project and include BMPs to eliminate the potential of polluted runoff and increased runoff during construction activities. This includes regular monitoring and visual inspections during construction activities. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP (per PPP WQ-1) as verified by the City through the construction permitting process would prevent construction-related impacts related to increases in run-off and pollution from development activities. Therefore, impacts would be less than significant.</p> <p>Operation As described previously, the proposed project would result in an increase of impervious surfaces that would generate increased runoff. However, the project would manage the increased flow with infiltration basins and landscaping that has been designed to accommodate the increased volume pursuant to the MS4 permit requirements. The units would retain, filter, treat, and slowly discharge runoff into existing off-site drainage basins adjacent to the WMD and EMWD easement areas along the westerly portion of the property and will discharge to the existing point of discharge.</p> <p>As part of the permitting approval process, the proposed drainage design and engineering plans would be reviewed by the City's Engineering Division to ensure that the proposed drainage would accommodate the appropriate design flows. Additionally, the City permitting process would ensure that the drainage system specifications adhere to the existing MS4 permit regulations, which would ensure that pollutants are removed prior to discharge. Overall, with compliance to the existing regulations as verified by the City's permitting process, project impacts related to the capacity of the drainage system and polluted runoff would be less than significant.</p>				
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Response: Less Than Significant Impact. According to the Federal Emergency Management Agency (FEMA) Map 06065C0765G, the project site is designated as zone X, meaning it is in an area of minimal flood hazard (FEMA 2020). As detailed in the previous responses, implementation of the project would result in a 70 percent increase of impermeable surfaces on the site. However, the project would maintain the existing drainage pattern; and drainage would be accommodated by onsite by landscaping and infiltration basins that have been sized to accommodate MS4 requirements. Therefore, the project would not result in impeding or redirecting flood flows by the addition of the impervious surfaces. As detailed previously, the City's permitting process would ensure that the drainage system specifications adhere to the existing MS4 permit regulations, and compliance with existing regulations would ensure that impacts would be less than significant.</p>				
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. According to the Federal Emergency Management Agency (FEMA) Map 06065C0765G, the project site is designated as zone X, meaning it is in an area of minimal flood hazard (FEMA 2020). Thus, the project site is not located</p>				

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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within a flood hazard area that could be inundated with flood flows and result in release of pollutants. Impacts related to flood hazards and pollutants would not occur from the project.

Tsunamis are generated ocean wave trains generally caused by tectonic displacement of the sea floor associated with shallow earthquakes, sea floor landslides, rock falls, and exploding volcanic islands. The proposed project is approximately 41 miles from the ocean shoreline. Based on the distance of the project site to the Pacific Ocean, the project site is not at risk of inundation from tsunami. Therefore, the proposed project would not risk release of pollutants from inundation from a tsunami. No impact would occur.

Seiching is a phenomenon that occurs when seismic ground shaking induces standing waves (seiches) inside water retention facilities (e.g., reservoirs and lakes). Such waves can cause retention structures to fail and flood downstream properties. The project site is not located adjacent to any water retention facilities. For this reason, the project site is not at risk of inundation from seiche waves. Therefore, the proposed project would not risk release of pollutants from inundation from seiche. No impact would occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. As described previously, use of BMPs during construction implemented as part of a SWPPP as required by the NPDES Construction General Permit and PPP WQ-1 would serve to ensure that project impacts related to construction activities resulting in a degradation of water quality would be less than significant. Thus, construction of the project would not conflict or obstruct implementation of a water quality control plan.

Also, as described previously, new development projects are required to implement a WQMP (per PPP WQ-2) that would comply with the Santa Ana RWQCB MS4 Permit regulations. The WQMP and applicable BMPs are verified as part of the City's permitting approval process, and construction plans would be required to demonstrate compliance with these regulations. Therefore, operation of the proposed project would not conflict or obstruct with a water quality control plan.

In addition, as detailed previously, the EMWD manages basin water supply and the anticipated production of groundwater would remain steady from 2025 through 2082 (as shown in Table WQ-1). As described previously and further detailed in Section 19, *Utilities and Service Systems*, the City's supply of water listed in Table WQ-1 would be sufficient during both normal years and multiple dry year conditions between 2020 and 2082 to meet all of the City's estimated needs, including the proposed project. Therefore, the project would be consistent with the groundwater management plan and would not conflict with or obstruct its implementation. Thus, impacts related to water quality control plan or sustainable groundwater management plan would be less than significant.

Existing Plans, Programs, or Policies

PPP WQ-1: Stormwater Pollution Prevention Plan. Prior to grading permit issuance, the project developer shall have a Stormwater Pollution Prevention Plan (SWPPP) prepared by a Qualified SWPPP Developer (QSD) in accordance with the City's Municipal Code Chapter 8.10 and the Santa Ana Regional Water Quality Control Board National Pollution Discharge Elimination System (NPDES) Storm Water Permit Order No. R4-2012-0175 (MS4 Permit). The SWPPP shall incorporate all necessary Best Management Practices (BMPs) and other NPDES regulations to limit the potential of erosion and polluted runoff during construction activities. Project contractors shall be required to ensure compliance with the SWPPP and permit periodic inspection of the construction site by the City of Moreno Valley staff or its designee to confirm compliance.

PPP WQ-2: Water Quality Management Plan. Prior to grading permit issuance, the project applicant shall have a Water Quality Management Plan (WQMP) approved by the City for implementation. The project shall comply with the City's Municipal Chapter 8.10 and the Municipal Separate Storm Sewer System (MS4) permit requirements in effect for the Regional Water Quality Control Board (RWQCB) at the time of grading permit to control discharges of sediments and other pollutants during operations of the project.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Mitigation Measures

None.

Sources:

1. Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 6 – Safety Element – Section 6.7 – Water Quality
 - Figure 5-4 – Flood Hazards
 - Chapter 7 – Conservation Element – Section 7.5 – Water Resources
 - Figure 6-1 Water Purveyor Service Area Map
2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Section 5.5 – Hazards and Hazardous Materials
 - Figure 4.5-2 – Floodplains and High Fire Hazard Areas
 - Section 5.7 – Hydrology and Water Quality
 - Figure 4.7-1 – Storm Water Flows and Major Drainage Facilities
 - Figure 4.7-2 – Groundwater Basins
3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
 - Section 9.10.080 – Liquid and Solid Waste
4. Moreno Valley Municipal Code Chapter 8.12 – Flood Damage Prevention
5. Moreno Valley Municipal Code Chapter 8.21 – Grading Regulations
6. Eastern Municipal Water District (EMWD) Groundwater Reliability Plus, <http://gwrplus.org/>
7. Eastern Municipal Water District (EMWD) 2015 Urban Water Management Plan
8. Preliminary Hydrology Report for TTM 37909, Moreno Valley, CA. April 4, 2020. Prepared by Robert M. Beers (Appendix G).
9. Project Specific Water Quality Management Plan, Iris Park, TTM 37909. April 2020. Prepared by Adkan Engineers (Appendix H).
10. FEMA Flood Map Service Center. 2020. Available at: <https://msc.fema.gov/portal/search?AddressQuery=47108%20%2047%20N%20CHERRY%20ST%20Hammond,%20LA#searchresultsanchor> (Accessed May 5, 2020).

XI. LAND USE AND PLANNING – Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:

No Impact. The project site is currently vacant and is surrounded by a roadway to the north followed by single-family residences; single-family residences to the east; commercial uses to the west; and single-family residences and educational uses to the south. The proposed project would develop the site to provide 81 single-family residential units, which are consistent with the existing single-family residences to the north, east, and south of the site at a higher allowable density of RS10. Therefore, the change of the project site from a vacant site to single-family residential would not physically divide an established community. In addition, the project would not change roadways or install any infrastructure that would result in a physical division. Thus, the proposed project would not result in impacts related to physical division of an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:

Less Than Significant Impact. As described previously, the project site is currently vacant. The project would develop the project site to provide 81 new single-family residences, which would be similar to the single-family residential uses that are located adjacent to the east of the site, to the north of the site beyond Iris Avenue, and to the south of the site.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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General Plan

The project site currently has a General Plan land use designation of has a land use designation of Residential: Max. 5 du/ac (R5) and Commercial (C), which does not have the purpose of avoiding or mitigating an environmental effect. The proposed project includes a General Plan Amendment to change the land use designation of the site to Residential: Max. 10 du/ac (R10), which would allow the proposed single-family residences at a density of 7.58 du/acre. The General Plan Land Use Element states that the Residential: Max. 10 du/ac (R10) designation allows for allows for development of residential uses to a maximum density of 10 dwelling units per acre. As the project would develop residences at a density of 7.58 dwelling units per net acre, it would be consistent with the proposed land use designation, and the proposed change in land use would be less than significant.

Zoning

The project site is currently zoned the project site currently has a zoning designation of Residential 5 (R5) District and Community Commercial (CC) District. As such, the project includes a zone change to Residential Single-Family 10 District (RS10) to implement the proposed single-family residential uses. Section 9.03.020 of the City’s Municipal Code states that the Residential Single-Family 10 District (RS10) zoning district is to provide for residential development on small single-family lots with amenities not generally found in suburban subdivisions. The district is intended for subdivisions at a maximum allowable density of ten (10) dwelling units per net acre. As described previously, the project would develop single-family residences at a density of 7.48 dwelling units per net acre. In addition, the project is requesting approval of a Conditional Use Permit (CUP) for a Planned Unit Development (PUD), which allows for a development to establish unique criteria for such things as setbacks, lot width and depth, building separation, lot size, etc. This is allowed in exchange for a higher level of detail and amenities within the project than typically required for standard residential development. Thus, the proposed project would not conflict with any applicable zoning regulations adopted for the purpose of avoiding or mitigating an environmental effect.

Existing Plans, Programs, or Policies

None.

Mitigation Measures

None.

Sources:

1. Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 2 – Community Development Element – Section 2.1 – Land Use
 - Figure 1-1 – Neighboring Lands Uses
 - Figure 1-2 – Land Use Map
 - Chapter 8 – 2014 – 2021 Housing Element
2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Section 5.12 – Population and Housing
 - Attachments #1 - #10 – Housing Sites Inventory
 - Exhibits A1 – A11, C, D, and E – Maps of Housing Sites
3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code

XII. 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 type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:

No Impact. The project site is located in Mineral Resource Zone 3 (MRZ-3), according to the Mineral Land Classification Map provided by the California Department of Conservation (CDC 2020). The MRZ-3 zone within the Significant Mineral Aggregate Resource Area (SMARA) Study Area is defined as areas containing mineral deposits which the significance cannot be evaluated from available data.

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The City's General Plan EIR states that no locally, regionally, or statewide significant mineral resources are located within the City. Therefore, development of the site would not result in the loss of availability of a known mineral resource that would be of value to the region, and impacts would not occur.

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 type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:
No Impact. As described in the previous response, the City's General Plan EIR states that no locally, regionally, or statewide significant mineral resources are located within the City. Therefore, implementation of the project would not result in the loss of locally important mineral resources, and impacts would not occur.

Existing Plans, Programs, or Policies

None.

Mitigation Measures

None.

Sources:

1. Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 7 – Conservation Element – Section 7.9 – Mineral Resources
2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Section 5.14 – Mineral Resources
3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
 - Section 9.02.120 – Surface Mining Permits
4. Moreno Valley Municipal Code Section 8.21.020 A 7 – Permits Required
5. The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code, Sections 2710-2796), <https://www.conservation.ca.gov/dmr/lawsandregulations>
6. California Department of Conservation. 2020. Mineral Land Classification. Accessed: <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc> (Accessed May 5, 2020).

XIII. NOISE – Would the project result in:

City of Moreno Valley Municipal Code

Sound level limits: Chapter 11.80.03 of the City's Municipal Code establishes maximum noise levels permitted within the city, which are listed in Table N-1:

Table N-1: City of Moreno Valley Maximum Continuous Sound Levels

Duration per Day (Continuous Hours)	Sound Level [dBA]
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
.5	110
.25	115

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ISSUES & SUPPORTING INFORMATION SOURCES:

Potentially Significant Impact

Less Than Significant with Mitigation Incorporated

Less Than Significant Impact

No Impact

Source: City of Moreno Valley Municipal Code

Sensitive Receptor Noise Levels: Chapter 11.80.30 of the City's Municipal Code establishes the permissible noise level that may be received at nearby sensitive uses (e.g., residential). For noise-sensitive residential properties 200 feet from the source, the exterior noise level shall not exceed 60 dBA during daytime hours (8:00 a.m. to 10:00 p.m.) and shall not exceed 55 dBA during the nighttime hours (10:01 p.m. to 7:59 a.m.) (Municipal Code, Chapter 11.80).

Construction Noise: Section 8.14.082.E of the City's Municipal Code also provides construction noise standards, which state that Any construction within the city shall only be completed between the hour of seven a.m. to eight p.m. Monday through Friday, excluding holidays, unless written approval is obtained from the city building official or city engineer.

Sensitive Receptors

The nearest sensitive receptors to the project site are the single-family homes located adjacent to the east side of the project site, where the nearest residential structure is as near as 25 feet east of the project site. In addition, Val Verde Academy is located adjacent to the southwest side of the project site, where the nearest school structure is as near as 180 feet southwest of the project site.

Existing Ambient Noise Levels

To identify the existing ambient noise levels in the project area, noise level measurements were taken on and adjacent to the project site on May 9, 2020 and May 10, 2020. As shown on Table N-2, the average noise levels in the project area range from 52.1 dBA to 63.3 dBA. Table N-2 also shows that the both the daytime and nighttime noise levels at the nearby sensitive receptors currently exceeds the City's residential noise standards of 60 dBA Leq during the daytime.

Table N-2: Existing Ambient Noise Level Measurements

Site No.	Site Description	Average (dBA Leq)		1-hr Average (dBA Leq/Time)		Weighted-Average (dBA CNEL)
		Daytime	Nighttime	Minimum	Maximum	
1	Located on the southwest property line fence, approximately 8 feet south of the shopping center and adjacent to the northern portion of Val Verde Academy.	50.0	45.4	37.3 2:52 a.m.	56.2 8:10 p.m.	54.4
2	Located on the east property line fence, approximately 100 feet south of the centerline for Iris Avenue.	61.1	53.5	47.3 3:06 a.m.	63.9 5:00 p.m.	63.3
3	Located at the south corner of the project site on the fence for Val Verde Academy.	51.4	41.5	35.1 3:46 a.m.	54.8 4:18 p.m.	52.1

Source: NOI 2020

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project 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"/>

Response:

**Less Than Significant Impact.
Construction**

The construction activities for the proposed project are anticipated to include site preparation and grading of project site, construction of the 81 single-family residences, paving of the onsite driveways and parking areas, and application of architectural coatings. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptors to the project site are the single-family residences located approximately 25 feet east of the project site.

Table N-3 shows that the highest noise from construction would occur during the site preparation and grading phases when noise levels are anticipated to reach 59 dBA Leq at the nearest sensitive receptors (residences), which is below the City’s noise threshold of 60 dBA (Municipal Code Chapter 11.80.30). In addition, the project would comply with the allowable construction times pursuant to the City’s Municipal Code, the construction-related noise levels would not exceed any standards. Therefore, construction noise impacts would be less than significant.

Table N-3: Construction Noise Levels at the Nearest Sensitive Receptor

Construction Phase	Construction Noise Level (dBA Leq) at:	
	Nearest Homes to the East ¹	Nearest School to Southwest ²
Site Preparation	59	64
Grading	59	64
Building Construction	58	61
Paving	55	59
Painting	50	52
City’s Noise Threshold³	60	65
Exceed Thresholds?	No	No

Notes:

- ¹ The construction noise levels were calculated at 200 feet from the project’s property line pursuant to Section 11.80.030(C) of the Municipal Code.
 - ² In order to account for the existing 6-foot high wall on the east property line and the first row of homes that are located within 200 feet of the property line 10 dB of shielding was added to the RCNM Model.
 - ³ In order to account for the commercial and school structures that are located within 200 feet of the property line, 5 dB of shielding was added to the RCNM Model.
 - ⁴ City Noise Thresholds obtained from Section 11.80.030(C) of the Municipal Code.
- Source: RCNM, Federal Highway Administration, 2006

Source: NOI 2020

Operation

Development of the proposed project would result in 81 single-family residences, which would generate approximately 61 trips during the a.m. peak hour, 81 trips during the p.m. peak hour, for a total of 774 daily trips. The noise generated from these vehicular trips has been identified through a comparison of noise generated by traffic volumes with and without the project, provided in Table N-4.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Table N-4: Project Traffic Noise Contributions

Roadway	Segment	dBA CNEL at Nearest Receptor			Increase Threshold
		Existing	Existing Plus Project	Project Contribution	
Iris Avenue	East of Perris Blvd	68.8	69.0	0.2	+0.1 dBA

Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108.

Source: NOI 2020

Objective 6.5 of the City’s General Plan Noise Element requires the City to minimize noise impacts from significant noise generators including roadway noise impacts. However, neither the General Plan nor the CEQA Guidelines define what constitutes a “substantial permanent increase to ambient noise levels.” Therefore, thresholds from the FTA *Transit Noise and Vibration Impact Assessment* (2018) have been utilized, which identifies noise impacts by comparing the existing noise levels and the future noise levels with the proposed project. Based on the FTA guidance, a substantial increase in ambient noise from vehicular traffic could occur when the noise levels at noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA CNEL and the project creates an increase of 3 dBA CNEL or greater noise level increase; or when noise levels range from 60 to 65 dBA CNEL and the project creates 2 dBA CNEL or greater noise level increase.

As shown in Table N-4 above, the project traffic would result in a increase of 0.2 dBA, which is below the noise increase thresholds of 1 dBA. Therefore, impacts related to operational noise would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:

Less Than Significant Impact.

Construction

Construction activities associated with the proposed project would require the operation of off-road equipment and trucks that are known sources of vibration. Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Vibrations at buildings could produce results that range from no perceptible effects at the low levels to damage at the highest levels. It should be noted that vibration is much more discernible in a sitting or laying down position, which typically only occur inside a home. As such, this analysis is based on the vibration levels at the nearest homes, instead of the nearest residential property lines.

Section 16.30.130(K) of the City’s Municipal Code restricts the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source. The perception threshold is defined as a motion velocity of 0.01 inch per second over the range of 1 to 100 Hertz or a root mean square (rms) velocity of 0.01 inch per second (PPV). Table N-5 shows the typical PPV and average vibration levels shown in vibration velocity in decibels (VdB) that are produced from some common construction equipment that would likely be utilized during construction of the proposed project (NOI 2020).

Table N-5: Typical Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity (inches/second)	Approximate Vibration Level (L _v) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 (upper range)	105
	0.170 (typical)	93

ISSUES & SUPPORTING INFORMATION SOURCES:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Clam shovel drop (slurry wall)	0.202	94			
Vibratory Roller	0.210	94			
Hoe Ram	0.089	87			
Large bulldozer	0.089	87			
Caisson drill	0.089	87			
Loaded trucks	0.076	86			
Jackhammer	0.035	79			
Small bulldozer	0.003	58			

Source: NOI 2020

Chapter 9.10 of the Municipal Code includes performance standards for proposed development projects that may impact the surrounding neighborhood and Section 9.10.030(B), which is part of this Chapter, exempts temporary construction activities from Section 9.10.170 that restricts the creation of vibration that can be felt at the property line, provided that construction activities occur between the hours of 7 a.m. and 7 p.m. Since the City's Municipal does not provide a quantifiable vibration level for construction activities, Caltrans guidance has been utilized, which defines the threshold of perception from transient sources at 0.25 inch per second peak particle velocity (PPV).

The primary source of vibration during construction would be from the operation of a bulldozer. As demonstrated above in Table N-5, a large bulldozer would create a vibration level of 0.089 inch-per-second PPV at 25 feet, which is the approximate distance to the nearest residence. The vibration level at the nearest residence from the project site is within the 0.25 inch per second PPV threshold detailed above. Therefore, construction-related vibration impacts would be less than significant.

Operation

Operation of the proposed single-family uses would include heavy trucks for residents moving in and out of the residences, large deliveries, and garbage trucks for solid waste disposal. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. However, typical vibration levels for the heavy truck activity at normal traffic speeds would be approximately 0.006 in/sec PPV, based on the FTA Transit Noise Impact and Vibration Assessment. Truck movements on site would be travelling at very low speed, so it is expected that truck vibration at nearby sensitive receivers would be less than the vibration threshold of 0.08 in/sec PPV for fragile historic buildings and 0.04 in/sec PPV for human annoyance, and therefore, would be less than significant.

c) For a project located within the vicinity of a private airstrip or 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"/>
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Response:
Less Than Significant Impact. The project site is located approximately 1.2 miles to the east of the March Air Reserve Base (MARB). The project is within the MARB/Inland Port Airport Land Use Compatibility Plan (RCALUC 2014); however, the project is in Zone E, which is beyond the 55-CNEL contour. Therefore, there would be a low noise impact with occasional overflights intrusive to some outdoor activities (RCALUC 2014). Thus, aircraft noise impacts would be less than significant.

Existing Plans, Programs, or Policies

None.

Mitigation Measures

None.

Sources:

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<ol style="list-style-type: none"> 1. Moreno Valley General Plan, adopted July 11, 2006 <ul style="list-style-type: none"> • Chapter 6 – Safety Element – Section 6.4 – Noise <ul style="list-style-type: none"> - Figure 5-2 – Buildout Noise Contours 2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006 <ul style="list-style-type: none"> • Section 5.4 – Noise <ul style="list-style-type: none"> - Figure 4.4-1 – March Air Reserve Base Noise Impact Area - Figure 4.4-2 – Buildout Noise Contours – Alternative 1 - Figure 4.4-3 -- Buildout Noise Contours – Alternative 2 - Figure 4.4-4 -- Buildout Noise Contours – Alternative 3 • Appendix D – Noise Analysis, Wieland Associates, Inc., June 2003. 3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code <ul style="list-style-type: none"> • Section 9.10.140 Noise and Sound 4. Moreno Valley Municipal Code Chapter 11.80 Noise Regulations 5. March Air Reserve Base (MARB)/March Inland Port (MIP) Airport Land Use Compatibility Plan (ALUCP) on November 13, 2014, (http://www.rcaluc.org/Portals/13/17%20-%20Vol.%201%20March%20Air%20Reserve%20Base%20Final.pdf?ver=2016-08-15-145812-700) 6. Noise Impact Analysis, Iris Park Single-Family Residential Project, City of Moreno Valley. May 19, 2020. Prepared by Vista Environmental (Appendix I). 				

XIV. POPULATION AND HOUSING – Would the project:

a) Induce substantial unplanned 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"/>
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Response:
Less Than Significant Impact. The project would construct 81 single-family residences on the project site. The California Department of Finance (CDF) data details that the City of Moreno Valley had a residential population of 207,743 and 57,005 residential units in 2019. Of these, 46,098 (approximately 80 percent) are single-family detached units. In addition, it is estimated that the City has an average of 3.96 persons per household.

Based on this information, the proposed project would result in a net increase of approximately 321 new residents. The addition of 321 new residents would represent a population increase of approximately 0.15 percent and the new housing units would result in a 0.14 percent increase in residential units within the City. This limited level of growth on a site that has been previously developed would not constitute substantial growth.

The proposed project is located in an urbanized residential area of the City and is surrounded by residential and commercial uses and is already served by the existing roadways and infrastructure systems. No infrastructure would be extended or constructed to serve areas beyond the project site, and indirect impacts related to growth would not occur from implementation of the proposed project. Therefore, potential impacts related to inducement of unplanned population growth, either directly or indirectly, would be less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:
No Impact. As described above, the project site is vacant and undeveloped land and does not contain any housing or people on the project site. The proposed project would construct 81 new single-family residences and would not displace any existing housing or people and would not necessitate the construction of housing elsewhere. Thus, impacts would not occur.

Existing Plans, Programs, or Policies
 None.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Mitigation Measures

None.

Sources:

1. Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 2 – Community Development Element – Section 2.1 – Land Use
 - Figure 1-1 – Neighboring Lands Uses
 - Figure 1-2 – Land Use Map
 - Chapter 8 – 2014 – 2021 Housing Element
2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Section 5.12 – Population and Housing
 - Attachments #1 - #10 – Housing Sites Inventory
 - Exhibits A1 – A11, C, D, and E – Maps of Housing Sites
3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
4. California Department of Finance. May 2019. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2019 with 2010 Census Benchmark. Accessed: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/> (Accessed May 11, 2020).

XV. PUBLIC SERVICES – Would the project:

a) 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:

i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:

Less Than Significant Impact. The City of Moreno Valley Fire Department provides fire protection to the project area. The City's Fire Department is the primary response agency to fires, emergency medical service, hazardous materials incidents, traffic accidents, terrorist acts, catastrophic weather events, and technical rescues. Additionally, the City's Office of Emergency Management is located within the Fire Department allowing for a well-coordinated response to both natural and man-made disasters. The Moreno Valley Fire Department is part of the CALFIRE/Riverside County Fire Department's regional, integrated, cooperative fire protection organization, which provides access to other regional fire and emergency equipment and/or services, as needed.

There are two fire stations within two miles of the project site. Fire Station 65 is located 1.6 miles from the project site at 15111 Indian Street. This fire station houses one paramedic engine company and a reserve fire engine. Fire Station 91 is located 2.0 miles from the project site at 16110 Lasselle Street. This fire station is two bay fire station that houses one paramedic engine company and is home to the City's two Battalion Chiefs (Fire 2020).

The project would develop 81 single-family residences in an area already served by the City's Fire Department and within close proximity to two existing fire stations. Due to the small increase in employees and customers that would occur from implementation of the project a limited incremental increase in demand for fire protection and emergency medical services would occur. However, the project would be required to adhere to the California Fire Code (included in the City's Municipal Code Chapters 8.36) and would be reviewed by the Fire Department during the project permitting process to ensure that the project plans meet the fire protection requirements.

The project would be adequately served by the two fire stations that currently serve the project area. Due to the limited increase in employees and customers, and the close location of the existing fire stations, the proposed project would not result in the need for, new or physically altered fire department facilities that are not currently planned. Therefore, impacts related to fire protection services would be less than significant.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. The City of Moreno Valley receives policing services through a contract for services with the Riverside County Sheriff’s Office. The City’s police station is located at 22850 Calle San Juan De Los Lagos, which is approximately 4.1 miles from the project site. Because the project site is currently vacant and undeveloped, implementation of the project would result in an onsite population that would create the need for police services. Calls for police service during project construction may include: theft of building materials and construction equipment, malicious mischief, graffiti, and vandalism. Operation of the project could generate a typical range of police service calls, such as burglaries, thefts, and disturbances. To reduce the potential for these types of crimes, security concerns are addressed in the project design by providing low-intensity security lighting for the purposes of wayfinding, safety, and building structure security.

Although an incremental increase could result from implementation of the project, the need for law enforcement services from the proposed project would be limited and within the area that is currently served. Thus, the need for policing services generated by the project would not require the construction or expansion of police department facilities. Therefore, impacts related to police protection would be less than significant.

iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. The project site is located within the Moreno Valley Unified School District, which operates and maintains 43 schools, including 23 elementary schools (K-5), 6 middle schools (7-8), 5 high schools (9-12), and 9 specialized schools. The site is currently located within the attendance area boundaries of Ridgecrest Elementary School, Mountain View Middle School, and Valley View High School.

The project would develop 81 single-family residences. The District’s April 2020 Developer Fee Justification Report indicates that there are over 53,581 residential dwelling units existing within the District. It is anticipated that a total of 13,156 additional units will be constructed by 2040. Based on the District’s Student Generation Rate of 0.6041, this will generate over 7,947 additional K-12 students during that period (MV 2020). With the Student Generation Rate of 0.6041, the project will generate approximately 49 additional K-12 students upon implementation.

Pursuant to Government Code Section 65995 et seq., the need for additional school facilities is addressed through compliance with school impact fee assessment. SB 50 (Chapter 827 of Statutes of 1998) sets forth a state school facilities construction program that includes restrictions on a local jurisdiction’s ability to condition a project on mitigation of a project’s impacts on school facilities in excess of fees set forth in the Government Code. These fees are collected by school districts at the time of issuance of building permits for development projects. Pursuant to Government Code Section 65995 applicants shall pay developer fees to the appropriate school districts at the time building permits are issued; and payment of the adopted fees provides full and complete mitigation of school impacts. As a result, impacts related to school facilities would be less than significant with the Government Code required fee payments.

iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. Utilizing Map 3.1, Existing Parks and Community Facilities, in the City of Moreno Valley Parks, Recreation and Open Space Comprehensive Plan, the City operates and maintains six parks within the project’s vicinity: Rock Ridge Park, approximately 4.7 miles to the northwest; Morrison Park, approximately 4.4 miles to the northwest; Ridgecrest Park, approximately 4.1 miles to the southeast; Weston Park, approximately 3.8 miles to the northwest; the Moreno Valley Community Park, approximately 4.8 miles to the west; and Celebration Park, approximately 3.3 miles to the southwest.

The project includes several onsite recreational areas, the largest being a park of almost 0.43 acre. These facilities will satisfy a substantial portion of the parks demands from the new residents. Further, the City’s Municipal Code (Section

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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3.38.080 and Chapter 3.40) includes requirements for mitigation fees in favor of park improvements and/or parkland dedication; where applicable, these fees would be included as a condition of the approval of the residential development (included as PPP PS-2). These fees would be used in the City of the purpose of acquiring, designing, constructing, improving, providing and maintaining, to the extent permitted by law, park improvements provided for in the City's general plan and its adopted capital improvement program or an adopted master plan of parks and recreation facilities, as amended from time to time. Therefore, impacts related to the need to provide new or altered park and recreation facilities in order to maintain acceptable service ratios would be less than significant.

v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact. The proposed project would develop 81 single-family residential units within an area that already contains single-family residential. The additional residences would result in a limited incremental increase in the need for additional services, such as public libraries and post offices, etc. Because the project area is already served by other services and the project would result in a limited increase in residences, the project would not result in the need for new or physically altered facilities to provide other services, the construction of which could cause significant environmental impacts. Therefore, impacts would be less than significant.

Existing Plans, Programs, or Policies
PPP PS-1: The project will be required to pay applicable development fees levied by the Moreno Valley Unified School District pursuant to the School Facilities Act (Senate Bill [SB] 50, Stats. 1998, c.827) to offset any effects on school facilities resulting from new development.

PPP PS-2: Park Fees. As a condition of the approval of a residential development, the project shall pay applicable park related fees and/or dedicate parkland pursuant to Municipal Code Section 3.38.080 and Chapter 3.40.

Mitigation Measures
 None.

- Sources:**
1. Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 2 – Community Development Element – Section 2.5 – Schools
 - Figure 1-3 – School District Boundaries
 - Chapter 2 – Community Development Element – Section 2.6 – Library Services
 - Chapter 2 – Community Development Element – Section 2.7 – Special Districts
 - Chapter 2 – Community Development Element – Section 2.5 – Other City Facilities
 - Chapter 4 – Parks, Recreation and Open Space Element – Section 4.3 – Parks and Recreation
 - Figure 3-2 – Future Parklands Acquisition Areas
 - Figure 3-3 – Master Plan of Trails
 - Chapter 6 – Safety Element – Section 6.1 – Police Protection and Crime Preventions
 - Chapter 6 – Safety Element – Section 6.2 – Fire and Emergency Services
 - Figure 5-1 – Fire Stations
 2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Section 5.13 – Public Services
 - Figure 4.13-1 – Location of Public Facilities
 3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
 4. City of Moreno Valley Fire Department Website. Accessed: http://www.moreno-valley.ca.us/city_hall/departments/fire/index-fire.shtml (Accessed May 11, 2020).
 5. City of Moreno Valley Police Department Website. Accessed: http://www.moreno-valley.ca.us/city_hall/departments/police/index-police.shtml (Accessed May 11, 2020).
 6. City of Moreno Valley Parks, Recreational, and Open Spaces Comprehensive Master Plan. Accessed:
 7. http://www.ci.moreno-valley.ca.us/resident_services/park_rec/pdfs/park-mp0910.pdf (Accessed May 11, 2020).

Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
8. Moreno Valley Unified School District Fee Justification Report for New Residential and Commercial/Industrial Development. 2020.				
XVI. RECREATION – Would the project:				
a) Would the project 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"/>
<p>Response: Less Than Significant Impact. As described previously project would develop 81 single-family residences. Residential developments are subject to Municipal Code Section 3.38.080 and Chapter 3.40, requiring park improvements residential development impact fees and/or parkland dedication or in-lieu fees for residential development as a condition of project approval (included as PPP PS-2). These fees would be used in the City of the purpose of acquiring, designing, constructing, improving, providing and maintaining, to the extent permitted by law, park improvements provided for in the City's general plan and its adopted capital improvement program or an adopted master plan of parks and recreation facilities, as amended from time to time. Furthermore, the project would develop recreational areas within the new residential development, including a community park, fitness stations, and connections to a future public linear park along the California Aqueduct easement. Therefore, impacts related to the increase the use of existing parks and recreational facilities, such that physical deterioration of the facility would be accelerated would be less than significant.</p>				
b) Does the project 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"/>
<p>Response: Less Than Significant Impact. As described above, while the project would contribute park development fees pursuant to Municipal Code 3.38.080 (included as PPP PS-2) to be used towards the future expansion or maintenance parks and recreational facilities, these fees are standard with every residential development. The project would also construct recreational facilities within the residential development area, including a community park, fitness stations, and connections to a future public linear park. The development of these recreational facilities are analyzed throughout this study as part of the proposed project and would not result in a significant adverse physical effect on the environment. As a result, impacts would be less than significant.</p>				
<p>Existing Plans, Programs, or Policies PPP PS-2: Park Fees, provided in Section 15, <i>Public Services</i>.</p>				
<p>Mitigation Measures None.</p>				
<p>Sources:</p> <ol style="list-style-type: none"> 1. Moreno Valley General Plan, adopted July 11, 2006 <ul style="list-style-type: none"> • Chapter 4 – Parks, Recreation and Open Space Element – Section 4.3 – Parks and Recreation <ul style="list-style-type: none"> - Figure 3-1 Open Space - Figure 3-2 – Future Parklands Acquisition Areas - Figure 3-3 – Master Plan of Trails 2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006 <ul style="list-style-type: none"> • Section 5.13 – Public Services <ul style="list-style-type: none"> - Figure 4.13-1 – Location of Public Facilities 3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code 				

Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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XVII. TRANSPORTATION – Would the project:

a) Conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:
Less Than Significant Impact.
Construction

Construction activities associated with the project would generate vehicular trips from construction workers traveling to and from project site, delivery of construction supplies and import materials to, and export of debris from, the project site. However, these activities would only occur for a period of 12 months. The increase of trips during construction activities would be limited and are not anticipated to exceed the number of operational trips described below. The short-term vehicle trips from construction of the project would generate less than significant traffic related impacts.

Operation
 As shown in Table T-1 below, the proposed project would generate approximately 61 trips during the AM peak hour, 81 trips during the PM peak hour, and a total of 774 daily trips.

Table T-1: Project Trip Generation

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Trip Rates								
Single-Family Detached Housing ¹	DU	9.440	0.185	0.555	0.740	0.624	0.366	0.990
Project Trip Generation								
Detached Single Family	81 DU	774	15	46	61	51	30	81

Notes:
 DU = Dwelling Units
 1 Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 210 - Single-Family Detached Housing.

Source: EPD 2020 (Appendix J)

According to Exhibit A of the City of Moreno Valley Traffic Impact Analysis Preparation Guide, projects that generate fewer than 100 vehicle trips during the peak hours are generally exempt from the requirement to prepare a traffic impact analysis. The worst-case peak hour trip generation of the project is 81 PM peak hour trips, fewer than 100 peak hour trips. Therefore, the project would not result in a conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, and impacts would be less than significant.

The project area is currently served by the Riverside Transit Authority (RTA). The RTA provides both local and regional services throughout the region with 38 fixed routes, 9 commuter link routes, and Dial-A-Ride services. The existing RTA bus stop for Route 19, located adjacent to the project site on Iris Avenue, is the closest existing route to the project. Operation of the project would not affect the operation of the bus route. Thus, no impacts would occur. In addition, both sidewalks and bicycle lanes are located adjacent to the project site on Iris Avenue. The proposed project would not alter any of the existing bicycle or sidewalk facilities. Thus, impacts related to bicycle or pedestrian circulation would not occur from implementation of the project.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Response:
Less than Significant Impact. The City of Moreno Valley has prepared updated *Traffic Impact Analysis Guidelines* (Guidelines) for Land Use Projects in June 2020 to address changes to CEQA pursuant to SB-743 to include VMT analysis methodology and thresholds. The City recommends using VMT per capita for home-based trips for residential

ISSUES & SUPPORTING INFORMATION SOURCES:

Potentially Significant Impact

Less Than Significant with Mitigation Incorporated

Less Than Significant Impact

No Impact

projects. Based on the Guidelines, a project would result in a significant project generated VMT impact under either of the following conditions:

1. A project would have a significant VMT impact if, in the Existing Plus Project scenario, its net VMT per capita (for residential projects) or per employee (for office and industrial projects) exceeds the average VMT for Moreno Valley. For all other uses, a net increase in VMT would be considered a significant impact.
2. If a project is consistent with the regional RTP/SCS, then the cumulative impacts shall be considered less than significant subject to consideration of other substantial evidence. If it is not consistent with the RTP/SCS, then it would have a significant VMT impact if:
 - a. For residential projects its net VMT per capita exceeds the average VMT per capita for Moreno Valley in the RTP/SCS horizon-year.
 - b. For office and industrial projects its net VMT per employee exceeds the average VMT per employee for Moreno Valley in the RTP/SCS horizon-year
 - c. For all other land development project types, a net increase in VMT in the RTP/SCS horizon-year would be considered a significant impact.

The VMT analysis was conducted using two steps. First, the per capita VMT was calculated from the Riverside Transportation Analysis Model (RivTAM). Second, since the project includes project characteristics which reduce VMT but cannot be evaluated using the RivTAM, those calculations were conducted off-model. The RivTAM uses a base year of 2012 and a future year of 2040, and both models were run for the without and with project scenarios. VMT outputs are included in Attachment A to the VMT Memorandum (Appendix K to this document). Consistent to the Guidelines, the baseline (2020) conditions VMT was calculated by interpolating the Base Year and Future Year RivTAM runs. The methodology for the VMT analysis is further discussed in Appendix K to this document.

The first part of the VMT analysis was conducted using the RivTAM. Table T-2 summarizes the findings of the Base Year (2012) model run and Table T-3 summarizes the findings of the Future Year (2040) model run respectively. As seen on Table T-3, the Future Year (2040) project VMT per capita is 11.8 miles, which is less than the City's home-based VMT per capita of 13.7 miles, showing a less than significant impact under cumulative conditions.

Table T-2: Base Year (2012) Model VMT Summary

	Homebased VMT	Total Households	Total Population	VMT/Capita
Project	4,937	81	343	14.4
Moreno Valley				12.8

Source: VMT Memorandum (Appendix K).

Table T-3: Future Year (2040) Model VMT Summary

	Homebased VMT	Total Households	Total Population	VMT/Capita
Project	4,039	81	343	11.8
Moreno Valley				13.7

Source: VMT Memorandum (Appendix K).

Based on the City's Guidelines, Baseline VMT was calculated by interpolating between the model base and future years. Table T-4 shows the resulting VMT for the City and the Project. As seen on Table T-4, the project VMT per Capita is 13.6 miles, which is 4.58% greater than the City of Moreno Valley VMT/Capita of 13.0 miles.

**ISSUES & SUPPORTING
INFORMATION SOURCES:**
Potentially
Significant
ImpactLess Than
Significant with
Mitigation
IncorporatedLess Than
Significant
ImpactNo
Impact
Table T-4: Future Year (2040) Model VMT Summary

	Homebased VMT	Total Households	Total Population	VMT/Capita
Project	4,681	81	343	13.6
Moreno Valley				13.0
Project VMT as a Percentage of City				104.58%

Source: VMT Memorandum (Appendix K).

The City also requires analysis of project effect on VMT within the City's roadways for disclosure although no thresholds are specified. This analysis was based on the RivTAM. Tables T-5, T-6, and T-7 show the results of the analysis for the Base Year (2012), Future Year (2040), and Baseline Year (2020) conditions. As seen from the tables, the project reduces per capita VMT within the City limits under all scenarios.

Table T-5: City of Moreno Valley - Project Effect on VMT (Base Year 2012)

	Without Project	With Project
Roadway VMT	1,717,720	1,716,263
Service Population	225,662	226,005
VMT/Service Population	7.61	7.59

Source: VMT Memorandum (Appendix K).

Table T-6: City of Moreno Valley - Project Effect on VMT (Future Year 2040)

	Without Project	With Project
Roadway VMT	2,783,726	2,759,709
Service Population	307,007	307,350
VMT/Service Population	9.07	8.98

Source: VMT Memorandum (Appendix K).

Table T-7: City of Moreno Valley - Project Effect on VMT (Baseline Year 2020)

	Without Project	With Project
Roadway VMT	2,022,293	2,014,391
Service Population	248,903	249,246
VMT/Service Population	8.12	8.08

Source: VMT Memorandum (Appendix K).

The second part of the VMT analysis includes the off-model calculations. The project includes several site-specific conditions that cannot be analyzed using the RivTAM, including a nearby pedestrian trail, a bus stop on a high-frequency transit route, and a higher residential density than assumed in the General Plan. These conditions were calculated separately using CalEEMod and CAPCOA guidelines. These conditions reduce the VMT impacts of any development on the project site, as calculated in Table T-8.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Table T-8: VMT Reductions due to Site-Specific Conditions

	Annual VMT	Percent Reduction	Source
BAU VMT	2,669,967		CalEEMod
Pedestrian Connections Off Site	2,616,568	2.00%	CalEEMod
Proximity to Transit	2,536,469	5.00%	CalEEMod
Increased Density (Compared to GP)		3.60%	LUT 1 (CAPCOA)
Mitigated VMT	2,387,004		
Reductions due to PDFs	89.40%	10.60%	
Source: VMT Memorandum (Appendix K).			

Table T-9, below, shows the project generated VMT after accounting for site-specific conditions. As shown on Table T-9, these conditions result in project VMT being lower than the City VMT for both the baseline and cumulative conditions.

Table T-9: Project VMT Including Site-Specific Conditions

	Project VMT/Capita	Percent of City VMT
Baseline (2020) Project VMT/Capita (from RivTAM)	13.6	104.58%
Baseline (2020) Project VMT/Capita After PDF	12.2	93.50%
Cumulative (2040) Project VMT/Capita (from RivTAM)	11.8	86.15%
Cumulative (2040) Project VMT/Capita (after PDFs)	10.5	80.67%
Source: VMT Memorandum (Appendix K).		

Overall, the project generated VMT is under baseline conditions is 12.2 miles which is less than the City average of 13.0 miles. The project generated VMT under cumulative conditions is 10.5 miles, which is less than the City average of 13.7 miles. The “with project” VMT per service population on City roadways under the baseline and cumulative conditions are less than those under “without project” conditions. Therefore, the project would be consistent with CEQA Guidelines section 15064 and impacts would be less than significant.

c) Substantially increase hazards due to a geometric 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"/>
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Response:
Less Than Significant Impact. The project includes development of single-family residences. The project includes community type uses and does not include any incompatible uses, such as farm equipment. The proposed project area would be accessed from Iris Avenue, as well as through the onsite streets to each residence.

The project would also not increase any hazards related to a design feature. All of the onsite streets would be developed in conformance with City design standards. The City’s construction permitting process includes review of project plans to ensure that no potentially hazardous transportation design features would be introduced by the project. For example, the design of the project streets would be reviewed to ensure fire engine accessibility and turn around area is provided to the fire code standards. As a result, impacts related to vehicular circulation design features would be less than significant.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Response: Less than Significant Impact. Construction The proposed construction activities, including equipment and supply staging and storage, would occur within and adjacent to the project area on Iris Avenue, and would not restrict access of emergency vehicles to the project site or adjacent areas. The installation of driveways and connections to existing infrastructure systems that would be implemented during construction of the proposed project could require the temporary closure of Iris Avenue. Traffic detours are not expected to be necessary. In addition, the construction activities would be required to ensure emergency access in accordance with Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9), which would be ensured through the City's permitting process. Thus, implementation of the project through the City's permitting process would ensure existing regulations are adhered to and would reduce potential construction related emergency access impacts to a less than significant level.</p> <p>Operation As described previously, the proposed project area would be accessed from Iris Avenue, as well as through the onsite streets to each residence. Permitting of these roadways would provide adequate and safe circulation to, from, and through the project area and would provide two routes for emergency responders to access different portions of the project area. Because the project is required to comply with all applicable City codes, as verified by the City, potential impacts related to inadequate emergency access would be less than significant.</p>				
<p>Existing Plans, Programs or Policies None.</p>				
<p>Mitigation Measures None.</p>				
<p>Sources:</p> <ol style="list-style-type: none"> 1. Moreno Valley General Plan, adopted July 11, 2006 <ul style="list-style-type: none"> • Chapter 5 Circulation Element <ul style="list-style-type: none"> - Figure 8-1 – Circulation Plan - Figure 8-2 – LOS Standards - Figure 8-3 – Roadway Cross-Sections - Figure 8-4 – Bikeway Plan 2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006 <ul style="list-style-type: none"> • Section 5.2 – Traffic/Circulation <ul style="list-style-type: none"> - Figure 4.2-1 – Circulation Plan - Figure 4.2-2 – General Plan Roadway Cross-Sections - Figure 4.2-3 – Year 2000 Number of Through Lanes - Figure 4.2-4 – Year 2000 Daily Volume/Capacity (V/C) Ratios - Figure 4.2-5 – Year 2000 Average Daily Traffic Volumes - Figure 4.2-6 – Proposed Circulation Plan - Figure 4.2-7 – LOS Standards • Appendix B – Traffic Analysis, City of Moreno Valley General Plan Traffic Study, Urban Crossroads, June 2004. 3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code 4. Moreno Valley Municipal Code Chapter 3.18 Special Gas Tax Street Improvement Fund 5. Moreno Valley Master Bike Plan, adopted January 2015 6. Riverside County Transportation Commission, Congestion Management Program, December 14, 2011 7. City of Moreno Valley Transportation Engineering Division, Traffic Impact Analysis Preparation Guide. 2007. 				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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8. Trip Generation Analysis for Proposed Iris Park Residential Project. May 12, 2020. Prepared by EPD Solutions, Inc. (Appendix J).
9. VMT Memorandum. October 7, 2020. Prepared by Translutions. (Appendix K).

XVIII. TRIBAL CULTURAL RESOURCES – Would the project:

AB 52 and SB 18 Requirements

The project would be required to comply with AB 52 and SB 18 regarding tribal consultation. Chapter 532, Statutes of 2014 (i.e., AB 52), requires that Lead Agencies evaluate a project’s potential to impact “tribal cultural resources.” Such resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are eligible for inclusion in the California Register or included in a local register of historical resources (PRC Section 21074). AB 52 also gives Lead Agencies the discretion to determine, supported by substantial evidence, whether a resource falling outside the definition stated above nonetheless qualifies as a “tribal cultural resource.”

SB 18 requires cities and counties acting as Lead Agency to contact and consult with California Native American tribes before adopting or amending a General Plan. The intent of SB 18 is to establish meaningful consultation between tribal governments and local governments at the earliest possible point in the planning process and to enable tribes to manage “cultural places.” Cultural places are defined as a Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine (PRC Section 5097.9), or a Native American historic, cultural, or sacred site, that is listed or may be eligible for listing in the California Register, including any historic or prehistoric ruins, any burial ground, or any archaeological or historic site (PRC Section 5097.993).

In compliance with these requirements, the City sent out to the following Native American tribes that may have knowledge regarding tribal cultural resources in the project vicinity.

- Agua Caliente Band of Cahuilla Indians
- Cahuilla Band of Indians
- Desert Cahuilla Indians
- Los Coyotes Band of Cahuilla Mission Indians
- Morongo Band of Mission Indians
- Pechanga Band of Luiseño Indians
- Rincon Band of Luiseño Indians
- San Manuel Band of Mission Indians
- Santa Rosa Band of Mission Indians
- Serrano Nation of Mission Indians
- Soboba Band of Luiseño Indians

Native American consultation was conducted as part of the Phase I Cultural Resources Assessment (CUL 2020), which included initial contact with the Native American Heritage Commission and follow-up letters to local Native American representatives. The NAHC provided Material Culture Consulting, Inc. (MCC) with contact information for 21 tribes/individuals to reach out to for additional information on February 18, 2020. MCC sent letters on February 18, 2020 to all 21 Native American contacts, requesting any information related to cultural resources or heritage sites within or adjacent to the project area. Additional attempts at contact by letter, email, or phone call were made on March 4, 2020 and March 18, 2020. As a result of this outreach effort, MCC received seven responses from Native American Tribes or individuals. Several tribes responded with concerns about presence of nearby resources and presented requests for formal consultation with the Lead Agency. MCC did not conduct formal consultation with any of the Native American representatives and recommends that appropriate consultation take place as soon as possible between Riverside County, as lead agency, and all interested parties (CUL 2020).

The Agua Caliente Band of Cahuilla Indians, Pechanga Band of Luiseño Indians, Rincon Band of Luiseño Indians, and Soboba Band of Luiseño Indians requested consultation regarding the proposed Project. The consulting tribes consider

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>the area sensitive for cultural resources as several sites are located nearby. Although no information for site specific tribal cultural resources was provided (and there are no known tribal cultural resources on or adjacent to the project site), the consulting tribes requested inclusion of mitigation due to the potential of the Project to unearth previously undocumented tribal cultural resources during construction.</p>				
<p>a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p>				
<p>i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. As detailed previously in Section 5, <i>Cultural Resources</i>, the project site is currently vacant. A review of historical aerial photographs and topographic maps indicate that prior to 1990s, the project area was agricultural. By the late 1990s, the surrounding area saw increased commercial and residential development that has continued up to the present day.</p> <p>The Phase I Cultural Resources Assessment prepared for the project included a search of the California Historical Resource Information System (CHRIS) at the Eastern Information Center (EIC), located at the University of California, Riverside, Riverside County. The record search indicated five previously recorded resources located within a 1-mile radius of the area, with no resources located directly within the project area. Furthermore, the Sacred Lands File search completed by the NAHC did not identify any previously known tribal cultural resources or sacred lands within the vicinity of the project area (CUL 2020). Therefore, no substantial evidence exists that tribal cultural resources are present in the project site, and potential impacts would be less than significant.</p>				
<p>ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Response: Less Than Significant Impact. The project site is vacant, and as discussed in Impact TCR-1 above, no substantial evidence exists that tribal cultural resources are present in the project site. Based on the results of the cultural resources search and survey, the proposed project area is considered to have a low sensitivity for presence of significant prehistoric or historical archaeological deposits or features (CUL 2020).</p> <p>In addition, as described previously, PPP CUL-1 requires a qualified professional archeologist to be present at the pre-grade meeting to detail an inadvertent discovery plan and for contractors to halt work within 50 feet in the event of uncovering a potential archaeological resource and to have the find evaluated by a qualified archaeologist. Furthermore, implementation of PPP CUL-2, California Health and Safety Code, Section 7050.5 requires that if human remains are discovered in the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation. If the coroner determines that the remains are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission. Therefore, with implementation of PPP CUL -1 and PPP CUL-2, impacts to tribal cultural resources would be less than significant.</p>				
<p>Existing Plans, Programs, or Policies PPP CUL-1: Inadvertent Discoveries. Listed previously in Section 5, Cultural Resources. PPP CUL-2: Human Remains. Listed previously in Section 5, Cultural Resources.</p>				

Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Mitigation Measures

MM TCR-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.

MM TCR-2: Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Luiseño Indians and the Soboba Band of Luiseño Indians for tribal monitoring. The Developer 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.

MM TCR-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

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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.

MM TCR-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."

MM TCR-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 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.

MM TCR-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 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).

Sources:

1. Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 7 – Conservation Element – Section 7.2 – Cultural and Historical Resources
2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Section 5.10 – Cultural Resources
 - Figure 4.10-1 – Locations of Listed Historic Resource Inventory Structures
 - Figure 4.10-2 – Location of Prehistoric Sites
 - Figure 4.10-3 – Paleontological Resource Sensitive Areas
 - Appendix F – Cultural Resources Analysis, Study of Historical and Archaeological Resources for the Revised General Plan, City of Moreno Valley, Archaeological Associates, August 2003.
3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
4. Moreno Valley Municipal Code Title 7 – Cultural Preservation
5. Cultural Resources Inventory for the City of Moreno Valley, Riverside County, California, prepared by Daniel F. McCarthy, Archaeological Research Unit, University of California, Riverside, October 1987 (*This document cannot be provided to the public due to the inclusion of confidential information pursuant to Government Code Section 6254.10.*)
6. Phase I Cultural Resources Assessment: Iris Park Project, City of Moreno Valley, Riverside County, California. March 2020. Prepared by Material Culture Consulting, Inc. (Appendix C).

XIX. UTILITIES AND SERVICE SYSTEMS – Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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relocation of which could cause significant environmental effects?				
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Response:

Water Infrastructure

The proposed project would install a new water pipeline within the project site that would connect to the existing 18-inch EMWD water pipeline in the adjacent Metropolitan Water District (MWD) easement. The new onsite water system would convey water supplies to the proposed residences and landscaping through plumbing/landscaping fixtures that are compliant with the CalGreen Plumbing Code for efficient use of water.

The proposed project would continue to receive water supplies through the existing water line located within the Iris Avenue rights-of-way that has the capacity to provide the increased water supplies needed to serve the proposed project, and no extensions or expansions to the water pipelines that convey water to the project site would be required. The installation of onsite water distribution lines would only serve the proposed project and would not provide water to any off-site areas.

The construction activities related to the onsite water infrastructure that would be needed to serve the proposed single-family residences is included as part of the proposed project and would not result in any physical environmental effects beyond those identified throughout this MND. For example, construction emissions for excavation and installation of the water infrastructure is included in Sections 3, *Air Quality* and 8, *Greenhouse Gas Emissions*. Therefore, the proposed project would not result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and impacts would be less than significant.

Wastewater Infrastructure

The project includes installation of onsite sewer lines within the proposed onsite streets that would connect to the existing 18-inch sewer line in the adjacent California Aqueduct easement. These wastewater flows will be further transported to the Moreno Valley Regional Water Reclamation Facility.

The construction activities related to installation of the onsite sewer infrastructure that would serve the proposed project is included as part of the proposed project and would not result in any physical environmental effects beyond those identified throughout this MND. For example, construction emissions for excavation and installation of the sewer infrastructure is included in Section 3, *Air Quality* and 8, *Greenhouse Gas Emissions*, and noise volumes from these activities are evaluated in Section 13, *Noise*. As the proposed project includes facilities to serve the proposed development, it would not result in the need for construction of other new wastewater facilities or expansions, the construction of which could cause significant environmental effects. Therefore, impacts would be less than significant.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:

Less Than Significant Impact. The proposed project would result in an increased demand for water supplies from the 81 single-family residential units and from associated project recreational areas. Water supplies to the project area are provided by EMWD, which serves 555 square miles of western Riverside County and includes the project area (UWMP 2015). In 2015, EMWD had a water demand of 146,090 AF, and based on land use and growth projections it anticipates a demand of 197,901 AF in 2020, which is a 35 percent increase over 2015 demands (an increase of 51,811 AF) (UWMP 2015). The UWMP details that the District has water supply to meet the projected demands over the next 25 years and beyond (UWMP 2015). The UWMP describes that the District has a projected supply of 197,901 AFY in 2020, and a predicted supply of 268,200 AFY in 2082.

To provide a conservative estimate of project water use, a generation rate of 176 gallons per capita per day was used to estimate water demand from the proposed project (UWMP 2015). As described in Section 14, *Population and Housing*, the proposed project would result in 325 additional residents at full occupancy. Based on the District's 2020 water use target of 176 gallons per capita per day, the 325 additional residents would generate a water demand of 57,200 gallons

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<p>per day. The project would limit water demand by inclusion of low-flow plumbing and irrigation fixtures, pursuant to the California Title 24 requirements.</p> <p>As detailed previously, the District has water supply to meet the projected demands over the next 25 years and beyond. In addition, the 2015 UWMP details the available supply, including groundwater, imported water, and recycled water would meet the projected demand during normal, single dry and multiple dry years (UWMP 2015). Therefore, impacts related to water supplies from the proposed project would be less than significant.</p>				
<p>c) 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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. As described above, wastewater flows would be conveyed to the Moreno Valley Regional Water Reclamation Facility. The treatment facility typically processes 10.6 million gallons per day (MGD) but has a current capacity for 16 MGD and an ultimate capacity of 41 MGD (UWMP 2015). Through the City's plan check process, the City's Engineering Department would confirm that the wastewater generated from the Project would be accommodated within this capacity. Thus, the wastewater treatment plant has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments, and impacts would not occur.</p>				
<p>d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Response: Less Than Significant Impact. The closest landfill to the vacant project site is the Badlands Sanitary Landfill, which is located approximately 7.9 miles northeast from the project site at 31125 Ironwood Avenue in Moreno Valley. The landfill is permitted to accept 4,800 tons per day of solid waste and is permitted to operate through 2022 (CalRecycle 2020). As of March 2020, the landfill has a remaining capacity of 15,748,799 cubic yards (CalRecycle 2020).</p> <p>The CalEEMod solid waste generation rate for single-family residential land use is 0.41 tons per resident per year. As described previously, full occupancy of the proposed project would generate approximately 325 new residents. Thus, operation of the project would generate approximately 133.25 tons per solid waste per year; or 2.56 tons per week. However, at least 75 percent of the solid waste is required by AB 341 to be recycled, which would reduce the volume of landfilled solid waste to approximately 0.64 tons per week or .09 tons per day, which is within the Badlands Sanitary Landfill's existing permitted capacity of 4,800 tons per day. Thus, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs and the project would not impair the attainment of solid waste reduction goals. Impacts related to landfill capacity would be less than significant.</p>				
<p>e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Response: No Impact. The proposed project would result in new development that would generate an increased amount of solid waste. All solid waste-generating activities within the City are subject to the requirements set forth in Section 5.828.1 of the 2016 California Green Building Standards Code that requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste, and AB 341 that requires diversion of a minimum of 75 percent of operational solid waste. Implementation of the proposed project would be consistent with all state regulations, as ensured through the City's development project permitting process. Therefore, the proposed project would comply with all solid waste statute and regulations; and impacts would not occur.</p>				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Existing Plans, Programs, or Policies None.				
Mitigation Measures None.				
Sources: <ol style="list-style-type: none"> 1. Moreno Valley General Plan, adopted July 11, 2006 <ul style="list-style-type: none"> • Chapter 2 – Conservation Element – Section 2.4 – Utilities • Chapter 6 – Safety Element – Section 6.7 – Water Quality • Chapter 7 – Conservation Element – Section 7.3 – Solid Waste • Chapter 7 -- Conservation Element – Section 7.5—Water Resources <ul style="list-style-type: none"> - Figure 6-1 – Water Purveyor Service Area Map 2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006 <ul style="list-style-type: none"> • Section 5.7 – Hydrology and Water Quality <ul style="list-style-type: none"> - Figure 4.7-1 – Strom Water Flows and Major Drainage Facilities - Figure 4.7-2 – Groundwater Basins • Section 5.13 – Public Services <ul style="list-style-type: none"> - Figure 4.13-1 – Locations of Public Facilities 3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code 4. Moreno Valley Municipal Code Chapter 8.10 Stormwater/Urban Runoff Management and Discharge Controls 5. Moreno Valley Municipal Code Section 8.21.170 National Pollutant Discharge Elimination System (NPDES). 6. Moreno Valley Municipal Code Chapter 8.80 – Recycling and Diversion of Construction and Demolition Waste 7. California Emissions Estimator Model Appendix D Default Data Tables. Table 10.1 Solid Waste Disposal Rates. Accessed: http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf?sfvrsn=2 8. CalRecycle Solid Waste Information System. Accessed at: https://www2.calrecycle.ca.gov/SWFacilities/Directory (Accessed May 12, 2020). 9. CalRecycle Disposal Reporting System: Jurisdiction Tons by Facility. Accessed at: https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility (Accessed May 12, 2020). 10. Eastern Municipal Water District 2015 Urban Water Management Plan. June 2016. Prepared by RMC. Available: https://www.emwd.org/post/urban-water-management-plan (Accessed May 12, 2020). 11. Eastern Municipal Water District Moreno Valley Regional Water Reclamation Facility Fact Sheet. Accessed: https://www.emwd.org/sites/main/files/file-attachments/mvrwrffactsheet.pdf (Accessed May 12, 2020). 				
XX. WILDFIRE – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Response: No Impact. The project site is developed and within an urbanized residential area of Moreno Valley. The project site is surrounded by developed and urban areas. The project site is not adjacent to any wildland areas. According to the CAL FIRE Hazard Severity Zone map, the project site is not within a fire hazard zone. The project area would be accessed from two driveways on Iris Avenue. Permitting of these roadways would provide adequate and safe circulation to, from, and through the project area and would provide two routes for emergency responders to access different portions of the project area. Because the project is required to comply with all applicable City codes, as verified by the City potential impacts related to an emergency response or evacuation would be less than significant.				
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Response:

No Impact. As discussed previously, the project site is developed and within an urbanized residential area of Moreno Valley. The project site is surrounded by developed and urban areas. The project site is not adjacent to any wildland areas, and as determined by the CAL FIRE Hazard Severity Zone map, the project site is not within a fire hazard zone. In addition, the project site is flat and within a flat area. The site is adjacent to roadways and commercial and residential developments. There are no factors on or adjacent to the project site that would exacerbate wildfire risks. Thus, no impact related to other factors that would expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would occur from the project.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:

No Impact. As described previously, the project site is developed and within a developed and urban area that is not within a wildfire hazard zone. The project does not include any infrastructure that would exacerbate fire risks. In addition, the project would provide internal streets and fire suppression facilities (e.g., hydrants and sprinklers) that conform to the California Fire Code requirements, included as Municipal Code Chapter 8.36, as verified through the City’s permitting process. Therefore, impacts related to infrastructure that could exacerbate fire risks would not occur with the proposed project.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Response:

No Impact. As described previously, the project site is developed and within a developed and urban area that is not within a wildfire hazard zone. In addition, the project site is flat and surrounded by flat areas. There are no slope or hillsides that would become unstable. In addition, the project would install onsite drainage that would be conveyed to the existing flood control channel, which is consistent with the existing condition. Therefore, impacts related to flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would not occur from the proposed project.

Sources:

1. Moreno Valley General Plan, adopted July 11, 2006
 - Chapter 6 – Safety Element – Section 6.2- Fire and Emergency Services – 6.2.8—Wildland Urban Interface
2. Final Environmental Impact Report City of Moreno Valley General Plan, certified July 11, 2006
 - Section 5.5 – Hazards and Hazardous Materials
 - Figure 4.5-2 – Floodplains and High Fire Hazard Areas
3. Title 9 – Planning and Zoning of the Moreno Valley Municipal Code
4. Local Hazard Mitigation Plan, City of Moreno Valley Fire Department, adopted October 4, 2011, amended 2017, http://www.moval.org/city_hall/departments/fire/pdfs/haz-mit-plan.pdf
 - Chapter 5 – Wildland and Urban Fires
 - Figure 4-2 – Moreno Valley High Fire Area Map 2016
 - Chapter 8 – Landslide
 - Figure 7-1 – Moreno Valley Slope Analysis 2016
5. Emergency Operations Plan, City of Moreno Valley, March 2009, http://www.moval.org/city_hall/departments/fire/pdfs/mv-eop-0309.pdf
 - Threat Assessment 3 – Wildfire
6. California Department of Forestry and Fire Protection (CAL FIRE). 2020. Fire Hazard Severity Zone Map. Accessed:

Attachment: Exhibit A to Resolution No. 2020-49 Initial Study MND (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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<https://forestwatch.maps.arcgis.com/apps/Styler/index.html?appid=5e96315793d445419b6c96f89ce5d153>
(Accessed May 12, 2020).

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

<p>a) Does the project have the potential to substantially 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?</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Response:

Less Than Significant with Mitigation Incorporated. The Habitat Assessment (Blackhawk 2020) describes that the special-status wildlife and plant species with the potential to occur on the project site are covered by compliance with the MSHCP, which requires payment of fees, included as PPP BIO-1. In addition, because the site supports suitable habitat for burrowing owl the MSHCP requires focused surveys pursuant to the Western Riverside County Regional Conservation Authority (RCA) Burrowing Owl Survey Instructions for the MSHCP area. Hence, Mitigation Measure BIO-1 requires a preconstruction burrowing owl survey to be conducted pursuant to the RCA Survey Instructions prior to start of ground disturbance activities. With implementation of Mitigation Measures BIO-1, impacts related to burrowing owl would be less than significant.

In addition, the Habitat Assessment identified suitable habitat and substrate for raptors and migratory birds that are protected under the Migratory Bird Treaty Act and Section 3503.5 of the California Department of Fish and Wildlife (CDFW) code. Therefore, Mitigation Measure BIO-2 is included to require nesting bird surveys if construction activities begin during the nesting season. With implementation of Mitigation Measure BIO-2, impacts related to protected bird species would also be reduced to a less than significant level.

As described in Section 5, *Cultural Resources*, the project site does not contain any buildings or structures that meet any of the California Register of Historical Resources (California Register) criteria or qualify as “historical resources” as defined by CEQA. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource. In addition, the Phase I Cultural Resources Assessment determined that based on the results of the cultural resources search and survey, the proposed project area is considered to have a low sensitivity for presence of significant prehistoric or historical archaeological deposits or features. However, because previous resources have been identified within a one-mile radius of the project area, MM CUL-1 has been included to require contractors to halt work within 50 feet of any inadvertent finds of potential archaeological resource and to have the find evaluated by a qualified archaeologist.

The project area is considered moderately sensitive for paleontological resources. Thus, MM PAL-1 has been included to require paleontological monitoring during all future excavations that would exceed a relative depth of five feet below the present surface. Thus, implementation of MM PAL-1 would reduce potential impacts to important examples of California prehistory to a less than significant level.

<p>b) 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.)?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Response:

Less than Significant with Mitigation Incorporated. The project would develop the project site for single-family residences within a developed area. The project would provide land uses that are consistent with the adjacent single-

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>family residential and retail commercial uses. As described above, all of the potential impacts related to implementation of the project would be less than significant or reduced to a less than significant level with implementation of mitigation measures that are imposed by the City that effectively reduce environmental impacts.</p> <p>The other cumulative effects of the proposed project taken into consideration with these other projects would be limited, because the project site has already been developed and disturbed and the new uses onsite would not result in substantial change in the urban use of the area. As discussed in Section 19, <i>Utilities and Service Systems</i>, public services and utility infrastructure are in place to serve the project and would not result in cumulatively considerable increases in service and utility needs to serve the project. In addition, the project would not result in substantial effects to any environmental resource topic, as described though out this document.</p> <p>Overall, the proposed project would develop an area that has been subject to previous urban uses, is disturbed, and is surrounded by consistent development and roadways. Impacts to environmental resources or issue areas would not be cumulatively considerable; and cumulative impacts would be less than significant with implementation of the previously identified mitigation measures related to cultural resources, paleontological resources, hazardous materials, and tribal cultural resources.</p>				
<p>c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Response: Less than Significant with Mitigation Incorporated. The project proposes development of the project site for single-family residential uses. As described previously, the project site is within an urban area and surrounded by consistent land uses. The project would not consist of any use or any activities that would result in a substantial negative affect on persons in the vicinity. All resource topics associated with the proposed project have been analyzed in accordance with CEQA and the State CEQA Guidelines and were found to pose no impacts or less-than-significant impacts with implementation of mitigation measures related to cultural resources, paleontological resources, hazardous materials, and tribal cultural resources; and existing plans, programs, or policies that are required by the City. Consequently, the proposed project would in environmental effects that would cause substantial adverse effects on human beings directly or indirectly, and impacts would be less than significant with mitigation.</p>				

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CalEEMod Emission Summary

TO: Rafik Albert, EPDS
FROM: Vince Mirabella
DATE: September 21, 2020

SUBJECT: Summary of CalEEMod Model Runs and Output for the Iris Park Residential Project, Moreno Valley, California

SECTION 1: PROJECT INFORMATION

1.1 - Project Name

Iris Park Residential Project, Moreno Valley, CA

1.2 - Project Location

The project site is located on the south side of Iris Avenue, about 500 feet east of Perris Boulevard, on APN 312-020-025. The project site is triangular in shape and has a gross acreage of approximately 10.82 acres, including 3.02 acres that is planned for development by the City of Moreno Valley as a public park and trail over the California Aqueduct.

1.3 - Project Description

Iris Park is a proposed 81-lot single-family detached subdivision. The community will have two gated access points off Iris Avenue. Three small park areas are spread out on the site. Residential lots would range from 2,197 sq. ft. to 4,741 sq. ft. Homes would range from 1,848 sq. ft. to 2,201 sq. ft., with 3 to 5 bedrooms and 2.5 to 3 baths. Homes would be two stories, include a back yard approximately 12 to 14 feet deep, and have an attached two-car garage. Three architectural styles are proposed: Spanish, French, and Farmhouse. The project overall would provide 217 parking spaces, including 162 garage spaces and 49 spaces on private streets

1.4 - Purpose of the Report

This report summarizes the results of the project construction and operational criteria pollutant and greenhouse gas (GHG) emissions and energy usage estimates using the California Emissions Estimator Model (CalEEMod Version 2016.3.2) land use emission model for use in preparing CEQA regulatory documentation. The estimated project emissions were compared to the recommended air quality and GHG significance thresholds recommended by the South Coast Air Quality Management District (SCAQMD).

1.5 - Conclusions

- The construction and operation of the project would not exceed any project-level criteria pollutant regional or localized emission significance threshold adopted by the SCAQMD. Therefore, the project would result in a less than significant impact and no mitigation is required.

- The construction and operation of the project would not result in a cumulatively significant impact on the region's air quality. Therefore, the project would result in a less than significant impact and no mitigation is required.
- The construction and operation of the project would not exceed the greenhouse gas significance threshold adopted for this project. Therefore, the project would result in a less than significant impact and no mitigation is required.
- The construction and operation of the project would not result in the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with project design, project location, the use of electricity and natural gas, and the use of fuel by vehicles anticipated to travel to and from the project. Therefore, the project would result in a less than significant impact and no mitigation is required.

SECTION 2: CALEEMOD EMISSION ESTIMATES – CRITERIA POLLUTANTS

This section quantifies the project construction and operational criteria pollutant emissions¹ for the project design and compares the emissions to the regional and local emission significance thresholds adopted by the SCAQMD.

2.1 - Significance Thresholds-Criteria Pollutants

The City has not adopted its own set of criteria pollutant significance thresholds. Therefore, the respective significance thresholds adopted by the SCAQMD were applied to the project in assessing the significance of the project's emissions.

2.1.1 Regional Emission Significance Thresholds

The incremental regional air quality impacts of an individual project are generally very small and difficult to measure. However, the SCAQMD's regional significance thresholds define levels of maximum daily emissions whose exceedance by a project's construction or operation may add to the overall emission burden within the SCAQMD and impact the attainment and maintenance of ambient air quality standards.

The regional thresholds apply to criteria pollutant emissions of carbon monoxide (CO), oxides of nitrogen (NO_x), oxides of sulfur (SO_x), particulate matter (PM₁₀ and PM_{2.5}), and reactive organic gases (ROG). The quantification of regional emissions includes those project emissions generated from both onsite emission sources (i.e., offroad construction equipment, fugitive dust, area sources) and offsite emission sources (vehicle travel to and away from the project). Table 1 shows the SCAQMD's regional significance thresholds.

Table 1: SCAQMD Regional Emission Significance Thresholds

Air Pollutant	Maximum Daily Emissions (pounds/day)	
	Construction	Operation
Carbon Monoxide	550	550
Oxides of Nitrogen	100	55
Sulfur Oxides	150	150
PM ₁₀	150	150
PM _{2.5}	55	55
Reactive Organic Gases	75	55
Source: SCAQMD ²		

¹Criteria pollutants are the only air pollutants with national air quality standards that define allowable concentrations of these substances in the ambient air. Criteria pollutants include carbon monoxide (CO), oxides of nitrogen (NO_x), sulfur dioxide (SO_x), and particulate matter (PM₁₀ and PM_{2.5}). Note that ozone is another criteria pollutant; however, in terms of defining significance thresholds, ozone is represented by its precursor components, oxides of nitrogen (NO_x) and reactive organic gases.

² SCAQMD April 2019. Website: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>

2.1.2 Localized Significance Thresholds

Project-related construction or operational air emissions may have the potential to exceed the State and national air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact on the SCAQMD. As a result, the SCAQMD has also adopted localized significance thresholds (LSTs) that represent the maximum rates of daily construction or operational emissions from a project site that would not result in air pollutant levels that would exceed a national or State ambient air quality standards (SCAQMD 2003³,2008⁴). There are three principal differences between the regional thresholds and the LSTs. First, the regional thresholds include all sources of project construction and operational emissions generated from both onsite and offsite emission sources, whereas the LSTs only consider the emissions generated from onsite emission sources. Second, the LSTs only apply to CO, NO_x, and particulate matter (PM₁₀ and PM_{2.5}), while the regional thresholds include both ROG and SO_x. Third, the regional thresholds apply to emission sources regardless of where the source is located within the SCAQMD. In contrast, the LSTs are location-dependent and also depend on the size of the project, and emission location relative to the nearest sensitive receptor⁵.

For purposes of this localized assessment, the SCAQMD provides screening emission look-up tables for projects that disturb a maximum of 5 acres in size in a day. The look-up tables were developed by the SCAQMD to readily determine if the daily emissions of CO, NO_x, PM₁₀, and PM_{2.5} from a project could result in a significant impact on the local air quality. The appropriate LSTs can be determined based on the project's source receptor area (SRA)⁶, size, and distance to nearest sensitive receptor. The SCAQMD has divided the SCAQMD into 37 SRAs, each with a set of LSTs that depend on the air pollutant, project size, and distance to the nearest sensitive receptor. The project site is located within SRA 24, Perris Valley. The LSTs for this SRA were applied to the project.

LSTs for Construction

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (SCAQMD 2011)⁷. The CalEEMod model calculates construction emissions based on the number and types of construction equipment, equipment hours, rates of emission, the maximum daily disturbance activity possible for each piece of equipment, and the developmental intensity. The daily maximum disturbed area during construction serves as the factor in determining the project size value of the LSTs for construction. Table 2 shows the maximum daily disturbed acreage during site preparation, and grading based on the types and numbers of construction equipment used for each construction activity, as identified by the CalEEMod model. As shown in Table 2, the maximum daily area disturbed during construction is 4.0 acres that occurs during the grading activity. Therefore, the maximum daily disturbed area during construction was set as 4.0 acres for the localized assessment of construction impacts.

³ SCAQMD 2003. Final Localized Significance Threshold Methodology. Website: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2>

⁴ SCAQMD 2008: Final Localized Significance Threshold Methodology. Website: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf>

⁵ The SCAQMD defines a sensitive receptor as an individual who is most health-wise susceptible to exposures to air pollutants including children the elderly, and adults with chronic health issues. Such receptors include residences, schools, elderly care centers, and hospitals where such receptors could be exposed to air pollutants for at least 24 hours.

⁶ A source-receptor area (SRA) is a geographic area within the SCAQMD that can act as both a source of emissions and a receptor of emission impacts.

⁷ SCAQMD 2011: Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. Website: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/calemod-guidance.pdf>

Table 2: Equipment Specific Site Preparation and Grading Disturbed Area Rates

Activity	Equipment Type	Equipment Quantity	Acres Graded per 8-hour Day	Operating Hours per Day	Acres Graded per Day
Site Preparation	Rubber Tired Dozer	3	0.5	8	1.5
	Crawler Tractor	4	0.5	8	2.0
Total 3.5 acres					
Grading	Excavators	2	0.0	8	0.0
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
	Crawler Tractor	2	0.5	8	1.0
	Scrapers	2	1	8	2.0
Total 4.0 acres					

Source: Table 5 shows the construction inventory developed for the Site Preparation and Grading activities as derived from the CalEEMod model.

The specification of LSTs is also dependent on the distance to the nearest sensitive receptor. The location of the nearest sensitive receptor depends not only on the distance from the project but also on the duration for which a receptor may be exposed to air pollution. The SCAQMD considers a sensitive receptor to be a location such as a residence, hospital, convalescent facility where it is possible than an individual could remain for 24 hours or longer. Commercial and industrial facilities are not included in the definition of a sensitive receptor because employees do not typically remain onsite for a full 24 hours, but are present for shorter periods, such as eight hours⁸.

The project location is surrounded by several residential areas to the north and east with a shopping center and Val Verde Academy to the west of the project. The closest sensitive receptors where such a receptor could reside for 24 hours or longer are located at existing residences along the project's eastern property line. Therefore, the distance for sensitive receptors in the LST assessment was set at 25 meters, the shortest distance contained in the SCAQMD LST emission look-up tables. Table 3 provides the applicable construction LSTs for this project.

Table 3: Construction Localized Significance Thresholds

NOx (lbs/day)	CO (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
239	1,346	11	7

LSTs for SRA 24, project area of 4.0 acres and a receptor distance of 25 meters. The LSTs were interpolated from the 2 and 5 acre LSTs provided in the SCAQMD LST look-up tables.

⁸ SCAQMD 2003. Final Localized Significance Threshold Methodology. Website: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2>

LST for Operation

Because the LST methodology is applicable to projects where emission sources occupy a fixed location, LST methodology would typically not apply to the operational phase of a residential project because emissions for these projects are primarily generated by mobile sources traveling on local roadways over generally large distances or areas and not from emission sources located on the project site. LSTs would apply to the operational phase of a project if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site. For example, the LST methodology applies to operational projects such as warehouse/transfer facilities or large stationary sources such as a refinery, chemical factory, or railyard. As the project would include residential uses, an operational analysis applying the LST methodology is not appropriate and the localized operational impacts would be considered less than significant.

2.1.3 Cumulative Significance Thresholds

The SCAQMD has published the following report on how to address cumulative impacts from air pollution: White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (SCAQMD 2003)⁹. Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. Therefore, the project-specific and cumulative significance thresholds are the same. As a result, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

The US Environmental Protection Agency currently designates the South Coast Air Basin where the project is located as nonattainment for ozone, PM₁₀, and PM_{2.5}. By its nature, air pollution is largely a cumulative impact resulting from emissions generated over a large geographic region. The nonattainment status of regional pollutants is a result of past and present development within the air basin, and this regional impact is a cumulative impact. In other words, new development projects (such as the proposed project) within the air basin would contribute to this impact only on a cumulative basis. No single project would be sufficient in size, by itself, to result in nonattainment of regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

The determination of cumulative air quality impacts for construction and operational emissions was, therefore, based on whether the project would result in regional emissions that exceed SCAQMD regional thresholds of significance for construction and operations on a project level. Projects that generate emissions below the SCAQMD regional significance thresholds would be considered consistent with regional air quality planning efforts and would not generate cumulatively considerable emissions.

⁹ SCAQMD 2003. White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution

2.2 - Criteria Pollutant Emission and Impact Estimates

2.2.1 Project Emissions

Construction

Assumptions

- Construction Schedule: Construction is anticipated to commence in January 2021 and last for approximately 2 years. The project occupancy is expected in 2023
- The project site is currently vacant.
- 6,042 cubic yards of soil to be exported during grading
- Fugitive dust mitigation applied as per SCAQMD Rule 403 – Fugitive Dust (3x daily watering, vehicle speeds < 15 mph on unpaved roads, soil moisture content =12% on unpaved roads)
- Construction equipment inventory derived from the CalEEMod model equipment specifications

Construction Emissions

The project's conceptual construction schedule and equipment inventory are provided in [Table 4](#) and [Table 5](#), respectively, based on the schedule provided by the applicant and equipment provided in the CalEEMod model for the project size and land uses. [Table 6](#) presents the project's construction vehicle trips.

Table 4: Construction Schedule

Activity	Start Date	End Date	Total Days
Site Preparation	01/04/2021	01/15/2021	10
Grading	01/16/2021	02/26/2021	30
Building Construction	02/27/2021	02/24/2023	520
Paving 1	02/27/2021	03/12/2021	10
Architectural Coating 1	02/01/2022	02/28/2022	20
Architectural Coating 2	07/17/2022	08/12/2022	20
Architectural Coating 3	10/01/2022	10/28/2022	20
Paving 2	02/25/2023	03/10/2023	10
Architectural Coating 4	03/11/2023	04/07/2023	20
Source: see CalEEMod output			

Table 5: Construction Equipment Inventory

Activity	Equipment	Project Number	Project Hours per day	Default Horse-power	Default Load Factor
Site Preparation	Rubber Tired Dozer	3	8	247	0.40
	Crawler Tractor	4	8	212	0.43
Grading	Excavators	2	8	158	0.38
	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.40
	Crawler Tractor	2	8	212	0.43
	Scrapers	2	8	367	0.48
Building Construction	Crane	1	7	231	0.29
	Forklifts	3	8	89	0.20
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
	Generator Set	1	8	84	0.74
Paving 1,2	Pavers	2	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	7	80	0.38
Architectural Coating 1,2,3,4	Air Compressor	1	6	78	0.48

Source: see CalEEMod output

Table 6: Construction Vehicle Trips

Activity	Construction Trips per Day		Total Trips
	Worker	Vendor	Haul
Site Preparation	18	0	0
Grading	20	0	755
Building Construction	135	50	0
Paving 1, 2	15	0	0
Architectural Coating 1,2,3,4	27	0	0

Source: see CalEEMod output

Table 7 presents the project’s estimated maximum daily regional construction emissions. As noted in Table 7, the construction of the project would exceed not the SCAQMD’s regional emission significance thresholds.

Table 8 presents the results of the project's localized construction impact assessment. From Table 8, the construction of the project would not exceed the SCAQMD's construction localized emission significance thresholds.

Table 7: Estimated Maximum Daily Regional Construction Emissions

Construction Activity	Maximum Daily Regional Emissions ⁽¹⁾ (pounds/day)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2021						
Site Preparation	5.4	60.8	22.6	0.1	9.8	6.4
Grading	5.1	62.0	32.7	0.1	6.4	3.7
Building Construction	2.7	22.4	22.4	0.0	2.8	1.4
Paving 1	2.1	12.9	15.3	0.0	0.9	0.6
Maximum Daily Emission (Overlapping Emissions)	5.4	62.0	37.7	0.1	9.8	6.4
2022						
Building Construction	2.4	20.3	21.8	0.0	2.6	1.3
Architectural Coating 1	60.5	1.5	2.7	0.0	0.4	0.2
Architectural Coating 2	60.5	1.5	2.7	0.0	0.4	0.2
Architectural Coating 3	60.5	1.5	2.7	0.0	0.4	0.2
Maximum Daily Emission (Overlapping Emissions')	62.9	21.8	24.5	0.0	3.0	1.5
2023						
Building Construction	2.2	18.0	21.1	0.0	3.2	1.0
Paving 2	1.9	10.2	15.1	0.0	0.7	0.5
Architectural Coating 4	60.5	1.5	2.7	0.0	0.4	0.2
Maximum Daily Emission (Overlapping Emissions')	60.5	18.0	21.1	0.0	3.2	1.0
2021 to 2023 Maximum Daily Emissions	62.9	62.0	37.7	0.1	9.8	6.4
SCAQMD Significance Thresholds	75	100	550	150	150	55
Emissions Exceed Thresholds?	No	No	No	No	No	No
Notes: ROG = reactive organic gases NO _x = oxides of nitrogen PM ₁₀ = particulate matter 10 microns or less in diameter PM _{2.5} = particulate matter 2.5 microns or less in diameter CO = carbon monoxide SO _x = sulfur oxides PM emissions reflect SCAQMD Rule 403 reductions An emission of 0.0 implies an emission of <0.1 pounds/day Source: see CalEEMod model output						

Table 8: Estimated Maximum Daily Localized Construction Emissions

Construction Activity	Maximum Daily Localized Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
2021				
Site Preparation	60.8	21.9	9.6	5.3
Grading	56.5	31.2	5.7	3.5
Building Construction	17.4	16.6	1.0	0.9
Paving 1	12.9	14.7	0.7	0.6
Maximum Daily Emission (Overlapping Emissions)	60.8	31.3	9.6	0.9
2022				
Building Construction	15.6	16.4	0.8	0.8
Architectural Coating 1	1.4	1.8	0.1	0.1
Architectural Coating 2	1.4	1.8	0.1	0.1
Architectural Coating 3	1.4	1.8	0.1	0.1
Maximum Daily Emission (Overlapping Emissions')	17.0	18.2	0.9	0.9
2023				
Building Construction	14.4	16.2	1.4	0.5
Paving 2	10.2	14.6	0.5	0.5
Architectural Coating 4	1.4	1.8	0.1	0.1
Maximum Daily Emission (Overlapping Emissions')	14.4	16.2	1.4	0.5
2021 to 2023 Maximum Daily Emissions	60.8	31.3	9.8	6.4
SCAQMD Significance Thresholds	239	1,346	11	7
Emissions Exceed Thresholds?	No	No	No	No
Notes: NO _x = oxides of nitrogen PM ₁₀ = particulate matter 10 microns or less in diameter PM _{2.5} = particulate matter 2.5 microns or less in diameter CO = carbon monoxide PM emissions reflect SCAQMD Rule 403 emission reductions An emission of 0.0 implies an emission of <0.1 pounds/day Source: see CalEEMod model output				

Project Operational Emissions

The project's day-to-day operations would generate the project's long-term emissions. Operational emissions for land use development projects are typically distinguished as mobile, area, and energy-source emissions. Mobile-source emissions are associated with project-related automobiles and other motor vehicles that would travel to and from the project site. In accordance with the project's traffic impact memorandum¹⁰, the project is expected to generate 762 daily weekday trips. The CalEEMod default vehicle

¹⁰ EPD Solutions 2020. Project Traffic Trip Generation Memorandum

fleet mix, trip purpose, and trip lengths were assumed in estimating the project's mobile source emissions. Area-source emissions result from landscape maintenance activities and periodic architectural coatings, while energy-source emissions result primarily from natural gas consumption. Table 9 summarizes the project's regional operational emissions along with a comparison to the SCAQMD's regional significance thresholds. As noted in Table 9, the project's regional operational emissions are less than the regional significance thresholds.

Table 9: Estimated Maximum Daily Regional Operational Emissions

Operational Activity	Maximum Daily Regional Emissions (pounds/day)				
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
Area	4.3	0.1	6.7	0.0	0.0
Energy	0.1	0.6	0.3	0.1	0.1
Mobile –	1.1	8.1	14.3	5.9	1.6
Total Operational Emissions	5.5	8.8	24.3	6.0	1.7
SCAQMD Significance Threshold	55	55	550	150	55
Exceed Threshold?	No	No	No	No	No
Notes: NO _x = oxides of nitrogen PM ₁₀ = particulate matter 10 microns or less in diameter ROG = reactive organic gases PM _{2.5} = particulate matter 2.5 microns or less in diameter CO = carbon monoxide An emission of 0.0 implies an emission of <0.1 pounds/day Source: see CalEEMod model output					

2.2.2 Cumulative Impacts

Construction

As shown above in Table 7, the project's maximum daily regional construction emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the project's construction emissions would not result in a cumulatively considerable incremental contribution to the existing air quality. Furthermore, all construction activities would comply with applicable SCAQMD rules and regulations, including Rule 403 to minimize fugitive PM dust emissions. Therefore, the cumulative impact of the construction of the project would be less than significant.

Operations

As shown in Table 9 above, the project's maximum daily operational emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the project's operational emissions would not result in a cumulatively considerable incremental contribution to the existing air quality. The cumulative impact from the long-term operation of the project would be less than significant.

2.3 - Conclusion

The project's construction and operational emissions would not exceed the SCAQMD's established project level or cumulative regional or localized pollutant significant thresholds during either construction or operation. Therefore, the project's impacts are less than significant and no mitigation is required.

SECTION 3: CALEEMOD EMISSION ESTIMATES - GREENHOUSE GAS EMISSIONS

This section analyzes the potential impacts on climate change from the project's emissions of various greenhouses (GHG).

3.1 - Significance Threshold

The City of Moreno Valley has not adopted its own numeric threshold of significance for determining impacts with respect to greenhouse gas (GHG) emissions. SCAQMD has adopted a significance threshold of 10,000 MTCO₂e per year for permitted (stationary) sources of GHG emissions for which SCAQMD is the designated lead agency. To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) in September 2010, SCAQMD identified a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency (SCAQMD 2010).

- Tier 1. If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.
- Tier 2. If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (e.g., city or county), project-level and cumulative GHG emissions are less than significant.
- Tier 3. If GHG emissions are less than the screening-level threshold, project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. Project-related GHG emissions include on-road transportation, energy use, water use, wastewater generation, solid waste disposal, area sources, off-road emissions, and construction activities. The SCAQMD Working Group concluded that because construction activities would result in a "one-time" net increase in GHG emissions, construction activities should be amortized into the operational phase GHG emissions inventory based on the service life of a building. For buildings an amortization time of 30-years was recommended by the SCAQMD. With regards to quantitative significance thresholds, the SCAQMD identified a screening-level threshold of 3,000 MTCO₂e annually for all land use types or the following land-use specific thresholds: 1,400 MTCO₂e for commercial projects, 3,500 MTCO₂e for residential projects, and 3,000 MTCO₂e for mixed-use projects. These bright-line thresholds are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds. For purposes of this assessment, a significance threshold of 3,000 MTCO₂e was used as the threshold for this assessment. Thus, based on guidance from the SCAQMD, if a non-industrial project would emit GHGs less than 3,000 MTCO₂e 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

3.2.1 Construction

Table 10 summarizes the project's construction GHG emissions. As per SCAQMD guidance, the project's construction emissions are amortized over a 30-year time period and added to the operational emissions to quantify the project's total GHG emissions.

Table 10: Project Construction GHG Emissions

Activity	Annual GHG Emissions (MTCO _{2e})
2021	684
2022	626
2023	108
Total Emissions	1,418
Total Emissions Amortized Over 30 years	47
Source: see CalEEMod output	

3.2.2 Operations

Table 11 summarizes the project's operational GHG emissions, along with the construction GHG emissions and the total project GHG emissions. The project would result in GHG emissions of 1,585 MTCO_{2e} per year. This level of emissions does not exceed the 3,000 MTCO_{2e} per year significance threshold adopted for this project. Therefore, the project would have a less than significant individual and cumulative impact for GHG emissions.

Table 11: Project Operational GHG Emissions

Activity	Annual GHG Emissions (MTCO _{2e})
Project Operational Emissions	
Area	1
Energy	305
Mobile	1,142
Waste	48
Water	43
Total	1,538
Project Construction Emissions	47
Project Construction and Operation	1,585
Significance Threshold	3,000
Project Exceeds Threshold?	NO
Source: see CalEEMod output	

3.2 - Conclusion

The project's construction and operational GHG emissions would have a less than significant individual and cumulative impact for GHG emissions. Therefore, the project would result in a less than significant impact and no mitigation is required.

SECTION 4: PROJECT FUEL AND ENERGY CONSUMPTION

4.1 - Assumptions

- Construction equipment fuel consumption derived from ARB Offroad2017 emission model and the CalEEMod construction equipment
- Fuel Consumption from vehicle travel derived from ARB EMFAC2017 emission model
- Electrical and natural gas usage derived from the CalEEMod model

4.2 - Significance Thresholds

Neither Appendix F of the State CEQA Guidelines nor PRC Section 21100(b)(3)) provide a numerical threshold of significance that might be used to evaluate the potential significance of energy consumption of a proposed project. Instead, the emphasis is on reducing “the wasteful, inefficient, and unnecessary consumption of energy.” Based on this focus of the guidelines, for purposes of this report, the proposed project would have a significant impact related to energy consumption if it would:

- Involve the wasteful, inefficient, and unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with project design, project location, the use of electricity and natural gas, and the use of fuel by vehicles anticipated to travel to and from the project.

4.3 - Construction

4.3.1 Electricity and Natural Gas Usage

Southern California Edison Company would provide temporary electric power for necessary lighting and electronic equipment such as computers inside temporary construction trailers and construction tools. The electricity used for such activities would be temporary and would be substantially less than that required for project operation and would have a negligible contribution to the project’s overall energy consumption.

Natural gas is not anticipated to be required during the construction of the proposed project. Fuels used during the construction would primarily consist of diesel and gasoline, which are discussed below under the “petroleum” subsection. Any minor amounts of natural gas that may be consumed as a result of project construction would be substantially less than that required for project operation and would have a negligible contribution to the project’s overall energy consumption.

4.3.2 Petroleum Fuel Usage

Off-road heavy-duty construction equipment associated with construction activities would rely on diesel fuel as would vendor and haul trucks involved in delivering building materials and removing soil during grading from the project site. Construction workers would travel to and from the project site throughout the duration of construction. It is assumed in this analysis that construction workers would travel to and from the site in gasoline-powered passenger vehicles. Table 12 presents the fuel usage for the off-road construction equipment. These estimates are based on the total fuel consumption and horsepower-hour

data contained within the ARB OFFROAD2017 emission model for specific types of diesel construction equipment to be employed in the project construction. Note that the total fuel consumption during construction computed below likely substantially overstates the amount of fuel usage. Although construction equipment and their duration are listed under a particular construction activity, there is a likelihood that all of the inventoried equipment would not operate over the entire duration of the construction activity. For example, during building construction, a crane is listed as one of the operational pieces of equipment. However, it is highly unlikely that the crane would operate over the entire duration of 300 days assumed during the building construction activity.

Table 13 summarizes the project's construction vehicle fuel usage. The fuel usage is based on the vehicle type (worker vehicle, vendor vehicle, and haul truck), vehicle miles traveled, and fuel usage factors contained in the ARB EMFAC2017 mobile source emission model and in the CalEEMod model. Table 14 summarizes the total fuel construction during construction.

4.4 - Operational Energy Requirements

Table 15 summarizes the project's operational energy requirements.

4.5 - Conclusion

Construction of the project would result in fuel consumption from the use of construction tools and equipment, vendor and haul truck trips, and vehicle trips generated from construction workers traveling to and from the site. Construction activities and corresponding fuel energy consumption would be temporary and localized, as the use of diesel fuel and heavy-duty equipment would not be a typical operational condition of the project. The operational aspects of the project would involve energy use in the form of natural gas and electricity consumption for residential uses and fuel consumption from residential vehicle travel. Also, there are no unusual project characteristics that would cause the use of construction equipment that would be less energy efficient compared with other similar construction sites in other parts of the State. The rational goal of any construction job, whether it is for a household task or construction project such as the proposed project, is to minimize construction costs while meeting all legal requirements for doing so. Therefore, construction-related fuel consumption by the project would not result in inefficient, wasteful, or unnecessary energy use compared with other construction sites in the region.

The operation of the project would involve the development of 81 single family housing units. According to CEQA Guidelines Appendix F, the goal of conserving energy implies the wise and efficient use of energy, including decreasing overall per capita energy consumption, reducing reliance on natural gas and oil, and increasing reliance on renewable energy sources. The project would comply with all of the energy efficiency requirements under all applicable State, county, and local business and energy code ordinances. As a result, the operation of the project would not result in inefficient, wasteful, or unnecessary energy use compared with other similar residential projects in the region. Therefore, the project would result in a less than significant impact and no mitigation is required.

Table 12: Construction Equipment Fuel Usage

Construction Equipment	Equipment	Equipment Number	Equipment Hours per day	Default Horsepower	Default Load Factor	Days of Construction	Total Horsepower-hours	Fuel Rate (gal/hp-hr)	Fuel Use (gallons)
Site Preparation	Rubber Tired Dozer	3	8	247	0.40	10	23,712	0.02046	485
	Crawler Tractor	4	8	212	0.43	10	29,171	0.02217	647
Grading	Excavators	2	8	158	0.38	30	28,819	0.01976	570
	Graders	2	8	187	0.41	30	36,802	0.02114	778
	Rubber Tired Dozers	1	8	247	0.40	30	23,712	0.02046	485
	Crawler Tractor	2	8	212	0.43	30	43,757	0.02217	970
Building Construction	Scrapers	2	8	367	0.48	30	84,557	0.02498	2,112
	Crane	1	7	231	0.29	520	243,844	0.01489	3,631
	Forklifts	3	8	89	0.20	520	222,144	0.02396	5,324
	Tractors/Loaders/Backhoes	3	7	97	0.37	520	391,919	0.01911	7,491
	Welders	1	8	46	0.46	520	88,026	0.02147	1,890
Paving 1	Generator Set	1	8	84	0.74	520	258,586	0.02147	5,552
	Pavers	2	8	130	0.42	10	8,736	0.02151	188
	Paving Equipment	2	8	132	0.36	10	7,603	0.01833	139
Architectural Coating	Rollers	2	8	80	0.36	10	4,608	0.01942	89
	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
Paving 2	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
	Pavers	2	8	130	0.42	10	8,736	0.02151	188
	Paving Equipment	2	8	132	0.36	10	7,603	0.01833	139
	Rollers	2	8	80	0.36	10	4,608	0.01942	89
								Total	31,154

Table 13: Estimated Project Construction Vehicle Fuel Usage

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Haul Trucks	2,165	0
Vendor Trucks	17,723	0
Worker Vehicles	0	38,210
Construction Vehicles Total	19,888	38,210
Source: see Construction Fuel Usage Spreadsheet		

Table 14: Total Construction Fuel Usage

Construction Source	Gallons of Diesel Fuel	Gallons of Gasoline Fuel
Construction Vehicles	19,888	38,210
Off-road Construction Equipment	31,154	0
Construction Total	51,042	38,210
Source: see Construction Fuel Usage Spreadsheet		

Table 15: Project Annual Operational Energy Requirements

Operational Source (value per year)		
Energy Source	Annual VMT	Gallons of Gasoline Fuel
Transportation – Project	278,145 (Diesel) 2,314,975 (Gas) 2,593,120(Total)	32,304 (Diesel) 87,330 (Gas)
Thousands Kilowatt-Hours		
Electricity – Project	706,035	
Thousands British Thermal Units		
Natural Gas – Project	2,478,290	
Note: Source: see Fuel Usage Spreadsheet and CalEEMod output		

CalEEMod Model Spreadsheet Output

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Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

Iris Park Residential Project, Moreno Valley, CA

CalEEMod Construction Emission Summary

2021	Maximum Daily Emissions (pounds/day)									
	ROG	NOx	CO	SOx	PM10F	PM10Exh	PM10Total	PM2.5Fug	PM2.5 Exh	PM2.5Total
Site Prep (SP)										
Onsite	5.3	60.8	21.9	0.1	7.0	2.6	9.6	3.9	2.4	6.3
Offsite	0.1	0.0	0.7	0.0	0.2	0.0	0.2	0.1	0.0	0.1
Total	5.4	60.8	22.6	0.1	7.2	2.6	9.8	4.0	2.4	6.4
Grading (GR)										
Onsite	4.9	56.5	31.2	0.1	3.4	2.3	5.7	1.4	2.1	3.5
Offsite	0.2	5.5	1.5	0.0	0.7	0.0	0.7	0.2	0.0	0.2
Total	5.1	62.0	32.7	0.1	4.1	2.3	6.4	1.6	2.1	3.7
Building Construction (BC)										
Onsite	1.9	17.4	16.6	0.0	0.0	1.0	1.0	0.0	0.9	0.9
Offsite	0.8	5.0	5.8	0.0	1.8	0.0	1.8	0.5	0.0	0.5
Total	2.7	22.4	22.4	0.0	1.8	1.0	2.8	0.5	0.9	1.4
Paving 1										
Onsite	2.0	12.9	14.7	0.0	0.0	0.7	0.7	0.0	0.6	0.6
Offsite	0.1	0.0	0.6	0.0	0.2	0.0	0.2	0.0	0.0	0.0
Total	2.1	12.9	15.3	0.0	0.2	0.7	0.9	0.0	0.6	0.6
2021 Max Onsite (Construction Activity)	5.3 (SP)	60.8 (SP)	31.3 (GR)	0.1 (GR)	7.0 (SP)	2.6 (SP)	9.6 (SP)	3.9 (SP)	2.4 (SP)	6.3 (SP)
2021 Max Total (Construction Activity)	5.4 (SP)	62.0 (GR)	37.7 (GR)	0.1 (GR)	7.2 (SP)	2.6 (SP)	9.8 (SP)	4.0 (SP)	2.4 (SP)	6.4 (SP)

2022	ROG	NOx	CO	SOx	PM10F	PM10Exh	PM10Total	PM2.5Fug	PM2.5 Exh	PM2.5Total
Building Construction (BC)										
Onsite	1.7	15.6	16.4	0.0	0.0	0.8	0.8	0.0	0.8	0.8
Offsite	0.7	4.7	5.4	0.0	1.8	0.0	1.8	0.5	0.0	0.5
Total	2.4	20.3	21.8	0.0	1.8	0.8	2.6	0.5	0.8	1.3
Architectural Coating 1 (AC1)										
Onsite	60.4	1.4	1.8	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Offsite	0.1	0.1	0.9	0.0	0.3	0.0	0.3	0.1	0.0	0.1
Total	60.5	1.5	2.7	0.0	0.3	0.1	0.4	0.1	0.1	0.2
Architectural Coating 2 (AC2)										
Onsite	60.4	1.4	1.8	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Offsite	0.1	0.1	0.9	0.0	0.3	0.0	0.3	0.1	0.0	0.1
Total	60.5	1.5	2.7	0.0	0.3	0.1	0.4	0.1	0.1	0.2
Architectural Coating 3 (AC3)										
Onsite	60.4	1.4	1.8	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Offsite	0.1	0.1	0.9	0.0	0.3	0.0	0.3	0.1	0.0	0.1
Total	60.5	1.5	2.7	0.0	0.3	0.1	0.4	0.1	0.1	0.2
2022 Max Onsite Construction Activity	62.1 (BC+AC)	17.0 (BC+AC)	18.2 (BC+AC)	0.0 (BC+AC)	0.0 (BC+AC)	0.9 (BC+AC)	0.9 (BC+AC)	0.0 (BC+AC)	0.9 (BC+AC)	0.9 (BC+AC)
2022 Max Total (Construction Activity)	62.9 (BC+AC)	21.8 (BC+AC)	24.5 (BC+AC)	0.0 (BC+AC)	2.1 (BC+AC)	0.9 (BC+AC)	3.0 (BC+AC)	0.6 (BC+AC)	0.9 (BC+AC)	1.5 (BC+AC)

2023	ROG	NOx	CO	SOx	PM10F	PM10Exh	PM10Total	PM2.5Fug	PM2.5 Exh	PM2.5Total
Building Construction (BC)										
Onsite	1.6	14.4	16.2	0.0	0.7	0.7	1.4	0.0	0.5	0.5
Offsite	0.6	3.6	4.9	0.0	1.8	0.0	1.8	0.5	0.0	0.5
Total	2.2	18.0	21.1	0.0	2.5	0.7	3.2	0.5	0.5	1.0
Paving 2 (PV2)										
Onsite	1.8	10.2	14.6	0.0	0.0	0.5	0.5	0.0	0.5	0.5
Offsite	0.1	0.0	0.5	0.0	0.2	0.0	0.2	0.0	0.0	0.0
Total	1.9	10.2	15.1	0.0	0.2	0.5	0.7	0.0	0.5	0.5
Architectural Coating 4 (AC4)										
Onsite	60.4	1.4	1.8	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Offsite	0.1	0.1	0.9	0.0	0.3	0.0	0.3	0.1	0.0	0.1
Total	60.5	1.5	2.7	0.0	0.3	0.1	0.4	0.1	0.1	0.2
2023 Max Onsite Construction Activity	60.4 (AC4)	14.4 (BC)	16.2 (BC)	0.0 (BC)	0.7 (BC)	0.7 (BC)	1.4 (BC)	0.0 (BC)	0.5 (BC)	0.5 (BC)
2023 Max Total	60.5	18.0	21.1	0.0	2.5	0.7	3.2	0.5	0.5	1.0

2021-2023 Max Onsite	62.1	60.8	31.3	0.1	7.0	2.6	9.6	3.9	2.4	6.3
2021-2023 Total	62.9	62.0	37.7	0.1	7.2	2.6	9.8	4.0	2.4	6.4

Regional Emission Significance Threshold (pounds/day)										
	75.0	100.0	550.0	150.0			150.0			55.0

Maximum Total Project Emissions										
Exceed Regional Thresholds	NO	NO	NO	NO			NO			NO

LST Threshold (pounds/day)	239	1346					11			7
Exceed LSTs	NO	NO					NO			NO

Iris Park Residential Project, Moreno Valley, CA

Construction Equipment Fuel Usage

Construction Equipment	Equipment	Equipment Number	Equipment Hours per day	Default Horse-power	Default Load Factor	Days of Construction	Total Horsepower-hours	Fuel Rate (gal/hp-hr)	Fuel Use (gallons)
Site Preparation	Rubber Tired Dozer	3	8	247	0.40	10	23,712	0.02046	485
	Crawler Tractor	4	8	212	0.43	10	29,171	0.02217	647
Grading	Excavators	2	8	158	0.38	30	28,819	0.01976	570
	Graders	2	8	187	0.41	30	36,802	0.02114	778
	Rubber Tired Dozers	1	8	247	0.40	30	23,712	0.02046	485
	Crawler Tractor	2	8	212	0.43	30	43,757	0.02217	970
	Scrapers	2	8	367	0.48	30	84,557	0.02498	2,112
	Building Construction	Crane	1	7	231	0.29	520	243,844	0.01489	3,631
	Forklifts	3	8	89	0.20	520	222,144	0.02396	5,324
	Tractors/Loaders/Backhoes	3	7	97	0.37	520	391,919	0.01911	7,491
	Welders	1	8	46	0.46	520	88,026	0.02147	1,890
	Generator Set	1	8	84	0.74	520	258,586	0.02147	5,552
Paving 1	Pavers	2	8	130	0.42	10	8,736	0.02151	188
	Paving Equipment	2	8	132	0.36	10	7,603	0.01833	139
	Rollers	2	8	80	0.36	10	4,608	0.01942	89
Architectural Coating 1	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
Architectural Coating 2	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
Architectural Coating 3	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
Architectural Coating 4	Air Compressor	1	6	78	0.48	20	4,493	0.02147	96
Paving 2	Pavers	2	8	130	0.42	10	8,736	0.02151	188
	Paving Equipment	2	8	132	0.36	10	7,603	0.01833	139
	Rollers	2	8	80	0.36	10	4,608	0.01942	89
Total									31,154

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Park Residential Project, Moreno Valley, CA

Fuel Consumption from Construction Vehicles (Derived from the ARB EMFAC2017 Mobile Source Emission Model)

Emission Factors

Region (County)	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT (miles/day)	Fuel Consumption (1000 gallons/day)	Fuel Rate (miles/gallon)
RIVERSIDE	2021	MHDT-T6	Aggregated	Aggregated	DSL	1186652	89.4	13.3
RIVERSIDE	2021	HHDT-T7	Aggregated	Aggregated	DSL	3825933	548.6	7.0
							Average (50%/50%)	10.1
RIVERSIDE	2021	LDA	Aggregated	Aggregated	GAS	29816029	960	31.1
RIVERSIDE	2021	LDT1	Aggregated	Aggregated	GAS	3017206	115	26.3
RIVERSIDE	2021	LDT2	Aggregated	Aggregated	GAS	9631964	392	24.6
							Average (50%/25%/25%)	28

Vehicle Assumptions (CalEEMod)

Haul trucks represented by HHDT-T7 (heavy -heavy duty haul truck)

MHDT-T6 (medium heavy duty haul truck)

Vendor trucks assumed to be 50% HHDT-T7 and MHDT-T6)

LDA (light duty automobile for worker vehicles)

LDT1 (light duty truck 1 for worker vehicles)

LDT2 (light duty truck 2 for worker vehicles)

Worker vehicles represented as 50% LDT, 25% LHT1, and 25% LDT2

Construction Vehicle Use (Derived from the CalEEMod model output)

Fuel Consumption for Haul Trucks

Construction Activity	No Haul Truck Trips	Trip Length	VMT (miles)	DSL Fuel (gallons)
Site Preparation	0	20	0	0
Grading	755	20	15100	2165
Building Construction	0	20	0	0
Paving 1 -	0	20	0	0
Architectural Coating 1	0	20	0	0
Architectural Coating 2	0	20	0	0
Architectural Coating 3	0	20	0	0
Architectural Coating 4	0	20	0	0
Paving 2	0	20	0	0
Total	755		15100	2165

Construction Activity	No Vendor Truck Trips/day	Duration (days)	Trip Length (miles)	VMT (miles)	Fuel	Fuel Rate (miles/gallon)	DSL Fuel (gallons)
Site Preparation	0	10	6.9	0	DSL	10.1	0
Grading	0	30	6.9	0	DSL	10.1	0
Building Construction	50	520	6.9	179400	DSL	10.1	17723
Paving 1 -	0	10	6.9	0	DSL	10.1	0
Architectural Coating 1	0	20	6.9	0	DSL	10.1	0
Architectural Coating 2	0	20	6.9	0	DSL	10.1	0
Architectural Coating 3	0	20	6.9	0	DSL	10.1	0
Architectural Coating 4	0	10	6.9	0	DSL	10.1	0
Paving 2	0	20	6.9	0	DSL	10.1	0
Total				179400			17723

Activity	No Worker Vehicles Trips/day	Duration (days)	Trip Length (miles)	VMT (miles)	Fuel	Fuel Rate (miles/gallon)	Gas Fuel (gallons)
Site Preparation	18	10	14.7	2646	GAS	28	94
Grading	20	30	14.7	8820	GAS	28	312
Building Construction	135	520	14.7	1031940	GAS	28	36524
Paving 1 -	15	10	14.7	2205	GAS	28	78
Architectural Coating 1	27	20	14.7	7938	GAS	28	281
Architectural Coating 2	27	20	14.7	7938	GAS	28	281
Architectural Coating 3	27	20	14.7	7938	GAS	28	281
Architectural Coating 4	27	20	14.7	7938	GAS	28	281
Paving 2	15	10	14.7	2205	GAS	28	78
Total				1079568			38210

Summary	Gallons
Total -DSL	19888
Total - GAS	38210
	58098

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

Iris Park Residential Project, Moreno Valley, CA

Estimation of Operational Vehicle Fuel Use 2023

Total Annual VMT 2,593,120

Vehicle Class	CalEEMod	Annual VMT	EMFAC2017	Annual	EMFAC2017	Annual	EMFAC2017	Fuel Rate -DSL	Fuel Rate-GAS	Fuel Consumption	GAS-(gal/year)
	Fleet Mix		% DSL	DSL VMT	%GAS	GAS VMT	(mi/gallons)	(mi/gal)	DSL-(gal/year)		
LDA	54.600%	1,415,844	0.9%	13361	99.1%	1402482	50.9	31.1	263	45,155	
LDT1	3.700%	95,945	0.0%	30	100.0%	95916	25.6	26.3	1	3,643	
LDT2	18.600%	482,320	0.6%	2908	99.4%	479412	37.9	24.6	77	19,513	
LHDT1	1.500%	38,897	50.1%	19492	49.9%	19405	20.8	10.7	939	1,821	
LHDT2	0.500%	12,966	71.1%	9221	28.9%	3745	19.0	9.3	485	403	
Motor Cycle	0.500%	12,966	0.0%	0	100.0%	12966	0	38.3	-	339	
MDT	11.500%	298,209	2.2%	6510	97.8%	291699	28.0	19.7	233	14,782	
Motor Home	0.010%	259	29.7%	77	70.3%	182	10.8	5.1	7	36	
Other Bus	0.100%	2,593	47.7%	1237	52.3%	1356	8.8	5.1	140	267	
School Bus	0.100%	2,593	65.1%	1688	34.9%	905	7.5	8.9	224	101	
MHDT	1.800%	46,676	90.3%	42128	9.7%	4548	10.8	5.1	3,911	885	
HHDT	7.000%	181,518	100.0%	181488	0.0%	31	7.0	4.2	26,024	7	
Urban Bus	0.090%	2,334	0.3%	6	99.7%	2328	8.9	6.2	1	378	
	100.000%	2,593,120									
Total VMT-DSL		278,145	VMT							32,304	87,330
Total VMT-Gas		2,314,975	VMT								
		2,593,120	VMT								
Total Fuel - DSL		32,304	gallons/year								
Total Fuel - GAS		87,330	gallons/year								

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

Iris Residential Project - Moreno Valley, CA
Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.79	Acre	2.79	121,532.40	0
City Park	3.02	Acre	3.02	131,551.20	0
Single Family Housing	81.00	Dwelling Unit	5.02	187,000.00	232

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

Project Characteristics - SCE CO2 Intensity Factor 2020 to 2029

Land Use - Residential = 81 SFU

Internal Roadways = 2.79 acres

Park area = 3.02 acres

Construction Phase - Construction schedult provided by client

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Use of larger equipment

Off-road Equipment - ..

Off-road Equipment - ..

Off-road Equipment - Use of Larger equipment

Grading - Soil export of 6,042 cy

Architectural Coating -

Vehicle Trips - Weekday trip generation from the project trip memorandum - EPDS

Weekend trip rates from CalEEMod default values

Woodstoves - Assumes no fireplaces in residential units

Construction Off-road Equipment Mitigation - Applied ffffigitive dust reductions as required under SCAQMD Rule 493

Fleet Mix - SFU fleet mix is the default CalEEMod fleet mix for Riversode County in 2023

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	520.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	10.00
tblFireplaces	FireplaceDayYear	25.00	0.00

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	68.85	0.00
tblFireplaces	NumberNoFireplace	8.10	0.00
tblFireplaces	NumberWood	4.05	0.00
tblGrading	AcresOfGrading	105.00	75.00
tblGrading	AcresOfGrading	20.00	0.00
tblGrading	MaterialExported	0.00	6,042.00
tblLandUse	LandUseSquareFeet	145,800.00	187,000.00
tblLandUse	LotAcreage	26.30	5.02
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	534
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	9.52	9.41
tblWoodstoves	NumberCatalytic	4.05	0.00
tblWoodstoves	NumberNoncatalytic	4.05	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Iris Residential Project - Moreno Valley, CA - 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					
2021	5.4281	62.0685	37.5996	0.0926	18.2675	2.6472	20.9146	9.9840	2.4354	12.4195	0.0000	9,150.577 4	9,150.577 4	2.3619	0.0000	9,209.625 4
2022	62.9332	21.7833	24.4692	0.0594	2.1309	0.9085	3.0395	0.5724	0.8595	1.4319	0.0000	5,852.278 1	5,852.278 1	0.7598	0.0000	5,871.272 6
2023	60.4991	17.9634	21.1694	0.0528	1.8291	0.7115	2.5406	0.4924	0.6694	1.1617	0.0000	5,206.070 3	5,206.070 3	0.7171	0.0000	5,223.733 1
Maximum	62.9332	62.0685	37.5996	0.0926	18.2675	2.6472	20.9146	9.9840	2.4354	12.4195	0.0000	9,150.577 4	9,150.577 4	2.3619	0.0000	9,209.625 4

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					
2021	5.4281	62.0685	37.5996	0.0926	7.2470	2.6472	9.8942	3.9263	2.4354	6.3617	0.0000	9,150.577 4	9,150.577 4	2.3619	0.0000	9,209.625 4
2022	62.9332	21.7833	24.4692	0.0594	2.1309	0.9085	3.0395	0.5724	0.8595	1.4319	0.0000	5,852.278 1	5,852.278 1	0.7598	0.0000	5,871.272 6
2023	60.4991	17.9634	21.1694	0.0528	1.8291	0.7115	2.5406	0.4924	0.6694	1.1617	0.0000	5,206.070 3	5,206.070 3	0.7171	0.0000	5,223.733 0
Maximum	62.9332	62.0685	37.5996	0.0926	7.2470	2.6472	9.8942	3.9263	2.4354	6.3617	0.0000	9,150.577 4	9,150.577 4	2.3619	0.0000	9,209.625 4

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - 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	49.58	0.00	41.59	54.83	0.00	40.35	0.00	0.00	0.00	0.00	0.00	0.00

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - 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	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234
Energy	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505
Mobile	1.3646	8.1381	16.6881	0.0757	5.8491	0.0406	5.8897	1.5648	0.0379	1.6026		7,730.9814	7,730.9814	0.3132		7,738.8121
Total	5.7215	8.8408	23.6390	0.0800	5.8491	0.1282	5.9773	1.5648	0.1255	1.6902	0.0000	8,541.8190	8,541.8190	0.3401	0.0146	8,554.6860

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	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234
Energy	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505
Mobile	1.3646	8.1381	16.6881	0.0757	5.8491	0.0406	5.8897	1.5648	0.0379	1.6026		7,730.9814	7,730.9814	0.3132		7,738.8121
Total	5.7215	8.8408	23.6390	0.0800	5.8491	0.1282	5.9773	1.5648	0.1255	1.6902	0.0000	8,541.8190	8,541.8190	0.3401	0.0146	8,554.6860

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - 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	1/4/2021	1/15/2021	5	10	
2	Grading	Grading	1/16/2021	2/26/2021	5	30	
3	Building Construction	Building Construction	2/27/2021	2/24/2023	5	520	
4	Paving 1	Paving	2/27/2021	3/12/2021	5	10	
5	Architectural Coating 1	Architectural Coating	2/1/2022	2/28/2022	5	20	
6	Architectural Coating 2	Architectural Coating	7/17/2022	8/12/2022	5	20	
7	Architectural Coating 3	Architectural Coating	10/1/2022	10/28/2022	5	20	
8	Paving 2	Paving	2/25/2023	3/10/2023	5	10	
9	Architectural Coating 4	Architectural Coating	3/11/2023	4/7/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 2.79

Residential Indoor: 378,675; Residential Outdoor: 126,225; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 7,292 (Architectural Coating – sqft)

OffRoad Equipment

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crawler Tractors	2	8.00	212	0.43
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving 1	Pavers	2	8.00	130	0.42
Paving 1	Paving Equipment	2	8.00	132	0.36
Paving 1	Rollers	2	8.00	80	0.38
Architectural Coating 1	Air Compressors	1	6.00	78	0.48
Architectural Coating 2	Air Compressors	1	6.00	78	0.48
Architectural Coating 3	Air Compressors	1	6.00	78	0.48
Paving 2	Pavers	2	8.00	130	0.42
Paving 2	Paving Equipment	2	8.00	132	0.36
Paving 2	Rollers	2	8.00	80	0.38
Architectural Coating 4	Air Compressors	1	6.00	78	0.48

Trips and VMT

Iris Residential Project - Moreno Valley, CA - 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	755.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	135.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving 1	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 1	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 2	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 3	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 4	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.2 Site Preparation - 2021

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343		5,523.5047	5,523.5047	1.7864		5,568.1651
Total	5.3428	60.7861	21.8537	0.0570	18.0663	2.6460	20.7123	9.9307	2.4343	12.3650		5,523.5047	5,523.5047	1.7864		5,568.1651

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	0.0853	0.0486	0.6655	1.9200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		191.6552	191.6552	4.5700e-003		191.7694
Total	0.0853	0.0486	0.6655	1.9200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		191.6552	191.6552	4.5700e-003		191.7694

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.2 Site Preparation - 2021

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343	0.0000	5,523.5047	5,523.5047	1.7864		5,568.1651
Total	5.3428	60.7861	21.8537	0.0570	7.0458	2.6460	9.6918	3.8730	2.4343	6.3073	0.0000	5,523.5047	5,523.5047	1.7864		5,568.1651

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	0.0853	0.0486	0.6655	1.9200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		191.6552	191.6552	4.5700e-003		191.7694
Total	0.0853	0.0486	0.6655	1.9200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		191.6552	191.6552	4.5700e-003		191.7694

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.3 Grading - 2021

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					8.6988	0.0000	8.6988	3.6004	0.0000	3.6004			0.0000			0.0000
Off-Road	4.9185	56.5443	31.2281	0.0715		2.2861	2.2861		2.1032	2.1032		6,925.967 4	6,925.967 4	2.2400		6,981.967 3
Total	4.9185	56.5443	31.2281	0.0715	8.6988	2.2861	10.9849	3.6004	2.1032	5.7036		6,925.967 4	6,925.967 4	2.2400		6,981.967 3

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	0.1225	5.4701	0.7193	0.0190	0.4402	0.0167	0.4569	0.1207	0.0159	0.1366		2,011.659 9	2,011.659 9	0.1168		2,014.581 0
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	0.0948	0.0540	0.7394	2.1400e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		212.9502	212.9502	5.0800e-003		213.0771
Total	0.2173	5.5242	1.4587	0.0211	0.6638	0.0180	0.6818	0.1800	0.0171	0.1971		2,224.610 0	2,224.610 0	0.1219		2,227.658 1

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.3 Grading - 2021

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					3.3926	0.0000	3.3926	1.4041	0.0000	1.4041			0.0000			0.0000
Off-Road	4.9185	56.5443	31.2281	0.0715		2.2861	2.2861		2.1032	2.1032	0.0000	6,925.967 4	6,925.967 4	2.2400		6,981.967 3
Total	4.9185	56.5443	31.2281	0.0715	3.3926	2.2861	5.6787	1.4041	2.1032	3.5074	0.0000	6,925.967 4	6,925.967 4	2.2400		6,981.967 3

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	0.1225	5.4701	0.7193	0.0190	0.4402	0.0167	0.4569	0.1207	0.0159	0.1366		2,011.659 9	2,011.659 9	0.1168		2,014.581 0
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	0.0948	0.0540	0.7394	2.1400e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		212.9502	212.9502	5.0800e-003		213.0771
Total	0.2173	5.5242	1.4587	0.0211	0.6638	0.0180	0.6818	0.1800	0.0171	0.1971		2,224.610 0	2,224.610 0	0.1219		2,227.658 1

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.4 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

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	0.1167	4.6270	0.8255	0.0130	0.3202	8.8000e-003	0.3290	0.0922	8.4200e-003	0.1006		1,366.2551	1,366.2551	0.0977		1,368.6987
Worker	0.6400	0.3646	4.9911	0.0144	1.5090	8.8900e-003	1.5179	0.4002	8.1900e-003	0.4084		1,437.4137	1,437.4137	0.0343		1,438.2706
Total	0.7568	4.9916	5.8166	0.0274	1.8292	0.0177	1.8468	0.4924	0.0166	0.5090		2,803.6688	2,803.6688	0.1320		2,806.9693

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.4 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

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	0.1167	4.6270	0.8255	0.0130	0.3202	8.8000e-003	0.3290	0.0922	8.4200e-003	0.1006		1,366.2551	1,366.2551	0.0977		1,368.6987
Worker	0.6400	0.3646	4.9911	0.0144	1.5090	8.8900e-003	1.5179	0.4002	8.1900e-003	0.4084		1,437.4137	1,437.4137	0.0343		1,438.2706
Total	0.7568	4.9916	5.8166	0.0274	1.8292	0.0177	1.8468	0.4924	0.0166	0.5090		2,803.6688	2,803.6688	0.1320		2,806.9693

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.4 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

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	0.1088	4.3654	0.7678	0.0128	0.3202	7.4000e-003	0.3276	0.0922	7.0800e-003	0.0993		1,354.6259	1,354.6259	0.0926		1,356.9401
Worker	0.5987	0.3281	4.6036	0.0139	1.5090	8.6600e-003	1.5176	0.4002	7.9700e-003	0.4082		1,384.8922	1,384.8922	0.0308		1,385.6618
Total	0.7075	4.6935	5.3715	0.0267	1.8291	0.0161	1.8452	0.4924	0.0151	0.5074		2,739.5180	2,739.5180	0.1234		2,742.6019

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.4 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

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	0.1088	4.3654	0.7678	0.0128	0.3202	7.4000e-003	0.3276	0.0922	7.0800e-003	0.0993		1,354.6259	1,354.6259	0.0926		1,356.9401
Worker	0.5987	0.3281	4.6036	0.0139	1.5090	8.6600e-003	1.5176	0.4002	7.9700e-003	0.4082		1,384.8922	1,384.8922	0.0308		1,385.6618
Total	0.7075	4.6935	5.3715	0.0267	1.8291	0.0161	1.8452	0.4924	0.0151	0.5074		2,739.5180	2,739.5180	0.1234		2,742.6019

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.4 Building Construction - 2023

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

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	0.0835	3.2826	0.6768	0.0125	0.3201	3.3000e-003	0.3234	0.0922	3.1600e-003	0.0953		1,318.5977	1,318.5977	0.0710		1,320.3735
Worker	0.5613	0.2959	4.2486	0.0134	1.5090	8.4500e-003	1.5174	0.4002	7.7800e-003	0.4080		1,332.2626	1,332.2626	0.0276		1,332.9535
Total	0.6448	3.5785	4.9254	0.0259	1.8291	0.0118	1.8409	0.4924	0.0109	0.5033		2,650.8604	2,650.8604	0.0987		2,653.3270

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.4 Building Construction - 2023

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

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	0.0835	3.2826	0.6768	0.0125	0.3201	3.3000e-003	0.3234	0.0922	3.1600e-003	0.0953		1,318.5977	1,318.5977	0.0710		1,320.3735
Worker	0.5613	0.2959	4.2486	0.0134	1.5090	8.4500e-003	1.5174	0.4002	7.7800e-003	0.4080		1,332.2626	1,332.2626	0.0276		1,332.9535
Total	0.6448	3.5785	4.9254	0.0259	1.8291	0.0118	1.8409	0.4924	0.0109	0.5033		2,650.8604	2,650.8604	0.0987		2,653.3270

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.5 Paving 1 - 2021

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9865	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

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	0.0711	0.0405	0.5546	1.6000e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		159.7126	159.7126	3.8100e-003		159.8078
Total	0.0711	0.0405	0.5546	1.6000e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		159.7126	159.7126	3.8100e-003		159.8078

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.5 Paving 1 - 2021

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9865	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

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	0.0711	0.0405	0.5546	1.6000e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		159.7126	159.7126	3.8100e-003		159.8078
Total	0.0711	0.0405	0.5546	1.6000e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		159.7126	159.7126	3.8100e-003		159.8078

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.6 Architectural Coating 1 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324
Total	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.6 Architectural Coating 1 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

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	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324
Total	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.7 Architectural Coating 2 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324
Total	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.7 Architectural Coating 2 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

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	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324
Total	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.8 Architectural Coating 3 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324
Total	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.8 Architectural Coating 3 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

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	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324
Total	0.1197	0.0656	0.9207	2.7800e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		276.9784	276.9784	6.1600e-003		277.1324

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.9 Paving 2 - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.7310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7637	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336

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	0.0624	0.0329	0.4721	1.4900e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		148.0292	148.0292	3.0700e-003		148.1059
Total	0.0624	0.0329	0.4721	1.4900e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		148.0292	148.0292	3.0700e-003		148.1059

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.9 Paving 2 - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.7310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7637	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336

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	0.0624	0.0329	0.4721	1.4900e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		148.0292	148.0292	3.0700e-003		148.1059
Total	0.0624	0.0329	0.4721	1.4900e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		148.0292	148.0292	3.0700e-003		148.1059

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.10 Archtecturaal Coating 4 - 2023

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	60.3869	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

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	0.1123	0.0592	0.8497	2.6700e-003	0.3018	1.6900e-003	0.3035	0.0800	1.5600e-003	0.0816		266.4525	266.4525	5.5300e-003		266.5907
Total	0.1123	0.0592	0.8497	2.6700e-003	0.3018	1.6900e-003	0.3035	0.0800	1.5600e-003	0.0816		266.4525	266.4525	5.5300e-003		266.5907

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

3.10 Archtecturaal Coating 4 - 2023

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	60.3869	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

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	0.1123	0.0592	0.8497	2.6700e-003	0.3018	1.6900e-003	0.3035	0.0800	1.5600e-003	0.0816		266.4525	266.4525	5.5300e-003		266.5907
Total	0.1123	0.0592	0.8497	2.6700e-003	0.3018	1.6900e-003	0.3035	0.0800	1.5600e-003	0.0816		266.4525	266.4525	5.5300e-003		266.5907

4.0 Operational Detail - Mobile

Iris Residential Project - Moreno Valley, CA - 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	1.3646	8.1381	16.6881	0.0757	5.8491	0.0406	5.8897	1.5648	0.0379	1.6026		7,730.9814	7,730.9814	0.3132		7,738.8121
Unmitigated	1.3646	8.1381	16.6881	0.0757	5.8491	0.0406	5.8897	1.5648	0.0379	1.6026		7,730.9814	7,730.9814	0.3132		7,738.8121

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	762.21	802.71	698.22	2,593,120	2,593,120
Total	762.21	802.71	698.22	2,593,120	2,593,120

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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Other Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Single Family Housing	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

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	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505
NaturalGas Unmitigated	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505

Iris Residential Project - Moreno Valley, CA - 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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	6789.83	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505
Total		0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505

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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	6.78983	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505
Total		0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505

6.0 Area Detail

Iris Residential Project
CalEEMod Output

Iris Residential Project - Moreno Valley, CA - 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	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234
Unmitigated	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - 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	0.3298					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7524					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	0.2014	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370		12.0340	12.0340	0.0116		12.3234
Total	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - 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	0.3298					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7524					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	0.2014	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370		12.0340	12.0340	0.0116		12.3234
Total	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234

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
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10.0 Stationary Equipment

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Summer

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

Iris Residential Project - Moreno Valley, CA Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.79	Acre	2.79	121,532.40	0
City Park	3.02	Acre	3.02	131,551.20	0
Single Family Housing	81.00	Dwelling Unit	5.02	187,000.00	232

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

Project Characteristics - SCE CO2 Intensity Factor 2020 to 2029

Land Use - Residential = 81 SFU

Internal Roadways = 2.79 acres

Park area = 3.02 acres

Construction Phase - Construction schedult provided by client

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Use of larger equipment

Off-road Equipment - ..

Off-road Equipment - ..

Off-road Equipment - Use of Larger equipment

Grading - Soil export of 6,042 cy

Architectural Coating -

Vehicle Trips - Weekday trip generation from the project trip memorandum - EPDS

Weekend trip rates from CalEEMod default values

Woodstoves - Assumes no fireplaces in residential units

Construction Off-road Equipment Mitigation - Applied ffffigitive dust reductions as required under SCAQMD Rule 493

Fleet Mix - SFU fleet mix is the default CalEEMod fleet mix for Riversode County in 2023

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	520.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	10.00
tblFireplaces	FireplaceDayYear	25.00	0.00

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	68.85	0.00
tblFireplaces	NumberNoFireplace	8.10	0.00
tblFireplaces	NumberWood	4.05	0.00
tblGrading	AcresOfGrading	105.00	75.00
tblGrading	AcresOfGrading	20.00	0.00
tblGrading	MaterialExported	0.00	6,042.00
tblLandUse	LandUseSquareFeet	145,800.00	187,000.00
tblLandUse	LotAcreage	26.30	5.02
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	534
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	9.52	9.41
tblWoodstoves	NumberCatalytic	4.05	0.00
tblWoodstoves	NumberNoncatalytic	4.05	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Iris Residential Project - Moreno Valley, CA - 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					
2021	5.4265	62.1074	36.6814	0.0919	18.2675	2.6472	20.9146	9.9840	2.4354	12.4195	0.0000	9,078.123 7	9,078.123 7	2.3722	0.0000	9,137.429 7
2022	62.9288	21.7529	23.5411	0.0572	2.1309	0.9088	3.0397	0.5724	0.8597	1.4322	0.0000	5,630.116 3	5,630.116 3	0.7657	0.0000	5,649.258 2
2023	60.4977	17.9286	20.4449	0.0510	1.8291	0.7116	2.5407	0.4924	0.6695	1.1618	0.0000	5,020.029 4	5,020.029 4	0.7167	0.0000	5,037.796 1
Maximum	62.9288	62.1074	36.6814	0.0919	18.2675	2.6472	20.9146	9.9840	2.4354	12.4195	0.0000	9,078.123 7	9,078.123 7	2.3722	0.0000	9,137.429 7

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					
2021	5.4265	62.1074	36.6814	0.0919	7.2470	2.6472	9.8942	3.9263	2.4354	6.3617	0.0000	9,078.123 6	9,078.123 6	2.3722	0.0000	9,137.429 7
2022	62.9288	21.7529	23.5411	0.0572	2.1309	0.9088	3.0397	0.5724	0.8597	1.4322	0.0000	5,630.116 3	5,630.116 3	0.7657	0.0000	5,649.258 2
2023	60.4977	17.9286	20.4449	0.0510	1.8291	0.7116	2.5407	0.4924	0.6695	1.1618	0.0000	5,020.029 4	5,020.029 4	0.7167	0.0000	5,037.796 0
Maximum	62.9288	62.1074	36.6814	0.0919	7.2470	2.6472	9.8942	3.9263	2.4354	6.3617	0.0000	9,078.123 6	9,078.123 6	2.3722	0.0000	9,137.429 7

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - 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	49.58	0.00	41.59	54.83	0.00	40.35	0.00	0.00	0.00	0.00	0.00	0.00

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - 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	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234
Energy	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505
Mobile	1.1471	8.1137	14.3367	0.0699	5.8491	0.0409	5.8900	1.5648	0.0381	1.6029		7,146.1542	7,146.1542	0.3201		7,154.1569
Total	5.5040	8.8165	21.2877	0.0742	5.8491	0.1285	5.9775	1.5648	0.1257	1.6905	0.0000	7,956.9918	7,956.9918	0.3470	0.0146	7,970.0307

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	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234
Energy	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505
Mobile	1.1471	8.1137	14.3367	0.0699	5.8491	0.0409	5.8900	1.5648	0.0381	1.6029		7,146.1542	7,146.1542	0.3201		7,154.1569
Total	5.5040	8.8165	21.2877	0.0742	5.8491	0.1285	5.9775	1.5648	0.1257	1.6905	0.0000	7,956.9918	7,956.9918	0.3470	0.0146	7,970.0307

Iris Residential Project - Moreno Valley, CA - 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	1/4/2021	1/15/2021	5	10	
2	Grading	Grading	1/16/2021	2/26/2021	5	30	
3	Building Construction	Building Construction	2/27/2021	2/24/2023	5	520	
4	Paving 1	Paving	2/27/2021	3/12/2021	5	10	
5	Architectural Coating 1	Architectural Coating	2/1/2022	2/28/2022	5	20	
6	Architectural Coating 2	Architectural Coating	7/17/2022	8/12/2022	5	20	
7	Architectural Coating 3	Architectural Coating	10/1/2022	10/28/2022	5	20	
8	Paving 2	Paving	2/25/2023	3/10/2023	5	10	
9	Architectural Coating 4	Architectural Coating	3/11/2023	4/7/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 2.79

Residential Indoor: 378,675; Residential Outdoor: 126,225; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 7,292 (Architectural Coating – sqft)

OffRoad Equipment

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crawler Tractors	2	8.00	212	0.43
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving 1	Pavers	2	8.00	130	0.42
Paving 1	Paving Equipment	2	8.00	132	0.36
Paving 1	Rollers	2	8.00	80	0.38
Architectural Coating 1	Air Compressors	1	6.00	78	0.48
Architectural Coating 2	Air Compressors	1	6.00	78	0.48
Architectural Coating 3	Air Compressors	1	6.00	78	0.48
Paving 2	Pavers	2	8.00	130	0.42
Paving 2	Paving Equipment	2	8.00	132	0.36
Paving 2	Rollers	2	8.00	80	0.38
Architectural Coating 4	Air Compressors	1	6.00	78	0.48

Trips and VMT

Iris Residential Project - Moreno Valley, CA - 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	755.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	135.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving 1	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 1	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 2	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 3	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 4	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.2 Site Preparation - 2021

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343		5,523.5047	5,523.5047	1.7864		5,568.1651
Total	5.3428	60.7861	21.8537	0.0570	18.0663	2.6460	20.7123	9.9307	2.4343	12.3650		5,523.5047	5,523.5047	1.7864		5,568.1651

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	0.0838	0.0503	0.5372	1.7200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		171.9348	171.9348	3.9700e-003		172.0342
Total	0.0838	0.0503	0.5372	1.7200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		171.9348	171.9348	3.9700e-003		172.0342

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.2 Site Preparation - 2021

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343	0.0000	5,523.5047	5,523.5047	1.7864		5,568.1651
Total	5.3428	60.7861	21.8537	0.0570	7.0458	2.6460	9.6918	3.8730	2.4343	6.3073	0.0000	5,523.5047	5,523.5047	1.7864		5,568.1651

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	0.0838	0.0503	0.5372	1.7200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		171.9348	171.9348	3.9700e-003		172.0342
Total	0.0838	0.0503	0.5372	1.7200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		171.9348	171.9348	3.9700e-003		172.0342

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.3 Grading - 2021

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					8.6988	0.0000	8.6988	3.6004	0.0000	3.6004			0.0000			0.0000
Off-Road	4.9185	56.5443	31.2281	0.0715		2.2861	2.2861		2.1032	2.1032		6,925.967 4	6,925.967 4	2.2400		6,981.967 3
Total	4.9185	56.5443	31.2281	0.0715	8.6988	2.2861	10.9849	3.6004	2.1032	5.7036		6,925.967 4	6,925.967 4	2.2400		6,981.967 3

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	0.1289	5.5072	0.8391	0.0185	0.4402	0.0169	0.4571	0.1207	0.0162	0.1368		1,961.117 6	1,961.117 6	0.1278		1,964.313 3
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	0.0931	0.0559	0.5969	1.9200e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		191.0387	191.0387	4.4100e-003		191.1491
Total	0.2220	5.5631	1.4360	0.0204	0.6638	0.0182	0.6820	0.1800	0.0174	0.1973		2,152.156 3	2,152.156 3	0.1322		2,155.462 4

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.3 Grading - 2021

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					3.3926	0.0000	3.3926	1.4041	0.0000	1.4041			0.0000			0.0000
Off-Road	4.9185	56.5443	31.2281	0.0715		2.2861	2.2861		2.1032	2.1032	0.0000	6,925.967 4	6,925.967 4	2.2400		6,981.967 3
Total	4.9185	56.5443	31.2281	0.0715	3.3926	2.2861	5.6787	1.4041	2.1032	3.5074	0.0000	6,925.967 4	6,925.967 4	2.2400		6,981.967 3

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	0.1289	5.5072	0.8391	0.0185	0.4402	0.0169	0.4571	0.1207	0.0162	0.1368		1,961.117 6	1,961.117 6	0.1278		1,964.313 3
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	0.0931	0.0559	0.5969	1.9200e-003	0.2236	1.3200e-003	0.2249	0.0593	1.2100e-003	0.0605		191.0387	191.0387	4.4100e-003		191.1491
Total	0.2220	5.5631	1.4360	0.0204	0.6638	0.0182	0.6820	0.1800	0.0174	0.1973		2,152.156 3	2,152.156 3	0.1322		2,155.462 4

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.4 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

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	0.1240	4.5871	0.9766	0.0125	0.3202	9.0700e-003	0.3292	0.0922	8.6700e-003	0.1009		1,314.8661	1,314.8661	0.1089		1,317.5888
Worker	0.6281	0.3771	4.0288	0.0129	1.5090	8.8900e-003	1.5179	0.4002	8.1900e-003	0.4084		1,289.5113	1,289.5113	0.0298		1,290.2562
Total	0.7521	4.9642	5.0054	0.0254	1.8292	0.0180	1.8471	0.4924	0.0169	0.5092		2,604.3774	2,604.3774	0.1387		2,607.8451

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.4 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

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	0.1240	4.5871	0.9766	0.0125	0.3202	9.0700e-003	0.3292	0.0922	8.6700e-003	0.1009		1,314.8661	1,314.8661	0.1089		1,317.5888
Worker	0.6281	0.3771	4.0288	0.0129	1.5090	8.8900e-003	1.5179	0.4002	8.1900e-003	0.4084		1,289.5113	1,289.5113	0.0298		1,290.2562
Total	0.7521	4.9642	5.0054	0.0254	1.8292	0.0180	1.8471	0.4924	0.0169	0.5092		2,604.3774	2,604.3774	0.1387		2,607.8451

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.4 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

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	0.1158	4.3217	0.9116	0.0124	0.3202	7.6400e-003	0.3278	0.0922	7.3000e-003	0.0995		1,303.3857	1,303.3857	0.1033		1,305.9669
Worker	0.5892	0.3392	3.7104	0.0125	1.5090	8.6600e-003	1.5176	0.4002	7.9700e-003	0.4082		1,242.4575	1,242.4575	0.0268		1,243.1274
Total	0.7050	4.6609	4.6220	0.0248	1.8291	0.0163	1.8454	0.4924	0.0153	0.5076		2,545.8432	2,545.8432	0.1301		2,549.0943

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.4 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

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	0.1158	4.3217	0.9116	0.0124	0.3202	7.6400e-003	0.3278	0.0922	7.3000e-003	0.0995		1,303.3857	1,303.3857	0.1033		1,305.9669
Worker	0.5892	0.3392	3.7104	0.0125	1.5090	8.6600e-003	1.5176	0.4002	7.9700e-003	0.4082		1,242.4575	1,242.4575	0.0268		1,243.1274
Total	0.7050	4.6609	4.6220	0.0248	1.8291	0.0163	1.8454	0.4924	0.0153	0.5076		2,545.8432	2,545.8432	0.1301		2,549.0943

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.4 Building Construction - 2023

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

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	0.0884	3.2380	0.7816	0.0120	0.3201	3.4100e-003	0.3236	0.0922	3.2600e-003	0.0954		1,269.5132	1,269.5132	0.0787		1,271.4816
Worker	0.5542	0.3058	3.4193	0.0120	1.5090	8.4500e-003	1.5174	0.4002	7.7800e-003	0.4080		1,195.3063	1,195.3063	0.0241		1,195.9084
Total	0.6427	3.5438	4.2009	0.0240	1.8291	0.0119	1.8410	0.4924	0.0110	0.5034		2,464.8195	2,464.8195	0.1028		2,467.3900

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.4 Building Construction - 2023

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

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	0.0884	3.2380	0.7816	0.0120	0.3201	3.4100e-003	0.3236	0.0922	3.2600e-003	0.0954		1,269.5132	1,269.5132	0.0787		1,271.4816
Worker	0.5542	0.3058	3.4193	0.0120	1.5090	8.4500e-003	1.5174	0.4002	7.7800e-003	0.4080		1,195.3063	1,195.3063	0.0241		1,195.9084
Total	0.6427	3.5438	4.2009	0.0240	1.8291	0.0119	1.8410	0.4924	0.0110	0.5034		2,464.8195	2,464.8195	0.1028		2,467.3900

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.5 Paving 1 - 2021

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9865	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

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	0.0698	0.0419	0.4476	1.4400e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		143.2790	143.2790	3.3100e-003		143.3618
Total	0.0698	0.0419	0.4476	1.4400e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		143.2790	143.2790	3.3100e-003		143.3618

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.5 Paving 1 - 2021

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.7310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9865	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

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	0.0698	0.0419	0.4476	1.4400e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		143.2790	143.2790	3.3100e-003		143.3618
Total	0.0698	0.0419	0.4476	1.4400e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		143.2790	143.2790	3.3100e-003		143.3618

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.6 Architectural Coating 1 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255
Total	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.6 Architectural Coating 1 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

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	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255
Total	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.7 Architectural Coating 2 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255
Total	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.7 Architectural Coating 2 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

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	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255
Total	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.8 Architectural Coating 3 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255
Total	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.8 Architectural Coating 3 - 2022

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	60.3998	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062

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	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255
Total	0.1179	0.0678	0.7421	2.4900e-003	0.3018	1.7300e-003	0.3035	0.0800	1.5900e-003	0.0816		248.4915	248.4915	5.3600e-003		248.6255

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.9 Paving 2 - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.7310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7637	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336

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	0.0616	0.0340	0.3799	1.3300e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		132.8118	132.8118	2.6800e-003		132.8787
Total	0.0616	0.0340	0.3799	1.3300e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		132.8118	132.8118	2.6800e-003		132.8787

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.9 Paving 2 - 2023

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.7310					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7637	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336

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	0.0616	0.0340	0.3799	1.3300e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		132.8118	132.8118	2.6800e-003		132.8787
Total	0.0616	0.0340	0.3799	1.3300e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		132.8118	132.8118	2.6800e-003		132.8787

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.10 Archtecturaal Coating 4 - 2023

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	60.3869	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

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	0.1108	0.0612	0.6839	2.4000e-003	0.3018	1.6900e-003	0.3035	0.0800	1.5600e-003	0.0816		239.0613	239.0613	4.8200e-003		239.1817
Total	0.1108	0.0612	0.6839	2.4000e-003	0.3018	1.6900e-003	0.3035	0.0800	1.5600e-003	0.0816		239.0613	239.0613	4.8200e-003		239.1817

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

3.10 Archtecturaal Coating 4 - 2023

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	60.1952					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	60.3869	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

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	0.1108	0.0612	0.6839	2.4000e-003	0.3018	1.6900e-003	0.3035	0.0800	1.5600e-003	0.0816		239.0613	239.0613	4.8200e-003		239.1817
Total	0.1108	0.0612	0.6839	2.4000e-003	0.3018	1.6900e-003	0.3035	0.0800	1.5600e-003	0.0816		239.0613	239.0613	4.8200e-003		239.1817

4.0 Operational Detail - Mobile

Iris Residential Project - Moreno Valley, CA - 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	1.1471	8.1137	14.3367	0.0699	5.8491	0.0409	5.8900	1.5648	0.0381	1.6029		7,146.1542	7,146.1542	0.3201		7,154.1569
Unmitigated	1.1471	8.1137	14.3367	0.0699	5.8491	0.0409	5.8900	1.5648	0.0381	1.6029		7,146.1542	7,146.1542	0.3201		7,154.1569

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	762.21	802.71	698.22	2,593,120	2,593,120
Total	762.21	802.71	698.22	2,593,120	2,593,120

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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Other Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Single Family Housing	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

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	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505
NaturalGas Unmitigated	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505

Iris Residential Project - Moreno Valley, CA - 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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	6789.83	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505
Total		0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505

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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	6.78983	0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505
Total		0.0732	0.6257	0.2663	3.9900e-003		0.0506	0.0506		0.0506	0.0506		798.8036	798.8036	0.0153	0.0146	803.5505

6.0 Area Detail

Iris Residential Project
CalEEMod Output

Iris Residential Project - Moreno Valley, CA - 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	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234
Unmitigated	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - 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	0.3298					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7524					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	0.2014	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370		12.0340	12.0340	0.0116		12.3234
Total	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - 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	0.3298					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7524					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	0.2014	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370		12.0340	12.0340	0.0116		12.3234
Total	4.2837	0.0771	6.6847	3.5000e-004		0.0370	0.0370		0.0370	0.0370	0.0000	12.0340	12.0340	0.0116	0.0000	12.3234

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
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10.0 Stationary Equipment

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Winter

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

**Iris Residential Project - Moreno Valley, CA
Riverside-South Coast County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	2.79	Acre	2.79	121,532.40	0
City Park	3.02	Acre	3.02	131,551.20	0
Single Family Housing	81.00	Dwelling Unit	5.02	187,000.00	232

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

Project Characteristics - SCE CO2 Intensity Factor 2020 to 2029

Land Use - Residential = 81 SFU

Internal Roadways = 2.79 acres

Park area = 3.02 acres

Construction Phase - Construction schedult provided by client

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Use of larger equipment

Off-road Equipment - ..

Off-road Equipment - ..

Off-road Equipment - Use of Larger equipment

Grading - Soil export of 6,042 cy

Architectural Coating -

Vehicle Trips - Weekday trip generation from the project trip memorandum - EPDS

Weekend trip rates from CalEEMod default values

Woodstoves - Assumes no fireplaces in residential units

Construction Off-road Equipment Mitigation - Applied ffffigitive dust reductions as required under SCAQMD Rule 493

Fleet Mix - SFU fleet mix is the default CalEEMod fleet mix for Riversode County in 2023

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	300.00	520.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	10.00
tblFireplaces	FireplaceDayYear	25.00	0.00

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	68.85	0.00
tblFireplaces	NumberNoFireplace	8.10	0.00
tblFireplaces	NumberWood	4.05	0.00
tblGrading	AcresOfGrading	105.00	75.00
tblGrading	AcresOfGrading	20.00	0.00
tblGrading	MaterialExported	0.00	6,042.00
tblLandUse	LandUseSquareFeet	145,800.00	187,000.00
tblLandUse	LotAcreage	26.30	5.02
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	534
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	9.52	9.41
tblWoodstoves	NumberCatalytic	4.05	0.00
tblWoodstoves	NumberNoncatalytic	4.05	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Iris Residential Project - Moreno Valley, CA - 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					
2021	0.4002	3.7752	3.0666	7.6200e-003	0.4304	0.1586	0.5890	0.1602	0.1481	0.3083	0.0000	681.5113	681.5113	0.1184	0.0000	684.4702
2022	2.1220	2.6910	2.8227	6.9700e-003	0.2429	0.1098	0.3526	0.0654	0.1034	0.1689	0.0000	623.3581	623.3581	0.0876	0.0000	625.5468
2023	0.6573	0.4245	0.5119	1.2100e-003	0.0398	0.0175	0.0573	0.0107	0.0165	0.0272	0.0000	107.5658	107.5658	0.0163	0.0000	107.9728
Maximum	2.1220	3.7752	3.0666	7.6200e-003	0.4304	0.1586	0.5890	0.1602	0.1481	0.3083	0.0000	681.5113	681.5113	0.1184	0.0000	684.4702

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					
2021	0.4002	3.7752	3.0666	7.6200e-003	0.2957	0.1586	0.4543	0.0969	0.1481	0.2450	0.0000	681.5109	681.5109	0.1184	0.0000	684.4698
2022	2.1220	2.6910	2.8227	6.9700e-003	0.2429	0.1098	0.3526	0.0654	0.1034	0.1689	0.0000	623.3578	623.3578	0.0876	0.0000	625.5464
2023	0.6573	0.4245	0.5119	1.2100e-003	0.0398	0.0175	0.0573	0.0107	0.0165	0.0272	0.0000	107.5658	107.5658	0.0163	0.0000	107.9727
Maximum	2.1220	3.7752	3.0666	7.6200e-003	0.2957	0.1586	0.4543	0.0969	0.1481	0.2450	0.0000	681.5109	681.5109	0.1184	0.0000	684.4698

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

	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	18.89	0.00	13.48	26.76	0.00	12.54	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-4-2021	4-3-2021	1.6899	1.6899
2	4-4-2021	7-3-2021	0.8151	0.8151
3	7-4-2021	10-3-2021	0.8241	0.8241
4	10-4-2021	1-3-2022	0.8205	0.8205
5	1-4-2022	4-3-2022	1.3492	1.3492
6	4-4-2022	7-3-2022	0.7385	0.7385
7	7-4-2022	10-3-2022	1.4108	1.4108
8	10-4-2022	1-3-2023	1.2962	1.2962
9	1-4-2023	4-3-2023	0.9646	0.9646
10	4-4-2023	7-3-2023	0.0884	0.0884
		Highest	1.6899	1.6899

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

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	0.7702	9.6300e-003	0.8356	4.0000e-005		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	1.3646	1.3646	1.3100e-003	0.0000	1.3975
Energy	0.0134	0.1142	0.0486	7.3000e-004		9.2300e-003	9.2300e-003		9.2300e-003	9.2300e-003	0.0000	303.2655	303.2655	0.0118	4.3500e-003	304.8562
Mobile	0.1981	1.4196	2.5488	0.0123	0.9899	7.0000e-003	0.9969	0.2652	6.5300e-003	0.2717	0.0000	1,140.5308	1,140.5308	0.0488	0.0000	1,141.7501
Waste						0.0000	0.0000		0.0000	0.0000	19.3613	0.0000	19.3613	1.1442	0.0000	47.9668
Water						0.0000	0.0000		0.0000	0.0000	1.6743	35.2813	36.9556	0.1739	4.4600e-003	42.6308
Total	0.9817	1.5434	3.4330	0.0131	0.9899	0.0209	1.0108	0.2652	0.0204	0.2856	21.0356	1,480.4422	1,501.4778	1.3800	8.8100e-003	1,538.6012

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

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	0.7702	9.6300e-003	0.8356	4.0000e-005		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	1.3646	1.3646	1.3100e-003	0.0000	1.3975
Energy	0.0134	0.1142	0.0486	7.3000e-004		9.2300e-003	9.2300e-003		9.2300e-003	9.2300e-003	0.0000	303.2655	303.2655	0.0118	4.3500e-003	304.8562
Mobile	0.1981	1.4196	2.5488	0.0123	0.9899	7.0000e-003	0.9969	0.2652	6.5300e-003	0.2717	0.0000	1,140.5308	1,140.5308	0.0488	0.0000	1,141.7501
Waste						0.0000	0.0000		0.0000	0.0000	19.3613	0.0000	19.3613	1.1442	0.0000	47.9668
Water						0.0000	0.0000		0.0000	0.0000	1.6743	35.2813	36.9556	0.1739	4.4600e-003	42.6308
Total	0.9817	1.5434	3.4330	0.0131	0.9899	0.0209	1.0108	0.2652	0.0204	0.2856	21.0356	1,480.4422	1,501.4778	1.3800	8.8100e-003	1,538.6012

	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

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/15/2021	5	10	
2	Grading	Grading	1/16/2021	2/26/2021	5	30	
3	Building Construction	Building Construction	2/27/2021	2/24/2023	5	520	
4	Paving 1	Paving	2/27/2021	3/12/2021	5	10	
5	Architectural Coating 1	Architectural Coating	2/1/2022	2/28/2022	5	20	
6	Architectural Coating 2	Architectural Coating	7/17/2022	8/12/2022	5	20	
7	Architectural Coating 3	Architectural Coating	10/1/2022	10/28/2022	5	20	
8	Paving 2	Paving	2/25/2023	3/10/2023	5	10	
9	Architectural Coating 4	Architectural Coating	3/11/2023	4/7/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 2.79

Residential Indoor: 378,675; Residential Outdoor: 126,225; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 7,292 (Architectural Coating – sqft)

OffRoad Equipment

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crawler Tractors	2	8.00	212	0.43
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving 1	Pavers	2	8.00	130	0.42
Paving 1	Paving Equipment	2	8.00	132	0.36
Paving 1	Rollers	2	8.00	80	0.38
Architectural Coating 1	Air Compressors	1	6.00	78	0.48
Architectural Coating 2	Air Compressors	1	6.00	78	0.48
Architectural Coating 3	Air Compressors	1	6.00	78	0.48
Paving 2	Pavers	2	8.00	130	0.42
Paving 2	Paving Equipment	2	8.00	132	0.36
Paving 2	Rollers	2	8.00	80	0.38
Architectural Coating 4	Air Compressors	1	6.00	78	0.48

Trips and VMT

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

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	755.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	135.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving 1	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 1	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 2	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 3	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving 2	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating 4	1	27.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

3.2 Site Preparation - 2021

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0267	0.3039	0.1093	2.8000e-004		0.0132	0.0132		0.0122	0.0122	0.0000	25.0542	25.0542	8.1000e-003	0.0000	25.2568
Total	0.0267	0.3039	0.1093	2.8000e-004	0.0903	0.0132	0.1036	0.0497	0.0122	0.0618	0.0000	25.0542	25.0542	8.1000e-003	0.0000	25.2568

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	3.9000e-004	2.6000e-004	2.8300e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8000	0.8000	2.0000e-005	0.0000	0.8004
Total	3.9000e-004	2.6000e-004	2.8300e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8000	0.8000	2.0000e-005	0.0000	0.8004

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3.2 Site Preparation - 2021

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					0.0352	0.0000	0.0352	0.0194	0.0000	0.0194	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0267	0.3039	0.1093	2.8000e-004		0.0132	0.0132		0.0122	0.0122	0.0000	25.0542	25.0542	8.1000e-003	0.0000	25.2567
Total	0.0267	0.3039	0.1093	2.8000e-004	0.0352	0.0132	0.0485	0.0194	0.0122	0.0315	0.0000	25.0542	25.0542	8.1000e-003	0.0000	25.2567

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	3.9000e-004	2.6000e-004	2.8300e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8000	0.8000	2.0000e-005	0.0000	0.8004
Total	3.9000e-004	2.6000e-004	2.8300e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8000	0.8000	2.0000e-005	0.0000	0.8004

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3.3 Grading - 2021

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					0.1305	0.0000	0.1305	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0738	0.8482	0.4684	1.0700e-003		0.0343	0.0343		0.0316	0.0316	0.0000	94.2470	94.2470	0.0305	0.0000	95.0090
Total	0.0738	0.8482	0.4684	1.0700e-003	0.1305	0.0343	0.1648	0.0540	0.0316	0.0856	0.0000	94.2470	94.2470	0.0305	0.0000	95.0090

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	1.8800e-003	0.0839	0.0116	2.8000e-004	6.5100e-003	2.5000e-004	6.7600e-003	1.7900e-003	2.4000e-004	2.0300e-003	0.0000	27.0853	27.0853	1.6500e-003	0.0000	27.1267
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	1.2900e-003	8.7000e-004	9.4400e-003	3.0000e-005	3.3000e-003	2.0000e-005	3.3200e-003	8.8000e-004	2.0000e-005	8.9000e-004	0.0000	2.6665	2.6665	6.0000e-005	0.0000	2.6681
Total	3.1700e-003	0.0848	0.0210	3.1000e-004	9.8100e-003	2.7000e-004	0.0101	2.6700e-003	2.6000e-004	2.9200e-003	0.0000	29.7519	29.7519	1.7100e-003	0.0000	29.7948

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3.3 Grading - 2021

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					0.0509	0.0000	0.0509	0.0211	0.0000	0.0211	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0738	0.8482	0.4684	1.0700e-003		0.0343	0.0343		0.0316	0.0316	0.0000	94.2469	94.2469	0.0305	0.0000	95.0089
Total	0.0738	0.8482	0.4684	1.0700e-003	0.0509	0.0343	0.0852	0.0211	0.0316	0.0526	0.0000	94.2469	94.2469	0.0305	0.0000	95.0089

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	1.8800e-003	0.0839	0.0116	2.8000e-004	6.5100e-003	2.5000e-004	6.7600e-003	1.7900e-003	2.4000e-004	2.0300e-003	0.0000	27.0853	27.0853	1.6500e-003	0.0000	27.1267
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	1.2900e-003	8.7000e-004	9.4400e-003	3.0000e-005	3.3000e-003	2.0000e-005	3.3200e-003	8.8000e-004	2.0000e-005	8.9000e-004	0.0000	2.6665	2.6665	6.0000e-005	0.0000	2.6681
Total	3.1700e-003	0.0848	0.0210	3.1000e-004	9.8100e-003	2.7000e-004	0.0101	2.6700e-003	2.6000e-004	2.9200e-003	0.0000	29.7519	29.7519	1.7100e-003	0.0000	29.7948

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3.4 Building Construction - 2021

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					
Off-Road	0.2091	1.9175	1.8233	2.9600e-003		0.1055	0.1055		0.0991	0.0991	0.0000	254.8010	254.8010	0.0615	0.0000	256.3378
Total	0.2091	1.9175	1.8233	2.9600e-003		0.1055	0.1055		0.0991	0.0991	0.0000	254.8010	254.8010	0.0615	0.0000	256.3378

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	0.0131	0.5128	0.0987	1.4000e-003	0.0347	9.8000e-004	0.0357	0.0100	9.4000e-004	0.0110	0.0000	134.1853	134.1853	0.0102	0.0000	134.4412
Worker	0.0637	0.0429	0.4675	1.4600e-003	0.1632	9.8000e-004	0.1642	0.0433	9.0000e-004	0.0442	0.0000	131.9937	131.9937	3.0700e-003	0.0000	132.0706
Total	0.0768	0.5557	0.5662	2.8600e-003	0.1980	1.9600e-003	0.1999	0.0534	1.8400e-003	0.0552	0.0000	266.1790	266.1790	0.0133	0.0000	266.5117

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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					
Off-Road	0.2091	1.9175	1.8233	2.9600e-003		0.1055	0.1055		0.0991	0.0991	0.0000	254.8007	254.8007	0.0615	0.0000	256.3375
Total	0.2091	1.9175	1.8233	2.9600e-003		0.1055	0.1055		0.0991	0.0991	0.0000	254.8007	254.8007	0.0615	0.0000	256.3375

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	0.0131	0.5128	0.0987	1.4000e-003	0.0347	9.8000e-004	0.0357	0.0100	9.4000e-004	0.0110	0.0000	134.1853	134.1853	0.0102	0.0000	134.4412
Worker	0.0637	0.0429	0.4675	1.4600e-003	0.1632	9.8000e-004	0.1642	0.0433	9.0000e-004	0.0442	0.0000	131.9937	131.9937	3.0700e-003	0.0000	132.0706
Total	0.0768	0.5557	0.5662	2.8600e-003	0.1980	1.9600e-003	0.1999	0.0534	1.8400e-003	0.0552	0.0000	266.1790	266.1790	0.0133	0.0000	266.5117

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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					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
Total	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471

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	0.0145	0.5710	0.1086	1.6400e-003	0.0411	9.7000e-004	0.0420	0.0118	9.3000e-004	0.0128	0.0000	157.2185	157.2185	0.0115	0.0000	157.5050
Worker	0.0705	0.0456	0.5090	1.6600e-003	0.1929	1.1300e-003	0.1940	0.0512	1.0400e-003	0.0523	0.0000	150.3002	150.3002	3.2700e-003	0.0000	150.3818
Total	0.0850	0.6166	0.6176	3.3000e-003	0.2340	2.1000e-003	0.2361	0.0631	1.9700e-003	0.0650	0.0000	307.5186	307.5186	0.0147	0.0000	307.8868

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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					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
Total	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467

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	0.0145	0.5710	0.1086	1.6400e-003	0.0411	9.7000e-004	0.0420	0.0118	9.3000e-004	0.0128	0.0000	157.2185	157.2185	0.0115	0.0000	157.5050
Worker	0.0705	0.0456	0.5090	1.6600e-003	0.1929	1.1300e-003	0.1940	0.0512	1.0400e-003	0.0523	0.0000	150.3002	150.3002	3.2700e-003	0.0000	150.3818
Total	0.0850	0.6166	0.6176	3.3000e-003	0.2340	2.1000e-003	0.2361	0.0631	1.9700e-003	0.0650	0.0000	307.5186	307.5186	0.0147	0.0000	307.8868

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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					
Off-Road	0.0315	0.2877	0.3249	5.4000e-004		0.0140	0.0140		0.0132	0.0132	0.0000	46.3610	46.3610	0.0110	0.0000	46.6367
Total	0.0315	0.2877	0.3249	5.4000e-004		0.0140	0.0140		0.0132	0.0132	0.0000	46.3610	46.3610	0.0110	0.0000	46.6367

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	1.7000e-003	0.0657	0.0146	2.5000e-004	6.3200e-003	7.0000e-005	6.3800e-003	1.8200e-003	6.0000e-005	1.8900e-003	0.0000	23.5502	23.5502	1.3500e-003	0.0000	23.5839
Worker	0.0102	6.3300e-003	0.0722	2.5000e-004	0.0297	1.7000e-004	0.0299	7.8800e-003	1.6000e-004	8.0400e-003	0.0000	22.2455	22.2455	4.5000e-004	0.0000	22.2568
Total	0.0119	0.0720	0.0867	5.0000e-004	0.0360	2.4000e-004	0.0362	9.7000e-003	2.2000e-004	9.9300e-003	0.0000	45.7957	45.7957	1.8000e-003	0.0000	45.8407

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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					
Off-Road	0.0315	0.2877	0.3249	5.4000e-004		0.0140	0.0140		0.0132	0.0132	0.0000	46.3609	46.3609	0.0110	0.0000	46.6366
Total	0.0315	0.2877	0.3249	5.4000e-004		0.0140	0.0140		0.0132	0.0132	0.0000	46.3609	46.3609	0.0110	0.0000	46.6366

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	1.7000e-003	0.0657	0.0146	2.5000e-004	6.3200e-003	7.0000e-005	6.3800e-003	1.8200e-003	6.0000e-005	1.8900e-003	0.0000	23.5502	23.5502	1.3500e-003	0.0000	23.5839
Worker	0.0102	6.3300e-003	0.0722	2.5000e-004	0.0297	1.7000e-004	0.0299	7.8800e-003	1.6000e-004	8.0400e-003	0.0000	22.2455	22.2455	4.5000e-004	0.0000	22.2568
Total	0.0119	0.0720	0.0867	5.0000e-004	0.0360	2.4000e-004	0.0362	9.7000e-003	2.2000e-004	9.9300e-003	0.0000	45.7957	45.7957	1.8000e-003	0.0000	45.8407

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3.5 Paving 1 - 2021

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					
Off-Road	6.2800e-003	0.0646	0.0733	1.1000e-004		3.3900e-003	3.3900e-003		3.1200e-003	3.1200e-003	0.0000	10.0117	10.0117	3.2400e-003	0.0000	10.0927
Paving	3.6500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9300e-003	0.0646	0.0733	1.1000e-004		3.3900e-003	3.3900e-003		3.1200e-003	3.1200e-003	0.0000	10.0117	10.0117	3.2400e-003	0.0000	10.0927

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	3.2000e-004	2.2000e-004	2.3600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6666	0.6666	2.0000e-005	0.0000	0.6670
Total	3.2000e-004	2.2000e-004	2.3600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6666	0.6666	2.0000e-005	0.0000	0.6670

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3.5 Paving 1 - 2021

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					
Off-Road	6.2800e-003	0.0646	0.0733	1.1000e-004		3.3900e-003	3.3900e-003		3.1200e-003	3.1200e-003	0.0000	10.0117	10.0117	3.2400e-003	0.0000	10.0927
Paving	3.6500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9300e-003	0.0646	0.0733	1.1000e-004		3.3900e-003	3.3900e-003		3.1200e-003	3.1200e-003	0.0000	10.0117	10.0117	3.2400e-003	0.0000	10.0927

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	3.2000e-004	2.2000e-004	2.3600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6666	0.6666	2.0000e-005	0.0000	0.6670
Total	3.2000e-004	2.2000e-004	2.3600e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6666	0.6666	2.0000e-005	0.0000	0.6670

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

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3.6 Architectural Coating 1 - 2022

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					
Archit. Coating	0.6020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.6040	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

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	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136
Total	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136

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3.6 Architectural Coating 1 - 2022

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					
Archit. Coating	0.6020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.6040	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

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	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136
Total	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136

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3.7 Architectural Coating 2 - 2022

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					
Archit. Coating	0.6020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.6040	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

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	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136
Total	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136

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3.7 Architectural Coating 2 - 2022

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					
Archit. Coating	0.6020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.6040	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

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	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136
Total	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136

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3.8 Architectural Coating 3 - 2022

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					
Archit. Coating	0.6020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.6040	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

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	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136
Total	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136

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3.8 Architectural Coating 3 - 2022

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					
Archit. Coating	0.6020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.6040	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

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	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136
Total	1.0800e-003	7.0000e-004	7.8300e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.3123	2.3123	5.0000e-005	0.0000	2.3136

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3.9 Paving 2 - 2023

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					
Off-Road	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	3.6500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.8100e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944

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	2.8000e-004	1.8000e-004	2.0000e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6179	0.6179	1.0000e-005	0.0000	0.6182
Total	2.8000e-004	1.8000e-004	2.0000e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6179	0.6179	1.0000e-005	0.0000	0.6182

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

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3.9 Paving 2 - 2023

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					
Off-Road	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	3.6500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.8100e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944

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	2.8000e-004	1.8000e-004	2.0000e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6179	0.6179	1.0000e-005	0.0000	0.6182
Total	2.8000e-004	1.8000e-004	2.0000e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6179	0.6179	1.0000e-005	0.0000	0.6182

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3.10 Archtecturaal Coating 4 - 2023

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					
Archit. Coating	0.6020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	0.6039	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

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	1.0200e-003	6.3000e-004	7.2200e-003	2.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.2246	2.2246	5.0000e-005	0.0000	2.2257
Total	1.0200e-003	6.3000e-004	7.2200e-003	2.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.2246	2.2246	5.0000e-005	0.0000	2.2257

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3.10 Archtecturaal Coating 4 - 2023

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					
Archit. Coating	0.6020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	0.6039	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571

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	1.0200e-003	6.3000e-004	7.2200e-003	2.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.2246	2.2246	5.0000e-005	0.0000	2.2257
Total	1.0200e-003	6.3000e-004	7.2200e-003	2.0000e-005	2.9700e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.2246	2.2246	5.0000e-005	0.0000	2.2257

4.0 Operational Detail - Mobile

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

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	0.1981	1.4196	2.5488	0.0123	0.9899	7.0000e-003	0.9969	0.2652	6.5300e-003	0.2717	0.0000	1,140.5308	1,140.5308	0.0488	0.0000	1,141.7501
Unmitigated	0.1981	1.4196	2.5488	0.0123	0.9899	7.0000e-003	0.9969	0.2652	6.5300e-003	0.2717	0.0000	1,140.5308	1,140.5308	0.0488	0.0000	1,141.7501

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	762.21	802.71	698.22	2,593,120	2,593,120
Total	762.21	802.71	698.22	2,593,120	2,593,120

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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Other Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Single Family Housing	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

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	171.0146	171.0146	9.2900e-003	1.9200e-003	171.8194
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	171.0146	171.0146	9.2900e-003	1.9200e-003	171.8194
NaturalGas Mitigated	0.0134	0.1142	0.0486	7.3000e-004		9.2300e-003	9.2300e-003		9.2300e-003	9.2300e-003	0.0000	132.2509	132.2509	2.5300e-003	2.4200e-003	133.0368
NaturalGas Unmitigated	0.0134	0.1142	0.0486	7.3000e-004		9.2300e-003	9.2300e-003		9.2300e-003	9.2300e-003	0.0000	132.2509	132.2509	2.5300e-003	2.4200e-003	133.0368

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	2.47829e+006	0.0134	0.1142	0.0486	7.3000e-004		9.2300e-003	9.2300e-003		9.2300e-003	9.2300e-003	0.0000	132.2509	132.2509	2.5300e-003	2.4200e-003	133.0368
Total		0.0134	0.1142	0.0486	7.3000e-004		9.2300e-003	9.2300e-003		9.2300e-003	9.2300e-003	0.0000	132.2509	132.2509	2.5300e-003	2.4200e-003	133.0368

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					
City Park	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
Other Asphalt Surfaces	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
Single Family Housing	2.47829e+006	0.0134	0.1142	0.0486	7.3000e-004		9.2300e-003	9.2300e-003		9.2300e-003	9.2300e-003	0.0000	132.2509	132.2509	2.5300e-003	2.4200e-003	133.0368
Total		0.0134	0.1142	0.0486	7.3000e-004		9.2300e-003	9.2300e-003		9.2300e-003	9.2300e-003	0.0000	132.2509	132.2509	2.5300e-003	2.4200e-003	133.0368

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

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5.3 Energy by Land Use - Electricity

Unmitigated

Land Use	Electricity Use kWh/yr	Total CO2 MT/yr	CH4 MT/yr	N2O MT/yr	CO2e MT/yr
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	706035	171.0146	9.2900e-003	1.9200e-003	171.8194
Total		171.0146	9.2900e-003	1.9200e-003	171.8194

Mitigated

Land Use	Electricity Use kWh/yr	Total CO2 MT/yr	CH4 MT/yr	N2O MT/yr	CO2e MT/yr
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	706035	171.0146	9.2900e-003	1.9200e-003	171.8194
Total		171.0146	9.2900e-003	1.9200e-003	171.8194

6.0 Area Detail

Iris Residential Project
CalEEMod Output

Iris Residential Project - Moreno Valley, CA - 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	0.7702	9.6300e-003	0.8356	4.0000e-005		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	1.3646	1.3646	1.3100e-003	0.0000	1.3975
Unmitigated	0.7702	9.6300e-003	0.8356	4.0000e-005		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	1.3646	1.3646	1.3100e-003	0.0000	1.3975

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Iris Residential Project - Moreno Valley, CA - 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	0.0602					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6848					0.0000	0.0000		0.0000	0.0000	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	0.0252	9.6300e-003	0.8356	4.0000e-005		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	1.3646	1.3646	1.3100e-003	0.0000	1.3975
Total	0.7702	9.6300e-003	0.8356	4.0000e-005		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	1.3646	1.3646	1.3100e-003	0.0000	1.3975

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Iris Residential Project - Moreno Valley, CA - 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	0.0602					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6848					0.0000	0.0000		0.0000	0.0000	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	0.0252	9.6300e-003	0.8356	4.0000e-005		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	1.3646	1.3646	1.3100e-003	0.0000	1.3975
Total	0.7702	9.6300e-003	0.8356	4.0000e-005		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	1.3646	1.3646	1.3100e-003	0.0000	1.3975

7.0 Water Detail

7.1 Mitigation Measures Water

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	36.9556	0.1739	4.4600e-003	42.6308
Unmitigated	36.9556	0.1739	4.4600e-003	42.6308

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 3.59827	9.6831	5.3000e-004	1.1000e-004	9.7287
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	5.27748 / 3.3271	27.2725	0.1734	4.3500e-003	32.9021
Total		36.9556	0.1739	4.4600e-003	42.6308

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - 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			
City Park	0 / 3.59827	9.6831	5.3000e-004	1.1000e-004	9.7287
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	5.27748 / 3.3271	27.2725	0.1734	4.3500e-003	32.9021
Total		36.9556	0.1739	4.4600e-003	42.6308

8.0 Waste Detail

8.1 Mitigation Measures Waste

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.3613	1.1442	0.0000	47.9668
Unmitigated	19.3613	1.1442	0.0000	47.9668

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.26	0.0528	3.1200e-003	0.0000	0.1308
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	95.12	19.3085	1.1411	0.0000	47.8360
Total		19.3613	1.1442	0.0000	47.9667

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

Iris Residential Project - Moreno Valley, CA - Riverside-South Coast County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.26	0.0528	3.1200e-003	0.0000	0.1308
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	95.12	19.3085	1.1411	0.0000	47.8360
Total		19.3613	1.1442	0.0000	47.9667

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
----------------	--------

11.0 Vegetation

Attachment: Appendix A to Initial Study CalEEMod Emission Summary (4197 : Tentative Tract Map 37909

IRIS PARK PROJECT WESTERN RIVERSIDE MSHCP HABITAT ASSESSMENT AND CONSISTENCY ANALYSIS

CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA

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March 31, 2020

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Attachment: Appendix B to Initial Study Habitat Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

ABBREVIATIONS

AMSL	Above Mean Sea Level
APN	Assessor's Parcel Number
BCC	Birds of Conservation Concern
CDFW	California Department of Fish & Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
FC	Federal Candidate Species
FE	Federally Endangered Species
FT	Federally Threatened Species
FESA	Federal Endangered Species Act
FP	CDFW Fully Protected Species
GPS	Global Positioning System
HCP	Habitat Conservation Plan
MBTA	Migratory Bird Treaty Act
MSHCP	Multiple Species Habitat Conservation Plan
NEPA	National Environmental Protection Act
NWI	National Wetland Inventory
Plan	Western Riverside Multiple Species Habitat Conservation Plan
PFO	Potential for Occurrence
RCA	Regional Conservation Authority
RCIP	Riverside County Integrated Project
RWQCB	Regional Water Quality Control Board
SC	State Candidate Species
SE	State Endangered Species
ST	State Threatened Species
SSC	CDFW Species of Special Concern
TLMA	Transportation and Land Management
USACE	United States Army Corp of Engineers
USDA	United State Department of Agriculture
USGS	United States Geological Survey
USFWS	United States Fish & Wildlife Service

EXECUTIVE SUMMARY

Blackhawk Environmental (Blackhawk) conducted a literature review, field reconnaissance survey, and biological assessment of the proposed Iris Park Project (Project; APN 312-020-025) to assess existing site conditions, as well as assess the potential for sensitive species or habitats to occur within the Project site and surrounding area. This report is intended to fulfill requirements for determining Project consistency with the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP; Plan).

Iris Park (Project) includes 10.82 acres of undeveloped lands in the incorporated City of Moreno Valley, Riverside County, California. The Project is located generally east of March Air Reserve Base and Interstate 215 and south of State Route (SR) 60 (Attachment A, Figure 1). The Project site is bordered by the Val Verde Academy to the west, Iris Avenue to the north, California Aqueduct Linear Park Site to the south and the residential community associated with Ebony Avenue to the east.

The Project is a proposed 81-lot single-family detached subdivision located on the south side of Iris Avenue, about 500 feet east of Perris Boulevard, on APN 312-020-025. The project site is triangular in shape and has a gross acreage of approximately 10.82 acres, including 3.02 acres that is planned for development by the City of Moreno Valley as a public park and trail over the California Aqueduct. The community will have two gated access points off Iris Avenue. Three small park areas are spread out on the site. Residential lots would range from 2,197 sq. ft. to 4,741 sq. ft. Homes would range from 1,848 sq. ft. to 2,201 sq. ft., with 3 to 5 bedrooms and 2.5 to 3 baths. Homes would be two stories, include a back yard approximately 12 to 14 feet deep, and have an attached two-car garage. Three architectural styles are proposed: Spanish, French, and Farmhouse. The project overall would provide 217 parking spaces, including 162 garage spaces and 49 spaces on private streets.

The Project site is located entirely within the Riverside County, California and will include 10.82 acres occurring on vacant land. Proposed Project impact areas are shown in Attachment A, Figure 3. The Project is located within the boundaries of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP; Plan) in the Reche Canyon/Badlands Area Plan. The Project site is not located within any Criteria Cell and is located outside of Plan Conservation Areas. The Project area is not located within areas requiring assessment for special status mammals, amphibians, narrow endemic plants, or other criteria area species. The Project area requires assessment and surveys for burrowing owl (*Athene cunicularia*), if suitable habitat is identified during a habitat assessment; suitable burrowing owl habitat was not present within the survey area.

The Project site contains a single vegetation community and/or land cover type (Residential/Urban/Exotic – Disturbed Areas) and predominately contains non-native grasses and non-native annual plant species commonly associated with anthropogenically-altered landscapes, while areas surrounding the Project site contain sparse ornamental shrubs and trees, amongst development.

A literature review conducted for the Project site identified documented occurrences from within five miles of the Project site for a total of 18 special-status wildlife species and one special-status plant species. A field reconnaissance survey and habitat assessment was conducted on February 24, 2020. During the survey, each of these “target species” species were evaluated for their potentials for occurrence (PFO) within and/or adjacent to the Project site. In order to evaluate habitat which may

be suitable for burrowing owl, and to evaluate the potential for indirect impacts, the assessment included all proposed Project features as well as an additional 150-meter (492 feet) survey buffer surrounding the proposed Parcel (Survey Area). During the assessment, no additional special-status wildlife species were observed within or adjacent to the Project site.

Special-status wildlife species identified in the literature review that were determined to have a potential for occurrence (PFO) within the Survey Area consisted of California horned lark (*Eremophila alpestris actia*; moderate PFO), California glossy snake (*Arizona elegans occidentalis*; low PFO) and Western yellow bat (*Lasiurus xanthinus*; low PFO [roosting]). Of the three species with the potential to occur, only the California horned lark is covered under the MSHCP. Species PFO was determined based on proximity of historic records and quality of habitat on site. At the time of the assessment, the Survey Area did not support suitable habitat for burrowing owl; however, two rubble piles containing shallow cavities were identified on the site and were occupied by desert cottontail and a domestic cat during the 2020 breeding season, precluding occupation by burrowing owl. Therefore, suitable habitat for burrowing owl was found absent from the Project site and focused burrowing owl surveys were not required pursuant to the Burrowing Owl Survey Instructions for the Western Riverside MSHCP. Though, occupied by other species at the time of the assessment, these rubble piles have a low potential to support migrating burrowing owls as temporary roost sites, if they become vacant (i.e. not occupied by desert cottontails or domestic cats) prior to construction. Following the MSHCP recommendation of a preconstruction burrowing owl survey within 30 days prior to construction, no negative impacts to burrowing owl are anticipated. If burrowing owls are present during the non-breeding season (September 1 through February 28), burrowing owl exclusion measures may be implemented in accordance with the Plan.

The remaining 15 target sensitive species were considered absent due to lack of suitable habitats on the Project site and Survey Area and no sensitive species were present at the time of the assessment.

Based on CNDDDB, USFWS, and CNPSEI-documented occurrences within five miles of the Project site, the literature review resulted in a list of one special-status plant species evaluated for its' potential to occur on the Project site (smooth tarplant; *Centromadia pungens ssp. laevis*). Smooth tarplant was determined to be absent from the Project site and Survey Area, based on lack of individuals observed on site, proximity of historic records and quality of habitat on site. Smooth tarplant is covered under the MSHCP; however, is presumed absent.

The Project site and surrounding areas support suitable nesting substrates for various general migratory bird and raptor species common to the region. Take authorization for migratory bird and raptor species is not provided by the Plan. The Plan functionally covers the remaining special-status species identified with potentials to occur, as well as impacts to their habitats. No other special-status resources are present or are expected to occur. Mitigation for potential Project-related impacts to the species identified to occur or with the potentials to occur during the literature review and assessment can be achieved through payment of a mitigation fee to the appropriate MSHCP authority. No significant adverse impacts to special-status biological resources of the region are anticipated with implementation of Project mitigation contained herein.

Riparian/riverine habitats, as defined by the MSHCP, do not occur within the proposed Project area. The habitat assessment did not identify any drainages or waterways which may fall under the jurisdiction by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW). No vernal pools or habitat that could potentially support fairy shrimp species were observed on the Project site. No vernal pools

were observed, and they are not known to historically occur within the Project site or within 2 miles of the Survey Area. Additional permitting from these agencies should not be required for Project authorization.

1.0 INTRODUCTION

Blackhawk was contracted by Environmental Planning Development Solutions, Inc. (EPD) to conduct environmental surveys and provide a Habitat Assessment Report and MSHCP Consistency Analysis Report for proposed Iris Park Project (Project; APN 312-020-025), located within an approximately 10.82-acre private land parcel in Riverside County, California. Blackhawk conducted a literature review, field reconnaissance survey, and biological assessment of the proposed Project to assess existing site conditions, as well as assess the potential for sensitive species or habitats to occur within the Project site.

The purpose of this survey effort and consistency analysis is to identify and document sensitive biological resources potentially occurring within the Project site and surrounding areas. The Project is located within the boundaries of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) in the Reche Canyon/Badlands Area Plan; however, the Project is not located within a MSHCP Cell Group or MSHCP Criteria Cell(s). The survey effort focused on documentation of existing site conditions, such as soils, topography, vegetation communities, riverine/riparian habitats, vernal pools and special status species as required for review under the MSHCP. Specifically, the assessment was conducted to determine if habitat was present for BUOW due to the Project location occurring within the MSHCP BUOW survey area, as well as all other sensitive species identified in the literature review as required by the Plan (Table 3 and 4). The assessment did not include a formal jurisdictional or wetland delineation or aquatic resources mapping effort.

1.1 Project Description

The Project is located within a 10.82-acre parcel (APN 312-020-025) in Riverside County, located generally east of March Air Reserve Base and Interstate 215 and south of State Route (SR) 60 in the incorporated City of Moreno Valley (Attachment A, Figure 1). The Project is a proposed 81-lot single-family detached subdivision located on the south side of Iris Avenue, about 500 feet east of Perris Boulevard, on APN 312-020-025. The project site is triangular in shape and has a gross acreage of approximately 10.82 acres, including 3.02 acres that is planned for development by the City of Moreno Valley as a public park and trail over the California Aqueduct. The community will have two gated access points off Iris Avenue. Three small park areas are spread out on the site. Residential lots would range from 2,197 sq. ft. to 4,741 sq. ft. Homes would range from 1,848 sq. ft. to 2,201 sq. ft., with 3 to 5 bedrooms and 2.5 to 3 baths. Homes would be two stories, include a back yard approximately 12 to 14 feet deep, and have an attached two-car garage. Three architectural styles are proposed: Spanish, French, and Farmhouse. The project overall would provide 217 parking spaces, including 162 garage spaces and 49 spaces on private streets. Proposed Project impact areas are shown on Attachment A, Figure 3.

2.0 REGULATORY SETTING

The proposed Project is subject to a host of state and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: state- and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species that are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities.

2.1 State and/or Federally Listed Plant and Wildlife Species

2.1.1 State of California Endangered Species Act

California's Endangered Species Act (CESA) defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the Federal Endangered Species Act (FESA), CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided." Under the CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

2.1.2 Federal Endangered Species Act

The FESA of 1973 defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to

“take” any listed species. “Take” is defined in Section 3(18) of FESA: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the United States Fish and Wildlife Service (USFWS), through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification that result in injury to, or death of species as forms of “take.” These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

2.1.3 State and Federal Take Authorizations for Listed Species

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.
- Sections 2090-2097 of the California Endangered Species Act (CESA) require that the state lead agency consult with CDFW on projects with potential impacts on state-listed species. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed as well as state- listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

2.2 California Environmental Quality Act

Shortly after the United States federal government passed the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA) was passed in 1970 to institute a statewide policy of environmental protection. CEQA does not directly regulate land uses, but instead requires state and local agencies within California to follow a protocol of analysis and public disclosure of environmental impacts of proposed projects and adopt all feasible measures to mitigate those impacts. CEQA makes environmental protection a mandatory part of every California state and local agency's decision-making process.

2.2.1 CEQA Thresholds of Significance

Environmental impacts relative to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California to:

“Prevent the elimination of fish or wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities...”

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Attachment G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

“The project has the potential to: substantially 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 wildlife community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, ...”

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project.

2.2.2 Criteria for Determining Significance Pursuant to CEQA

Attachment G of the 1998 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

- 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 Wildlife or U.S. Fish and Wildlife Service.
- 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 Wildlife or U.S. Fish and Wildlife Service.

- 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.
- 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.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- 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.

2.2.3 CEQA Guidelines Section 15380

The CEQA requires evaluation of a project's impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that could potentially meet the criteria for state listing. For plants, CDFW assigns California Rare Plant Ranks (CRPR) to species categorized as List 1A, 1B, or 2 of the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants in California may meet the criteria for listing and should be considered under CEQA. CDFW also recommends protection of plants, which are regionally important, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 or 4.

2.3 Special Status Species Designations

2.3.1 Federally Designated Special-Status Species

Some years ago, the USFWS instituted changes in the listing status of candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. All references to federally protected species in this report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS. Additionally, the USFWS Birds of Conservation Concern 2008 report was published to identify the migratory and non-migratory bird species (beyond those already federally listed) that represent the highest conservation priorities for USFWS.

For this report, the following acronyms are used for federal special-status species:

- FE: Federally listed as Endangered
- FT: Federally listed as Threatened
- FPE: Federally proposed for listing as Endangered
- FPT: Federally proposed for listing as Threatened
- FC: Federal Candidate species (Former Category 1 candidates)
- BCC: USFWS Birds of Conservation Concern



2.3.2 State-Designated Special-Status Species

Some mammals and birds are protected by the state as Fully Protected (FP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California Species of Special Concern (SSC) are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's California Natural Diversity Database (CNDDDB) project. Informally listed taxa are not protected but warrant consideration in the preparation of biotic assessments. For some species, the CNDDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites. For this report the following acronyms are used for State special-status species:

- SE: State-listed as Endangered
- ST: State-listed as Threatened
- SCE: State candidate for listing as Endangered
- SCT: State candidate for listing as Threatened
- FP: State Fully Protected
- SSC: Species of Special Concern

2.3.3 California Rare Plant Rank

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The California Native Plant Society's *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five categories. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California (Tibor 2001). The list serves as the candidate list for listing as threatened and endangered by CDFW.

- CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
- CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
- CRPR 2A: Plants presumed extirpated in California but common elsewhere
- CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
- CRPS 3: Plants about which more information is needed
- CRPR 4: Plants of limited distribution

2.4 Additional Applicable State and Federal Regulations

Each of the following regulations bears some applicability toward assessing the natural resources of the Project Site and any effects that construction and long-term operations and maintenance activities may have upon such resources. These are included for informational and referential purposes only.



2.4.1 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (PL 95-616; 16 USC §§ 668 et seq.) provides for protection of the bald and golden eagles by prohibiting taking, possession, and commerce in the birds.

2.4.2 Clean Water Act

The Clean Water Act (CWA) regulates the discharge of pollutants to waters of the United States in order to protect water quality and the beneficial uses of these waters. Through a permit application process, CWA Section 404 regulates dredge and fill discharges to waters of the United States.

2.4.3 Fish and Wildlife Conservation Act of 1980

The Fish and Wildlife Conservation Act of 1980 (PL 96-366; 16 USC §§2901 et seq.) provides for conservation, protection, restoration and propagation of certain species, including migratory birds threatened with extinction.

2.4.4 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (PL 65-186, as amended; 16 USC §§ 703 et seq.) protects most birds, whether or not they migrate. Birds, their nests, eggs, parts, or products may not be killed or possessed. Game birds are listed and protected except where specific seasons, bag limits, and other features govern their hunting. Exceptions are made for some agricultural pests, which require a USFWS permit (yellow-headed, red-winged, bi-colored red-winged, tri-colored red-winged, Rusty and Brewer's blackbirds, cowbirds, all grackles, crows and magpies). Some other birds that injure crops in California may be taken under the authority of the County Agricultural Commissioner (meadowlarks, horned larks, golden-crowned sparrows, white- and other crowned sparrows, goldfinches, house finches, acorn woodpeckers, Lewis' woodpeckers and flickers). Permits may be granted for various non-commercial activities involving migratory birds and some commercial activities involving captive-bred migratory birds.

2.4.5 California Fish & Game Codes 3500 Series

California Fish & Game Codes 3500, 3503, 3503.5, 3505, 3511 and 3513 are State regulations that cover resident and non-resident game birds, protected bird nests, protected raptor nests, egrets, ospreys, Fully Protected bird species, and take considerations for Migratory Bird Treaty Act birds.

- Code 3500: "(a) Resident game birds are as follows:
 - (1) Doves of the genus *Streptopelia*, including, but not limited to, spotted doves, ringed turtledoves, and Eurasian collared-doves.
 - (2) California quail and varieties thereof.
 - (3) Gambel's or desert quail.
 - (4) Mountain quail and varieties thereof.
 - (5) Sooty or blue grouse and varieties thereof.
 - (6) Ruffed grouse.
 - (7) Sage hens or sage grouse.
 - (8) Hungarian partridges.
 - (9) Red-legged partridges including the chukar and other varieties.
 - (10) Ring-necked pheasants and varieties thereof.
 - (11) Wild turkeys of the order Galliformes.

(b) Migratory game birds are as follows:

- (1) Ducks and geese.
- (2) Coots and gallinules.
- (3) Jacksnipe.
- (4) Western mourning doves.
- (5) White-winged doves.
- (6) Band-tailed pigeons.

(c) References in this code to "game birds" means both resident game birds and migratory game birds."

- Code 3503: "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."
- Code 3503.5: "It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."
- Code 3505: "It is unlawful to take, sell, or purchase any aigrette or egret, osprey, bird of paradise, goura, numidi, or any part of such a bird."
- Code 3511: "(a) (1) Except as provided in Section 2081.7 or 2835, fully protected birds or parts thereof may not be taken or possessed at any time. No provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected bird, and no permits or licenses heretofore issued shall have any force or effect for that purpose. However, the department may authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species, and may authorize the live capture and relocation of those species pursuant to a permit for the protection of livestock. Prior to authorizing the take of any of those species, the department shall make an effort to notify all affected and interested parties to solicit information and comments on the proposed authorization. The notification shall be published in the California Regulatory Notice Register and be made available to each person who has notified the department, in writing, of his or her interest in fully protected species and who has provided an e-mail address, if available, or postal address to the department. Affected and interested parties shall have 30 days after notification is published in the California Regulatory Notice Register to provide any relevant information and comments on the proposed authorization.
 - (2) As used in this subdivision, "scientific research" does not include any actions taken as part of specified mitigation for a project, as defined in Section 21065 of the Public Resources Code.
 - (3) Legally imported fully protected birds or parts thereof may be possessed under a permit issued by the department.
 - (b) The following are fully protected birds:
 - (1) American peregrine falcon (*Falco peregrinus anatum*).
 - (2) Brown pelican.
 - (3) California black rail (*Laterallus jamaicensis coturniculus*).
 - (4) California Ridgway's rail (*Rallus longirostris obsoletus*).
 - (5) California condor (*Gymnogyps californianus*).
 - (6) California least tern (*Sterna albifrons browni*).



- (7) Golden eagle.
- (8) Greater sandhill crane (*Grus canadensis tabida*).
- (9) Light-footed Ridgway's rail (*Rallus longirostris levipes*).
- (10) Southern bald eagle (*Haliaeetus leucocephalus leucocephalus*).
- (11) Trumpeter swan (*Cygnus buccinator*).
- (12) White-tailed kite (*Elanus leucurus*).
- (13) Yuma Ridgway's rail (*Rallus longirostris yumanensis*)."

- Code 3513: "It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act."

2.4.6 Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the California Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations, emergencies, and/or with proper notification to the CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

2.4.7 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (California Water Code §§13000 et seq.) is the State's primary water law. It gives the State Water Resources Control Board (SWRCB) and the nine regional water quality control boards substantial authority to regulate water use of surface and sub-surface waters.

2.5 Local Regulations

2.5.1 Western Riverside Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on conservation of species and their associated habitats in Western Riverside County.

The MSHCP will serve as an HCP pursuant to Section 10(a)(1)(B) of the FESA, as well as a NCCP under the NCCP Act of 2001. The MSHCP will be used to allow the participating jurisdictions to authorize "take" of plant and wildlife species identified within the MSHCP area. USFWS and CDFW (Wildlife Agencies) have authority to regulate the take of threatened, endangered, and rare species. Under the MSHCP, the Wildlife Agencies will grant "take authorization" for otherwise lawful actions, such as public and private development that may incidentally take or harm individual species or their habitat outside of the MSHCP Conservation Area, in exchange for the assembly and management of a coordinated MSHCP Area. The MSHCP is designed to provide mitigation compliance under the FESA, CESA, CEQA, and National Environmental Protection Act (NEPA) with payment of a development mitigation fee to the appropriate local jurisdiction and completion of requisite habitat assessments/focused surveys for projects within those jurisdictions.

3.0 METHODS

Methods described below focused on determination of potential for occurrence of special-status plant and wildlife species. Specific consideration was given for species not covered or functionally covered under the Western Riverside MSHCP. Species are considered to be special-status, and are therefore subject to analysis in this section, if they meet one or more of the following criteria:

- Plant and animal species listed as endangered (FE), threatened (FT), or candidates (FPE or FPT) for listing under the Federal Endangered Species Act (FESA);
- Plant and animal species listed as endangered (SE), threatened (ST), or candidates (SPE or SPT) for listing under the California Endangered Species Act (CESA);
- Animals designated as Fully Protected Species (FP), as defined in California Fish and Game Code Sections 3511, 4700, 5050, and 5515;
- Animal species designated as Species of Special Concern (SSC) by the CDFW;
- Bat species designated as High Priority (H) by the Western Bat Working Group;
- Plants that are state listed as Rare¹; or
- Plant species ranked by the California Native Plant Society (CNPS) as having a California Rare Plant Rank (CRPR) of 1 or 2.²

Sensitive natural communities are communities that have a limited distribution and are often vulnerable to the environmental effects of projects. These communities may or may not contain sensitive species or their habitats. For purposes of this assessment, sensitive natural communities are considered to be any of the following:

- Vegetation communities listed in the CNDDDB;
- Communities listed in the Natural Communities List with a rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable).

3.1 Literature Review

As a foundation for MSHCP requirements, the Riverside County Parcel Report was considered for information regarding sensitive habitat types and potential survey requirements applicable to portions of the Project occurring within private land. The RCA MSHCP Information map was further used to review Plan Survey areas and Criteria Species areas which may overlay portions of the Project occurring within County ROW. Additional sources of information included the National Wetlands Inventory database (NWI), the US Department of Agriculture (USDA) Web Soil Mapper, Calflora database, US Geological Service (USGS) topographic maps, and Google Earth aerial imagery.

Blackhawk Environmental conducted database records search (February 20, 2020) centered on the USGS 7.5-minute Sunnymead quadrangle and including up to a five-mile radius surrounding the Project. The database records search included the CDFW California Natural Diversity Database (CNDDDB) (CDFW 2020), the US Fish & Wildlife Service (USFWS) Species Occurrence Database (USFWS 2020), and the California Native Plant Society's (CNPS) Electronic Inventory (EI) of Rare and

¹ Plants that were previously state listed as "Rare" have been re-designated as state threatened.

² Under the CEQA review process, only CRPR 1 and 2 species are considered, as these are the only CNPS species that meet CEQA's definition of "rare" or "endangered." Impacts to List 3 and 4 species do not meet CEQA's definition of "rare" or "endangered."



Endangered Vascular Plants of California (CNPS 2020). The CNDDDB contains records of reported occurrences of federal- and state-listed species, proposed endangered or threatened species, Federal Birds of Conservation Concern (BCC), California Species of Special Concern (SSC) and otherwise sensitive species or communities that may occur within and/or in the vicinity of a Project (Figure 2). The USFWS Species Occurrence Database records federal-listed and candidate species. The CNPS Electronic inventory was filtered for CRPR 2.B and higher species. For the purposes of the habitat assessment, all historic records identified using the methods above, as well as MSHCP species with additional survey needs and procedures, were considered “target species.”

The USDA Web Soil Survey was used to review soil types documented to occur within the Project site, as soil types often relate to the PFOs for a number of special-status species and habitat types. Also, a synoptic review was conducted of the NWI database, Google Earth imagery and USGS topographic maps for documented or potential water features on and adjacent to the Project site. These databases and literature reviews were used to provide details on special-status species that have potentials to occur within the proposed Project site and/or its surrounding area prior to conducting habitat assessment or focused survey efforts.

Utilizing the background data described above, Blackhawk biologist Ryan Quilley conducted a field survey of the Project site on February 24, 2020 to assess the Project site for existing conditions and the capacity to potentially harbor target species. Representative photos of the Project site, habitats, and existing site conditions are included in Attachment B.

Following the habitat assessment, potentials for sensitive species to occur were evaluated based on proximity, connectivity, recency and abundance of known occurrences, availability of suitable habitats, historic distributions of the species, and existing site conditions. Potentials for occurrence were generally evaluated based on the following criteria:

- Present – The species was observed within the Project area during the survey effort.
- High – Historic records indicate that the species has been known to occur within the vicinity of the Project (1 mile), and suitable habitat occurs onsite.
- Moderate – Historic records indicate that the species has been known to occur within the vicinity of the Project, but low-quality suitable habitat occurs onsite, or; no historic records occur within the Project, but the Project occurs within the historic range of the species, and moderate to high quality habitat occurs.
- Low – Historic records indicate that the species has not been known to occupy the immediate vicinity of the Project, and low-quality habitat for the species exists onsite.
- Assumed Absent – The species is restricted to habitats not occurring within the Project or is considered extirpated from the Project area.

3.2 Habitat Assessment

Blackhawk Environmental Biologist Ryan Quilley conducted the habitat assessment on February 24, 2020. In order to evaluate areas which may be appropriate for temporary Project use, and to evaluate the potential for indirect impacts, the assessment included all proposed Project features as well as an additional 150-meter (492 feet) survey buffer surrounding the proposed Parcel (Survey Area). Fully developed areas were excluded from the Survey Area due to lack of potential habitat for sensitive species. The survey was conducted between 07:20 A.M. and 08:55 A.M. Survey conditions

are included in Table 1 below.

Table 1. Habitat Assessment Conditions

Biologist(s)	Date	Time	Air Temperature (°F)	Wind Speed (mph)	Cloud Cover (%)	Precipitation
Ryan Quilley	2/24/2020	0720-0855	45-60	0-2	0	None

Methods used during the habitat assessment included slowly walking the entire Project site while documenting flora and fauna species and using Global Positioning System (GPS) technology to map dominant vegetation communities and potential hydrologic features. Where appropriate, the biologist paused at select vantage points to provide full visual coverage of the Project site and Survey Area. Pedestrian surveys of the Project Survey Area were performed throughout all areas of the Project and associated survey buffer, with the exception of fully developed lands; and are further discussed below. During the field survey, all plant and wildlife species observed or detected were recorded in field notebooks. Binoculars were used as needed to identify wildlife species. Plant species observed were identified to species or subspecies level when feasible according to the nomenclature in The Jepson Manual: Vascular Plants of California Edition 2 (2012). Vegetation communities were described according to dominant plant species and annotated on a high-resolution aerial photograph of the Project site. The habitat assessment did not include focused or protocol level surveys for any special-status plant or wildlife species; however, the habitat assessment included a burrowing owl habitat assessment, per Plan requirements.

3.3 Jurisdictional Water Bodies, Riverine/Riparian Habitats, Vernal Pools and Listed Fairy Shrimp Habitat

Aerial imagery, the NWI database, and USGS topographic maps of the Project site were reviewed to identify any known or potential drainage features, riparian/riverine habitat types, water bodies and/or other features that may fall under USACE, RWQCB, and/or CDFW jurisdictions and that may require investigation during the field survey. Per the MSHCP, riparian/riverine habitats are lands containing 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 freshwater flow during all or a portion of the year. The presence of any potentially jurisdictional features, including associated vegetation/communities, presence of ordinary high watermarks (OHWMs) or streambeds, substrates, hydrological indicators and potential connectivity, were documented during the field survey. Although the survey did not include a formal jurisdictional delineation, the survey included evaluation of potentially jurisdictional water bodies that may be subject to USACE, RWQCB, and/or CDFW jurisdictions within or adjacent to the Project as well as an assessment of riverine/riparian habitats as defined by the Plan, and none were observed to occur.

3.3.1 Vernal Pools and Listed Fairy Shrimp Habitat

The habitat assessment included a review of the proposed Project and Survey Area for stock ponds, ephemeral pools, road ruts, and other seasonally ponded areas which may support listed fairy shrimp species. The survey was performed during the 2020 wet season. The biologist noted any areas which may support standing water in excess of 2 centimeters. Where presence of standing water was not noted, the biologist recorded any indicators of non-riverine seasonally ponded areas such as water marks, soil cracks, algal mats, or other indicators which may indicate intermittent ponding. As part of the notation of floral species, the biologist recorded any observed vernal pool indicator species per USACE guidance (USACE 1997). Methods included the review of historic aerial imagery to determine

if inundation was readily visible on historic aerials.

3.4 MSHCP Additional Survey Needs and Procedures

The proposed Project falls within an MSHCP Survey Areas for burrowing owl (e.g. amphibian species, mammal species, narrow endemic plant species, and/or special linkage areas). Assessment of habitat suitability for burrowing owl was performed per accepted protocols. These methods are discussed below. The proposed Project does not occur within areas requiring additional assessment and surveys for mammals, amphibians, narrow endemic plants, or Criteria Areas.

3.4.1 Burrowing Owl

A habitat assessment for burrowing owl was performed throughout the Survey Area, as the entirety of the Project falls within areas designated as MSHCP survey areas for the species. Blackhawk performed a habitat assessment for burrowing owl concurrently with the habitat assessment on February 24, 2020. The assessment was performed per the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area – Step 1 Habitat Assessment (2005, by walking meandering transects through the entire Survey Area (excluding urban development). Pedestrian survey transects were spaced in a manner which allowed 100% visual coverage of the ground surface and transect centerlines were no more than 30 meters (approximately 100 ft.) apart. Transect spacing was adjusted as necessary to account for differences in terrain, vegetation density and ground surface visibility. The approximate spacing and directionality of transects is shown on Figure 3. Suitable habitat, as defined by the MSHCP, consists of a variety of natural and modified habitats for nesting and foraging that is typically characterized by low growing vegetation. Burrowing owl habitat includes, but is not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf-courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial (adapted for burrowing or digging) mammals, such as ground squirrels (*Spermophilus beecheyi*) or badgers (*Taxidea taxus*), they often utilize manmade structures, such as earthen berms; cement culverts; cement, asphalt, rock, or wood debris piles; or openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or in close proximity to man-made structures. In order to assess potential habitat, the biologist focused on the identification of suitable burrows within and adjacent to the site. Per the MSHCP, if burrowing owl habitat is not present on-site (i.e. if the site is completely covered by chaparral, cement or asphalt) Step II of the survey is not necessary and no pre-construction surveys are necessary.

4.0 ENVIRONMENTAL SETTING AND RESULTS

4.1 Literature Review Results

The literature review resulted in a total of 18 special-status wildlife species and one special-status plant species known to occur within the Project vicinity. Three wildlife species are Federally Endangered, and one is State Threatened. No plant species are listed as Threatened or Endangered under the CESA or FESA. In addition to the above-mentioned FESA and CESA designations, the remaining 16 species had a CDFW listing status of at least Species of Special Concern (SSC) or CRPR ranking of 2 or higher. A CNDDDB map of all sensitive wildlife and plant species known to occur within five miles of the Project site can be found in Attachment A, Figure 2. The resulting lists of species are included in Tables 3 and 4 and discussed in Section 4.2.4 and 4.2.5 below.

- Federally Endangered: three wildlife species; Riverside fairy shrimp, Stephen's kangaroo rat and San Bernardino kangaroo rat.
- State Threatened: one wildlife species; Stephen's kangaroo rat (*Dipodomys stephensi*).

4.1.1 MSHCP Requirements (criteria cells, fee areas, narrow endemic plants, jurisdictional areas)

The Project site is located within Riverside County in the Reche Canyon/Badlands Area Plan. The RCIP report indicates the Project does not occur within a Plan Cell Group or Plan Criteria Cell; however, the Project is located within the Reche Canyon/Badlands Area Development Impact Fee (DIF) Area and is subject to payment of said fees as compliance. The MSHCP requires burrowing owl habitat assessments and surveys (if suitable habitat is present) are to be conducted on the Project site, but it does not require additional surveys for criteria areas species, amphibian species, mammal species, narrow endemic plant species, and/or special linkage areas.

4.2 Habitat Assessment Results

The proposed Project includes 10.82 acres of undeveloped lands in the incorporated City of Moreno Valley, Riverside County, California. The Project is located generally east of March Air Reserve Base and Interstate 215 and south of State Route (SR) 60 (Attachment A, Figure 1). The Project site is bordered by the Val Verde Academy to the west, Iris Avenue to the north, California Aqueduct Linear Park Site to the south and the residential community associated with Ebony Avenue to the east. Regional access is provided by Iris Avenue to the north. Areas surrounding the Project site include residential and commercial developments, major and arterial roadways, parking areas, infrastructure, and landscaped areas, as well as undeveloped areas including the site itself and small undeveloped parcels to the west.

Elevations within the Project site range from 1,588 feet to 1,573 feet above mean sea level (AMSL) with little variation throughout the entire Project area.

4.2.1 Soils

Mapped soil units within the Project Survey Area include Exeter, Greenfield and Hanford sandy loams and loamy sands with slopes ranging between zero to two percent. Three distinct soil series are present within the Project area. These soil units are included in Table 2.

Table 2. Soils Occurring Within the Project Site

Map Unit Symbol	Map Unit Name	Acres in Survey Area	Percent of Survey Area
EnA	Exeter sandy loam, 0 to 2 percent slopes	2.11	19.5
GyA	Greenfield sandy loam, 0 to 2 percent slopes	7.00	64.7
HgA	Hanford fine sandy loam, 0 to 2 percent slopes	1.71	15.80
Total		10.82	100.00

4.2.2 Existing Land Use and Site Conditions

The Project site consists of a flat, vacant, triangular area characterized entirely by previously disturbed areas showing evidence of past historic mass grading of the site, imported soils (fill material containing sand and gravel), a single existing dirt access road, anthropogenic topographical disruptions from past land uses (tilling), and small debris piles. There was evidence onsite of recent (<1 year) disturbances, and the observed vegetation communities were highly disturbed. No native habitat was identified within the Project site, and nonnative annual species accounted for over ninety percent of the plant species percent cover on the vegetated areas.

Absolute vegetative cover averaged seventy percent and non-native plant species were dominant in all portions of the Project site. Shrubs were absent and annual, nonnative plant species accounted for an average vegetation height of one foot. The only observed trees within the Survey Area were located outside of the Project site and consisted of scattered ornamental species such as eucalyptus (*Eucalyptus* spp.), golden wattle (*Acacia* sp.) and Mexican fan palm associated with residential development to the east and northwest of the parcel and the Val Verde Academy to the west of the parcel. The Project site provides marginally suitable habitat for common plant and wildlife species known to occur in the region and is restricted to species associated with disturbed areas.

Hydrology within the Project is characteristic of previously graded urban development areas with flat topography, isolated from surface run-off by municipal storm drain systems surrounding the site. The Project site has a slight grade and generally drains from north to south. Soils throughout the project are broadly described as “well drained,” comprised of sandy loams. Areas of natural hydrology were not observed within the Project, with the exception of small rills due to sheet flow.

4.2.3 Vegetation Communities and Land Use Types

According to the MSHCP Information Map, the Project is proposed to occur within developed/disturbed land. Field verification of the site identified two distinct MSHCP vegetation community and/or land use type within the Project site. Land use types are described according to Volume II, Section C Habitat Accounts – Vegetation Associations of the Plan and further refined into

subgroups according to *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). Vegetation mapping showing the distribution of the two communities identified within the Project site and the Survey Area is shown in Figure 3 of Attachment A. The vegetation community/land cover uses present on the Project site and its' acreage include:

Project Site:

- 10.82 acres of Residential/Urban/Exotic – Disturbed Lands (Holland code 11300)

Survey Area (150 meter buffer):

- 12.23 acres of Residential/Urban/Exotic – Disturbed Lands (Holland code 11300)
- 54.39 acres of Residential/Urban/Exotic – Urban/Developed Areas (Holland code 11200)

Residential/Urban/Exotic – Disturbed Lands (Holland code 11300)

According to the Plan descriptions of Residential/Urban/Exotic areas, weed communities occur commonly in roadside areas and abandoned lots, such as the proposed Project lot. Within the Survey Area, these areas are further characterized according to Holland as “Disturbed Lands,” which may result from anthropogenic or natural causes and can take on many forms in context of the surrounding vegetation communities, available seed banks, and disturbance factors. These areas can result from previous grading, vehicle traffic, or temporary land uses such as project staging. If disturbance variables are removed, and Disturbed Land is left to natural processes, these areas have the capacity to revegetate in the short term, but do not function as native vegetation communities. This contrasts with Urban/Developed Areas described herein, that do not have the capacity to revegetate in the short term or consist of maintained landscaping.

The entire parcel (10.82 acres) can be characterized by Residential/Urban/Exotic – Disturbed Lands in the form of non-native grasses and recently disturbed soils. Dominant and sub-dominant vegetation in this habitat include smooth barley (*Hordeum murinum*), cheeseweed (*Malva parviflora*), wild radish (*Raphanus sativus*), common fiddleneck (*Amsinckia menziesii*) and red brome (*Bromus madritensis*). Herbaceous ground cover in these areas was observed to provide groundcover in excess of eighty percent. Average height of vegetation was low, ranging from one half to three feet above ground. An additional 1.41 acres of similarly characterized habitat occurs within the surrounding Survey Area. Visible signs of recent mechanical raking (tilling) and consistent anthropogenic disturbance were observed within this habitat type, precluding the potential for most special-status species of plants and wildlife (Attachment B, Photograph 4). The regional value of disturbed Residential/Urban/Exotic – Weed Communities on site is low; having potential as foraging habitat for raptors, some passerine bird species and use by rodents capable of withstanding frequent anthropogenic disturbance

Residential/Urban/Exotic – Urban/Developed Areas (Holland code 11200)

The Plan characterizes developed areas and urban environments in a variety of ways, including tree groves, street strips, green belts, and shrub cover. Within the Survey Area this land use is further refined to include existing development according to Holland as “Urban/Developed Areas” which are nearly or entirely devoid of native vegetation and show significant evidence of intentional, human-caused conversion of previously existing natural habitats into development. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. This vegetation community typically includes unvegetated or landscaped areas with a variety of ornamental (usually non-native) plants (Oberbauer 2008). A total of 54.39

acres of Urban/Developed Areas were observed within the Survey Area.

4.2.3 Jurisdictional Waters and Riverine/Riparian Habitats

USACE, RWQCB and CDFW regulate discharge into and impacts to wetland and non-wetland water bodies meeting certain criteria. The MSHCP regulates impacts to riverine/riparian communities and vernal pools, as well as species associated with these habitat types, as outlined in section 6.1.2 of the MSHCP. The MSHCP specifically describes riverine/riparian habitats as “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 freshwater flow during all or a portion of the year.”

The habitat assessment did not identify any drainage features which meet the MSHCP criteria for riverine or riparian habitat within the Project vicinity. Based on lack of riverine habitat a Jurisdictional Assessment and accompanying Jurisdictional Delineation Report is not required.

4.2.4 Sensitive and Observed Wildlife Species

The literature review resulted in a list of eighteen special-status target wildlife species with the potential to occur within the Project vicinity. These species and their potentials for occurrence are further described in Table 3. A complete list of wildlife species observed during the habitat assessment is included in Attachment C.

Table 3. Sensitive Wildlife Species Potentially Occurring Within the Survey Area

Species Name	Listing Status	Habitat Requirements	Potential for Occurrence
Birds			
Burrowing owl <i>Athene cunicularia</i>	Federal: BCC State: SSC MSHCP: Covered	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Presumed Absent. Six historical occurrences were recorded within five miles of the Project site; however, at the time of the survey, the site had no suitable burrows and lacks enough suitable habitat to support this species.
California horned lark <i>Eremophila alpestris actia</i>	Federal: None State: WL MSHCP: Covered	A common, widespread bird of the open country, the Horned Lark prefers short, sparsely vegetated prairies, deserts, and agricultural lands.	Moderate. Two historical occurrences were recorded within five miles of the Project site. Residential/Urban/Exotic – Weed Communities dominated by non-native grasses within the site provides suitable nesting and foraging habitat.
Loggerhead shrike <i>Lanius</i>	Federal: BCC State: SSC MSHCP:	Inhabits open country with short vegetation and well-spaced shrubs or low trees,	Presumed Absent (Nesting). One historical occurrence was recorded within five miles of



<i>Iudovicianus</i> (nesting)	Covered	particularly those with spines or thorns. Frequents agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses and cemeteries.	the Project site; however, the site does not provide any suitable nesting substrate.
Reptiles and Amphibians			
California glossy snake <i>Arizona elegans occidentalis</i>	Federal: None State: SSC MSHCP: Not Covered	This nocturnal species inhabits a variety of grassland, sage scrub, dry wash and chaparral habitats from sea level to over 7,000 feet in elevation. Tends to prefer sandy, loose soils. It remains in its burrow by day.	Low. One historical occurrence was recorded within five miles of the Project site; however, the site is disturbed and unlikely to provide suitable habitat for this species. Additionally, the site is surrounded by development, further precluding occupation by this species.
San Diego horned lizard <i>Phrynosoma blainvillii</i> (formerly <i>Phrynosoma coronatum blainvillei</i>)	Federal: None State: SSC MSHCP: Covered	Occurs widely in sage scrub, woodlands, grasslands, and chaparral communities within microhabitats of loose granitic soils and open areas for sunning and foraging. This species is commonly associated with the presence of native harvester ants.	Presumed Absent. Multiple historical occurrences are recorded within five miles of the Project site; however, suitable habitat does not exist within the Project site. Additionally, the site is surrounded by development, further precluding occupation by this species.
Coastal whiptail <i>Aspidoscelis tigris stejnegeri</i> (formerly <i>Cnemidophorus tigris multiscutatus</i>)	Federal: None State: SSC MSHCP: Covered	Prefers open scrub, chaparral, and woodland habitats with open areas for basking and native ants as a prey base.	Presumed Absent. One historical occurrence was recorded within five miles of the Project site; however, the site is highly disturbed, lacks shrub cover, and is unlikely to provide suitable habitat for this species. Additionally, the site is surrounded by development, further precluding occupation by this species.
Northern red diamond rattlesnake <i>Crotalus ruber ruber</i>	Federal: None State: SSC MSHCP: Covered	Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas. On the desert slopes of the mountains, it ranges into rocky desert flats.	Presumed Absent. Four historical occurrences are recorded within five miles of the Project site; however, suitable habitat does not exist within the Project site. Additionally, the site is surrounded by development, further precluding occupation by this species.
Belding's orange-	Federal: None	Occurs widely in sage scrub,	Presumed Absent. One



throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	State: SSC MSHCP: Covered	woodlands, grasslands, and chaparral communities within microhabitats of loose granitic soils and open areas for sunning and foraging.	historical occurrence was recorded within five miles of the Project site; however, the site is disturbed, lacks shrub cover, and is unlikely to provide suitable habitat for this species. Additionally, the site is surrounded by development, further precluding occupation by this species.
Western spadefoot toad <i>Spea hammondi</i>	Federal: None State: SSC MSHCP: Covered	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Breeding sites include vernal pools and other temporary rain pools, cattle tanks, and occasionally in pools of intermittent streams. Typically, the pools are turbid with little or no cover.	Presumed Absent. Five historical occurrences are recorded within five miles of the Project site; however, suitable habitat does not exist within the Project site, and no seasonal water bodies were observed in the vicinity. Additionally, the site is surrounded by development, further precluding occupation by this species.
Mammals			
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	Federal: None State: SSC MSHCP: Covered	This species is associated with sparsely vegetated lower elevation grasslands, alluvial sage scrub and coastal sage scrub, where it tends to occur in patches with fine sandy soils, such as dry washes and aeolian deposits.	Presumed Absent. Five historical occurrences are recorded within five miles of the Project site; however, the Project site is characterized by heavily disturbed soils, lacks sufficient grass or shrub cover, contains fill soil/gravel materials, and lacks connectivity to higher quality habitat. No pocket mouse burrows were observed. Suitable habitat for this species is absent from the site.
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	Federal: None State: SSC MSHCP: Covered	Prefers loose, sandy, and gravelly soils, or mixed rocks, on moderate to steep rocky slopes with nearby shrubs. Habitats include coastal scrub, chamise-redshank chaparral, mixed chaparral,	Presumed Absent. Two historical occurrences are recorded within five miles of the Project site; the Project site is characterized by disturbed soils, lacks sufficient shrub cover, contains fill soil/gravel



		sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper and annual grassland. Known range extends north to the San Bernardino and San Gabriel mountains, east to the San Jacinto Mountains, and south into Baja California.	materials, and lacks connectivity to higher quality habitat. No pocket mouse burrows were observed. Suitable habitat for this species is absent from the site.
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	Federal: None State: SSC MSHCP: Not Covered	Colonial species that roosts primarily in crevices in steep rugged cliffs, high rocky outcrops and slopes; it is readily found in abandoned quarries. May also roost in buildings, caves, and under roof tiles. It has been found in a wide variety of plant associations, including riparian, oak woodland, coniferous forest, open meadow and grassland, and coastal and desert scrublands, including over scrubby ridges, reservoirs, ponds, wetlands, and artificial lights.	Presumed Absent (Roosting/Foraging). One historical occurrence has been reported within five miles of the Project site. The Project site contains poor foraging habitat and roosting habitat/structure is not present on the Project site.
San Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>	Federal: FE State: SSC MSHCP: Covered	This species occurs primarily in alluvial fan sage scrub (AFSS) which is a distinct habitat type of the coastal sage scrub (CSS) community. The AFSS habitats are confined to river and floodplains of southern San Bernardino County, the current distribution of the SBKR in San Bernardino County is San Ana Wash, Cajon and Lytle Creek, Plunge Creek, City Creeks, and area west of Rialto Drainage near the Jurupa Hills.	Presumed Absent. Three historical occurrences are recorded within five miles of the Project site; however, the Project site is characterized by disturbed soils and fill materials and lacks connectivity to higher quality habitat. Habitat for this species is sub-marginal at best, but with no kangaroo rat burrows observed, and a lack of reasonable connectivity to known populations, this species is assumed absent.
Southern grasshopper mouse	Federal: None State: SSC MSHCP: Not	Typically found in open habitats, including native perennial grasslands and	Presumed Absent. One historical occurrence has been recorded within five miles of



<p><i>Onychomys torridus ramona</i></p>	<p>Covered</p>	<p>coastal sage scrub to the west of the mountain and alluvial fans and desert scrub to the east.</p>	<p>the Project site; however, the Project site is characterized by disturbed soils, a lack of shrub cover, imported fill materials, and lacks connectivity to higher quality habitat. Habitat for this species is assumed absent.</p>
<p>Stephen's kangaroo rat <i>Dipodomys stephensi</i></p>	<p>Federal: FE State: ST MSHCP: Covered</p>	<p>Occurs primarily in low-growing annual and perennial grassland habitats but may occur in coastal scrub or sagebrush with sparse canopy cover and low herbaceous growth, or in disturbed areas. Preferred perennials are buckwheat and chamise; preferred annuals are brome grass and filarees.</p>	<p>Presumed Absent. Nine historical occurrences are recorded within five miles of the Project site; however, the Project site is characterized by disturbed soils and fill materials and lacks connectivity to higher quality habitat. Habitat for this species is sub-marginal at best, but with no kangaroo rat burrows observed, and a lack of reasonable connectivity to known populations, this species is assumed absent.</p>
<p>Western mastiff bat <i>Eumops perotis californicus</i></p>	<p>Federal: None State: SSC MSHCP: Not Covered</p>	<p>Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Crevices in cliff faces, high buildings, trees, and tunnels are required for roosting. When roosting in rock crevices, it needs vertical faces to drop off to take flight. Reproduction: Nursery roosts described as tight rock crevices at least 35 inches deep and two inches wide, or crevices in buildings. Suitable habitat consists of extensive open areas with abundant roost locations provided by crevices in rock outcrops and buildings. Is known to forage over 25 miles away from its roost site (Zeiner et al 1988).</p>	<p>Presumed Absent (Roosting/Foraging). Two historical occurrences have been reported within five miles of the Project site. The Project site contains poor quality foraging habitat and no roosting habitat/structure. Additionally, the site is surrounded by development, further precluding occupation by this species.</p>



Western yellow bat <i>Lasiurus xanthinus</i>	Federal: None State: SSC MSHCP: Not Covered	Roosts are commonly in palm trees, and occasionally in cottonwood trees or yuccas, often near surface water in open grassy areas or scrub habitat. Forages over water and among trees in coastal, foothill, and desert riparian areas, and in suburban neighborhoods.	Low (Roosting), Presumed Absent (Foraging). Two historical occurrences have been reported within five miles of the Project site. The Project site does not contain suitable foraging and roosting habitat/structure for this species. Potential roosting sites in Mexican fan palms are present in adjacent areas to the Project site within the Survey Area.
Crustaceans			
Riverside fairy shrimp <i>Streptocephalus wootoni</i>	Federal: FE State: None MSHCP: Covered	Restricted to deep seasonal vernal pools, vernal pool like ephemeral ponds, and stock ponds and other human modified depressions (TLMA 2004). Riverside fairy shrimp prefer warm-water pools that have low to moderate dissolved solids, are less predictable, and remained filled for extended periods of time (Eriksen and Belk 1999). In Riverside County, Riverside fairy shrimp have been found in pools formed over the following soils: Murrieta stony clay loams, Las Posas series, Wyman clay loam, and Willows soils (U.S. Fish and Wildlife Service 2001).	Presumed Absent. Two historical occurrences have been reported within five miles of the Project site; however, this species requires vernal pool habitats which are absent from the Project site.

Of the 18 target wildlife species documented to occur within the Project vicinity, one (California horned lark) was determined to have a moderate potential for occurrence, and two (glossy snake and western yellow bat) had a low potential for occurrence based on proximity of historic records and quality of habitat on site. Specifically, western yellow bat was determined to have a low potential for roosting within the Survey Area based on the presence of Mexican fan palms (*Washingtonia robusta*) present on lands immediately adjacent to the Project site. However, suitable roosting sites for this species do not occur directly within the Project and this species is presumed absent from the Project site. The remaining 15 target sensitive species were considered absent due to lack of suitable habitats on the Survey Area.

4.2.5 Special Status and Observed Plant Species

Based on CNDDDB, USFWS, and CNPSEI-documented occurrences within five miles of the Project site,

the literature review resulted in a list of one special-status plant species evaluated for its' potential to occur on the Project site. This single species and potential for occurrence is further described in Table 4 below. A complete list of plant species observed during the field survey is included in Attachment D.

Table 4. Special-Status Plant Species Potentially Occurring Within the Project Site

Species Name	Listing Status	Habitat Requirements	Potential for Occurrence
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	Federal: None State: None CRPR: 1B.1 MSHCP: Not Covered	Annual herb that occurs in alkali soils within chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland. Blooms: Apr-Sep Elevation: 0-640 m	Presumed Absent. One historical occurrence has been recorded within five miles of the Project site; however, alkali soils in suitable habitat were not observed on the Project site. Additionally, no senesced individuals, seedlings or plants of any tarplant species were observed.

The single special-status plant species (smooth tarplant) documented to occur within the Project vicinity, is presumed absent within the Survey Area based on proximity of historic records and lack of suitable habitat on site.

4.2.6 Special Status and Observed Habitat Types

The literature review did not result in any special-status habitat types with potential to occur on the Project site.

4.3 Migratory Birds

The Project site predominately contains non-native grasses and non-native annual plant species commonly associated with anthropogenically-altered landscapes, while areas surrounding the Project site contain sparse ornamental shrubs and trees, amongst development. These habitat types provide suitable nesting habitat primarily for avian species commonly associated with developed and Residential/Urban/Exotic – Weed Communities dominated by non-native grasses. Nearly all native nesting birds are protected by the Migratory Bird Treaty Act (MBTA) and CDFW Codes 3500 through 3516.

Common bird species with the potential to nest within the Project site and adjacent habitats include American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), house finch (*Haemorhous mexicanus*), house sparrow (*Passer domesticus*; not MBTA-covered), European starling (*Sturnus vulgaris*; not MBTA-covered), northern mockingbird (*Mimus polyglottos*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*) and Say's phoebe (*Sayornis saya*) among others. Suitable nesting habitat for raptor species identified during the survey (i.e., American kestrel), consisted of potential cavities within ornamental palms and buildings that were adjacent to the Project site. The open nature of the Project site and Residential/Urban/Exotic – Weed Communities dominated by non-native grasses, also provides suitable habitat for ground nesting birds such as

horned lark, savannah sparrow (*Passerculus sandwichensis*), killdeer (*Charadrius vociferans*), among others.

4.4 Reserve Interface and Wildlife Movement Corridors

Tracks, sign, burrows and/or direct visual observation of small mammal species was limited and consisted of scarce Botta's pocket gopher (*Thomomys bottae*) burrows along the northern Project limit and direct observation of desert cottontail (*Sylvillagus audubonii*) within a single small rubble pile within the northwest portion of the Project site. Domestic dog tracks and a single domestic cat were observed within the Project site. The Project site does not contain large natural areas and habitat fragments, and is isolated by surrounding development, precluding wildlife corridors and connectivity to large conservation areas. The Project does not occur within Plan Conservation Areas or Public/Quasi Public Lands (PQP), and the nearest PQP area is three quarters of a mile south of the Project site and connectivity between open space Conservation Areas and the Project is absent as a result of heavy urban development in surrounding lands.

5.0 WESTERN RIVERSIDE MSHCP CONSISTENCY ANALYSIS

The Project is not located within a MSHCP Criteria Cell or Cell Group. The MSHCP establishes habitat assessments for certain plant and wildlife species. The Project is located within an area of the MSHCP requiring habitat assessments for burrowing owl and burrowing owl surveys, if suitable habitat is present; however, no suitable burrowing owl habitat was identified within the Project area or adjacent survey areas. The Project was not observed to support riparian/riverine habitats. The Project does not exist adjacent to Public/Quasi Public Lands. The Project is not located within an area requiring surveys for mammals, amphibians, narrow endemic plant species, or criteria area species.

5.1 Reserve Assembly Analysis

The proposed Project is not located within a Plan Criteria Cell or Cell Group, and therefore will not directly impact Conservation Areas or long-term reserve assembly. The proposed Project does not occur immediately adjacent to Plan Conservation Areas and therefore will avoid direct impacts to these areas. Potential indirect impacts associated with the proposed Project adjacent to these areas is discussed in Section 5.2 below.

5.2 Urban Wildlands Interface

According to the Plan, the Urban/Wildlands Interface Guidelines are intended to address indirect effects associated with locating development in proximity to Plan Conservation Areas. Plan Conservation Areas include Public/Quasi Public Lands (PQP), San Jacinto Wildlife Area Additional Acquisition, Preexisting Conservation Agreements and Rural Mountainous Designation in the MSHCP Plan Area. The Project Site does not occur within any of these Conservation Areas and urban development isolates the Survey Area from all Conservation Areas by more than three quarters of a mile. The Project Site does not occur within a Special Linkage Area and connectivity to the site is absent as a result of heavy urban development in surrounding lands. The Project does not occur adjacent to Conservation Areas, therefore, development of this parcel is not likely to result in "edge effects" that will adversely affect biological resources within the MSHCP Public/Quasi Public Lands (TLMA, 2004). Analysis was conducted under section 6.1.4 of the MSHCP to determine potential impacts.

5.2.1 Drainage and Storm Water Runoff

Though the project is not within or immediately adjacent to PQP lands, Project indirect impacts could involve drainage and storm water runoff from the Project site to adjacent flow-ways (Iris Avenue and Red Maple Lane) and potentially into the municipal storm drain system. A possible temporary indirect impact during construction may include an increase of soil erosion above natural levels currently observed in these areas. Other potential effects may result from non-storm water discharges, excavation stockpile runoff, or other elements that might degrade or harm biological resources or ecosystem processes within distant MSHCP PQP Lands, if fed by the municipal storm drain system. Regardless of proximity to PQP Lands, Best Management Practices (BMPs) should be included to ensure that siltation and erosion are minimized during construction, and also incorporated into the final design of the Project in order to ensure that future water quality is not degraded. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into existing natural drainage courses and/or MSHCP Public Quasi-Public Lands (TLMA, 2004).

5.2.2 Toxics

Due to the use of heavy machinery proposed in the development of the Project site, as well as standard development practices, a possible indirect impact to the distant MSHCP Public/Quasi Public Lands could involve toxic runoff from the Project site to City storm drains. Toxic runoff may originate from hydraulic fuel, automotive fluid leaks, oil, etc. Similar measures as those used to address drainage impacts will be implemented to prevent toxic impacts to the any MSHCP Public/Quasi Public Lands.

5.2.3 Lighting

No PQP lands exist adjacent to the Project and therefore there should be no associated impacts to adjacent habitats or MSHCP Public/Quasi Public Lands as a result of night lighting.

5.2.4 Noise

Project activities may result in an increase of noise levels in areas immediately surrounding the Project site; however, no adjacent habitats and MSHCP Public/Quasi Public Lands do not exist within the vicinity of the Project. Therefore, increased noise levels associated with Project implementation are not anticipated to effect wildlife associated with MSHCP Public/Quasi Public Lands.

5.1.5 Invasives

The Project is surrounded by urban development and is not adjacent to MSHCP Public/Quasi Public Lands, therefore transfer of invasive species to distant MSHCP Public/Quasi Public Lands is not anticipated. The site itself does not provide any native habitat and is dominated by non-native annual species.

5.1.6 Grading/ Land Development

All Project activities shall remain restricted to designated work areas proposed for disturbance as shown in Attachment A, Figure 3, "Project Boundary". The Project work area occurs outside of all

MSHCP Conservation Areas, Riverine Habitat, and avoids habitat areas which may support species for which additional surveys would be required.

5.2 Additional Survey Needs and Procedures

Additional surveys are not anticipated in conjunction with Plan implementation in order to achieve coverage for species discussed in 6.3.2 of the Plan, since these species either were determined to be absent from the Project site, or potential impacts to species with a PFO will be limited to a level that is below levels considered significant under CEQA/NEPA guidelines and the MSHCP.

The Project falls within the MSHCP Survey Area for burrowing owl. The habitat assessment included consideration of this species, discussed below.

5.2.1 Burrowing Owl

The Project site is located within a MSHCP burrowing owl survey area, if suitable habitat is identified during the burrowing owl habitat assessment. A habitat assessment during a site visit conducted on February 24, 2020 identified Disturbed Areas which may be considered suitable for burrowing owl. Based on the potential for suitable habitat, a habitat assessment was performed as described in section 3.4.1 above. The results of the habitat assessment determined that suitable burrowing owl habitat does not exist within the Project site or Survey Area due to a lack of suitable burrow sites. Natural or manmade burrows were not observed, with the exception of two small concrete rubble piles, one of which was occupied by a feral cat and the other occupied by several desert cottontail rabbits, precluding owl occupation. No whitewash, pellets, feathers or other burrowing owl sign were observed during the survey. Additionally, crevices created by these concrete rubble piles were considered to be too shallow to support burrowing owl. Due to absence of suitable habitat for this species within the Survey Area, no additional surveys for this species are required.

5.3 Criteria Area Species and Narrow Endemic Plant Species

The Project site is not located within a Narrow Endemic Plants Survey Area under section 6.1.3 of the Plan. The Project site is not located within a Criteria Area Species Survey for special-status plant species under section 6.3.2 of the Plan. No additional non-covered special-status or narrow endemic plant species with the potential to occur on site were identified during the literature review and/or site assessment.

5.4 Jurisdictional Waters

The presence of any potentially jurisdictional features, including associated vegetation/communities, presence of ordinary high watermarks (OHWMs) or streambeds, substrates, hydrological indicators and potential connectivity was not observed during the habitat assessment. The habitat assessment did not include a formal jurisdictional delineation effort as potentially jurisdictional water bodies that may be subject to USACE, RWQCB, and/or CDFW jurisdictions were not documented to occur within or adjacent to the Project. Therefore, an additional assessment is not required to determine if specific areas of the Project site meet either 1) criteria to be considered a relatively permanent water or tributary of a TNW providing meeting significant nexus standards and fall under the jurisdiction of the USACE, RWQCB and/or CDFW as a non-wetland water and streambed, or 2) meet the three-parameter criteria of a wetland and fall under the jurisdiction of the USACE, RWQCB and/or CDFW as

wetland areas.

5.4.1 Riparian/Riverine Habitats

Per Section 6.1.2 of the MSHCP, riparian/riverine habitats are lands containing 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 freshwater flow during all or a portion of the year. The habitat assessment included a review of areas which may meet criteria as riparian/riverine habitats per the Plan. No riparian/riverine habitats were documented within the Project site or Survey Area.

5.4.2 Riparian/Riverine Species

Riparian/riverine habitats were not identified within the Project site. Due to the lack of habitat which supports riparian species, riparian/riverine-associated species listed in section 6.1.2 of the Plan are not expected to occur. No MSHCP-covered or riparian-associated species were directly observed during the February 24, 2020 field survey.

5.5 Vernal Pools and Fairy Shrimp

No vernal pools or habitat that could potentially support fairy shrimp species were observed on the Project site. No vernal pools were observed, and they are not known to historically occur within the Project site or within 2 miles of the Survey Area. The closest historical record of listed fairy shrimp to the Project Site occurs approximately 2.5 miles to the west. The Project is surrounded by urban development and lacks any connectivity to known populations of listed fairy shrimp, further precluding the potential for occurrence. In addition to the absence of historical records of occurrence, native soil types mapped for the Project include well drained sandy loams, not expected to support natural formation of vernal pools or fairy shrimp habitat. As a result, these areas are not expected to support vernal pool species.

6.0 IMPACTS AND MITIGATION

This section of the report includes a discussion of the potential direct, indirect, and cumulative impacts to onsite special-status biological resources that may result upon the construction and implementation of the Project. Direct impacts include those involving the loss, alteration, and/or disturbance of plant communities, and consequently, the flora and fauna of the affected area. Direct impacts also include the destruction of individual plants and/or wildlife. Direct impacts may adversely affect regional populations of certain species, or result in isolated populations, reducing genetic diversity and range-wide population stability; conversely, direct impacts may also have intended or unintended positive effects in some cases.

Indirect impacts include a variety of effects related to areas or habitats that are not directly removed by project development, such as loss of foraging habitat, increased ambient noise, artificial light, introduced predators (e.g., domestic cats, dogs and other non-native animals), competition with exotic plants and animals, increased human presence and associated disturbances (e.g., trash, green waste, physical intrusion). Indirect impacts may include long, and/or short-term daily activities associated with project build-out, such as increased traffic, permanent barriers or fences, buildings, exotic seed-bearing ornamental plantings, irrigated landscapes and human presence, among others. These types of impacts are known as edge effects and over time, may result in some encroachment on native plants by exotic plants, altered behavioral wildlife patterns, reduced wildlife diversity, and decreased wildlife abundance in habitats adjacent to a given project site. However, as is the case with direct impacts, indirect impacts may also have intended or unintended positive effects for certain species.

The potential for significant adverse effects, either directly or indirectly through habitat modification or conversion, on any special-status vegetation community, plant species or wildlife species, or that could occur as a result of the development of this Project is discussed within this section.

6.1 Project Impacts

This section provides definitions and discussion of the various Project-related impacts which are anticipated to occur.

6.1.1 Habitat Impacts

Construction of the proposed Project will result in permanent loss of 10.82 acres of Residential/Urban/Exotic – Disturbed Areas associated with the permanent footprint of the residential development, parks, roads, and a trail.. These include all areas proposed for ground disturbance, clearing, grading, equipment staging, materials laydown, storage and ultimate development of the parcel. This area is shown on Attachment A as “Project Boundary.”

The estimated acreages of proposed impacts resulting from implementation as described above are summarized in Table 6.

Table 6. Summary of Proposed Project Impacts to Vegetation Communities/Land Use Types

Vegetation Community/ Land Use Type	Acreage
Residential/Urban/Exotic – Weed Communities	10.82

6.1.2 Construction-Related Impacts

Short-term (Temporary) Construction-Related Direct Impacts

Potential direct impacts to special status biological resources, absent mitigation measures, which may occur as a result of construction of the proposed Project include wildlife entrapment, killed or injured wildlife, and unauthorized grading or vegetation removal. These activities have the potential to occur for any number of reasons, including lack or absence of project design staking, inadequate or unmaintained demarcation of proposed impacts areas, misinterpretation of Project designs, and human error in operating equipment. Dependent on construction methodology and sequencing, impacts resulting from wildlife entrapment may occur at any Project site where excavations remain open and un-sealed for extended periods.

Short-term (Temporary) Construction-Related Indirect Impacts

Potential temporary indirect impacts as a result of construction of the proposed Project include non-storm-water discharges resulting from spills or leaks and storm-water discharges from sediment laden runoff into adjacent municipal storm drain systems.

Potential temporary indirect impacts as a result of the Project may include fugitive dust, excess noise, and the attraction of predators to the Project site that could ultimately result in take of special-status species.

6.1.3 Operations and Maintenance-Related Impacts

The proposed Project would include the complete development of the proposed parcel. As the Project location is surrounded by previously developed lands, there are no anticipated operations and maintenance-related impacts from the Project, once development is complete.

Long-term (Permanent) Operations and Maintenance-Related Direct Impacts

Direct impacts associated with the completion of the Project would be restricted to the permanent loss of Residential/Urban/Exotic – Weed Communities. Additional impacts to special status biological resources are not anticipated to result from operations and maintenance activities.

Long-term (Permanent) Operations and Maintenance-Related Indirect Impacts

Indirect impacts associated with the long-term operation of the Project are not anticipated due to the Project location being surrounded by developed areas. Though, without implementation mitigation measure and not adjacent to PQP lands. Impacts as a result of Operations and Maintenance of the proposed Project could include non-storm-water discharges resulting from spills or leaks and storm-water discharges from sediment laden runoff into adjacent municipal storm drain systems. Without proper implementation of a SWPPP and stormwater management systems

incorporated in the construction design, consistent with state and local requirements, there is a potential for long term urban discharge.

6.2 Special-Status Species

6.2.1 MSHCP-Covered Special Status Species

Of the eighteen special-status target wildlife species evaluated, only three are expected to have the potential to occur. Of these three wildlife species, the California horned lark (moderate PFO; State WL) is the only species functionally covered under the Plan. This species may be subject to both temporary and permanent, direct and indirect impacts, as a result of the proposed Project. Absent mitigation, Project-related impacts to this species are potentially significant. The following MM is recommended to reduce potential impacts to below significant levels for Plan-covered special-status species:

- MM-BIO 1: Payment of MSHCP Mitigation Fees. Prior to issuance of a grading or building permit, the Project applicant will be required to pay relevant MSHCP mitigation fees per the Final Mitigation Fee Nexus Report. These fees will be determined in consultation with the Riverside Conservation Authority based on final Project classification and impacts. Payment of all mitigation fees will be required as part of the Project approval process.

The single special-status target plant species evaluated (smooth tarplant) does not have the potential to occur. Smooth tarplant (Assumed Absent PFO; SSC) is covered under the Plan.

6.2.2 Special-Status Species Not Functionally Covered Under the MSHCP

Of the special-status species expected to have the potential to occur, the following two species are not functionally covered under the Plan:

- California glossy snake (low PFO; SSC)
- Western yellow bat (low [roosting]; SSC)

Focused surveys for these special-status species were not performed and potential for impacts is presumed based on extent and availability of habitat. California glossy snake may be subject to permanent, direct impacts, as a result of the proposed Project; however, anticipated Project-related impacts to California glossy snake is less than significant due to the Project size, existing marginal habitat, previous disturbance and low probability that this species exists within the Project site.

Western yellow bat may be subject to temporary indirect impacts as a result of the proposed Project. The only potentially suitable roosting habitat for Western yellow bat exists in the form of scattered ornamental Mexican fan palms which only occur outside of the Project impact footprint. Indirect impacts to potential western yellow bat roost sites may include temporary increases in noise as a result of construction activity. However, these activities are expected to be short in duration and generally would not exceed existing ambient conditions adjacent to the site. Based on low potential for this species to occur in combination with the temporary nature of potential impacts, potential impacts to this species are likely considered less than significant.

Additionally, with the implementation of MM BIO-1 above, which will contribute to the ongoing reserve assembly of the region, impacts to either of the aforementioned species are likely to be less than significant.



6.3 Species Requiring Additional Surveys and/or Habitat Assessments

6.3.1 Burrowing Owl

At the time of the assessment, the Survey Area did not support suitable habitat for burrowing owl; however, two rubble piles containing shallow cavities were identified on the site and were occupied by desert cottontail and a domestic cat during the 2020 breeding season, precluding occupation by burrowing owl. Therefore, suitable habitat for burrowing owl was found absent from the Project site and focused burrowing owl surveys were not required pursuant to the Burrowing Owl Survey Instructions for the Western Riverside MSHCP. Though, occupied by other species at the time of the assessment, these rubble piles have a low potential to support migrating burrowing owls as temporary roost sites, if they become vacant (i.e. not occupied by desert cottontails or domestic cats) prior to construction.

With the implementation of the proposed mitigation measures for potential Project-related impacts to burrowing owl, the Project will fulfill the requirements related to biological resources pursuant to CEQA and the Plan.

- MM-BUOW 1: Within 30 days of construction, conduct take avoidance surveys for burrowing owl per guidelines specified in the Western Riverside County Regional Conservation Authority Burrowing Owl Survey Instructions for the Plan Area (2006).
- MM-BUOW 2: If burrowing owls are observed to occupy the Project site and/or adjacent areas during take avoidance surveys or incidentally during construction, the City of Moreno Valley Planning Department will be notified, and avoidance measures may be implemented during the breeding season (March 1 through August 31). If burrowing owls are present during the non-breeding season (September 1 through February 28), burrowing owl exclusion measures may be implemented in accordance with the Plan.

6.4 Migratory Birds

The assessment identified suitable habitat and substrate for migratory birds protected under the MBTA and CDFW Codes 3503 and 3503.5. Permanent impacts to migratory birds as a result of the Project may include habitat loss, nesting habitat removal, roosting site loss and/or loss of individuals. Indirect impacts may include fugitive dust, excess noise, increased artificial lighting, and the attraction of predators to the Project site. The following mitigation measure is recommended to reduce potential impacts to migratory bird species below significant levels:

- MM-BIO 2: Perform Per-Construction Nesting Bird Surveys. To the extent feasible, conduct vegetation removal outside of the nesting bird season (generally between March 1 and August 31). If vegetation removal is required during the nesting bird season, conduct take avoidance surveys for nesting birds within 100-feet of areas proposed for vegetation removal. Surveys should be conducted by a qualified biologist(s) within three days of vegetation removal. If active nests are observed, a qualified biologist will determine appropriate minimum disturbance buffers or other adaptive mitigation techniques (e.g., biological monitoring of active nests during construction-related activities, staggered schedules, etc.) to ensure that impacts to nesting birds are avoided until the nest is no longer active.



6.5 MSHCP Urban Wildlands Interface Impacts

As discussed in Section 6.1.3 above, the proposed Project has the potential for indirect impacts to PQP Lands and Plan Conservation Areas through potential stormwater and non-stormwater discharges. However, the Project will incorporate “best practices” for storm water pollution prevention identified during the development of a Project Storm Water Pollution Prevention Plan (SWPPP). Furthermore, the Project has been designed to incorporate stormwater management facilities to manage and control urban run-off during long-term operations. As such, potential indirect impacts to PQP and Conservation Areas are likely considered less than significant.

6.6 Riparian/Riverine Habitat and/or Potentially Jurisdictional Areas

The habitat assessment did not identify Riparian/Riverine habitat and potentially jurisdictional areas subject to regulation by USACE, RWQCB, and/or CDFW. Therefore, there are no anticipated potential impacts to these areas and Project development will not result in significant impacts.

7.0 CONCLUSIONS

The Project site is within the Reche Canyon/Badlands Area Plan of the MSHCP, but not within any Criteria Cell or Cell Group.

The Project does not provide suitable habitat for riparian/riverine associated species. The Project site does not contain vernal pools or potential listed fairy shrimp habitat. At the time the assessment was conducted, the Project site did not provide suitable habitat for burrowing owl; however, two rubble piles, occupied by other species at the time of the assessment, have a low potential to support migrating burrowing owls as temporary roost sites, if they become vacant (i.e. not occupied by desert cottontails or domestic cats) prior to construction. Following the MSHCP recommendation of a preconstruction burrowing owl survey within 30 days prior to construction, no negative impacts to burrowing owl are anticipated. If burrowing owls are present during the non-breeding season (September 1 through February 28), burrowing owl exclusion measures may be implemented in accordance with the Plan. If burrowing owls are present during the breeding season (March 1 through August 31), avoidance measures will be implemented.

The Project site provides potentially suitable habitat for California glossy snake and also provides suitable nesting habitat for California horned lark and other avian species. Adjacent areas, outside of the Project footprint may provide roosting habitat for Western yellow bat in the form of Mexican fan palms. Impacts to adjacent PQP lands, special-status species, PQP Lands, Riverine habitat, potential jurisdictional water resources and nesting birds are anticipated to be less than significant with mitigation proposed herein to offset any direct and/or indirect impacts.

By adhering to the recommendations provided in this Report (and resulting additional actions, if required), payment of the MSHCP mitigation fees and fulfillment of the stipulations set forth by the County of Riverside HANS process, this Project is fully consistent with the Plan and would fulfill requirements for biological resources pursuant to CEQA, FESA, and CESA.



8.0 SURVEYOR CERTIFICATION

All data, statements, analyses, findings and attachments within this report are accurate and truthful in terms of describing the existing conditions and the Project as proposed to Blackhawk Environmental. By adhering to the mitigation measures proposed within this habitat assessment report and payment of appropriate fees to the Western Riverside County Regional Conservation Authority, compensatory mitigation related to the complete the Project will be met to CEQA significance thresholds.

Ryan Quilley
Staff Biologist



Attachment: Appendix B to Initial Study Habitat Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

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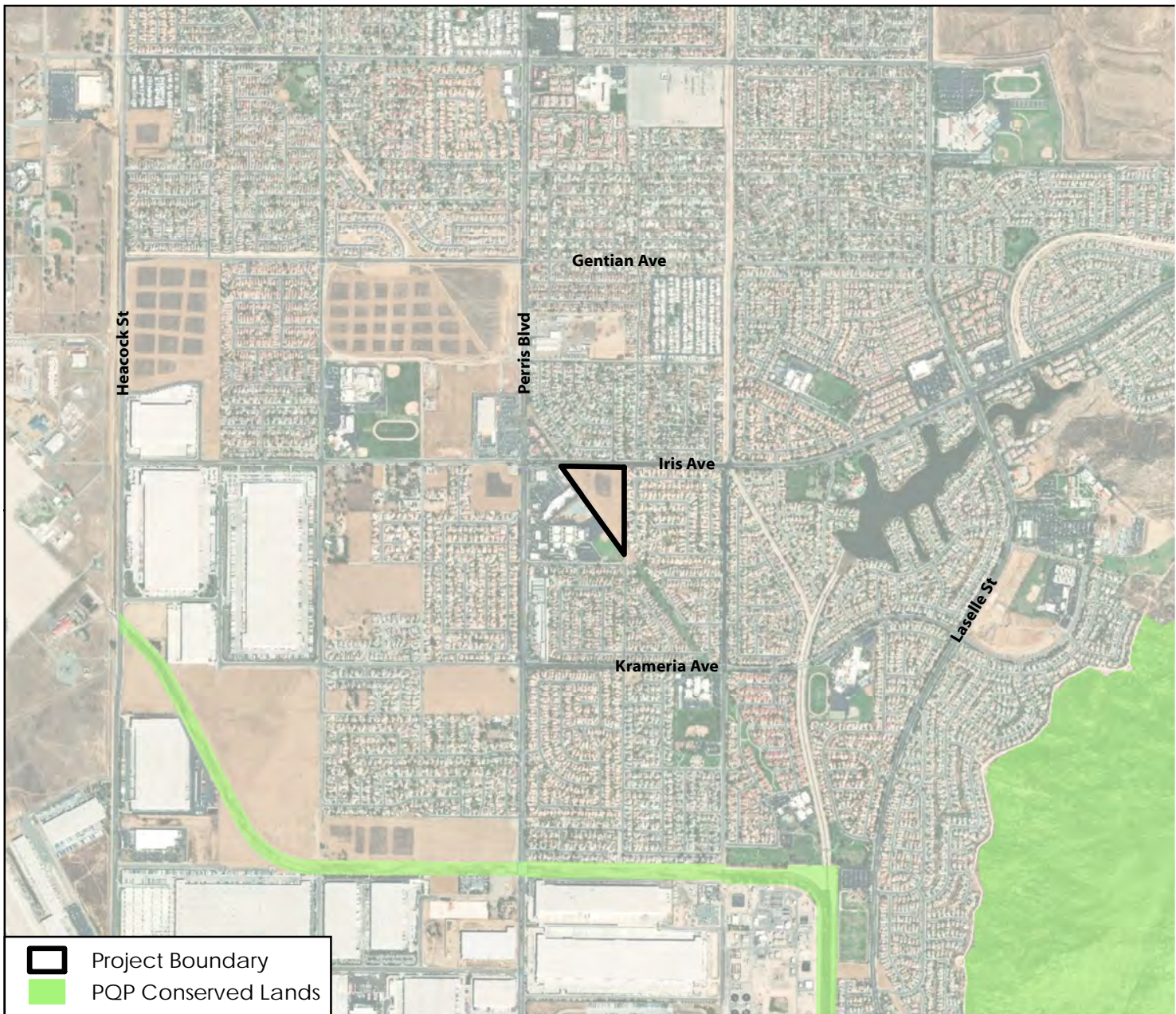
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ATTACHMENT A

Figures





Source: Maxar 2018, Esri

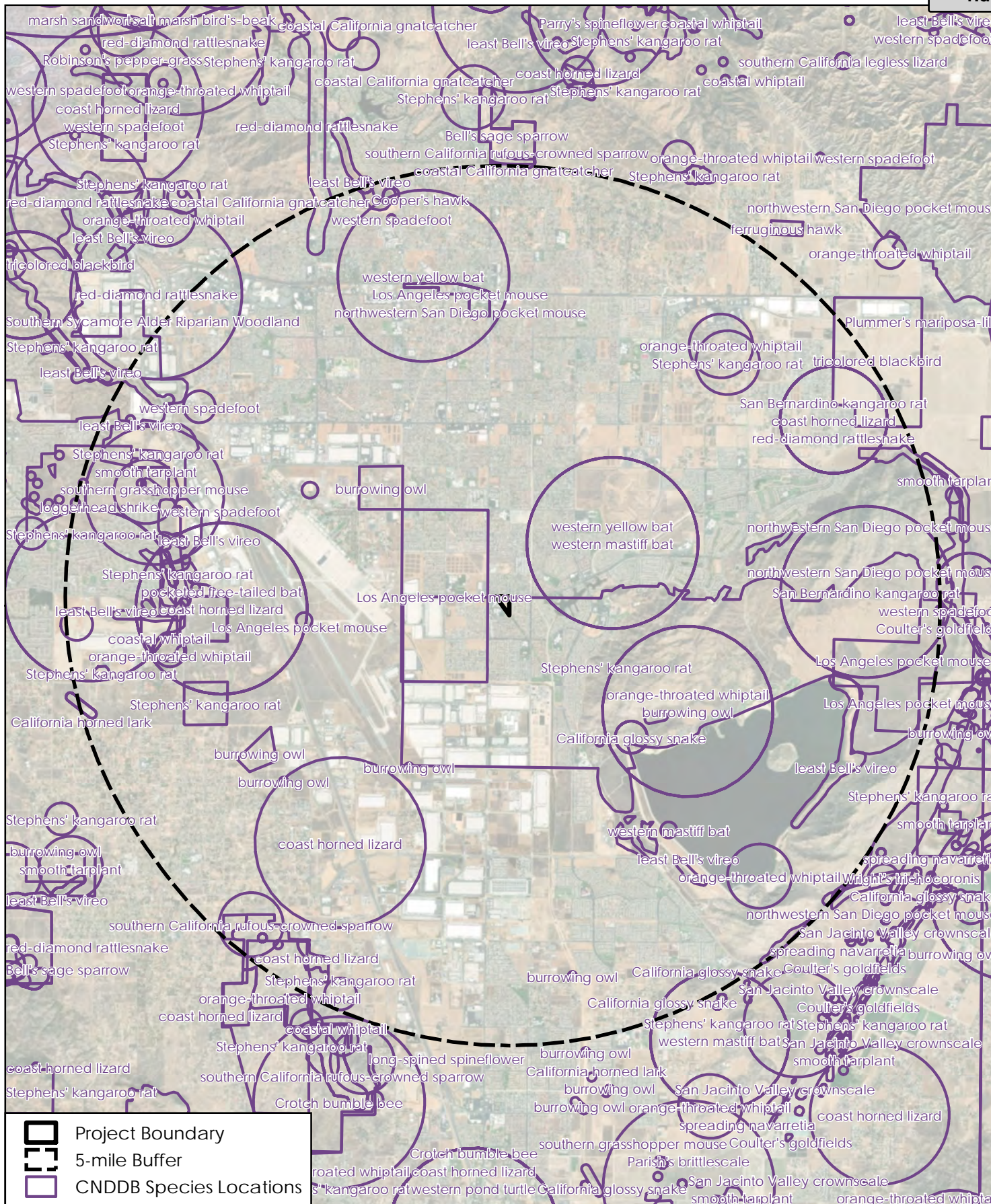
Figure 1



Project Vicinity and Location

APN 312-020-025 Moreno Valley, CA

Attachment: Appendix B to Initial Study Habitat Assessment_R (4197) : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned



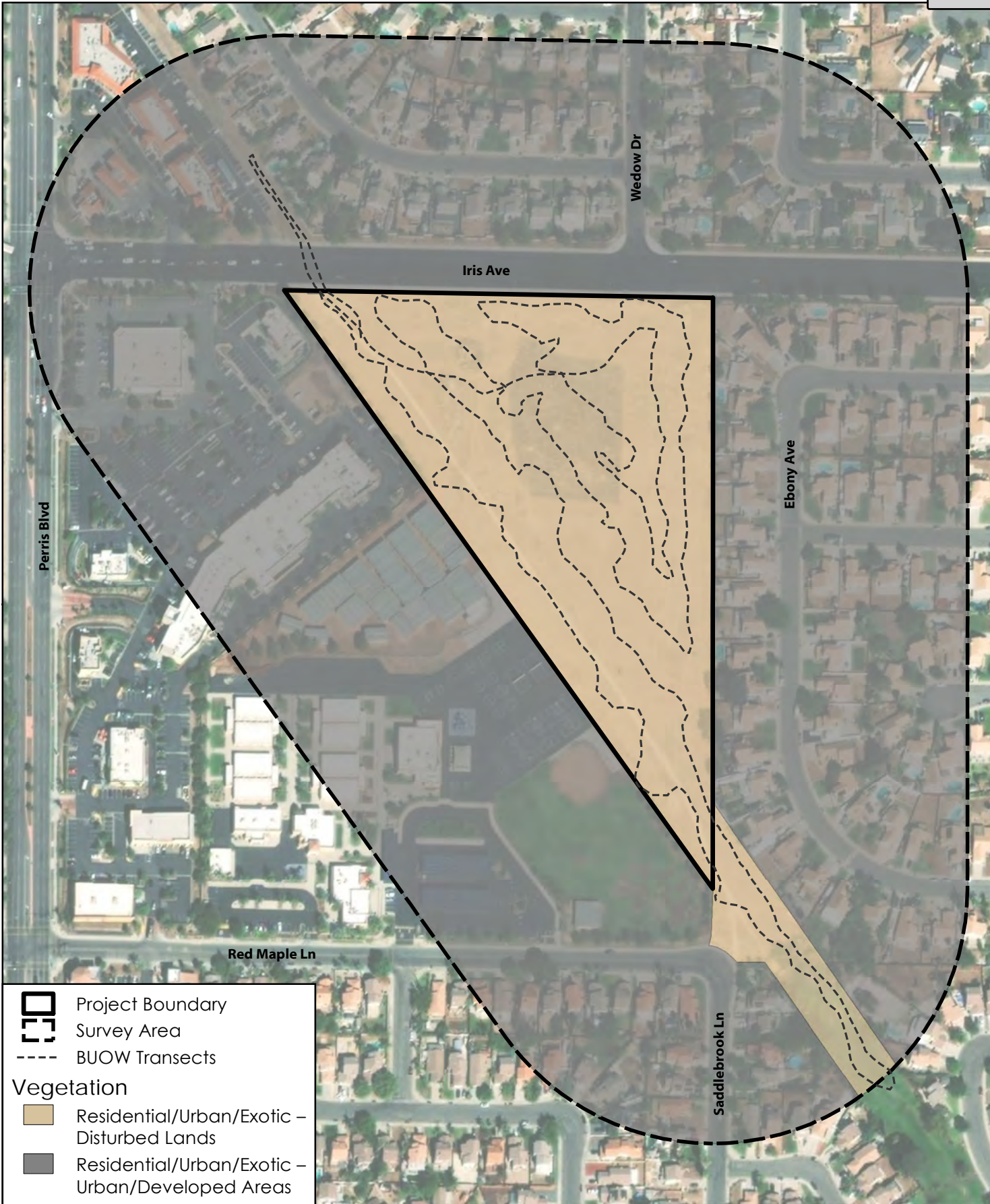
Source: CDFW; Maxar 2018, Esri

Figure 1

CNDDDB Results

Attachment: Appendix B to Initial Study Habitat Assessment_R (4197) : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned





	Project Boundary
	Survey Area
	BUOW Transects
Vegetation	
	Residential/Urban/Exotic - Disturbed Lands
	Residential/Urban/Exotic - Urban/Developed Areas

Source: Maxar 2018, Esri

Figure :

Vegetation Communities and Project Boundary

BLACKHAWK
Environmental

N
0 250 Feet

APN 312-020-025 Moreno Valley, CA

Attachment: Appendix B to Initial Study Habitat Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

ATTACHMENT B

Representative Site Photographs





• Photograph 1:
Northwest-facing photograph taken from southwest portion of the of the Project site, showing Residential/Urban/Exotic – Disturbed Lands dominated by non-native plant species.



Photograph 2: Southeast-facing photograph taken from southwest portion of the of the Project site, showing Residential/Urban/Exotic – Disturbed Lands dominated by non-native plant species. Large ornamental trees

Attachment: Appendix B to Initial Study Habitat Assessment_R (4197) : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

and Mexican fan palms are visible in the background and provide suitable nesting habitat for raptor species and potential roost sites for Western yellow bat.



Photograph 3: South-facing photograph taken from northeastern portion of the of the Project site, showing Residential/Urban/Exotic – Disturbed Lands surrounded by urban development.



Photograph 3: Southwest-facing photograph taken from northeastern portion of the of the Project site, showing Residential/Urban/Exotic – Disturbed Lands surrounded by Residential/Urban/Exotic – Urban/Developed Areas. Iris Avenue is visible on the right side of the photograph.

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Photograph 4: North-facing photograph taken from the central portion of the Project area, showing Residential/Urban/Exotic – Disturbed Lands and recent signs of disturbance (tilling).



Photograph 5: Downward-facing photograph showing one of two small rubble piles. A feral cat is pictured here, occupying one of the rubble cavities, precluding burrowing owl occupancy.

ATTACHMENT C

Observed Wildlife Species List



AVES	BIRDS
ACCIPITRIDAE	Kites, Hawks, Eagles, and Allies
<i>Falco sparverius</i>	American kestrel
CHARADRIIDAE	Plovers, Dotterels & Lapwings
<i>Charadrius vociferans</i>	killdeer
CORVIDAE	Crows & Jays
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	common raven
FRINGILLIDAE	Finches and Allies
<i>Haemorhous mexicanus</i>	house finch
ICTERIDAE	Blackbirds and Allies
LARIDAE	Gulls, Terns, and Skimmers
<i>Larus californicus</i>	California gull
MIMIDAE	Mockingbirds & Thrashers
<i>Mimus polyglottos</i>	northern mockingbird
MOTACILLIDAE	Wagtails, Longclaws, and Pipits
<i>Anthus rubescens</i>	American pipit
PARULIDAE	Wood Warblers & relatives
<i>Setophaga coronata</i>	yellow-rumped warbler
PASSERELLIDAE	New World Sparrows
<i>Passerculus sandwichensis</i>	savannah sparrow
PASSERIDAE	Old World Sparrows
<i>Passer domesticus</i> *	house sparrow
STURNIDAE	Starlings and Mynas
<i>Sturnus vulgaris</i> *	European starling
TROCHILIDAE	Hummingbirds
<i>Calypte anna</i>	Anna's hummingbird
<i>Selasphorus sp.</i>	rufous or Allen's hummingbird
TURDIDAE	Thrushes
<i>Sialia mexicana</i>	western bluebird
TYRANNIDAE	Tyrant Flycatchers
<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe

MAMMALIA	MAMMALS
CANIDAE	Canids
<i>Canis familiaris</i> *	Domestic dog
FELIDAE	Felines
<i>Felus catus</i> *	domestic cat
GEOMYIDAE	Gophers
<i>Thomomys bottae</i>	Botta's pocket gopher
LEPORIDAE	Rabbits and Hares
<i>Sylvillagus audubonii</i>	desert cottontail

*Non-native

ATTACHMENT D

Observed Plant Species List



MONOCOTS	
EUPHORBIACEAE	Spurge Family
<i>Croton setiger</i>	turkey-mullein
POACEAE	Grass Family
<i>Bromus madritensis</i> **	red brome
<i>Hordeum murinum</i> *	smooth barley
<i>Schismus barbatus</i> **	Mediterranean schismus

DICOTS	
ASTERACEAE	Aster Family
<i>Cotula coronopifolia</i> **	brass buttons
<i>Erigeron canadensis</i>	horseweed
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Lactuca serriola</i> *	prickly lettuce
BORAGINACEAE	Borage Family
<i>Amsinckia menziesii</i>	common fiddleneck
<i>Plagiobotrys</i> sp.	popcorn flower
<i>Pectocarya</i> sp.	comb-bur
BRASSICACEAE	Mustard Family
<i>Brassica nigra</i> **	black mustard
<i>Descurainia pinnata</i>	tansy mustard
<i>Sisymbrium altissimum</i> **	London rocket
<i>Raphanus sativus</i> **	wild radish
CHENOPODIACEAE	Amaranth Family
<i>Salsola</i> sp.**	Russian thistle
FABACEAE	Pea Family
<i>Acacia</i> sp.**	orange wattle
<i>Lupinus bicolor</i>	miniature lupine
GERANIACEAE	Geranium Family
<i>Erodium botrys</i> *	longbeak stork's bill
<i>Erodium cicutarium</i> *	redstem filaree
MALVACEAE	Mallow Family
<i>Malva parviflora</i> *	cheeseweed

*Non-native

**Non-native and Invasive according to the California Invasive Plant Council



Submitted to:

Rafik Albert
E|P|D Solutions, Inc.
Irvine, California

CULTURAL RESOURCES ASSESSMENT

Iris Park Project

City of Moreno Valley, Riverside County,
California



**PHASE I CULTURAL RESOURCES ASSESSMENT:
IRIS PARK PROJECT
CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA**

Prepared for:

E|P|D Solutions, Inc.
2 Park Plaza, Suite 1120
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Prepared By:

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Material Culture Consulting, Inc.
2701-B North Towne Avenue
Pomona, California 91767

March 2020

Type of Study: Phase I Cultural Resources Assessment

Cultural Resources within Area of Potential Impact: None

Project Location: USGS 7.5' Topographic Quadrangle Sunnymead, Section 29 of Township 3 South, Range 3 West

APN: 312-020-025

Project Area: Approximately 10.8 acres

Date of Field Survey: March 6, 2020

Key Words: Archaeology, CEQA, Moreno Valley, Riverside County, Low sensitivity

MANAGEMENT SUMMARY

Passco Pacifica LLC (Proponent) proposes the construction of Iris Park, a proposed 81-lot single-family detached subdivision located on the south side of Iris Avenue, about 500 feet east of Perris Boulevard, on APN 312-020-025. The project site is triangular in shape and has a gross acreage of approximately 10.82 acres, including 3.02 acres that is planned for development by the City of Moreno Valley as a public park and trail over the California Aqueduct. The community will have two gated access points off Iris Avenue. Three small park areas are spread out on the site. Residential lots would range from 2,197 sq. ft. to 4,741 sq. ft. Homes would range from 1,848 sq. ft. to 2,201 sq. ft., with 3 to 5 bedrooms and 2.5 to 3 baths. Homes would be two stories, include a back yard approximately 12 to 14 feet deep, and have an attached two-car garage. Three architectural styles are proposed: Spanish, French, and Farmhouse. The project overall would provide 217 parking spaces, including 162 garage spaces and 49 spaces on private streets. Material Culture Consulting, Inc. (MCC) was retained by E|P|D Solutions, Inc. to conduct a Phase I cultural resource investigation of the Project Area. This assessment was conducted in accordance with the California Environmental Quality Act (CEQA) and Riverside County Guidelines, and included a cultural resources records search, a search of the Sacred Lands File (SLF) by the Native American Heritage Commission (NAHC), outreach efforts with 21 Native American tribal representatives, background research, and a pedestrian field survey.

Yahaira Gonzalez, MCC Archaeologist, conducted a search of the California Historical Resource Information System (CHRIS) on February 25, 2020 at the Eastern Information Center (EIC), located on the campus of University of California, Riverside. The cultural resources records search identified twenty-six prior cultural resources investigations within a 1-mile radius of the Project Area. One of these studies intersects the Project Area. A total of five previously recorded cultural resources were identified within a 1-mile radius of the Project Area, yet none of these are documented within the Project Area. A review of historical aerial photographs and topographic maps indicate that prior to the 1990s, the Project Area was used for agricultural purposes. By the late 1990s, the surrounding area saw increased commercial and residential development that has continued up to the present day.

The SLF did not identify any previously known tribal cultural resources or sacred lands within the vicinity of the Project Area. The NAHC provided MCC with contact information for 21 tribes/individuals to reach out to for additional information on February 18, 2020. MCC sent letters on February 18, 2020 to all 21 Native American contacts, requesting any information related to cultural resources or heritage sites within or adjacent to the Project Area. Additional attempts at contact by letter, email, or phone call were made on March 4, 2020 and March 18, 2020. As a result of this outreach effort, MCC received seven responses from Native American Tribes or individuals. Several tribes responded with concerns about presence of nearby resources and presented requests for formal consultation with the Lead Agency. These results are summarized in the Native American Outreach and Background Research section of this report and all correspondence is found in Appendix C. MCC did not conduct formal consultation with any of the Native American representatives, and recommends that appropriate consultation take place as soon as possible between Riverside County, as lead agency, and all interested parties.

The pedestrian survey of the Project Area was conducted on March 6, 2020 by MCC Archaeologist Zachary White. During the course of fieldwork, survey conditions were fair and ground visibility was poor to good (10-80%) throughout the 10.8-acre Project Area, due to prior ground disturbance and vegetation coverage. The property has been disturbed due to vehicular activity and modern dumping activity. No cultural resources were identified during the investigation.

Based on the above findings, the probability of encountering significant cultural resources within the Project Area is considered low. MCC recommends no further mitigation measures prior to implementation of the Project. While we do not recommend additional mitigation, we do recommend including a condition of approval which addresses

inadvertent discoveries of cultural materials and/or human remains, should these be encountered during any phase of Project implementation.

A copy of this report will be permanently filed with the EIC at University of California, Riverside. All notes, photographs, correspondence and other materials related to this Project are located at MCC, Inc., located in Pomona, California.

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APPENDIX A: QUALIFICATIONS
APPENDIX B: CULTURAL RESOURCES RECORDS SEARCH RESULTS
APPENDIX C: NAHC AND NATIVE AMERICAN CORRESPONDENCE

Attachment: Appendix C to Initial Study Phase I Cultural Resources Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

INTRODUCTION

Passco Pacifica LLC (Proponent) proposes the construction Iris Park, a proposed 81-lot single-family detached subdivision located on the south side of Iris Avenue, about 500 feet east of Perris Boulevard (Project), located in the City of Moreno Valley in Riverside County, California. Material Culture Consulting, Inc. (MCC) was retained by E|P|D Solutions, Inc. to conduct a Phase I cultural resource investigation of the Project Area. This assessment was conducted pursuant to all applicable State of California regulations regarding cultural resources, as well as guidelines established by the City of Moreno Valley. According to these regulations and guidelines, if development of a Project has the potential to result in significant impacts to cultural resources, a plan must be developed to mitigate those impacts to a level which is less than a significant. This assessment documents the potential for encountering cultural resources during development of this Project and provides recommendations on how to mitigate impacts to those resources.

PROJECT LOCATION AND DESCRIPTION

The Project is located in the City of Moreno Valley, Riverside County, California (Figure 1). Iris Park is a proposed 81-lot single-family detached subdivision located on the south side of Iris Avenue, about 500 feet east of Perris Boulevard, on APN 312-020-025 (Figures 2 and 3). The project site is triangular in shape and has a gross acreage of approximately 10.82 acres, including 3.02 acres that is planned for development by the City of Moreno Valley as a public park and trail over the California Aqueduct. The community will have two gated access points off Iris Avenue. Three small park areas are spread out on the site. Residential lots would range from 2,197 sq. ft. to 4,741 sq. ft. Homes would range from 1,848 sq. ft. to 2,201 sq. ft., with 3 to 5 bedrooms and 2.5 to 3 baths. Homes would be two stories, include a back yard approximately 12 to 14 feet deep, and have an attached two-car garage. Three architectural styles are proposed: Spanish, French, and Farmhouse. The project overall would provide 217 parking spaces, including 162 garage spaces and 49 spaces on private streets. Specifically, the proposed Project is located in Section 29, within Township 3 South, Range 3 West on the U.S. Geological Survey (USGS) Sunnymead 7.5' topographic quadrangle (San Bernardino Baseline and Meridian) (Figure 2).

PROJECT PERSONNEL

Tria Belcourt, M.A., RPA, served as the Principal Investigator for the study and supervised all work. Ms. Belcourt coordinated and oversaw the records searches, communicated with NAHC and Native American individuals, and provided quality control for this report. Ms. Belcourt is a Registered Professional Archaeologist (RPA) and Qualified Riverside County Archaeologist, with a M.A. in Anthropology from the University of Florida, a B.A. in Anthropology from the University of California at Los Angeles and over 16 years of experience in California archaeology (See Appendix A).

Sonia Sifuentes, M.Sc, RPA, provided co-authorship of this report. Julia Carvajal, M.A., managed the field survey and all GIS support for the project and report. Yahaira Gonzalez, B.A., conducted the records search and co-authored this report, and Zachary White, B.A., performed the pedestrian survey.

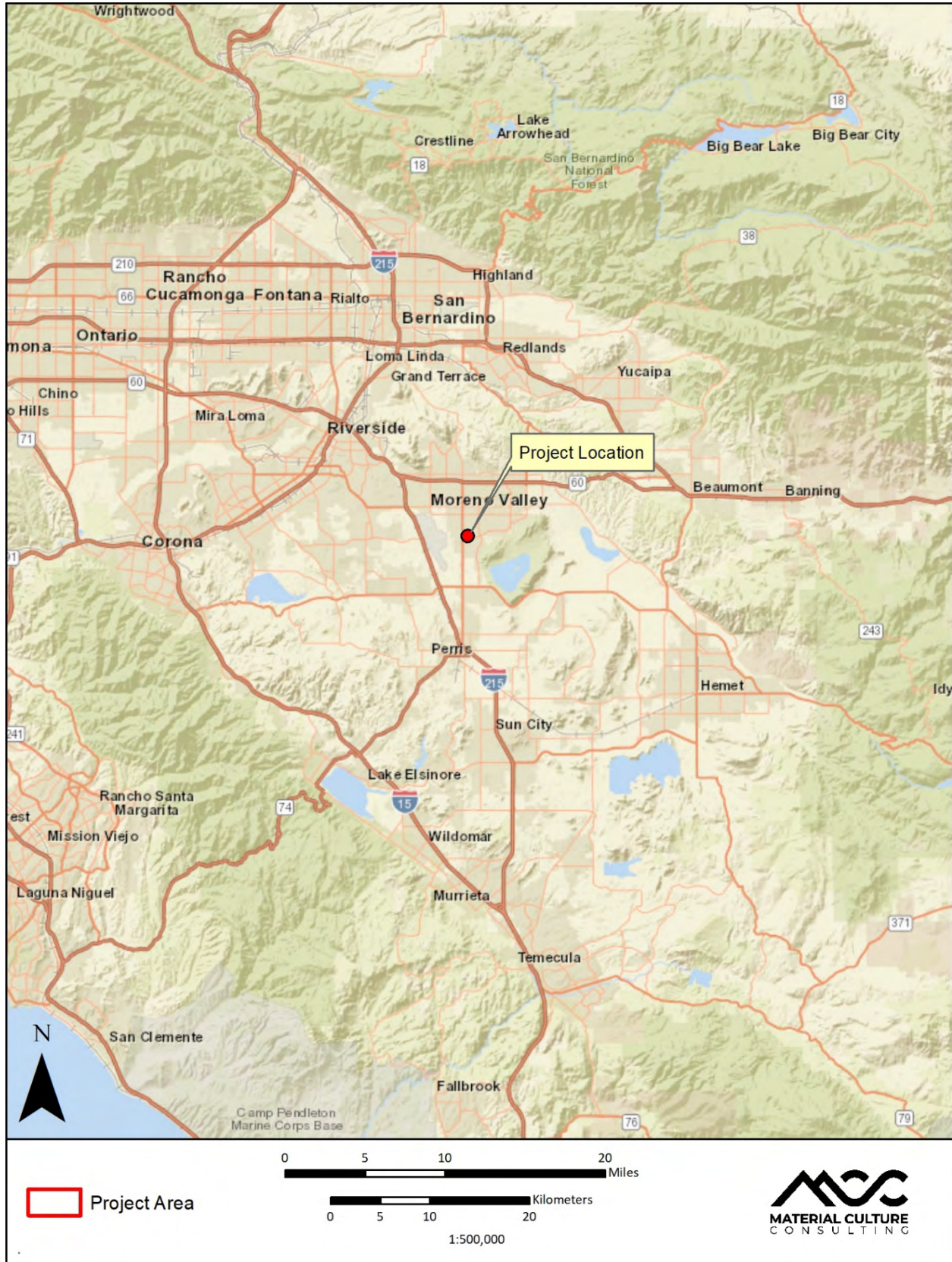


Figure 1. EPD Iris Park Project Vicinity (1:500,000)

Attachment: Appendix C to Initial Study Phase I Cultural Resources Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

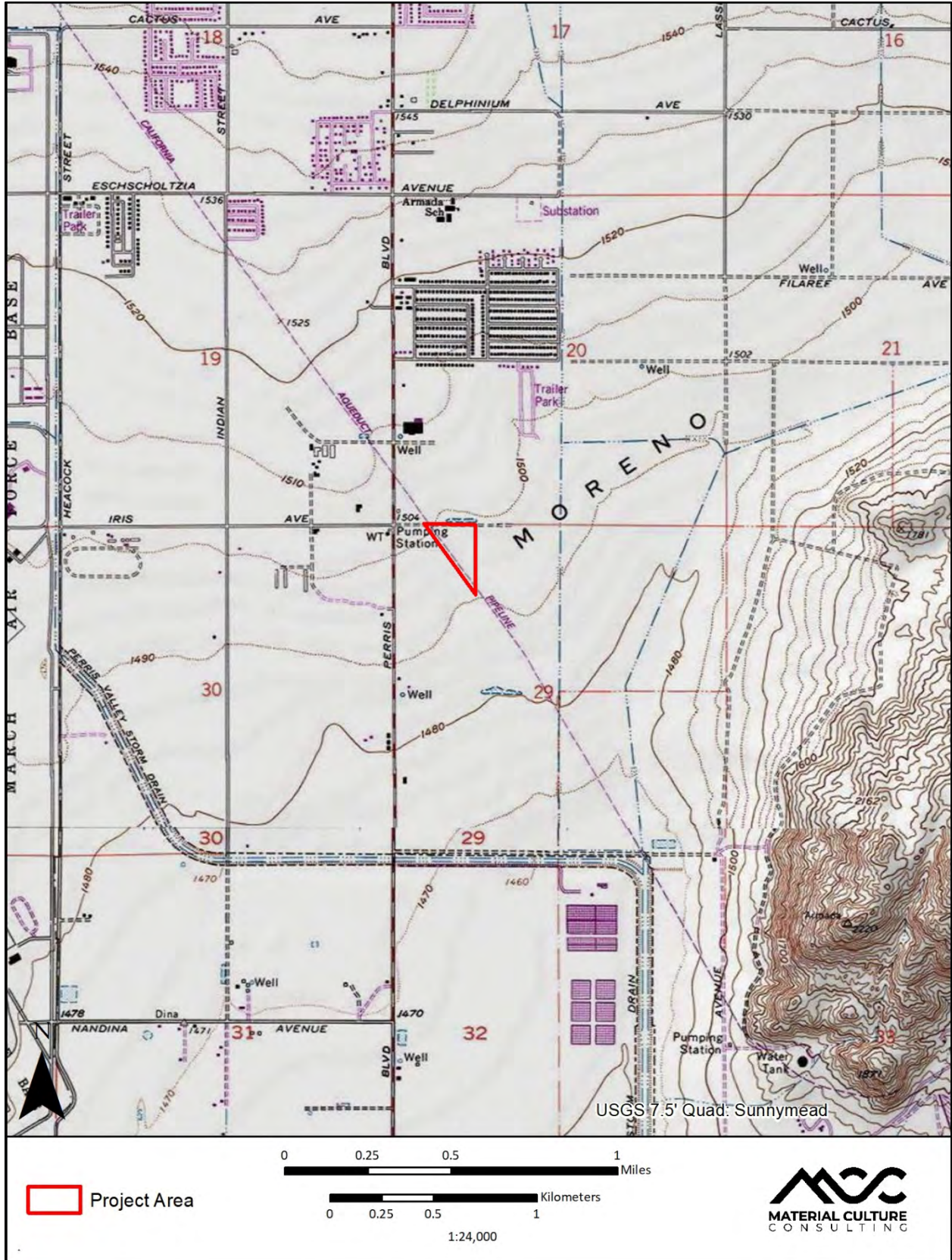


Figure 2. EPD Iris Park Project Area (1:24,000, as depicted on Sunnymead USGS 7.5 Minute Quadrangle)

Attachment: Appendix C to Initial Study Phase I Cultural Resources Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

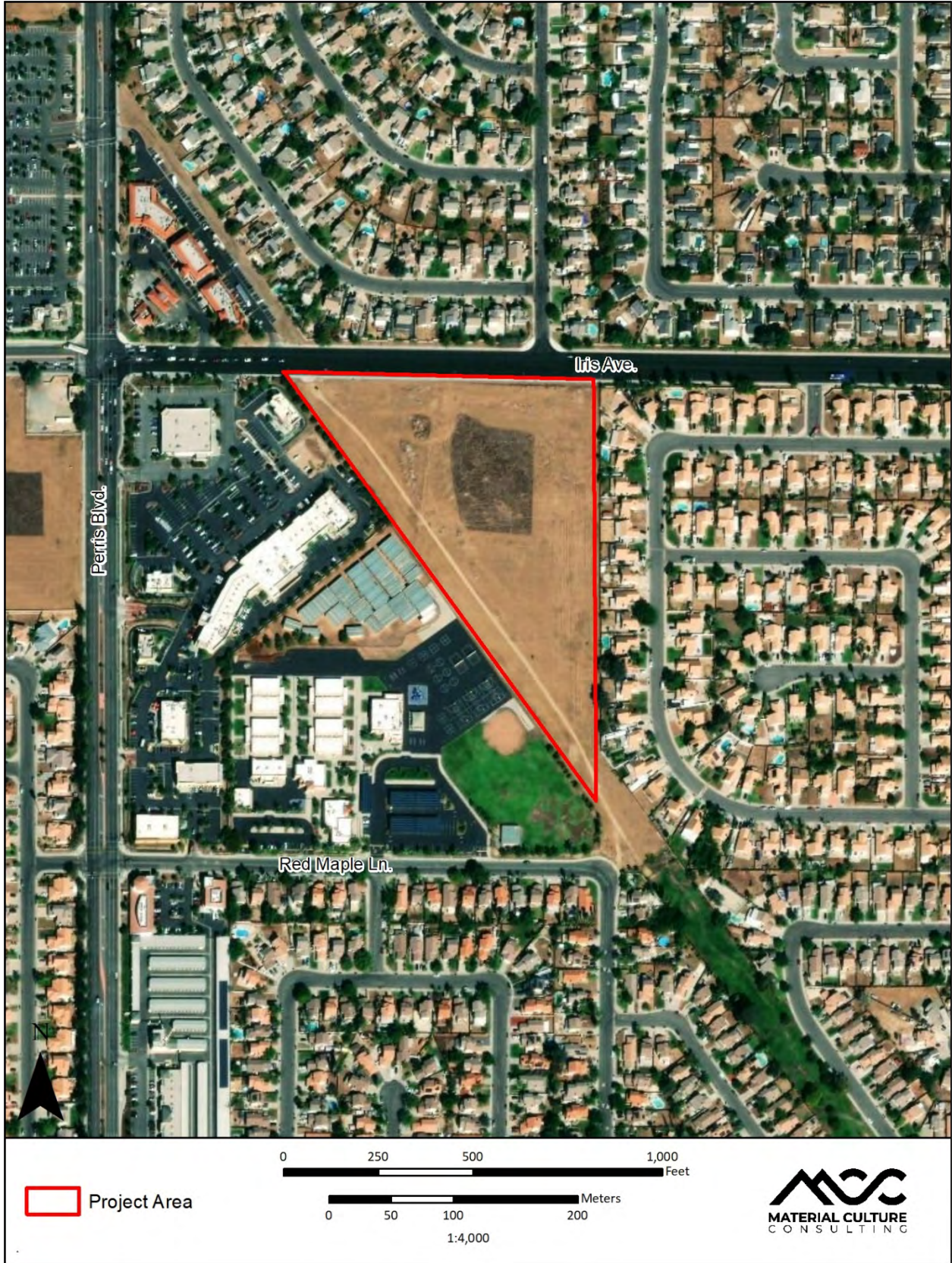


Figure 3. EPD Iris Park Project Area (1:4,000, as depicted on aerial photograph)

Attachment: Appendix C to Initial Study Phase I Cultural Resources Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

ENVIRONMENTAL SETTING

The Project Area is located within the city limits of Moreno Valley in northwestern Riverside County. Riverside County is situated within the Peninsular Ranges Geologic Province, a northwest-southeast oriented complex of blocks separated by similarly trending faults (Norris and Webb 1978). Most geological formations found within this area are comprised the Southern California Batholith, a great mass of basement igneous rocks. The Project Area also lies within the Central Perris Block (Kenney 1999). The Perris Block is a structurally stable, internally cohesive mass of crustal rocks bounded on the east by the San Jacinto fault zone, bounded on the west by the Elsinore and Chino fault zones, and on the north by the Cucamonga fault zone (Norris and Webb, 1976; Morton and Matti, 1989), and on the south by a series of sedimentary basins (Morton and Matti 1989). This structural block is believed to have been active since Pliocene time (Woodford et al 1971).

Vegetation observed within the Project Area include invasive grasses and weeds and brittle bush observed along the southern portion. Non-native landscaping is present within the surround region, with a residential and commercial development located to the South-southwest and Northwest of the Project Area. The climate in the region is characterized as Mediterranean, with hot, dry summers and temperate, wet winters. The Project Area is located within a relatively flat valley, with elevations averaging approximately 456 m (1496 ft.) above mean sea level (AMSL). Vegetation in much of the area has been altered by historical and modern development, with introduced species of flora, including annual grasses, weeds, and sunflowers observed. Perris Reservoir and Russell Mountains are located approximately 2.59 miles southeast of the Project Area. Moreno Valley area enjoys a mild Mediterranean climate characterized by warm, dry summers and cool, moist winters.

PREHISTORIC CONTEXT

The earliest evidence of human presence of North America radiocarbon dates as early as 15,000 years before present (BP) (Waters et al. 2011). Most of the cultural material to this period derives from a site in present-day Salado, Texas. Known as the Buttermilk Creek Complex, this assemblage of over 15,000 artifacts underlaid a Clovis assemblage and provides evidence of occupation prior to the Clovis horizon (Waters et al. 2011). No projectile points have been recovered from the Buttermilk Creek Complex and Clovis Complex is still the earliest known emergence of this technology. In California, the oldest radiocarbon date is derived from a from a site located in Siskiyou County (Tule Lake Rockshelter/CA-SIS- 218A), which dates as early as 13,000 years BP (Jones and Klar 2007; Erlandson et al. 2014).

The chronological prehistory of inland southern California remains more elusive than the much-researched desert and coastal regions. Most researchers generally agree that the earliest occupation for the Riverside County area dates to the late Pleistocene/early Holocene (11,000 to 8,000 years ago). The regional prehistoric chronology discussed here includes San Dieguito Complex, Encinitas Tradition, Milling Stone Horizon, La Jolla Complex, Pauma Complex, and San Luis Rey Complex, as they relate to the archaeological assemblages of the region. Other chronological classification utilized for southern California include King's Early Period, which does includes regional subtraditions of the La Jolla and Pauma Complexes, along with the Early Santa Barbara region subtradition (Oak Grove culture), and the Late Santa Barbara region subtradition (Hunting and Campbell traditions) (King 2001).

The earliest sites known in the area are attributed to the San Dieguito culture, which consisted of a hunting culture with flaked stone tool industry (Warren 1967). Also known as the Paleo Indian Period, the environment during this period was cool and moist, which allowed for glaciation in the mountains and the formation of deep, pluvial lakes in the deserts and basin lands (Moratto 1984). The material culture related to this time included scrapers, hammer stones, large flaked cores, drills, and choppers, which were used to process food and raw materials. During the archaeological investigations at the Eastside Reservoir, an early date of 7,380 +/- 300 before present from site CA-

RIV-5786 implies that people lived in the area at this time. Two other archaeological sites that date to this period are also within the vicinity of nearby Menifee: CA-RIV-2798/H, near the shoreline of Lake Elsinore; and CA-RIV-6069, located in San Jacinto Valley near Mystic Lake. These early sites revealed deep, intact deposits with a number of stone tools and features, which are more likely to be found along ancient lake terraces.

Around 8,000 years ago, subsistence patterns changed, resulting in a material complex consisting of an abundance of milling stones (for grinding food items) and a decrease in the number of chipped stone tools. The material culture from this time period includes large, bifacially worked dart points and grinding stones, handstones, and metates. Archaeologists initially designated this period as the Millingstone Horizon (Wallace 1955), which was later redefined as a cultural tradition named the Encinitas Tradition (Warren 1967). The Encinitas Tradition has various regional expressions including Topanga and La Jolla (Moriarty 1966). Naming conventions for this time period by archaeologists varied as some adopted a generalized Encinitas Tradition without regional variations, while others continued to use Millingstone Horizon, and still others used Middle Holocene (the geologic time period) to indicate this observed pattern (Sutton and Gardner 2010:1-2). Recently, this generalized terminology was criticized by Sutton and Gardner (2010) as suppressing the identification of cultural, spatial, and temporal variation, as well as the movement of peoples throughout space and time. It is these factors that are believed to be critical to an understanding of prehistoric cultural adaptation and change in this portion of southern California (Sutton and Gardner 2010:1-2).

The Encinitas Tradition characteristics include abundant metates and manos; crudely made core and flake tools; bone tools; shell ornaments; and very few projectile points, indicating a subsistence pattern focused on hunting and gathering a variety of floral resources. Faunal remains vary by location but include marine mammals, fish, and shellfish; as well as terrestrial animals, reptiles, and birds (Sutton and Gardner 2010:7). The Encinitas Tradition has been redefined to have four patterns (Sutton and Gardner 2010: 8-25). These include the Topanga Pattern in coastal Los Angeles and Orange counties; the La Jolla Pattern in coastal San Diego County; and the Sayles or Pauma Complex in inland San Diego County extending into western Riverside County, where the project is located. At approximately 3,500 years ago, Pauma Complex in the general Project vicinity adopted new cultural traits which transformed the archaeological site characteristics - including mortar and pestle technology, greater tool variety (including atlatl dart points and crescentics), and evidence of a more sedentary lifestyle (Warren et al. 1961; Meighan 1954).

At approximately 1,500 years before present, bow and arrow technology started to emerge in the archaeological record, which indicated changes in settlement patterns and subsistence systems. The local population incorporated new materials while retaining their day to day subsistence methods of the past, as evidenced by the archaeological record. The Palomar Tradition is attributed to this time, and is comprised of two larger patterns: the Peninsular Pattern in the inland areas of the northern Peninsular Ranges (e.g., San Jacinto and Santa Rosa mountains) and the northern Coachella Valley (Sutton 2010); and the San Luis Rey pattern of the Project Area. Archaeological sites from this time period are characterized by soapstone bowls, arrowhead projectile points, pottery vessels, rock paintings, and evidence of cremation sites. This shift in material culture assemblages is largely attributed to the emergence of Shoshonean (Takic-speaking) people who entered California from the east.

Recent investigations at the Eastside Reservoir project (Applied Earthworks 2001) refined the chronology for the past 1500 years into four stages: Saratoga Springs (1500-750 BP), Late Prehistoric (750-410 BP), Protohistoric (410-180 BP), and Historic (post-180 BP). The indications from this research show a large number of semi-residential sites during the Medieval Climatic Anomaly at the end of the Saratoga Springs period and ending by the Late Prehistoric (Applied Earthworks 2001). The increased use of the area suggests that the area may have had a more favorable environment than in surrounding regions.

ETHNOGRAPHIC CONTEXT

The Project Area has historically been situated between two Native American territories, the Luiseño people and the Cahuilla people, and is located south of the southern boundaries of Serrano traditional use area (Figure 4). The “Takic Expansion”, which discusses the concept of migration phases of Takic/proto-Takic speaking peoples from the Great Basin into the desert and coastal Southern California regions, is believed to have occurred approximately 1000 to 600 years B.P (Koerper 1979; Moratto 1984; Laylander 2010). It is believed that both the Cahuilla and Luiseño ethnographic groups derived from this migration.

Cahuilla

The Cahuilla territory was bounded by the San Bernardino Mountains to the north, the Orocopa Mountains to the east, the Santa Ana River/the San Jacinto Plain and the eastern portion of Palomar Mountains to the west, and Borrego Springs and the Chocolate Mountains to the south (Bean 1978). The Project Area falls within the western region of the tribe’s traditional territory, denoted by the San Gorgonio Pass. The Cahuilla existed within the most geographically diverse region, having exploited more than 500 native and non-native plants (Bean and Saubel 1972). The Cahuilla spoke a language that belongs to the Cupan group of the Takic subfamily of the Uto-Aztecan language family, a language family that includes the Shoshonean groups of the Great Basin (Bean and Shipek 1978).

The prehistoric Cahuilla occupation is characterized by structures within permanent villages that ranged from small brush shelters to dome-shaped or rectangular dwellings. Villages were situated near water sources, in the canyons near springs, or on alluvial fans at man-made walk-in wells (Bean 1972). There appears to be slight difference in subsistence tools between the Desert, Pass, or Mountain Cahuilla groups. The Desert Cahuilla used deep, wooden mortars with a long pestle whereas San Gorgonio Pass Cahuilla utilized shallower mortars with basketry rims (Kroeber 1908: 40, 43). Cahuilla granaries were usually raised on pole platforms two to four feet high, which resembled birds’ nests, and were used to store mesquite (Kroeber 1908: 42).

In comparison with other Southern California tribes, the Cahuilla appeared to have had a lower population density and a less rigid social structure. The Cahuilla are patrilineal, with closely related patrilineages that share an assumed common ancestor which is important socially and ceremonially (Hudlow 2007). The office of lineage leader, also known as a *net*, directed subsistence activities, settled conflicts, represented the clan regionally and was responsible for correct performances of ceremonies, with the official role of the chief passed from father to eldest son (Bean 1978; Hudlow 2007).

Initial contact with European explorers with the Cahuilla most likely occurred during the expedition of Juan Bautista de Anza in 1777 (Napton and Greathouse 1982). The presence of the San Gabriel Mission in the early 1800s led to more contact via baptisms (Napton and Greathouse 1982). It also led to the Native Americans moving away from traditional habitation sites to separate themselves from the influence of the Mission (Brumgardt 1977). The Cahuilla traditions may have been relatively stable until mission secularization in 1834, due to the policy of the Catholic Mission fathers, or padres, to maintain imported European traditional style settlement and economic patterns (Bean and Shipek 1978). After 1877, when the United States government established Indian reservations in the region and religious missionaries began conversion of the Native American populations in the region, traditional cultural practices were prohibited. Presently, the Cahuilla reside in nine separate reservations in Southern California, located in Imperial, Riverside and San Diego counties (Bean 1978).

Luiseño

The Spanish name Luiseño was used to identify Native Americans who were associated with the Mission San Luis Rey, since the Luiseño most likely had no known native term for their own nationality (Bean and Shipek 1978).

Extensive research has been accumulated that gives detailed accounts of the Luiseño (DuBois 1908, Sparkman 1908, Kroeber 1976, White 1963, and Bean and Shipek 1978). At the time of these ethnographies, the Luiseño maintained a sophisticated political organization structure, and their lands extended from western San Jacinto to the Pacific Ocean along several major waterways, including Temecula, Santa Margarita, and San Luis Rey Rivers (Bean and Shipek 1978). Neighboring tribes included the Cahuilla to the east, the Serrano to the north, and the Gabrielino to the west. Each of these groups are of the same Uto-Aztec linguistic subfamily of Tatic-speakers. The boundaries for territories fluctuate as new information evolves in ethnographic and ethnohistoric research, so there is a likelihood that there was quite a bit of overlap and intermarriage between groups over time.

The Luiseño organized themselves according to family groups or lineages, rather than forming exogamous moieties. Each lineage occupied land that they held in common, and they lived socially and politically separately from others (Bean and Shipek 1978). They typically resided in villages near reliable water sources and maintained special purpose camps close to the main villages. In the springtime, families would replenish food supplies by gathering local fruit, seeds, bulbs and roots. In the fall, families would move into the upland areas to gather acorns, prickly pear, toyon berries, and yucca. The Luiseño territory contained several species of oak that produced edible acorns. Acorns were stored and processed as needed by breaking the shell, grinding the meat into a powder, and leaching the tannic acid from the nut by using water. A porridge was made from the leached nuts and cooked with water using hot stones in baskets. The Luiseño used a wide variety of tools, including manos and metates, bone and shellfish hooks, stone and shell ornaments, bone awls, wooden throwing sticks, hammer stones, handstones, pestles, mortars, and drills, which are evident in late Prehistoric archaeological sites. Presently, there are six federally recognized Luiseño tribes with associated reservations within Southern California.

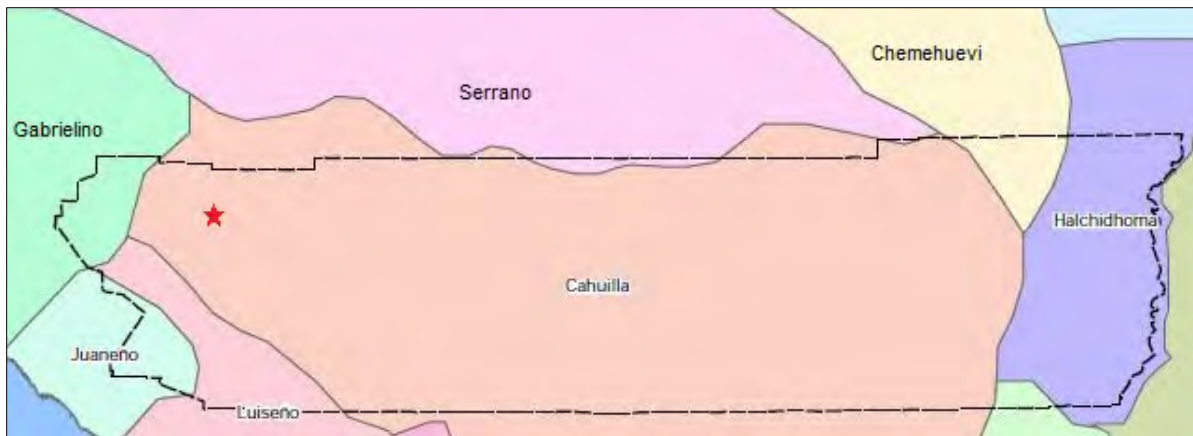


Figure 4. Traditional Tribal Areas in Riverside County and Project Area (derived from County of Riverside 2015)

Serrano

The Serrano has been defined as a Northern Uto-Aztec language sub-family which resided in the mountains and deserts of interior southern California, known as the Mountain Serrano and the Desert Serrano (Sutton and Earle 2017). The Serrano’s traditional use area is believed to located from the Cajon Pass of the San Gabriel/San Bernardino Mountains, as far east as Twentynine Palms, as far south as to Yucaipa, and as far north as Barstow (Bean and Smith 1978). Gifford (1971) categorizes the Serrano as a clan and moiety-oriented, or local lineage-oriented, group tied to traditional territories or use areas. Typically, a “village” consisted of a collection of families centered about a ceremonial house, with individual families inhabiting willow-framed huts with tule thatching. Considered hunter-gatherers, the Serrano exhibited sophisticated technologies devoted to hunting small animals and gathering roots, tubers and seeds of various kinds. Principal game animals included were deer, mountain sheep, antelope, rabbits, small rodents, and various birds (Bean and Smith 1978). The Serrano spoke a language

that belongs to the Takic subfamily of the Uto-Aztecan language family, with some evidence of similarity with the Gabrielino (of the Los Angeles Basin) (Miller 1984).

European influence on the Serrano was limited until 1819, with the establishment of an asistencia near present-day Redlands (Bean and Smith 1978). By 1834, most of the western Serrano population had been displaced, with those located northeast of San Geronio Pass continued to thrive. Today, Serrano descendants are found mostly on the Morongo and San Manuel reservations, which are a modern-day culmination of Serrano, Cahuilla, and Cupeno lineages.

HISTORIC CONTEXT

In 1769, Spanish settlers began to enter and colonize Alta California, which caused the region to undergo an immense change. As early as 1827, Anglo-Americans were migrating into Southern California. In the decades to come, California would be taken by the United States with the end of the Mexican-American War and subsequent events such as the Civil War and California Gold Rush continued to shape the history of California.

Spanish Period (1769 to 1821) to Mexican Period (1821 to 1848)

The Spanish period began in 1769 with Captain Gaspar de Portolá's land expedition, and ended in 1821 with Mexican Independence. During the Spanish Period, the influence of San Luis Rey Mission (1798) was apparent throughout the surrounding regions, with much of the area used for cattle grazing. At its peak, the Mission controlled multiple ranches and claimed control over what is now western Riverside County and northern San Diego County, including the Project Area. Most land was managed as outlying ranches known as asistencias. The asistencias allowed the Luiseño of the area to reside in their villages and not move onto the mission itself. However, after control of the area shifted to Mexico, secularization began throughout the area and the missions and their associated ranches began to decline. The Mexican government proceeded to push settlements of Mexican populations from the south by deeding large grants to individuals who promised to employ settlers. Small villages were established on some ranchos, while small towns appeared in areas between ranchos. The Project Area, however, was not part of any Mexican land grant and the general area that is now Moreno Valley was largely uninhabited during these periods.

American Period (1848 to present)

The Gold Rush of 1849 saw a tremendous influx of Americans and Europeans flooding into Southern California. The passage of the Homestead Act of 1862 increased the influx of settlers within the region. Eventually, Riverside County was settled by homesteaders and farmers, and quickly became a diversified agricultural area with citrus, grain, grapes, poultry, and swine being the leading commodities. This influx of settlers led to population pressures and increased conflicts with the local indigenous groups. The passage of the Act for the Governance and Protection of Indians in 1850 further degraded the position of the Luiseño and Cahuilla. By 1877, The Cahuilla were moved to reservations in a checkerboard pattern throughout the Palm Springs and Coachella Valleys in Riverside County (Napton and Greathouse 1982) which broke up reservation land into discontinuous patchwork pieces, restricting access by the tribe to sacred lands and traditional gathering places. The Moreno Valley area remained unclaimed public land until 1870, when a large tract of over 13,400 acres were purchased from the U.S. government in a single transaction (Tang and Hogan 2013).

Development of the City of Moreno Valley began during the late 19th century. In 1883, Frank E. Brown ventured from Redlands into the Moreno Valley region and secured a large acreage that were platted into ten-acre tracts (Ellis 1912). This attracted settlers and farmers into the region and the Town of Moreno was established in Brown's honor in 1890 (Ellis 1912; P&D Consultants 2006). However, due to water conflicts and litigations that ultimately went in favor of the City of Redlands, a period of drought forced the failure of most farmers in the area and led to

an exodus from the Town of Moreno to other closer locations like Riverside, dubbing the area and town “The Valley/Town on Wheels” (Ellis 1912; Ghori 2014; City of Moreno Valley 2020).



Figure 5. Frank Brown, far right, during pipeline placement, circa 1891 (Ghori 2014)

In 1918, the construction of a military training airfield in the area brought in new community growth. Located approximately 1.30 miles west of the Project Area, it was originally called the Alessandro Aviation Field, with its official name changed to March Air Field in honor of an Army pilot who had died during a training crash (Ghori 2014). First encompassing 640 acres of land, March Air Field grew to encompass more than 7,000 acres, with the base supporting 85,000 troops at its height of activity (City of Moreno Valley 2020). In 1996, March was realigned as an Air Reserves Base and is still currently active.



Figure 6. Postcard of March Air Field, unknown date (Ghori 2014)

From the late 1950s to the late 1980s, the Riverside International Raceway operated within Moreno Valley. Established by Rudy Cleye, it was considered a dangerous track and circuit changes occurred in 1969 (Racing Circuits 2018). It hosted many prominent races, including NASCAR championships (Ghori 2014). By 1989, the land the track was on was sold to create housing and a shopping mall, located 4.5 miles northwest of the Project Area

(Racing Circuits 2018). By 1984, the communities of Edgemont, Sunnymead, and Moreno voted to incorporate after prior failed efforts, and the City of Moreno Valley was established (City of Moreno 2020).

Attachment: Appendix C to Initial Study Phase I Cultural Resources Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

RESEARCH DESIGN

The objectives of an archaeological assessment are to locate, interpret, and evaluate the effects and significance of past human activities within the study area. The indicators of such activities are represented by cultural resources, which can consist of many different types of materials, organizational, distributional, and structural evidence that includes stone tools, historic neighborhoods, historic-era can scatters, village sites, food waste, tool manufacturing waste, trails, stone alignments, petroglyphs, hearths, or human skeletal remains. All of these types of resources are known to exist within the general Project region. The scope of this study is to identify and evaluate the significance of cultural resources within the Project Area and determine protective measures that would minimize negative impacts to these resources if avoidance is not possible.

LEGAL COMPLIANCE BASIS

This project is subject to both state and local regulations, including CEQA and the Riverside County General Use Plan. CEQA declares that it is state policy to "take all action necessary to provide the people of this state with...historic environmental qualities." It further states that public or private projects financed or approved by the state are subject to environmental review by the state. All such projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed project. In the event that a project is determined to have a potential significant environmental effect, the act requires that alternative plans and mitigation measures be considered. CEQA includes historic and archaeological resources as integral features of the environment. The level of consideration may vary with the importance of the resource.

The Moreno Valley General Plan's Objective 7.6 is to "identify and preserve Moreno Valley's unique historical and archaeological resources for future generations" (City of Moreno Valley 2006). Five policies aim to promote this objective, including Policy 7.6.2, "implement appropriate mitigation measures to conserve cultural resources that are uncovered during excavation and construction activities" (City of Moreno Valley 2006).

RESEARCH THEMES WITHIN THE PROJECT AREA

Riverside County and the Perris Valley have a rich prehistoric and historic cultural heritage. Prehistoric sites are known to occur along intermittent drainages, as well as in the hills west of the Project Area and are often associated with boulder outcrops. Food processing sites, consisting of bedrock grinding and milling features, and ground stone artifacts (whole and fragmentary) are found within this region. The closest known sites such as these are located along the foothills and canyons to the west, indicating that certain areas may have been used more frequently or for extended periods. Prehistoric rock art sites are known to exist in the general region; however, no such sites have been identified in the records search of the Project Area.

Future archaeological research within the general Project Area has the potential to address research questions regarding settlement patterns, site structure, subsistence strategies, trade and distribution networks and tool technologies. Questions for the Project have been selected to contribute to the context and understanding of the prehistory and history of California. Based on the literature review, research questions fall into several prehistoric and historic domains. The prehistoric research domains are Chronology and Cultural Affiliation, Subsistence and Site Function, and Toolstone Procurement and Use. Historic research topics focus primarily on the domain of Community Development. Defining research questions also helps focus the documentation of resources during survey so that artifacts, features and other remains that can contribute to an understanding of regional history and prehistory are carefully noted.

CHRONOLOGY AND CULTURAL AFFILIATION

At prehistoric sites throughout Riverside County, chronometric data generally derive from time-sensitive artifacts (e.g., projectile points, beads, and ceramics) and artifacts/organic materials that can provide absolute dating (e.g., obsidian hydration, and calibrated radiocarbon dating). Time-sensitive and dateable artifacts can occur in surface and subsurface contexts, the former sometimes less reliable than the latter in terms of dating archaeological components. Dateable organic remains (e.g., bone, shell, fiber, loose charcoal) occur in multiple contexts within an archaeological site, which include but is not limited to food processing, shell bead manufacturing, and burials.

Chronological measurements using absolute or relative (e.g., stratigraphy and seriation) methods can be used to compare and contrast temporal adaptive patterns in human behavior. For the most part, sites that can be dated have greater information potential than undated sites as they can be placed in time and help refine our understanding of long-and short-term changes in prehistoric human adaptation.

Given the importance of chronological data to all archaeological interpretation, it will be critical to document the presence of any time-sensitive artifacts within the Project Area. Sites that can contribute valuable chronological data may be recommended eligible for listing on CRHR under Criterion (4), research potential.

SUBSISTENCE-SETTLEMENT PATTERNS

Subsistence is one of the most basic of human needs that has a direct effect on human behavior. Prehistoric subsistence procurement activities consist of any number of variables including: site location in relation to land form, water supply, and raw materials; site size; site function; and duration of occupation. Material culture, such as lithic and ground stone tools, ceramics, and faunal and botanical remains, provide data representative of subsistence-related activities and strategies.

The Project Area is within a larger settlement area used by the Luiseño and Cahuilla, with the these cultures and the Serrano utilizing the region for trade. Information on the nature and intensity of prehistoric use of the Project Area, including the types of sites present, their density, and environmental context, will contribute to a more complete picture of settlement and subsistence patterns in this part of California. Combined with chronological information (above), this information can also assist in determining adaptive changes over time. Sites that can offer valuable data concerning prehistoric subsistence-settlement patterns may be recommended eligible for listing on CRHR under Criterion (4), research potential.

TOOL-STONE PROCUREMENT AND USE

Basic patterns in lithic materials use can be useful for reconstructing the approximate geographic extent of past settlement and trade systems. Sites that offer valuable information concerning patterns of raw material procurement and use and tool manufacture may be recommended eligible for listing on CRHR under Criterion (4), research potential, particularly if they are accompanied by chronological data that may be used to place stone-working behaviors in time.

HISTORIC RESEARCH DOMAINS

Historic archaeological sites can offer important data concerning any number of historic themes and may be recommended eligible for listing on CRHR under Criterion (4), research potential. They may also be eligible under Criterion (1) if they can be linked to certain historical events that are important to California's past, Criterion (2) if they are found associated with persons important in history, or under Criterion (3) if they contain structural features that are distinctive of a particular historic period or demonstrate an exceptional aesthetic quality. For the purposes of this project, we plan to focus historic period research on the theme of community development and built environments. The historic research domains will specifically address the historic-era built environment within the project vicinity, as it is felt that this topic is important to our understanding of the history in Western Riverside County.

SIGNIFICANCE EVALUATIONS

The criteria for listing resources on the California Register of Historic Resources (CRHR) were expressly developed to be in accordance with previously established criteria developed for listing on the National Register of Historic Places and require similar protection to that which the National Historic Preservation Act Section 106 mandates for historic properties. According to Public Resources Code (PRC) Section 5024.1(c) (1-4), a resource is considered historically significant if it meets at least one of the following criteria:

- 1) Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
- 2) Associated with the lives of persons important to local, California or national history;
- 3) Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; or
- 4) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of manufacture and use. Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Note that California Historical Landmarks with numbers 770 or higher are automatically included in the CRHR.

Sites with the potential to yield artifacts and other data that can address research questions may be evaluated as eligible for CRHR listing per Criterion (4). Some prehistoric sites may be evaluated as CRHR-eligible under Criterion (1) if they relate to culturally significant events or (mythological) persons (Criterion 2), or represent high artistic forms (e.g., rock art), per Criterion (3).

Under CEQA, if an archaeological site is not a significant "historical resource" but meets the definition of a "unique archaeological resource" as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined in PRC Section 21083.2(g) as follows: An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- 1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- 2) Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- 3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Resources that neither meet any of these criteria for listing on the NRHP or CRHR nor qualify as a "unique archaeological resource" under CEQA PRC Section 21083.2 are viewed as not significant. Under CEQA, "A non-unique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects" [PRC Section 21083.2(h)].

Under CEQA, impacts to historical resources that alter the characteristics that qualify the historical resource for listing on the CRHR are considered to be a significant effect. The impacts to a historical resource are considered significant if: The Project activities physically destroy or damage all or part of a resource; change the character of the use of the resource or physical feature within the setting of the resource which contribute to its significance; or introduce visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource. If it can be demonstrated that a Project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2 (a), (b), and (c)).

TRIBAL CULTURAL RESOURCES

Assembly Bill (AB) 52 (Gatto; Stats. 2014, ch. 532), enacted in September 2014, sets forth both procedural and substantive requirements for analysis of tribal cultural resources as defined in Public Resources Code (PRC) Section 21074, and consultation with California Native American tribes. Tribal cultural resources include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a tribe. A tribal cultural resource is one that is either: (1) listed on, or eligible for listing on the CRHR or local register of historical resources (see section below); or (2) a resource that the CEQA lead agency, at its discretion and supported by substantial evidence, determines is significant pursuant to the criteria in PRC Section 5024.1, subdivision (c) (see PRC Section 21074). Further, because tribes traditionally and culturally affiliated with a geographic area may have specific expertise concerning their tribal cultural resources, AB 52 sets forth requirements for notification and invitation to government to government consultation between the CEQA lead agency and geographically affiliated tribes (PRC Section 21080.3.1[a]). Under AB 52, lead agencies must avoid damaging effects to tribal cultural resources, when feasible, regardless of whether consultation occurred or is required.

Tribal cultural resources per PRC 21074 (a)(1)(A)–(B) are defined as either of the following:

- 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - a) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - b) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
- 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
 - a) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
 - b) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

METHODS

CALIFORNIA HISTORIC RESOURCES INVENTORY SYSTEM AND CULTURAL BACKGROUND RESEARCH

On February 25, 2020, Yahaira Gonzalez, B.A., MCC Archaeologist, conducted a search of the California Historical Resource Information System (CHRIS) at the Eastern Information Center (EIC), located at the University of California, Riverside, Riverside County. The search identified any previously recorded cultural resources and investigations within a 1-mile radius of the Project Area. The CHRIS search also included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Inventory of Historic Resources. Additional background research included historical aerial photos and a search of the Bureau of Land Management General Land Office Records.

NATIVE AMERICAN OUTREACH AND BACKGROUND RESEARCH

MCC requested a search of the Sacred Lands File from the Native American Heritage Commission (NAHC) on February 4, 2020. The Commission responded on February 18, 2020, stating that there are no known sacred lands within a 1-mile radius of the Project Area. The NAHC provided contact information for 21 Native American tribes or individuals who could potentially provide additional information regarding the general Project vicinity. MCC subsequently sent letters on February 18, 2020 to the 21 Native American contacts, requesting any information related to cultural resources or heritage sites within or adjacent to the Project Area. Additional attempts at contact by letter, email, or phone call were made on March 4, 2020 and March 18, 2020. MCC did not conduct formal consultation with Native American representatives.

FIELD SURVEY

The survey stage is a necessary component of a project's environmental assessment phase to verify the exact location of each identified cultural resource, the condition or integrity of the resource, and the proximity of the resource to areas of cultural resources sensitivity. Zachary White, B.A., MCC Archaeologist, conducted the survey of the proposed Project Area on March 6, 2020. The survey consisted of walking parallel transects spaced at approximately 6-meter intervals over the Project parcel, while closely inspecting the ground surface. Transects were oriented East to West due to the triangular shape of the Project Area. All undeveloped ground surface areas within the ground disturbance portion of the Project Area were examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools or fire-affected rock), soil discoloration that might indicate the presence of an anthrosol, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), or historic-era debris (e.g., metal, glass, ceramics). Existing ground disturbances (e.g. cutbanks, ditches, animal burrows, etc.) were visually inspected. Representative photographs were taken of the entire Project Area and are located in the Results section.

RESULTS

CALIFORNIA HISTORIC RESOURCES INVENTORY SYSTEM AND CULTURAL BACKGROUND RESEARCH

The cultural resources search identified 26 prior cultural resources investigations within a 1-mile radius of the Project Area. One of these studies intersects the Project Area (see Table 1).

Table 1. Previously Conducted Investigations within 1-mile Buffer of Project Area

CHRIS Report Number	Authors	Year	Title of Study	Affiliation	Distance from Project Area
RI-00146	Joan R. Smith	1974	Archaeological Impact Evaluation: Eastern Water District, Sewage Pipeline, Mariposa Avenue to Existing Reclamation Facility, Sun City	Archaeological Research Unit, U.C. Riverside	Within 1 - mile
RI-01843	Scientific Resource Surveys, Inc.	1984	Cultural Resource Survey Report On Wolfskill Ranch	Scientific Resource Surveys, Inc.	Within ¼ mile
RI-02171	McCarthy, Daniel F.	1987	Cultural Resources Inventory For The City Of Moreno Valley, Riverside County, California	Archaeological Research Unit, U.C. Riverside	Within 1 - mile
RI-03693	Foster, John M., James J. Schmidt, Carmen A. Weber, Gwendolyn R. Romani, And Roberta S. Greenwood	1991	Cultural Resource Investigation: Inland Feeder Project, Metropolitan Water District Of Southern California	Greenwood & Associates	Intersects Project Area
RI-04745	Erika Thal	2004	Letter Report: Proposed Cellular Tower Project(s) in Riverside County, California, Site Name/ Number: CA-8863A/ Iris	EarthTouch, Inc.	Within 1 - mile
RI-05035	Mckenna et al.	2005	Letter Report: Monitoring at the Site of the Proposed Indian Middle School in the City of Perris, Riverside County, California	Mckenna et al.	Within ½ mile
RI-05294	White, Laurie	2000	Letter Report: Records Search Results For Sprint PCS Facility RV37XC917C (SCE Alessandro Substation), City Of Moreno Valley, Riverside County, CA	Michael Brandman Associates	Within 1 - mile
RI-06081	Lorna Billat	2004	Letter Report: Proposed Cellular Tower Project in Riverside County, California, Site Name/Number: CA-8868A/ Lasselle	EarthTouch, Inc.	Within 1 - mile
RI-06140	Aislin-Kay, Marnie	2004	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	Michael Brandman Associates	Within 1 - mile
RI-06278	Ahmet, Koral, and Evelyn N. Chandler	2005	Cultural Resources Survey for a Proposed Bikeway in Moreno Valley, Riverside County, California	ECORP Consulting, Inc.	Within 1 - mile
RI-06693	Tang, Bai "Tom"	2007	Letter Report: Historical/Archaeological Resources Study: MVRWRF Bardenpho Plant Modification Project, City of Moreno Valley, Riverside County, California	CRM Tech	Within 1 - mile
RI-07127	Jordan, Stacey C.	2007	Archaeological Survey Report for Southern California Edison Company: Conversion of Overhead to Underground Project on the Rule 20C, Riverside County, California (WO#6577-7281, AI#6-7227)	Jones & Stokes	Within ½ mile
RI-07573	Sanka, Jennifer M.	2008	Phase I Cultural Resources Assessment and Paleontological Records Review, APN 486-070-007, Moreno Valley, Riverside County, California	Michael Brandman Associates	Within 1 - mile

Attachment: Appendix C to Initial Study Phase I Cultural Resources Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Table 1. Previously Conducted Investigations within 1-mile Buffer of Project Area

CHRIS Report Number	Authors	Year	Title of Study	Affiliation	Distance from Project Area
RI-07618	Tang, B. and Hogan M.	2007	Identification and Evaluation of Historic Properties: Moreno Valley Regional Water Reclamation Facility Bardenpho Plant Modification Project	CRM Tech	Within 1 - mile
RI-08124	Wayne Bonner And Marnie Aislin-Kay	2008	Letter Report: Cultural Resource Records Search and Site Visit Results for Royal Street Communications Candidate IE24896A (Extra Space Storage), 16340 Perris Boulevard, Moreno Valley, Riverside County, California	Michael Brandman Associates, Irvine, California	Within ¼ mile
RI-08477	Kurt Heidelberg	2009	Archaeological Survey Report: for Southern California Edison's Service Pole Replacement on the Bazooka 12kV Transmission Line in Moreno Valley, Riverside County, California	AECOM, Inc.	Within ½ mile
RI-09077	Jeanette A. Mckenna	2014	A Phase I Cultural Resources Survey For The Proposed Walmart Supercenter on Approximately 22.28 Acres of Land In The City of Moreno Valley, Riverside County, California	McKenna et al.	Within ½ mile
RI-09311	Carrie D Wills	2014	Cultural Resources Records Search and Site Visit Results for Verizon Wireless Candidate "Gentian", 16015 North Perris Boulevard, Moreno Valley, Riverside County, California	First Carbon Solutions	Within ¼ mile
RI-09413	Brian F. Smith and Associates Inc.	2013	A Phase I Cultural resources Assessment for the Modular Logistics Center, Moreno Valley, Riverside County, California	Brian F. Smith and Associates Inc.	Within 1 - mile
RI-09528	Mary M. Lenich and Brian F. Smith		Phase I Cultural Resources Survey for the Moreno Valley Logistics Center Project City of Moreno Valley, County of Riverside	Brian F. Smith and Associates Inc.	Within 1 - mile
RI-09681	Carrie D. Wills and Sarah A. Williams	2016	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate IE953617 (Alessandro Substation) 15901 Kitching Street, Moreno Valley, Riverside County, California	Environmental Assessment Specialists, Inc.	Within 1 - mile
RI-09828	Elizabeth Wilk	2015	Addendum to FCC Form 620: Gogh/Ensite #25674 (284941), 15091 Kitching Street, Moreno Valley, Riverside County, California 92551, EBI Project #6115003214/ E-106 File Number 0006967049, FCC_2015_1005_009	EBI Consulting	Within 1 - mile
RI-09903	Sabrina R. Corcoran and Brian F. Smith	2016	Phase I Cultural Resources survey of the San Michele Business Center Project, City of Moreno Valley, County of Riverside	Brian F. Smith and Associates, Inc.	Within 1 - mile
RI-10498	David Brunzell	2018	Cultural Resources Assessment Moreno Valley Storage Project City of Moreno Valley, Riverside County, California	BCR Consulting LLC	Within 1 - mile
RI-10700	Don C. Perez	2015	Cultural Resources Survey Gogh / Ensite #25674 (284941)	EBI Consulting	Within 1 - mile
RI-10827	Sarah A. Williams and Carrie D. Wills	2019	Cultural Resource Records Search and Site Visit Results for AT&T Mobility Candidate CSL02876 (Iris Plaza), 16110 Perris Boulevard, Moreno Valley, Riverside County, California (EBI Project Number 6119000825)	HELIX Environmental Planning, Inc.	Within ¼ mile

A total of five previously recorded cultural resources were identified within a 1-mile radius of the Project Area, with none of these recorded within the Project Area. No previously recorded cultural resources have been

documented in the Project Area. Resources identified in the records search include one prehistoric resource and four historic resources (See Table 2). The closest mapped archaeological resource (P-33-023936/CA-RIV-011757) is located less than ½ mile northwest of the Project Area. P-33-023936/CA-RIV-011757 is a historic ranch/farm, known as the Barron/Lantz Holdings.

Table 2. Previously Recorded Resources within 1-mile Buffer of Project Area

Primary Number	Trinomial	Age	Attributes	NRHP/CRHR	Distance from Project Area
P-33-007920		Historic	HP02: Single family property	N/A	Within 1-mile
P-33-015301		Prehistoric	AP16: Other (Isolate)	N/A	Within 1-mile
P-33-023936	CA-RIV-011757	Historic	HP33: Ranch/farm	N/A	Within ½ mile
P-33-028072	CA-RIV-012673	Historic	AH04: Privies/dumps/trash scatters	N/A	Within 1-mile
P-33-028073	CA-RIV-012674	Historic	AH04: Privies/dumps/trash scatters	N/A	Within 1-mile

The complete results of the CHRIS resources records searches are included as Confidential Appendix B of this report.

Several additional sources were consulted for this project as well (Table 3). Additional sources did not identify significant potential for historic-era or prehistoric cultural resources.

Table 3. Additional Sources Consulted for the Project

Source	Results
National Register of Historic Places (1979-2002 & supplements)	Negative
Historical United States Geological Survey topographic maps (USGS 2012)	Some agricultural disturbance noted until 1990s, with increase development in the surrounding area since the 1990s
Historical United States Department of Agriculture aerial photos	Some agricultural disturbance noted until 1990s, with increase development in the surrounding area since the 1990s
California Register of Historical Resources (1992-2010)	Negative
California Inventory of Historic Resources (1976-2010)	Negative
California Historical Landmarks (1995 & supplements to 2010)	Negative
California Points of Historical Interest (1992 to 2010)	Negative
Local Historical Register Listings	Negative
Bureau of Land Management General Land Office Records	Negative

A review of historical aerial photographs and topographic maps indicate that prior to 1990s, the Project Area was agricultural (Figures 7 and 8). By the late 1990s, the surrounding area saw increased commercial and residential development that has continued up to the present day (Figure 9).



Figure 7. Project Area with agricultural activity (as depicted on 1966 aerial)



Figure 8. Project Area with some disturbance and increased surrounding development (as depicted on 2002 aerial)



Figure 9. Project Area with additional development to the south-southeast (as depicted on 2012 aerial)

NATIVE AMERICAN OUTREACH AND BACKGROUND RESEARCH

As a result of the effort to contact the 21 Native American Tribes or individuals identified by the NAHC, MCC received seven responses. These responses came in the form of letters, emails, and phone calls. Below is a summary of the responses provided by Native American Tribes.

On March 9, 2020, MCC received an email from Arysa Gonzalez Romero, Historic Preservation Technician for the Agua Caliente Band of Cahuilla Indians (ACBCI), who notified MCC that the Project is located within the tribe's Traditional Use Area. ACBCI THPO requested copies of any cultural resource documentation generated in connection with the report; copy of the record search; and description of proposed Project.

On February 26, 2020, MCC received an email from Travis Armstrong, Tribal Historic Preservation Officer for Morongo Band of Mission Indians (Morongo). Mr. Armstrong stated that Morongo had no additional comments to provide to MCC at this time but may provide other information to the lead agency during the AB-52 consultation process.

On March 17, 2020, MCC received an email from Molly Earp-Escobar, Cultural Planning Specialist for the Pechanga Band of Luiseno Indians, stating that the Project Area is not within reservation lands although it is within their ancestral territory. The tribe requested to be involved in the project.

On March 3, 2020, MCC received an email from Alexandra McCleary, Tribal Archaeologist for the San Manuel Band of Mission Indians, who stated that the Project is located outside of Serrano ancestral territory and tribe will not be requesting consulting party status

On March 18, 2020, MCC received an email from Jessica Valdez, Cultural Resource Specialist for the Soboba Band of Luiseno Indians, who notified MCC that the Project Area is considered sensitive by the people of Soboba, as

there are existing sites in the surrounding areas. An in-house database search identified multiple areas of potential impact. Specifics will be discussed in direct consultation with the lead agency

MCC contacted Mercedes Estrada from the Santa Rosa Band of Cahuilla Indians via phone call on March 18, 2020. Marina Hendon received the phone call and stated Ms. Estrada is no longer employed by the tribe. Additionally, Ms. Hendon stated that the tribe had no response regarding this project.

MCC contacted Michael Mirelez, Cultural Resource Coordinator for Torres-Martinez Desert Cahuilla Indians via phone call on March 18, 2020. During the phone call, Mr. Mirelez deferred to Soboba for any comments related to the proposed Project.

As of March 27, 2020, MCC has not received any additional responses from the remaining NAHC-listed groups or individuals we contacted for information. Should MCC receive additional responses once the final report is submitted, the information will be passed on to the Proponent to be added to the report as an addendum. The NAHC and Native American correspondence materials, including our communication attempts, are provided as Appendix C.

FIELD SURVEY RESULTS

During the course of fieldwork, survey conditions were fair (See Figures 10 through 13). Ground visibility in the entire Project Area was fair, ranging from less than 10 to 80% due to prior ground disturbance and overgrown vegetation within the Project Area. Disturbances within the Project Area include vehicular activity and modern dumping of concrete and bricks remnants. Soil observed during fieldwork was noted as light brown, fine-grain sandy loam consistent with alluvial fan deposits mapped in the area. No cultural resources were identified during the survey.



Figure 10. Overview of Project Area from northwestern corner, view towards east



Figure 11. Overview of Project Area from northern corner, view towards west



Figure 12. Representative photo of concrete and brick dumping observed within Project Area, view towards west



Figure 13. Overview of vehicular road within Project Area, view southeast



Figure 14. Overview of Project Area from southern boundary, view towards northwest

CONCLUSIONS AND RECOMMENDATIONS

The Phase I cultural resource assessment of the Project Area included a CHRIS records search, NAHC outreach, background research, and a field pedestrian survey. The record search indicated five previously recorded resources located within a 1-mile radius of the area, with no resources located directly within the Project Area. Based on the results of the cultural resources search and survey, the proposed Project Area is considered to have a low sensitivity for presence of significant prehistoric or historical archaeological deposits or features. MCC recommends **No Mitigation is Needed**. While we do not recommend additional mitigation, MCC does recommend setting a plan in place to expediently address inadvertent discoveries and human remains (as described below), should these be encountered during construction activities. MCC also notes at least two Native American tribes, Soboba and Morongo, request to proceed with AB-52 consultation proceedings with the Project Proponent and the Lead Agency. MCC recommends that the consultation process be initiated as soon as possible, to avoid unnecessary delays to Project development and implementation.

INADVERTENT DISCOVERIES

Despite actions taken to ensure that all cultural resources are located prior to construction, including record searches and field surveying, there is a possibility that undiscovered, buried archaeological resources might be encountered during construction. In the event that these resources are inadvertently discovered during ground-disturbing activities, work must be halted within 50 feet of the find until it can be evaluated by a qualified archaeologist. Construction activities could continue in other areas. If the discovery proves to be significant, additional work, such as data recovery excavation or fossil recovery, may be warranted and would be discussed in consultation with the appropriate regulatory agency(ies).

HUMAN REMAINS

Procedures of conduct following the discovery of human remains on non-federal lands have been mandated by California Health and Safety Code §7050.5, PRC §5097.98 and the California Code of Regulations (CCR) §15064.5(e). According to the provisions in CEQA, should human remains be encountered, all work in the immediate vicinity of the burial must cease and any necessary steps to ensure the integrity of the immediate area must be taken. The Riverside County Coroner shall be immediately notified and must then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner has 24 hours to notify the NAHC, who will in turn, notify the person they identify as the Most-Likely-Descendent (MLD) of any human remains. Further actions will be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC.

CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: March 27,2020

Signed: 

Printed Name: Tria Belcourt, M.A., RPA, Qualified Riverside County Archaeologist
President and Principal Archaeologist, Material Culture Consulting, Inc.

Attachment: Appendix C to Initial Study Phase I Cultural Resources Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

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Submitted to:

Rafik Albert
E|P|D Solutions, Inc.
Irvine, California

PALEONTOLOGICAL RESOURCES ASSESSMENT

Iris Park Project

City of Moreno Valley, Riverside County, California



**PHASE I PALEONTOLOGICAL RESOURCES ASSESSMENT
IRIS PARK PROJECT
CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA**

Prepared for:

E|P|D Solutions, Inc.
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Prepared By:

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Sonia Sifuentes, M.Sc., Registered Professional Archaeologist
Material Culture Consulting, Inc.
2701-B North Towne Avenue
Pomona, California 91767

March 2020

Type of Study: Paleontological resources assessment

Paleontological Localities within Area of Potential Impact: None

Project Location: USGS 7.5' Topographic Quadrangle Sunnymead, Section 29 of Township 3 South, Range 3 West
APN:312-020-025

Project Area: approximately 10.8 acres

Date of Field Survey: March 6, 2020

Key Words: Paleontology, CEQA, Riverside, RCLIS, Negative Survey, High B Sensitivity, Qvof, Qyf

MANAGEMENT SUMMARY

Passco Pacifica LLC (Proponent) proposes the construction of a residential development project (Project), located in the City of Moreno Valley in Riverside County, California. Material Culture Consulting, Inc. (MCC) was retained by the E|P|D solutions, Inc. to conduct a Phase I paleontological resource investigation of the Project Area in accordance with the California Environmental Quality Act (CEQA). This assessment included a fossil locality search, an examination of geologic maps and paleontological literature, and a pedestrian field survey.

No significant paleontological resources were identified within the Project Area during the fossil locality search or the field survey. The Riverside County Land Information System (RCLIS) GIS data reveals all of the Project Area lies within an area mapped as High B sensitivity. High B sensitivity indicates that excavation has the potential to impact paleontological resources in this area at a depth at or below 5 feet. Excavation during the course of the Project may reach paleontologically sensitive deposits, and, as a result, could impact paleontological resources. Therefore, MCC recommends the following procedures:

- A trained and qualified paleontological monitor shall perform full-time monitoring of any excavations on the Project that have the potential to impact paleontological resources in undisturbed High B sensitivity native sediments, at or below 5 feet in depth. The monitor will have the ability to redirect construction activities to ensure avoidance of adverse impacts to paleontological resources.
- The project paleontologist may re-evaluate the necessity for paleontological monitoring after examination of the affected sediments during excavation, with approval from County and Client representatives.
- Any potentially significant fossils observed shall be collected and recorded in conjunction with best management practices and Society of Vertebrate Paleontology (SVP) professional standards.
- Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.
- A report documenting the results of the monitoring, including any salvage activities and the significance of any fossils, will be prepared and submitted to the appropriate County personnel.

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APPENDIX A: PERSONNEL QUALIFICATIONS

APPENDIX B: LACM LOCALITY SEARCH RESULT

INTRODUCTION

Passco Pacifica LLC (Proponent) proposes the construction of a residential development project (Project), located in the City of Moreno Valley in Riverside County, California. Material Culture Consulting, Inc. (MCC) was retained by the E|P|D solutions, Inc. to conduct a Phase I paleontological investigation of the Project Area. This paleontological resource assessment was conducted in compliance with the California Environmental Quality Act (CEQA), Public Resources Code (13 PRC) 2100, (14 CAC) 15000, Appendix G, Section J, (PRC) 2100-21177, Appendix G, (PRC) 5097.5 and guidelines set forth by the County of Riverside. According to these regulations and guidelines, if development of a Project has the potential to result in significant impacts to paleontological resources, a plan must be developed to mitigate those impacts to a level which is less than a significant. This investigation included a fossil locality search, and a pedestrian field survey. The following report identifies the potential for encountering paleontological resources during development of this Project and provides recommendations on how to mitigate impacts to those resources.

PROJECT LOCATION AND DESCRIPTION

The Project is located in the City of Moreno Valley, Riverside County, California (Figure 1). The Project Area is bound by a commercial complex and Perris Boulevard to the west; a commercial complex, a vacant lot and Red Maple Lane to the south; residential properties to the east; and Iris Avenue to the north (Figures 2 and 3). Specifically, the proposed Project is located in Section 29, within Township 3 South, Range 3 West on the U.S. Geological Survey (USGS) Sunnymead 7.5' topographic quadrangle (San Bernardino Baseline and Meridian) (Figure 2). The 10.8-acre Project Area encompasses one parcel, APN 312-020-025. The Project Area is currently a vacant lot. The proposed Project would develop the area into 84 single-family detached home lots. Approximately seven acres will be utilized for the construction of the homes, with a 100-foot wide easement area designated on the west-southwestern boundary, encompassing approximately three acres. The development would include small outdoor recreational areas and stormwater management facilities. The area north of the easement will be landscaped and include a pedestrian trail.

PROJECT PERSONNEL

Jennifer Kelly, M.S., a Qualified Riverside County Paleontologist, served as the Principal Investigator for the study. Ms. Kelly conducted the paleontological resource literature and map reviews, oversaw the field study, and oversaw preparation of this report. Ms. Kelly has a M.Sc. in Geology from California State University, Long Beach. Ms. Kelly has over ten years of experience in environmental and paleontological compliance in California (See Appendix A).

Sonia Sifuentes, M.Sc., co-authored this report. Julia Carvajal, M.A., managed the field survey and all GIS support for the project and report. Zachary White, B.A., MCC archaeologist and cross-trained paleontologist, conducted the pedestrian survey. Yahaira Gonzales, B.A. co-authored this report.

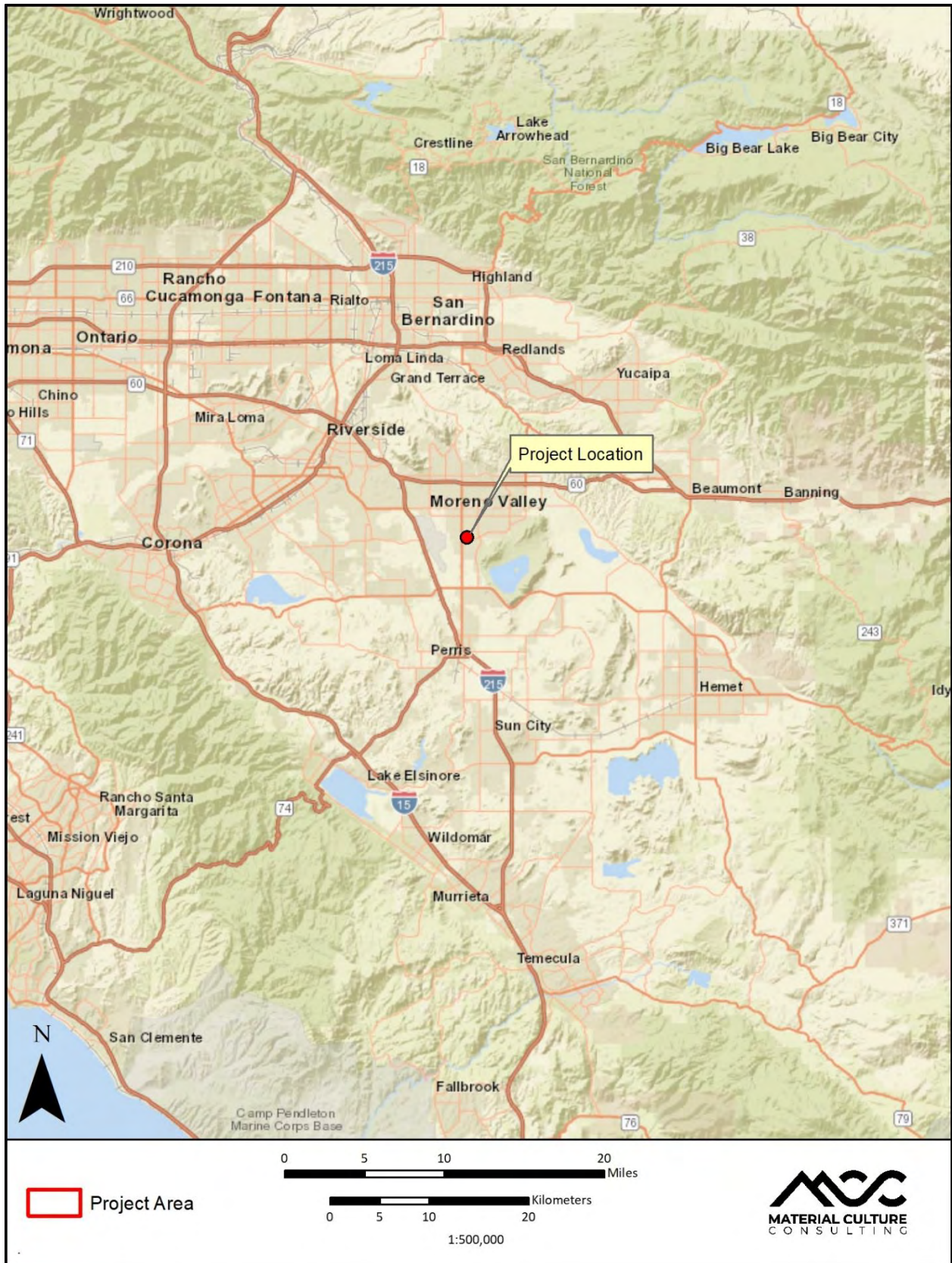


Figure 1. Iris Park Project Vicinity (1:500,000)

Attachment: Appendix D to Initial Study Phase I Paleontological Resources Assessment (4197 : Tentative Tract Map 37909 with a Conditional

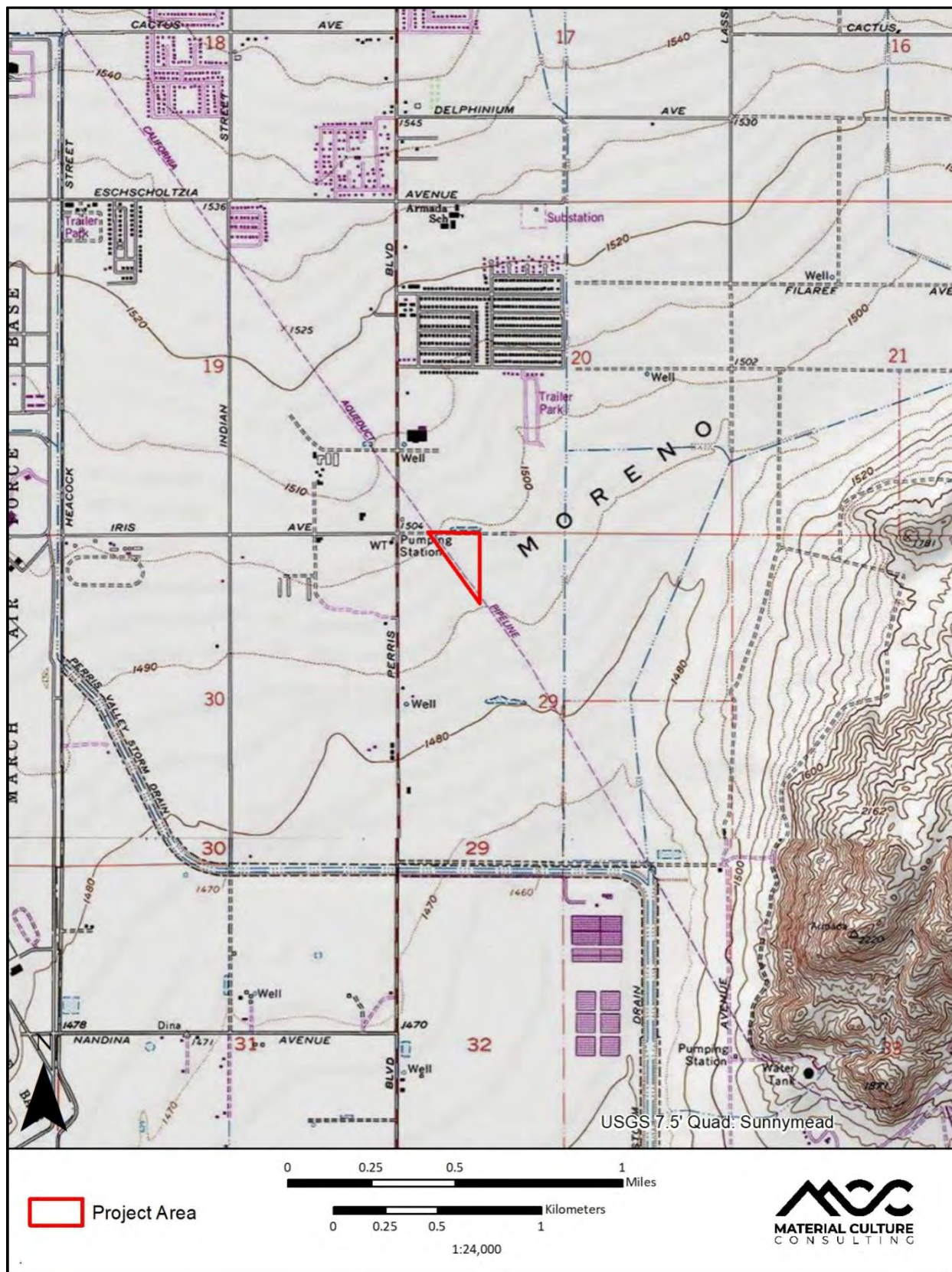


Figure 2. Iris Park Project Area (1:24,000, as depicted on Sunnymead USGS 7.5 Minute Quadrangle)

Attachment: Appendix D to Initial Study Phase I Paleontological Resources Assessment (4197 : Tentative Tract Map 37909 with a Conditional



Figure 3. Iris Park Project Area (1:4,000, as depicted on aerial photograph)

ENVIRONMENTAL SETTING

Riverside County is situated within the Peninsular Ranges Geologic Province. The Project Area is located within the city limits of Moreno Valley in northwestern Riverside County. The Project is bounded by a commercial complex and Perris Boulevard to the west, a commercial complex, a vacant lot and Red Maple Lane to the south, residential properties to the east, and Iris Avenue to the north. The Project Area is located within a relatively flat valley, with elevations averaging approximately 456 m (1496 ft.) above mean sea level (AMSL). Vegetation in much of the area has been altered by historical and modern development, with introduced species of flora, including annual grasses, weeds, and sunflowers observed. Perris Reservoir and Russell Mountains are located approximately 2.59 miles southeast of the Project Area. Moreno Valley area enjoys a mild Mediterranean climate characterized by warm, dry summers and cool, moist winters.

GEOLOGICAL CONTEXT

Riverside County is situated within the Peninsular Ranges Geologic Province, a northwest-southeast oriented complex of blocks separated by similarly trending faults (Norris and Webb 1978). Most geological formations found within this area are comprised the Southern California Batholith, a great mass of igneous basement rocks. The Project Area also lies within the Central Perris Block (Kenney 1999). The Perris Block is a structurally stable, internally cohesive mass of crustal rocks bounded on the east by the San Jacinto fault zone, bounded on the west by the Elsinore and Chino fault zones, and on the north by the Cucamonga fault zone (Norris and Webb, 1976; Morton and Matti, 1989), and on the south by a series of sedimentary basins (Morton and Matti 1989). This structural block is believed to have been active since Pliocene time (Woodford et al 1971). The entire Project Area is mapped as Quaternary alluvium (Q) by Jennings, Strand, and Rogers (1977) (Figure 4). Morton and Matti (2001) mapped the Project Area lying mainly within very old alluvial fan deposits (Qvof_a) with in young alluvial arenaceous fan deposits (Qyf_a) directly west of the Project Area (Figure 5).

Young Quaternary alluvial fan deposits (arenaceous) (Qyf_a) are Holocene to late Pleistocene-aged alluvial fan deposit that is derived from geologically diverse sediment units. The sediments are mainly gray-hued, slightly consolidated sand (Morton and Matti 2001).

Very Old Alluvial fan deposits (Qvof_a) are early Pleistocene deposits consisting of mostly well-dissected, well-indurated, reddish-brown sand deposits with minor gravel (Morton and Matti 2001). These deposits are commonly flanking bedrock areas and can contain duripans and locally silcretes (Morton and Matti 2001). Quaternary very old alluvial fan deposits have the potential to produce scientifically important fossils of land mammals, invertebrates, and plants in this area, and have been assigned a high sensitivity ranking within the County of Riverside. Notably, the excavations for the Diamond Valley Lake in Hemet produced exceptional specimens of Pleistocene animals including mammoths, horses, camels, and bison in units similar to these.

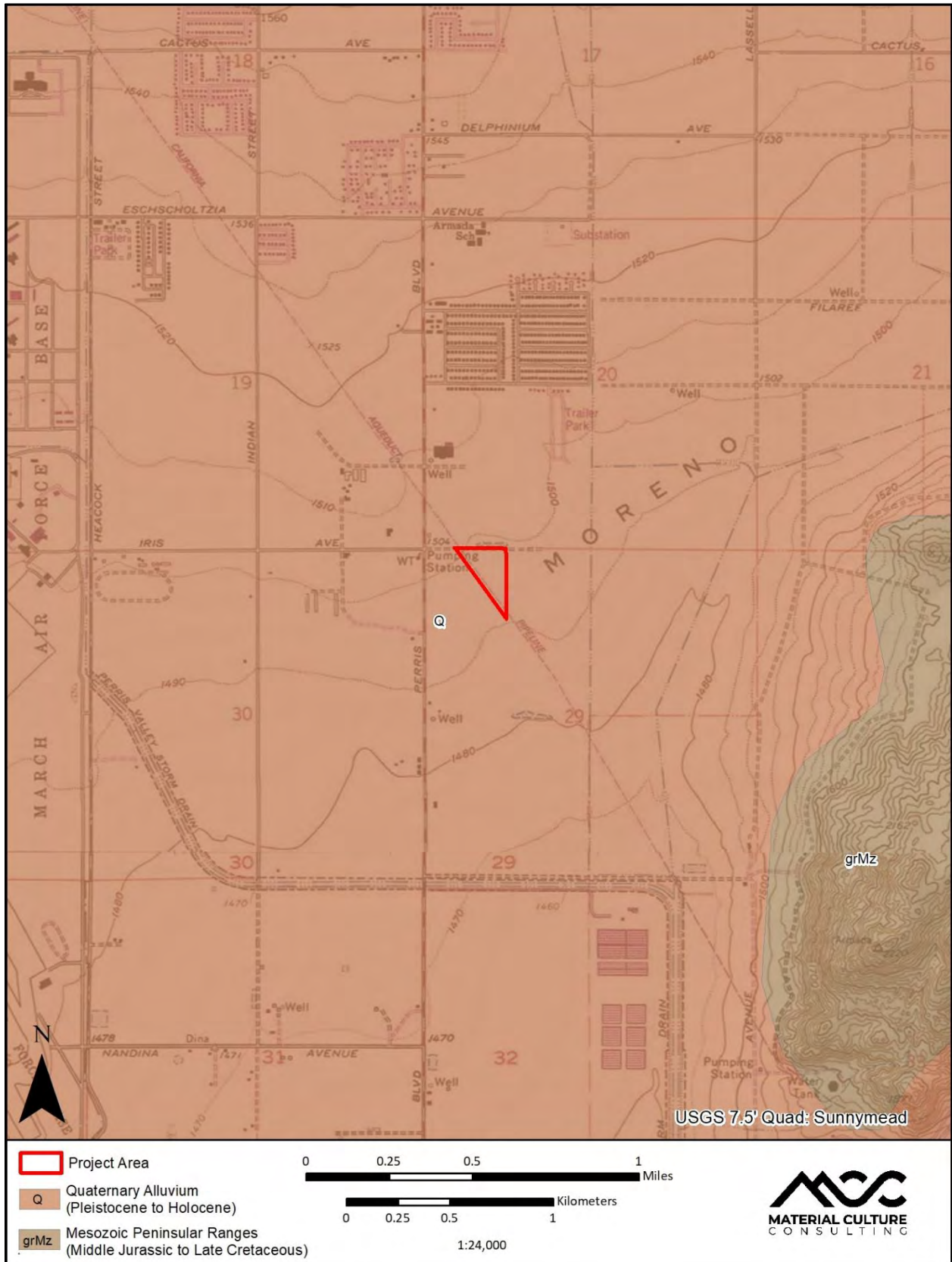


Figure 4. EPD Iris Park Project Geologic Map 1 (from Jennings, Strand, and Rogers 1977)

Attachment: Appendix D to Initial Study Phase I Paleontological Resources Assessment (4197 : Tentative Tract Map 37909 with a Conditional

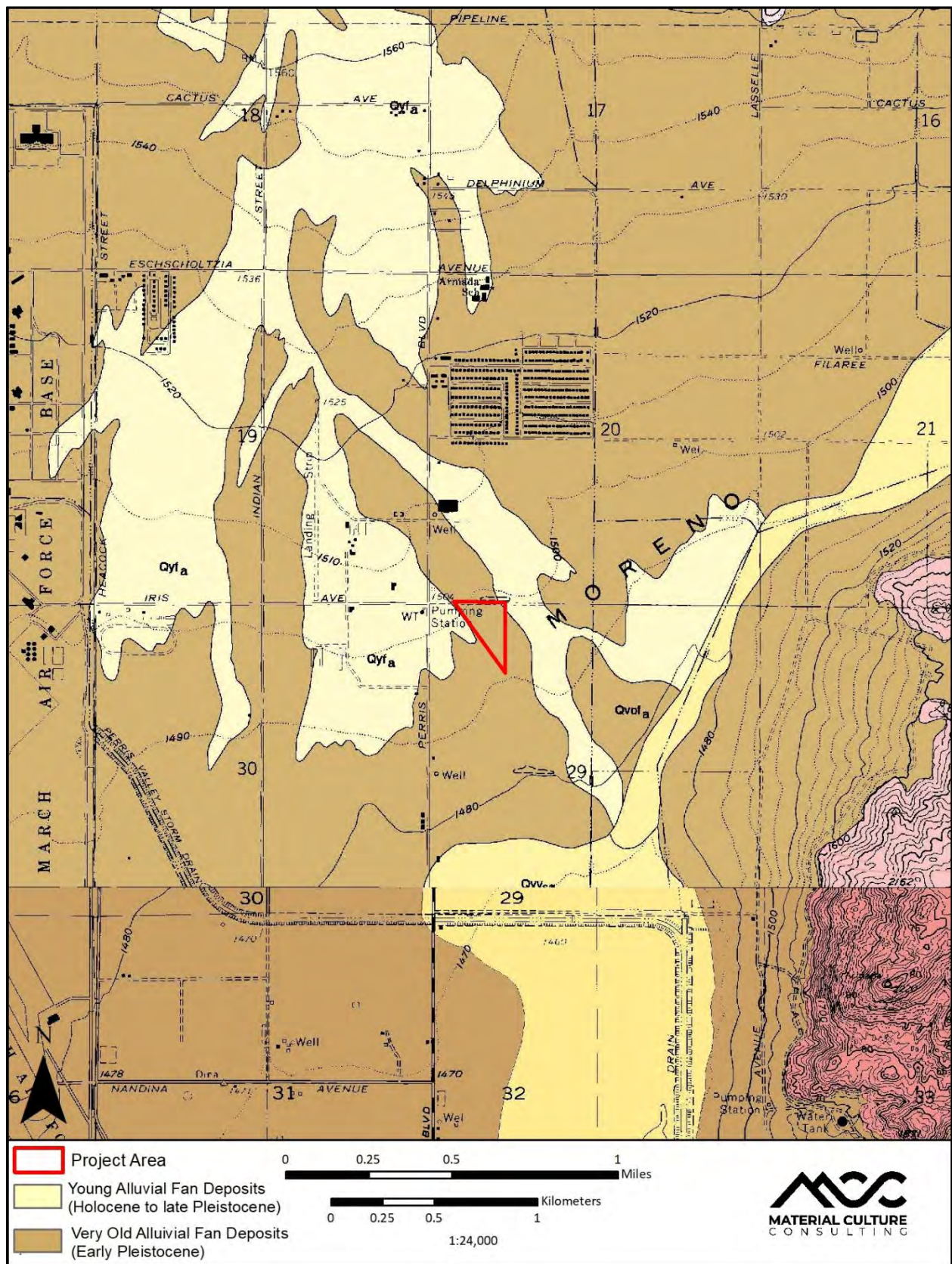


Figure 5. EPD Iris Park Project Geologic Map 2 (from Morton and Matti 2001).

Attachment: Appendix D to Initial Study Phase I Paleontological Resources Assessment (4197) : Tentative Tract Map 37909 with a Conditional

RESEARCH DESIGN

The paleontological resources assessment was conducted according to CEQA, Public Resources Code (13 PRC) 2100, (14 CAC) 15000, Appendix G, Section J, (PRC) 2100-21177, Appendix G, (PRC) 5097.5. The paleontological resources assessment was conducted to evaluate the potential existence of resources that would require a preparation of a monitoring plan and monitoring activities, in order to reduce impacts to a less than significant level. Guidelines set forth by Riverside County were consulted to ensure that all local and state requirements were met.

The Riverside County Land Information System (RCLIS) overlay map defines what significant impact on paleontological resources consists of, and requires monitoring of, activities within designated High sensitivity areas (both High A and B) that may affect these resources. Areas with a "High Potential" for paleontological resources include sedimentary rock units with a high potential for containing significant non-renewable paleontological resources and are rock units within which vertebrate or significant invertebrate fossils have been determined to be present or likely to be present. These units include, but are not limited to, sedimentary formations which contain significant non-renewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. High sensitivity includes not only the potential for yielding abundant vertebrate fossils, but also for production of a few significant fossils that may provide new and significant (taxonomic, phylogenetic, ecologic, and/or stratigraphic) data. High sensitivity areas are mapped as either "High A" or "High B."

The *Moreno Valley General Plan's* (2006) Conservation Element Programs 7-6 states "in areas where archaeological or paleontological resources are known or reasonably expected to exist, based upon the citywide survey conducted by the UCR Archaeological Research Unit, incorporate the recommendations and determinations of that report to reduce potential impacts to levels of insignificance". Additionally, the *Environmental Impact Report for City of Moreno Valley General Plan* (P&D Consultants 2006) has one mitigation measure concerning paleontological resources:

- MM-1. Prior to the approval of a project, the City will assess potential impacts to significant historic, prehistoric archeological, and paleontological resources, including impacts to human remains, pursuant to Section 15064.5 of the California Environmental Quality Act Guidelines. If significant impacts are identified, the City will require the project to be modified to avoid the impacts or require measures to mitigate the impacts. Mitigation may involve monitoring, resource recovery, documentation or other measures.

Paleontological resources (fossils) are the remains of prehistoric life. These remains can be bones, teeth, shells, wood or leaves, or trace fossils (including burrows and trackways). The Society for Vertebrate Paleontology (SVP) generally considers any resource greater than 5,000 years old to be a fossil (SVP 2010). Fossils are evidence of ancient life, and as such provide an invaluable window into the past. Fossils are considered non-renewable resources and in California, impacts to paleontological resources must be considered pursuant to CEQA requirements for environmental reviews.

METHODS

LITERATURE AND MAP REVIEW AND LOCALITY SEARCH

The literature review included an examination of geologic maps of the Project Area and a review of relevant geological and paleontological literature to determine which geologic units are present within the Project Area and whether fossils have been recovered from those geologic units elsewhere in the region. As geologic units may extend over large geographic areas and contain similar lithologies and fossils, the literature review includes areas well beyond the Project Area. The results of this literature review include an overview of the geology of the Project Areas and a discussion of the paleontological sensitivity (or potential) of the geologic units within the Project Area. The County of Riverside also provides a paleontological resource sensitivity map for the entire county (RCLIS). This map was consulted by MCC staff on March 4, 2020.

The purpose of a locality search is to establish the status and extent of previously recorded paleontological resources within and adjacent to the study area for a given project. In February 2020, a locality search was conducted through the Natural History Museum of Los Angeles County (LACM) of Los Angeles (Appendix B). This search identified any vertebrate localities in the LACM records that exist near the Project Area in the same or similar deposits.

PALEONTOLOGICAL RESOURCES SURVEY METHODS

The survey stage is a necessary component of a project's environmental assessment phase to verify the exact location of each identified paleontological resource, the condition or integrity of the resource, and provides invaluable information on the type of sediment present within the Project Area, which informs the assessment of paleontological sensitivity. On March 6, 2020, MCC qualified archaeologist and cross-trained paleontologist Zachary White conducted a pedestrian survey of the Project Area. Special attention was paid to any graded areas and to rodent burrows that offered a better view of the underlying sediment. The purpose of a field survey is to note the sediments in the Project Area, relocate any known paleontological localities, and identify any unrecorded paleontological resources exposed on the surface. In this way, impacts to existing, unrecorded paleontological material may be mitigated prior to the beginning of ground-disturbing activities and portions of the Project Area that are more likely to contain paleontological resources may be identified.

RESULTS

LAMC LOCALITY SEARCH AND LITERATURE REVIEW RESEARCH

The record search results from the LACM (McLeod 2020, Appendix B) do not indicate any fossil localities have been found directly within the Project Area, nor within a 1-mile radius. The surficial deposits of younger Quaternary alluvium mapped within the Project Area derived primarily from alluvial fan deposits from the more elevated terrain to the north (McLeod 2020). While these deposits are unlikely to contain significant fossil vertebrates within the uppermost layers, they may be underlain by older Quaternary deposits that do contain significant vertebrate fossils. The closest vertebrate fossil locality from similar older Quaternary deposits is LACM 4540, located approximately 9.5 miles east-southeast of the Project Area around Jack Rabbit Trail in the eastern side of the San Jacinto Valley. This locality produced a fossil specimen of horse (*Equus*) (McLeod 2020). Additional literature was consulted, including The University of California Museum of Paleontology (UCMP)'s Miocene Mammal Mapping Project (MioMap). The database results indicate no fossil localities are within a 1-mile radius of the Project; however, there are a number of localities in the same general area as LACM 4540, approximately 9.5 miles east-southeast of the Project (Carrasco et al. 2005). The RCLIS map indicates that the Project Area has a high potential (High B) to produce paleontological resources during ground disturbing activities (Figure 6).

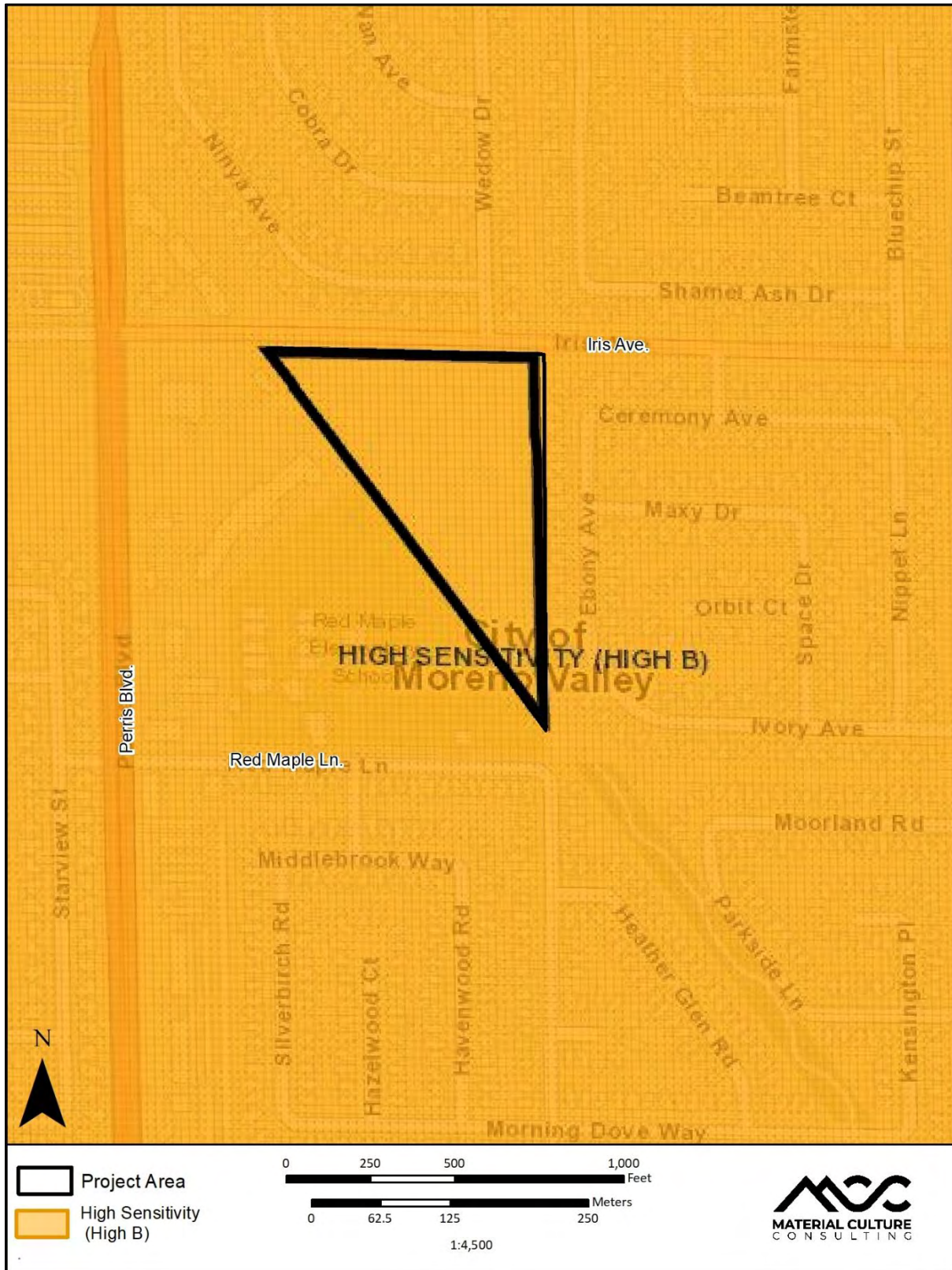


Figure 6. Paleontological Sensitivity (from RCLIS, orange indicates High B Sensitivity)

FIELD SURVEY RESULTS

During the course of fieldwork, survey conditions were fair (see Figures 7 through 13). Ground visibility in the entire Project Area was fair, ranging from less than 10 to 80% due to prior ground disturbance and overgrown vegetation within the Project Area. Disturbances within the Project Area include vehicular activity and modern dumping of concrete and brick remnants. The visual observation of sediment throughout the site does align with the geologic mapping of Quaternary alluvium, with light brown, fine grain sandy loam noted, with sub-rounded pebbles with high sphericity inclusions observed (see Figures 12 and 13). No paleontological resources were observed during the fieldwork survey.



Figure 7. Overview of Project Area from northwestern corner, view towards east



Figure 8. Overview of Project Area from northern corner, view towards west



Figure 9. Representative photo of concrete and brick dumping observed within Project Area, view towards west



Figure 10. Overview of vehicular road within Project Area, view southeast



Figure 11. Overview of Project Area from southern boundary, view towards northwest



Figure 12. Representative photo of alluvial soils observed in Project Area



Figure 13. Representative photo of alluvial soils observed in Project Area

CONCLUSIONS AND RECOMMENDATIONS

MCC conducted a Phase I paleontological resource assessment of the Project Area that included a fossil locality records search and an intensive pedestrian survey covering all 10.8 acres. No significant paleontological resources were identified within the Project Area during the locality search or field survey. The uppermost layers of soil within the Project Area are of recently disturbed Quaternary alluvium that is unlikely to contain significant fossil vertebrates. However, LACM notes that significant fossils have been found within similar alluvial mapped units, and that any excavations that extend deeper and into older and finer-grained Quaternary deposits may encounter significant fossil vertebrate remains. In addition, the Project Area is mapped in RCLIS as High B is based on geologic formations or mapped rock units that are known to contain (or have the correct age and depositional conditions to contain) significant paleontological resources at a depth below 5 feet.


RECOMMENDED MITIGATION

Based on the results of the Phase I paleontological resource assessment, the proposed Area is considered to have high sensitivity for the potential to impact paleontological resources during construction activities at or below 5 feet in undisturbed sedimentary deposits. MCC recommends preparation of a Paleontological Resource Management Plan (PRMP) prior to construction excavation, in order to mitigate any potential impact to non-renewable fossil resources to a less-than-significant level. It is recommended that a professional paleontologist be hired to oversee monitoring and the preparation of a PRMP. At a minimum, the PRMP should include the following items:

- A trained and qualified paleontological monitor should perform full-time monitoring of any excavations on the Project that have the potential to impact paleontological resources in undisturbed native sediments below 5 feet in depth. The monitor will have the ability to redirect construction activities to ensure avoidance of adverse impacts to paleontological resources.
- The Project paleontologist may re-evaluate the necessity for paleontological monitoring after examination of the affected sediments during excavation, with approval from the City and Client representatives.
- Any potentially significant fossils observed shall be collected and recorded in conjunction with best management practices and SVP professional standards.
- Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.
- A report documenting the results of the monitoring, including any salvage activities and the significance of any fossils, will be prepared and submitted to the appropriate City personnel.

CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: March 27, 2020

Signature: 
Name: Jennifer Kelly, MSc., Geology
Riverside County Qualified Paleontologist

Attachment: Appendix D to Initial Study Phase I Paleontological Resources Assessment (4197 : Tentative Tract Map 37909 with a Conditional

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Appendix A:
Qualifications

Jennifer Kelly, M.Sc.
Paleontological Principal Investigator and Project
Manager



Jennifer Kelly has experience in all aspects of paleontology. She has extensive experience with monitoring, salvage, fieldwork, project management, and report writing, as well as volunteer experience from the La Brea Tar Pits/Page Museum and the Cooper Center of Orange County (Paleontology department) and field experience as a Staff Geologist for Leighton Geotechnical. Her expertise is Geology, and she has her M.S. in Geological Sciences, emphasis in Geochemistry.

Jennifer has taught lab courses in paleontology and general geology, and also assisted with field mapping classes. Jennifer is HAZWOPER 40-hour certified and a registered Orange County paleontologist. She has authored and co-authored more than 100 paleontological compliance documents, including PRMPs, EIR, EIS, PEA, treatment plans, final monitoring reports, survey reports, and other compliance documents, in compliance with NEPA, CEQA, Caltrans and city and county laws, ordinances, regulations, and statutes.

Education

- 2012 M.Sc. in Geology, California State University, Long Beach, California
- 2005 B.S., Geology (preliminary work for entry to M.S. Geology Program), California State University, Long Beach
- 2004 B.A., Theater Arts, California State University, Long Beach

Certifications and Training

- 40 Hour Certification for HAZWOPER training under 29 CFR 1910.120, CA (2013 – 2014)
- Orange County Certified Paleontologist
- San Diego County Certified Paleontologist

Recent Professional Experience in California

Paleontological Principal Investigator and Project Manager, Harvill Industrial Project, City of Jurupa Valley, Riverside County, California (2017-present). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation for this project, and prepared the Paleontological Resources Impact Mitigation Plan (PRIMP). Kelly also oversees the paleontological monitoring program for this Project. This project is ongoing and is scheduled to be complete in 2020.

Paleontological Principal Investigator and Project Manager, Rider Commerce Center Project, Unincorporated Riverside County, California (2018-present). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation for this project, and prepared the Paleontological Resources Impact Mitigation Plan (PRIMP). Kelly also oversees the paleontological monitoring program for this Project. This project is ongoing and is scheduled to be complete in 2020.

Paleontological Principal Investigator and Project Manager, Ontario Ranch Logistic Center, City of Ontario, County of San Bernardino, California (2018-present) Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation for this project, and authored the PRIMP for this project. Kelly also oversees the paleontological monitoring program for this Project. This project

is ongoing and is scheduled to be complete in 2021.

Paleontological Principal Investigator and Project Manager, Saddleback College, City of Mission Viejo, Orange County (2018-present) Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation for this project, prepared the Paleontological Resources Impact Mitigation Plan (PRIMP), and oversaw the paleontological monitoring program detailed in the PRIMP. Kelly is currently co-authoring the final paleontological mitigation report This project is in the final stages and is scheduled to be completed 2020.

Private Development Sector Experience

Paleontological Principal Investigator and Project Manager, Proposed Alta Vista Specific Plan Project, SC Development, City of Placentia, Orange County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Magnolia Tank Farm Project, SLF-HB Magnolia, LLC, City of Huntington Beach, Orange County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Santa Fe Springs Apartment Project, Clearwater Communities, City of Whittier, Los Angeles County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Rider Business Center Project, Capstone Advisor, Unincorporated Riverside County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Los Olivos French Valley Project, Newland Homes LLC, Unincorporated Riverside County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Veteran's Village Community Development Project, UHC LLC, Cathedral City, Riverside County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Colony Commerce East Project, CapRock Partners, City of Ontario, San Bernardino County (2016). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Jurupa Valley Medical Clinic Project, Boureston Company, City of Jurupa Valley, Riverside County (2016). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Renewable Energy Sector Experience

Paleontological Principal Investigator and Project Manager, California Department of Corrections and

Rehabilitation Ventura Youth Correctional Facility Solar Project, Ecoplexus, Inc, City of Camarillo, Ventura County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Anderson-Devil's Den Solar Project, Forefront Power, Lost Hills, Kern County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Anderson-Coalinga 1-1109 Solar Project, Forefront Power, Ora, Unincorporated Fresno County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Anderson-Coalinga 2 Solar Project, Forefront Power, City of Coalinga, Fresno County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Anderson-Derrick Solar Project, Forefront Power, City of Coalinga, Fresno County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Anderson-Dulgarian Solar Project, Forefront Power, Lost Hills, Kern County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Anderson-Gates Solar Project, Forefront Power, City of Coalinga, Fresno County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Mahal Property Solar Project, Forefront Power, City of Selma, Fresno County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, Rector Reservoir Solar Facility Project, Forefront Power, Napa Valley, Napa County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, California Men's Colony Solar Facility Project, Forefront Power, San Luis Obispo, San Luis Obispo County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Paleontological Principal Investigator and Project Manager, California Department of Corrections and Rehabilitation California Institute for Women Solar Project, Ecoplexus, Inc, City of Corona, San Bernardino County (2017). Ms. Kelly coordinated all surveying, preparation of compliance and environmental documentation relating to Paleontological resources for this project.

Utility Sector Experience

Paleontological Project Manager, Cadiz Ground Water Project, San Bernardino County, California

(2012-2013). Ms. Kelly conducted all research and data collection for the Cadiz Groundwater Conservation and Storage Project for completion of a DEIR section on paleontological resources. Based on the results of the analysis, Kelly prepared the mitigation measures which were designed to reduce potential adverse impacts to paleontological resources.

Paleontological Project Manager, Manzana Wind Express Project, Kern County, California (2012-2015).

Ms. Kelly prepared the Paleontological Mitigation Monitoring Resource Plan, which allowed her to develop a key role in presenting environmental training programs to construction workers and other environmental compliance monitors. She also authored the final paleontological monitoring report. The Project's construction consisted of the installation more than 300 wind energy turbines, aligned along approximately 26 rows, on the 6,275-acre proposed site. The Manzana Wind Energy Project site was found to have the potential for scientifically significant paleontological resources that could be impacted by construction-related ground disturbance. She co-authored the final paleontological mitigation report in compliance with CEQA and Kern County guidelines.

Paleontological Project Manager, Pacific Wind Express Project, Kern County, California (2008-2009).

Ms. Kelly prepared the Paleontological Mitigation Monitoring Resource Plan, which allowed her to develop a key role in presenting environmental training programs to construction workers and other environmental compliance monitors. She co-authored the final paleontological mitigation report.

Paleontological Project Manager, Tehachapi Renewable Transmission Project (TRTP), Southern California Edison (SCE), Kern County, Los Angeles County, San Bernardino County (2009-2015).

Ms. Kelly conducted and led surveys along this project's right of way. She was also in charge of scheduling monitoring crews during grading in areas of paleontological sensitivity, managing and reviewing log sheets, and tracking data that is incorporated to final reports. Ms. Kelly played a valuable role with scheduling for the project's needs. She monitored, surveyed, and reported on all paleontological facets of this project as the Lead Paleontological Monitor for segment 3B, which was located near Rosamond, and for segments 4-11 which extended into Los Angeles and San Bernardino Counties. She authored more than 10 of the compliance reports for this project. She also performed monitoring on every segment of this Project.

Paleontological Project Manager, SCE, Valley South Subtransmission Line Project, Riverside County, California (2007-2010). Ms. Kelly managed scheduling and provided oversight for coordination of all surveying, preparation of compliance and environmental documentation for this project, including three proposed alternatives, and co-wrote the final PEA and survey reports, utilizing CEQA and Riverside County paleontological guidelines.

Paleontological Project Manager, SCE, San Joaquin Cross Valley Loop Project, Tulare County, California (2010-2013). Ms. Kelly assisted with coordination of all surveying, preparation of compliance and environmental documentation for this project, and co-authored the final Paleontological Monitoring Plan for this project.

Paleontological Project Manager, SCE, Devore Substation Project, San Bernardino County, California (2010-2012). Ms. Kelly prepared the compliance and environmental documents for this project, including paleontological inventory and geological map research.

Paleontological Project Manager, El Casco System-Transmission Line, SCE, throughout Riverside County (2011-2014). Ms. Kelly performed paleontological monitoring. Her duties included salvaging small and large fossils, screen washing and sorting fossils. She aided in the processing of microfossils collected from bulk sampling of fossil bearing sediment, and documenting stratigraphic locations of fossil bearing units. This project was in compliance with both CEQA and under the jurisdiction of the CPUC.

Paleontological Project Manager, South of Kramer Project, SCE, Hesperia to Barstow, San Bernardino, County (2009-2016). Ms. Kelly provided project management and compliance surveying, which included surveying from Hesperia to Barstow, CA for a Proponent's Environmental Assessment (PEA). All portions of the Proposed Project were located within San Bernardino County, California. Kelly co-authored the final survey report for this Project. A BLM Permit was authorized for the survey.

Paleontological Project Manager, OC Access Road Grading, SCE, Orange and Riverside County (2010-2011). Ms. Kelly assisted in documentation for the cultural resources portion, which include information regarding the location and condition of archaeological and paleontological sites recorded at or near the access roads, and recommends impact avoidance measures for future years in implementing the Protocol for 73 known archaeological sites. This required extensive coordination with Orange County Fire Authority grading department, SCE's Operations and Maintenance (O&M), and Orange County Parks. Trimble units were used for the documentation before and after grading of access roads. Communication played a key role when strategizing which locations were being graded where and when. The company came in under budget because of Kelly's efficiency and ability to coordinate and schedule.

Paleontological Project Manager, West of Devers Transmission Line Project, SCE, Riverside County, California (2009-2016). Ms. Kelly provided all project management and paleontological related services. This included proper BLM authorization and permitting to conduct surveying and a research design for field reconnaissance related to PEA, EIS/EIR documentation for the proposed transmission line. She assisted with managing documentation with laws relating to paleontological resources, among which are CEQA and NEPA compliance.

Paleontological Project Manager, Pacific Gas and Electric (PG&E), Line 300A/MP 147.7 and 180.8 Projects, San Bernardino County, California (2005-2006). Kelly prepared the mitigation recommendations and a paleontological inventory report for this project. She also was responsible for scheduling surveys on BLM and United States Marine Corps lands.

Paleontological Project Manager, PG&E, Jefferson to Stanford No. 2 60 kV Feasibility Project, San Mateo County, California (2012-2014). Kelly assisted with the preparation of the paleontological resources review and paleontological inventory report (PIR) and Proponent's Environmental Assessment (PEA) for this project. Several potential routes were assessed for this project, and the feasibility and paleontological potential was determined for this project. The report and PIR were prepared according to CEQA guidelines.

Paleontological Project Manager, Camp Pendleton Project, SDG&E, throughout San Diego and Orange Counties (2013-2017). Kelly provided on-call paleontological services for this project. She was a key facet in report production and research which enabled her firm to perform all survey and monitoring work required on Camp Pendleton for CEQA/NEPA check list assessments requested from SDG&E. Kelly was cleared from the Department of Defense in order to conduct work on the base. Site assessments and monitoring include all work related to: future location of power poles and towers, water control features, trenching and subsurface excavations, access roads, grading impacts to develop substations and other facilities, work pads, staging yards, and gas pipelines.

Appendix B:
LACM Locality Search Results

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org



Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

19 February 2020

Material Culture Consulting
2701-B North Towne Avenue
Pomona, CA 91767

Attn: Julia Carvajal, Archaeologist & GIS Specialist

re: Paleontological resources for the proposed Iris Park Project, in the City of Moreno Valley, Riverside County, project area

Dear Julia:

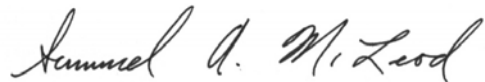
I have conducted a thorough check of our paleontology collection records for the locality and specimen data for proposed Iris Park Project, in the City of Moreno Valley, Riverside County, project area as outlined on the portion of the Sunnymead USGS topographic quadrangle map that you sent to me via e-mail on 4 February 2020. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities somewhat nearby from sedimentary deposits similar to those that probably occur at depth in the proposed project area.

Surface deposits in the entire proposed project area consist of younger Quaternary Alluvium, derived as alluvial fan deposits from the more elevated terrain to the north. These sedimentary deposits typically do not contain significant vertebrate fossils, at least in the uppermost layers, but they may be underlain by older Quaternary deposits that do contain significant vertebrate fossils. Our closest vertebrate fossil locality from somewhat similar deposits is LACM 4540, from the gravel pits just west of Jack Rabbit Trail east-southeast of the proposed project area on the eastern side of the San Jacinto Valley, that produced a specimen of fossil horse, *Equus*.

Shallow excavations in younger Quaternary Alluvium in the proposed project area are unlikely to uncover significant vertebrate fossil remains. Deeper excavations in the proposed project area that extend down into older Quaternary deposits, however, may well encounter significant vertebrate fossils. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,



Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

**PRELIMINARY GEOTECHNICAL
AND INFILTRATION FEASIBILITY INVESTIGATION
PROPOSED IRIS PARK RESIDENTIAL DEVELOPMENT
MORENO VALLEY, CALIFORNIA**

**PROJECT NO. 33591.1
NOVEMBER 25, 2019**

Prepared For:

Passco Pacifica, LLC
333 City Boulevard, Suite 1700
Orange, California 92868

Attention: Mr. Oscar Graham

November 25, 2019

Passco Pacifica, LLC
333 City Boulevard, Suite 1700
Orange, California 92868

Project No. 33591.1

Attention: Mr. Oscar Graham

Subject: Preliminary Geotechnical and Infiltration Feasibility Investigation, Proposed Iris Park Residential Development, APN 312-020-025, Moreno Valley, California.

LOR Geotechnical Group, Inc., is pleased to present this report summarizing our geotechnical investigation for the above referenced project. In summary, it is our opinion that the proposed development is feasible from a geotechnical perspective, provided the recommendations presented in the attached report are incorporated into design and construction.

To provide adequate support for the proposed residential structures, we recommend that a compacted fill mat be constructed beneath footings and slabs. The compacted fill mat will provide a dense, high-strength soil layer to uniformly distribute the anticipated foundation loads over the underlying soils. All undocumented fill material and any loose alluvial materials should be removed from structural areas and areas to receive engineered compacted fill. The data developed during this investigation indicates that removals on the order of approximately 5 to 7 feet will be required within the currently planned development areas. The given removal depths are preliminary. The actual depths of the removals should be determined during the grading operation by observation and/or in-place density testing.

Very low expansion potential, fair R-value quality, poor infiltration characteristics, and a negligible soluble sulfate content generally characterize the onsite soil materials tested.

LOR Geotechnical Group, Inc.

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Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation_R (4197 : Tentative Tract Map 37909

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Passco Pacifica, LLC
November 25, 2019

Project No. 33591.1

INTRODUCTION

During November of 2019, a Preliminary Geotechnical and Infiltration Feasibility Investigation was performed by LOR Geotechnical Group, Inc., for proposed Iris Park residential development of APN 312-020-025 in the City of Moreno Valley, California. The purpose of this investigation was to conduct a technical evaluation of the geologic setting of the site and to provide geotechnical design recommendations for the proposed improvements. The scope of our services included:

- Review of available pertinent geotechnical literature, reports, maps, and agency information pertinent to the study area;
- Interpretation of aerial photographs of the site and surrounding regions dated 1966 through 2018;
- Geologic field reconnaissance mapping to verify the areal distribution of earth units and significance of surficial features as compiled from documents, literature, and reports reviewed;
- A subsurface field investigation to determine the physical soil conditions pertinent to the proposed development;
- Infiltration testing via the constant head test method at two locations within the approximate area proposed for the infiltration of onsite runoff waters;
- Laboratory testing of selected soil samples obtained during the field investigation;
- Development of geotechnical recommendations for site grading and foundation design; and
- Preparation of this report summarizing our findings, and providing conclusions and recommendations for site development.


The approximate location of the site is shown on the attached Index Map, Enclosure A-1, within Appendix A.

To orient our investigation at the site, you provided us with Site Plan, prepared by IDE Arc Architecture & Planning, undated, that showed the proposed development. As noted on that map, the site will be developed with 84 residential lots and the associated interior streets. An infiltration basin is also proposed. The Site Plan was utilized as a base map for our field investigation and is presented as Enclosure A-2, within Appendix A.

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PROJECT CONSIDERATIONS

Information furnished to this firm indicates that the proposed project will consist of the construction of  single-family residences.

These will likely be one or two stories in height and are anticipated to be of wood frame construction with an exterior plaster veneer. Light to moderate foundation loads are anticipated with such structures. Cuts and fills on the order of a few feet are anticipated to create the planar building pads.

EXISTING SITE CONDITIONS

The subject site consists of a triangular shaped, relatively flat, vacant area of land that is approximately 10 acres in size. At the time of our investigation, vegetation on the site consisted of a light moderate growth of weeds. The topography of the site is planar, with a very gentle fall towards the southeast.

Iris Avenue, a fully improved roadway, bounds the site on the north followed by a tract of single family residences. A tract of single family residences bounds the site on the east. The California Aqueduct easement comprises the western 100 feet of the site with a shopping center and school beyond. South of the site is a tract of single family homes.

AERIAL PHOTOGRAPH ANALYSIS

The aerial photographs reviewed consisted of vertical aerial stereoscopic photographs of varying scales. We reviewed imagery available from Google Earth (2018) and from Historic Aerials (2019).

The site consisted of vacant land which appeared to be dry land farmed with surrounding properties from 1966, the earliest photograph available, to 1978. The 1997 photograph shows the site as vacant land with some stockpiles of fill material in the northeast corner. Numerous dirt paths are visible in this area. The 2006 photograph shows additional smoothed out fill to the west of the previously noted fill. An earthen berm is present on the north and west side of this area. A minor amount of additional end dumped fill is visible in the 2009 photograph.

Our review of the aerial photographs did not reveal any adverse geologic conditions, such as possible faults or landslides, as being present at or within close proximity to the site.

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FIELD EXPLORATION PROGRAM

Our subsurface field exploration program was conducted on November 7, 2019 and consisted of drilling 5 exploratory borings with a truck-mounted Mobile B-61 drill rig equipped with 8-inch diameter hollow stem augers. The borings were drilled to depths of approximately 21 to 51.5 feet below the existing ground surface. The approximate locations of our exploratory borings are presented on the attached Site Plan, Enclosure A-2 within Appendix A.

The subsurface conditions encountered in the exploratory borings were logged by a geologist from this firm. Relatively undisturbed and bulk samples were obtained at a maximum depth interval of 5 feet and returned to our geotechnical laboratory in sealed containers for further testing and evaluation. A detailed description of the field exploration program and the boring logs are presented in Appendix B.

LABORATORY TESTING PROGRAM

Selected soil samples obtained during the field investigation were subjected to laboratory testing to evaluate their physical and engineering properties. Laboratory testing included in-place moisture content and dry density, laboratory compaction characteristics, direct shear, sieve analysis, sand equivalent, R-value, consolidation, expansion index, Atterberg limits, and soluble sulfate content. A detailed description of the laboratory testing program and the test results are presented in Appendix C.

GEOLOGIC CONDITIONS

Regional Geologic Setting

The site is located within the south-central portion of Moreno Valley which lies within the northern end of Perris Valley. This area is located on the Perris block, within the northern Peninsular Ranges geologic province of southern California. While the Perris block is considered to be a relatively stable structural block, it is bounded by active faults. The Perris block is underlain predominately by a very large mass of crystalline igneous rocks of Cretaceous age and older metasedimentary and metavolcanic rocks.

The Perris block has a series of erosional surfaces, marked by low topographic relief and capped with unconsolidated alluvial sediments stripped from the surrounding highlands, such as the Box Spring Mountains and the hills around Lake Perris located east of the site.

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These were mapped by the California Division of Mines and Geology as being underlain by deposits of relatively unconsolidated, but weakly to moderately indurated younger to older alluvium (Morton and Matti, 2001 and Morton, 2003).

The nearest known active fault zone is the San Jacinto fault zone located approximately 9.8 kilometers (6.1 miles) to the northeast. Other major faults within the region include the Elsinore fault zone located approximately 26 kilometers (16.2 miles) to the southwest, and San Andreas fault zone located approximately 27 kilometers (17 miles) to the northeast. The site and the regional geologic setting are shown on Enclosure A-3 within Appendix A.

Site Geologic Conditions

Fill/Topsoil: As encountered within the majority of our exploratory borings, fill/topsoil materials on the order of 2 feet thick are present across much of the site. The fill materials were noted to be light brown, dry, and loose silty sand. These materials are most likely the result of weed abatement practices (discing).

Fill: As encountered within our exploratory boring placed in the northeast portion of the site, fill materials on the order of 5 feet are present. These materials consisted of dry, loose, silty sand with some debris and are believed to be end dumped fills noted in our review of aerial photographs.

Older Alluvium: Underlying the fill materials at the site, older alluvial materials were encountered within all of our exploratory borings to the maximum depths explored. These units were noted to consist of silty sand and sandy silt, and lesser amounts unit of well graded sand, clayey sand and lean clay with sand. The older alluvial materials were in a relatively loose to medium dense/stiff state upon first encounter, becoming medium dense/very stiff to dense/hard with depth based on our equivalent Standard Penetration Test (SPT) data and in-place density testing. Consolidation testing of the older alluvial materials indicate normal consolidation/hydro-consolidation characteristics at depths of 7 feet and greater.

A detailed description of the subsurface soil conditions as encountered within our exploratory borings is presented on the Boring Logs within Appendix B.

Groundwater Hydrology

Groundwater was encountered within our exploratory borings B-2 at a depth of approximately 33.5 feet below the existing ground surface.

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Records for nearby wells which were readily available from the State of California Department of Water Resources online database (CDWR, 2019) and the Western Municipal Water District Cooperative Well Measurement Program (WMWD, 2019) were reviewed as a part of this investigation. In addition, historic groundwater level data was reviewed from a groundwater contour map prepared by the U.S.G.S. (Carson and Matti, 1985).

According to the State of California Department for Water resources online database, the nearest well with available data is State Well Number 03S03W32B001S located to the southeast, approximately 1.4 kilometers (0.9 miles). In this well, groundwater was last measured at a depth of 21 feet below the ground surface on April 26, 2019. The depth to groundwater in the past was noted to vary slightly over time. Data for this well was presented from 2011 to 2019 and the elevation was listed as 1,476 feet above mean sea level.

Groundwater well data from the Cooperative Well Measuring Program, Spring 2019, indicates that the nearest well is the well noted above and no additional relevant information is presented within this database.

As illustrated on Enclosure A-1, the elevation of the site is approximately 1,495 feet above mean sea level. Based on the information above, groundwater is anticipated to lie approximately 35 feet in the general site area.

Surface Runoff

Current surface runoff of precipitation waters across the site is generally as sheet flow to the south-southeast.

Mass Movement

Mass movement features such as landslides, rockfalls, or debris flows within the site vicinity are not known to exist and no evidence of mass movement was observed on the site or in the vicinity during our review of aerial photographs or reconnaissance.

Faulting

No active or potentially active faults are known to exist at the subject site. In addition, the subject site does not lie within a current State of California Earthquake Fault Zone (Hart and Bryant, 2003).

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As previously mentioned, the closest known active fault is the San Jacinto Valley segment of the San Jacinto fault zone, located approximately 9.8 kilometers (6.1 miles) to the northeast. In addition, other relatively close active faults include the Glen Ivy segment of the Elsinore fault zone, located approximately 26 kilometers (16.2 miles) to the southwest, and the San Bernardino segment of the San Andreas fault zone located approximately 27 kilometers (17 miles) to the northeast.

The San Jacinto fault zone is a sub-parallel branch of the San Andreas fault zone, extending from the northwestern San Bernardino area, southward into the El Centro region. This fault has been active in recent times with several large magnitude events. It is believed that the San Jacinto fault is capable of producing an earthquake magnitude on the order of 6.5 or greater.

The Elsinore fault zone is one of the largest in southern California. At its northern end it splays into two segments and at its southern end it is cut by the Yuba Wells fault. The primary sense of slip along the Elsinore fault is right lateral strike-slip. It is believed that the Elsinore fault zone is capable of producing an earthquake magnitude on the order of 6.5 to 7.5.

The San Andreas fault is considered to be the major tectonic feature of California, separating the Pacific Plate and the North American Plate. While estimates vary, the San Andreas fault is generally thought to have an average slip rate on the order of 24mm/yr and capable of generating large magnitude events on the order of 7.5 or greater.

Current standards of practice often include a discussion of all potential earthquake sources within a 100 kilometer (62 mile) radius. However, while there are other large earthquake faults within a 100 kilometer (62 mile) radius of the site, none of these are considered as relevant to the site due to their greater distance and/or smaller anticipated magnitudes.

Historical Seismicity

In order to obtain a general perspective of the historical seismicity of the site and surrounding region a search was conducted for seismic events at and around the area within various radii. This search was conducted utilizing the historical seismic search website of the USGS. This website conducts a search of a user selected cataloged seismic events database, within a specified radius and selected magnitudes, and then plots the events onto a map. At the time of our search, the database contained data from January 1, 1932 through November 20, 2019.

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In our first search, the general seismicity of the region was analyzed by selecting an epicenter map listing all events of magnitude 4.0 and greater, recorded since 1932, within a 100 kilometer (62 mile) radius of the site, in accordance with guidelines of the California Division of Mines and Geology. This map illustrates the regional seismic history of moderate to large events. As depicted on Enclosure A-4, within Appendix A, the site lies within a relatively active region associated with the San Andreas fault trending northwest and the northwest trending faulting of the Mojave Desert geomorphic province.

In the second search, the micro seismicity of the area lying within a 15 kilometer (9.3 mile) radius of the site was examined by selecting an epicenter map listing events on the order of 1.0 and greater since 1978. In addition, only the "A" events, or most accurate events were selected. Caltech indicates the accuracy of the "A" events to be approximately 1 km. The results of this search is a map that presents the seismic history around the area of the site with much greater detail, not permitted on the larger map. The reason for limiting the events to the last 40± years on the detail map is to enhance the accuracy of the map. Events recorded prior the mid 1970's are generally considered to be less accurate due to advancements in technology. As depicted on this map, Enclosure A-5, the San Jacinto fault zone appear to be the source of numerous events.

In summary, the historical seismicity of the site entails numerous small to medium magnitude earthquake events occurring around the subject site, predominately associated with the presence of the San Jacinto fault zone. Any future developments at the subject site should anticipate that moderate to large seismic events could occur very near the site.

Secondary Seismic Hazards

Other secondary seismic hazards generally associated with severe ground shaking during an earthquake include liquefaction, seiches and tsunamis, earthquake induced flooding, landsliding and rockfalls, and seismic-induced settlement.

Liquefaction: The potential for liquefaction generally occurs during strong ground shaking within granular, loose, sediments where the groundwater is usually less than 50 feet. The County of Riverside has mapped the overall site area as having low liquefaction potential (TLMA, 2019).

Liquefaction is a process in which strong ground shaking causes saturated soils to lose their strength and behave as a fluid (Matti and Carson, 1991). Ground failure associated with liquefaction can result in severe damage to structures. Soil types susceptible to liquefaction include sand, silty sand, sandy silt, and silt, as well as soils having a plasticity

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index (PI) less than 7 (Boulanger and Idriss, 2004) and loose soils with a PI less than 12 and a moisture content greater than 85 percent of the liquid limit (Bray and Sancio, 2006). The geologic conditions for increased susceptibility to liquefaction are: 1) shallow groundwater (generally less than 50 feet in depth); 2) the presence of unconsolidated sandy alluvium, typically Holocene in age; and 3) strong ground shaking. All three of these conditions must be present for liquefaction to occur.

Severe seismic shaking may cause dry and non-saturated sands to densify, resulting in settlement expressed at the ground surface. Seismic settlement in dry soils generally occurs in loose sands and silty sands, with cohesive soils being less prone to significant settlement.

A quantitative method using an index called the liquefaction potential index (LPI) was developed and presented by Iwasaki et al. (1978, 1982). The LPI is defined as:

$$LPI = \int_0^{20} F_1 W(z) dz$$

where $W(z) = 10 - 0.5z$, $F_1 = 1 - FS$ for $FS < 1.0$, $F_1 = 0$ for $FS > 1.0$ and z is the depth below the ground surface in meters. The LPI presents the risk of liquefaction damage as a single value with the following indicators of liquefaction-induced damage:

LPI Range and Damage	
LPI Range	Damage
LPI = 0	Liquefaction risk is very low.
$0 < LPI \leq 5$	Liquefaction risk is low.
$5 < LPI \leq 15$	Liquefaction risk is high.
LPI > 15	Liquefaction risk is very high.

The most recent development for quantitative descriptions of liquefaction-induced surface damage, called "liquefaction vulnerability", was made by Tonkin & Taylor (2013) after the Christchurch earthquakes occurred between 2010 and 2011 and was based on field observations and analyses of approximately 7,500 CPT investigations. A new index, the liquefaction severity number (LSN), was proposed and defined as:

$$LSN = \int \frac{\varepsilon_v}{z} dz$$

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where ϵ_v is the calculated volumetric densification strain in the subject layer from Zhang et al. (2002) and z is the depth to the layer of interest in meters below the ground surface. The typical behaviors of sites with a given LSN are summarized in following table.

LSN Ranges and Observed Land Effects	
LSN Range	Predominant Performance
0-10	Little to no expression of liquefaction, minor effects
10-20	Minor expression of liquefaction, some sand boils
20-30	Moderate expression of liquefaction, with sand boils and some structural damage
30-40	Moderate to severe expression of liquefaction, settlement can cause structural damage
40-50	Major expression of liquefaction, undulations and damage to ground surface, severe total and differential settlement of structures
>50	Severe damage, extensive evidence of liquefaction at surface, severe total and differential settlements affecting structures, damage to services

Both LPI and LSN indices were calculated for the soil profiles of Exploratory Boring No. B-2. The results indicate that the liquefaction risk of the site is "very low" to "low" per the LPI index of 0. The site exhibits "little to no expression of liquefaction, minor effects" per the LSN index of 0.

The Idriss and Boulanger (2008) and Pradel (1998) methods were used to evaluate liquefaction-induced settlement and dry sand settlement. As input into our calculations a deaggregated modal moment magnitude of 6.5 and an acceleration of 0.553g were utilized for the representative soil profiles as provided in Boring B-2.

The results indicate that a maximum seismic settlement of less than one-half inch can be anticipated. Based on the relative uniformity of soil materials encountered, differential seismic settlement is anticipated to be approximately one-half of the total seismic settlement. The settlement calculated is accumulated from soil layers to a maximum depth of 50 feet and the result of our analysis is provided in Appendix E.

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Seiches/Tsunamis: The potential for the site to be affected by a seiche or tsunami (earthquake generated wave) is considered nil due to the absence of any large bodies of water near the site.

Flooding (Water Storage Facility Failure): There are no large water storage facilities located on or upstream near the site which could possibly rupture during an earthquake and affect the site by flooding.

Seismically-Induced Landsliding: Our research, site reconnaissance and review of aerial imagery of the site and vicinity indicates that there are no known or suspected landslides at the site or in close proximity to the site and, therefore, the potential for seismically-induced landslides occurring at the site is considered very low.

Rockfalls: No large, exposed, loose or unrooted boulders that could affect the integrity of the site are present above the site.

Seismically-Induced Settlement: Settlement generally occurs within areas of loose, granular soils with relatively low density. Since the site is underlain by dense/stiff to dense/hard older alluvial materials, the potential for settlement is considered low. In addition, the earthwork operations recommended to be conducted during the development of the site will mitigate any near surface loose soil conditions.

SOILS AND SEISMIC DESIGN CRITERIA (California Building Code 2016)

Section 1613 of Chapter 16 of the 2016 California Building Code (CBC) contains the procedures and definitions for the calculations of the earthquake loads on structures and non structural components that are permanently attached to structures and their supports and attachments.

It should be noted that the classification of use and occupancy of all proposed structures at the site, and thus design requirements, shall be the responsibility of the structural engineer and the building official.

CBC Earthquake Design Summary

The following earthquake design criteria have been formulated for the site utilizing the source referenced above. However, these values should be reviewed and the final design should be performed by a qualified structural engineer familiar with the region.

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CBC 2016 SEISMIC DESIGN SUMMARY*	
Site Location (WGS 84) 33.8872, -117.2226, Occupancy Category II	
Site Class Definition Chapter 20 ASCE 7	D
S_s Mapped Spectral Response Acceleration at 0.2s Period, (Figure 1613.3.1(1))	1.500
S_1 Mapped Spectral Response Acceleration at 1s Period, (Figure 1613.3.3(2))	0.605
F_a Short Period Site Coefficient at 0.2s Period, (Table 1613.3.3(1))	1.0
F_v Long Period Site Coefficient at 1s Period, (Table 1613.3.3(2))	1.5
S_{MS} Adjusted Spectral Response Acceleration at 0.2s Period, (eq .16-37)	1.500
S_{M1} Adjusted Spectral Response Acceleration at 1s Period, (eq .16-38)	0.907
S_{DS} Design Spectral Response Acceleration at 0.2s Period, (eq .16-39)	1.000
S_{D1} Design Spectral Response Acceleration at 1s Period, (eq .16-40)	0.605
Seismic Design Category - Short Period (Table 1613.3.5(1))	D
Seismic Design Category - Long Period (Table 1613.3.5(2))	D
*Values obtained from OSHPD online U.S. Seismic Design Maps tool	

INFILTRATION TESTING AND TEST RESULTS

Two constant head infiltration tests were conducted within the general area proposed for the infiltration of runoff waters. Testing consisted of two test holes which were excavated using a hollow stem auger drill rig to depths of approximately 5 feet below the existing ground surface. The holes were 8-inches in diameter. Two inches of gravel was placed in the bottom of the holes and perforated plastic liners were placed into each hole. A 2-inch PVC pipe with a preset water level of 0.5 feet was inserted into each liner. A 5-gallon glass bottle was then inverted over each pipe with a vacuum seal in order to maintain a constant 0.5 feet of water with each hole. The volume of water used in a given time period was recorded at various time intervals to establish the infiltration rates.

Infiltration test results are summarized in the following table:

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Test No.	Depth (ft.)*	Infiltration Rate** in/hr
I-1	4	0.10
I-2	4	0.10
* depth measured below existing ground surface ** clear water rate		

The results of our infiltration testing are attached as Enclosures D-1 and D-2. The test results indicate poor infiltration characteristics for the soils tested.

CONCLUSIONS

General

This investigation provides a broad overview of the geotechnical and geologic factors which are expected to influence future site planning and development. On the basis of our field investigation and testing program, it is the opinion of LOR Geotechnical Group, Inc., that the proposed development is feasible from a geotechnical standpoint, provided the recommendations presented in this report are incorporated into design and implemented during grading and construction.

The subsurface conditions encountered in our exploratory borings are indicative of the locations explored. The subsurface conditions presented here are not to be construed as being present the same everywhere on the site. If conditions are encountered during the construction of the project which differ significantly from those presented in this report, this firm should be notified immediately so we may assess the impact to the recommendations provided.

Foundation Support

Based upon the field investigation and test data, it is our opinion that the existing fill/topsoil and fill soils will not, in their present condition, provide uniform and/or adequate support for the proposed improvements. Left as is, this condition could cause unacceptable differential and/or overall settlements upon application of the anticipated foundation loads.

To provide adequate support for the proposed structural improvements, we recommend that a compacted fill mat be constructed beneath footings and slabs.

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This compacted fill mat will provide a dense, high-strength soil layer to uniformly distribute the anticipated foundation loads over the underlying soils. In addition, the construction of this compacted fill mat will allow for the removal of any undocumented fill soils that are present within the proposed building areas. Conventional foundation systems, using either individual spread footings and/or continuous wall footings, will provide adequate support for the anticipated downward and lateral loads when utilized in conjunction with the recommended fill mat.

Soil Expansiveness

Our laboratory testing found the soils tested to have a very low expansion potential. For very low expansive soils, no specialized construction procedures to resist expansive soil activity are necessary.

Careful evaluation of on-site soils and any import fill for their expansion potential should be conducted during the grading operation.

Sulfate Protection

The results of the soluble sulfate tests conducted on selected subgrade soils expected to be encountered at foundation levels indicate that there is a negligible sulfate exposure to concrete elements in contact with the on site soils per the 2016 CBC. Therefore, no specific recommendations are given for concrete elements to be in contact with the onsite soils.

Infiltration

The results of our field investigation and test data indicates the site soils are not conducive to infiltration or percolation. Therefore, water quality storm water systems should not incorporate on-site infiltration/percolation when determining storm water treatment capacity.

Geologic Mitigations

No special geologic recommendation methods are deemed necessary at this time, other than the geotechnical recommendations provided in the following sections.

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Seismicity

Seismic ground rupture is generally considered most likely to occur along pre-existing active faults. Since no known faults are known to exist at, or project into the site, the probability of ground surface rupture occurring at the site is considered nil.

Due to the site's close proximity to the faults described above, it is reasonable to expect a strong ground motion seismic event to occur during the lifetime of the proposed development on the site. Large earthquakes could occur on other faults in the general area, but because of their lesser anticipated magnitude and/or greater distance, they are considered less significant than the faults described above from a ground motion standpoint.

The effects of ground shaking anticipated at the subject site should be mitigated by the seismic design requirements and procedures outlined in Chapter 16 of the California Building Code. However, it should be noted that the current building code requires the minimum design to allow a structure to remain standing after a seismic event, in order to allow for safe evacuation. A structure built to code may still sustain damage which might ultimately result in the demolishing of the structure (Larson and Slosson, 1992).

RECOMMENDATIONS

Geologic Recommendations

No special geologic recommendation methods are deemed necessary at this time, other than the geotechnical recommendations provided in the following sections.

General Site Grading

It is imperative that no clearing and/or grading operations be performed without the presence of a qualified geotechnical engineer. An on-site, pre-job meeting with the owner, the developer, the contractor, and geotechnical engineer should occur prior to all grading related operations. Operations undertaken at the site without the geotechnical engineer present may result in exclusions of affected areas from the final compaction report for the project.

Grading of the subject site should be performed in accordance with the following recommendations as well as applicable portions of the California Building Code, and/or applicable local ordinances.

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All areas to be graded should be stripped of significant vegetation and other deleterious materials.

It is our recommendation that any existing fills under any proposed flatwork and/or paved areas be removed and replaced with engineered compacted fill. If this is not done, premature structural distress (settlement) of the flatwork and pavement may occur. Any undocumented fills encountered during grading should be completely removed and cleaned of significant deleterious materials. These may then be reused as compacted fill.

Cavities created by removal of undocumented fill soils and/or subsurface obstructions should be thoroughly cleaned of loose soil, organic matter and other deleterious materials, shaped to provide access for construction equipment, and backfilled as recommended in the following Engineered Compacted Fill section of this report.

Initial Site Preparation

Any and all existing uncontrolled fills and any loose/soft native alluvial soils should be removed from structural areas and areas to receive structural fills. The data developed during this investigation indicates that removals on the order of 5 to 7 feet will be required to encounter competent older alluvium. However, deeper removals may be required locally. Removals should extend horizontally at a distance equal to the depth of the removals plus proposed fill and at least a minimum of 5 feet. The actual depths of removals should be determined during the grading operation by observation and/or by in-place density testing.

Preparation of Fill Areas

After completion of the removals described above and prior to placing fill, the surfaces of all areas to receive fill should be scarified to a depth of at least 6 inches. The scarified soil should be brought to near optimum moisture content and compacted to a relative compaction of at least 90 percent (ASTM D 1557).

Preparation of Foundation Areas

All footings should rest upon a minimum of 24 inches of properly compacted fill material placed over competent natural alluvial soils. In areas where the required fill thickness is not accomplished by the removal of unsuitable soils, the footing areas should be further subexcavated to a depth of at least 24 inches below the proposed footing base grade, with the subexcavation extending at least 5 feet beyond the footing lines. The bottom of this excavation should then be scarified to a depth of at least 6 inches, brought to near

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optimum moisture content, and recompact to at least 90 percent relative compaction (ASTM D 1557) prior to refilling the excavation to grade as properly compacted fill. Fill areas should not be constructed so as to place structures across any area where the maximum depth of fill to minimum depth of fill is greater than a 3:1 ratio.

To provide adequate support, concrete slabs-on-grade should bear on a minimum of 24 inches of compacted soil. The final pad surfaces should be rolled to provide smooth, dense surfaces upon which to place the concrete.

Engineered Compacted Fill

The on-site soils should provide adequate quality fill material, provided they are free from organic matter and other deleterious materials. Unless approved by the geotechnical engineer, rock or similar irreducible material with a maximum dimension greater than 6 inches should not be buried or placed in fills.

Import fill, if required, should be inorganic, non-expansive granular soils free from rocks or lumps greater than 6 inches in maximum dimension. Sources for import fill should be approved by the geotechnical engineer prior to their use.

Fill should be spread in maximum 8-inch uniform, loose lifts, with each lift brought to near optimum moisture content prior to, during and/or after placement, and compacted to a relative compaction of at least 90 percent in accordance with ASTM D 1557.

Based upon the relative compaction of the near surface soils determined during this investigation and the relative compaction anticipated for compacted fill soil, we estimate a compaction shrinkage factor of approximately 10 to 15 percent. Therefore, 1.10 to 1.15 cubic yards of in-place materials would be necessary to yield one cubic yard of properly compacted fill material. Subsidence is anticipated to be 0.10 feet. These values are for estimating purposes only, and are exclusive of losses due to stripping or the removal of subsurface obstructions.

These values may vary due to differing conditions within the project boundaries and the limitations of this investigation. Shrinkage should be monitored during construction. If percentages vary, provisions should be made to revise final grades or adjust quantities of borrow or export.

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Short-Term Excavations

Following the California Occupational and Safety Health Act (CAL-OSHA) requirements, excavations 5 feet deep and greater should be sloped or shored. All excavations and shoring should conform to CAL-OSHA requirements.

Short-term excavations 5-feet deep and greater shall conform to Title 8 of the California Code of Regulations, Construction Safety Orders, Section 1504 and 1539 through 1547. Based on our exploratory borings, it appears that Type C soil is the predominant type of soil on the project and all short-term excavations should be based on this type of soil. Deviation from the standard short-term slopes are permitted using Option 4, Design by a Registered Professional Engineer (Section 1541.1).

Short-term slope construction and maintenance are the responsibility of the contractor, and should be a consideration of his methods of operation and the actual soil conditions encountered.

Slope Construction

Preliminary data indicates that cut and fill slopes should be constructed no steeper than two horizontal to one vertical. Fill slopes should be overfilled during construction and then cut back to expose fully compacted soil. A suitable alternative would be to compact the slopes during construction, then roll the final slopes to provide dense, erosion-resistant surfaces.

Slope Protection

Since the site soils are susceptible to erosion by running water, measures should be provided to prevent surface water from flowing over slope faces. Slopes at the project should be planted with a deep rooted ground cover as soon as possible after completion. The use of succulent ground covers such as iceplant or sedum is not recommended. If watering is necessary to sustain plant growth on slopes, the watering system should be monitored to assure proper operation and to prevent over watering.

Foundation Design

If the site is prepared as recommended, the proposed structures may be safely founded on conventional shallow foundations, either individual spread footings and/or continuous wall footings, bearing on a minimum of 24 inches of engineered compacted fill.

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All foundations should have a minimum width of 12 inches and should be established a minimum of 12 inches below lowest adjacent grade.

For the minimum width and depth, spread foundations may be designed using an allowable bearing pressure of 1,800 psf. This bearing pressure may be increased by 400 psf for each additional foot of width, and by 400 psf for each additional foot of depth, up to a maximum of 4,000 psf. For example, a footing 3 feet wide and embedded 2 feet will have an allowable bearing pressure of 3,000 psf.

The above values are net pressures; therefore, the weight of the foundations and the backfill over the foundations may be neglected when computing dead loads. The values apply to the maximum edge pressure for foundations subjected to eccentric loads or overturning. The recommended pressures apply for the total of dead plus frequently applied live loads, and incorporate a factor of safety of at least 3.0. The allowable bearing pressures may be increased by one-third for temporary wind or seismic loading. The resultant of the combined vertical and lateral seismic loads should act within the middle one-third of the footing width. The maximum calculated edge pressure under the toe of foundations subjected to eccentric loads or overturning should not exceed the increased allowable pressure. Buildings should be setback from slopes in accordance with the California Building Code.

Resistance to lateral loads will be provided by passive earth pressure and base friction. For footings bearing against compacted fill, passive earth pressure may be considered to be developed at a rate of 400 pounds per square foot per foot of depth. Base friction may be computed at 0.30 times the normal load. Base friction and passive earth pressure may be combined without reduction. These values are for dead load plus live load and may be increased by one-third for wind or seismic loading.

Settlement

Total settlement of individual foundations will vary depending on the width of the foundation and the actual load supported. Maximum settlement of shallow foundations designed and constructed in accordance with the preceding recommendations are estimated to be on the order of 0.5 inch. Differential settlements between adjacent footings should be about one-half of the total settlement. Settlement of all foundations is expected to occur rapidly, primarily as a result of elastic compression of supporting soils as the loads are applied, and should be essentially completed shortly after initial application of the loads.

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Building Area Slab-On-Grade

Concrete floor slabs should bear on a minimum of 24 inches of engineered compacted fill placed over competent native materials. The final pad surfaces should be rolled to provide smooth, dense surfaces upon which to place the concrete.

Slabs to receive moisture-sensitive coverings should be provided with a moisture vapor barrier. This barrier may consist of an impermeable membrane. Two inches of sand over the membrane will reduce punctures and aid in obtaining a satisfactory concrete cure. The sand should be moistened just prior to placing of concrete. The slabs should be protected from rapid and excessive moisture loss which could result in slab curling. Careful attention should be given to slab curing procedures, as the site area is subject to large temperature extremes, humidity, and strong winds.

Exterior Flatwork

To provide adequate support, exterior flatwork improvements should rest on a minimum of 12 inches of soil compacted to at least 90 percent (ASTM D 1557).

Flatwork surface should be sloped a minimum of 1 percent away from buildings and slopes, to approved drainage structures.

Wall Pressures

The design of footings for retaining structures should be performed in accordance with the recommendations described earlier under Preparation of Foundation Areas and Foundation Design. For design of retaining wall footings, the resultant of the applied loads should act in the middle one-third of the footing, and the maximum edge pressure should not exceed the basic allowable value without increase.

For design of retaining walls unrestrained against movement at the top, we recommend an equivalent fluid density of 48 pounds per cubic foot (pcf) be used. This assumes level backfill consisting of recompacted, non-expansive, native soils placed against the structures and with the backcut slope extending upward from the base of the stem at 35 degrees from the vertical or flatter.

To avoid overstressing or excessive tilting during placement of backfill behind walls, heavy compaction equipment should not be allowed within the zone delineated by a 45 degree line extending from the base of the wall to the fill surface.

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The backfill directly behind the walls should be compacted using light equipment such as hand operated vibrating plates and rollers. No material larger than 3-inches in diameter should be placed in direct contact with the wall.

Wall pressures should be verified prior to construction, when the actual backfill materials and conditions have been determined. Recommended pressures are applicable only to level, non-expansive, properly drained backfill (with no additional surcharge loadings).

If inclined backfills are proposed, this firm should be contacted to develop appropriate active earth pressure parameters. Toe bearing pressure for non-structural walls on soils, not prepared as described earlier under Preparation of Foundation Areas, should not exceed California Building Code values.

Sulfate Protection

The results of the soluble sulfate tests conducted on selected subgrade soils expected to be encountered at foundation levels are presented on Enclosure C.

Based on the test results it appears that there is a negligible sulfate exposure to concrete elements in contact with on site soils. The CBC, therefore, does not recommend special design criteria for concrete elements in contact with such materials.

Preliminary Pavement Design

Testing and design for preliminary on-site pavement was conducted in accordance with the California Highway Design Manual. Based upon our preliminary sampling and testing, and upon Traffic Index indicated by the City of Moreno Valley Standard Plans (2018), it appears that the structural section tabulated below should provide satisfactory pavement for the subject pavement improvements:

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AREA	T.I.	DESIGN R-VALUE	PRELIMINARY SECTION
Local Street	6.0	30	0.35' AC*/0.70' CAB
AC - Asphalt Concrete CAB - Crushed Aggregate Base * City of Moreno Valley minimum			

The above structural section is predicated upon 90 percent relative compaction (ASTM D 1557) of all utility trench backfills and 95 percent relative compaction (ASTM D 1557) of the upper 12 inches of pavement subgrade soils and of any aggregate base utilized.

In addition, the aggregate base should meet specifications for Crushed Aggregate Base.

In areas of the pavement which will receive high abrasion loads due to start-ups and stops, or where trucks will move on a tight turning radius, consideration should be given to installing concrete pads. Such pads should be a minimum of 0.5-foot thick concrete, with a 0.35-foot thick aggregate base. Concrete pads are also recommended in areas adjacent to trash storage areas where heavier loads will occur due to operation of trucks lifting trash dumpsters.

It should be noted that all of the above pavement design was based upon the results of preliminary sampling and testing, and should be verified by additional sampling and testing during construction when the actual subgrade soils are exposed.

Infiltration

Based upon our field investigation and infiltration test data, the site soils are not considered suitable for infiltration or percolation. Therefore water quality storm water systems should not incorporate on-site infiltration/percolation when determining storm water treatment capacity.

Construction Monitoring

Post investigative services are an important and necessary continuation of this investigation. Project plans and specifications should be reviewed by the project geotechnical consultant prior to construction to confirm that the intent of the

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recommendations presented herein have been incorporated into the design. Additional expansion index, R-value, and soluble sulfate testing may be required during site rough grading.

During construction, sufficient and timely geotechnical observation and testing should be provided to correlate the findings of this investigation with the actual subsurface conditions exposed during construction. Items requiring observation and testing include, but are not necessarily limited to, the following:

1. Site preparation-stripping and removals.
2. Excavations, including approval of the bottom of excavation prior to filling.
3. Scarifying and recompacting prior to fill placement.
4. Subgrade preparation for pavements and slabs-on-grade.
5. Placement of engineered compacted fill and backfill, including approval of fill materials and the performance of sufficient density tests to evaluate the degree of compaction being achieved.
6. Foundation excavations.

LIMITATIONS

This report contains geotechnical conclusions and recommendations developed solely for use by Passco Pacifica, LLC, and their design consultants, for the purposes described earlier. It may not contain sufficient information for other uses or the purposes of other parties. The contents should not be extrapolated to other areas or used for other facilities without consulting LOR Geotechnical Group, Inc.

The recommendations are based on interpretations of the subsurface conditions concluded from information gained from subsurface explorations and a surficial site reconnaissance. The interpretations may differ from actual subsurface conditions, which can vary horizontally and vertically across the site. If conditions are encountered during the construction of the project which differ significantly from those presented in this report, this firm should be notified immediately in order that we may assess the impact to the recommendations provided.

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Due to possible subsurface variations, all aspects of field construction addressed in this report should be observed and tested by the project geotechnical consultant.

If parties other than LOR Geotechnical Group, Inc., provide construction monitoring services, they must be notified that they will be required to assume responsibility for the geotechnical phase of the project being completed by concurring with the recommendations provided in this report or by providing alternative recommendations.

The report was prepared using generally accepted geotechnical engineering practices under the direction of a state licensed geotechnical engineer. No warranty, expressed or implied, is made as to conclusions and professional advice included in this report. Any persons using this report for bidding or construction purposes should perform such independent investigations as deemed necessary to satisfy themselves as to the surface and subsurface conditions to be encountered and the procedures to be used in the performance of work on this project.

TIME LIMITATIONS

The findings of this report are valid as of this date. Changes in the condition of a property can, however, occur with the passage of time, whether they be due to natural processes or the work of man on this or adjacent properties. In addition, changes in the Standards-of-Practice and/or Governmental Codes may occur. Due to such changes, the findings of this report may be invalidated wholly or in part by changes beyond our control. Therefore, this report should not be relied upon after a significant amount of time without a review by LOR Geotechnical Group, Inc. verifying the suitability of the conclusions and recommendations.

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November 25, 2019


Project No. 33591.1


CLOSURE

It has been a pleasure to assist you with this project. We look forward to being of further assistance to you as construction begins. Should conditions be encountered during construction that appear to be different than as indicated by this report, please contact this office immediately in order that we might evaluate these conditions.

Should you have any questions regarding this report, please do not hesitate to contact our office at your convenience.

Respectfully submitted,
LOR Geotechnical Group, Inc.


Andrew A. Tardie
Staff Geologist


Robert M. Markoff, CEG
Engineering Geologist


John P. Leuer, GE 2030
President
AAT:RMM:JPL:ss



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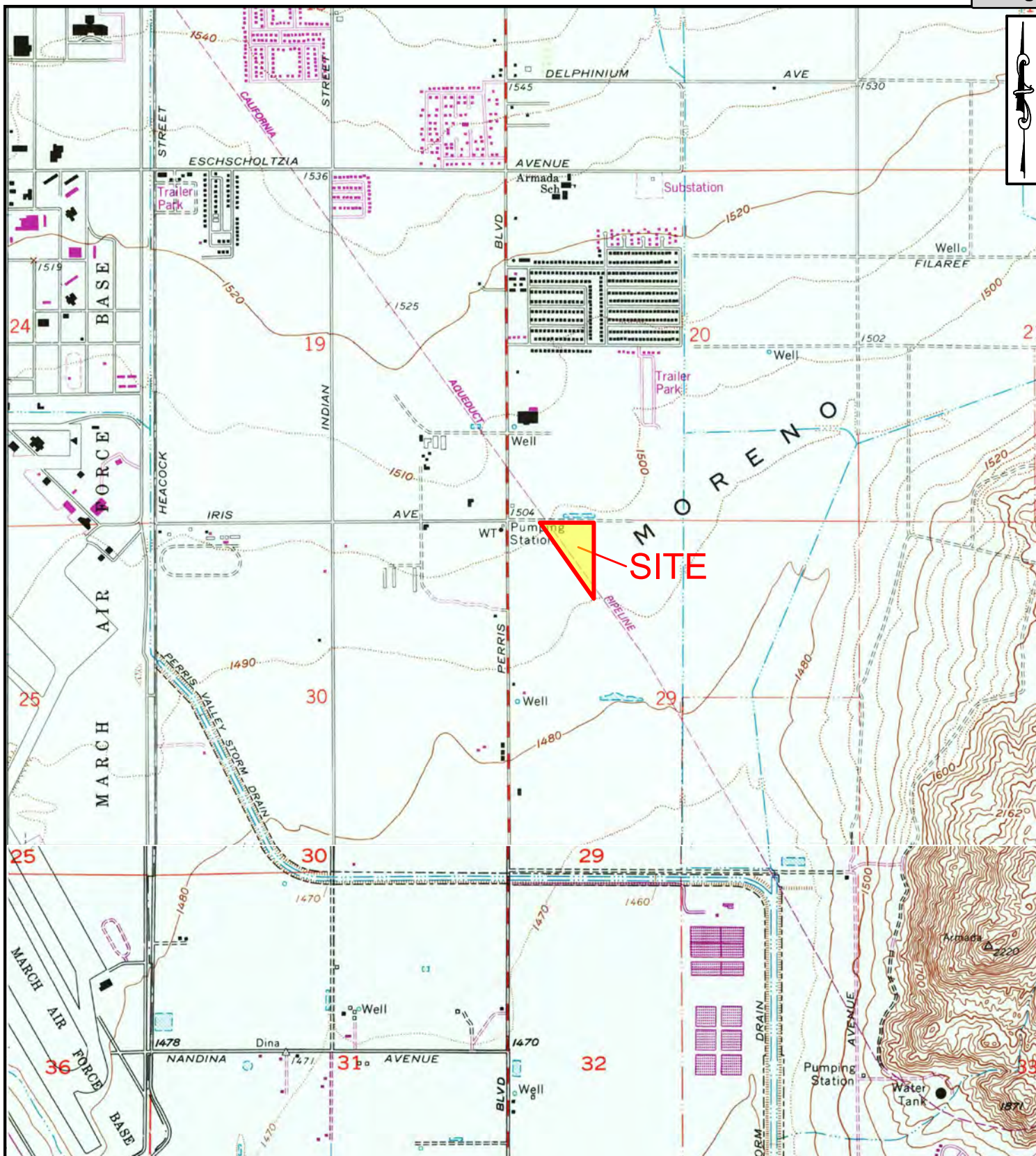
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APPENDIX A

Index Map, Site Plan, Regional Geologic Map and Historical Seismicity Maps



INDEX MAP

PROJECT:	IRIS PARK, MORENO VALLEY, CALIFORNIA	PROJECT NO:	33591.
CLIENT:	PASSCO PACIFICA, LLC	ENCLOSURE:	A-
LOR Geotechnical Group, Inc.		DATE:	NOVEMBER 2011
		SCALE:	1" = 2,000'



SUMMARY:
 AREA: 10.82 TOTAL ACRES
 100' Easement/Trail = 3.00 ACRES
 NO. OF LOTS: 84 @ 2,250 sf
 TOTAL DENSITY: 7.7 DU's/Ac
 NET DENSITY: 10.8 DU's/Ac



Legend
(Locations Approximate)

Map Symbols

- B-5 - Exploratory Boring
- I-2 - Infiltration Test

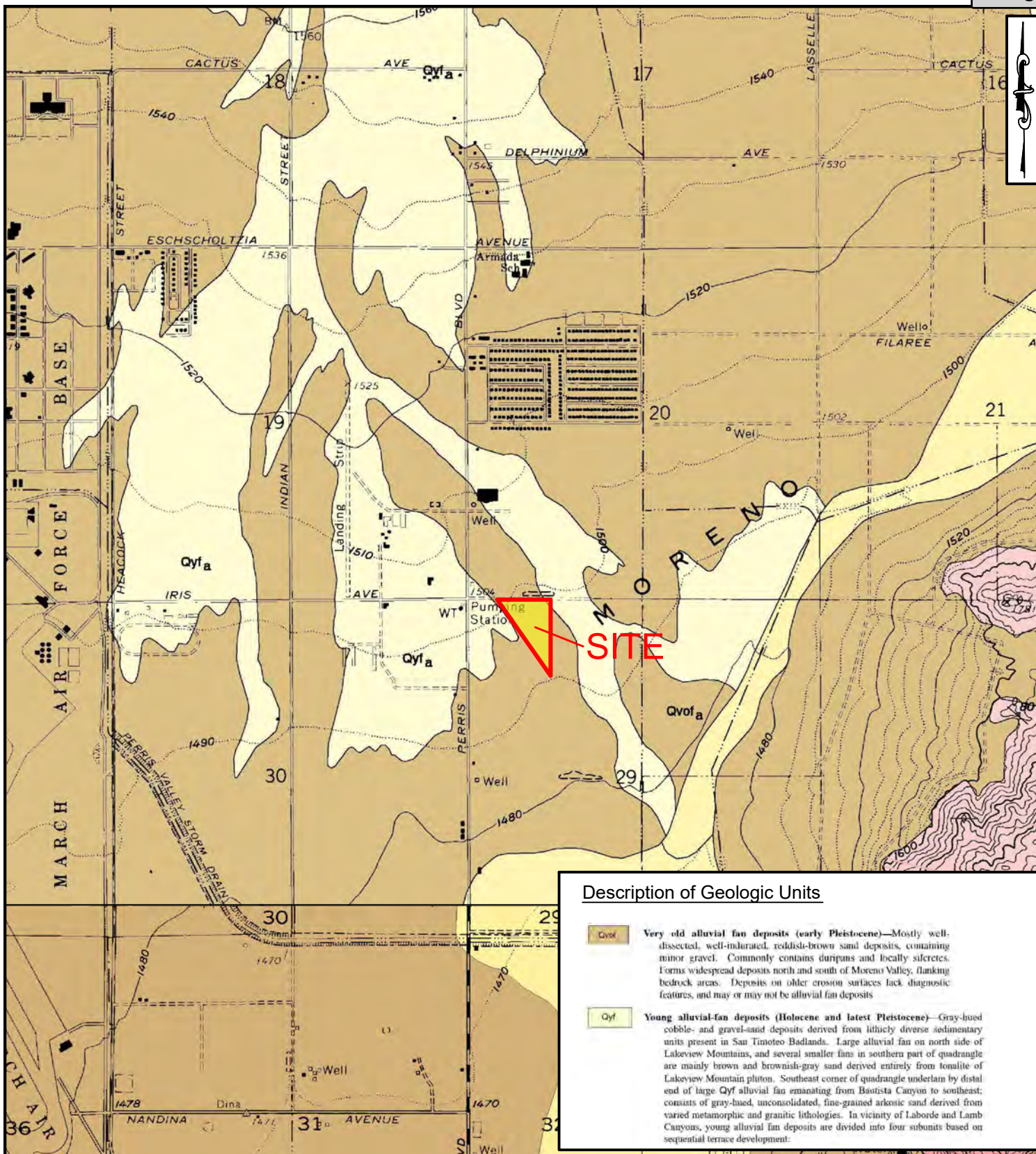


IRIS Park
 Moreno Valley, CA October 25, 2019
 Illustrative Concept Plan

SITE PLAN

PROJECT:	IRIS PARK, MORENO VALLEY, CALIFORNIA	PROJECT NO:	33591.
CLIENT:	PASSCO PACIFICA, LLC	ENCLOSURE:	A.
LOR Geotechnical Group, Inc.		DATE:	NOVEMBER 2019
		SCALE:	1" ≈ 200'

Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation R (4197 : Tentative Tract Map 37909

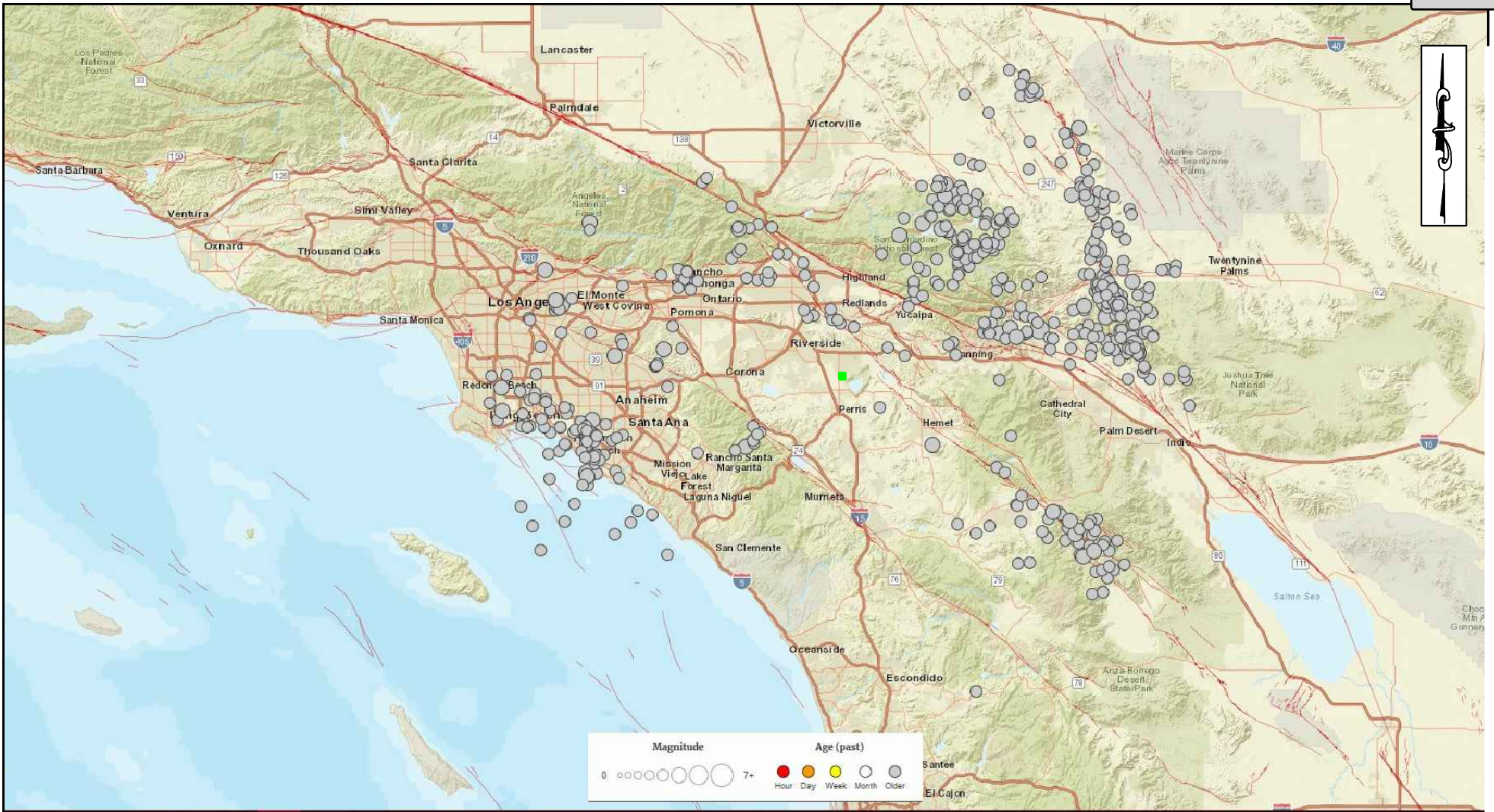


Description of Geologic Units

- Qyf** Very old alluvial fan deposits (early Pleistocene)—Mostly well-dissected, well-indurated, reddish-brown sand deposits, containing minor gravel. Commonly contains duripans and locally siltclites. Forms widespread deposits north and south of Moreno Valley, flanking bedrock areas. Deposits on older erosion surfaces lack diagnostic features, and may or may not be alluvial fan deposits.
- Qyf** Young alluvial-fan deposits (Holocene and latest Pleistocene)—Gray-hued cobble- and gravel-sand deposits derived from lithically diverse sedimentary units present in San Timoteo Badlands. Large alluvial fan on north side of Lakeview Mountains, and several smaller fans in southern part of quadrangle are mainly brown and brownish-gray sand derived entirely from tonalite of Lakeview Mountain pluton. Southeast corner of quadrangle underlain by distal end of large Qyf alluvial fan emanating from Bautista Canyon to southeast; consists of gray-hued, unconsolidated, fine-grained arkosic sand derived from varied metamorphic and granitic lithologies. In vicinity of Laborde and Lamb Canyons, young alluvial fan deposits are divided into four subunits based on sequential terrace development.

REGIONAL GEOLOGIC MAP (Morton, 2003 & Morton & Matti, 200

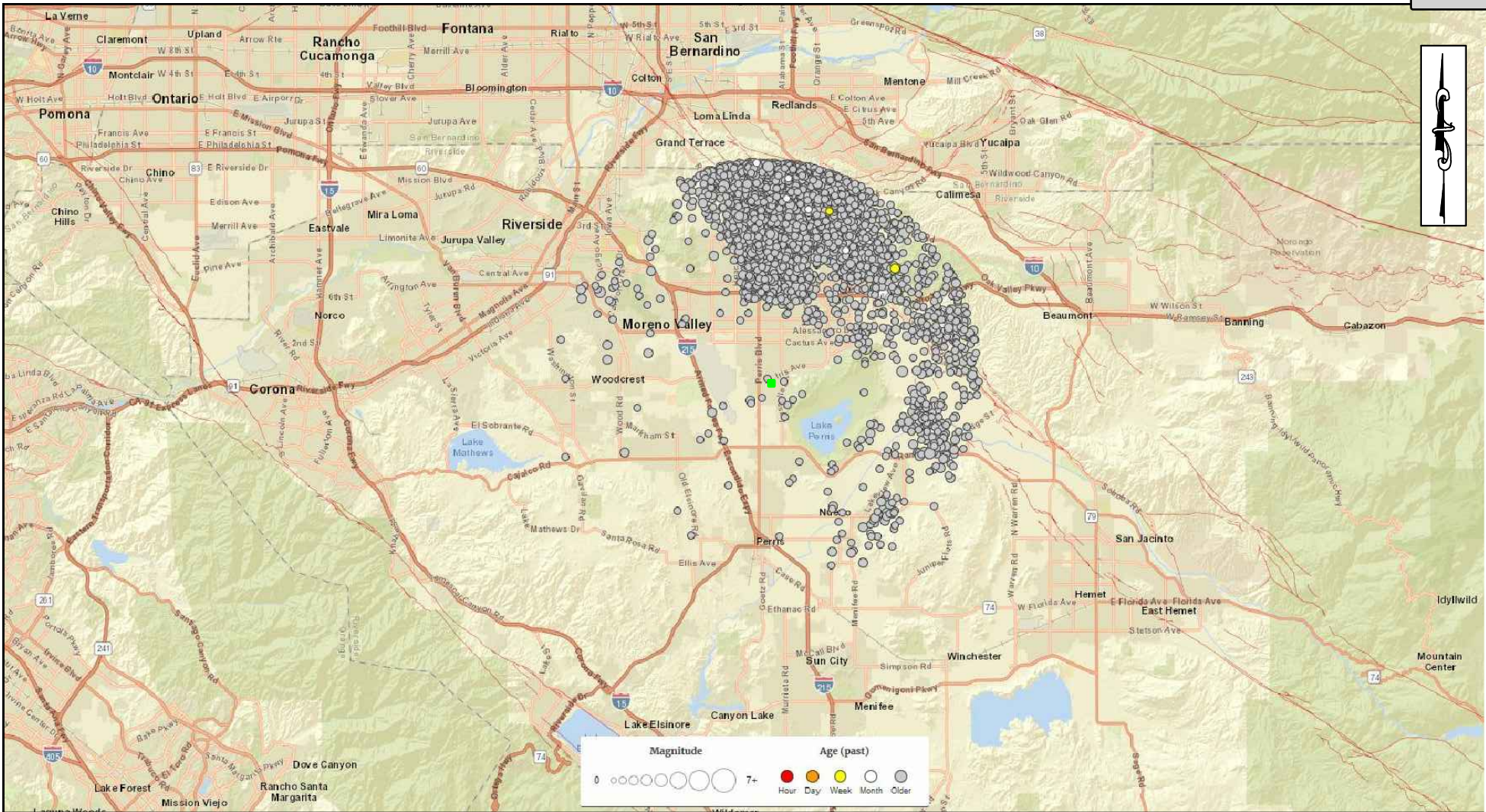
PROJECT:	IRIS PARK, MORENO VALLEY, CALIFORNIA	PROJECT NO:	33591.
CLIENT:	PASSCO PACIFICA, LLC	ENCLOSURE:	A.
LOR Geotechnical Group, Inc.		DATE:	NOVEMBER 2011
		SCALE:	1" = 2,000'



U.S. Geologic Survey (2017a) real-time earthquake epicenter map. Plotted are 544 epicenters of instrument-recorded events from 1978 to present (11/20/19) of local magnitude M4.0 or greater within a radius of ~62 miles (100 kilometers) of the site. Location accuracy varies. The site is indicated by the green square. The selected magnitude corresponds to a threshold intensity value where very light damage potential begins. These events are also generally widely felt by persons. Red lines mark the surface traces of known Quaternary-age faults.

HISTORICAL SEISMICITY MAP - 100km Radius

PROJECT:	IRIS PARK, MORENO VALLEY, CALIFORNIA	PROJECT NO:	33591.1
CLIENT:	PASSCO PACIFICA, LLC	FIGURE:	A-4
LOR Geotechnical Group, Inc.		DATE:	NOVEMBER 2019
		SCALE:	1" ≈ 40km



U.S. Geologic Survey (2017a) real-time earthquake epicenter map. Plotted are 4,945 epicenters of instrument-recorded events from 1932 to present (11/20/19) of local magnitude M1.0 or greater within a radius of ~9.3 miles (15 kilometers) of the site. Location accuracy varies. The site is indicated by the green square. Red lines mark the surface traces of known Quaternary-age faults.

HISTORICAL SEISMICITY MAP - 15km Radius

PROJECT:	IRIS PARK, MORENO VALLEY, CALIFORNIA	PROJECT NO:	33591.1
CLIENT:	PASSCO PACIFICA, LLC	FIGURE:	A-5
LOR Geotechnical Group, Inc.		DATE:	NOVEMBER 2019
		SCALE:	1" ≈ 10km

APPENDIX B

Field Investigation Program and Boring Logs

APPENDIX B FIELD INVESTIGATION

Subsurface Exploration

The site was investigated on November 7, 2019 and consisted of advancing 5 exploratory borings to depths between 21.5 feet and 51.5 feet below the existing ground surface. The approximate locations of the borings are shown on Enclosure A-2, within Appendix A.

The drilling exploration was conducted using a truck-mounted Mobile B-61 drill rig equipped with 8-inch diameter hollow stem augers. The soils were continuously logged by our geologist who inspected the site, created detailed logs of the borings, obtained undisturbed, as well as disturbed, soil samples for evaluation and testing, and classified the soils by visual examination in accordance with the Unified Soil Classification System.

Relatively undisturbed samples of the subsoils were obtained at a maximum interval of 5 feet. The samples were recovered by using a California split barrel sampler of 2.50 inch inside diameter and 3.25 inch outside diameter or a Standard Penetration Sampler (SPT) from the ground surface to the total depth explored. The samplers were driven by a 140 pound automatic trip hammer dropped from a height of 30 inches. The number of hammer blows required to drive the sampler into the ground the final 12 inches were recorded and further converted to an equivalent SPT N-value. Factors such as efficiency of the automatic trip hammer used during this investigation (80%), borehole diameter (8"), and rod length at the test depth were considered for further computing of equivalent SPT N-values corrected for field procedures (N₆₀) which are included in the boring logs, Enclosures B-1 through B-5.

The undisturbed soil samples were retained in brass sample rings of 2.42 inches in diameter and 1.00 inch in height, and placed in sealed containers. Disturbed soil samples were obtained at selected levels within the borings and placed in sealed containers for transport to the laboratory.

All samples obtained were taken to our geotechnical laboratory for storage and testing. Detailed logs of the borings are presented on the enclosed Boring Logs, Enclosures B-1 through B-5. A Boring Log Legend and Soil Classification Chart are presented on Enclosures B-i and B-ii, respectively.

CONSISTENCY OF SOIL

SANDS

SPT BLOWS

CONSISTENCY

0-4	Very Loose
4-10	Loose
10-30	Medium Dense
30-50	Dense
Over 50	Very Dense

COHESIVE SOILS

SPT BLOWS

CONSISTENCY

0-2	Very Soft
2-4	Soft
4-8	Medium
8-15	Stiff
15-30	Very Stiff
30-60	Hard
Over 60	Very Hard

SAMPLE KEY

Symbol

Description



INDICATES CALIFORNIA SPLIT SPOON SOIL SAMPLE

INDICATES BULK SAMPLE

INDICATES SAND CONE OR NUCLEAR DENSITY TEST

INDICATES STANDARD PENETRATION TEST (SPT) SOIL SAMPLE

TYPES OF LABORATORY TESTS

- 1 Atterberg Limits
- 2 Consolidation
- 3 Direct Shear (undisturbed or remolded)
- 4 Expansion Index
- 5 Hydrometer
- 6 Organic Content
- 7 Proctor (4", 6", or Cal216)
- 8 R-value
- 9 Sand Equivalent
- 10 Sieve Analysis
- 11 Soluble Sulfate Content
- 12 Swell
- 13 Wash 200 Sieve

BORING LOG LEGEND

PROJECT: PROPOSED IRIS PARK RESIDENTIAL DEVELOPMENT, MORENO VALLEY, CALIFORNIA

PROJECT NO.: 33591.1

CLIENT: PASSCO PACIFICA, LLC

ENCLOSURE: B-

LOR Geotechnical Group, Inc.

DATE: NOVEMBER 2019

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS <i>(LITTLE OR NO FINES)</i>		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES <i>(APPRECIABLE AMOUNT OF FINES)</i>		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS	CLEAN SANDS <i>(LITTLE OR NO FINES)</i>		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES <i>(APPRECIABLE AMOUNT OF FINES)</i>		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

PARTICLE SIZE LIMITS

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		COARSE	FINE	COARSE	MEDIUM	FINE	
12"	3"	3/4"	No. 4	No. 10	No. 40	200	
(U.S. STANDARD SIEVE SIZE)							

SOIL CLASSIFICATION CHART

PROJECT	PROPOSED IRIS PARK RESIDENTIAL DEVELOPMENT, MORENO VALLEY, CALIFORNIA	PROJECT NO.	33591.1
CLIENT:	PASSCO PACIFICA, LLC	ENCLOSURE:	B-ii
LOR Geotechnical Group, Inc.		DATE:	NOVEMBER 2019

Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation R (4197 : Tentative Tract Map 37909

LOG OF BORING B-1

TEST DATA							LITHOLOGY	U.S.C.S.	DESCRIPTION
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE				
0									
14		3, 4, 7, 9, 10, 11	6.0	120.0			SM	@ 0 feet, FILL/TOPSOIL: SILTY SAND, approximately 10% coarse grained sand, 20% medium grained sand, 30% fine grained sand, 40% silty fines, light brown, dry, loose.	
5	7		1.8	105.5			ML	@ 2 feet, ALLUVIUM: SANDY SILT, approximately 5% coarse grained sand, 15% medium grained sand, 20% fine grained sand, 60% silty fines, brown, damp, trace pinhole porosity.	
	21		9.5	101.2			SW SM	@ 5 feet, WELL GRADED SAND with SILT, approximately 25% coarse grained sand, 35% medium grained sand, 30% fine grained sand, 10% silty fines, light brown, dry. @ 7 feet, some sandy silt layers approximately 1 to 2" thick, damp.	
10	26		9.1	113.8			ML	@ 10 feet, SANDY SILT, approximately 5% coarse grained sand, 10% medium grained sand, 10% fine grained sand, 75% silty fines with trace clay, brown, damp, trace pinhole porosity.	
15	32		10.6	117.5				@ 15 feet, increase in clay, strong brown.	
20	40		10.9	112.3				@ 20 feet, contains some secondary calcite.	
25	37		17.9	109.5			SM	@ 25 feet, SILTY SAND, trace medium grained sand, approximately 80% fine grained sand, 20% silty fines, light brown, damp.	
								END OF BORING @ 26.5'	
30								Fill/topsoil to 2' No groundwater No bedrock	
35									

PROJECT: Proposed Iris Park Residential Development	PROJECT NUMBER: 33591.1
CLIENT: Passco Pacifica, LLC	ELEVATION:
LOR GEOTECHNICAL GROUP INC.	DATE DRILLED: November 7, 2019
	EQUIPMENT: Mobile B-61
	HOLE DIA.: 8" ENCLOSURE: B-1

Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation_R (4197 : Tentative Tract Map 37909

LOG OF BORING B-2

TEST DATA							LITHOLOGY	U.S.C.S.	DESCRIPTION
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE				
0									
9	9	2	3.7	112.4	█		SM	@ 0 feet, FILL/TOPSOIL: SILTY SAND , approximately 15% coarse grained sand, 20% medium grained sand, 20% fine grained sand, 45% silty fines, light brown, dry, loose.	
5	8		3.5	100.8	█			@ 2 feet, ALLUVIUM: SILTY SAND , approximately 15% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 35% silty fines, brown, damp.	
	21		4.2	113.5	█			@ 5 feet, SILTY SAND , approximately 10% coarse grained sand, 20% medium grained sand, 50% fine grained sand, 20% silty fines, light brown, dry, trace thin calcite stringers.	
10	36		4.0	112.4	█		SP SM	@ 7 feet, becomes coarser grained, approximately 25% coarse grained sand, 30% medium grained sand, 35% fine grained sand, 15% silty fines, brown, dry.	
15	66		13.0	120.6	█		CL	@ 10 feet, POORLY GRADED SAND with SILT , approximately 5% coarse grained sand, 25% medium grained sand, 60% fine grained sand, 10% silty fines, light brown, dry, micaceous.	
20	27		7.7	113.5	█		SM	@ 15 feet, LEAN CLAY with SAND , approximately 20% fine grained sand, 80% clayey fines of low plasticity, strong brown, damp.	
25	48		7.6	115.2	█			@ 20 feet, SILTY SAND , approximately 20% coarse grained sand, 20% medium grained sand, 30% fine grained sand, 30% silty fines, brown, damp, some secondary calcite.	
30	31		12.2		|||||				
35	48		12.8		|||||		SW	@ 33.5 feet, groundwater.	
40	29		17.7		|||||		CL	@ 35 feet, WELL GRADED SAND , approximately 35% coarse grained sand, 35% medium grained sand, 35% fine grained sand, 5% silty fines, speckled red-brown, wet.	
45	17	1	14.9		|||||			@ 40 feet, LEAN CLAY with SAND , approximately 10% medium grained sand, 20% fine grained sand, 70% clayey fines of low plasticity, brown, moist.	
50	32		17.3		|||||				
55								END OF BORING @ 51.5'	
								Fill/topsoil to 2' Groundwater @ 33.5' No bedrock	

PROJECT: Proposed Iris Park Residential Development	PROJECT NUMBER: 33591.1
CLIENT: Passco Pacifica, LLC	ELEVATION:
LOR GEOTECHNICAL GROUP INC.	DATE DRILLED: November 7, 2019
	EQUIPMENT: Mobile B-61
	HOLE DIA.: 8" ENCLOSURE: B-2

Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation R (4197 : Tentative Tract Map 37909

LOG OF BORING B-3

TEST DATA								DESCRIPTION
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	
0							SM	@ 0 feet, <u>FILL/TOPSOIL</u> : SILTY SAND, approximately 10% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 40% silty fines, light brown, dry, loose.
9			6.7	106.3	█		ML	@ 2 feet, <u>ALLUVIUM</u> : SANDY SILT, approximately 5% coarse grained sand, 15% medium grained sand, 20% fine grained sand, 60% silty fines, brown, damp, trace pinhole porosity.
5	6		3.5	106.1	█		SM	@ 5 feet, SILTY SAND, approximately 15% coarse grained sand, 25% medium grained sand, 35% fine grained sand, 20% silty fines, light brown, dry.
	15		0.6	109.5	█		SP	@ 7 feet, <u>POORLY GRADED SAND</u> , approximately 5% coarse grained sand, 35% medium grained sand, 45% fine grained sand, 5% silty fines, red-brown, dry.
10	25		11.8	116.9	█		CL	@ 10 feet, <u>LEAN CLAY</u> with SAND, approximately 5% coarse grained sand, 10% medium grained sand, 20% fine grained sand, 65% clayey fines of low plasticity, strong brown, damp, trace thin calcite stringers, trace pinhole porosity, some root hairs.
15	22		10.6	117.0	█		SC	@ 15 feet, <u>CLAYEY SAND</u> , approximately 15% coarse grained sand, 25% medium grained sand, 30% fine grained sand, 30% clayey fines of low plasticity, brown, damp.
20	60		8.4	124.8	█			
								END OF BORING @ 21.5'
								Fill/topsoil to 2' No groundwater No bedrock
25								

PROJECT: Proposed Iris Park Residential Development	PROJECT NUMBER: 33591.1
CLIENT: Passco Pacifica, LLC	ELEVATION:
LOR GEOTECHNICAL GROUP INC.	DATE DRILLED: November 7, 2019
	EQUIPMENT: Mobile B-61
	HOLE DIA.: 8" ENCLOSURE: B-3

Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation_R (4197 : Tentative Tract Map 37909

LOG OF BORING B-4

TEST DATA								DESCRIPTION
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	
0		8, 9, 10, 11					SM	@ 0 feet, FILL/TOPSOIL: SILTY SAND , approximately 10% coarse grained sand, 15% medium grained sand, 30% fine grained sand, 45% silty fines, brown, dry, loose.
19			5.8	106.8				@ 2 feet, ALLUVIUM: SILTY SAND , approximately 15% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 35% silty fines, brown, dry, trace pinhole porosity.
5	19		4.9	101.1			ML	@ 5 feet, SANDY SILT , approximately 15% medium grained sand, 25% fine grained sand, 60% silty fines, light brown, dry, some root hairs, trace pinhole porosity.
	21	2	2.6	109.8			SM	@ 7 feet, SILTY SAND , approximately 10% coarse grained sand, 35% medium grained sand, 35% fine grained sand, 20% silty fines, light brown, dry.
10	21		3.5	107.9				
15	38		8.1	128.2			SC	@ 15 feet, CLAYEY SAND , approximately 20% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 30% clayey fines of low plasticity, brown, damp.
20	55		8.8	121.3			ML	@ 20 feet, SANDY SILT , approximately 5% coarse grained sand, 15% medium grained sand, 15% fine grained sand, 65% silty fines with trace clay, brown, damp.
								END OF BORING @ 21.5'
								Fill/topsoil to 2' No groundwater No bedrock
25								

PROJECT: Proposed Iris Park Residential Development	PROJECT NUMBER: 33591.1
CLIENT: Passco Pacifica, LLC	ELEVATION:
LOR GEOTECHNICAL GROUP INC.	DATE DRILLED: November 7, 2019
	EQUIPMENT: Mobile B-61
	HOLE DIA.: 8" ENCLOSURE: B-4

Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation_R (4197 : Tentative Tract Map 37909

LOG OF BORING B-5

TEST DATA							
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.
0		9, 10, 11					
43			7.7	104.4			SM
5	19		5.5	103.1			ML
	16	2	7.4	105.4			
10	18	2	8.9	107.0			
15	25		11.6				SC
20	28		13.9				
25							

DESCRIPTION	
@ 0 feet, FILL : SILTY SAND, approximately 10% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 40% silty fines, dry, loose.	
@ 2 feet, some rope debris.	
@ 5 feet, ALLUVIUM : SANDY SILT, approximately 10% medium grained sand, 30% fine grained sand, 60% silty fines, light brown, dry, some pinhole porosity.	
@ 15 feet, CLAYEY SAND , approximately 20% coarse grained sand, 25% medium grained sand, 30% fine grained sand, 25% clayey fines of low plasticity, brown, damp.	
END OF BORING @ 21.5'	
Fill to 5' No groundwater No bedrock	

PROJECT: Proposed Iris Park Residential Development	PROJECT NUMBER: 33591.1
CLIENT: Passco Pacifica, LLC	ELEVATION:
LOR GEOTECHNICAL GROUP INC.	DATE DRILLED: November 7, 2019
	EQUIPMENT: Mobile B-61
	HOLE DIA.: 8" ENCLOSURE: B-5

APPENDIX C

Laboratory Testing Program and Test Results

APPENDIX C LABORATORY TESTING

General

Selected soil samples obtained from our borings were tested in our geotechnical laboratory to evaluate the physical properties of the soils affecting foundation design and construction procedures. The laboratory testing program performed in conjunction with our investigation included in-place moisture content and dry density, laboratory compaction characteristics, direct shear, sieve analysis, sand equivalent, R-value, consolidation, expansion index, Atterberg limits, and soluble sulfate content. Descriptions of the laboratory tests are presented in the following paragraphs:

Moisture Density Tests

The moisture content and dry density information provides an indirect measure of soil consistency for each stratum, and can also provide a correlation between soils on this site. The dry unit weight and field moisture content were determined for selected undisturbed samples, in accordance with ASTM D 2922 and ASTM D 2216, respectively, and the results are shown on the Boring Logs, Enclosures B-1 through B-5 for convenient correlation with the soil profile.

Laboratory Compaction

Selected soil samples were tested in the laboratory to determine compaction characteristics using the ASTM D 1557 compaction test method. The results are presented in the following table:

LABORATORY COMPACTION				
Boring Number	Sample Depth (feet)	Soil Description (U.S.G.S.)	Maximum Dry Density (pcf)	Optimum Moisture Content (percent)
B-1	0-3	(SM) Silty Sand	134.0	8.5

C

Direct Shear Tests

Shear tests are performed with a direct shear machine in general accordance with ASTM D 3080 at a constant rate-of-strain (usually 0.04 inches/minute). The machine is designed to test a sample partially extruded from a sample ring in single shear. Samples are tested at varying normal loads in order to evaluate the shear strength parameters, angle of internal friction and cohesion. Samples are tested in a remolded condition (90 percent relative compaction per ASTM D 1557) and soaked, to represent the worst case conditions expected in the field.

The results of the shear tests are presented in the following table:

DIRECT SHEAR TESTS				
Boring Number	Sample Depth (feet)	Soil Description (U.S.G.S.)	Angle of Internal Friction (degrees)	Apparent Cohesion (psf)
B-1	0-3	(SM) Silty Sand	28	200

Sieve Analysis

A quantitative determination of the grain size distribution was performed for selected samples in accordance with the ASTM D 422 laboratory test procedure. The determination is performed by passing the soil through a series of sieves, and recording the weights of retained particles on each screen. The results of the sieve analyses are presented graphically on Enclosure C-1.

Sand Equivalent

The sand equivalent of selected soils were evaluated using the California Sand Equivalent Test Method, Caltrans Number 217. The results of the sand equivalent tests are presented with the grain size distribution analyses on Enclosure C-1.

R-Value Test

Soil samples were obtained at probable pavement subgrade level and was tested to determine its R-value using the California R-Value Test Method, Caltrans Number 301. The results of the R-value test is presented on Enclosure C-1.

Consolidation Tests

The apparatus used for the consolidation tests (odometer) is designed to test a one-inch high portion of the undisturbed soil sample as contained in a sample ring. Porous stones and filler paper are placed in contact with the top and bottom of the specimen to permit the addition or release of water. Loads are applied to the test specimen in specified increments, and the resulting axial deformations are recorded. The results are plotted as log of axial pressure versus consolidation or compression, expressed as strain or sample height.

Samples are tested at field and greater-than field moisture contents. The results are shown on Enclosures C-2 through C-5.

Expansion Index Tests

Remolded samples are tested to determine their expansion potential in accordance with the Expansion Index (EI) test. The test is performed in accordance with the Uniform Building Code Standard 18-2. The test results are presented in the following table:

EXPANSION INDEX TESTS				
Boring Number	Sample Depth (feet)	Soil Description (U.S.C.S.)	Expansion Index (EI)	Expansion Potential
B-1	0-3	(SM) Silty Sand	11	Very Low

Atterberg Limits

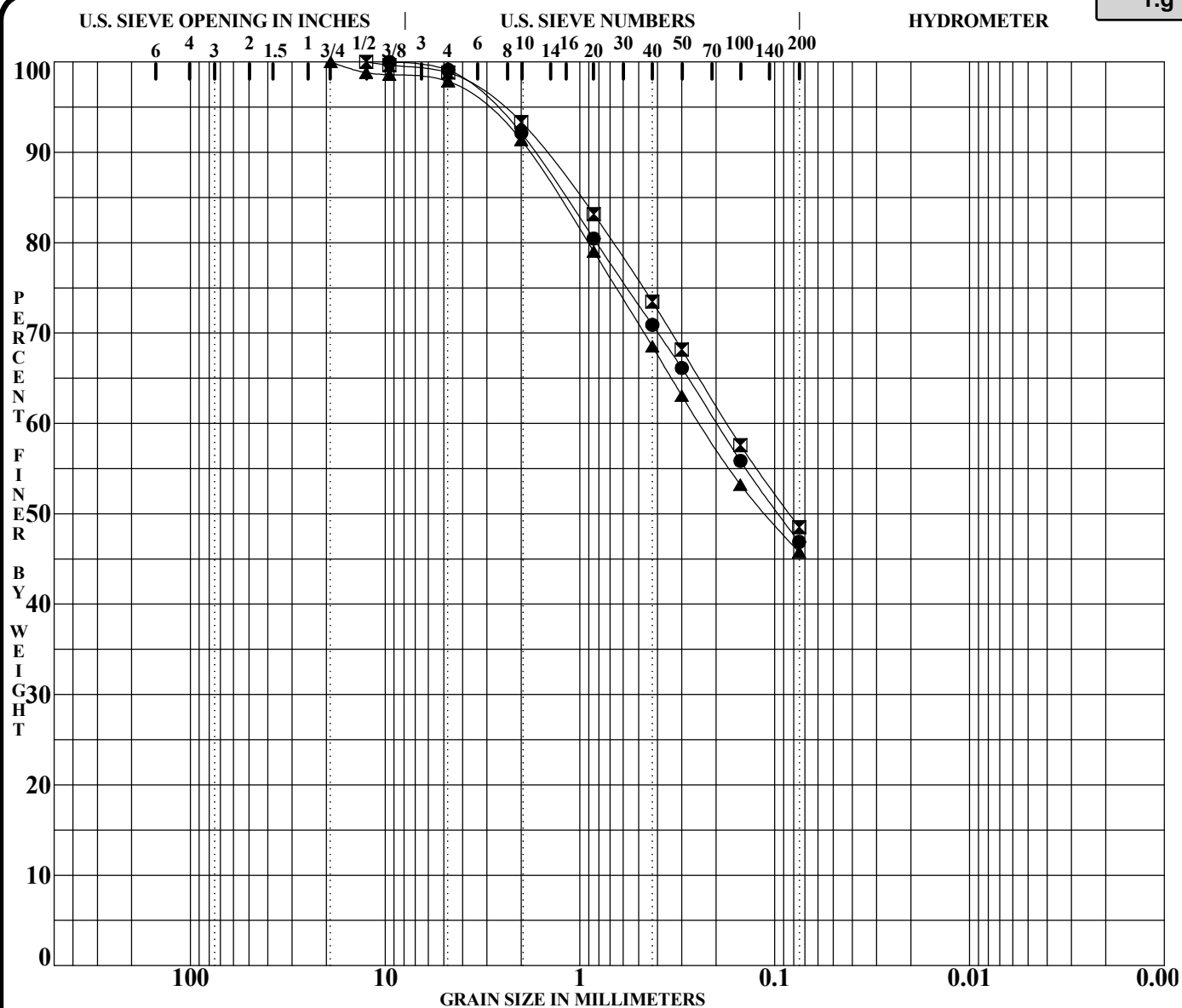
Selected samples of the fine-grained soil units encountered at the site are tested for their Atterberg limits in accordance with ASTM D 4318. The results of these tests are presented on Enclosure C-6.

Soluble Sulfate Content Tests

The soluble sulfate content of selected subgrade soils was evaluated and the concentration of soluble sulfates in the soils was determined by measuring the optical density of a barium sulfate precipitate. The precipitate results from a reaction of barium chloride with water extractions from the soil samples. The measured optical density is correlated with readings on precipitates of known sulfate concentrations. The test results are presented on the following table:

SOLUBLE SULFATE CONTENT TESTS			
Boring Number	Sample Depth (feet)	Soil Description (U.S.G.S.)	Sulfate Content (percent by weight)
B-1	0-3	(SM) Silty Sand	< 0.0085
B-4	0-3	(SM) Silty Sand	< 0.0075
B-5	0-3	(SM) Silty Sand	< 0.0055

C



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Soil Classification	SE	RV	PL	PI	Cc	Cu
● B-1 @ 0-3 ft	(SM) Silty Sand	13	--				
☒ B-4 @ 0-3 ft	(SM) Silty Sand	13	28				
▲ B-5 @ 0-3 ft	(SM) Silty Sand	16	--				

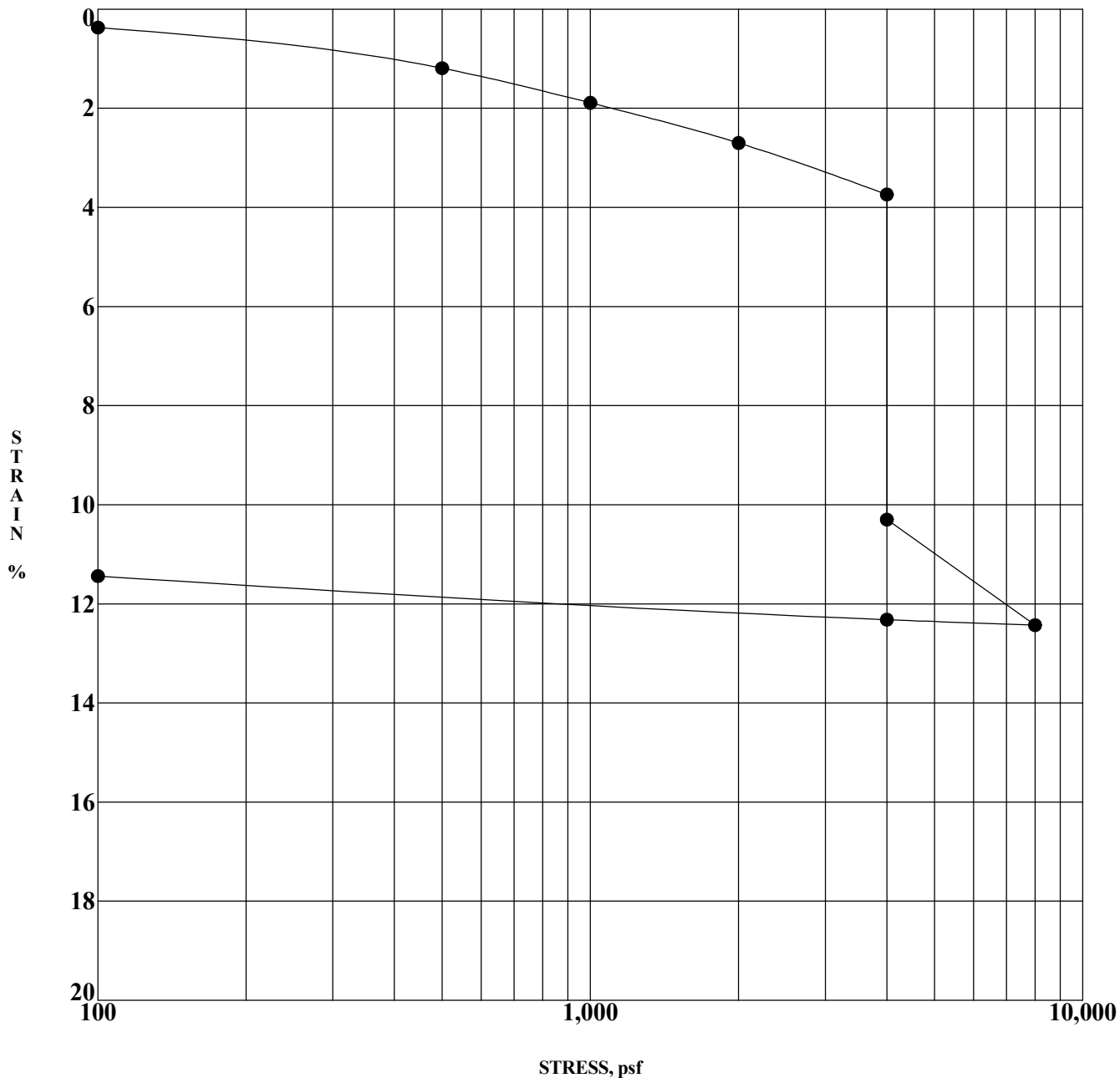
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-1 @ 0-3 ft	9.50	0.20			0.9	52.2	46.9	
☒ B-4 @ 0-3 ft	12.50	0.18			1.2	50.3	48.5	
▲ B-5 @ 0-3 ft	19.00	0.24			2.1	52.1	45.8	

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

GRADATION CURVES
 LOR Geotechnical Group, Inc.

ENCLOSURE C-1

Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation R (4197 : Tentative Tract Map 37909

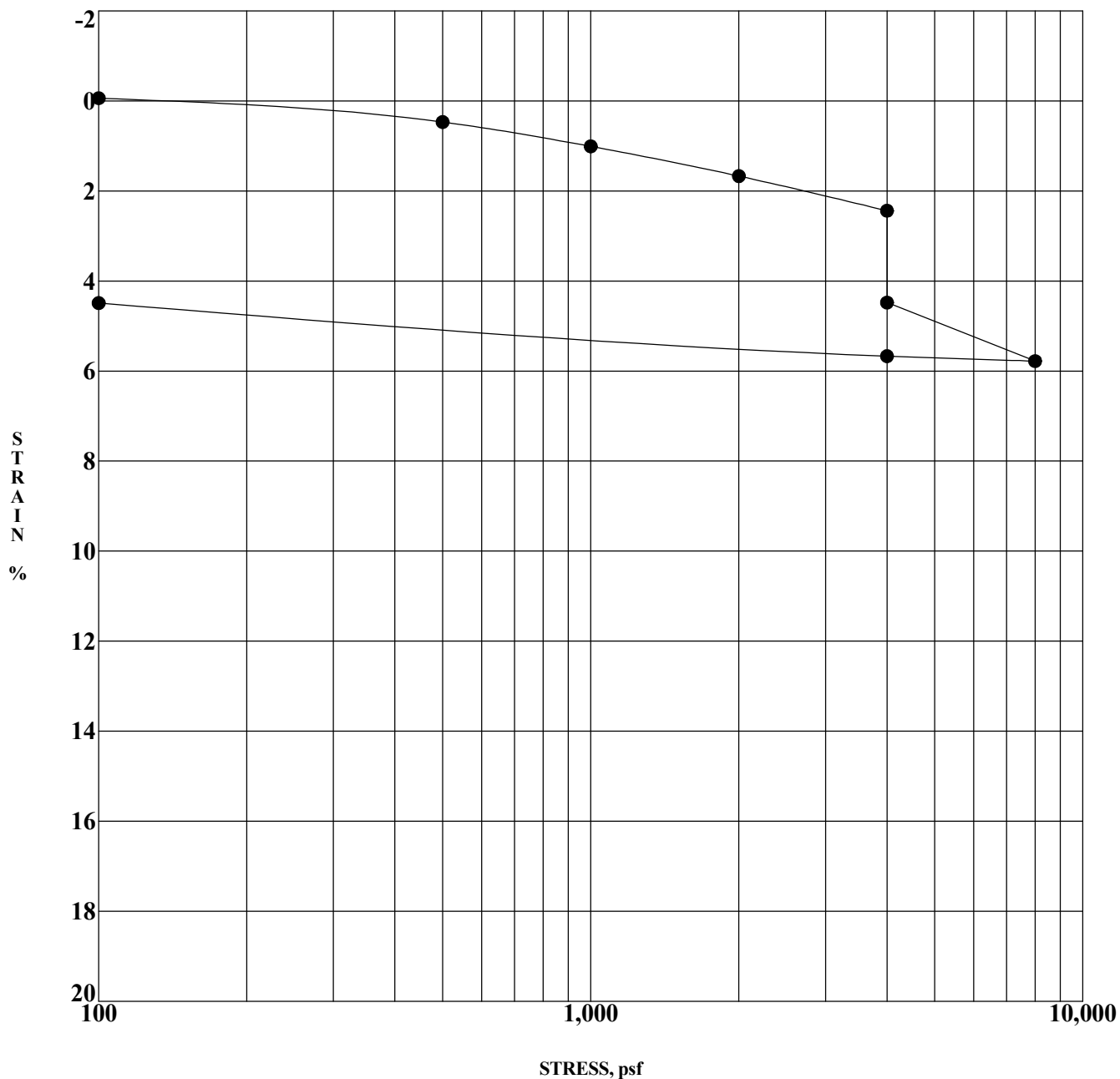


Specimen I.D.	Classification	DD	MC%
● B-2 @ 2 ft	(SM) Silty Sand	107	4

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

CONSOLIDATION TEST
 LOR Geotechnical Group, Inc.

ENCLOSURE C-2

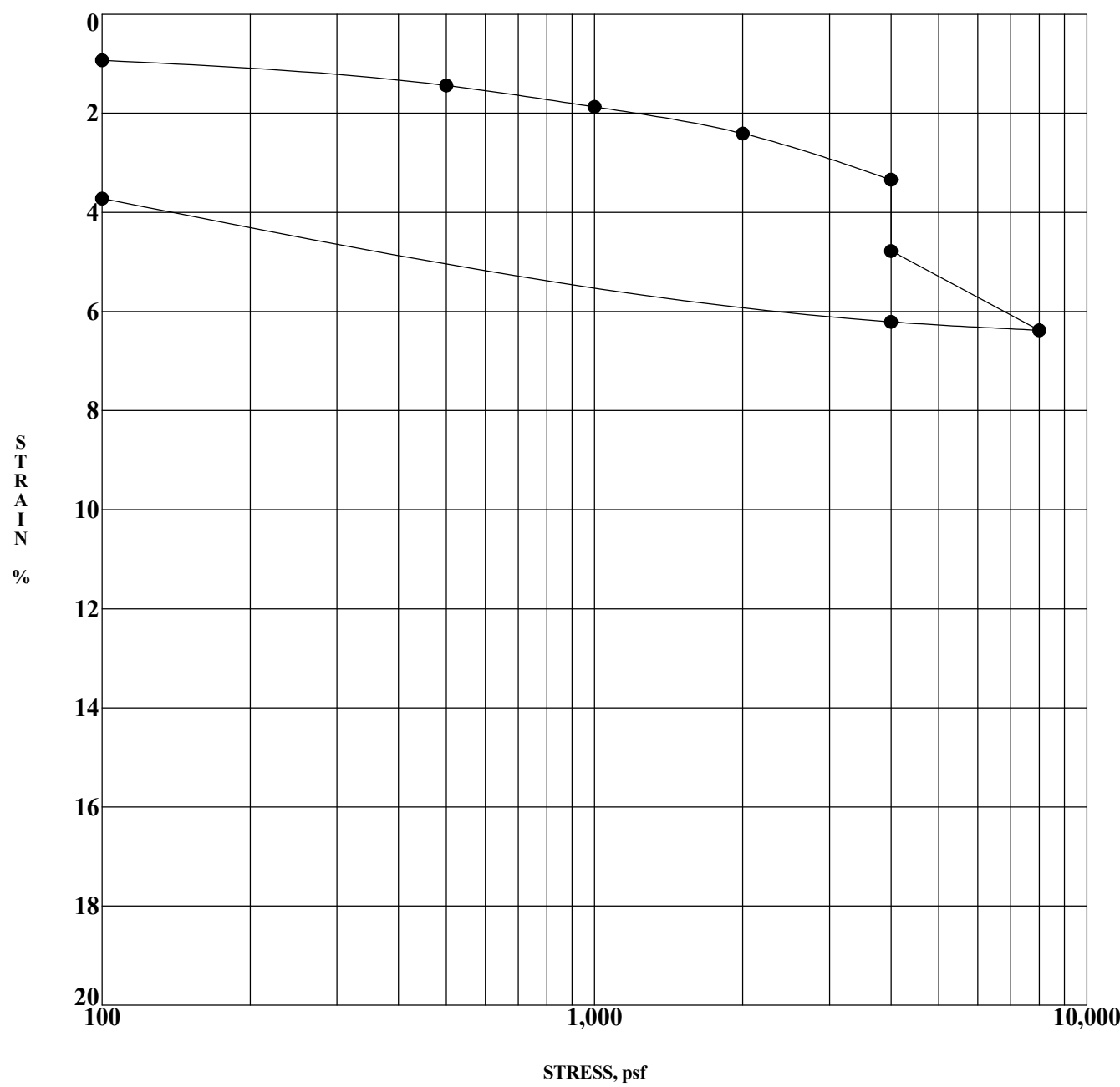


Specimen I.D.	Classification	DD	MC%
● B-4 @ 7 ft	(SM) Silty Sand	103	3

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

CONSOLIDATION TEST
 LOR Geotechnical Group, Inc.

ENCLOSURE C-3



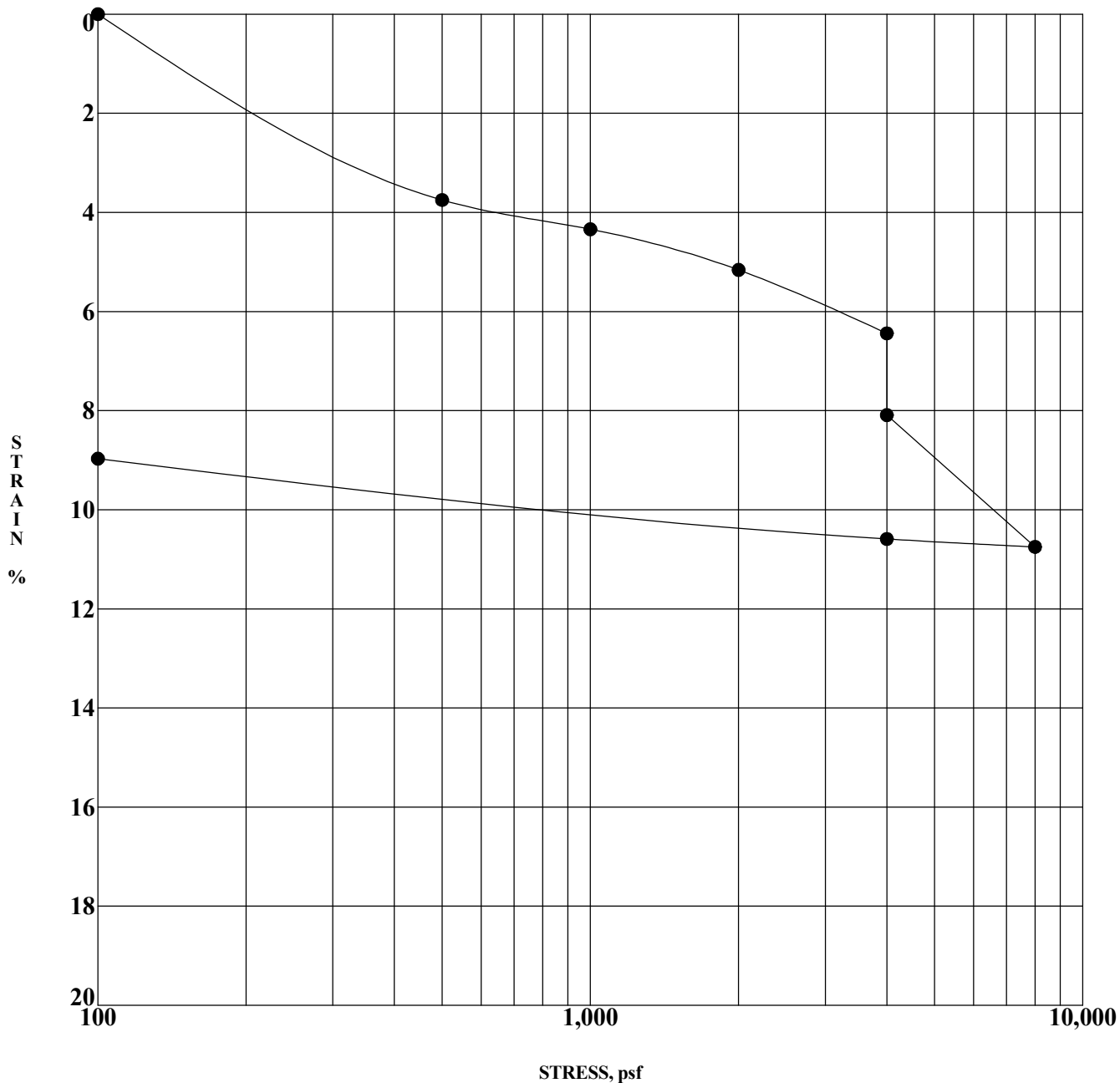
Specimen I.D.	Classification	DD	MC%
● B-5 @ 7 ft	(ML) Sandy Silt	103	7

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

CONSOLIDATION TEST
 LOR Geotechnical Group, Inc.

ENCLOSURE C-4

Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation R (4197 : Tentative Tract Map 37909



Specimen I.D.	Classification	DD	MC%
● B-5 @ 10 ft	(ML) Sandy Silt	106	9

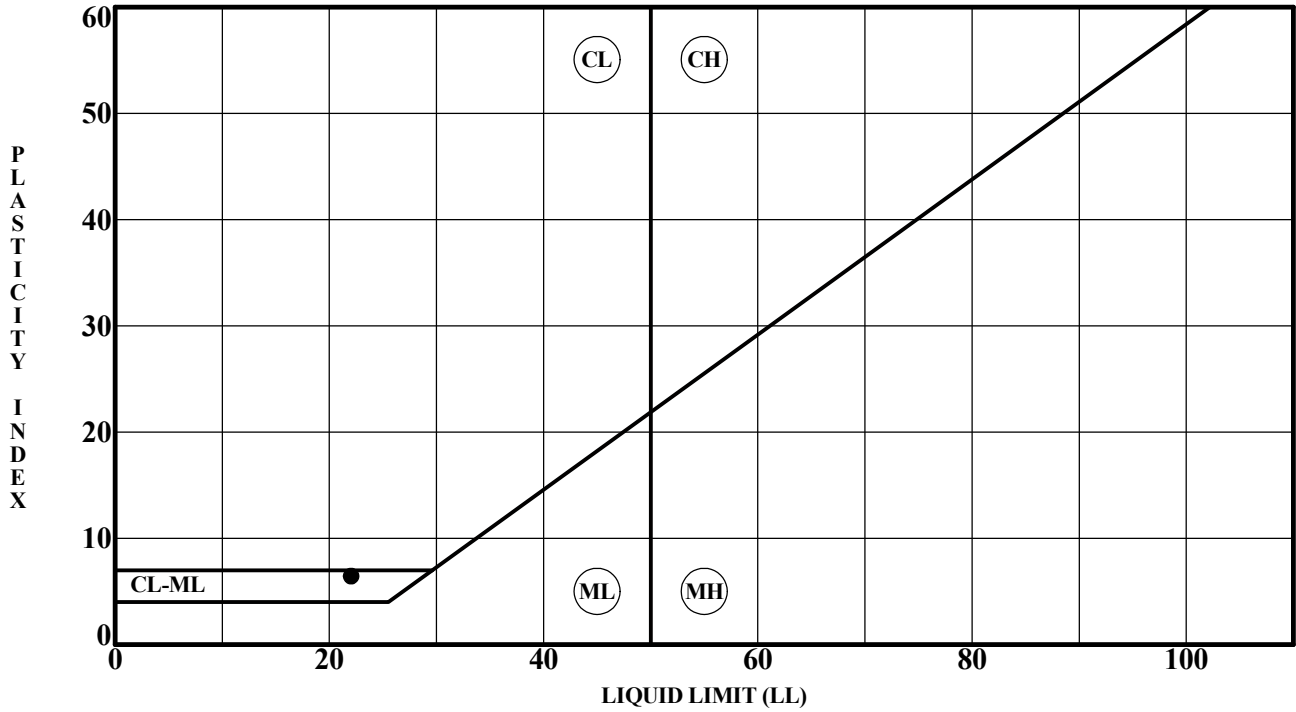
PROJECT Proposed Iris Park Residential Development

PROJECT NO. 33591.1

DATE 11/19/19

CONSOLIDATION TEST
LOR Geotechnical Group, Inc.

ENCLOSURE C-5



Specimen Identification	LL	PL	PI	Fines	Soil Classification
● B-2 @ 45 ft	22	16	6		(CL) Lean Clay with Sand

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

ATTERBERG LIMITS RESULTS
 LOR Geotechnical Group, Inc.

Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility Investigation_R (4197 : Tentative Tract Map 37909

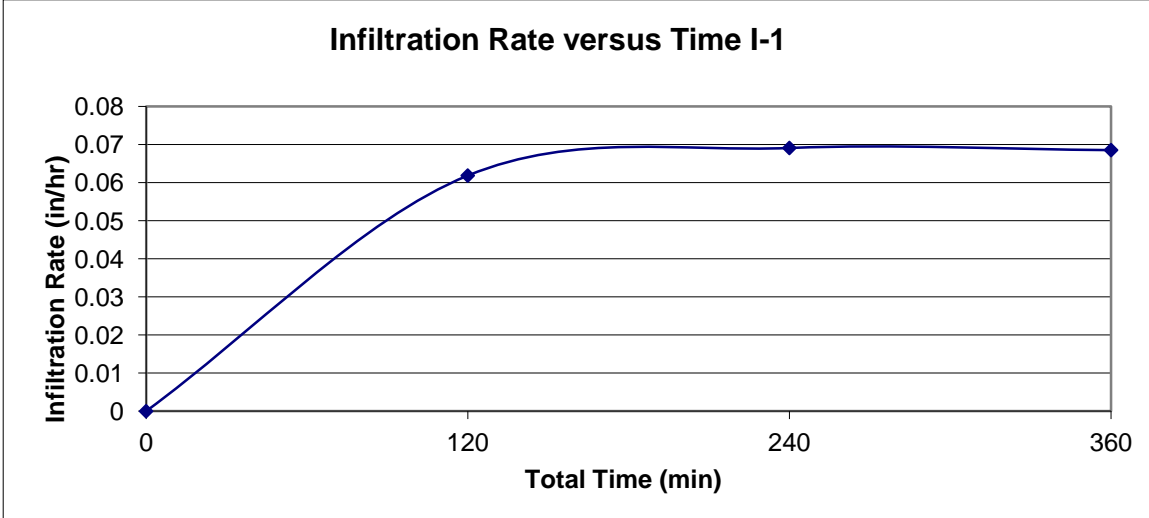
APPENDIX D

Infiltration Test Results

CONSTANT HEAD INFILTRMETER TEST DATA

Project:	<u>Iris Park</u>	Test Date:	<u>November 7, 2019</u>
Project No.:	<u>33591.1</u>	Test Hole No.:	<u>I-1</u>
Soil Classification:	<u>(ML) Sandy Silt</u>	Test Hole Size:	<u>8" x 8"</u>
Depth of Test Hole:	<u>4 ft.</u>	Date Excavated:	<u>November 7, 2019</u>
Tested By:	<u>A.L.</u>		

TEST PERIOD									
TRIAL NO.	TIME		TIME INTERVAL (minutes)	TOTAL ELASPE TIME (minutes)	WATER USED (lbs.)	WATER USED (gal.)	INFILTRATION RATE (gal/sf/day)	INFILTRATION RATE (in/hr)	REMARKS
1	S	8:26	120	120	1.11	0.13	0.9	0.1	
	E	10:26							
2	S	10:26	120	240	1.24	0.15	1.0	0.1	
	E	12:26							
3	S	12:26	120	360	1.23	0.15	1.0	0.1	
	E	14:26							

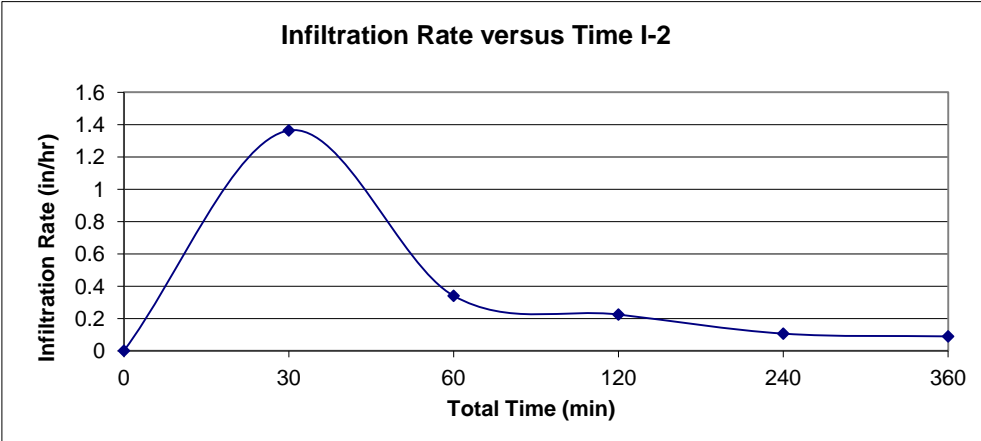


Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility

CONSTANT HEAD INFILTRMETER TEST DATA

Project:	<u>Iris Park</u>	Test Date:	<u>November 7, 2019</u>
Project No.:	<u>33591.1</u>	Test Hole No.:	<u>I-2</u>
Soil Classification:	<u>(ML) Sandy Silt</u>	Test Hole Size:	<u>6" x 8"</u>
Depth of Test Hole:	<u>4 ft.</u>	Date Excavated:	<u>November 7, 2019</u>
Tested By:	<u>A.L.</u>		

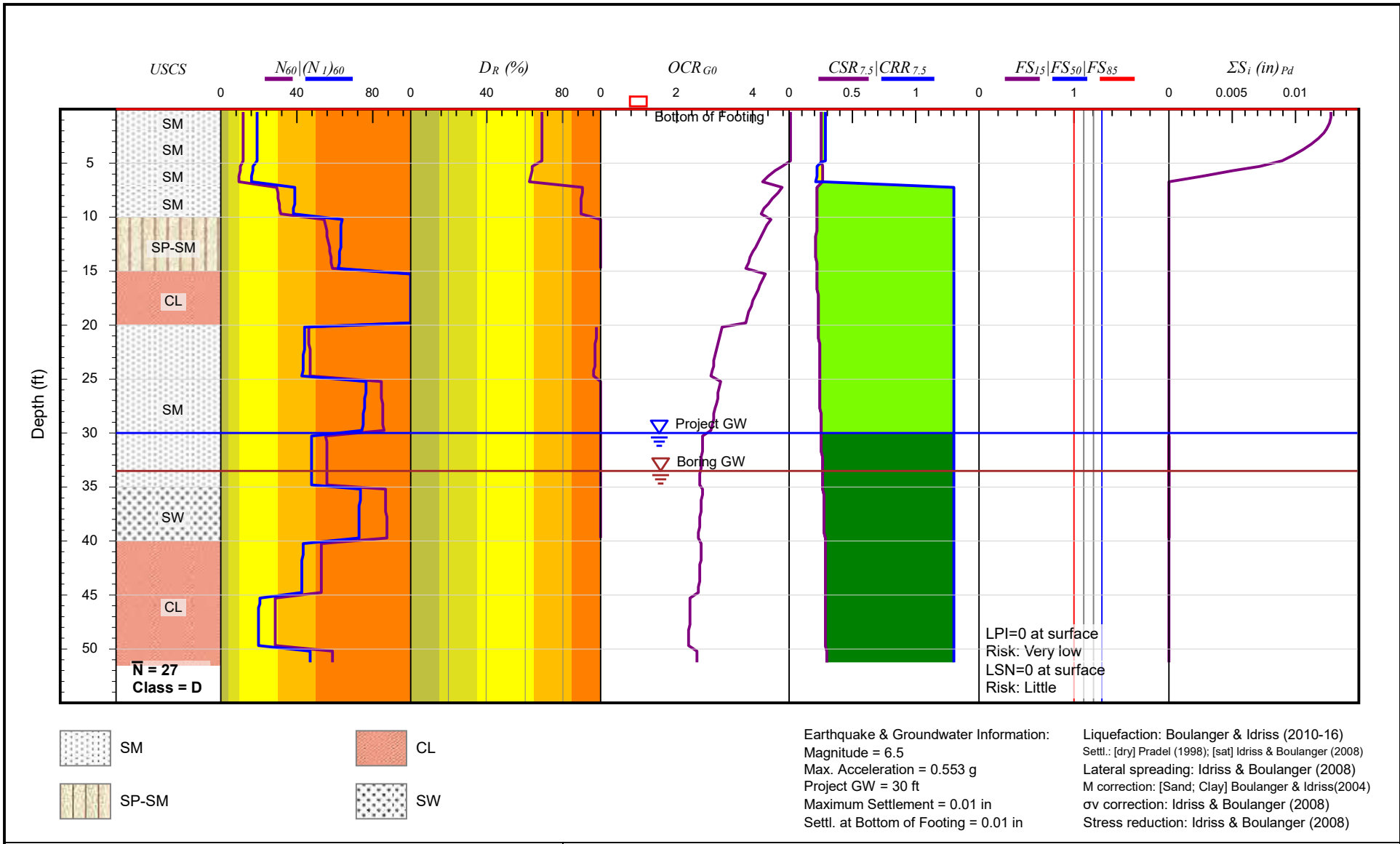
TEST PERIOD									
TRIAL NO.	TIME		TIME INTERVAL (minutes)	TOTAL ELASPE TIME (minutes)	WATER USED (lbs.)	WATER USED (gal.)	INFILTRATION RATE (gal/sf/day)	INFILTRATION RATE (in/hr)	REMARKS
1	S	8:20	30	30	4.41	0.53	20.3	1.4	
	E	8:50							
2	S	8:50	30	60	1.10	0.13	5.1	0.3	
	E	9:20							
3	S	9:20	60	120	1.45	0.17	3.3	0.2	
	E	10:20							
4	S	10:20	120	240	1.37	0.16	1.6	0.1	
	E	12:20							
5	S	12:20	120	360	1.15	0.14	1.3	0.1	
	E	14:20							



Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility

APPENDIX E

Liquefaction Analysis



Attachment: Appendix E to Initial Study Preliminary Geotechnical and Infiltration Feasibility



Liquefaction Potential - SPT Data				
Project:	Iris Park Residential Development			
Location:	Moreno Valley, California			
Job Number:	33591.1	Boring No.:	B-2	Enclosure:
				E-1

\\MacHome\Idea\top\33591.1 LOR Iris Residential\GeoSuite_33591_1_B-2.csv



Due Diligence, Inc.

Architectural/Environmental/Seismic Consultants

November 1, 2019

Pacifica Investments, or their assigns
c/o Mr. Oscar Graham
333 City Boulevard West, Suite 1700
Orange, CA 92688

Re: Phase I Environmental Site Assessment
Iris Park
Iris Avenue, east of Perris Blvd.
Moreno Valley, CA 92551
Project No. 19004122

Dear: Mr. Graham:

In accordance with our accepted proposal, AES performed a walk-through survey of the above-referenced property on October 31, 2019. An electronic copy of the report is provided for your use. AES Due Diligence, Inc. is not affiliated with the client or any other parties to this transaction.

We appreciate the opportunity to provide consulting services to you. If you have any questions, please contact our Corporate Office at (858) 569-0211.

Very truly yours,

AES DUE DILIGENCE, INC.

A handwritten signature in black ink, appearing to read 'Robert Presta', written in a cursive style.

Robert Presta, MBA, President
Registered Environmental Assessor in the former EPA Program

RP:RED/lo

Enclosures

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Prepared for

Pacifica Investments, or their assigns



Phase I Environmental Site Assessment

Iris Park
Iris Avenue, east of Perris Blvd.
Moreno Valley, CA 92551
November 1, 2019

Prepared by

AES Due Diligence, Inc.

Architectural/Environmental/Seismic Due Diligence Consultants
4542 Ruffner Street, Suite 330
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ATTACHMENTS

- Aerial Site Plans
- Vicinity Map
- Site Photographs
- EDR Database Report (Please see copy on CD)
- City Directory Abstract
- Vapor Encroachment Screen (Please see copy on CD)
- Historic USGS Topographic Maps
- Aerial Photographs
- Assessor’s Parcel Maps
- GeoTracker Map
- Preliminary Title Commitment
- Natural Hazards Report
- Certificate of Insurance
- Professional Profiles

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

EXECUTIVE SUMMARY

Iris Park
 Iris Avenue, east of Perris Blvd.
 Moreno Valley, CA 92551
 Project No. 19004122

ISSUE	ENVIRONMENTAL CONDITION IDENTIFIED					ASSESSMENT				
	NONE	REC	CREC	HREC	<i>de mini mis</i>	ACCEPTABLE	O&M	PHASE 2	PHASE 3	COST
Historic Use	X					X				
UST/AST	X					X				
Chemical Use, Storage or Disposal	X					X				
Waste Storage or Disposal	X					X				
PCBs	X					X				
Environmental Records Review	X					X				
REC on Adjoining Property	X					X				
Stains or Odors	X					X				
Solid Waste or Fill	X					X				
Septic Fields, Wells or Drywells	X					X				
Pits, Ponds, Lagoons	X					X				
Vapor Encroachment	X					X				
NON-SCOPE CONSIDERATIONS										
Asbestos	X					X				
Lead Based Paint	X					X				
Lead in Water	X					X				
Mold	X					X				
Wetlands	X					X				
Radon	X					X				

I IDENTIFICATION

Subject Site: Iris Park - Vacant Land

Location: Iris Avenue, east of Perris Blvd.
Riverside County APN# 312-020-025
Moreno Valley, CA 92551

Observation Date: October 31, 2019

Site Contact: Mr. Oscar Graham, Pacifica Investments, 714-609-7257

Client: Pacifica Investments, or their assigns

Reliance: This Report is for the exclusive use of Pacifica Investments, or their assigns. No other party shall have the right to rely on any service provided by AES Due Diligence, Inc. without prior written consent.

Environmental Professional Statement

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a site of the nature, history, and setting of the subject site. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared by:

Richard E. Darwicki
Registered Environmental Assessor in the former EPA Program



Reviewed by:

Timothy K. Dahlstrand
Managing Director of Environmental Services



Reviewed by:

Stephen J. Baker
California Registered Geologist – California License # 4354



II OBJECTIVE AND SCOPE

Objective

The purpose of this Phase I Environmental Site Assessment is to identify recognized environmental conditions that may have an impact on the subject site, using readily available sources of information, interviews and field observations. It is our understanding the Client intends to acquire the site.

Procedures

This Assessment is a Phase I Environmental Site Assessment (ESA) for the improvements located at Iris Avenue, east of Perris Boulevard in Moreno Valley, CA 92551, performed in general accordance with ASTM Designation E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and following the Scope of Work outlined in AES Due Diligence, Inc.'s proposal. AES Due Diligence, Inc. (AES) conducted on-site observations on October 31, 2019, interviewed site operations personnel and observed adjacent properties. Environmental Data Resources, Inc. (EDR) conducted database searches following ASTM guidelines. Such searches are generally limited to a radius of one mile from the subject site. Additionally, ASTM Non-Scope items are addressed in this Assessment, including Asbestos, Lead-Based Paint, Radon Gas, Mold, Wetlands and Lead in Drinking Water. No testing was conducted for ASTM Non-Scope items.

Limitations

The purpose of the Phase I ESA of the site is to address the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. If requested by the Client, certain non-scope business environmental risks are addressed in the Assessment. The Phase I ESA is intended to allow the Client to satisfy one of the requirements to qualify for the innocent landowner defense, contiguous property Owner or bonafide prospective purchaser limitations on CERCLA liability: i.e. the practice that constitutes "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in 42 USC § 9601(35)(B). The Phase I ESA does not address whether requirements in addition to appropriate inquiry were met in order to qualify for CERCLA's innocent landowner defense.

The objectives of the Phase I ESA are as follows:

1. Evaluate if recognized environmental conditions (REC), controlled recognized environmental conditions (CREC), historic recognized environmental conditions (HREC) or *de minimis* environmental conditions are present on the site.
2. Provide sufficient documentation of sources, records and resources utilized in conducting the Phase I ESA.

3. Prepare a professional opinion regarding the presence of RECs at the site.

Special Terms and Conditions

The Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with the site.

A Phase I ESA attempts to identify the environmental conditions of the site and vicinity. Environmental conditions and regulations are subject to change and re-interpretation. Current conditions or regulatory requirements should not be assumed to continue to represent conditions at some future time. This Assessment represents AES's professional judgments and opinions based on information presented in this Assessment and no warranty, either expressed or implied, are contained herein.

Limitations and Exceptions of Assessment

The surface conditions of the site were noted by visual observations or information obtained during interviews. No physical testing, soil/groundwater sampling or laboratory analysis was included unless otherwise noted in the Assessment.

The executive summary was prepared for the convenience of the users of this Assessment. This summary does not contain all the information presented in this Assessment and, therefore, the entire Assessment should be read to assure all pertinent information is transmitted.

AES performed the Phase I ESA of the site in substantial conformance with the scope and limitations of ASTM E 1527-13, Standard Practice for Environmental Site Assessments: *Phase I Environmental Site Assessment Process* unless otherwise noted in the Assessment. Certain environmental conditions may exist on a site that are beyond the scope of the Standard but may warrant consideration. Per the Standard, this environmental site assessment is presumed to be valid for a specific time limit as defined in ASTM Designation E-1527-13.

AES utilized the following methods to complete the reconnaissance of the site. AES observed the site and adjoining properties for indicators of existing or potential recognized environmental conditions. The site walkover consisted of walking the site boundary and several transects across the site. For a site with buildings, the accessible areas of the buildings were entered and observed. Please note that AES did not look under floors, above ceilings or inside walls. The adjoining properties were observed from the periphery of the site, if possible. The observations were documented with representative photographs.

The following limiting conditions were encountered during the course of the Phase I ESA:

- The questionnaire was not returned.

However, this did not preclude AES from developing an opinion regarding the environmental condition of the site.

Documents

Our Assessment represents our professional experience and judgment, and a good faith effort to obtain all available information. Documents and data provided by the Client, its designated representatives, or other interested parties, and consulted in the preparation of this Assessment, have been reviewed and may be referenced herein, with the understanding that AES assumes no responsibility or liability for their accuracy or for the withholding by any of the involved parties of any assessments or other information that could affect the transaction.

Intended Use

AES Due Diligence, Inc. is not affiliated with the borrower or any other parties to this transaction. This Assessment is intended to be used in its entirety. No portion of it may be deleted or used out of context without the written consent of AES. The opinions and information contained in this Assessment are time sensitive and represent our evaluation of the environmental site conditions at the time the services were provided. This Assessment was prepared for a limited use involving a single transaction, as set forth herein, and may not be used for any other purpose without the written consent of AES.

Proprietary Information

Field data, field notes, and other data and documents assembled by AES to produce this Assessment represent the work product of AES's training, experience and professional skill. This information belongs to and remains the property of AES Due Diligence, Inc.

Definitions

ASTM defines a Recognized Environmental Condition (REC) as "the presence or likely presence of an hazardous substance or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment."

A Controlled Recognized Environmental Condition (CREC) is defined as "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, of meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

A Historic Recognized Environmental Condition (HREC) is defined as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

A *de minimis* environmental condition "generally does 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 government agencies." Conditions determined to be *de minimis* are not a REC.

Business Environmental Risk (BER) is a risk, which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of the parcel of commercial real estate, not necessarily limited to those environmental issues investigated in this Phase I ESA. Business environmental risk issues may involve addressing one or more non-scope considerations.

III PROPERTY DESCRIPTION

Site Visit and Interviews

On October 31, 2019, AES visited the subject site and reviewed the fixed facility. No one accompanied Richard E. Darwicki of AES during the site visit.

AES observed the vacant property at the specified location. AES looked for underground and aboveground storage tanks, unusual surface appearances, wetlands and other issues that may indicate environmental conditions on the subject site. AES noted the location of on-site storm drainage structures where these were encountered. AES observed sites adjoining the subject site and areas within the immediate vicinity of the subject site.

AES photographed selected features at or near the subject site to support this written Assessment. The photographs are identified, described and appended to this Assessment.

Subject Site

The project is situated on one parcel estimated to total approximately 10.8 acres. The site is located on Iris Avenue, east of Perris Boulevard in Moreno Valley, CA 92551. There is a California Aqueduct easement along the southwest property line. The buildable portion of the lot is indicated to be 7.80 acres. No improvements have been completed at the subject site. The site is planned for residential development.

According to the EDR Database Report the topography of the site is gently sloping to the southeast. The site has a maximum surface elevation difference of approximately 10 feet.

There is a dirt road along the southwest property line but no paved areas on the site.

Utility services that will be providing service to the subject site include the Southern California Edison Company as the electrical supplier; Southern California Gas Company as the natural gas supplier; and municipal water, storm drain and sanitary sewer services from buried utilities along the adjacent thoroughfares.

Building

No buildings are currently located on the subject site.

Adjoining Properties

Properties immediately adjoining the subject site are listed in the following table. The adjoining properties are located in Moreno Valley, CA 92551.

Adjoining Properties			
Name	Operation	Direction from Site	Concerns
Iris Avenue Homes Beyond	Single-Family Residential	North	None
Homes Along Ebony Avenue	Single-Family Residential	East	None
Val Verde Academy 25100 Red Maple Lane	School	Southwest	EnviroStor
IHOP 16080 Perris Blvd	Restaurant	Southwest	None
KFC 16040 Perris Blvd.	Restaurant	Southwest	None
Ortiz Beauty Salon 15974-F Perris Blvd.	Commercial Uses	Northwest	None

The database listings are discussed in the Database Records Review section of this Report. Because of the controlled surface drainage and the predominantly non-hazardous uses on the adjoining properties, they do not, in our opinion, pose a significant environmental risk to the subject site. The above referenced sites with environmental concerns are discussed in the Environmental Records Review section of this Report.

Vicinity

AES observed other properties located near the subject site for current uses or conditions that might be environmentally significant. The local area properties observed by AES did not appear to be engaged in environmentally significant activities.

Topography and Hydrogeology

AES reviewed the United States Geological Survey (USGS) Topographic Map, which indicates that the subject site is approximately 1,500 feet above mean sea level. AES observed that the general drainage flows in a southeasterly direction across the surface of the site. No substantial grade changes appear to have been made to the subject site when compared to the topography of surrounding sites. A copy of the USGS topographic map that covers the subject site is appended.

AES did not observe site grading activities at the site. The lot has been cleared and has a slight weed growth.

Geology and Surficial Soils

According to the EDR Database Report, the subject site is located above Mesozoic era plutonic and intrusive bedrock. The depth to bedrock is unknown.

According to the information obtained through the EDR Database Report, the subject site is located in an area of sandy loam soils. These soil types have moderate permeability and would be expected to have moderate susceptibility as a result of surface spreading of wastes, depending upon local soil conditions

Surface and Ground Water Flow

The regional surface water flows in a southeasterly direction according to the EDR Database Report. The ground water flow in the area is assumed to be to the southeast. The depth to ground water is 70 feet below ground surface.

IV SITE HISTORY

No Environmental Reports prepared by others were provided to AES for review. AES conducted a limited historical review regarding the subject site. The following summarizes AES's review of readily available historical records and maps gathered from government agencies and commercial enterprises regarding the subject site history and use. This should not be considered a listing of all available information.

Interviews

Mr. Graham indicated that the subject site was used for agricultural purposes and is now vacant land.

Building Department Records Review

No permits or Certificates of Occupancy for improvements were found in the City records reviewed.

Regulatory Agency File Review

AES filed Freedom of Information Act requests with the following agencies: None

We searched the State Water Resources Control Board records using the GeoTracker website.

Aerial Photograph and Historical Map Review

Aerial photographs are reviewed to identify past site use and areas of environmental concern on the subject site. AES has reviewed aerial photographs of the subject site. The photographs were obtained from Environmental Data Resources. Copies of the aerial photographs that were obtained and reviewed by AES are appended. Please see chart below for the specific dates and description summary.

Beginning in the 1860s, the Sanborn Fire Insurance Company, and others, prepared maps that depict site improvements and commercial activities in many metropolitan areas in the United States. AES attempted to obtain fire insurance maps, specific to the site, to review as part of this Phase I Environmental Site Assessment. According to EDR, no Sanborn Maps were produced for this site.

Historical maps provide information concerning historical site boundaries and improvements. Historic Topographic Maps were reviewed for the site; please see the chart below for enumeration of years and findings.

The historical maps reviewed were obtained from EDR and are appended.

Site History Summary		
Date	Record Type	Land Use
1901	Historical Topographic Map	Undeveloped land
1942	Historical Topographic Map	Undeveloped land
1943	Historical Topographic Map	Undeveloped land
1953	Historical Topographic Map	Undeveloped land
1967	Historical Topographic Map	Undeveloped land
1967	Aerial Photograph	Agricultural uses
1973	Historical Topographic Map	Undeveloped land
1978	Aerial Photograph	Agricultural uses
1979	Historical Topographic Map	Undeveloped land
1985	Aerial Photograph	Agricultural uses
1989	Aerial Photograph	Cleared land, residential developments to north and east
1997	Aerial Photograph	Vacant land to southwest, residential to north and east
2002	Aerial Photograph	Vacant land to southwest, residential to north and east
2006	Aerial Photograph	Vacant land, school site under development to the southwest
2006	Aerial Photograph	Vacant land, current adjacent properties
2012	EDR Topographic Map	No buildings plotted
2016	Aerial Photograph	Vacant land, current adjacent properties

Based on AES's interpretation of the available documentation noted above the first developed and historic site use was primarily agricultural uses. Agricultural uses were first noted on the aerial map beginning in 1967.

No evidence of long-term fill activity, surface scarring, staining or other issues of environmental concern were visible in the aerial photographs during the review process.

Directories

City directories often provide information concerning historical site ownership and use. City Directories were reviewed for the years 1971 through 2014, in roughly five-year intervals. No significant listing was found. A copy of the City Directory Abstract is appended.

Title Records Review

A title records review, or chain-of-title, can be used to identify prior ownership of a property and to evaluate previous activities or operations in terms of environmental significance. Significant easements, covenants, restrictions and environmental liens may be indicated in title records. A chain-of-title regarding the subject site was not provided to AES for review as part of this Phase I Environmental Site Assessment. A Preliminary Title Commitment was provided by Chicago Title Company. No environmental concerns were noted and a copy is appended.

Document Review

No reports or other documents were provided for review by AES.

Data Gaps

The history and land use of the subject site has been determined by review of available historical aerial photographs, city directories, old topographic maps, personal interviews, public agency records, and other available resources. This history has been extended back as far as "it can be shown that the property contained structures or from the time the property was first used for residential, agricultural, commercial, industrial or governmental purposes." Necessary and available historical resources (aerial photographs, fire insurance maps, USGS topographic maps, historical city directories, building department records, zoning/land use records, interviews, etc.) were reviewed to establish a thorough land use history in order to identify historical environmental conditions. The following is a list of data gaps (insufficient data) and associated potential environmental significance:

No Data Gaps (insufficient data) were identified by AES for the subject site.

V ENVIRONMENTAL SITE ASSESSMENT

Fixed Facilities Review

No improvements to the subject site were observed by AES on October 31, 2019.

No asbestos containing materials or lead based paint were observed on the subject site.

No landscape maintenance services are performed on the subject site, and no landscape equipment is stored on the subject site. Neither automotive nor landscape equipment is maintained at the subject site.

Site Tenant Activities

AES observed no tenants or structures on the subject site.

AES confirmed the general nature of activities within the site boundaries. Past use of the site is indicated to have been agricultural based on a review of aerial photographs reviewed for this report.

Upon review of the activities at the above locations, AES found no specific environmental concerns regarding these operations.

On-Site Chemical and Petroleum Product Storage

AES looked for chemicals, hazardous substances, petroleum-based fuels and lubricants, and janitorial and cleaning supplies stored on the subject site. No chemicals or hazardous substances were observed on the subject site. The site is generally free of debris and illegal dumping.

Waste Disposal Practices

AES identified no wastes generated at the subject site.

Underground and Aboveground Storage Tanks

Owners and operators of certain USTs are required to register those USTs with the state agency responsible for administering the federally mandated UST program. A search of the list of registered USTs in California, prepared by EDR, showed that there are no registered USTs located on the subject site.

AES observed no presence of USTs and ASTs on the subject site. We found no records of USTs and no records of ASTs currently on the subject site.

AES visually observed the subject site for surficial evidence of USTs and ASTs. AES did not observe evidence of USTs or ASTs at the subject site.

There is an underground portion of the California Aqueduct in an easement along the southwest property line.

Polychlorinated Biphenyls (PCBs)

Federal regulations put into effect following the Toxic Substances Control Act (TSCA) require that electrical transformers be labeled to identify their PCB content. Manufacture and distribution of PCBs was banned in 1979. Transformer owners are responsible for compliance with all applicable regulations governing those transformers, including maintenance of the transformer and any remediation work resulting from a transformer-related incident.

No electrical transformers are provided on site.

Exterior Surface Condition

AES observed the exterior surface of the subject site. It is estimated that no portion of the subject site surface was covered by improvements and pavement. AES's observation of the site soil surfaces included the entire site.

None of the historical documentation reviewed, indicated that the subject site was previously utilized as a quarry and/or solid waste disposal facility.

No pits, ponds or lagoons were observed at the subject site during the site visit. No areas of distressed or dead vegetation, surface depressions or surface stains attributed to chronic leaks or spills were observed during the site visit.

Interior Surface Condition

AES observed no interior surfaces for evidence of unusual conditions. The site has no structures and is vacant land. The 1979 U.S. Geological Survey topographic map illustrates a pipeline trending northwest-southeast. According to the city of Moreno Land Development, this pipeline is an aqueduct that water passes through.

Vapor Encroachment Condition (VEC)

A Vapor Encroachment Screening was performed for the subject site following the guidelines of ASTM E2600-10, Tier 1 Vapor Encroachment Screening. The screening consists of an initial search of all standard government record databases and EDR's proprietary historical records related to former dry cleaners, gas stations and manufactured gas plants within the 1/3 mile radius (default Area of Concern-AOC). Based on local ground water flow direction knowledge, AES reduced the AOC by the Buonicore Method. Individual facilities within the remaining AOC were evaluated.

Based on this evaluation, a VEC can be ruled out because a VEC does not exist or is not likely to exist.

VI DATABASE RECORDS REVIEW

Environmental Records Review

An environmental records database search report dated October 25, 2019, was provided by Environmental Data Resources (EDR). A copy of EDR's report is appended. The following discussion excerpts specific items from the report that deserve additional description.

In addition to the mapped sites in the EDR report, there may also be a list of unmapped sites. These are reported database sites that, due to incomplete addressing information, could not be accurately plotted by EDR. In an attempt to locate all unmappable sites, AES compared each address provided on the unmappable site list to known addresses of the site and vicinity and attempted to locate unmappable sites during reconnaissance of the vicinity. AES concludes that no unmappable sites were identified that meet the search radius criteria of the scope of work and are considered to be environmentally significant to the subject site.

Superfund Enterprise Management System (SEMS) – Formerly Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)

Since 1982, the U.S. EPA has maintained lists of contaminated sites under the federal Superfund Program in accord with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The U.S. EPA discovers these sites from citizen reports, routine inspection of hazardous waste generators, treatment, storage and disposal facilities, and reporting requirements.

Superfund Enterprise Management System (SEMS) 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 known 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.

Review of the SEMS list provided by EDR identifies no SEMS sites within the approximate minimum search distance of one-half mile from the subject site.

Federal CERCLIS-NFRAP List (SEMS Archive)

CERCLA sites designated No Further Remedial Action Planned (NFRAP) have been removed from CERCLIS. CERC-NFRAP sites may be where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the National Priorities List (NPL), or the contamination was not serious enough to require Federal Superfund action or NPL consideration. CERCLIS-NFRAP sites, however, may continue to represent a concern to local or state regulators. CERCLIS-NFRAP was renamed to SEMS Archive by the EPA in 2015.

Review of the SEMS Archive list provided by EDR identifies no SEMS Archive sites within the approximate minimum search distance of one-half mile from the subject site.

National Priorities List

The U.S. EPA maintains this list as a subset of CERCLIS, identifying over 1,200 CERCLA sites for priority cleanup under the Superfund Program. Once sites have been designated on the CERCLIS list, the U.S. EPA uses its Hazard Ranking System to determine the potential risks of those sites to human health and the environment. Only the sites that present the greatest risk are added to the NPL, which qualifies the sites to receive CERCLA remedial funding.

Review of the NPL list provided by EDR identifies no NPL sites within the approximate minimum search distance of one mile from the subject site.

RCRA – Generators

The U.S. EPA's RCRA (Resource Conservation and Recovery Act, 42 U.S.C. '6991 *et seq.*) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. Generators are also listed in the FINDS database.

Review of the RCRA LQ-Generator list provided by EDR identifies only one RCRA-LQG site listed. There are no RCRA-LQG facilities on the subject site and there are no RCRA-LQG facilities on adjoining properties.

RCRA-Large Quantity Generator Facilities Noted on EDR Report					
Facility Name	Location			Violation Status	TSDF Status
	Distance	Direction	Gradient		
Walgreens #9616	0.061 mi.	West	Cross	No Violations	Not TSDF

The above referenced RCRA LQ-Generator facility was evaluated based on the following criteria: violator status, area geology, gradient relationship and separation distance. Based on this evaluation, and due to their regulated nature, it is believed that this does not represent an environmental concern to the subject site.

Review of the RCRA SQ-Generator list provided by EDR identifies a total of three RCRA-SQG sites listed. There are no RCRA-SQG facilities on the subject site and there are no RCRA-SQG facilities on adjoining properties.

RCRA-Small Quantity Generator Facilities Noted on EDR Report					
Facility Name	Location			Violation Status	TSDF Status
	Distance	Direction	Gradient		
Shell Service Station	0.076 mi.	WNW	Up	No Violations	Not TSDF
Malek Ayass	0.093 mi.	WNW	Up	No Violations	Not TSDF
Home Depot	0.141 mi.	WNW	Up	No Violations	Not TSDF

The above referenced RCRA SQ-Generator facilities were evaluated based on the following criteria: violator status, area geology, gradient relationship and separation distance. Based on this evaluation, and due to their regulated nature, it is believed that this does not represent an environmental concern to the subject site.

RCRA - Treatment, Storage, Disposal Facilities (TSD)

The Resource Conservation and Recovery Act Information System (RCRIS) is a compilation of selective information on facilities that generate, store, transport, treat or dispose of hazardous waste. Inclusion of a facility on the RCRIS database is not necessarily an indication of an environmental problem.

Review of the RCRIS-TSD list provided by EDR identifies no RCRIS-TSD sites within the approximate minimum search distance of one mile from the subject site.

Emergency Response Notification System (ERNS)

The ERNS is a compilation of reported releases of hazardous substances into the environment. The database contains information from Spill reports made to federal authorities, including the U.S. EPA, the U.S. Coast Guard, the National Response Center, and the U.S. Department of Transportation.

Review of the ERNS list provided by EDR identifies no ERNS listings adjacent to or at the subject site.

Underground Storage Tanks (USTs)

Certain USTs are regulated under the RCRA Act, and must be registered with the state agency responsible for administering the UST program. USTs are also listed in the CA FID database. Inclusion of a facility on the UST database is not necessarily an indication of an environmental problem.

Review of the list provided by EDR identifies a one site within a search radius of one-quarter mile. There are no facilities on the subject site and there are no facilities on adjoining properties.

The above referenced facility is a Shell gas station with a leaking tank at 15980 Perris Boulevard. Leaking tanks are discussed in the following section.

Leaking Underground Storage Tanks (LUSTs)

LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. LUSTs are also listed in the CORTESE database.

Review of the list provided by EDR identifies a total of four listings at two unique addresses within the ASTM standard minimum search distance of one-half mile from the subject site. There are no facilities on the subject site and there are no facilities on adjoining properties.

The Shell Station located at 15980 Perris Boulevard has been impacted by a petroleum release that impacted groundwater. Groundwater flow from the Shell station is to the southeast. Depth to groundwater is 70 feet below ground surface. Groundwater samples from monitor well, MW-8, located in the northeast corner of the intersection of Iris Avenue and Perris Boulevard, contained detectable gasoline range hydrocarbons (C₄-C₁₂) and no detectable benzene, toluene, xylene and ethylbenzene. Based on these conditions, the Shell station subsurface contamination is not expected to migrate beneath the subject site.

Registered LUST Facilities					
Facility Name and Address	Location			Material Released	Reported Impact and Current Status
	Distance	Direction	Gradient		
Shell Perris Blvd. 15980 Perris Blvd.	0.076 mi.	WNW	Up	Gasoline	Soil only, leak being confirmed 2004
Shell Service Stn. 15980 Perris Blvd.	0.076 mi.	WNW	Up	Gasoline	Aquifer affected, Open case, monitoring on going.
ARCO#5764 16466 Perris Blvd.	0.335 mi.	SSW	Down	Gasoline	Soil only, leak being confirmed 2003
ARCO#5764 16466 Perris Blvd.	0.335 mi.	SSW	Down	Gasoline	Case Closed 11/30/2004

NA – Information not provided in the EDR report

The above referenced facilities were evaluated based on the following criteria: violator status, area geology, gradient relationship, and separation distance. Based on this evaluation, and due to their regulated nature, it is believed that this does not represent an environmental concern to the subject site.

Solid Waste Facilities/Landfills (SWF/LS)

Solid waste records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Section 2004 criteria for solid waste landfills or disposal sites.

Review of the list provided by EDR identifies no sites within the approximate minimum search distance of one-half mile from the subject site.

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.

Review of the list provided by EDR identifies a total of two sites within the ASTM standard minimum search distance of one mile from the subject site. There are no facilities on the subject site and there is one facility on adjoining properties. The Indian Middle School is shown as over ½-mile distant and had DDT removal performed in 2006. The Red Maple School Site (Val Verde Unified School District) adjoining the Subject site was a School Investigation where agricultural row crops historically were grown. No contaminants were found. Completion was noted in the EDR report as November 29, 2001.

The above referenced facilities were evaluated based on the following criteria: violator status, reported status of past investigation on adjacent property, area geology, gradient relationship and separation distance. Based on this evaluation, and due to their regulated nature, it is believed that this does not represent an environmental concern to the subject site.

DEED (Institutional Controls)

Site Mitigation and Brownfield's Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfield's 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.

Review of the list provided by EDR identifies no sites within the approximate minimum search distance of one mile from the subject site.

California Hazardous Material Incident Reporting System (CHMIRS)

The California Office of Emergency Services database contains reported information on incidents involving accidental releases or spills of hazardous materials.

Review of the list provided by EDR identifies no listings adjacent to or at the subject site.

Hazardous Waste and Substances Sites List (CORTESE)

The Cal-EPA publishes a listing of potential and confirmed hazardous waste sites throughout the State of California. Under California Government Code Section 65962.5, these sites are submitted to the Cal-EPA by the State Department of Health Services, State Water Resources Control Board, the Integrated Waste Management Board and the Department of Toxic Substances Control.

The database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release, and all solid waste disposal facilities from which there is a known migration.

Review of the list provided by EDR identifies one site within the ASTM standard minimum search distance of one-half mile from the subject site. There are no facilities on the subject site and there are no facilities on adjoining properties. The site is the formerly discussed Shell Service Station LUST facility at 15980 Perris Boulevard.

The above referenced facility was evaluated based on the following criteria: violator status, area geology, gradient relationship and separation distance. Based on this evaluation, and due to their regulated nature, it is believed that this does not represent an environmental concern to the subject site.

VCP (Voluntary Cleanup Program)

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have requested that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Review of the list provided by EDR identifies no listings adjacent to or at the subject site.

Hazardous Waste Information System (HAZNET)

The California Department of Health Services, Toxic Substances Control Division, has developed and maintained lists of hazardous waste generators and hazardous waste treatment, storage and disposal facilities in the State of California, in accordance with the Hazardous Waste Control Law (California Health and Safety Code Section 25100 *et seq.*) And the Hazardous Waste Management Act of 1976 (California Health and Safety Code Section 25179.1 *et seq.*). Inclusion of a facility in the HAZNET list is not necessarily an indication of an environmental problem.

Additionally, the California Health and Safety Code requires all counties to prepare and submit hazardous waste management plans. To assist the counties, the Toxic Substances Control Division maintains lists containing hazardous waste generation and disposal data within each county. The Toxic Substances Control Division has assembled this information from manifest reports required from hazardous waste generators. This database currently lists over 20,000 facilities in the State of California.

Review of the list provided by EDR identifies no listings adjacent to or at the subject site.

Historic USTs

The Hazardous Substance Storage Container Database is a historical listing of former UST sites that are closed and typically not listed with the current UST sites.

Review of the list provided by EDR identifies no listings adjacent to or at the subject site.

EDR Historical Auto Service Stations

EDR 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.

Review of the list provided by EDR identifies no listings adjacent to or at the subject site.

Dry Cleaners and EDR Historical Dry Cleaners

This database provides a list of drycleaner facilities that have EPA ID numbers. These facilities have certain SIC codes including: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; dry cleaning plants, except rugs; carpet and upholstery cleaning; industrial launderers and laundry and garment services.

Review of the list provided by EDR identifies a total of six listings for two unique addresses. There are no facilities on the subject site and there are no facilities on adjoining properties.

The above referenced facilities were evaluated based on the following criteria: violator status, area geology, gradient relationship and separation distance. Based on this evaluation, and due to their regulated nature, it is believed that this does not represent an environmental concern to the subject site.

EDR 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.

Review of the list provided by EDR identifies no Historical Dry Cleaner listings adjacent to or at the subject site.

Waste Management Unit Database System (WMUDS/SWAT)

The California Integrated Waste Management Board maintains an inventory list of both open as well as closed and inactive solid waste disposal facilities and transfer stations in accordance with the Solid Waste Management and Resource Recovery Act of 1972, California Government Code Section 2.66790(b). Generally, the California Integrated Waste Management Board learns of locations of disposal facilities through permit applications and from local enforcement agencies. The Waste Management Unit Database System is used by the California Water Resources Control Board and the Regional Water Quality Control Boards for program tracking and inventory of waste management units.

Review of the latest WMUDS/SWAT listing identifies no WMUDS/SWAT facilities within the approximate minimum search distance of one-half mile from the subject site.

Manufactured Gas Plants (MGP)

Manufactured Gas Plants produced combustible gas for urban use prior to the widespread use and pipeline distribution of natural gas in the 1950s. The main fuels used in production of this gas were coke, coal and oil; the by-products of this manufacturing process include a variety of tars, sludge and other chemicals. MGP sites tend to have subsurface contamination due to the common practice of disposing of the waste products on site.

Review of the MGP list provided by EDR identifies no MGP sites within the approximate minimum search distance of one mile from the subject site.

US Brownfields

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields.

Review of the list provided by EDR identifies no sites within the approximate minimum search distance of one-half mile from the subject site.

Federal Superfund Lien Searches

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.

Review of the list provided by EDR identifies no listings adjacent to or at the subject site.

In, addition, there are no Federal, State or non-priority liens on the subject property listed in the EDR Database Report or Activity and Use Limitations (AULs) associated with the subject site.

VII ASTM NON-SCOPE ITEMS

Asbestos

In 1977, the U.S. EPA acted to eliminate friable asbestos from building materials. Friable materials are defined as those that can be crushed or reduced to powder by hand pressure. Materials do not have to be damaged to be identified as friable. Additionally, the United States Occupational Safety and Health Administration (OSHA) now requires certain untested materials to be presumed to contain asbestos for buildings constructed prior to 1981.

During the site visit, AES observed vacant land with no building on site. No documents were provided for review. There was no visible construction and no signs of asbestos containing materials were observed.

No sampling or analytical testing of ASTM Non-Scope items was conducted.

Lead Based Paint

In 1978, the Consumer Product Safety Commission banned the use of lead as an additive in paint. During the site visit, there was vacant land with no signs of painted structures or empty cans.

Potable Water Supply

The subject site is serviced by a municipally operated, public water system, which is regulated by the Safe Drinking Water Act of 1974. This Act requires that public water supplies be tested for the presence of lead in water. AES contacted the local water utility company, the City of Moreno Valley, regarding the results of water tests. The utility company reports that the lead content of the water is below the U.S. EPA action level of 0.015 milligrams per liter.

Radon Gas

Radon gas is a naturally occurring, colorless, odorless gas that is the by-product of the decay of radioactive materials found within bedrock and soil. Radon gas enters buildings through cracks, structural joints, and plumbing openings in floor levels that are in direct contact with the soil. Radon gas, when inhaled, has been found to be carcinogenic in some humans. The U.S. EPA recommended action level for radon gas is 4.0 pCi/L (picoCuries per liter).

The State of California, in conjunction with the U.S. EPA, has conducted residential screening tests in Riverside County. The results of that screening indicate that Riverside County is predicted to have an average indoor radon screening level of 1.7 pCi/L, with 100% of tests less than 4.0 pCi/L.

AES reviewed the U.S. EPA's Map of Radon Zones for California, which identifies Riverside County as being within radon zone 2. Counties within radon zone 2 have a predicted average indoor radon gas screening level of between 2 and 4 pCi/L.

Based on the literature reviewed, it is our opinion that the risk of radon gas accumulation is not a significant environmental concern at the subject site.

No sampling or analytical testing of ASTM Non-Scope items was conducted.

Wetlands

AES did not observe ponded water, flowing water, saturated soils or hydrophytic vegetation at the subject site.

Mold

AES observed portions of the exposed soil for signs of mold and/or mildew and none was observed. Based on the condition of these surfaces, mold and/or mildew were not an environmental concern to the subject property (vacant land) at the time of our site visit.

Please note that AES did not perform any probes of surface materials, use moisture meters to test materials or use specialized equipment to test air quality for signs of existing mold and/or mildew. If further confirmation is required for determining if mold and/or mildew is present in the vacant land, AES recommends that a qualified Industrial Hygienist be retained to perform the necessary industry standard tests and provide a report of their findings.

VIII CONCLUSIONS

Findings and Opinion

AES completed a Phase I ESA for the site in substantial conformance with the scope and limitations of the Standard. Any exceptions to, or deletions from, the Standard are described in the Assessment.

Historical Recognized Environmental Conditions (HRECs)

Based on site observations, interviews and review of available documents and the database records search, AES concludes that no HRECs were identified at the subject site. AES recommends no additional investigation at this time.

Current Recognized Environmental Conditions (RECs)

Based on site observations, interviews and review of available documents and the database records search, AES concludes that no RECs were identified at the subject site. AES recommends no additional investigation at this time.

Business Environmental Risk (BER)

Based on site observations, interviews and review of available documents and the database records search, AES concludes that no *BER's* were identified at the subject site. AES recommends no additional investigation at this time.

Controlled Recognized Environmental Conditions (CREC)

Based on site observations, interviews and review of available documents and the database records search, AES concludes that no CRECs were identified at the subject site. AES recommends no additional investigation at this time.

de minimis Environmental Conditions

Based on site observations, interviews and review of available documents and the database records search, AES concludes that no *de minimis* conditions were identified at the subject site.

Conclusions

We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations ASTM Practice E 1527-13 of Iris Park (Riverside County APN# 312-020-025), Moreno Valley, CA 92551, the *property*. Any exceptions to or deletions from, this practice are described in Section II of this *report*. This assessment has revealed no evidence of *Recognized Environmental Conditions, Controlled Recognized Environmental Conditions, Business Environmental Risks or Historical Recognized Environmental Conditions* with the *property*. AES recommends no additional investigation at this time.

IX INTERVIEWS

<u>Name</u>	<u>Title/Affiliation</u>	<u>Phone</u>
Mr. Oscar Graham	Pacifica Investments	714-609-7257
Staff	Building & Safety Division City of Moreno Valley	951-413-3000
Website	State Water Resources Control Board http://geotracker.waterboards.ca.gov/	
Website	Oil Gas and Thermal Resources http://www.conservation.ca.gov/dog/	

X QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Richard E. Darwicki - Mr. Darwicki is a Registered Environmental Assessor in the former EPA Program and has over ten years of experience related to environmental assessments and over 30 years experience related to engineering matters. He has completed numerous Phase I Environmental Site Assessments throughout the United States. He is also a Licensed Engineer in the State of California and attended Santa Ana College and Fullerton College.

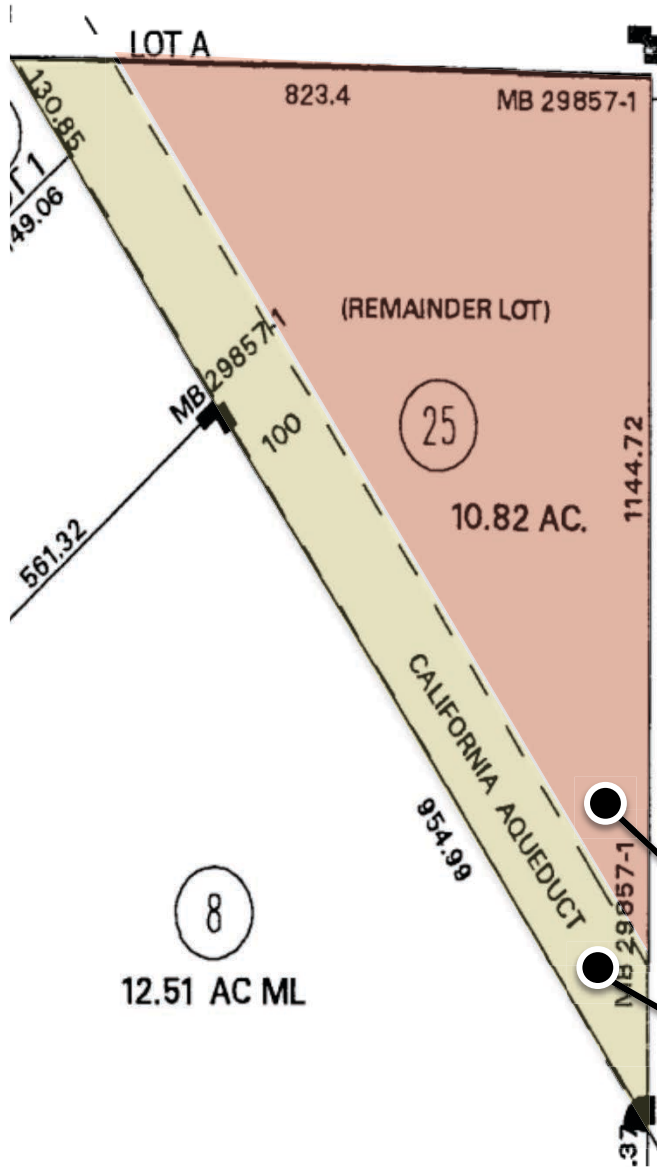
Timothy K. Dahlstrand - Mr. Dahlstrand has over twenty-five years of experience related to environmental and engineering matters. He has completed and supervised hundreds of Phase I Environmental Site Assessments throughout the United States and internationally. He holds a B.A. in Geology and a M.S. in Civil Engineering from Northwestern University.

Stephen J. Baker – Mr. Baker is a California and Washington Registered Geologist and Certified Hydrogeologist. He has conducted cursory environmental surveys, Phase I Evaluations, site characterization of sediment and groundwater, remedial design and implementation, post monitoring and achievement of “No Further Action” status by the lead regulating agencies. Mr. Baker holds a degree in geology from Ohio State University and a California Registered Geologist License number 4354.



Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 :

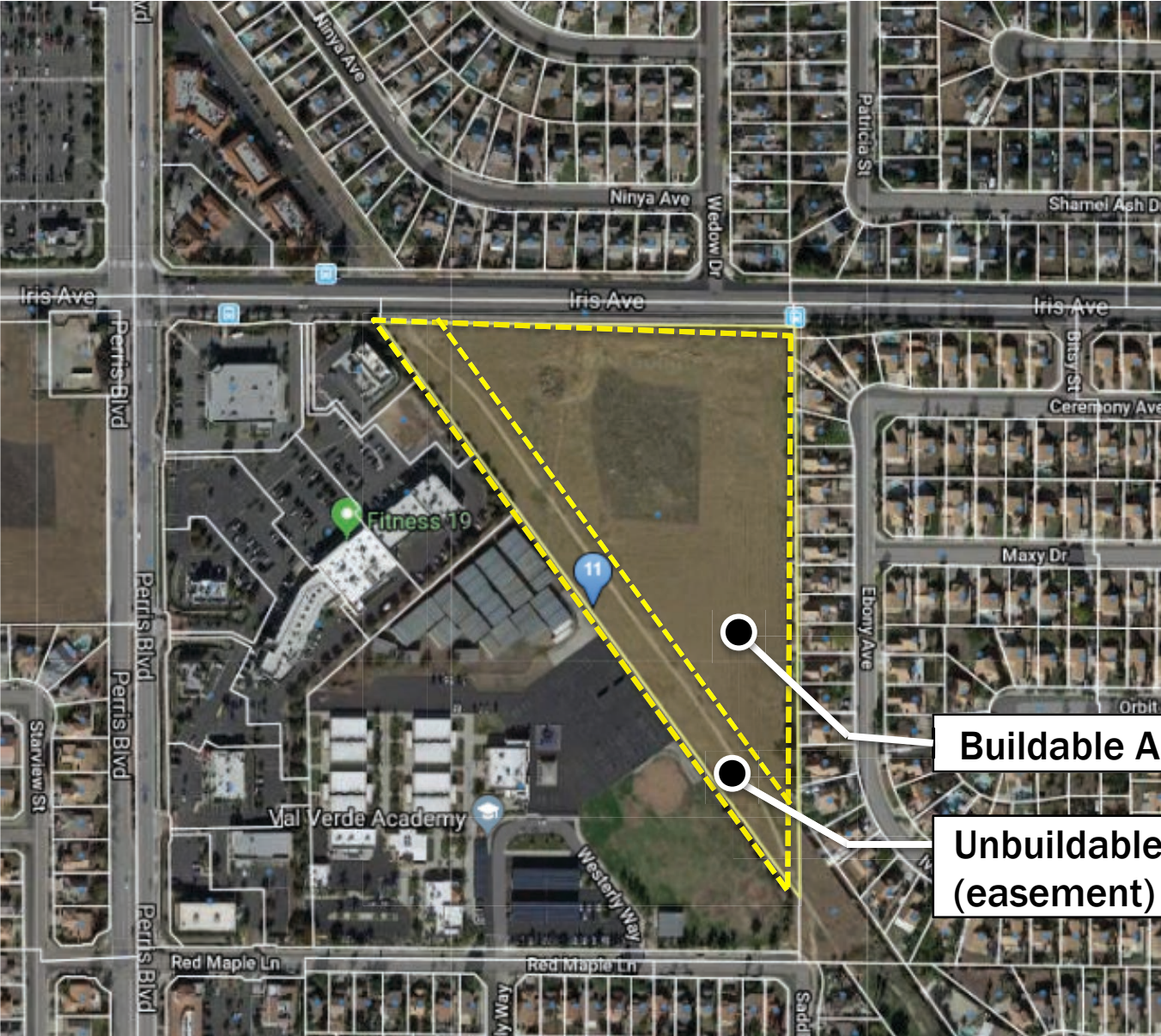




Buildable Area: 7.80 ac

Unbuildable Area: 3.00 ac
(easement)





Buildable Area: 7.80 a

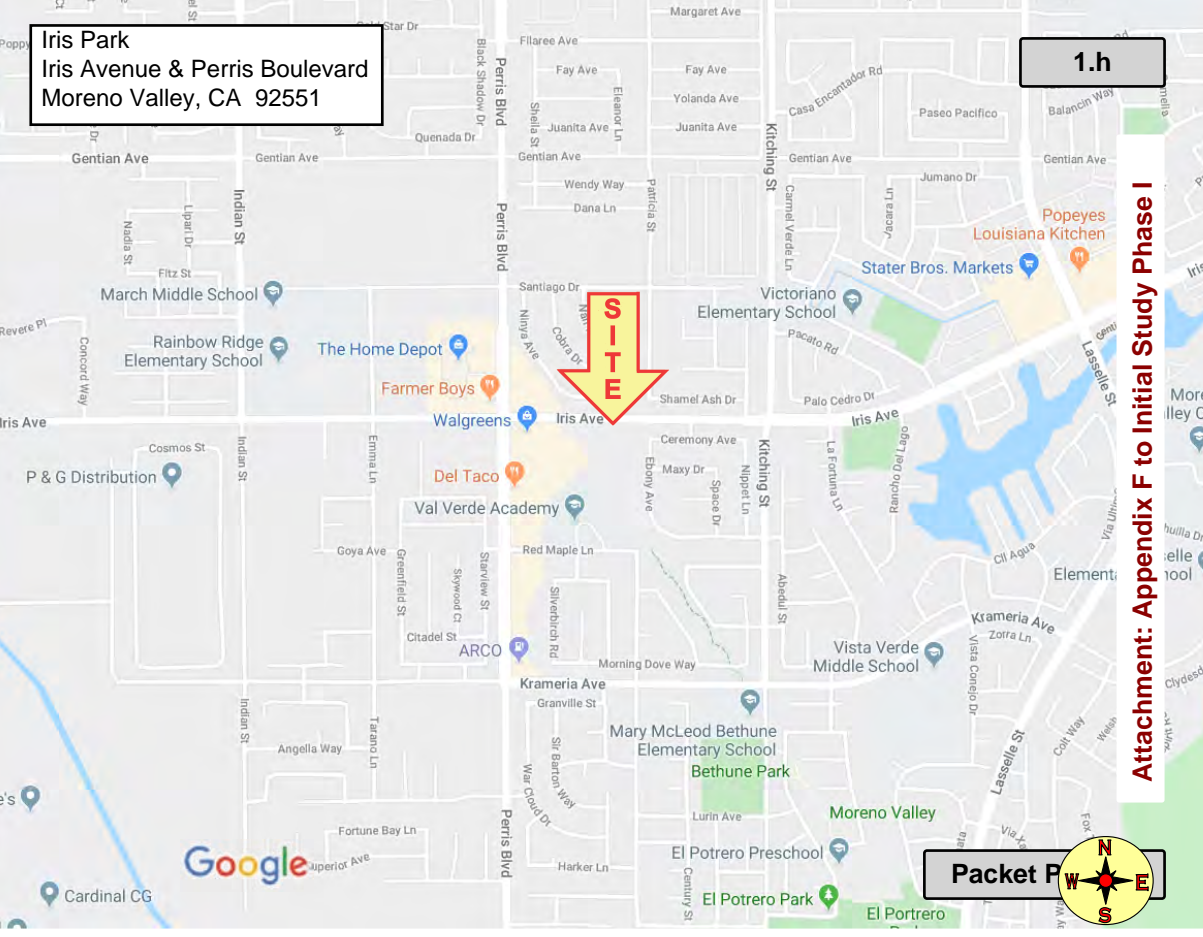
**Unbuildable Area: 3 ac
(easement)**



Iris Park
Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551

1.h

Attachment: Appendix F to Initial Study Phase I





Phase I Environmental Site Assessment
 Iris Park
 Moreno Valley, CA 92551

Photos taken October 31, 2019
 AES Project 19004122
 Page 1



1) View of the adjacent property to the north beyond Iris Avenue.



2) View of an adjacent residential property to the east along Ebony Avenue.



3) View of the adjacent schoolyard to the southwest.



4) View of the adjacent vacant and schoolyard property to the southwest.



Phase I Environmental Site Assessment
Iris Park
Moreno Valley, CA 92551

Photos taken October 29, 2019
AES Project 19004122
Page 2



5) View of the adjacent IHOP restaurant to the southwest.



6) View of the adjacent KFC restaurant to the southwest.



7) View of the commercial property to the northwest.



8) View of the site along the southwest property line looking south.



Phase I Environmental Site Assessment
 Iris Park
 Moreno Valley, CA 92551

Photos taken October 29, 2019
 AES Project 19004122
 Page 3



9) View of the site along the north property line looking east.



10) View of the site along the east property line looking south.



11) View of the site from the northeast corner looking southwest.

Iris Park

Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551

Inquiry Number: 5844302.2s
October 25, 2019

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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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

IRIS AVENUE & PERRIS BOULEVARD
MORENO VALLEY, CA 92551

COORDINATES

Latitude (North): 33.8875320 - 33° 53' 15.11"
Longitude (West): 117.2227630 - 117° 13' 21.94"
Universal Transverse Mercator: Zone 11
UTM X (Meters): 479400.8
UTM Y (Meters): 3749514.0
Elevation: 1500 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:
IRIS AVENUE & PERRIS BOULEVARD
MORENO VALLEY, CA 92551

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & DIRECTIO
1	RED MAPLE SCHOOL SIT	RED MAPLE LANE/EBONY	ENVIROSTOR, SCH	Lower	155, 0.029,
A2	WALGREENS #9616	16020 PERRIS BLVD	RCRA-LQG	Higher	318, 0.060,
A3	WALGREENS	16020 PERRIS BLVD	CERS HAZ WASTE, CIWQS, CERS	Higher	318, 0.060,
B4	TESORO SHELL 68567	15980 PERRIS BLVD	CERS HAZ WASTE, CERS TANKS, HAZNET, CERS	Higher	403, 0.076,
B5	SHELL PERRIS BLVD.	15980 PERRIS BLVD.	LUST	Higher	403, 0.076,
B6	TESORO (SHELL) 68567	15980 PERRIS BLVD	UST	Higher	403, 0.076,
B7	TESORO SHELL 68567	15980 PERRIS BLVD	RCRA NonGen / NLR	Higher	403, 0.076,
B8	CAR ENTERPRISES INC	15980 PERRIS BLVD	EDR Hist Auto	Higher	403, 0.076,
B9	SHELL SERVICE STATIO	15980 PERRIS BLVD	RCRA-SQG, LUST, SWEEPS UST, FINDS, ECHO, Cortese,...	Higher	403, 0.076,
B10	MALEK AYASS	15974 PERRIS BLVD UN	RCRA-SQG, FINDS, ECHO	Higher	492, 0.093,
B11	ROLLING RIDGE CLEANE	15974 PERRIS BLVD ST	DRYCLEANERS	Higher	492, 0.093,
B12	ROLLING RIDGE CLEANE	15974 PERRIS BLVD UN	DRYCLEANERS	Higher	492, 0.093,
B13	ROLLING RIDGE CLEANE	15974 PERRIS BLVD UN	DRYCLEANERS	Higher	492, 0.093,
B14	ROLLING RIDGE CLEANE	15974 PERRIS BLVD UN	DRYCLEANERS	Higher	492, 0.093,
B15	ROLLING RIDGE CLEANE	15974 PERRIS BLVD ST	EDR Hist Cleaner	Higher	492, 0.093,
B16	TAN TRAN	15974 PERRIS BLVD UN	DRYCLEANERS	Higher	492, 0.093,
B17	EMWD MORENO #1 PUMPI	16015 PERRIS BLVD	SWEEPS UST	Higher	539, 0.102,
18	MAGIC DRY CLEANERS	16090 PERRIS BLVD #B	DRYCLEANERS	Higher	609, 0.115,
B19	ONE'S RECYCLING	15928 PERRIS BLVD	SWRCY	Higher	621, 0.118,
20	HOME DEPOT USA INC H	15975 PERRIS BLVD	RCRA-SQG, CERS HAZ WASTE, HAZNET, CERS	Higher	743, 0.141,
C21	CERTIFIED TIRE & SER	16190 PERRIS BLVD	CERS HAZ WASTE, HAZNET, CERS	Lower	830, 0.157,
C22	CERTIFIED TIRE & SER	16190 PERRIS BLVD	RCRA NonGen / NLR	Lower	830, 0.157,
C23	AUTOZONE #3714	16210 PERRIS BLVD	RCRA NonGen / NLR	Lower	994, 0.188,
C24	AUTOZONE #3714	16210 PERRIS BLVD	CERS HAZ WASTE, HAZNET, CERS	Lower	994, 0.188,
C25	MAGIC CLEANERS	25025 RED MAPLE LN	EDR Hist Cleaner	Lower	1032, 0.196,
26	M G MOBILE SERVICE	25190 MORNING DOVE W	EDR Hist Auto	Lower	1248, 0.236,
D27	ARCO #5764	16466 PERRIS BLVD.	LUST, CERS	Lower	1767, 0.336,
D28	ARCO #5764	16466 PERRIS BLVD	LUST, CERS HAZ WASTE, CA FID UST, CERS TANKS,...	Lower	1767, 0.336,
29	INDIAN MIDDLE SCHOOL	INDIAN AVENUE / IRIS	ENVIROSTOR, SCH, CERS	Higher	3096, 0.586,

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

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-VSQG..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS..... Land Use Control Information System
 US ENG CONTROLS..... Engineering Controls Sites List
 US INST CONTROL..... Sites with Institutional Controls

EXECUTIVE SUMMARY

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC..... Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing
AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Cleanup Program Properties

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 ODI..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... 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

EXECUTIVE SUMMARY

US CDL..... National Clandestine Laboratory Register
 PFAS..... PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

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

FUDS..... Formerly Used Defense Sites
 DOD..... Department of Defense Sites
 SCR DRYCLEANERS..... 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

EXECUTIVE SUMMARY

ABANDONED MINES.....	Abandoned Mines
FINDS.....	Facility Index System/Facility Registry System
DOCKET HWC.....	Hazardous Waste Compliance Docket Listing
ECHO.....	Enforcement & Compliance History Information
UXO.....	Unexploded Ordnance Sites
FUELS PROGRAM.....	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN.....	Bond Expenditure Plan
CUPA Listings.....	CUPA Resources List
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
UIC GEO.....	UIC GEO (GEOTRACKER)
WASTEWATER PITS.....	Oil Wastewater Pits Listing
WDS.....	Waste Discharge System
WIP.....	Well Investigation Program Case List
MILITARY PRIV SITES.....	MILITARY PRIV SITES (GEOTRACKER)
PROJECT.....	PROJECT (GEOTRACKER)
WDR.....	Waste Discharge Requirements Listing
CIWQS.....	California Integrated Water Quality System
CERS.....	CERS
NON-CASE INFO.....	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS.....	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS.....	PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT.....	SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ.....	Well Stimulation Project (GEOTRACKER)
MINES MRDS.....	Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants

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

Federal RCRA generators list

RCRA-LQG: 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.

A review of the RCRA-LQG list, as provided by EDR, and dated 06/24/2019 has revealed that there is 1 RCRA-LQG 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>
WALGREENS #9616 EPA ID:: CAL000324989	16020 PERRIS BLVD	W 0 - 1/8 (0.060 mi.)	A2	10

RCRA-SQG: 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.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/24/2019 has revealed that there are 3 RCRA-SQG sites 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>
SHELL SERVICE STATIO EPA ID:: CAR000120600	15980 PERRIS BLVD	WNW 0 - 1/8 (0.076 mi.)	B9	28
MALEK AYASS EPA ID:: CAR000019851	15974 PERRIS BLVD UN	WNW 0 - 1/8 (0.093 mi.)	B10	46
HOME DEPOT USA INC H EPA ID:: CAR000168732	15975 PERRIS BLVD	WNW 1/8 - 1/4 (0.141 mi.)	20	53

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 07/29/2019 has revealed that there are

EXECUTIVE SUMMARY

2 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>
INDIAN MIDDLE SCHOOL Status: Certified Facility Id: 33000006	INDIAN AVENUE / IRIS	WNW 1/2 - 1 (0.586 mi.)	29	89
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
RED MAPLE SCHOOL SIT Status: No Action Required Facility Id: 33010052	RED MAPLE LANE/EBONY	SSE 0 - 1/8 (0.029 mi.)	1	8

State and tribal leaking storage tank lists

LUST: 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.

A review of the LUST list, as provided by EDR, has revealed that there are 4 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SHELL PERRIS BLVD. Database: LUST REG 8, Date of Government Version: 02/14/2005 Facility Status: Leak being confirmed Global ID: T0606517323	15980 PERRIS BLVD.	WNW 0 - 1/8 (0.076 mi.)	B5	25
SHELL SERVICE STATIO Database: LUST, Date of Government Version: 06/10/2019 Database: RIVERSIDE CO. LUST, Date of Government Version: 07/10/2019 Status: Open - Verification Monitoring Facility Id: 200420313 Global Id: T0606517323 Facility Status: 9	15980 PERRIS BLVD	WNW 0 - 1/8 (0.076 mi.)	B9	28
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ARCO #5764 Database: LUST REG 8, Date of Government Version: 02/14/2005 Facility Status: Leak being confirmed Global ID: T0606531216	16466 PERRIS BLVD.	SSW 1/4 - 1/2 (0.335 mi.)	D27	75
ARCO #5764 Database: LUST, Date of Government Version: 06/10/2019 Database: RIVERSIDE CO. LUST, Date of Government Version: 07/10/2019 Status: Completed - Case Closed Facility Id: 200420311 Global Id: T0606531216 Facility Status: 9	16466 PERRIS BLVD	SSW 1/4 - 1/2 (0.335 mi.)	D28	77

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there is 1 UST 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>
TESORO (SHELL) 68567 Database: RIVERSIDE CO. UST, Date of Government Version: 07/10/2019 Database: UST, Date of Government Version: 06/10/2019 Facility Id: FA0014655 Facility Id: 825	15980 PERRIS BLVD	WNW 0 - 1/8 (0.076 mi.)	B6	26

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 06/11/2019 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ONE'S RECYCLING Cert Id: RC256989.001	15928 PERRIS BLVD	NW 0 - 1/8 (0.118 mi.)	B19	53

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 07/29/2019 has revealed that there is 1 SCH 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>
RED MAPLE SCHOOL SIT Facility Id: 33010052 Status: No Action Required	RED MAPLE LANE/EBONY	SSE 0 - 1/8 (0.029 mi.)	1	8

EXECUTIVE SUMMARY

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 08/14/2019 has revealed that there are 5 CERS HAZ WASTE sites 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>
WALGREENS	16020 PERRIS BLVD	W 0 - 1/8 (0.060 mi.)	A3	14
TESORO SHELL 68567	15980 PERRIS BLVD	WNW 0 - 1/8 (0.076 mi.)	B4	17
HOME DEPOT USA INC H	15975 PERRIS BLVD	WNW 1/8 - 1/4 (0.141 mi.)	20	53
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CERTIFIED TIRE & SER	16190 PERRIS BLVD	SW 1/8 - 1/4 (0.157 mi.)	C21	59
AUTOZONE #3714	16210 PERRIS BLVD	SW 1/8 - 1/4 (0.188 mi.)	C24	66

Local Lists of Registered Storage Tanks

SWEEPS UST: 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.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 2 SWEEPS UST sites 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>
SHELL SERVICE STATIO Status: A Tank Status: A Comp Number: 1985	15980 PERRIS BLVD	WNW 0 - 1/8 (0.076 mi.)	B9	28
EMWD MORENO #1 PUMPI Status: A Tank Status: A Comp Number: 30881	16015 PERRIS BLVD	WNW 0 - 1/8 (0.102 mi.)	B17	52

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 08/14/2019 has revealed that there is 1 CERS TANKS 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>
TESORO SHELL 68567	15980 PERRIS BLVD	WNW 0 - 1/8 (0.076 mi.)	B4	17

EXECUTIVE SUMMARY

Other Ascertainable Records

RCRA NonGen / NLR: 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.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/24/2019 has revealed that there are 3 RCRA NonGen / NLR sites 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>
TESORO SHELL 68567 EPA ID:: CAL000322036	15980 PERRIS BLVD	WNW 0 - 1/8 (0.076 mi.)	B7	27
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CERTIFIED TIRE & SER EPA ID:: CAL000332042	16190 PERRIS BLVD	SW 1/8 - 1/4 (0.157 mi.)	C22	64
AUTOZONE #3714 EPA ID:: CAL000334025	16210 PERRIS BLVD	SW 1/8 - 1/4 (0.188 mi.)	C23	65

Cortese: 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).

A review of the Cortese list, as provided by EDR, and dated 06/24/2019 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SHELL SERVICE STATIO Cleanup Status: OPEN - VERIFICATION MONITORING	15980 PERRIS BLVD	WNW 0 - 1/8 (0.076 mi.)	B9	28

DRYCLEANERS: 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 cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, has revealed that there are 6 DRYCLEANERS sites 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>
ROLLING RIDGE CLEANER Database: DRYCLEANERS, Date of Government Version: 06/04/2019 EPA Id: CAL000364010 EPA Id: CAL000389130	15974 PERRIS BLVD ST	WNW 0 - 1/8 (0.093 mi.)	B11	48
ROLLING RIDGE CLEANER Database: DRYCLEAN SOUTH COAST, Date of Government Version: 03/19/2019	15974 PERRIS BLVD UN	WNW 0 - 1/8 (0.093 mi.)	B12	49
ROLLING RIDGE CLEANER Database: DRYCLEAN SOUTH COAST, Date of Government Version: 03/19/2019	15974 PERRIS BLVD UN	WNW 0 - 1/8 (0.093 mi.)	B13	49
ROLLING RIDGE CLEANER Database: DRYCLEAN SOUTH COAST, Date of Government Version: 03/19/2019	15974 PERRIS BLVD UN	WNW 0 - 1/8 (0.093 mi.)	B14	50

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TAN TRAN Database: DRYCLEAN SOUTH COAST, Date of Government Version: 03/19/2019	15974 PERRIS BLVD UN	WNW 0 - 1/8 (0.093 mi.)	B16	51
MAGIC DRY CLEANERS Database: DRYCLEANERS, Date of Government Version: 06/04/2019 EPA Id: CAL000342712	16090 PERRIS BLVD #B	W 0 - 1/8 (0.115 mi.)	18	52

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: 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.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 2 EDR Hist Auto sites 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>
CAR ENTERPRISES INC	15980 PERRIS BLVD	WNW 0 - 1/8 (0.076 mi.)	B8	28
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
M G MOBILE SERVICE	25190 MORNING DOVE W	SSE 1/8 - 1/4 (0.236 mi.)	26	75

EDR Hist Cleaner: 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.

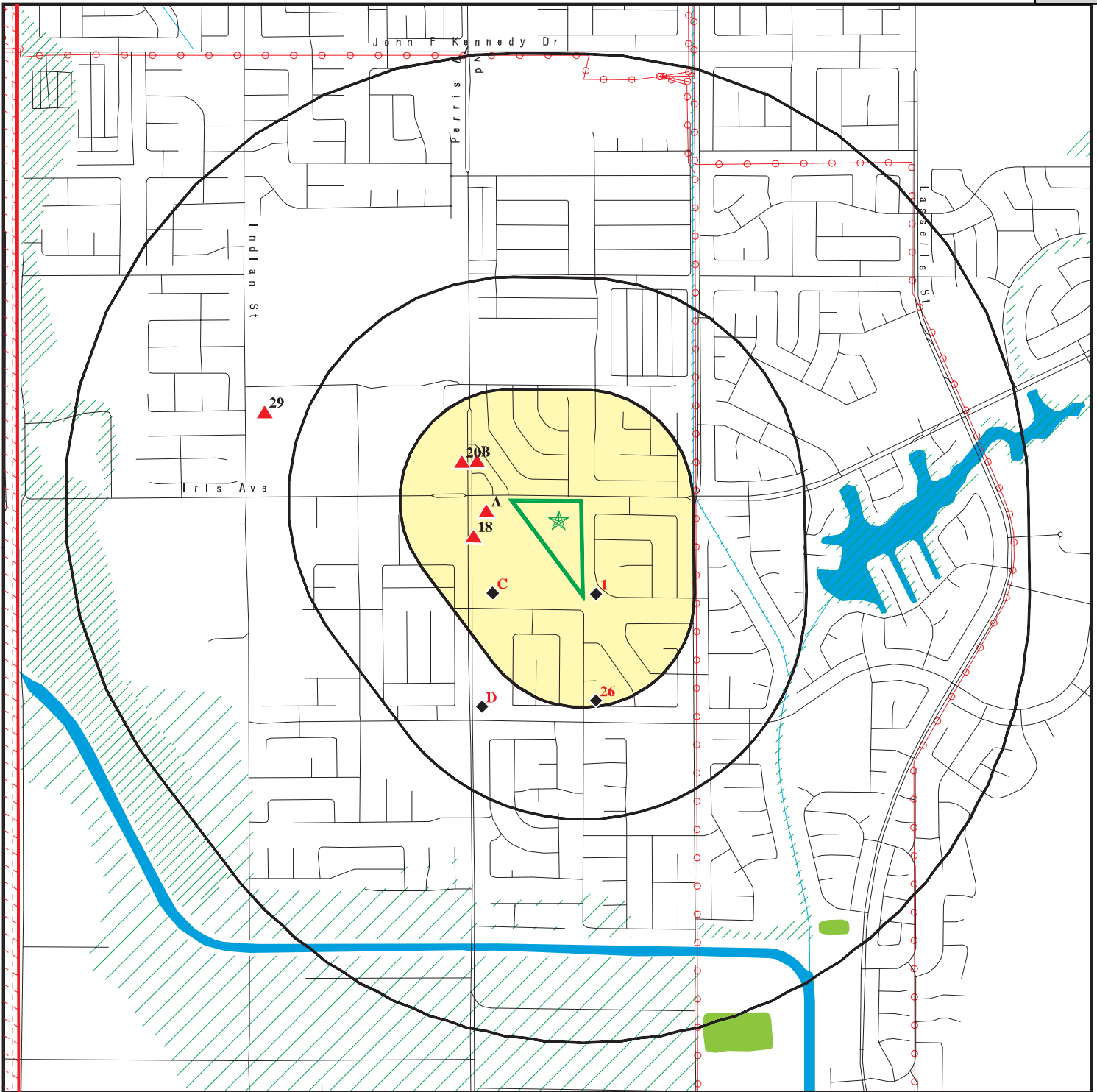
A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 2 EDR Hist Cleaner sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ROLLING RIDGE CLEANER	15974 PERRIS BLVD ST	WNW 0 - 1/8 (0.093 mi.)	B15	51
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MAGIC CLEANERS	25025 RED MAPLE LN	SW 1/8 - 1/4 (0.195 mi.)	C25	74

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

<u>Site Name</u>	<u>Database(s)</u>
KITCHING ST & IRIS AVE	CIWQS
PALMS CLEANERS, KWANG H. LEE DBA	DRYCLEANERS
DAVID CHANS	DRYCLEANERS

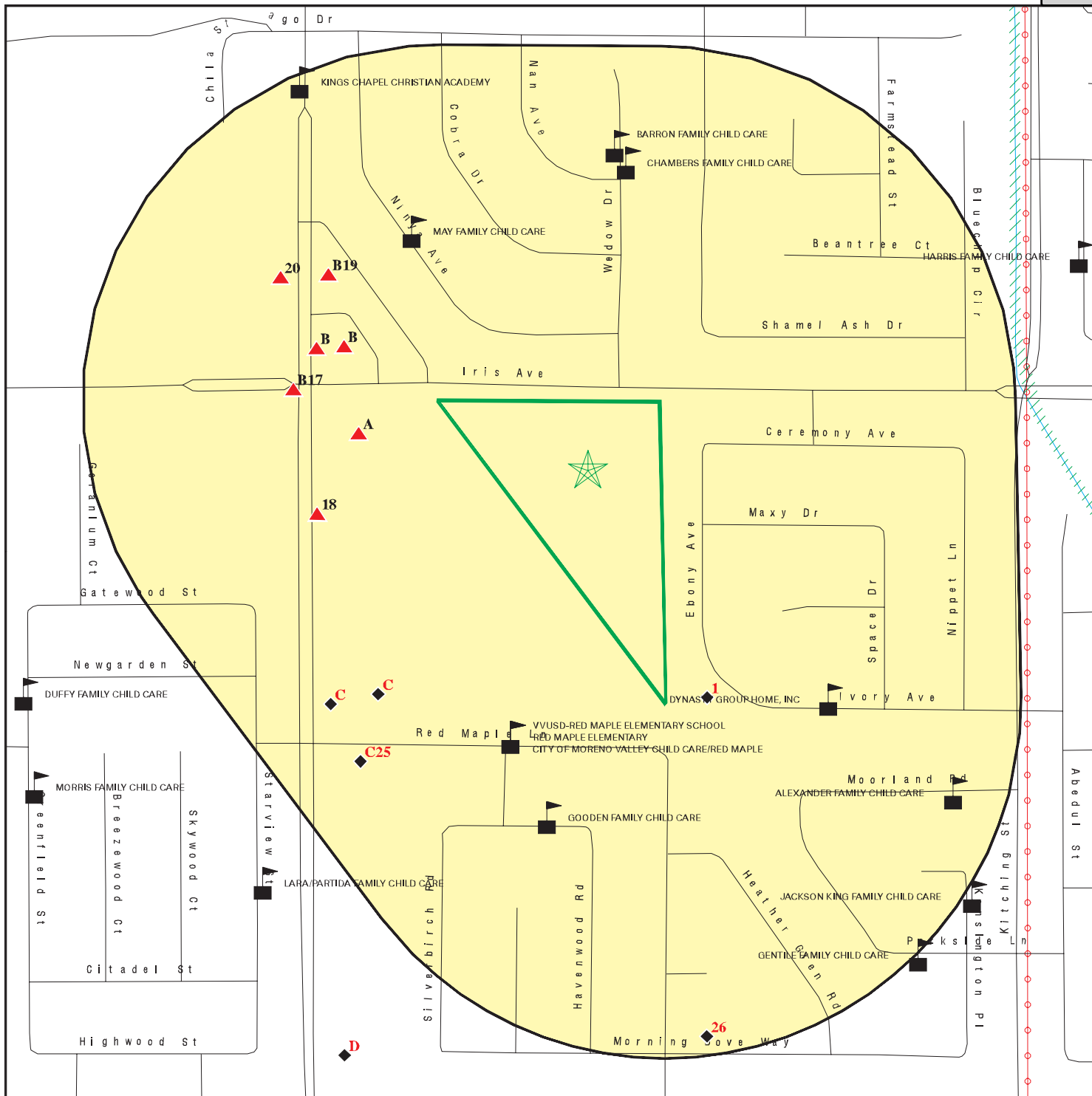







- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- 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.

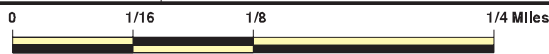
SITE NAME: Iris Park
 ADDRESS: Iris Avenue & Perris Boulevard
 Moreno Valley CA 92551
 LAT/LONG: 33.887532 / 117.222763

CLIENT: AES Due Diligence, Inc
 CONTACT: Rick Darwicki
 INQUIRY #: 5844302.2s
 DATE: October 25, 2019 2:01 pm



-  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: Iris Park
 ADDRESS: Iris Avenue & Perris Boulevard
 Moreno Valley CA 92551
 LAT/LONG: 33.887532 / 117.222763

CLIENT: AES Due Diligence, Inc
 CONTACT: Rick Darwicki
 INQUIRY #: 5844302.2s
 DATE: October 25, 2019 2:06 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
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		2	1	NR	NR	NR	3
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
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
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL</i>								
RESPONSE	1.000		0	0	0	0	NR	0
<i>State- and tribal - equivalent CERCLIS</i>								
ENVIROSTOR	1.000		1	0	0	1	NR	2
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		2	0	2	NR	NR	4

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
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		1	0	NR	NR	NR	1
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		1	0	0	NR	NR	1
HAULERS	TP		NR	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
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	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	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CERS HAZ WASTE	0.250		2	3	NR	NR	NR	5
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		2	0	NR	NR	NR	2
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		1	0	NR	NR	NR	1
Local Land Records								
LIENS	TP		NR	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
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	2	NR	NR	NR	3
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	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		1	0	0	NR	NR	1
CUPA Listings	0.250		0	0	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
DRYCLEANERS	0.250		6	0	NR	NR	NR	6
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	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	TP		NR	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	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	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	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	0.250		1	1	NR	NR	NR	2
EDR Hist Cleaner	0.250		1	1	NR	NR	NR	2
- Totals --		0	24	8	2	1	0	35

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
SSE
< 1/8
0.029 mi.
155 ft.

RED MAPLE SCHOOL SITE
RED MAPLE LANE/EBONY AVENUE
MORENO VALLEY, CA 92551

ENVIROSTOR S118756706
SCH N/A

Relative:
Lower

ENVIROSTOR:

Actual:
1493 ft.

Name: RED MAPLE SCHOOL SITE
Address: RED MAPLE LANE/EBONY AVENUE
City,State,Zip: MORENO VALLEY, CA 92551
Facility ID: 33010052
Status: No Action Required
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)
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

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

RED MAPLE SCHOOL SITE (Continued)**S118756706**

Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 11/03/2005
Comments: Two CRU Memos completed for Site Codes 404295 & 404298.

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

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:

Name: RED MAPLE SCHOOL SITE
Address: RED MAPLE LANE/EBONY AVENUE
City,State,Zip: MORENO VALLEY, CA 92551
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
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

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

RED MAPLE SCHOOL SITE (Continued)

S118756706

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: Cost Recovery Closeout Memo
 Completed Date: 11/03/2005
 Comments: Two CRU Memos completed for Site Codes 404295 & 404298.

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

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

A2 **WALGREENS #9616**
West **16020 PERRIS BLVD**
< 1/8 **MORENO VALLEY, CA 92551**
0.060 mi.
318 ft. **Site 1 of 2 in cluster A**

RCRA-LQG **1016954453**
CAL000324989

Relative: RCRA-LQG:
Higher Date form received by agency: 2018-08-31 00:00:00.0
Actual: Facility name: WALGREENS #9616
1504 ft. Facility address: 16020 PERRIS BLVD
 MORENO VALLEY, CA 92551
 EPA ID: CAL000324989
 Mailing address: GREY HAWK CT, SUITE 200
 CA92551 CA065US 3207
 CARLSBAD, CA 92010
 Contact: KIM DASCOLI
 Contact address: WILMOT DRIVE, MAIL STOP #2273
 DEEFIELD, IL 60015
 Contact country: US

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

WALGREENS #9616 (Continued)

1016954453

Contact telephone: 847-315-2812
 Contact email: KIM.DASCOLI@WALGREENS.COM
 EPA Region: 09
 Classification: Large Quantity Generator
 Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name: WALGREEN CO.
 Owner/operator address: WILMOT DRIVE, MAIL STOP #2273
 DEEFIELD, IL 60015
 Owner/operator country: US
 Owner/operator telephone: 847-315-2812
 Owner/operator email: KIM.DASCOLI@WALGREENS.COM
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private
 Owner/Operator Type: Operator
 Owner/Op start date: 2007-06-25 00:00:00.0
 Owner/Op end date: Not reported

Owner/operator name: SCHLOSSER PROPERTIES CO INC
 Owner/operator address: PO BOX 121
 PILOT HILL, CA 95664
 Owner/operator country: US
 Owner/operator telephone: 650-325-0936
 Owner/operator email: KIM.DASCOLI@WALGREENS.COM
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private
 Owner/Operator Type: Owner
 Owner/Op start date: 2007-06-25 00:00:00.0
 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
 Mixed waste (haz. and radioactive): No
 Recycler of hazardous waste: No
 Transporter of hazardous waste: No
 Treater, storer or disposer of HW: No
 Underground injection activity: No
 On-site burner exemption: No
 Furnace exemption: No
 Used oil fuel burner: No
 Used oil processor: No
 User oil refiner: No

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

WALGREENS #9616 (Continued)

1016954453

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

Date form received by agency: 2016-04-06 00:00:00.0
Site name: WALGREENS #9616
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 2014-06-09 00:00:00.0
Site name: WALGREENS #9616
Classification: Conditionally Exempt Small Quantity Generator

Hazardous Waste Summary:

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 131
. Waste name: Aqueous solution (2 < pH < 12.5) containing reactive anions (azide, bromate, chlorate, cyanide, fluoride, hypochlorite, nitrite, perchlorate, and sulfide anions)

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

WALGREENS #9616 (Continued)**1016954453**

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: U034
. Waste name: ACETALDEHYDE, TRICHLORO- (OR) CHLORAL

. Waste code: U165
. Waste name: NAPHTHALENE

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Amount (Lbs): 99

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Amount (Lbs): 45

Waste code: D007
Waste name: CHROMIUM
Amount (Lbs): 6

Waste code: D010
Waste name: SELENIUM
Amount (Lbs): 6

Waste code: D024
Waste name: M-CRESOL
Amount (Lbs): 1

Waste code: P001
Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

Amount (Lbs): 6

Waste code: P075
Waste name: NICOTINE, & SALTS
Amount (Lbs): 22

Violation Status: No violations found

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

A3
West
< 1/8
0.060 mi.
318 ft.

WALGREENS
16020 PERRIS BLVD
MORENO VALLEY, CA 92551

Site 2 of 2 in cluster A

CERS HAZ WASTE
CIWQS
CERS

S121689841
N/A

Relative:
Higher

Actual:
1504 ft.

CERS HAZ WASTE:
 Name: WAGLREENS #9616
 Address: 16020 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92551
 Site ID: 84044
 CERS ID: 10326247
 CERS Description: Hazardous Waste Generator

CIWQS:
 Name: WALGREENS
 Address: 16020 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92551
 Agency: Iris Partners LLC
 Agency Address: 1150 N Mountain Ave #109, Upland, CA 91786
 Place/Project Type: Construction - Commercial
 SIC/NAICS: Not reported
 Region: 8
 Program: CONSTW
 Regulatory Measure Status: Terminated
 Regulatory Measure Type: Storm water construction
 Order Number: 99-08DW
 WDID: 8 33C341703
 NPDES Number: CAS000002
 Adoption Date: Not reported
 Effective Date: 06/06/2006
 Termination Date: 12/18/2007
 Expiration/Review Date: Not reported
 Design Flow: Not reported
 Major/Minor: Not reported
 Complexity: Not reported
 TTWQ: Not reported
 Enforcement Actions within 5 years: 0
 Violations within 5 years: 0
 Latitude: 0
 Longitude: 0

CERS:
 Name: WAGLREENS #9616
 Address: 16020 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92551
 Site ID: 84044
 CERS ID: 10326247
 CERS Description: Chemical Storage Facilities

Evaluation:
 Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-11-2016
 Violations Found: No
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HMRRP
 Eval Source: CERS

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

WALGREENS (Continued)

S121689841

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-11-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-10-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 10-10-2013
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Coordinates:
Site ID: 84044
Facility Name: Waggreens #9616
Env Int Type Code: HWG
Program ID: 10326247
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.887890
Longitude: -117.225570

Affiliation:
Affiliation Type Desc: Legal Owner
Entity Name: Walgreen Co.
Entity Title: Not reported
Affiliation Address: 200 Wilmot Road
Affiliation City: Deerfield
Affiliation State: IL
Affiliation Country: United States
Affiliation Zip: 60015
Affiliation Phone: (847) 914-2264

Affiliation Type Desc: Parent Corporation
Entity Name: Walgreens
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

WALGREENS (Continued)

S121689841

Affiliation Phone:	Not reported
Affiliation Type Desc:	Environmental Contact
Entity Name:	Verisk 3E, Regulatory Department/Walgreen Co.
Entity Title:	Not reported
Affiliation Address:	3207 Grey Hawk Ct., Suite 200
Affiliation City:	Carlsbad
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92010
Affiliation Phone:	Not reported
Affiliation Type Desc:	Identification Signer
Entity Name:	Melissa Vales, on behalf of Walgreen Co.
Entity Title:	Regulatory Compliance Specialist, Verisk 3E
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Walgreen Co.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(847) 914-2264
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Document Preparer
Entity Name:	Melissa Vales, on behalf of Walgreen Co.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	Verisk 3E, Regulatory Dept/Walgreen Co., 3207 Grey Hawk Court, Ste 200
Affiliation City:	Carlsbad

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

WALGREENS (Continued)

S121689841

Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92010
Affiliation Phone: Not reported

B4
WNW
< 1/8
0.076 mi.
403 ft.

TESORO SHELL 68567
15980 PERRIS BLVD
MORENO VALLEY, CA 92551

CERS HAZ WASTE
CERS TANKS
HAZNET
CERS

S113148525
N/A

Site 1 of 15 in cluster B

Relative:
Higher

CERS HAZ WASTE:

Actual:
1506 ft.

Name: TESORO (SHELL) 68567 (WRR 6366)
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 74492
CERS ID: 10316209
CERS Description: Hazardous Waste Generator

CERS TANKS:

Name: TESORO (SHELL) 68567 (WRR 6366)
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 74492
CERS ID: 10316209
CERS Description: Underground Storage Tank

HAZNET:

Name: TESORO SHELL 68567
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Year: 2017
GEPaid: CAL000322036
Contact: BRENDA RAMIREZ
Telephone: 2106265153
Mailing Name: Not reported
Mailing Address: 19100 RIDGEWOOD PKWY
Mailing City,St,Zip: SAN ANTONIO, TX 782590000
Gen County: Riverside
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Tons: 0.021
CA Waste Code: 134-Aqueous solution with total organic residues less than 10 percent
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Riverside

Name: TESORO SHELL 68567
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Year: 2017
GEPaid: CAL000322036
Contact: BRENDA RAMIREZ
Telephone: 2106265153
Mailing Name: Not reported
Mailing Address: 19100 RIDGEWOOD PKWY

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO SHELL 68567 (Continued)**S113148525**

Mailing City,St,Zip: SAN ANTONIO, TX 782590000
Gen County: Riverside
TSD EPA ID: NVT330010000
TSD County: 99
Tons: 0.04
CA Waste Code: 352-Other organic solids
Method: H132-Landfill Or Surface Impoundment That Will Be Closed As Landfill(
To Include On-Site Treatment And/Or Stabilization)
Facility County: Riverside

Name: TESORO SHELL 68567
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Year: 2016
GEPaid: CAL000322036
Contact: JAMES BECK
Telephone: 5624956814
Mailing Name: Not reported
Mailing Address: 19100 RIDGEWOOD PKWY
Mailing City,St,Zip: SAN ANTONIO, TX 782590000
Gen County: Riverside
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Tons: 0.0294
CA Waste Code: 134-Aqueous solution with total organic residues less than 10 percent
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid
Regeneration, Organics Recovery Ect
Facility County: Riverside

Name: TESORO SHELL 68567
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Year: 2016
GEPaid: CAL000322036
Contact: JAMES BECK
Telephone: 5624956814
Mailing Name: Not reported
Mailing Address: 19100 RIDGEWOOD PKWY
Mailing City,St,Zip: SAN ANTONIO, TX 782590000
Gen County: Riverside
TSD EPA ID: NVT330010000
TSD County: 99
Tons: 0.01
CA Waste Code: 352-Other organic solids
Method: H132-Landfill Or Surface Impoundment That Will Be Closed As Landfill(
To Include On-Site Treatment And/Or Stabilization)
Facility County: Riverside

Name: TESORO SHELL 68567
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Year: 2015
GEPaid: CAL000322036
Contact: ROSIE RANGEL
Telephone: 2106266564
Mailing Name: Not reported
Mailing Address: 19100 RIDGEWOOD PKWY

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO SHELL 68567 (Continued)**S113148525**

Mailing City,St,Zip: SAN ANTONIO, TX 782590000
Gen County: Riverside
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Tons: 0.504
CA Waste Code: 134-Aqueous solution with total organic residues less than 10 percent
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid
Regeneration, Organics Recovery Ect
Facility County: Riverside

[Click this hyperlink](#) while viewing on your computer to access
16 additional CA_HAZNET: record(s) in the EDR Site Report.

CERS:

Name: TESORO (SHELL) 68567 (WRR 6366)
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 74492
CERS ID: 10316209
CERS Description: Chemical Storage Facilities

Violations:

Site ID: 74492
Site Name: TESORO (SHELL) 68567 (WRR 6366)
Violation Date: 08-16-2018
Citation: 23 CCR 16 2632(c)(2)(B), 2634(d)(1)(a), 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632(c)(2)(B), 2634(d)(1)(a), 2636(f)(1)
Violation Description: Failure of the leak detection equipment to have an audible and visual alarm as required.
Violation Notes: Returned to compliance on 08/16/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 74492
Site Name: TESORO (SHELL) 68567 (WRR 6366)
Violation Date: 09-18-2014
Citation: 23 CCR 16 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(1)
Violation Description: Failure of the double wall pressurized piping in the under dispenser containment to be continuously monitored by a method that either shuts down the flow of product to the dispenser or activates an audible/visual alarm when a leak is detected.
Violation Notes: Returned to compliance on 09/18/2014.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 74492
Site Name: TESORO (SHELL) 68567 (WRR 6366)
Violation Date: 09-18-2014
Citation: HSC 6.7 25292.1(a) - California Health and Safety Code, Chapter 6.7, Section(s) 25292.1(a)
Violation Description: Failure to operate the UST system to prevent spills and/or overfills.
Violation Notes: Returned to compliance on 09/18/2014.
Violation Division: Riverside County Department of Env Health

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO SHELL 68567 (Continued)**S113148525**

Violation Program: UST
Violation Source: CERS

Site ID: 74492
Site Name: TESORO (SHELL) 68567 (WRR 6366)
Violation Date: 08-16-2018
Citation: 23 CCR 16 2712 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712
Violation Description: Failure to comply with any of the applicable requirements of the permit issued for the operation of the UST system.
Violation Notes: Returned to compliance on 09/26/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 74492
Site Name: TESORO (SHELL) 68567 (WRR 6366)
Violation Date: 08-16-2018
Citation: 23 CCR 16 2641(h) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(h)
Violation Description: Failure to have an approved UST Monitoring Plan.
Violation Notes: Returned to compliance on 09/26/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-16-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-22-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-22-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 08-22-2017
Violations Found: No

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO SHELL 68567 (Continued)**S113148525**

Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-30-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-08-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-08-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-08-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	09-18-2014
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-03-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO SHELL 68567 (Continued)**S113148525**

Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-03-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-03-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Enforcement Action:	
Site ID:	74492
Site Name:	TESORO (SHELL) 68567 (WRR 6366)
Site Address:	15980 PERRIS BLVD
Site City:	MORENO VALLEY
Site Zip:	92551
Enf Action Date:	09-18-2014
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Riverside County Department of Env Health
Enf Action Program:	UST
Enf Action Source:	CERS
Coordinates:	
Site ID:	74492
Facility Name:	TESORO (SHELL) 68567 (WRR 6366)
Env Int Type Code:	HWG
Program ID:	10316209
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	33.888770
Longitude:	-117.225740
Affiliation:	
Affiliation Type Desc:	Document Preparer
Entity Name:	BELSHIRE ENVIRONMENTAL SERVICES, INC.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO SHELL 68567 (Continued)**S113148525**

Affiliation Type Desc:	Environmental Contact
Entity Name:	VESTA C. SLAYMAN
Entity Title:	Not reported
Affiliation Address:	400 OCEANGATE BLVD., SUITE 600
Affiliation City:	LONG BEACH
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90802
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	TESORO SOUTH COAST COMPANY LLC
Entity Title:	Not reported
Affiliation Address:	19100 RIDGEWOOD PKWY, MS: TX1-022
Affiliation City:	SAN ANTONIO
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	78259
Affiliation Phone:	(210) 626-4673
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Operator
Entity Name:	WESTERN REFINING AND MARKETING, LLC
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(505) 893-2973
Affiliation Type Desc:	Property Owner
Entity Name:	TESORO SOUTH COAST COMPANY LLC
Entity Title:	Not reported
Affiliation Address:	19100 RIDGEWOOD PKWY, MS: TX1-022
Affiliation City:	SAN ANTONIO
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	78259
Affiliation Phone:	(210) 626-4673
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	TESORO SOUTH COAST COMPANY LLC
Entity Title:	Not reported
Affiliation Address:	19100 RIDGEWOOD PKWY, MS: TX1-022
Affiliation City:	SAN ANTONIO
Affiliation State:	TX
Affiliation Country:	United States

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO SHELL 68567 (Continued)**S113148525**

Affiliation Zip: 78259
Affiliation Phone: (210) 626-4673

Affiliation Type Desc: UST Tank Operator
Entity Name: CAR ENTERPRISES INC. (SAM ANABI)
Entity Title: Not reported
Affiliation Address: 15980 PERRIS BLVD
Affiliation City: MORENO VALLEY
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92551
Affiliation Phone: (909) 394-4728

Affiliation Type Desc: UST Permit Applicant
Entity Name: TERESA A. MILES
Entity Title: ENVIRONMENTAL COMPLIANCE SUPERVISOR
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (562) 495-6850

Affiliation Type Desc: UST Tank Owner
Entity Name: TESORO SOUTH COAST COMPANY LLC
Entity Title: Not reported
Affiliation Address: 19100 RIDGEWOOD PKWY, MS: TX1-022
Affiliation City: SAN ANTONIO
Affiliation State: TX
Affiliation Country: United States
Affiliation Zip: 78259
Affiliation Phone: (210) 626-4673

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 19100 RIDGEWOOD PKWY, MS: TX1-022
Affiliation City: SAN ANTONIO
Affiliation State: TX
Affiliation Country: Not reported
Affiliation Zip: 78259
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: TERESA A. MILES
Entity Title: ENVIRONMENTAL COMPLIANCE SUPERVISOR
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: Tesoro Refining and Marketing Company LLC
Entity Title: Not reported
Affiliation Address: Not reported

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

TESORO SHELL 68567 (Continued)

S113148525

Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: Not reported

B5
WNW
< 1/8
0.076 mi.
403 ft.

SHELL PERRIS BLVD.
15980 PERRIS BLVD.
MORENO VALLEY, CA 92551

LUST S106162092
N/A

Site 2 of 15 in cluster B

Relative:
Higher
Actual:
1506 ft.

LUST REG 8:
 Name: SHELL PERRIS BLVD.
 Address: 15980 PERRIS BLVD.
 City: MORENO VALLEY
 Region: 8
 County: Riverside
 Regional Board: Santa Ana Region
 Facility Status: Leak being confirmed
 Case Number: Not reported
 Local Case Num: 200420313
 Case Type: Soil only
 Substance: Gasoline
 Qty Leaked: Not reported
 Abate Method: Not reported
 Cross Street: IRIS
 Enf Type: Not reported
 Funding: Not reported
 How Discovered: OM
 How Stopped: Other Means
 Leak Cause: UNK
 Leak Source: UNK
 Global ID: T0606517323
 How Stopped Date: 7/24/2003
 Enter Date: Not reported
 Date Confirmation of Leak Began: 2/9/2004
 Date Preliminary Assessment Began: Not reported
 Discover Date: 2/9/2004
 Enforcement Date: Not reported
 Close Date: Not reported
 Date Prelim Assessment Workplan Submitted: Not reported
 Date Pollution Characterization Began: Not reported
 Date Remediation Plan Submitted: Not reported
 Date Remedial Action Underway: Not reported
 Date Post Remedial Action Monitoring: Not reported
 Enter Date: Not reported
 GW Qualifies: Not reported
 Soil Qualifies: Not reported
 Operator: Not reported
 Facility Contact: Not reported
 Interim: Not reported
 Oversight Program: Not reported
 Latitude: 0
 Longitude: 0
 MTBE Date: Not reported
 Max MTBE GW: Not reported

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

SHELL PERRIS BLVD. (Continued)

S106162092

MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	CAB
Staff Initials:	SCB
Lead Agency:	Local Agency
Local Agency:	33000L
Hydr Basin #:	Not reported
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	Not reported

B6
WNW
< 1/8
0.076 mi.
403 ft.

TESORO (SHELL) 68567 (WRR 6366)
15980 PERRIS BLVD
MORENO VALLEY, CA 92551
Site 3 of 15 in cluster B

UST U003886118
N/A

Relative:
Higher
Actual:
1506 ft.

RIVERSIDE CO. UST:
 Name: TESORO (SHELL) 68567 (WRR 6366)
 Address: 15980 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92551
 Region: RIVERSIDE
 Total Tanks: 3

UST:
 Name: WESTGATE CENTER SHELL
 Address: 15980 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92551
 Facility ID: 825
 Permitting Agency: RIVERSIDE COUNTY
 Latitude: 33.8900568
 Longitude: -117.2245158

Name: TESORO (SHELL) 68567 (WRR 6366)
 Address: 15980 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92551
 Facility ID: FA0014655
 Permitting Agency: Riverside County Department of Environmental Health
 Latitude: 33.88877
 Longitude: -117.22574

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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B7				TESORO SHELL 68567	RCRA NonGen / NLR	1024817612	
WNW				15980 PERRIS BLVD			CAL000322036
< 1/8				MORENO VALLEY, CA 92551			
0.076 mi.							
403 ft.				Site 4 of 15 in cluster B			

Relative:
Higher

RCRA NonGen / NLR:

Actual:
1506 ft.

Date form received by agency: 2007-07-10 00:00:00.0
 Facility name: TESORO SHELL 68567
 Facility address: 15980 PERRIS BLVD
 MORENO VALLEY, CA 92551
 EPA ID: CAL000322036
 Mailing address: 19100 RIDGEWOOD PKWY
 SAN ANTONIO, TX 78259-0000
 Contact: BRENDA RAMIREZ
 Contact address: 19100 RIDGEWOOD PKWY
 SAN ANTONIO, TX 78259
 Contact country: Not reported
 Contact telephone: 210-626-5153
 Contact email: BRENDA.RAMIREZ@TSOCORP.COM
 EPA Region: 09
 Classification: Non-Generator
 Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: TESORO REFINING & MARKETING COMPANY
 Owner/operator address: 19100 RIDGEWOOD PKWY
 SAN ANTONIO, TX 78259
 Owner/operator country: Not reported
 Owner/operator telephone: 210-626-6153
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Other
 Owner/Operator Type: Owner
 Owner/Op start date: Not reported
 Owner/Op end date: Not reported

Owner/operator name: BRENDA RAMIREZ
 Owner/operator address: 19100 RIDGEWOOD PKWY
 SAN ANTONIO, TX 78259

Owner/operator country: Not reported
 Owner/operator telephone: 210-626-5153
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Other
 Owner/Operator Type: Operator
 Owner/Op start date: Not reported
 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
 Mixed waste (haz. and radioactive): No
 Recycler of hazardous waste: No
 Transporter of hazardous waste: Yes
 Treater, storer or disposer of HW: No
 Underground injection activity: No

MAP FINDINGS

Map ID Direction Distance Elevation Site Database(s) EDR ID Number EPA ID Number

TESORO SHELL 68567 (Continued)

1024817612

On-site burner exemption: No
 Furnace exemption: No
 Used oil fuel burner: No
 Used oil processor: No
 User oil refiner: No
 Used oil fuel marketer to burner: No
 Used oil Specification marketer: No
 Used oil transfer facility: No
 Used oil transporter: No

Violation Status: No violations found

B8
WNW
 < 1/8
 0.076 mi.
 403 ft.

CAR ENTERPRISES INC
15980 PERRIS BLVD
MORENO VALLEY, CA 92551

Site 5 of 15 in cluster B

EDR Hist Auto 1021287021
 N/A

Relative:
Higher

EDR Hist Auto

Actual:
 1506 ft.

Year:	Name:	Type:
2012	CAR ENTERPRISES INC	Gasoline Service Stations
2013	CAR ENTERPRISES INC	Gasoline Service Stations
2014	CAR ENTERPRISES INC	Gasoline Service Stations

B9
WNW
 < 1/8
 0.076 mi.
 403 ft.

SHELL SERVICE STATION
15980 PERRIS BLVD
MORENO VALLEY, CA 92551

Site 6 of 15 in cluster B

RCRA-SQG 1005904292
LUST CAR000120600
SWEEPS UST
FINDS
ECHO
Cortese
HAZNET
CERS

Relative:
Higher

Actual:
 1506 ft.

RCRA-SQG:
 Date form received by agency: 2002-07-18 00:00:00.0
 Facility name: SHELL SERVICE STATION
 Facility address: 15980 PERRIS BLVD
 S A P 135626
 MORENO VALLEY, CA 92388
 EPA ID: CAR000120600
 Mailing address: P O BOX 2648
 HOUSTON, TX 77252-2648
 Contact: SONDRA BIENVENU
 Contact address: P O BOX 2648
 HOUSTON, TX 77252-2648
 Contact country: US
 Contact telephone: 713-241-5036
 Contact email: Not reported
 EPA Region: 09
 Classification: Small Small Quantity Generator
 Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Owner/Operator Summary:

Owner/operator name: EQUILON ENT LLC DBA S O P US
 Owner/operator address: P O BOX 2648
 HOUSTON, TX 77252
 Owner/operator country: Not reported
 Owner/operator telephone: 713-241-5036
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private
 Owner/Operator Type: Owner
 Owner/Op start date: Not reported
 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
 Mixed waste (haz. and radioactive): No
 Recycler of hazardous waste: No
 Transporter of hazardous waste: No
 Treater, storer or disposer of HW: No
 Underground injection activity: No
 On-site burner exemption: No
 Furnace exemption: No
 Used oil fuel burner: No
 Used oil processor: No
 User oil refiner: No
 Used oil fuel marketer to burner: No
 Used oil Specification marketer: No
 Used oil transfer facility: No
 Used oil transporter: No

Hazardous Waste Summary:

. Waste code: D001
 . Waste name: IGNITABLE WASTE

Violation Status: No violations found

LUST:

Name: SHELL PERRIS BLVD.
 Address: 15980 PERRIS BLVD.
 City,State,Zip: MORENO VALLEY, CA 92551
 Lead Agency: SANTA ANA RWQCB (REGION 8)
 Case Type: LUST Cleanup Site
 Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606517323
 Global Id: T0606517323
 Latitude: 33.888806364
 Longitude: -117.22591758
 Status: Open - Verification Monitoring
 Status Date: 08/19/2016
 Case Worker: CAB
 RB Case Number: Not reported
 Local Agency: Not reported
 File Location: Local Agency
 Local Case Number: 200420313
 Potential Media Affect: Aquifer used for drinking water supply

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Potential Contaminants of Concern: Gasoline

Site History:

Data prior to 2005 does not appear in GeoTracker. Consult agency file for all site data Site History/Release Information: July 2003 - Soil samples were taken during dispenser and piping upgrades. Petroleum constituents were detected in several of the samples with the highest concentration in the north-central dispenser area (piping sample P4d7 with 17 ppm TBA). All samples were non-detect (ND) for benzene and MTBE. 203 tons of impacted soil was removed during the upgrades. The site was entered into the Local Oversight Program. Assessment and Remediation: 2005 - Four groundwater (gw) monitoring wells (MW-1 through MW-4) were installed around the perimeter of the UST cavity and dispenser islands. Heaviest soil impacts were identified near the USTs (MW-1 and MW-4) between 20 and 85 feet below grade (ft bg) with the highest concentrations approx 50 to 55 ft bg (78 ppm MTBE in MW-4@50 ft). The highest TBA detection in the soil was 57 ppm (MW-4@30 ft) while other constituents tested were low or ND. Depth to gw was approx 83 ft bg with flow to the southwest. Maximum gw concentrations were: 3800 ppb TPHg (MW-1), 80 ppb B (MW-3), ND<50 ppb TXE, 14000 ppb MTBE (MW-1), ND<500 ppb TBA. Neither the soil or the gw impacts were delineated 2006 - Three gw monitoring wells (MW-6, MW-10, MW-11) were installed at the property boundaries. Two observation wells (OBS-1 and OBS-2) were installed for remedial feasibility pilot testing. One cone penetration test (CPT) boring (CPT-1) was completed adjacent to MW-6. GW grab sample from CPT-1 detected 34000 ppb TPHg, 370000 ppb MTBE, 2600 ppb TBA and 1900 ppb TAME. GW from MW-6 (adjacent to Perris Blvd) and MW-11 (northern portion of the station) had very high MTBE detections (480000 ppb MW-6 and 200000 ppb MW-11). 2007 - Four dual-nested soil vapor extraction (SVE) wells (SVE-1 through SVE-4) were installed for remedial feasibility testing. All four wells had elevated MTBE and TBA in the soil with concentrations up to 42 ppm MTBE (SVE-1@45 feet) and 56 ppm TBA (SVE-4@60 feet). Eleven air sparge (AS) wells (AS-1, AS-3 through AS-11, AS-13) were also installed for remedial feasibility testing. All locations had ppm concentrations of MTBE at depths below 50 ft bg. Three off-site monitoring wells (MW-5, MW-8, and MW-12) were installed northwest (MW-5 and MW-12) and southwest (MW-8) of the site. GW from MW-8 and MW-12 had low to ND concentrations and MW-5 had detections of 1200 ppb TPHg and 2200 ppb MTBE. SVE and gw extraction pilot testing was conducted. SVE mass removal rates were approx 85 lb/day TPHg and 64 lb/day MTBE. Vapor concentrations remained consistent throughout the test. Consultant recommended remediating the site using SVE with air sparging/oxygen injection. 2007 (December) to 2011 SVE and AS remediation was conducted. Beginning December 2007, vapors were extracted from all four dual-nested SVE wells and beginning January 2008, air sparging was implemented on all 11 AS wells. SVE was shut down July 2010 and AS continued to operate until October 2011. A total 836 lbs TPHg and 591 lbs MTBE were removed using SVE. 2008 - One on-site monitoring well (MW-13) and four off-site monitoring wells (MW-14 through MW-16, MW-19) were installed to further delineate the gw plume. The wells provided delineation of the dissolved plume to the north and west. One gw extraction well (EW-1) and two observation wells (OBS-3 and OBS-4) were installed for gw remediation feasibility testing. GW in EW-1 and OBS-4 had elevated concentrations. Nine remedial gw extraction events were conducted to reduce elevated MTBE and TBA in the gw. A vacuum truck was used to pump a total of 2207 gallons of gw from MW-1, MW-4, MW-6, MW-10, and MW-11. 2009 - Off-site monitoring

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

wells MW-17 and MW-18 were installed west of Perris Blvd. The wells provided delineation of the western gw plume boundary as TBA was the only detection in the gw (34 and 79 ppb). Three re-injection wells (RI-1 through RI-3) were installed for injection of treated gw since off-site discharge permits could not be obtained. GW extraction pilot testing was conducted and it was concluded that this would be a feasible remedial technology for reducing gw impacts at the site. Permits for gw discharge were unable to be obtained, so re-injection of treated gw was proposed. Re-injection pilot testing was conducted and it was concluded that re-injection would be feasible method of managing the treated gw. 2010 - Two on-site monitoring wells (MW-20 and MW-21) were installed southwest of the station building. GW sampling indicated the wells defined the southwestern limits of the dissolved plume. SVE rebound testing was conducted. Test results were favorable with rebounded vapor concentrations all below 1 ppmv. Five confirmation soil borings (CB-1 through CB-5) were drilled to 85 ft bg. Soil samples from each 5-ft depth interval from each boring were ND for all constituents except MTBE and TBA. The highest MTBE detection was 0.2 ppm from CB-4-75 and the highest TBA detection was 3 ppm from CB-2-80. All MTBE and TBA detections were from samples collected below the water table. Soil remedial efforts were considered effective, however, MTBE and TBA concentrations in the gw remained elevated. 2011 - Two off-site monitoring wells (MW-7 and MW-9) were installed south of Iris Avenue. GW sampling indicated the wells defined the southern and southeastern limits of the dissolved plume. 2012 - Two additional gw monitoring wells (MW-22 and MW-23) were installed. MW-22 was installed on-site, adjacent to EW-1, and MW-23 was installed off-site, southeast of MW-9. Neither well had GW impacts. Delineation of soil and gw impacts was considered complete. 2013 to 2015 - Monitored natural attenuation (MNA) was implemented, and Oxygen-releasing sleeves (O-Sox) were placed in wells MW-4, MW-6, MW-11, MW-15 and OBS-4 in an attempt to reduce remaining elevated MTBE and TBA concentrations. Notable decreases in concentrations were not observed and the O-Sox were removed January 2015. MTBE and TBA concentrations have remained relatively stable following another year of monitoring since O-Sox removal. 2015 - With a rise in gw levels of approx 30-ft since monitoring began in 2005, most of the wells associated with the cleanup have submerged well screens. RCDEH requested installation of an appropriately screened well in the area with the highest gw concentrations so the results could be compared with nearby submerged well(s). One gw mon well (MW-24) was installed near submerged well MW-6. Soil from MW-24 was ND for all constituents tested from 5 to 65 ft bg. A year of gw monitoring of MW-24 has shown all constituents ND, except one detection of TBA (11 ppb). During this same sampling period, gw from MW-6 had detections up to 6700 ppb TPHg, 3800 ppb MTBE and 42000 ppb TBA. The consultant concludes that the elevated concentrations in MW-6 are attributable to petroleum fuel constituents trapped in the fine grained material and surrounding filter pack at depths below the current gw level. As such, it is not representative of surrounding conditions and should not be used for LTCP evaluation. Groundwater Monitoring: GW monitoring has been conducted at the site since March 2005. During this time period, gw has risen approx 30 ft from an initial depth of approx 80 ft bg to the current depth of approx 50 ft bg. GW flow has been consistently to the south and southeast. Most of the wells have submerged well screens as discussed above. Maximum historic gw concentrations were: 400000 ppb TPHg (MW-6), 80 ppb benzene (MW-3),

MAP FINDINGS

Map ID
Direction
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Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

480000 ppb MTBE (MW-6), and 260000 ppb TBA (MW-4). Current (August 2016) gw concentrations are: 6600 ppb TPHg, 2500 ppb MTBE, and 35000 ppb TBA (well MW-6). The new properly screened well, MW-24 (near MW-6), did not have any contaminants detected. Low Threat Closure Policy (LTCP) Evaluation: The site meets the General Criteria and the Direct Contact and Outdoor Air Exposure Criteria of the LTCP. The Petroleum Vapor Intrusion to Indoor Air Criteria was not evaluated based on the active commercial petroleum fueling facility LTCP exemption. Except for the MTBE exceedance in well MW-6 (2500 ppb MTBE Q3-2016), the LTCP Groundwater-Specific Criteria was met using scenario 1.2 (plume length <250 ft, no free product, nearest existing water supply well >1000 ft, benzene <3000 ppb, and <1000 ppb MTBE). MW-6 is located approx 25 ft from MW-24, which is ND for MTBE. It should be noted that elevated TBA concentrations remain in the gw at MW-6 (35000 ppb), however, the LTCP does not specifically address concentrations of TBA, but instead considers TBA attributable to the break-down of MTBE. A UST system is currently installed and operating at the site. Prior to a change in land use, the potential threat of petroleum vapor intrusion into indoor air should be evaluated.

LUST:

Global Id: T0606517323
Contact Type: Regional Board Caseworker
Contact Name: CARL BERNHARDT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: carl.bernhardt@waterboards.ca.gov
Phone Number: 9517824495

LUST:

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 09/01/2009
Action: Staff Letter - #Riv Co 090109

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 05/30/2014
Action: Waste Discharge Requirements

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 10/19/2018
Action: Meeting

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 03/28/2019
Action: Meeting

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/30/2009
Action: Pilot Study/ Treatability Report

Global Id: T0606517323

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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SHELL SERVICE STATION (Continued)

1005904292

Action Type:	RESPONSE
Date:	10/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/15/2010
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/15/2010
Action:	Monitoring Report - Annually
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/15/2010
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/15/2010
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/13/2009
Action:	Well Installation Report
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	08/13/2010
Action:	Other Report / Document
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/15/2014
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/15/2015
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	08/13/2009
Action:	Staff Letter - #Riv Co 081309
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	09/16/2009
Action:	Technical Correspondence / Assistance / Other - #Riv Co 091609
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/15/2015

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site Database(s) EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/15/2014
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 05/29/2015
Action: Well Installation Report

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 05/25/2010
Action: Staff Letter - #RCDEH 052510

Global Id: T0606517323
Action Type: RESPONSE
Date: 12/20/2010
Action: Soil and Water Investigation Report

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/15/2015
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 04/09/2007
Action: Technical Correspondence / Assistance / Other - #040807

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 12/09/2016
Action: File review - #RCDEH uploaded site file

Global Id: T0606517323
Action Type: RESPONSE
Date: 04/15/2011
Action: Monitoring Report - Annually

Global Id: T0606517323
Action Type: RESPONSE
Date: 07/15/2015
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 01/15/2016
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 08/26/2010
Action: Technical Correspondence / Assistance / Other - #RCDEH 082610

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	10/18/2010
Action:	Staff Letter - #RCDEH 101810
Global Id:	T0606517323
Action Type:	Other
Date:	02/09/2004
Action:	Leak Discovery
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/15/2011
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/15/2011
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/15/2012
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/15/2016
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/28/2018
Action:	Monitoring Report - Semi-Annually
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	03/28/2019
Action:	Other Report / Document
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/23/2019
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/03/2018
Action:	Other Report / Document
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	06/08/2007
Action:	Notice of Responsibility
Global Id:	T0606517323
Action Type:	ENFORCEMENT

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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SHELL SERVICE STATION (Continued)

1005904292

Date: 09/17/2007
Action: Staff Letter - #RCDEH 091707

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 03/28/2011
Action: Technical Correspondence / Assistance / Other - #RCDEH 032/11

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 02/22/2011
Action: Technical Correspondence / Assistance / Other - #RCDEH 022211

Global Id: T0606517323
Action Type: Other
Date: 07/24/2003
Action: Leak Stopped

Global Id: T0606517323
Action Type: RESPONSE
Date: 11/16/2007
Action: Other Report / Document

Global Id: T0606517323
Action Type: RESPONSE
Date: 12/21/2007
Action: Other Report / Document

Global Id: T0606517323
Action Type: RESPONSE
Date: 01/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 04/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 04/15/2012
Action: Monitoring Report - Annually

Global Id: T0606517323
Action Type: RESPONSE
Date: 06/21/2012
Action: Well Installation Report

Global Id: T0606517323
Action Type: RESPONSE
Date: 07/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/15/2016
Action: Monitoring Report - Quarterly

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site Database(s) EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/15/2016
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	05/31/2013
Action:	Corrective Action Plan / Remedial Action Plan - Addendum - Regulator Responded
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	12/17/2014
Action:	Other Workplan - Regulator Responded
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	03/13/2015
Action:	Soil and Water Investigation Workplan - Regulator Responded
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/18/2016
Action:	Request for Closure - Regulator Responded
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	08/02/2018
Action:	Request for Closure - Regulator Responded
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	09/25/2017
Action:	Soil and Water Investigation Workplan - Regulator Responded
Global Id:	T0606517323
Action Type:	REMEDIATION
Date:	01/03/2008
Action:	In Situ Physical/Chemical Treatment (other than SVE)
Global Id:	T0606517323
Action Type:	REMEDIATION
Date:	12/07/2007
Action:	Soil Vapor Extraction (SVE)
Global Id:	T0606517323
Action Type:	REMEDIATION
Date:	08/19/2008
Action:	Pump & Treat (P&T) Groundwater
Global Id:	T0606517323
Action Type:	REMEDIATION
Date:	07/01/2003
Action:	Excavation
Global Id:	T0606517323
Action Type:	ENFORCEMENT

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Map ID
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MAP FINDINGS

Site Database(s) EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Date: 05/27/2008
Action: Staff Letter - #RCDEH052708

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 12/23/2007
Action: File review

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 01/30/2008
Action: Staff Letter - #RCDEH013008

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 03/30/2016
Action: LOP Case Closure Summary to RB - #RCDEH 033016

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 01/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 06/04/2013
Action: Staff Letter - #RCDEH 060413

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 08/25/2010
Action: Meeting

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 05/01/2012
Action: Meeting

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 07/01/2017
Action: Referral to Regional Board - #RCDEH notification letters

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 08/15/2017
Action: Staff Letter

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Map ID
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	02/28/2018
Action:	Meeting
Global Id:	T0606517323
Action Type:	Other
Date:	02/09/2004
Action:	Leak Reported
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/15/2013
Action:	Monitoring Report - Annually
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/15/2013
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/31/2013
Action:	Well Installation Report
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	11/10/2008
Action:	Staff Letter - #RCDEH 11-10-08
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	02/23/2011
Action:	Meeting
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	04/22/2013
Action:	Notification - Public Notice of ROD/RAP/CAP - #RCDEH 042213
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	08/17/2009
Action:	Meeting
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Date: 12/12/2008
Action: Well Installation Report

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/30/2008
Action: Other Workplan

Global Id: T0606517323
Action Type: RESPONSE
Date: 06/29/2007
Action: CAP/RAP - Final Remediation / Design Plan

Global Id: T0606517323
Action Type: RESPONSE
Date: 06/27/2008
Action: Other Workplan

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 01/15/2014
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 01/09/2009
Action: Access Agreement - #RCDEH010909

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 10/17/2008
Action: File review

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 10/24/2008
Action: Staff Letter - #RCDEH102408

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 02/13/2009
Action: File review

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 01/09/2009
Action: Staff Letter - #RCDEH010909

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 01/07/2009
Action: NPDES Permit

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	09/21/2011
Action:	Meeting
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	04/30/2012
Action:	Staff Letter - #RCDEH 043012
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	07/01/2017
Action:	File review - #RCDEH site summary
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	04/22/2013
Action:	Staff Letter - #RCDEH 042213
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	12/10/2013
Action:	Technical Correspondence / Assistance / Other - #RCDEH 121013
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	11/29/2017
Action:	Staff Letter
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	05/21/2009
Action:	Other Workplan
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/09/2009
Action:	Well Installation Report
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/15/2014
Action:	Monitoring Report - Quarterly
LUST:	
Global Id:	T0606517323

MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Status: Open - Case Begin Date
Status Date: 07/24/2003

Global Id: T0606517323
Status: Open - Site Assessment
Status Date: 02/09/2004

Global Id: T0606517323
Status: Open - Site Assessment
Status Date: 02/01/2005

Global Id: T0606517323
Status: Open - Remediation
Status Date: 09/21/2007

Global Id: T0606517323
Status: Open - Eligible for Closure
Status Date: 03/11/2016

Global Id: T0606517323
Status: Open - Verification Monitoring
Status Date: 08/19/2016

RIVERSIDE CO. LUST:

Name: SHELL PERRIS BLVD.
Address: 15980 PERRIS BLVD.
City,State,Zip: MORENO VALLEY, CA
Region: RIVERSIDE
Facility ID: 200420313
Employee: Shurlow-LOP
Site Closed: Referred to Water Board
Case Type: Drinking Water Aquifer affected
Facility Status: closed/action completed
Casetype Decode: An Aquifer used for Drinking Water supply has been contaminated.
Fstatus Decode: Closed/Action completed

SWEEPS UST:

Name: SHELL PERRIS
Address: 15980 PERRIS BLVD
City: MORENO VALLEY
Status: Active
Comp Number: 1985
Number: 1
Board Of Equalization: 44-000074
Referral Date: 05-18-93
Action Date: 05-18-93
Created Date: 05-18-93
Owner Tank Id: 1
SWRCB Tank Id: 33-000-001985-000001
Tank Status: A
Capacity: 12000
Active Date: 05-18-93
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Number Of Tanks: 3

Name: SHELL PERRIS
Address: 15980 PERRIS BLVD
City: MORENO VALLEY
Status: Active
Comp Number: 1985
Number: 1
Board Of Equalization: 44-000074
Referral Date: 05-18-93
Action Date: 05-18-93
Created Date: 05-18-93
Owner Tank Id: 2
SWRCB Tank Id: 33-000-001985-000002
Tank Status: A
Capacity: 12000
Active Date: 05-18-93
Tank Use: M.V. FUEL
STG: P
Content: PRM UNLEADED
Number Of Tanks: Not reported

Name: SHELL PERRIS
Address: 15980 PERRIS BLVD
City: MORENO VALLEY
Status: Active
Comp Number: 1985
Number: 1
Board Of Equalization: 44-000074
Referral Date: 05-18-93
Action Date: 05-18-93
Created Date: 05-18-93
Owner Tank Id: 3
SWRCB Tank Id: 33-000-001985-000003
Tank Status: A
Capacity: 12000
Active Date: 05-18-93
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

FINDS:

Registry ID: 110012538511

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

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MAP FINDINGS

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Database(s)

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SHELL SERVICE STATION (Continued)

1005904292

corrective action activities required under RCRA.

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1005904292
Registry ID: 110012538511
DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110012538511>

CORTESE:

Name: SHELL PERRIS BLVD.
Address: 15980 PERRIS BLVD.
City,State,Zip: MORENO VALLEY, CA 92551
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0606517323
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: OPEN - VERIFICATION MONITORING
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

HAZNET:

Name: SHELL SERVICE STATION
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92388
Year: 2015
GEPaid: CAR000120600
Contact: ADAM ESTES
Telephone: 3172917007
Mailing Name: Not reported
Mailing Address: PO BOX 2099
Mailing City,St,Zip: HOUSTON, TX 772522099
Gen County: Riverside
TSD EPA ID: NVT330010000
TSD County: 99
Tons: 0.1
CA Waste Code: 141-Off-specification, aged or surplus inorganics
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Riverside

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Name: SHELL SERVICE STATION
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92388
Year: 2009
GEPaid: CAR000120600
Contact: Adam Estes
Telephone: 3172917007
Mailing Name: Not reported
Mailing Address: PO BOX 3127
Mailing City,St,Zip: HOUSTON, TX 772530000
Gen County: Riverside
TSD EPA ID: CAD008302903
TSD County: Los Angeles
Tons: 0.03
CA Waste Code: 352-Other organic solids
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: SHELL SERVICE STATION
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92388
Year: 2007
GEPaid: CAR000120600
Contact: Adam Estes
Telephone: 3172917007
Mailing Name: Not reported
Mailing Address: PO BOX 3127
Mailing City,St,Zip: HOUSTON, TX 772530000
Gen County: Riverside
TSD EPA ID: CAD008302903
TSD County: Los Angeles
Tons: 0.0075
CA Waste Code: 352-Other organic solids
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: SHELL SERVICE STATION
Address: 15980 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92388
Year: 2007
GEPaid: CAR000120600
Contact: Adam Estes
Telephone: 3172917007
Mailing Name: Not reported
Mailing Address: PO BOX 3127
Mailing City,St,Zip: HOUSTON, TX 772530000
Gen County: Riverside
TSD EPA ID: CAD028409019
TSD County: Los Angeles
Tons: 0.02
CA Waste Code: 352-Other organic solids
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

SHELL SERVICE STATION (Continued)

1005904292

Name: SHELL SERVICE STATION
 Address: 15980 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92388
 Year: 2006
 GEPAID: CAR000120600
 Contact: Adam Estes
 Telephone: 3172917007
 Mailing Name: Not reported
 Mailing Address: PO BOX 3127
 Mailing City,St,Zip: HOUSTON, TX 772530000
 Gen County: Riverside
 TSD EPA ID: CAD008302903
 TSD County: Los Angeles
 Tons: 0.085
 CA Waste Code: 352-Other organic solids
 Method: H01-Transfer Station
 Facility County: Riverside

[Click this hyperlink](#) while viewing on your computer to access 7 additional CA_HAZNET: record(s) in the EDR Site Report.

CERS:

Name: SHELL PERRIS BLVD.
 Address: 15980 PERRIS BLVD.
 City,State,Zip: MORENO VALLEY, CA 92551
 Site ID: 195812
 CERS ID: T0606517323
 CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc: Regional Board Caseworker
 Entity Name: CARL BERNHARDT - SANTA ANA RWQCB (REGION 8)
 Entity Title: Not reported
 Affiliation Address: 3737 MAIN STREET, SUITE 500
 Affiliation City: RIVERSIDE
 Affiliation State: CA
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: 9517824495

B10
WNW
< 1/8
0.093 mi.
492 ft.

MALEK AYASS
15974 PERRIS BLVD UNIT A
MORENO VALLEY, CA 92551

Site 7 of 15 in cluster B

RCRA-SQG 1001195410
FINDS CAR000019851
ECHO

Relative:
Higher
Actual:
1507 ft.

RCRA-SQG:
 Date form received by agency: 1997-05-20 00:00:00.0
 Facility name: MALEK AYASS
 Facility address: 15974 PERRIS BLVD UNIT A
 MORENO VALLEY, CA 92551
 EPA ID: CAR000019851
 Mailing address: PERRIS BLVD UNIT A
 MORENO VALLEY, CA 92551
 Contact: MALEK AYASS
 Contact address: 15974 PERRIS BLVD UNIT A
 MORENO VALLEY, CA 92551

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MALEK AYASS (Continued)

1001195410

Contact country: US
 Contact telephone: 909-488-9277
 Contact email: Not reported
 EPA Region: 09
 Classification: Small Small Quantity Generator
 Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: MALEK AYASS
 Owner/operator address: 15974 PERRIS BLVD UNIT A
 MORENO VALLEY, CA 92551
 Owner/operator country: Not reported
 Owner/operator telephone: 909-488-9277
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private
 Owner/Operator Type: Owner
 Owner/Op start date: Not reported
 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
 Mixed waste (haz. and radioactive): No
 Recycler of hazardous waste: No
 Transporter of hazardous waste: No
 Treater, storer or disposer of HW: No
 Underground injection activity: No
 On-site burner exemption: No
 Furnace exemption: No
 Used oil fuel burner: No
 Used oil processor: No
 User oil refiner: No
 Used oil fuel marketer to burner: No
 Used oil Specification marketer: No
 Used oil transfer facility: No
 Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002917425

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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MALEK AYASS (Continued)

1001195410

[Click this hyperlink](#) while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1001195410
Registry ID:	110002917425
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002917425

B11	ROLLING RIDGE CLEANERS	DRYCLEANERS	S103985263
WNW	15974 PERRIS BLVD STE A		N/A
< 1/8	MORENO VALLEY, CA 92551		
0.093 mi.			
492 ft.	Site 8 of 15 in cluster B		

Relative:
Higher

DRYCLEANERS:

Actual:
1507 ft.

Name:	ROLLING RIDGE CLEANERS INC
Address:	15974 PERRIS BLVD STE A
City,State,Zip:	MORENO VALLEY, CA 925514694
EPA Id:	CAL000364010
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	05/26/2011
Facility Active:	No
Inactive Date:	06/30/2013
Facility Addr2:	Not reported
Owner Name:	JOA PROPERTIES INC
Owner Address:	15694 RIO BLANCO TRL
Owner Address 2:	Not reported
Owner Telephone:	9512955910
Contact Name:	JESS ANDERSON
Contact Address:	15694 RIO BLANCO TRL
Contact Address 2:	Not reported
Contact Telephone:	9512955910
Mailing Name:	Not reported
Mailing Address 1:	15974 PERRIS BLVD STE A
Mailing Address 2:	Not reported
Mailing City:	MORENO VALLEY
Mailing State:	CA
Mailing Zip:	925514694
Owner Fax:	Not reported
Region Code:	4

Name:	ROLLING RIDGE CLEANERS
Address:	15974 PERRIS BLVD STE A
City,State,Zip:	MORENO VALLEY, CA 92551
EPA Id:	CAL000389130
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	08/30/2013
Facility Active:	No
Inactive Date:	06/30/2016
Facility Addr2:	Not reported

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

ROLLING RIDGE CLEANERS (Continued)

S103985263

Owner Name: TONY TRAN
 Owner Address: 15974 PERRIS BLVD STE A
 Owner Address 2: Not reported
 Owner Telephone: 9518135526
 Contact Name: TONY TRAN
 Contact Address: 15974 PERRIS BLVD STE A
 Contact Address 2: Not reported
 Contact Telephone: 9518135526
 Mailing Name: Not reported
 Mailing Address 1: 15974 PERRIS BLVD STE A
 Mailing Address 2: Not reported
 Mailing City: MORENO VALLEY
 Mailing State: CA
 Mailing Zip: 925510000
 Owner Fax: 0000000000
 Region Code: 4

**B12
WNW
< 1/8
0.093 mi.
492 ft.**

**ROLLING RIDGE CLEANERS INC
15974 PERRIS BLVD UNIT A
MORENO VALLEY, CA 92551
Site 9 of 15 in cluster B**

**DRYCLEANERS S113047505
N/A**

**Relative:
Higher
Actual:
1507 ft.**

DRYCLEAN SOUTH COAST:
 Name: ROLLING RIDGE CLEANERS INC
 Address: 15974 PERRIS BLVD UNIT A
 City,State,Zip: MORENO VALLEY, CA 92551
 Facility ID: 83714
 Application Number: 243794
 Permit Number: D39143
 Status: I
 Representative Name: DAVID FUJINAMI
 Representative Telephone: 818 4483168
 Permit Status: INACT_NR
 BCAT Number: 000234
 BCAT Description: DRY CLEANING EQUIP PERCHLOROETHYLENE
 CCAT Number: Not reported
 CCAT Description: Not reported
 UTM East: 430.73001099
 UTM North: 3763.3200684

**B13
WNW
< 1/8
0.093 mi.
492 ft.**

**ROLLING RIDGE CLEANERS, MALEK AYASS,DBA
15974 PERRIS BLVD UNIT A
MORENO VALLEY, CA 92551
Site 10 of 15 in cluster B**

**DRYCLEANERS S121693998
N/A**

**Relative:
Higher
Actual:
1507 ft.**

DRYCLEAN SOUTH COAST:
 Name: ROLLING RIDGE CLEANERS, MALEK AYASS,DBA
 Address: 15974 PERRIS BLVD UNIT A
 City,State,Zip: MORENO VALLEY, CA 92551
 Facility ID: 113640
 Application Number: 437644
 Permit Number: F72936
 Status: S
 Representative Name: MALEK AYASS

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

ROLLING RIDGE CLEANERS, MALEK AYASS, DBA (Continued)

S121693998

Representative Telephone: 951 4889277
 Permit Status: INACTIVE
 BCAT Number: 000233
 BCAT Description: DRY CLEANING EQUIP PETROLEUM SOLVENT
 CCAT Number: 04
 CCAT Description: VAPOR RECOVERY UNIT COMPRESS & CONDENSE
 UTM East: 479.0920105
 UTM North: 3749.6508789

Name: ROLLING RIDGE CLEANERS, MALEK AYASS, DBA
 Address: 15974 PERRIS BLVD UNIT A
 City, State, Zip: MORENO VALLEY, CA 92551
 Facility ID: 113640
 Application Number: 332174
 Permit Number: F14622
 Status: S
 Representative Name: MALEK AYASS
 Representative Telephone: 951 4889277
 Permit Status: INACTIVE
 BCAT Number: 000601
 BCAT Description: DRY CLEANING, DRY-TO-DRY NON-VENT, PERC
 CCAT Number: 04
 CCAT Description: VAPOR RECOVERY UNIT COMPRESS & CONDENSE
 UTM East: 479.0920105
 UTM North: 3749.6508789

B14
WNW
< 1/8
0.093 mi.
492 ft.

ROLLING RIDGE CLEANERS, JOA PROP DBA
15974 PERRIS BLVD UNIT A
MORENO VALLEY, CA 92551

DRYCLEANERS **S121696531**
N/A

Site 11 of 15 in cluster B

Relative:
Higher
Actual:
1507 ft.

DRYCLEAN SOUTH COAST:
 Name: ROLLING RIDGE CLEANERS, JOA PROP DBA
 Address: 15974 PERRIS BLVD UNIT A
 City, State, Zip: MORENO VALLEY, CA 92551
 Facility ID: 166980
 Application Number: 519767
 Permit Number: G13180
 Status: S
 Representative Name: JEFF ANDERSON
 Representative Telephone: 951 2955910
 Permit Status: INACTIVE
 BCAT Number: 000233
 BCAT Description: DRY CLEANING EQUIP PETROLEUM SOLVENT
 CCAT Number: Not reported
 CCAT Description: Not reported
 UTM East: 479.07998657
 UTM North: 3749.6398926

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

B15 **ROLLING RIDGE CLEANERS INC**
WNW **15974 PERRIS BLVD STE A**
< 1/8 **MORENO VALLEY, CA 92551**

EDR Hist Cleaner **1020076607**
N/A

0.093 mi.
492 ft. **Site 12 of 15 in cluster B**

Relative: EDR Hist Cleaner
Higher

Actual:	Year:	Name:	Type:
1507 ft.	1996	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	1997	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	1998	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	1999	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2000	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2001	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2002	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2003	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2004	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2005	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2006	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2007	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2008	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2009	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2010	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2011	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2012	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2013	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs
	2014	ROLLING RIDGE CLEANERS INC	Drycleaning Plants, Except Rugs

B16 **TAN TRAN**
WNW **15974 PERRIS BLVD UNIT A**
< 1/8 **MORENO VALLEY, CA 92551**

DRYCLEANERS **S121696655**
N/A

0.093 mi.
492 ft. **Site 13 of 15 in cluster B**

Relative: DRYCLEAN SOUTH COAST:
Higher

Actual:	Name:	TAN TRAN
1507 ft.	Address:	15974 PERRIS BLVD UNIT A
	City,State,Zip:	MORENO VALLEY, CA 92551
	Facility ID:	174663
	Application Number:	552438
	Permit Number:	G27268
	Status:	A
	Representative Name:	TAN TRAN
	Representative Telephone:	951 8135526
	Permit Status:	ACTIVE
	BCAT Number:	000233
	BCAT Description:	DRY CLEANING EQUIP PETROLEUM SOLVENT
	CCAT Number:	Not reported
	CCAT Description:	Not reported
	UTM East:	479.07998657
	UTM North:	3749.6398926

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
B17 WNW < 1/8 0.102 mi. 539 ft.	EMWD MORENO #1 PUMPING PLANT 16015 PERRIS BLVD MORENO VALLEY, CA 92343 Site 14 of 15 in cluster B	SWEEPS UST	S106925833 N/A
Relative: Higher	SWEEPS UST:		
Actual: 1506 ft.	Name: EMWD MORENO #1 PUMPING PLANT Address: 16015 PERRIS BLVD City: MORENO VALLEY Status: Active Comp Number: 30881 Number: 4 Board Of Equalization: 44-018137 Referral Date: 10-29-92 Action Date: 10-29-92 Created Date: 02-29-88 Owner Tank Id: 000433 SWRCB Tank Id: 33-000-030881-000001 Tank Status: A Capacity: 150 Active Date: 10-29-92 Tank Use: OIL STG: W Content: WASTE OIL Number Of Tanks: 1		
18 West < 1/8 0.115 mi. 609 ft.	MAGIC DRY CLEANERS 16090 PERRIS BLVD #B MORENO VALLEY, CA 92551	DRYCLEANERS	S109611992 N/A
Relative: Higher	DRYCLEANERS:		
Actual: 1503 ft.	Name: MAGIC DRY CLEANERS Address: 16090 PERRIS BLVD #B City,State,Zip: MORENO VALLEY, CA 92551 EPA Id: CAL000342712 NAICS Code: 81232 NAICS Description: Drycleaning and Laundry Services (except Coin-Operated) SIC Code: 7211 SIC Description: Power Laundries, Family and Commercial Create Date: 05/01/2009 Facility Active: No Inactive Date: 06/30/2009 Facility Addr2: Not reported Owner Name: MAGIC DRY CLEANERS LLC Owner Address: 16090 PERRIS BLVD #B Owner Address 2: Not reported Owner Telephone: 9519242702 Contact Name: HANAN FALTAS Contact Address: 26390 CAMINO LARGO Contact Address 2: Not reported Contact Telephone: 9519066230 Mailing Name: Not reported Mailing Address 1: 16090 PERRIS BLVD #B Mailing Address 2: Not reported Mailing City: MORENO VALLEY Mailing State: CA Mailing Zip: 92551		

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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MAGIC DRY CLEANERS (Continued)

S109611992

Owner Fax: 9519242079
Region Code: 4

B19
NW
< 1/8
0.118 mi.
621 ft.

ONE'S RECYCLING
15928 PERRIS BLVD
MORENO VALLEY, CA 92551

Site 15 of 15 in cluster B

SWRCY **S120834945**
N/A

Relative:
Higher

SWRCY:

Actual:
1508 ft.

Name: ONE'S RECYCLING
Address: 15928 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Reg Id: Not reported
Cert Id: RC256989.001
Mailing Address: 1403 Palma Bonita Ln
Mailing City: Perris
Mailing State: CA
Mailing Zip Code: 92571
Website: Not reported
Email: Not reported
Phone Number: (951) 999-5650
Rural: N
Operation Begin Date: 04/01/2017
Aluminium: Not reported
Glass: Not reported
Plastic: Not reported
Bimetal: Not reported
Hours of Operation: Mon - Sat 9:00 am - 4:30 pm; Sun Closed
Organization ID: Not reported
Organization Name: One's Recycling

20
WNW
1/8-1/4
0.141 mi.
743 ft.

HOME DEPOT USA INC HD 1087
15975 PERRIS BLVD
MORENO VALLEY, CA 92551

RCRA-SQG **1008880000**
CERS HAZ WASTE **CAR000168732**
HAZNET
CERS

Relative:
Higher

RCRA-SQG:

Actual:
1509 ft.

Date form received by agency: 2005-06-15 00:00:00.0
Facility name: HOME DEPOT USA INC HD 1087
Facility address: 15975 PERRIS BLVD
MORENO VALLEY, CA 92551
EPA ID: CAR000168732
Mailing address: 1905 ASTON AVE
STE 100
CARLSBAD, CA 92008
Contact: ROBERT PERKINS
Contact address: 1905 ASTON AVE STE 100
CARLSBAD, CA 92008
Contact country: US
Contact telephone: 760-602-8700
Contact email: RPERKINS@3ECOMPANY.COM
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

HOME DEPOT USA INC HD 1087 (Continued)**1008880000**

waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: HOME DEPOT USA
 Owner/operator address: Not reported
 Not reported
 Owner/operator country: US
 Owner/operator telephone: Not reported
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private
 Owner/Operator Type: Operator
 Owner/Op start date: 2004-01-15 00:00:00.0
 Owner/Op end date: Not reported

Owner/operator name: HOME DEPOT USA
 Owner/operator address: 2455 PACES FERRY RD
 ATLANTA, GA 30335
 Owner/operator country: US
 Owner/operator telephone: Not reported
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Private
 Owner/Operator Type: Owner
 Owner/Op start date: 2004-01-15 00:00:00.0
 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
 Mixed waste (haz. and radioactive): No
 Recycler of hazardous waste: No
 Transporter of hazardous waste: No
 Treater, storer or disposer of HW: No
 Underground injection activity: No
 On-site burner exemption: No
 Furnace exemption: No
 Used oil fuel burner: No
 Used oil processor: No
 User oil refiner: No
 Used oil fuel marketer to burner: No
 Used oil Specification marketer: No
 Used oil transfer facility: No
 Used oil transporter: No

Hazardous Waste Summary:

. Waste code: D001
 . Waste name: IGNITABLE WASTE
 . Waste code: D002
 . Waste name: CORROSIVE WASTE

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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HOME DEPOT USA INC HD 1087 (Continued)

1008880000

- . Waste code: D009
- . Waste name: MERCURY

- . Waste code: D016
- . Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

- . Waste code: D018
- . Waste name: BENZENE

- . Waste code: D035
- . Waste name: METHYL ETHYL KETONE

- . Waste code: F003
- . Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

- . Waste code: F005
- . Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

CERS HAZ WASTE:

Name: THE HOME DEPOT STORE #1087
 Address: 15975 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92551
 Site ID: 403837
 CERS ID: 10140261
 CERS Description: Hazardous Waste Generator

HAZNET:

Name: HOME DEPOT #1087
 Address: 15975 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 925510000
 Year: 2017
 GEPAID: CAR000168732
 Contact: ASHLEY CAMPBELL
 Telephone: 7139855472
 Mailing Name: Not reported
 Mailing Address: 5151 SAN FELIPE ST
 Mailing City,St,Zip: HOUSTON, TX 770560000
 Gen County: Riverside
 TSD EPA ID: CAD008364432
 TSD County: Los Angeles

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

HOME DEPOT USA INC HD 1087 (Continued)**1008880000**

Tons: 1.21
CA Waste Code: 331-Off-specification, aged or surplus organics
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: HOME DEPOT #1087
Address: 15975 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 925510000
Year: 2017
GEPaid: CAR000168732
Contact: ASHLEY CAMPBELL
Telephone: 7139855472
Mailing Name: Not reported
Mailing Address: 5151 SAN FELIPE ST
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: Riverside
TSD EPA ID: CAD008364432
TSD County: Los Angeles

Tons: 0.374
CA Waste Code: 122-Alkaline solution without metals pH >= 12.5
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: HOME DEPOT #1087
Address: 15975 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 925510000
Year: 2017
GEPaid: CAR000168732
Contact: ASHLEY CAMPBELL
Telephone: 7139855472
Mailing Name: Not reported
Mailing Address: 5151 SAN FELIPE ST
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: Riverside
TSD EPA ID: CAD008364432
TSD County: Los Angeles

Tons: 0.0035
CA Waste Code: 141-Off-specification, aged or surplus inorganics
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: HOME DEPOT #1087
Address: 15975 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 925510000
Year: 2017
GEPaid: CAR000168732
Contact: ASHLEY CAMPBELL
Telephone: 7139855472
Mailing Name: Not reported
Mailing Address: 5151 SAN FELIPE ST
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: Riverside
TSD EPA ID: CAD008364432
TSD County: Los Angeles

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

HOME DEPOT USA INC HD 1087 (Continued)**1008880000**

Tons: 0.043
 CA Waste Code: 181-Other inorganic solid waste
 Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
 Facility County: Riverside

Name: HOME DEPOT #1087
 Address: 15975 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 925510000
 Year: 2017
 GEPAID: CAR000168732
 Contact: ASHLEY CAMPBELL
 Telephone: 7139855472
 Mailing Name: Not reported
 Mailing Address: 5151 SAN FELIPE ST
 Mailing City,St,Zip: HOUSTON, TX 770560000
 Gen County: Riverside
 TSD EPA ID: CAD008364432
 TSD County: Los Angeles
 Tons: 0.0575
 CA Waste Code: 213-Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
 Method: H061-Fuel Blending Prior To Energy Recovery At Another Site
 Facility County: Riverside

[Click this hyperlink](#) while viewing on your computer to access 99 additional CA_HAZNET: record(s) in the EDR Site Report.

CERS:

Name: THE HOME DEPOT STORE #1087
 Address: 15975 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92551
 Site ID: 403837
 CERS ID: 10140261
 CERS Description: Chemical Storage Facilities

Evaluation:

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 01-11-2016
 Violations Found: No
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HMRRP
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 01-11-2016
 Violations Found: No
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HW
 Eval Source: CERS

Coordinates:

Site ID: 403837
 Facility Name: The Home Depot Store #1087

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

HOME DEPOT USA INC HD 1087 (Continued)**1008880000**

Env Int Type Code: HMBP
Program ID: 10140261
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.889750
Longitude: -117.227470

Affiliation:

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 213 Court Street, Suite 700 c/o Compliance Dept.
Affiliation City: Middletown
Affiliation State: CT
Affiliation Country: Not reported
Affiliation Zip: 06457
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: The Home Depot U.S.A., Inc.
Entity Title: Not reported
Affiliation Address: 2455 Paces Ferry Road, C-19
Affiliation City: Atlanta
Affiliation State: GA
Affiliation Country: United States
Affiliation Zip: 30339
Affiliation Phone: (770) 433-8211

Affiliation Type Desc: Operator
Entity Name: The Home Depot U.S.A., Inc.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (770) 433-8211

Affiliation Type Desc: CUPA District
Entity Name: Riverside Cnty Env Health
Entity Title: Not reported
Affiliation Address: 4065 County Circle Drive, Room 104
Affiliation City: Riverside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92503
Affiliation Phone: (951) 358-5055

Affiliation Type Desc: Document Preparer
Entity Name: ARCADIS U.S., Inc.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

HOME DEPOT USA INC HD 1087 (Continued)

1008880000

Affiliation Type Desc: Environmental Contact
Entity Name: ARCADIS U.S., Inc.
Entity Title: Not reported
Affiliation Address: 213 Court Street, Suite 700 c/o Compliance Dept.
Affiliation City: Middletown
Affiliation State: CT
Affiliation Country: Not reported
Affiliation Zip: 06457
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: John Falcetti, Agent for The Home Depot
Entity Title: Regulatory Compliance Specialist
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
Entity Name: The Home Depot USA, Inc.
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

C21
SW
1/8-1/4
0.157 mi.
830 ft.

CERTIFIED TIRE & SERVICE CENTERS INC
16190 PERRIS BLVD
MORENO VALLEY, CA 92551

CERS HAZ WASTE
HAZNET
CERS

S113152448
N/A

Site 1 of 5 in cluster C

Relative:
Lower
Actual:
1498 ft.

CERS HAZ WASTE:
Name: CERTIFIED TIRE & SERVICE CENTERS#23
Address: 16190 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 17851
CERS ID: 10327111
CERS Description: Hazardous Waste Generator

HAZNET:
Name: CERTIFIED TIRE & SERVICE CENTERS INC
Address: 16190 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Year: 2017
GEPAID: CAL000332042
Contact: MICHELE SCHOOF
Telephone: 9513690025
Mailing Name: Not reported
Mailing Address: 1875 IOWA AVE
Mailing City,St,Zip: RIVERSIDE, CA 925070000
Gen County: Riverside

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

CERTIFIED TIRE & SERVICE CENTERS INC (Continued)**S113152448**

TSD EPA ID: CAD097030993
TSD County: Los Angeles
Tons: 0.065
CA Waste Code: 352-Other organic solids
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: CERTIFIED TIRE & SERVICE CENTERS INC
Address: 16190 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Year: 2017
GEPaid: CAL000332042
Contact: MICHELE SCHOOF
Telephone: 9513690025
Mailing Name: Not reported
Mailing Address: 1875 IOWA AVE
Mailing City,St,Zip: RIVERSIDE, CA 925070000
Gen County: Riverside
TSD EPA ID: CAL000330453
TSD County: Los Angeles
Tons: 0.2
CA Waste Code: 352-Other organic solids
Method: H010-Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Facility County: Riverside

Name: CERTIFIED TIRE & SERVICE CENTERS INC
Address: 16190 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Year: 2017
GEPaid: CAL000332042
Contact: MICHELE SCHOOF
Telephone: 9513690025
Mailing Name: Not reported
Mailing Address: 1875 IOWA AVE
Mailing City,St,Zip: RIVERSIDE, CA 925070000
Gen County: Riverside
TSD EPA ID: CAL000330453
TSD County: Los Angeles
Tons: 0.025
CA Waste Code: 352-Other organic solids
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: CERTIFIED TIRE & SERVICE CENTERS INC
Address: 16190 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Year: 2017
GEPaid: CAL000332042
Contact: MICHELE SCHOOF
Telephone: 9513690025
Mailing Name: Not reported
Mailing Address: 1875 IOWA AVE
Mailing City,St,Zip: RIVERSIDE, CA 925070000
Gen County: Riverside
TSD EPA ID: CAT080013352

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

CERTIFIED TIRE & SERVICE CENTERS INC (Continued)**S113152448**

TSD County: Los Angeles
Tons: 0.18765
CA Waste Code: 223-Unspecified oil-containing waste
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid
Regeneration, Organics Recovery Ect
Facility County: Riverside

Name: CERTIFIED TIRE & SERVICE CENTERS INC
Address: 16190 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Year: 2014
GEPaid: CAL000332042
Contact: MICHELE SCHOOF
Telephone: 9513690025
Mailing Name: Not reported
Mailing Address: 1875 IOWA AVE
Mailing City,St,Zip: RIVERSIDE, CA 925070000
Gen County: Riverside
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Tons: 0.10425
CA Waste Code: 223-Unspecified oil-containing waste
Method: H039-Other Recovery Of Reclamation For Reuse Including Acid
Regeneration, Organics Recovery Ect
Facility County: Riverside

[Click this hyperlink](#) while viewing on your computer to access
2 additional CA_HAZNET: record(s) in the EDR Site Report.

CERS:

Name: CERTIFIED TIRE & SERVICE CENTERS#23
Address: 16190 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 17851
CERS ID: 10327111
CERS Description: Chemical Storage Facilities

Violations:

Site ID: 17851
Site Name: Certified Tire & Service Centers#23
Violation Date: 05-18-2016
Citation: 22 CCR 16 66266.81(a)(4)(B) - California Code of Regulations, Title
22, Chapter 16, Section(s) 66266.81(a)(4)(B)
Violation Description: Failure to retain disposal records of spent lead batteries for three
years.
Violation Notes: Returned to compliance on 07/27/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Evaluation:

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-18-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

CERTIFIED TIRE & SERVICE CENTERS INC (Continued)

S113152448

Eval Program: HMRRP
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-18-2016
 Violations Found: Yes
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HW
 Eval Source: CERS

Eval General Type: Other/Unknown
 Eval Date: 07-27-2016
 Violations Found: No
 Eval Type: Other, not routine, done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HW
 Eval Source: CERS

Coordinates:
 Site ID: 17851
 Facility Name: Certified Tire & Service Centers#23
 Env Int Type Code: HWG
 Program ID: 10327111
 Coord Name: Not reported
 Ref Point Type Desc: Center of a facility or station.
 Latitude: 33.885230
 Longitude: -117.225330

Affiliation:
 Affiliation Type Desc: Document Preparer
 Entity Name: Steven Bauby
 Entity Title: Not reported
 Affiliation Address: Not reported
 Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
 Entity Name: Mailing Address
 Entity Title: Not reported
 Affiliation Address: 1875 Iowa St
 Affiliation City: Riverside
 Affiliation State: CA
 Affiliation Country: Not reported
 Affiliation Zip: 92507
 Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
 Entity Name: Steven Bauby
 Entity Title: Clerk
 Affiliation Address: Not reported

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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CERTIFIED TIRE & SERVICE CENTERS INC (Continued)

S113152448

Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Jeff Darrow
Entity Title:	Not reported
Affiliation Address:	1875 IOWA AVE.
Affiliation City:	RIVERSIDE
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	92507
Affiliation Phone:	(951) 369-0025
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Environmental Contact
Entity Name:	Jeremy Darrow
Entity Title:	Not reported
Affiliation Address:	1875 IOWA AVE.
Affiliation City:	RIVERSIDE
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	92507
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	Certified Tire & Service Centers
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(951) 369-0025
Affiliation Type Desc:	Parent Corporation
Entity Name:	MNRO Holdings, LLC dba Tire Choice
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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C22				CERTIFIED TIRE & SERVICE CENTERS	RCRA NonGen / NLR	1024820066	
SW				16190 PERRIS BLVD			CAL000332042
1/8-1/4				MORENO VALLEY, CA 92551			

0.157 mi.
830 ft. **Site 2 of 5 in cluster C**

Relative: RCRA NonGen / NLR:
Lower Date form received by agency: 2018-07-26 00:00:00.0
Actual: Facility name: CERTIFIED TIRE & SERVICE CENTERS
1498 ft. Facility address: 16190 PERRIS BLVD
MORENO VALLEY, CA 92551
EPA ID: CAL000332042
Mailing address: IOWA AVE
RIVERSIDE, CA 92507
Contact: JEREMY DARROW
Contact address: IOWA AVE
RIVERSIDE, CA 92507
Contact country: US
Contact telephone: 951-369-0025
Contact email: JADARROW@CERTIFIEDTIRE.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: CERTIFIED TIRE & SERVICE CENTERS
Owner/operator address: IOWA AVE
RIVERSIDE, CA 92507
Owner/operator country: US
Owner/operator telephone: 951-369-0025
Owner/operator email: MSCHOOOF@CERTIFIEDTIRE.COM
Owner/operator fax: 951-369-0690
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: CERTIFIED TIRE & SERVICE CENTERS
Owner/operator address: IOWA AVE
RIVERSIDE, CA 92507
Owner/operator country: US
Owner/operator telephone: 951-369-0025
Owner/operator email: MSCHOOOF@CERTIFIEDTIRE.COM
Owner/operator fax: 951-369-0690
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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CERTIFIED TIRE & SERVICE CENTERS (Continued)

1024820066

On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

. Waste code:	221
. Waste name:	Waste oil and mixed oil

Violation Status:	No violations found
-------------------	---------------------

C23	AUTOZONE #3714	RCRA NonGen / NLR	1024820552
SW	16210 PERRIS BLVD		CAL000334025
1/8-1/4	MORENO VALLEY, CA 92351		
0.188 mi.			
994 ft.	Site 3 of 5 in cluster C		

Relative:	RCRA NonGen / NLR:
Lower	Date form received by agency: 2008-06-27 00:00:00.0
Actual:	Facility name: AUTOZONE #3714
1498 ft.	Facility address: 16210 PERRIS BLVD MORENO VALLEY, CA 92351
	EPA ID: CAL000334025
	Mailing address: DEPT 8190, 123 S FRONT ST MEMPHIS, TN 38103-3607
	Contact: BRYAN BLAIR
	Contact address: DEPT 8190, 123 SOUTH FRONT STREET MEMPHIS, TN 38103
	Contact country: Not reported
	Contact telephone: 901-495-7217
	Contact email: BRYAN.BLAIR@AUTOZONE.COM
	EPA Region: 09
	Classification: Non-Generator
	Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	BRYAN BLAIR
Owner/operator address:	DEPT 8190, 123 SOUTH FRONT STREET MEMPHIS, TN 38103
Owner/operator country:	Not reported
Owner/operator telephone:	901-495-7217
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	AUTO ZONE CORPORATION
Owner/operator address:	123 S FRONT ST MEMPHIS, TN 38103

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

AUTOZONE #3714 (Continued)

1024820552

Owner/operator country: Not reported
 Owner/operator telephone: 901-495-6500
 Owner/operator email: Not reported
 Owner/operator fax: Not reported
 Owner/operator extension: Not reported
 Legal status: Other
 Owner/Operator Type: Owner
 Owner/Op start date: Not reported
 Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
 Mixed waste (haz. and radioactive): No
 Recycler of hazardous waste: No
 Transporter of hazardous waste: Yes
 Treater, storer or disposer of HW: No
 Underground injection activity: No
 On-site burner exemption: No
 Furnace exemption: No
 Used oil fuel burner: No
 Used oil processor: No
 User oil refiner: No
 Used oil fuel marketer to burner: No
 Used oil Specification marketer: No
 Used oil transfer facility: No
 Used oil transporter: No

Violation Status: No violations found

C24
SW
1/8-1/4
0.188 mi.
994 ft.

AUTOZONE #3714
16210 PERRIS BLVD
MORENO VALLEY, CA 92351

CERS HAZ WASTE S113153123
HAZNET N/A
CERS

Site 4 of 5 in cluster C

Relative:
Lower
Actual:
1498 ft.

CERS HAZ WASTE:
 Name: AUTOZONE #3714
 Address: 16210 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92551
 Site ID: 386942
 CERS ID: 10139777
 CERS Description: Hazardous Waste Generator

Name: AUTOZONE #3714
 Address: 16210 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92551
 Site ID: 386942
 CERS ID: 10139777
 CERS Description: Hazardous Waste Onsite Treatment

HAZNET:
 Name: AUTOZONE #3714
 Address: 16210 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92351
 Year: 2017
 GEPAID: CAL000334025
 Contact: BRYAN BLAIR
 Telephone: 9014957217

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

AUTOZONE #3714 (Continued)**S113153123**

Mailing Name: Not reported
Mailing Address: DEPT 8190, 123 S FRONT ST
Mailing City,St,Zip: MEMPHIS, TN 381033607
Gen County: Riverside
TSD EPA ID: CAD059494310
TSD County: Santa Clara
Tons: 0.0125
CA Waste Code: 223-Unspecified oil-containing waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: AUTOZONE #3714
Address: 16210 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92351
Year: 2017
GEPaid: CAL000334025
Contact: BRYAN BLAIR
Telephone: 9014957217
Mailing Name: Not reported
Mailing Address: DEPT 8190, 123 S FRONT ST
Mailing City,St,Zip: MEMPHIS, TN 381033607
Gen County: Riverside
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.046
CA Waste Code: 331-Off-specification, aged or surplus organics
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: AUTOZONE #3714
Address: 16210 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92351
Year: 2017
GEPaid: CAL000334025
Contact: BRYAN BLAIR
Telephone: 9014957217
Mailing Name: Not reported
Mailing Address: DEPT 8190, 123 S FRONT ST
Mailing City,St,Zip: MEMPHIS, TN 381033607
Gen County: Riverside
TSD EPA ID: CAD044429835
TSD County: Los Angeles
Tons: 0.3
CA Waste Code: 352-Other organic solids
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: AUTOZONE #3714
Address: 16210 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92351
Year: 2017
GEPaid: CAL000334025
Contact: BRYAN BLAIR
Telephone: 9014957217

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

AUTOZONE #3714 (Continued)**S113153123**

Mailing Name: Not reported
Mailing Address: DEPT 8190, 123 S FRONT ST
Mailing City,St,Zip: MEMPHIS, TN 381033607
Gen County: Riverside
TSD EPA ID: CAD008364432
TSD County: Los Angeles
Tons: 0.0075
CA Waste Code: 181-Other inorganic solid waste
Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery
(H010-H129) Or (H131-H135)
Facility County: Riverside

Name: AUTOZONE #3714
Address: 16210 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92351
Year: 2017
GEPAID: CAL000334025
Contact: BRYAN BLAIR
Telephone: 9014957217
Mailing Name: Not reported
Mailing Address: DEPT 8190, 123 S FRONT ST
Mailing City,St,Zip: MEMPHIS, TN 381033607
Gen County: Riverside
TSD EPA ID: NED981723513
TSD County: 99
Tons: 0.125
CA Waste Code: 223-Unspecified oil-containing waste
Method: H040-Incineration--Thermal Destruction Other Than Use As A Fuel
Facility County: Riverside

[Click this hyperlink](#) while viewing on your computer to access
41 additional CA_HAZNET: record(s) in the EDR Site Report.

CERS:

Name: AUTOZONE #3714
Address: 16210 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 386942
CERS ID: 10139777
CERS Description: Chemical Storage Facilities

Violations:

Site ID: 386942
Site Name: AutoZone #3714
Violation Date: 03-30-2016
Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22,
Chapter 12, Section(s) 66262.40(a)
Violation Description: Failure to maintain uniform hazardous waste manifest, consolidated
manifest, or bills of lading copies for three years.
Violation Notes: Returned to compliance on 05/04/2016.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 386942
Site Name: AutoZone #3714
Violation Date: 12-09-2015

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

AUTOZONE #3714 (Continued)

S113153123

Citation: 22 CCR 12 66262.40(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.40(a)

Violation Description: Failure to maintain uniform hazardous waste manifest, consolidated manifest, or bills of lading copies for three years.

Violation Notes: Returned to compliance on 05/04/2016.

Violation Division: Riverside County Department of Env Health

Violation Program: HW

Violation Source: CERS

Site ID: 386942

Site Name: AutoZone #3714

Violation Date: 12-09-2015

Citation: HSC 6.5 25201.5(d)(6) - California Health and Safety Code, Chapter 6.5, Section(s) 25201.5(d)(6)

Violation Description: Failure of the generator to prepare and maintain onsite, for a period of three years, the following: (1) compliance records of all pretreatment and discharge records to the POTW; (2) records of the dates, concentrations, amounts, and types of waste treated; and (3) operating instructions.

Violation Notes: Returned to compliance on 05/04/2016.

Violation Division: Riverside County Department of Env Health

Violation Program: CE

Violation Source: CERS

Site ID: 386942

Site Name: AutoZone #3714

Violation Date: 12-09-2015

Citation: 22 CCR 15 66265.16 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.16

Violation Description: Failure to provide employees within the first six months after the date of their employment, or assignment to the facility, or to work unsupervised, or to a new position at a facility with hazardous waste training to ensure employees are competent in the following areas: hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed, emergency response and emergency equipment, and procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment. In addition, the owner/operator shall ensure facility personnel take part in an annual review of the initial training and training records training records on current personnel shall be kept until closure of the facility. Training records on former employees shall be kept for at least three years from the date the employee last worked at the facility. The records shall include the following: the job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job; a written job description for each position, duties of facility personnel assigned to each position, and a written description of the type and amount of both introductory and continuing training that will be given to each person filling a position.

Violation Notes: Returned to compliance on 05/04/2016.

Violation Division: Riverside County Department of Env Health

Violation Program: CE

Violation Source: CERS

Site ID: 386942

Site Name: AutoZone #3714

Violation Date: 12-09-2015

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

AUTOZONE #3714 (Continued)

S113153123

Citation: 22 CCR 12 66262.42 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.42

Violation Description: Failure to complete the uniform hazardous waste manifest exception requirements.

Violation Notes: Returned to compliance on 05/04/2016.

Violation Division: Riverside County Department of Env Health

Violation Program: HW

Violation Source: CERS

Site ID: 386942

Site Name: AutoZone #3714

Violation Date: 12-09-2015

Citation: 40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)

Violation Description: Failure to ensure employees are familiar with the handling and compliance of hazardous waste regulations and emergency response.

Violation Notes: Returned to compliance on 03/30/2016.

Violation Division: Riverside County Department of Env Health

Violation Program: HW

Violation Source: CERS

Site ID: 386942

Site Name: AutoZone #3714

Violation Date: 12-09-2015

Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)

Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.

Violation Notes: Returned to compliance on 03/30/2016.

Violation Division: Riverside County Department of Env Health

Violation Program: HMRRP

Violation Source: CERS

Site ID: 386942

Site Name: AutoZone #3714

Violation Date: 03-30-2016

Citation: 22 CCR 12 66262.42 - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.42

Violation Description: Failure to complete the uniform hazardous waste manifest exception requirements.

Violation Notes: Returned to compliance on 05/04/2016.

Violation Division: Riverside County Department of Env Health

Violation Program: HW

Violation Source: CERS

Evaluation:

Eval General Type: Other/Unknown

Eval Date: 03-30-2016

Violations Found: No

Eval Type: Other, not routine, done by local agency

Eval Notes: Not reported

Eval Division: Riverside County Department of Env Health

Eval Program: HMRRP

Eval Source: CERS

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

AUTOZONE #3714 (Continued)

S113153123

Eval General Type: Other/Unknown
Eval Date: 03-30-2016
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 05-04-2016
Violations Found: No
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-09-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: CE
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-09-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-09-2015
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS

Enforcement Action:

Site ID: 386942
Site Name: AutoZone #3714
Site Address: 16210 PERRIS BLVD
Site City: MORENO VALLEY
Site Zip: 92551
Enf Action Date: 03-30-2016
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HW

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

AUTOZONE #3714 (Continued)

S113153123

Enf Action Source: CERS

Site ID: 386942
Site Name: AutoZone #3714
Site Address: 16210 PERRIS BLVD
Site City: MORENO VALLEY
Site Zip: 92551
Enf Action Date: 12-09-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: CE
Enf Action Source: CERS

Site ID: 386942
Site Name: AutoZone #3714
Site Address: 16210 PERRIS BLVD
Site City: MORENO VALLEY
Site Zip: 92551
Enf Action Date: 12-09-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 386942
Site Name: AutoZone #3714
Site Address: 16210 PERRIS BLVD
Site City: MORENO VALLEY
Site Zip: 92551
Enf Action Date: 12-09-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HW
Enf Action Source: CERS

Coordinates:
Site ID: 386942
Facility Name: AutoZone #3714
Env Int Type Code: HMBP
Program ID: 10139777
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.885060
Longitude: -117.225720

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: Andrew Beaven
Entity Title: Not reported
Affiliation Address: Dept 8190, 123 South Front Street

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

AUTOZONE #3714 (Continued)

S113153123

Affiliation City: Memphis
 Affiliation State: TN
 Affiliation Country: Not reported
 Affiliation Zip: 38103
 Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
 Entity Name: Deborah Williams
 Entity Title: Environmental Coordinator
 Affiliation Address: Not reported
 Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: Not reported

Affiliation Type Desc: Parent Corporation
 Entity Name: Auto Zone
 Entity Title: Not reported
 Affiliation Address: Not reported
 Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
 Entity Name: VELIMIR PETAKOVICH
 Entity Title: Not reported
 Affiliation Address: 9939 Hibert Street Suite 206
 Affiliation City: San Diego
 Affiliation State: CA
 Affiliation Country: United States
 Affiliation Zip: 92131
 Affiliation Phone: (760) 489-5024

Affiliation Type Desc: Onsite Treatment Unit Owner Operator
 Entity Name: Bryan Blair
 Entity Title: Environmental Specialist
 Affiliation Address: Not reported
 Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: Not reported

Affiliation Type Desc: CUPA District
 Entity Name: Riverside Cnty Env Health
 Entity Title: Not reported
 Affiliation Address: 4065 County Circle Drive, Room 104
 Affiliation City: Riverside
 Affiliation State: CA
 Affiliation Country: Not reported
 Affiliation Zip: 92503
 Affiliation Phone: (951) 358-5055

Affiliation Type Desc: Document Preparer

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

AUTOZONE #3714 (Continued)

S113153123

Entity Name: Deborah Williams
 Entity Title: Not reported
 Affiliation Address: Not reported
 Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
 Entity Name: Mailing Address
 Entity Title: Not reported
 Affiliation Address: Dept 8190, 123 South Front Street
 Affiliation City: Memphis
 Affiliation State: TN
 Affiliation Country: Not reported
 Affiliation Zip: 38103
 Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
 Entity Name: AutoZone Stores Inc
 Entity Title: Not reported
 Affiliation Address: 123 South Front Street
 Affiliation City: Memphis
 Affiliation State: TN
 Affiliation Country: United States
 Affiliation Zip: 38103
 Affiliation Phone: (901) 495-6500

Affiliation Type Desc: Operator
 Entity Name: Store Manager On Duty (Various Shifts)
 Entity Title: Not reported
 Affiliation Address: Not reported
 Affiliation City: Not reported
 Affiliation State: Not reported
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: (760) 471-0463

C25 **MAGIC CLEANERS**
SW **25025 RED MAPLE LN**
1/8-1/4 **MORENO VALLEY, CA 92551**
0.195 mi.
1032 ft. **Site 5 of 5 in cluster C**

EDR Hist Cleaner **1020032612**
 N/A

Relative: EDR Hist Cleaner
Lower

Actual: Year: Name: Type:
1497 ft. 2008 MAGIC CLEANERS Drycleaning Plants, Except Rugs, NEC
 2009 MAGIC CLEANERS Drycleaning Plants, Except Rugs, NEC

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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26				M G MOBILE SERVICE	EDR Hist Auto	1021075737	
SSE				25190 MORNING DOVE WAY		N/A	
1/8-1/4				MORENO VALLEY, CA 92551			
0.236 mi.							
1248 ft.							
Relative:				EDR Hist Auto			
Lower							
Actual:				Year: Name:	Type:		
1485 ft.				2013 M G MOBILE SERVICE	Gasoline Service Stations, NEC		
				2014 M G MOBILE SERVICE	Gasoline Service Stations, NEC		

D27				ARCO #5764	LUST	S106163538	
SSW				16466 PERRIS BLVD.	CERS	N/A	
1/4-1/2				MORENO VALLEY, CA 92551			
0.335 mi.				Site 1 of 2 in cluster D			
1767 ft.							
Relative:				LUST REG 8:			
Lower				Name:	ARCO #5764		
Actual:				Address:	16466 PERRIS BLVD.		
1490 ft.				City:	MORENO VALLEY		
				Region:	8		
				County:	Riverside		
				Regional Board:	Santa Ana Region		
				Facility Status:	Leak being confirmed		
				Case Number:	Not reported		
				Local Case Num:	200420311		
				Case Type:	Undefined		
				Substance:	Gasoline		
				Qty Leaked:	Not reported		
				Abate Method:	Not reported		
				Cross Street:	7TH		
				Enf Type:	Not reported		
				Funding:	Not reported		
				How Discovered:	OM		
				How Stopped:	Not reported		
				Leak Cause:	UNK		
				Leak Source:	UNK		
				Global ID:	T0606531216		
				How Stopped Date:	1/9/2003		
				Enter Date:	Not reported		
				Date Confirmation of Leak Began:	1/9/2003		
				Date Preliminary Assessment Began:	Not reported		
				Discover Date:	10/21/2002		
				Enforcement Date:	Not reported		
				Close Date:	Not reported		
				Date Prelim Assessment Workplan Submitted:	Not reported		
				Date Pollution Characterization Began:	Not reported		
				Date Remediation Plan Submitted:	Not reported		
				Date Remedial Action Underway:	Not reported		
				Date Post Remedial Action Monitoring:	Not reported		
				Enter Date:	Not reported		
				GW Qualifies:	Not reported		
				Soil Qualifies:	Not reported		
				Operator:	Not reported		
				Facility Contact:	Not reported		
				Interim:	Not reported		
				Oversite Program:	Not reported		
				Latitude:	0		

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

ARCO #5764 (Continued)

S106163538

Longitude: 0
 MTBE Date: Not reported
 Max MTBE GW: Not reported
 MTBE Concentration: 0
 Max MTBE Soil: Not reported
 MTBE Fuel: 1
 MTBE Tested: Site NOT Tested for MTBE. Includes Unknown and Not Analyzed.
 MTBE Class: *
 Staff: VJJ
 Staff Initials: SCB
 Lead Agency: Local Agency
 Local Agency: 33000L
 Hydr Basin #: Not reported
 Beneficial: Not reported
 Priority: Not reported
 Cleanup Fund Id: Not reported
 Work Suspended: Not reported
 Summary: SOIL SAMPLE TPHG NG<1.0 MILLIGRAMS PER KILOGRAM (MG/KG) >BENZENE
 0.00028 MG/KG >TOLUENE 0.00088 MG/KG >ETHYLBENZENE ND<0.00021 MG/KG
 >XYLENES ND<0.00063 MG/KG >MTBE 0.11 MG/KG >DIPE
 ND<0.00022 MG/KG>ETBE ND<0.00041 MG/KG >TAME ND<0.00050
 MG/KG >TBA ND<0.0047 MG/KG

CERS:

Name: ARCO #5764
 Address: 16466 PERRIS BLVD.
 City,State,Zip: MORENO VALLEY, CA 92551
 Site ID: 217560
 CERS ID: T0606531216
 CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc: Regional Board Caseworker
 Entity Name: VALERIE JAHN-BULL - SANTA ANA RWQCB (REGION 8)
 Entity Title: Not reported
 Affiliation Address: 3737 MAIN STREET, SUITE 500
 Affiliation City: RIVERSIDE
 Affiliation State: CA
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: 9517824903

Affiliation Type Desc: Local Agency Caseworker
 Entity Name: SHARON BOLTINGHOUSE - RIVERSIDE COUNTY LOP
 Entity Title: Not reported
 Affiliation Address: 3880 LEMON ST SUITE 200
 Affiliation City: RIVERSIDE
 Affiliation State: CA
 Affiliation Country: Not reported
 Affiliation Zip: Not reported
 Affiliation Phone: 9519558980

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
D28	SSW	1/4-1/2	0.335 mi. 1767 ft.	ARCO #5764 16466 PERRIS BLVD MORENO VALLEY, CA 92388 Site 2 of 2 in cluster D	LUST CERS HAZ WASTE CA FID UST CERS TANKS HAZNET CERS	S101590180	N/A
Relative: Lower	LUST:						
Actual: 1490 ft.	Name: ARCO #5764 Address: 16466 PERRIS BLVD. City,State,Zip: MORENO VALLEY, CA 92551 Lead Agency: RIVERSIDE COUNTY LOP Case Type: LUST Cleanup Site Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606531216 Global Id: T0606531216 Latitude: 33.8814694942017 Longitude: -117.22577682209 Status: Completed - Case Closed Status Date: 11/30/2004 Case Worker: SCB RB Case Number: Not reported Local Agency: RIVERSIDE COUNTY LOP File Location: Not reported Local Case Number: 200420311 Potential Media Affect: Under Investigation Potential Contaminants of Concern: Gasoline Site History: Not reported						
	LUST:						
	Global Id: T0606531216 Contact Type: Local Agency Caseworker Contact Name: SHARON BOLTINGHOUSE Organization Name: RIVERSIDE COUNTY LOP Address: 3880 LEMON ST SUITE 200 City: RIVERSIDE Email: sbolting@rivco.org Phone Number: 9519558980						
	LUST:						
	Global Id: T0606531216 Contact Type: Regional Board Caseworker Contact Name: VALERIE JAHN-BULL Organization Name: SANTA ANA RWQCB (REGION 8) Address: 3737 MAIN STREET, SUITE 500 City: RIVERSIDE Email: valerie.jahn-bull@waterboards.ca.gov Phone Number: 9517824903						
	LUST:						
	Global Id: T0606531216 Action Type: ENFORCEMENT Date: 11/29/2004 Action: File review - #RCDEH uploaded site file 12/12/2014						
	LUST:						
	Global Id: T0606531216 Action Type: Other Date: 10/21/2002 Action: Leak Discovery						
	LUST:						
	Global Id: T0606531216						

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

ARCO #5764 (Continued)**S101590180**

Action Type: Other
Date: 01/09/2003
Action: Leak Stopped

Global Id: T0606531216
Action Type: REMEDIATION
Date: 01/09/2003
Action: Other (Use Description Field)

Global Id: T0606531216
Action Type: Other
Date: 01/09/2003
Action: Leak Reported

LUST:

Global Id: T0606531216
Status: Open - Case Begin Date
Status Date: 10/21/2002

Global Id: T0606531216
Status: Open - Site Assessment
Status Date: 01/09/2003

Global Id: T0606531216
Status: Completed - Case Closed
Status Date: 11/30/2004

RIVERSIDE CO. LUST:

Name: ARCO #5764
Address: 16466 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA
Region: RIVERSIDE
Facility ID: 200420311
Employee: Boltinghous-LOP
Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed
Casetype Decode: Soil only is impacted
Fstatus Decode: Closed/Action completed

CERS HAZ WASTE:

Name: ARCO #82581
Address: 16466 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 92980
CERS ID: 10470889
CERS Description: Hazardous Waste Generator

CA FID UST:

Facility ID: 33006357
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

ARCO #5764 (Continued)**S101590180**

Facility Phone: 7142472668
Mail To: Not reported
Mailing Address: P O BOX 6038
Mailing Address 2: Not reported
Mailing City,St,Zip: MORENO VALLEY 92388
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

CERS TANKS:

Name: ARCO #82581
Address: 16466 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 92980
CERS ID: 10470889
CERS Description: Underground Storage Tank

HAZNET:

Name: TRISHA INVESTMENTS LLC
Address: 16466 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 925519282
Year: 2017
GEPaid: CAL000391537
Contact: SUNIL PATEL
Telephone: 9097092876
Mailing Name: Not reported
Mailing Address: 16466 PERRIS BLVD
Mailing City,St,Zip: MORENO VALLEY, CA 92551
Gen County: Riverside
TSD EPA ID: CAD982444481
TSD County: San Bernardino
Tons: 0.02
CA Waste Code: 352-Other organic solids
Method: H010-Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Facility County: Riverside

CERS:

Name: ARCO #82581
Address: 16466 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 92980
CERS ID: 10470889
CERS Description: Chemical Storage Facilities

Violations:

Site ID: 92980
Site Name: Arco #82581
Violation Date: 06-19-2019
Citation: 23 CCR 16 2715(f) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(f)
Violation Description: Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure,

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site Database(s) EDR ID Number
EPA ID Number

ARCO #5764 (Continued)

S101590180

Violation Notes: hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Returned to compliance on 06/19/2019. OBSERVATION: Owner/operator failed to certify the UST monitoring equipment every 12 months as required. Observed that the most recent monitoring certification was conducted at this facility on May 29, 2018. CORRECTIVE ACTION: Owner/operator shall certify the continuous monitoring system as required every 12 months. The monitoring certification was conducted today at the time of inspection. The violation is corrected on site. The monitoring certification is due annually in May and should not be conducted in June next year due to late testing.

Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 92980
Site Name: Arco #82581
Violation Date: 05-29-2018
Citation: 23 CCR 16 2641(h) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2641(h)

Violation Description: Failure to have an approved UST Monitoring Plan.
Violation Notes: Returned to compliance on 07/02/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 92980
Site Name: Arco #82581
Violation Date: 05-29-2018
Citation: HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286

Violation Description: Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes: Returned to compliance on 07/02/2018.
Violation Division: Riverside County Department of Env Health
Violation Program: UST
Violation Source: CERS

Site ID: 92980
Site Name: Arco #82581
Violation Date: 05-14-2015
Citation: 40 CFR 1 265.174 - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 265.174

Violation Description: Failure to inspect hazardous waste storage areas at least weekly.
Violation Notes: Returned to compliance on 06/13/2015.
Violation Division: Riverside County Department of Env Health
Violation Program: HW
Violation Source: CERS

Site ID: 92980
Site Name: Arco #82581
Violation Date: 05-12-2016
Citation: 23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)

Violation Description: Failure to maintain records of repairs, lining, and upgrades on site, or off site if approved by the CUPA, for the life of the underground storage tank and/or failure to maintain written monitoring and

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
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ARCO #5764 (Continued)

S101590180

maintenance records on site, or off site if approved by the CUPA, for a period of 3 years, 6 1/2 years for cathodic protection, and 5 years for written performance claims pertaining to release detection systems and calibration and maintenance records for such systems.

Violation Notes: Returned to compliance on 07/12/2016.
 Violation Division: Riverside County Department of Env Health
 Violation Program: UST
 Violation Source: CERS

Site ID: 92980
 Site Name: Arco #82581
 Violation Date: 05-14-2015
 Citation: 23 CCR 16 2712(b) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)

Violation Description: Failure to maintain leak detection alarm logs and/or maintain records of appropriate follow-up actions

Violation Notes: Returned to compliance on 07/02/2015.
 Violation Division: Riverside County Department of Env Health
 Violation Program: UST
 Violation Source: CERS

Site ID: 92980
 Site Name: Arco #82581
 Violation Date: 05-29-2018
 Citation: 23 CCR 16 2665 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2665

Violation Description: Failure to comply with one or more of the following: Failure to install or maintain a liquid-tight spill bucket. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill bucket/spill container. Be resistant to galvanic corrosion.

Violation Notes: Returned to compliance on 07/19/2018.
 Violation Division: Riverside County Department of Env Health
 Violation Program: UST
 Violation Source: CERS

Site ID: 92980
 Site Name: Arco #82581
 Violation Date: 05-14-2015
 Citation: 22 CCR 12 66262.34(f) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(f)

Violation Description: Failure to properly label hazardous waste accumulation containers with the following requirements: "Hazardous Waste", name and address of the generator, physical and chemical characteristics of the Hazardous Waste, and starting accumulation date.

Violation Notes: Returned to compliance on 06/13/2015.
 Violation Division: Riverside County Department of Env Health
 Violation Program: HW
 Violation Source: CERS

Site ID: 92980
 Site Name: Arco #82581
 Violation Date: 05-14-2015
 Citation: 40 CFR 1 262.34(d)(5)(iii) - U.S. Code of Federal Regulations, Title 40, Chapter 1, Section(s) 262.34(d)(5)(iii)

Violation Description: Failure to ensure employees are familiar with the handling and compliance of hazardous waste regulations and emergency response.

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
				ARCO #5764 (Continued)			S101590180
				Violation Notes:	Returned to compliance on 07/02/2015.		
				Violation Division:	Riverside County Department of Env Health		
				Violation Program:	HW		
				Violation Source:	CERS		
				Site ID:	92980		
				Site Name:	Arco #82581		
				Violation Date:	05-29-2018		
				Citation:	23 CCR 16 2637(e) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2637(e)		
				Violation Description:	Failure to submit a copy of the secondary containment test results to the UPA within 30 days after the test.		
				Violation Notes:	Returned to compliance on 05/29/2018.		
				Violation Division:	Riverside County Department of Env Health		
				Violation Program:	UST		
				Violation Source:	CERS		
				Site ID:	92980		
				Site Name:	Arco #82581		
				Violation Date:	05-14-2014		
				Citation:	HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections		
				Violation Description:	UST Program - Administration/Documentation - General		
				Violation Notes:	Returned to compliance on 06/10/2014.		
				Violation Division:	Riverside County Department of Env Health		
				Violation Program:	UST		
				Violation Source:	CERS		
				Site ID:	92980		
				Site Name:	Arco #82581		
				Violation Date:	05-14-2015		
				Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)		
				Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.		
				Violation Notes:	Returned to compliance on 07/02/2015.		
				Violation Division:	Riverside County Department of Env Health		
				Violation Program:	HMRRP		
				Violation Source:	CERS		
				Site ID:	92980		
				Site Name:	Arco #82581		
				Violation Date:	05-29-2018		
				Citation:	23 CCR 16 2712 - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712		
				Violation Description:	Failure to comply with any of the applicable requirements of the permit issued for the operation of the UST system.		
				Violation Notes:	Returned to compliance on 07/02/2018.		
				Violation Division:	Riverside County Department of Env Health		
				Violation Program:	UST		
				Violation Source:	CERS		
				Site ID:	92980		
				Site Name:	Arco #82581		
				Violation Date:	05-14-2014		

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

ARCO #5764 (Continued)**S101590180**

Citation: HSC 6.7 Multiple Sections - California Health and Safety Code, Chapter 6.7, Section(s) Multiple Sections
 Violation Description: UST Program - Operations/Maintenance - General
 Violation Notes: Returned to compliance on 06/10/2014.
 Violation Division: Riverside County Department of Env Health
 Violation Program: UST
 Violation Source: CERS

Evaluation:

Eval General Type: Other/Unknown
 Eval Date: 01-22-2019
 Violations Found: No
 Eval Type: Other, not routine, done by local agency
 Eval Notes: Reviewing submitted Overfill prevention equipment inspection report form. Pass.
 Eval Division: Riverside County Department of Env Health
 Eval Program: UST
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-12-2016
 Violations Found: Yes
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: UST
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-14-2014
 Violations Found: No
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HW
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-14-2014
 Violations Found: Yes
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: UST
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-14-2015
 Violations Found: Yes
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HMRRP
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-14-2015

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

ARCO #5764 (Continued)

S101590180

Violations Found: Yes
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HW
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-14-2015
 Violations Found: Yes
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: UST
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-18-2017
 Violations Found: No
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HMRRP
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-18-2017
 Violations Found: No
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HW
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-18-2017
 Violations Found: No
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: UST
 Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
 Eval Date: 05-29-2018
 Violations Found: Yes
 Eval Type: Routine done by local agency
 Eval Notes: Not reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: UST
 Eval Source: CERS

Eval General Type: Other/Unknown
 Eval Date: 06-10-2014
 Violations Found: No
 Eval Type: Other, not routine, done by local agency
 Eval Notes: Not reported

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

ARCO #5764 (Continued)

S101590180

Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-19-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Annual monitoring certification today. Vasquez Maintenance on site for testing.
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-02-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-02-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-02-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	07-12-2016
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	12-20-2017
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	UST

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

ARCO #5764 (Continued)**S101590180**

Eval Source: CERS

Enforcement Action:

Site ID: 92980
Site Name: Arco #82581
Site Address: 16466 PERRIS BLVD
Site City: MORENO VALLEY
Site Zip: 92551
Enf Action Date: 05-14-2014
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 92980
Site Name: Arco #82581
Site Address: 16466 PERRIS BLVD
Site City: MORENO VALLEY
Site Zip: 92551
Enf Action Date: 05-14-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HMRRP
Enf Action Source: CERS

Site ID: 92980
Site Name: Arco #82581
Site Address: 16466 PERRIS BLVD
Site City: MORENO VALLEY
Site Zip: 92551
Enf Action Date: 05-14-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: HW
Enf Action Source: CERS

Site ID: 92980
Site Name: Arco #82581
Site Address: 16466 PERRIS BLVD
Site City: MORENO VALLEY
Site Zip: 92551
Enf Action Date: 05-14-2015
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Riverside County Department of Env Health
Enf Action Program: UST
Enf Action Source: CERS

Coordinates:

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

ARCO #5764 (Continued)**S101590180**

Site ID: 92980
Facility Name: Arco #82581
Env Int Type Code: HWG
Program ID: 10470889
Coord Name: Not reported
Ref Point Type Desc: Center of a facility or station.
Latitude: 33.881530
Longitude: -117.225740

Affiliation:

Affiliation Type Desc: Environmental Contact
Entity Name: SUNIL PATEL
Entity Title: Not reported
Affiliation Address: 16466 Perris Blvd
Affiliation City: Moreno Valley
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92251
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 16466 Perris Blvd.
Affiliation City: Moreno Valley
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92551
Affiliation Phone: Not reported

Affiliation Type Desc: UST Tank Operator
Entity Name: SUNIL PATEL
Entity Title: Not reported
Affiliation Address: 16466 Perris Blvd.
Affiliation City: Moreno Valley
Affiliation State: ca
Affiliation Country: United States
Affiliation Zip: 92551
Affiliation Phone: (951) 247-2668

Affiliation Type Desc: Parent Corporation
Entity Name: YUCAIPA GAS MART
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Property Owner
Entity Name: Trisha Investments LLC.
Entity Title: Not reported
Affiliation Address: 16466 Perris Blvd.
Affiliation City: Moreno Valley
Affiliation State: CA
Affiliation Country: United States

MAP FINDINGS

Map ID
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Site

Database(s)

EDR ID Number
EPA ID Number

ARCO #5764 (Continued)

S101590180

Affiliation Zip: 92251
Affiliation Phone: (951) 247-2668

Affiliation Type Desc: UST Permit Applicant
Entity Name: Sunil Patel
Entity Title: Parnter
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (909) 709-2876

Affiliation Type Desc: Document Preparer
Entity Name: sunil patel
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Identification Signer
Entity Name: SUNIL PATEL
Entity Title: PARTNER
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Legal Owner
Entity Name: Trisha Investments LLC.
Entity Title: Not reported
Affiliation Address: 16466 Perris Blvd
Affiliation City: Moreno Valley
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92551
Affiliation Phone: (951) 247-2668

Affiliation Type Desc: UST Property Owner Name
Entity Name: Trisha Investments LLC.
Entity Title: Not reported
Affiliation Address: 16466 Perris Blvd.
Affiliation City: Moreno Valley
Affiliation State: ca
Affiliation Country: United States
Affiliation Zip: 92551
Affiliation Phone: (951) 247-2668

Affiliation Type Desc: CUPA District
Entity Name: Riverside Cnty Env Health
Entity Title: Not reported
Affiliation Address: 4065 County Circle Drive, Room 104

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

ARCO #5764 (Continued)

S101590180

Affiliation City: Riverside
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 92503
Affiliation Phone: (951) 358-5055

Affiliation Type Desc: Operator
Entity Name: SUNIL PATEL
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (951) 247-2668

Affiliation Type Desc: UST Tank Owner
Entity Name: Trisha Investments LLC.
Entity Title: Not reported
Affiliation Address: 16466 Perris Blvd.
Affiliation City: Moreno Valley
Affiliation State: CA
Affiliation Country: United States
Affiliation Zip: 92551
Affiliation Phone: (951) 247-2668

29
WNW
1/2-1
0.586 mi.
3096 ft.

INDIAN MIDDLE SCHOOL
INDIAN AVENUE / IRIS AVENUE
MORENO VALLEY, CA 92551

ENVIROSTOR **S106568096**
SCH **N/A**
CERS

Relative:
Higher
Actual:
1512 ft.

ENVIROSTOR:
Name: INDIAN MIDDLE SCHOOL
Address: INDIAN AVENUE / IRIS AVENUE
City,State,Zip: MORENO VALLEY, CA 92551
Facility ID: 33000006
Status: Certified
Status Date: 03/10/2006
Site Code: 404555
Site Type: School Cleanup
Site Type Detailed: School
Acres: 29
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Amit Pathak
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: 33.8911
Longitude: -117.2342

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

INDIAN MIDDLE SCHOOL (Continued)

S106568096

APN: NONE SPECIFIED
 Past Use: AGRICULTURAL - ROW CROPS
 Potential COC: DDT Toxaphene
 Confirmed COC: DDT Toxaphene
 Potential Description: SOIL
 Alias Name: INDIAN MIDDLE SCHOOL
 Alias Type: Alternate Name
 Alias Name: VAL VERDE UNIFIED
 Alias Type: Alternate Name
 Alias Name: VAL VERDE USD-PRPSD INDIAN MID SCL
 Alias Type: Alternate Name
 Alias Name: 110033615112
 Alias Type: EPA (FRS #)
 Alias Name: 404555
 Alias Type: Project Code (Site Code)
 Alias Name: 33000006
 Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Preliminary Endangerment Assessment Report
 Completed Date: 02/09/2005
 Comments: Not reported

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Phase 1
 Completed Date: 06/30/2004
 Comments: Not reported

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Preliminary Endangerment Assessment Report
 Completed Date: 11/09/2004
 Comments: Not reported

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Supplemental Site Investigation Workplan
 Completed Date: 04/28/2005
 Comments: Not reported

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Supplemental Site Investigation Workplan
 Completed Date: 07/06/2005
 Comments: Not reported

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Supplemental Site Investigation Report
 Completed Date: 11/01/2005
 Comments: Further Action with RAW for Toxaphene and DDT

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Removal Action Workplan

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

INDIAN MIDDLE SCHOOL (Continued)

S106568096

Completed Date: 12/28/2005
Comments: Approved along with NOE/Public Comment Response Letter

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 12/20/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 12/20/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 03/06/2006
Comments: DTSC issued a No Further Action determination based on a Removal Action Completion Report

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 4.15 Request
Completed Date: 03/01/2005
Comments: Approved.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Notice of Exemption
Completed Date: 01/03/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/02/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 03/10/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 08/09/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 11/18/2004
Comments: Not reported

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Map ID
Direction
Distance
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

INDIAN MIDDLE SCHOOL (Continued)

S106568096

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 07/13/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: School Cleanup Agreement
Completed Date: 03/01/2005
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:

Name: INDIAN MIDDLE SCHOOL
Address: INDIAN AVENUE / IRIS AVENUE
City,State,Zip: MORENO VALLEY, CA 92551
Facility ID: 33000006
Site Type: School Cleanup
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 29
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Amit Pathak
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 404555
Assembly: 61
Senate: 31
Special Program Status: Not reported
Status: Certified
Status Date: 03/10/2006
Restricted Use: NO
Funding: School District
Latitude: 33.8911
Longitude: -117.2342
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: DDT, Toxaphene
Confirmed COC: DDT, Toxaphene
Potential Description: SOIL
Alias Name: INDIAN MIDDLE SCHOOL
Alias Type: Alternate Name
Alias Name: VAL VERDE UNIFIED

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

INDIAN MIDDLE SCHOOL (Continued)**S106568096**

Alias Type: Alternate Name
Alias Name: VAL VERDE USD-PRPSD INDIAN MID SCL
Alias Type: Alternate Name
Alias Name: 110033615112
Alias Type: EPA (FRS #)
Alias Name: 404555
Alias Type: Project Code (Site Code)
Alias Name: 33000006
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 02/09/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 06/30/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 11/09/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 04/28/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Workplan
Completed Date: 07/06/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Report
Completed Date: 11/01/2005
Comments: Further Action with RAW for Toxaphene and DDT

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 12/28/2005
Comments: Approved along with NOE/Public Comment Response Letter

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 12/20/2005
Comments: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

INDIAN MIDDLE SCHOOL (Continued)

S106568096

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 12/20/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 03/06/2006
Comments: DTSC issued a No Further Action determination based on a Removal Action Completion Report

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 4.15 Request
Completed Date: 03/01/2005
Comments: Approved.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Notice of Exemption
Completed Date: 01/03/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 06/02/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Certification
Completed Date: 03/10/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 08/09/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 11/18/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 07/13/2005
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

INDIAN MIDDLE SCHOOL (Continued)**S106568096**

Completed Document Type: School Cleanup Agreement
Completed Date: 03/01/2005
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

CERS:

Name: INDIAN MIDDLE SCHOOL
Address: INDIAN AVENUE / IRIS AVENUE
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 338551
CERS ID: 33000006
CERS Description: School Cleanup

Affiliation:

Affiliation Type Desc: Lead Project Manager
Entity Name: AMIT PATHAK
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: CYPRESS
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Supervisor
Entity Name: SHAHIR HADDAD
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Count: 3 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
MORENO VALLEY	S121695513	PALMS CLEANERS, KWANG H. LEE DBA	25910 IRIS AVE SUITE A7 & 8	92551	DRYCLEANERS
MORENO VALLEY	S121696270	DAVID CHANS	25910 IRIS AVE SUITE A7 & 8	92551	DRYCLEANERS
MORENO VALLEY	S121648746	KITCHING ST & IRIS AVE	KITCHING ST & IRIS AVE		CIWQS

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract

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: 07/19/2019	Source: EPA
Date Data Arrived at EDR: 07/30/2019	Telephone: N/A
Date Made Active in Reports: 09/03/2019	Last EDR Contact: 10/02/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 01/13/2020
	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: 07/19/2019	Source: EPA
Date Data Arrived at EDR: 07/30/2019	Telephone: N/A
Date Made Active in Reports: 09/03/2019	Last EDR Contact: 10/02/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 01/13/2020
	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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/1991
 Date Data Arrived at EDR: 02/02/1994
 Date Made Active in Reports: 03/30/1994
 Number of Days to Update: 56

Source: EPA
 Telephone: 202-564-4267
 Last EDR Contact: 08/15/2011
 Next Scheduled EDR Contact: 11/28/2011
 Data Release Frequency: No Update Planned

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: 07/19/2019
 Date Data Arrived at EDR: 07/30/2019
 Date Made Active in Reports: 09/03/2019
 Number of Days to Update: 35

Source: EPA
 Telephone: N/A
 Last EDR Contact: 10/02/2019
 Next Scheduled EDR Contact: 01/13/2020
 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: 04/03/2019
 Date Data Arrived at EDR: 04/05/2019
 Date Made Active in Reports: 05/14/2019
 Number of Days to Update: 39

Source: Environmental Protection Agency
 Telephone: 703-603-8704
 Last EDR Contact: 10/04/2019
 Next Scheduled EDR Contact: 01/13/2020
 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 known 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: 07/19/2019
 Date Data Arrived at EDR: 07/30/2019
 Date Made Active in Reports: 09/03/2019
 Number of Days to Update: 35

Source: EPA
 Telephone: 800-424-9346
 Last EDR Contact: 10/02/2019
 Next Scheduled EDR Contact: 01/27/2020
 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: 07/19/2019	Source: EPA
Date Data Arrived at EDR: 07/30/2019	Telephone: 800-424-9346
Date Made Active in Reports: 09/03/2019	Last EDR Contact: 10/02/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 01/27/2020
	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: 06/24/2019	Source: EPA
Date Data Arrived at EDR: 06/26/2019	Telephone: 800-424-9346
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 09/16/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	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: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 09/16/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	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: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 09/16/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	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: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 09/16/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly 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). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 09/16/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	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: 08/13/2019	Source: Department of the Navy
Date Data Arrived at EDR: 08/20/2019	Telephone: 843-820-7326
Date Made Active in Reports: 08/26/2019	Last EDR Contact: 08/07/2019
Number of Days to Update: 6	Next Scheduled EDR Contact: 11/25/2019
	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: 08/19/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/20/2019	Telephone: 703-603-0695
Date Made Active in Reports: 08/26/2019	Last EDR Contact: 08/20/2019
Number of Days to Update: 6	Next Scheduled EDR Contact: 12/09/2019
	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: 08/19/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/20/2019	Telephone: 703-603-0695
Date Made Active in Reports: 08/26/2019	Last EDR Contact: 08/20/2019
Number of Days to Update: 6	Next Scheduled EDR Contact: 12/09/2019
	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: 09/09/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 14

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/09/2019
Next Scheduled EDR Contact: 01/06/2020
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: 07/29/2019
Date Data Arrived at EDR: 07/31/2019
Date Made Active in Reports: 10/08/2019
Number of Days to Update: 69

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
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: 07/29/2019
Date Data Arrived at EDR: 07/31/2019
Date Made Active in Reports: 10/08/2019
Number of Days to Update: 69

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/11/2019
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: 08/12/2019
Date Data Arrived at EDR: 08/13/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 57

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/13/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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
 Date Data Arrived at EDR: 04/23/2001
 Date Made Active in Reports: 05/21/2001
 Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
 Telephone: 858-637-5595
 Last EDR Contact: 09/26/2011
 Next Scheduled EDR Contact: 01/09/2012
 Data Release Frequency: No Update Planned

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.

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 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

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
 Date Data Arrived at EDR: 06/07/2005
 Date Made Active in Reports: 06/29/2005
 Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
 Telephone: 760-241-7365
 Last EDR Contact: 09/12/2011
 Next Scheduled EDR Contact: 12/26/2011
 Data Release Frequency: No Update Planned

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
 Date Data Arrived at EDR: 09/10/2003
 Date Made Active in Reports: 10/07/2003
 Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
 Telephone: 530-542-5572
 Last EDR Contact: 09/12/2011
 Next Scheduled EDR Contact: 12/26/2011
 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: 06/10/2019
 Date Data Arrived at EDR: 06/11/2019
 Date Made Active in Reports: 08/05/2019
 Number of Days to Update: 55

Source: State Water Resources Control Board
 Telephone: see region list
 Last EDR Contact: 09/09/2019
 Next Scheduled EDR Contact: 12/23/2019
 Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 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
 Date Data Arrived at EDR: 02/15/2005
 Date Made Active in Reports: 03/28/2005
 Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
 Telephone: 909-782-4496
 Last EDR Contact: 08/15/2011
 Next Scheduled EDR Contact: 11/28/2011
 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 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
 Date Data Arrived at EDR: 02/26/2004
 Date Made Active in Reports: 03/24/2004
 Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
 Telephone: 760-776-8943
 Last EDR Contact: 08/01/2011
 Next Scheduled EDR Contact: 11/14/2011
 Data Release Frequency: No Update Planned

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: 04/08/2019
 Date Data Arrived at EDR: 07/30/2019
 Date Made Active in Reports: 10/17/2019
 Number of Days to Update: 79

Source: EPA, Region 5
 Telephone: 312-886-7439
 Last EDR Contact: 07/29/2019
 Next Scheduled EDR Contact: 11/04/2019
 Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/12/2019	Source: EPA Region 4
Date Data Arrived at EDR: 07/29/2019	Telephone: 404-562-8677
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/23/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/04/2019
	Data Release Frequency: Varies

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: 10/16/2018	Source: EPA Region 8
Date Data Arrived at EDR: 03/07/2019	Telephone: 303-312-6271
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 55	Next Scheduled EDR Contact: 11/04/2019
	Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/01/2019	Source: EPA Region 6
Date Data Arrived at EDR: 07/29/2019	Telephone: 214-665-6597
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/04/2019
	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: 07/02/2019	Source: EPA Region 7
Date Data Arrived at EDR: 10/16/2019	Telephone: 913-551-7003
Date Made Active in Reports: 10/24/2019	Last EDR Contact: 10/16/2019
Number of Days to Update: 8	Next Scheduled EDR Contact: 11/04/2019
	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: 04/08/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/29/2019	Telephone: 415-972-3372
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/04/2019
	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: 04/16/2019	Source: EPA Region 10
Date Data Arrived at EDR: 07/29/2019	Telephone: 206-553-2857
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/04/2019
	Data Release Frequency: Varies

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: 04/11/2019	Source: EPA Region 1
Date Data Arrived at EDR: 07/29/2019	Telephone: 617-918-1313
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/04/2019
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CPS-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: 06/10/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/11/2019	Telephone: 866-480-1028
Date Made Active in Reports: 08/05/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 55	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

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	Source: California Regional Water Quality Control Board, North Coast Region (1)
Date Data Arrived at EDR: 04/07/2003	Telephone: 707-576-2220
Date Made Active in Reports: 04/25/2003	Last EDR Contact: 08/01/2011
Number of Days to Update: 18	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	Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-286-0457
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: No Update Planned

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	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/18/2006	Telephone: 805-549-3147
Date Made Active in Reports: 06/15/2006	Last EDR Contact: 07/18/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: No Update Planned

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	Source: Region Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 11/18/2004	Telephone: 213-576-6600
Date Made Active in Reports: 01/04/2005	Last EDR Contact: 07/01/2011
Number of Days to Update: 47	Next Scheduled EDR Contact: 10/17/2011
	Data Release Frequency: No Update Planned

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	Source: Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 04/05/2005	Telephone: 916-464-3291
Date Made Active in Reports: 04/21/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 16	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: No Update Planned

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: No Update Planned

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: No Update Planned

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: 10/11/2019
 Next Scheduled EDR Contact: 01/20/2020
 Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 06/10/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/11/2019	Telephone: 866-480-1028
Date Made Active in Reports: 07/24/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 43	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/10/2019	Source: SWRCB
Date Data Arrived at EDR: 06/11/2019	Telephone: 916-341-5851
Date Made Active in Reports: 07/23/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 42	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 06/10/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/12/2019	Telephone: 916-327-7844
Date Made Active in Reports: 07/23/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 41	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

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: 09/12/2019
Number of Days to Update: 69	Next Scheduled EDR Contact: 12/30/2019
	Data Release Frequency: Varies

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: 04/08/2019	Source: EPA Region 5
Date Data Arrived at EDR: 07/29/2019	Telephone: 312-886-6136
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/05/2019
	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: 05/02/2019	Source: EPA Region 7
Date Data Arrived at EDR: 07/29/2019	Telephone: 913-551-7003
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/04/2019
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 04/16/2019	Source: EPA Region 10
Date Data Arrived at EDR: 07/30/2019	Telephone: 206-553-2857
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 11/04/2019
	Data Release Frequency: Varies

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: 04/08/2019	Source: EPA Region 9
Date Data Arrived at EDR: 07/29/2019	Telephone: 415-972-3368
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/04/2019
	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: 10/16/2018	Source: EPA Region 8
Date Data Arrived at EDR: 03/07/2019	Telephone: 303-312-6137
Date Made Active in Reports: 05/01/2019	Last EDR Contact: 08/05/2019
Number of Days to Update: 55	Next Scheduled EDR Contact: 11/04/2019
	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: 05/01/2019	Source: EPA Region 6
Date Data Arrived at EDR: 07/29/2019	Telephone: 214-665-7591
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/04/2019
	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: 04/12/2019	Source: EPA Region 4
Date Data Arrived at EDR: 07/29/2019	Telephone: 404-562-9424
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/23/2019
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/04/2019
	Data Release Frequency: Varies

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: 04/11/2019	Source: EPA, Region 1
Date Data Arrived at EDR: 07/30/2019	Telephone: 617-918-1313
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 07/29/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 11/04/2019
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal voluntary cleanup sites

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: 07/29/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 07/31/2019	Telephone: 916-323-3400
Date Made Active in Reports: 10/08/2019	Last EDR Contact: 07/31/2019
Number of Days to Update: 69	Next Scheduled EDR Contact: 11/11/2019
	Data Release Frequency: Quarterly

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: 09/19/2019
Number of Days to Update: 142	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Varies

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: 06/24/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/25/2019	Telephone: 916-323-7905
Date Made Active in Reports: 08/21/2019	Last EDR Contact: 09/24/2019
Number of Days to Update: 57	Next Scheduled EDR Contact: 01/06/2020
	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: 06/03/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/04/2019	Telephone: 202-566-2777
Date Made Active in Reports: 08/26/2019	Last EDR Contact: 09/19/2019
Number of Days to Update: 83	Next Scheduled EDR Contact: 12/30/2019
	Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 04/10/2000	Telephone: 916-227-4448
Date Made Active in Reports: 05/10/2000	Last EDR Contact: 07/25/2019
Number of Days to Update: 30	Next Scheduled EDR Contact: 11/11/2019
	Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 06/11/2019	Source: Department of Conservation
Date Data Arrived at EDR: 06/12/2019	Telephone: 916-323-3836
Date Made Active in Reports: 08/15/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 64	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 03/26/2019	Source: Integrated Waste Management Board
Date Data Arrived at EDR: 03/27/2019	Telephone: 916-341-6422
Date Made Active in Reports: 04/30/2019	Last EDR Contact: 08/07/2019
Number of Days to Update: 34	Next Scheduled EDR Contact: 11/25/2019
	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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 07/25/2019
Number of Days to Update: 52	Next Scheduled EDR Contact: 11/11/2019
	Data Release Frequency: Varies

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	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-947-4219
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 10/17/2019
Number of Days to Update: 137	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: No Update Planned

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	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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	Source: Department of Health & Human Services, Indian Health Service
Date Data Arrived at EDR: 08/06/2014	Telephone: 301-443-1452
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 08/02/2019
Number of Days to Update: 176	Next Scheduled EDR Contact: 11/11/2019
	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: 06/11/2019	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 06/13/2019	Telephone: 202-307-1000
Date Made Active in Reports: 09/03/2019	Last EDR Contact: 08/21/2019
Number of Days to Update: 82	Next Scheduled EDR Contact: 12/09/2019
	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.

Date of Government Version: 08/08/2005	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	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: 07/29/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 07/31/2019	Telephone: 916-323-3400
Date Made Active in Reports: 10/08/2019	Last EDR Contact: 07/31/2019
Number of Days to Update: 69	Next Scheduled EDR Contact: 11/11/2019
	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: 06/30/2018	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 07/16/2019	Telephone: 916-255-6504
Date Made Active in Reports: 09/24/2019	Last EDR Contact: 09/24/2019
Number of Days to Update: 70	Next Scheduled EDR Contact: 01/20/2020
	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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/30/1995	Telephone: 916-227-4364
Date Made Active in Reports: 09/26/1995	Last EDR Contact: 01/26/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/27/2009
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 08/14/2019	Source: CalEPA
Date Data Arrived at EDR: 08/14/2019	Telephone: 916-323-2514
Date Made Active in Reports: 08/21/2019	Last EDR Contact: 10/22/2019
Number of Days to Update: 7	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Quarterly

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: 06/11/2019	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 06/13/2019	Telephone: 202-307-1000
Date Made Active in Reports: 09/03/2019	Last EDR Contact: 08/21/2019
Number of Days to Update: 82	Next Scheduled EDR Contact: 12/09/2019
	Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 06/28/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/28/2019	Telephone: 866-480-1028
Date Made Active in Reports: 07/24/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 26	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

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.

Date of Government Version: 06/01/1994	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/07/2005	Telephone: N/A
Date Made Active in Reports: 08/11/2005	Last EDR Contact: 06/03/2005
Number of Days to Update: 35	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: 12/04/2018	Source: Department of Public Health
Date Data Arrived at EDR: 12/06/2018	Telephone: 707-463-4466
Date Made Active in Reports: 12/14/2018	Last EDR Contact: 08/21/2019
Number of Days to Update: 8	Next Scheduled EDR Contact: 12/09/2019
	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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 08/01/2019
 Date Data Arrived at EDR: 08/02/2019
 Date Made Active in Reports: 10/11/2019
 Number of Days to Update: 70

Source: San Francisco County Department of Public Health
 Telephone: 415-252-3896
 Last EDR Contact: 07/31/2019
 Next Scheduled EDR Contact: 11/18/2019
 Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 08/14/2019
 Date Data Arrived at EDR: 08/14/2019
 Date Made Active in Reports: 08/21/2019
 Number of Days to Update: 7

Source: California Environmental Protection Agency
 Telephone: 916-323-2514
 Last EDR Contact: 10/22/2019
 Next Scheduled EDR Contact: 02/03/2020
 Data Release Frequency: Quarterly

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: 06/05/2019
 Date Data Arrived at EDR: 06/06/2019
 Date Made Active in Reports: 08/09/2019
 Number of Days to Update: 64

Source: Department of Toxic Substances Control
 Telephone: 916-323-3400
 Last EDR Contact: 08/28/2019
 Next Scheduled EDR Contact: 12/16/2019
 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: 07/30/2019
 Date Data Arrived at EDR: 07/30/2019
 Date Made Active in Reports: 09/03/2019
 Number of Days to Update: 35

Source: Environmental Protection Agency
 Telephone: 202-564-6023
 Last EDR Contact: 10/02/2019
 Next Scheduled EDR Contact: 01/13/2020
 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: 06/04/2019	Source: DTSC and SWRCB
Date Data Arrived at EDR: 06/04/2019	Telephone: 916-323-3400
Date Made Active in Reports: 08/08/2019	Last EDR Contact: 09/04/2019
Number of Days to Update: 65	Next Scheduled EDR Contact: 12/16/2019
	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: 06/24/2019	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 06/26/2019	Telephone: 202-366-4555
Date Made Active in Reports: 09/23/2019	Last EDR Contact: 09/24/2019
Number of Days to Update: 89	Next Scheduled EDR Contact: 01/06/2020
	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: 05/15/2019	Source: Office of Emergency Services
Date Data Arrived at EDR: 06/24/2019	Telephone: 916-845-8400
Date Made Active in Reports: 08/21/2019	Last EDR Contact: 07/26/2019
Number of Days to Update: 58	Next Scheduled EDR Contact: 11/04/2019
	Data Release Frequency: Semi-Annually

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: 06/10/2019	Source: State Water Quality Control Board
Date Data Arrived at EDR: 06/11/2019	Telephone: 866-480-1028
Date Made Active in Reports: 08/05/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 55	Next Scheduled EDR Contact: 12/23/2019
	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: 06/10/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/11/2019	Telephone: 866-480-1028
Date Made Active in Reports: 07/24/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 43	Next Scheduled EDR Contact: 12/23/2019
	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: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: (415) 495-8895
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 09/16/2019
Number of Days to Update: 113	Next Scheduled EDR Contact: 01/06/2020
	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: 05/15/2019	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 05/21/2019	Telephone: 202-528-4285
Date Made Active in Reports: 08/08/2019	Last EDR Contact: 08/23/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 12/02/2019
	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: 10/11/2019
Number of Days to Update: 62	Next Scheduled EDR Contact: 01/20/2020
	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: 10/07/2019
Number of Days to Update: 339	Next Scheduled EDR Contact: 01/20/2020
	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: 08/16/2019
Number of Days to Update: 63	Next Scheduled EDR Contact: 11/25/2019
	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: 06/24/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/26/2019	Telephone: 202-566-1917
Date Made Active in Reports: 09/23/2019	Last EDR Contact: 09/24/2019
Number of Days to Update: 89	Next Scheduled EDR Contact: 01/06/2020
	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: 08/05/2019
Number of Days to Update: 88	Next Scheduled EDR Contact: 11/18/2019
	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: 09/30/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/08/2018	Telephone: 703-308-4044
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 08/09/2019
Number of Days to Update: 73	Next Scheduled EDR Contact: 11/18/2019
	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: 09/19/2019
Number of Days to Update: 198	Next Scheduled EDR Contact: 12/30/2019
	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: 08/23/2019
Number of Days to Update: 2	Next Scheduled EDR Contact: 12/02/2019
	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: 09/30/2018	Source: EPA
Date Data Arrived at EDR: 04/24/2019	Telephone: 202-564-4203
Date Made Active in Reports: 08/08/2019	Last EDR Contact: 10/23/2019
Number of Days to Update: 106	Next Scheduled EDR Contact: 02/03/2020
	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: 07/19/2019	Source: EPA
Date Data Arrived at EDR: 07/30/2019	Telephone: 703-416-0223
Date Made Active in Reports: 09/03/2019	Last EDR Contact: 10/02/2019
Number of Days to Update: 35	Next Scheduled EDR Contact: 12/16/2019
	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: 04/25/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/02/2019	Telephone: 202-564-8600
Date Made Active in Reports: 05/23/2019	Last EDR Contact: 10/21/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 02/03/2020
	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: 08/20/2019	Source: EPA
Date Data Arrived at EDR: 09/05/2019	Telephone: 202-564-6023
Date Made Active in Reports: 09/23/2019	Last EDR Contact: 10/02/2019
Number of Days to Update: 18	Next Scheduled EDR Contact: 11/18/2019
	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: 03/20/2019	Source: EPA
Date Data Arrived at EDR: 04/10/2019	Telephone: 202-566-0500
Date Made Active in Reports: 05/14/2019	Last EDR Contact: 10/11/2019
Number of Days to Update: 34	Next Scheduled EDR Contact: 01/20/2020
	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: 10/07/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 01/20/2020
	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: No Update Planned

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: No Update Planned

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: 06/20/2019	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 06/20/2019	Telephone: 301-415-7169
Date Made Active in Reports: 08/08/2019	Last EDR Contact: 09/04/2019
Number of Days to Update: 49	Next Scheduled EDR Contact: 11/04/2019
	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: 09/06/2019
Number of Days to Update: 76	Next Scheduled EDR Contact: 12/16/2019
	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: 09/03/2019
Number of Days to Update: 40	Next Scheduled EDR Contact: 12/16/2019
	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: 08/09/2019
Number of Days to Update: 15	Next Scheduled EDR Contact: 11/04/2019
	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: 07/01/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/01/2019	Telephone: 202-343-9775
Date Made Active in Reports: 09/23/2019	Last EDR Contact: 10/15/2019
Number of Days to Update: 84	Next Scheduled EDR Contact: 01/13/2020
	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: 07/01/2019
 Date Data Arrived at EDR: 07/31/2019
 Date Made Active in Reports: 10/24/2019
 Number of Days to Update: 85

Source: Department of Transportation, Office of Pipeline Safety
 Telephone: 202-366-4595
 Last EDR Contact: 07/31/2019
 Next Scheduled EDR Contact: 11/11/2019
 Data Release Frequency: Quarterly

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: 06/30/2019
 Date Data Arrived at EDR: 07/16/2019
 Date Made Active in Reports: 10/02/2019
 Number of Days to Update: 78

Source: Department of Justice, Consent Decree Library
 Telephone: Varies
 Last EDR Contact: 10/02/2019
 Next Scheduled EDR Contact: 01/20/2020
 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: 09/16/2019
 Next Scheduled EDR Contact: 01/06/2020
 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: 10/06/2019
 Next Scheduled EDR Contact: 01/19/2020
 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: 08/08/2017
 Date Data Arrived at EDR: 09/11/2018
 Date Made Active in Reports: 09/14/2018
 Number of Days to Update: 3

Source: Department of Energy
 Telephone: 202-586-3559
 Last EDR Contact: 07/30/2019
 Next Scheduled EDR Contact: 11/18/2019
 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
 Date Data Arrived at EDR: 10/11/2017
 Date Made Active in Reports: 11/03/2017
 Number of Days to Update: 23

Source: Department of Energy
 Telephone: 505-845-0011
 Last EDR Contact: 08/21/2019
 Next Scheduled EDR Contact: 12/02/2019
 Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 07/19/2019
 Date Data Arrived at EDR: 07/30/2019
 Date Made Active in Reports: 09/03/2019
 Number of Days to Update: 35

Source: Environmental Protection Agency
 Telephone: 703-603-8787
 Last EDR Contact: 10/02/2019
 Next Scheduled EDR Contact: 01/13/2020
 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
 Date Data Arrived at EDR: 10/27/2010
 Date Made Active in Reports: 12/02/2010
 Number of Days to Update: 36

Source: American Journal of Public Health
 Telephone: 703-305-6451
 Last EDR Contact: 12/02/2009
 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
 Date Data Arrived at EDR: 10/26/2016
 Date Made Active in Reports: 02/03/2017
 Number of Days to Update: 100

Source: EPA
 Telephone: 202-564-2496
 Last EDR Contact: 09/26/2017
 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
 Date Data Arrived at EDR: 10/26/2016
 Date Made Active in Reports: 02/03/2017
 Number of Days to Update: 100

Source: EPA
 Telephone: 202-564-2496
 Last EDR Contact: 09/26/2017
 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: 05/03/2019
 Date Data Arrived at EDR: 05/29/2019
 Date Made Active in Reports: 08/08/2019
 Number of Days to Update: 71

Source: Department of Labor, Mine Safety and Health Administration
 Telephone: 303-231-5959
 Last EDR Contact: 08/27/2019
 Next Scheduled EDR Contact: 12/09/2019
 Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/06/2019	Source: DOL, Mine Safety & Health Admi
Date Data Arrived at EDR: 06/06/2019	Telephone: 202-693-9424
Date Made Active in Reports: 10/24/2019	Last EDR Contact: 09/12/2019
Number of Days to Update: 140	Next Scheduled EDR Contact: 12/16/2019
	Data Release Frequency: Quarterly

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.

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: 08/30/2019
Number of Days to Update: 49	Next Scheduled EDR Contact: 12/09/2019
	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: 08/30/2019
Number of Days to Update: 97	Next Scheduled EDR Contact: 12/09/2019
	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: 09/10/2019	Source: Department of Interior
Date Data Arrived at EDR: 09/10/2019	Telephone: 202-208-2609
Date Made Active in Reports: 10/17/2019	Last EDR Contact: 09/10/2019
Number of Days to Update: 37	Next Scheduled EDR Contact: 12/23/2019
	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: 05/03/2019	Source: EPA
Date Data Arrived at EDR: 06/05/2019	Telephone: (415) 947-8000
Date Made Active in Reports: 09/03/2019	Last EDR Contact: 09/04/2019
Number of Days to Update: 90	Next Scheduled EDR Contact: 12/16/2019
	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: 07/06/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/09/2019	Telephone: 202-564-2280
Date Made Active in Reports: 10/02/2019	Last EDR Contact: 10/08/2019
Number of Days to Update: 85	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017	Source: Department of Defense
Date Data Arrived at EDR: 01/17/2019	Telephone: 703-704-1564
Date Made Active in Reports: 04/01/2019	Last EDR Contact: 10/10/2019
Number of Days to Update: 74	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/26/2018	Telephone: 202-564-0527
Date Made Active in Reports: 10/05/2018	Last EDR Contact: 08/21/2019
Number of Days to Update: 71	Next Scheduled EDR Contact: 12/09/2019
	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: 05/20/2019	Source: EPA
Date Data Arrived at EDR: 05/21/2019	Telephone: 800-385-6164
Date Made Active in Reports: 08/08/2019	Last EDR Contact: 08/20/2019
Number of Days to Update: 79	Next Scheduled EDR Contact: 12/02/2019
	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: 06/24/2019	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 06/25/2019	Telephone: 916-323-3400
Date Made Active in Reports: 08/21/2019	Last EDR Contact: 09/24/2019
Number of Days to Update: 57	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Quarterly

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 08/01/2019	Source: San Francisco County Department of Environmental Health
Date Data Arrived at EDR: 08/02/2019	Telephone: 415-252-3896
Date Made Active in Reports: 10/09/2019	Last EDR Contact: 07/31/2019
Number of Days to Update: 68	Next Scheduled EDR Contact: 11/18/2019
	Data Release Frequency: Varies

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/01/2019
 Date Data Arrived at EDR: 05/14/2019
 Date Made Active in Reports: 07/17/2019
 Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
 Telephone: 925-454-2361
 Last EDR Contact: 08/15/2019
 Next Scheduled EDR Contact: 11/25/2019
 Data Release Frequency: Varies

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: 06/04/2019
 Date Data Arrived at EDR: 06/28/2019
 Date Made Active in Reports: 08/22/2019
 Number of Days to Update: 55

Source: Department of Toxic Substance Control
 Telephone: 916-327-4498
 Last EDR Contact: 08/28/2019
 Next Scheduled EDR Contact: 12/16/2019
 Data Release Frequency: Annually

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/19/2019
 Date Data Arrived at EDR: 03/22/2019
 Date Made Active in Reports: 04/09/2019
 Number of Days to Update: 18

Source: South Coast Air Quality Management District
 Telephone: 909-396-3211
 Last EDR Contact: 08/21/2019
 Next Scheduled EDR Contact: 12/09/2019
 Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 06/03/2019
 Date Data Arrived at EDR: 06/04/2019
 Date Made Active in Reports: 08/08/2019
 Number of Days to Update: 65

Source: Antelope Valley Air Quality Management District
 Telephone: 661-723-8070
 Last EDR Contact: 08/28/2019
 Next Scheduled EDR Contact: 12/16/2019
 Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
 Date Data Arrived at EDR: 06/24/2019
 Date Made Active in Reports: 08/22/2019
 Number of Days to Update: 59

Source: California Air Resources Board
 Telephone: 916-322-2990
 Last EDR Contact: 09/18/2019
 Next Scheduled EDR Contact: 12/30/2019
 Data Release Frequency: Varies

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: 07/19/2019
 Date Data Arrived at EDR: 07/22/2019
 Date Made Active in Reports: 09/26/2019
 Number of Days to Update: 66

Source: State Water Resources Control Board
 Telephone: 916-445-9379
 Last EDR Contact: 10/17/2019
 Next Scheduled EDR Contact: 02/03/2020
 Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 07/19/2019
 Date Data Arrived at EDR: 07/23/2019
 Date Made Active in Reports: 09/30/2019
 Number of Days to Update: 69

Source: Department of Toxic Substances Control
 Telephone: 916-255-3628
 Last EDR Contact: 10/17/2019
 Next Scheduled EDR Contact: 02/03/2020
 Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 08/16/2019	Source: California Integrated Waste Management Board
Date Data Arrived at EDR: 08/20/2019	Telephone: 916-341-6066
Date Made Active in Reports: 10/18/2019	Last EDR Contact: 08/07/2019
Number of Days to Update: 59	Next Scheduled EDR Contact: 11/25/2019
	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: 12/31/2017	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 05/29/2019	Telephone: 916-255-1136
Date Made Active in Reports: 07/22/2019	Last EDR Contact: 10/11/2019
Number of Days to Update: 54	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/19/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/20/2019	Telephone: 877-786-9427
Date Made Active in Reports: 10/18/2019	Last EDR Contact: 08/20/2019
Number of Days to Update: 59	Next Scheduled EDR Contact: 12/02/2019
	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 [CALSTITES]. 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

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/19/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/20/2019	Telephone: 916-323-3400
Date Made Active in Reports: 10/18/2019	Last EDR Contact: 08/20/2019
Number of Days to Update: 59	Next Scheduled EDR Contact: 12/02/2019
	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: 07/08/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 07/09/2019	Telephone: 916-440-7145
Date Made Active in Reports: 09/20/2019	Last EDR Contact: 10/08/2019
Number of Days to Update: 73	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 06/10/2019	Source: Department of Conservation
Date Data Arrived at EDR: 06/11/2019	Telephone: 916-322-1080
Date Made Active in Reports: 08/15/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 65	Next Scheduled EDR Contact: 12/23/2019
	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: 05/17/2019	Source: Department of Public Health
Date Data Arrived at EDR: 06/04/2019	Telephone: 916-558-1784
Date Made Active in Reports: 08/09/2019	Last EDR Contact: 09/04/2019
Number of Days to Update: 66	Next Scheduled EDR Contact: 12/16/2019
	Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/12/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/13/2019	Telephone: 916-445-9379
Date Made Active in Reports: 10/16/2019	Last EDR Contact: 08/13/2019
Number of Days to Update: 64	Next Scheduled EDR Contact: 11/25/2019
	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: 06/04/2019	Source: Department of Pesticide Regulation
Date Data Arrived at EDR: 06/04/2019	Telephone: 916-445-4038
Date Made Active in Reports: 08/09/2019	Last EDR Contact: 09/04/2019
Number of Days to Update: 66	Next Scheduled EDR Contact: 12/16/2019
	Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 06/11/2019	Source: Department of Conservation
Date Data Arrived at EDR: 06/12/2019	Telephone: 916-323-3836
Date Made Active in Reports: 08/15/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 64	Next Scheduled EDR Contact: 12/23/2019
	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: 06/17/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/18/2019	Telephone: 916-445-3846
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 09/16/2019
Number of Days to Update: 65	Next Scheduled EDR Contact: 12/30/2019
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 04/27/2018	Source: Department of Conservation
Date Data Arrived at EDR: 06/13/2018	Telephone: 916-445-2408
Date Made Active in Reports: 07/17/2018	Last EDR Contact: 08/20/2019
Number of Days to Update: 34	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 06/10/2019	Source: State Water Resource Control Board
Date Data Arrived at EDR: 06/11/2019	Telephone: 866-480-1028
Date Made Active in Reports: 07/24/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 43	Next Scheduled EDR Contact: 12/23/2019
	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 boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 05/08/2018	Source: RWQCB, Central Valley Region
Date Data Arrived at EDR: 07/11/2018	Telephone: 559-445-5577
Date Made Active in Reports: 09/13/2018	Last EDR Contact: 10/11/2019
Number of Days to Update: 64	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/20/2007	Telephone: 916-341-5227
Date Made Active in Reports: 06/29/2007	Last EDR Contact: 08/14/2019
Number of Days to Update: 9	Next Scheduled EDR Contact: 12/02/2019
	Data Release Frequency: No Update Planned

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	Source: Los Angeles Water Quality Control Board
Date Data Arrived at EDR: 07/21/2009	Telephone: 213-576-6726
Date Made Active in Reports: 08/03/2009	Last EDR Contact: 09/19/2019
Number of Days to Update: 13	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 06/10/2019	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/11/2019	Telephone: 866-480-1028
Date Made Active in Reports: 07/24/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 43	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)

Projects sites

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/10/2019
 Date Data Arrived at EDR: 06/11/2019
 Date Made Active in Reports: 07/24/2019
 Number of Days to Update: 43

Source: State Water Resources Control Board
 Telephone: 866-480-1028
 Last EDR Contact: 09/09/2019
 Next Scheduled EDR Contact: 12/23/2019
 Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 06/11/2019
 Date Data Arrived at EDR: 06/12/2019
 Date Made Active in Reports: 08/15/2019
 Number of Days to Update: 64

Source: State Water Resources Control Board
 Telephone: 916-341-5810
 Last EDR Contact: 09/09/2019
 Next Scheduled EDR Contact: 12/23/2019
 Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 06/04/2019
 Date Data Arrived at EDR: 06/04/2019
 Date Made Active in Reports: 08/08/2019
 Number of Days to Update: 65

Source: State Water Resources Control Board
 Telephone: 866-794-4977
 Last EDR Contact: 09/04/2019
 Next Scheduled EDR Contact: 12/16/2019
 Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 08/14/2019
 Date Data Arrived at EDR: 08/14/2019
 Date Made Active in Reports: 08/21/2019
 Number of Days to Update: 7

Source: California Environmental Protection Agency
 Telephone: 916-323-2514
 Last EDR Contact: 10/22/2019
 Next Scheduled EDR Contact: 02/03/2020
 Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 06/10/2019
 Date Data Arrived at EDR: 06/11/2019
 Date Made Active in Reports: 07/24/2019
 Number of Days to Update: 43

Source: State Water Resources Control Board
 Telephone: 866-480-1028
 Last EDR Contact: 09/09/2019
 Next Scheduled EDR Contact: 12/23/2019
 Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 06/10/2019
 Date Data Arrived at EDR: 06/11/2019
 Date Made Active in Reports: 07/24/2019
 Number of Days to Update: 43

Source: State Water Resources Control Board
 Telephone: 866-480-1028
 Last EDR Contact: 09/09/2019
 Next Scheduled EDR Contact: 12/23/2019
 Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 06/10/2019

Date Data Arrived at EDR: 06/11/2019

Date Made Active in Reports: 07/24/2019

Number of Days to Update: 43

Source: State Water Resources Control Board

Telephone: 866-480-1028

Last EDR Contact: 09/09/2019

Next Scheduled EDR Contact: 12/23/2019

Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 06/10/2019

Date Data Arrived at EDR: 06/11/2019

Date Made Active in Reports: 07/24/2019

Number of Days to Update: 43

Source: State Water Resources Control Board

Telephone: 866-480-1028

Last EDR Contact: 09/09/2019

Next Scheduled EDR Contact: 12/23/2019

Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)

Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 06/10/2019

Date Data Arrived at EDR: 06/11/2019

Date Made Active in Reports: 07/24/2019

Number of Days to Update: 43

Source: State Water Resources Control Board

Telephone: 866-480-1028

Last EDR Contact: 09/09/2019

Next Scheduled EDR Contact: 12/23/2019

Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018

Date Data Arrived at EDR: 10/21/2019

Date Made Active in Reports: 10/24/2019

Number of Days to Update: 3

Source: USGS

Telephone: 703-648-6533

Last EDR Contact: 08/30/2019

Next Scheduled EDR Contact: 12/09/2019

Data Release Frequency: Varies

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

Date Data Arrived at EDR: N/A

Date Made Active in Reports: N/A

Number of Days to Update: N/A

Source: EDR, Inc.

Telephone: N/A

Last EDR Contact: 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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A
 Date Data Arrived at EDR: N/A
 Date Made Active in Reports: N/A
 Number of Days to Update: N/A

Source: EDR, Inc.
 Telephone: N/A
 Last EDR Contact: 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
 Date Data Arrived at EDR: N/A
 Date Made Active in Reports: N/A
 Number of Days to Update: N/A

Source: EDR, Inc.
 Telephone: N/A
 Last EDR Contact: N/A
 Next Scheduled EDR Contact: N/A
 Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: 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: 01/09/2019
 Date Data Arrived at EDR: 01/11/2019
 Date Made Active in Reports: 03/05/2019
 Number of Days to Update: 53

Source: Alameda County Environmental Health Services
 Telephone: 510-567-6700
 Last EDR Contact: 10/02/2019
 Next Scheduled EDR Contact: 01/20/2020
 Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/10/2019
 Date Data Arrived at EDR: 04/11/2019
 Date Made Active in Reports: 06/20/2019
 Number of Days to Update: 70

Source: Alameda County Environmental Health Services
 Telephone: 510-567-6700
 Last EDR Contact: 10/02/2019
 Next Scheduled EDR Contact: 04/24/2047
 Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List

Cupa Facility List

Date of Government Version: 06/27/2019
 Date Data Arrived at EDR: 06/28/2019
 Date Made Active in Reports: 07/24/2019
 Number of Days to Update: 26

Source: Amador County Environmental Health
 Telephone: 209-223-6439
 Last EDR Contact: 08/28/2019
 Next Scheduled EDR Contact: 12/16/2019
 Data Release Frequency: Varies

BUTTE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA BUTTE: CUPA Facility Listing Cupa facility list.

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: 10/02/2019
Next Scheduled EDR Contact: 01/20/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing Cupa Facility Listing

Date of Government Version: 08/05/2019
Date Data Arrived at EDR: 08/07/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 63

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/23/2019
Next Scheduled EDR Contact: 01/06/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List Cupa facility list.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/20/2019
Date Data Arrived at EDR: 08/23/2019
Date Made Active in Reports: 10/22/2019
Number of Days to Update: 60

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/26/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List Cupa Facility list

Date of Government Version: 07/30/2019
Date Data Arrived at EDR: 08/02/2019
Date Made Active in Reports: 10/09/2019
Number of Days to Update: 68

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/25/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

EL DORADO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA EL DORADO: CUPA Facility List CUPA facility list.

Date of Government Version: 06/05/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 07/23/2019
Number of Days to Update: 47

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 09/05/2019
Next Scheduled EDR Contact: 11/11/2019
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: 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: 07/11/2019
Date Data Arrived at EDR: 07/11/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 71

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 10/09/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List CUPA facility list.

Date of Government Version: 07/08/2019
Date Data Arrived at EDR: 07/10/2019
Date Made Active in Reports: 09/20/2019
Number of Days to Update: 72

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/19/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List Cupa facility list.

Date of Government Version: 07/19/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

INYO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA INYO: CUPA Facility List Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/06/2019
Date Made Active in Reports: 10/08/2019
Number of Days to Update: 63

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/31/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: 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: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/14/2019
Next Scheduled EDR Contact: 12/02/2019
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List Cupa facility list

Date of Government Version: 08/16/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/15/2019
Next Scheduled EDR Contact: 01/27/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List Cupa facility list

Date of Government Version: 07/22/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/26/2019
Number of Days to Update: 65

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AOCONCERN: Key Areas of Concerns in Los Angeles County

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009	Source: N/A
Date Data Arrived at EDR: 03/31/2009	Telephone: N/A
Date Made Active in Reports: 10/23/2009	Last EDR Contact: 09/12/2019
Number of Days to Update: 206	Next Scheduled EDR Contact: 12/30/2019
	Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 07/09/2019	Source: Department of Public Works
Date Data Arrived at EDR: 07/11/2019	Telephone: 626-458-3517
Date Made Active in Reports: 09/20/2019	Last EDR Contact: 10/02/2019
Number of Days to Update: 71	Next Scheduled EDR Contact: 01/20/2020
	Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/15/2019	Source: La County Department of Public Works
Date Data Arrived at EDR: 07/17/2019	Telephone: 818-458-5185
Date Made Active in Reports: 09/26/2019	Last EDR Contact: 10/16/2019
Number of Days to Update: 71	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019	Source: Engineering & Construction Division
Date Data Arrived at EDR: 01/15/2019	Telephone: 213-473-7869
Date Made Active in Reports: 03/07/2019	Last EDR Contact: 10/09/2019
Number of Days to Update: 51	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory

A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 09/27/2019
Number of Days to Update: 58	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012	Source: Los Angeles County Department of Public Works
Date Data Arrived at EDR: 04/17/2019	Telephone: 626-458-6973
Date Made Active in Reports: 05/29/2019	Last EDR Contact: 10/18/2019
Number of Days to Update: 42	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 09/27/2019
Number of Days to Update: 58	Next Scheduled EDR Contact: 01/06/2020
	Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 06/25/2019
Number of Days to Update: 58	Next Scheduled EDR Contact: 10/07/2019
	Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/15/2019	Source: Community Health Services
Date Data Arrived at EDR: 07/17/2019	Telephone: 323-890-7806
Date Made Active in Reports: 08/05/2019	Last EDR Contact: 10/18/2019
Number of Days to Update: 19	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017	Source: City of El Segundo Fire Department
Date Data Arrived at EDR: 04/19/2017	Telephone: 310-524-2236
Date Made Active in Reports: 05/10/2017	Last EDR Contact: 10/09/2019
Number of Days to Update: 21	Next Scheduled EDR Contact: 01/27/2020
	Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019	Source: City of Long Beach Fire Department
Date Data Arrived at EDR: 04/23/2019	Telephone: 562-570-2563
Date Made Active in Reports: 06/27/2019	Last EDR Contact: 10/17/2019
Number of Days to Update: 65	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019	Source: City of Torrance Fire Department
Date Data Arrived at EDR: 07/30/2019	Telephone: 310-618-2973
Date Made Active in Reports: 10/02/2019	Last EDR Contact: 10/17/2019
Number of Days to Update: 64	Next Scheduled EDR Contact: 02/03/2020
	Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: 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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/28/2019
 Date Data Arrived at EDR: 05/30/2019
 Date Made Active in Reports: 08/05/2019
 Number of Days to Update: 67

Source: Madera County Environmental Health
 Telephone: 559-675-7823
 Last EDR Contact: 08/14/2019
 Next Scheduled EDR Contact: 12/02/2019
 Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
 Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
 Date Data Arrived at EDR: 10/04/2018
 Date Made Active in Reports: 11/02/2018
 Number of Days to Update: 29

Source: Public Works Department Waste Management
 Telephone: 415-473-6647
 Last EDR Contact: 09/25/2019
 Next Scheduled EDR Contact: 01/13/2020
 Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
 CUPA facility list.

Date of Government Version: 05/29/2019
 Date Data Arrived at EDR: 05/30/2019
 Date Made Active in Reports: 07/22/2019
 Number of Days to Update: 53

Source: Merced County Environmental Health
 Telephone: 209-381-1094
 Last EDR Contact: 08/14/2019
 Next Scheduled EDR Contact: 12/02/2019
 Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
 CUPA Facility List

Date of Government Version: 05/23/2019
 Date Data Arrived at EDR: 05/30/2019
 Date Made Active in Reports: 07/22/2019
 Number of Days to Update: 53

Source: Mono County Health Department
 Telephone: 760-932-5580
 Last EDR Contact: 08/21/2019
 Next Scheduled EDR Contact: 12/09/2019
 Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
 CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/25/2019
 Date Data Arrived at EDR: 07/30/2019
 Date Made Active in Reports: 09/30/2019
 Number of Days to Update: 62

Source: Monterey County Health Department
 Telephone: 831-796-1297
 Last EDR Contact: 09/30/2019
 Next Scheduled EDR Contact: 01/13/2020
 Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
 A listing of leaking underground storage tank sites located in Napa county.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 08/21/2019
 Next Scheduled EDR Contact: 12/09/2019
 Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
 Underground storage tank sites located in Napa county.

Date of Government Version: 02/21/2019
 Date Data Arrived at EDR: 02/22/2019
 Date Made Active in Reports: 03/08/2019
 Number of Days to Update: 14

Source: Napa County Department of Environmental Management
 Telephone: 707-253-4269
 Last EDR Contact: 09/05/2019
 Next Scheduled EDR Contact: 12/09/2019
 Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
 CUPA facility list.

Date of Government Version: 07/23/2019
 Date Data Arrived at EDR: 07/30/2019
 Date Made Active in Reports: 10/02/2019
 Number of Days to Update: 64

Source: Community Development Agency
 Telephone: 530-265-1467
 Last EDR Contact: 07/25/2019
 Next Scheduled EDR Contact: 11/11/2019
 Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
 Petroleum and non-petroleum spills.

Date of Government Version: 07/10/2019
 Date Data Arrived at EDR: 08/07/2019
 Date Made Active in Reports: 10/09/2019
 Number of Days to Update: 63

Source: Health Care Agency
 Telephone: 714-834-3446
 Last EDR Contact: 08/05/2019
 Next Scheduled EDR Contact: 11/18/2019
 Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
 Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 07/10/2019
 Date Data Arrived at EDR: 08/09/2019
 Date Made Active in Reports: 10/09/2019
 Number of Days to Update: 61

Source: Health Care Agency
 Telephone: 714-834-3446
 Last EDR Contact: 08/05/2019
 Next Scheduled EDR Contact: 11/18/2019
 Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
 Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 07/10/2019
 Date Data Arrived at EDR: 08/06/2019
 Date Made Active in Reports: 10/09/2019
 Number of Days to Update: 64

Source: Health Care Agency
 Telephone: 714-834-3446
 Last EDR Contact: 08/05/2019
 Next Scheduled EDR Contact: 11/18/2019
 Data Release Frequency: Quarterly

PLACER COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MS PLACER: Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/03/2019
 Date Data Arrived at EDR: 06/04/2019
 Date Made Active in Reports: 08/12/2019
 Number of Days to Update: 69

Source: Placer County Health and Human Services
 Telephone: 530-745-2363
 Last EDR Contact: 08/28/2019
 Next Scheduled EDR Contact: 12/16/2019
 Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List

Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
 Date Data Arrived at EDR: 04/23/2019
 Date Made Active in Reports: 06/26/2019
 Number of Days to Update: 64

Source: Plumas County Environmental Health
 Telephone: 530-283-6355
 Last EDR Contact: 10/17/2019
 Next Scheduled EDR Contact: 02/03/2020
 Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/10/2019
 Date Data Arrived at EDR: 07/11/2019
 Date Made Active in Reports: 09/20/2019
 Number of Days to Update: 71

Source: Department of Environmental Health
 Telephone: 951-358-5055
 Last EDR Contact: 09/16/2019
 Next Scheduled EDR Contact: 12/30/2019
 Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 07/10/2019
 Date Data Arrived at EDR: 07/11/2019
 Date Made Active in Reports: 09/23/2019
 Number of Days to Update: 74

Source: Department of Environmental Health
 Telephone: 951-358-5055
 Last EDR Contact: 09/16/2019
 Next Scheduled EDR Contact: 12/30/2019
 Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 05/06/2019
 Date Data Arrived at EDR: 06/28/2019
 Date Made Active in Reports: 08/22/2019
 Number of Days to Update: 55

Source: Sacramento County Environmental Management
 Telephone: 916-875-8406
 Last EDR Contact: 10/01/2019
 Next Scheduled EDR Contact: 01/13/2020
 Data Release Frequency: Quarterly

ML SACRAMENTO: 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: 05/06/2019
 Date Data Arrived at EDR: 06/28/2019
 Date Made Active in Reports: 09/13/2019
 Number of Days to Update: 77

Source: Sacramento County Environmental Management
 Telephone: 916-875-8406
 Last EDR Contact: 10/01/2019
 Next Scheduled EDR Contact: 01/13/2020
 Data Release Frequency: Quarterly

SAN BENITO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA SAN BENITO: CUPA Facility List Cupa facility list

Date of Government Version: 07/16/2019
Date Data Arrived at EDR: 07/16/2019
Date Made Active in Reports: 09/24/2019
Number of Days to Update: 70

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 07/16/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: 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: 05/31/2019
Date Data Arrived at EDR: 05/31/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 52

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: 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: 06/04/2019
Date Data Arrived at EDR: 06/04/2019
Date Made Active in Reports: 08/08/2019
Number of Days to Update: 65

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/04/2019
Next Scheduled EDR Contact: 12/16/2019
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/16/2019
Date Data Arrived at EDR: 07/23/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 69

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SAN DIEGO CO SAM: 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	Source: San Diego County Department of Environmental Health
Date Data Arrived at EDR: 06/15/2010	Telephone: 619-338-2371
Date Made Active in Reports: 07/09/2010	Last EDR Contact: 08/28/2019
Number of Days to Update: 24	Next Scheduled EDR Contact: 12/16/2019
	Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008	Source: Department Of Public Health San Francisco County
Date Data Arrived at EDR: 09/19/2008	Telephone: 415-252-3920
Date Made Active in Reports: 09/29/2008	Last EDR Contact: 07/31/2019
Number of Days to Update: 10	Next Scheduled EDR Contact: 11/18/2019
	Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 08/01/2019	Source: Department of Public Health
Date Data Arrived at EDR: 08/02/2019	Telephone: 415-252-3920
Date Made Active in Reports: 10/08/2019	Last EDR Contact: 07/31/2019
Number of Days to Update: 67	Next Scheduled EDR Contact: 11/18/2019
	Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018	Source: Environmental Health Department
Date Data Arrived at EDR: 06/26/2018	Telephone: N/A
Date Made Active in Reports: 07/11/2018	Last EDR Contact: 09/11/2019
Number of Days to Update: 15	Next Scheduled EDR Contact: 12/29/2019
	Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List

Cupa Facility List.

Date of Government Version: 08/14/2019	Source: San Luis Obispo County Public Health Department
Date Data Arrived at EDR: 08/20/2019	Telephone: 805-781-5596
Date Made Active in Reports: 10/18/2019	Last EDR Contact: 08/14/2019
Number of Days to Update: 59	Next Scheduled EDR Contact: 12/02/2019
	Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/06/2019
 Date Data Arrived at EDR: 08/14/2019
 Date Made Active in Reports: 08/15/2019
 Number of Days to Update: 1

Source: San Mateo County Environmental Health Services Division
 Telephone: 650-363-1921
 Last EDR Contact: 09/09/2019
 Next Scheduled EDR Contact: 12/23/2019
 Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
 Date Data Arrived at EDR: 03/29/2019
 Date Made Active in Reports: 05/29/2019
 Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
 Telephone: 650-363-1921
 Last EDR Contact: 09/05/2019
 Next Scheduled EDR Contact: 12/23/2019
 Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
 Date Data Arrived at EDR: 09/09/2011
 Date Made Active in Reports: 10/07/2011
 Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
 Telephone: 805-686-8167
 Last EDR Contact: 08/14/2019
 Next Scheduled EDR Contact: 12/02/2019
 Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List

Cupa facility list

Date of Government Version: 08/14/2019
 Date Data Arrived at EDR: 08/20/2019
 Date Made Active in Reports: 10/18/2019
 Number of Days to Update: 59

Source: Department of Environmental Health
 Telephone: 408-918-1973
 Last EDR Contact: 08/14/2019
 Next Scheduled EDR Contact: 12/02/2019
 Data Release Frequency: Varies

HIST LUST SANTA CLARA: 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
 Date Data Arrived at EDR: 03/30/2005
 Date Made Active in Reports: 04/21/2005
 Number of Days to Update: 22

Source: Santa Clara Valley Water District
 Telephone: 408-265-2600
 Last EDR Contact: 03/23/2009
 Next Scheduled EDR Contact: 06/22/2009
 Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
 Date Data Arrived at EDR: 03/05/2014
 Date Made Active in Reports: 03/18/2014
 Number of Days to Update: 13

Source: Department of Environmental Health
 Telephone: 408-918-3417
 Last EDR Contact: 08/21/2019
 Next Scheduled EDR Contact: 12/09/2019
 Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/30/2019
 Date Data Arrived at EDR: 08/02/2019
 Date Made Active in Reports: 10/08/2019
 Number of Days to Update: 67

Source: City of San Jose Fire Department
 Telephone: 408-535-7694
 Last EDR Contact: 07/31/2019
 Next Scheduled EDR Contact: 11/18/2019
 Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
 CUPA facility listing.

Date of Government Version: 01/21/2017
 Date Data Arrived at EDR: 02/22/2017
 Date Made Active in Reports: 05/23/2017
 Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
 Telephone: 831-464-2761
 Last EDR Contact: 08/14/2019
 Next Scheduled EDR Contact: 12/02/2019
 Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
 Cupa Facility List.

Date of Government Version: 06/15/2017
 Date Data Arrived at EDR: 06/19/2017
 Date Made Active in Reports: 08/09/2017
 Number of Days to Update: 51

Source: Shasta County Department of Resource Management
 Telephone: 530-225-5789
 Last EDR Contact: 08/14/2019
 Next Scheduled EDR Contact: 12/02/2019
 Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
 Date Data Arrived at EDR: 06/06/2019
 Date Made Active in Reports: 08/13/2019
 Number of Days to Update: 68

Source: Solano County Department of Environmental Management
 Telephone: 707-784-6770
 Last EDR Contact: 08/28/2019
 Next Scheduled EDR Contact: 12/16/2019
 Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
 Date Data Arrived at EDR: 06/06/2019
 Date Made Active in Reports: 07/23/2019
 Number of Days to Update: 47

Source: Solano County Department of Environmental Management
 Telephone: 707-784-6770
 Last EDR Contact: 08/28/2019
 Next Scheduled EDR Contact: 12/16/2019
 Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
 Cupa Facility list

Date of Government Version: 06/18/2019
 Date Data Arrived at EDR: 06/25/2019
 Date Made Active in Reports: 07/24/2019
 Number of Days to Update: 29

Source: County of Sonoma Fire & Emergency Services Department
 Telephone: 707-565-1174
 Last EDR Contact: 10/17/2019
 Next Scheduled EDR Contact: 01/06/2020
 Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST SONOMA: Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/02/2019
 Date Data Arrived at EDR: 07/02/2019
 Date Made Active in Reports: 09/20/2019
 Number of Days to Update: 80

Source: Department of Health Services
 Telephone: 707-565-6565
 Last EDR Contact: 09/19/2019
 Next Scheduled EDR Contact: 01/06/2020
 Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List

Cupa facility list

Date of Government Version: 07/18/2019
 Date Data Arrived at EDR: 07/18/2019
 Date Made Active in Reports: 09/26/2019
 Number of Days to Update: 70

Source: Stanislaus County Department of Environmental Protection
 Telephone: 209-525-6751
 Last EDR Contact: 10/15/2019
 Next Scheduled EDR Contact: 01/27/2020
 Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 06/03/2019
 Date Data Arrived at EDR: 06/04/2019
 Date Made Active in Reports: 07/23/2019
 Number of Days to Update: 49

Source: Sutter County Environmental Health Services
 Telephone: 530-822-7500
 Last EDR Contact: 08/28/2019
 Next Scheduled EDR Contact: 12/16/2019
 Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List

Cupa facilities

Date of Government Version: 05/20/2019
 Date Data Arrived at EDR: 05/21/2019
 Date Made Active in Reports: 07/18/2019
 Number of Days to Update: 58

Source: Tehama County Department of Environmental Health
 Telephone: 530-527-8020
 Last EDR Contact: 07/31/2019
 Next Scheduled EDR Contact: 11/18/2019
 Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List

Cupa facility list

Date of Government Version: 07/19/2019
 Date Data Arrived at EDR: 07/23/2019
 Date Made Active in Reports: 09/26/2019
 Number of Days to Update: 65

Source: Department of Toxic Substances Control
 Telephone: 760-352-0381
 Last EDR Contact: 10/17/2019
 Next Scheduled EDR Contact: 02/03/2020
 Data Release Frequency: Varies

TULARE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA TULARE: CUPA Facility List Cupa program facilities

Date of Government Version: 08/12/2019
Date Data Arrived at EDR: 08/14/2019
Date Made Active in Reports: 10/17/2019
Number of Days to Update: 64

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/05/2019
Next Scheduled EDR Contact: 11/18/2019
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 10/17/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: 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: 05/29/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 63

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/21/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Quarterly

LF VENTURA: 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: 09/25/2019
Next Scheduled EDR Contact: 01/13/2020
Data Release Frequency: No Update Planned

LUST VENTURA: 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: 08/07/2019
Next Scheduled EDR Contact: 11/25/2019
Data Release Frequency: No Update Planned

MED WASTE VENTURA: 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: 05/29/2019
Date Data Arrived at EDR: 07/29/2019
Date Made Active in Reports: 09/30/2019
Number of Days to Update: 63

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/21/2019
Next Scheduled EDR Contact: 02/03/2020
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST VENTURA: Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 06/10/2019	Source: Environmental Health Division
Date Data Arrived at EDR: 06/12/2019	Telephone: 805-654-2813
Date Made Active in Reports: 07/24/2019	Last EDR Contact: 09/09/2019
Number of Days to Update: 42	Next Scheduled EDR Contact: 12/23/2019
	Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 06/26/2019	Source: Yolo County Department of Health
Date Data Arrived at EDR: 06/28/2019	Telephone: 530-666-8646
Date Made Active in Reports: 07/31/2019	Last EDR Contact: 09/25/2019
Number of Days to Update: 33	Next Scheduled EDR Contact: 01/13/2020
	Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 07/26/2019	Source: Yuba County Environmental Health Department
Date Data Arrived at EDR: 07/31/2019	Telephone: 530-749-7523
Date Made Active in Reports: 10/08/2019	Last EDR Contact: 07/25/2019
Number of Days to Update: 69	Next Scheduled EDR Contact: 11/11/2019
	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: 05/14/2019	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 05/14/2019	Telephone: 860-424-3375
Date Made Active in Reports: 08/05/2019	Last EDR Contact: 08/07/2019
Number of Days to Update: 83	Next Scheduled EDR Contact: 11/25/2019
	Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018	Source: Department of Environmental Protection
Date Data Arrived at EDR: 04/10/2019	Telephone: N/A
Date Made Active in Reports: 05/16/2019	Last EDR Contact: 10/02/2019
Number of Days to Update: 36	Next Scheduled EDR Contact: 01/20/2020
	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: 01/01/2019
 Date Data Arrived at EDR: 05/01/2019
 Date Made Active in Reports: 06/21/2019
 Number of Days to Update: 51

Source: Department of Environmental Conservation
 Telephone: 518-402-8651
 Last EDR Contact: 07/29/2019
 Next Scheduled EDR Contact: 11/11/2019
 Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
 Date Data Arrived at EDR: 07/19/2019
 Date Made Active in Reports: 09/10/2019
 Number of Days to Update: 53

Source: Department of Environmental Protection
 Telephone: 717-783-8990
 Last EDR Contact: 10/09/2019
 Next Scheduled EDR Contact: 12/07/2020
 Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2017
 Date Data Arrived at EDR: 02/23/2018
 Date Made Active in Reports: 04/09/2018
 Number of Days to Update: 45

Source: Department of Environmental Management
 Telephone: 401-222-2797
 Last EDR Contact: 08/16/2019
 Next Scheduled EDR Contact: 12/02/2019
 Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
 Date Data Arrived at EDR: 06/19/2019
 Date Made Active in Reports: 09/03/2019
 Number of Days to Update: 76

Source: Department of Natural Resources
 Telephone: N/A
 Last EDR Contact: 09/06/2019
 Next Scheduled EDR Contact: 12/23/2019
 Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

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 Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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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 and Wildlife

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[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

IRIS PARK
IRIS AVENUE & PERRIS BOULEVARD
MORENO VALLEY, CA 92551

TARGET PROPERTY COORDINATES

Latitude (North):	33.887532 - 33° 53' 15.12"
Longitude (West):	117.222763 - 117° 13' 21.95"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	479400.8
UTM Y (Meters):	3749514.0
Elevation:	1500 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 principle 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).

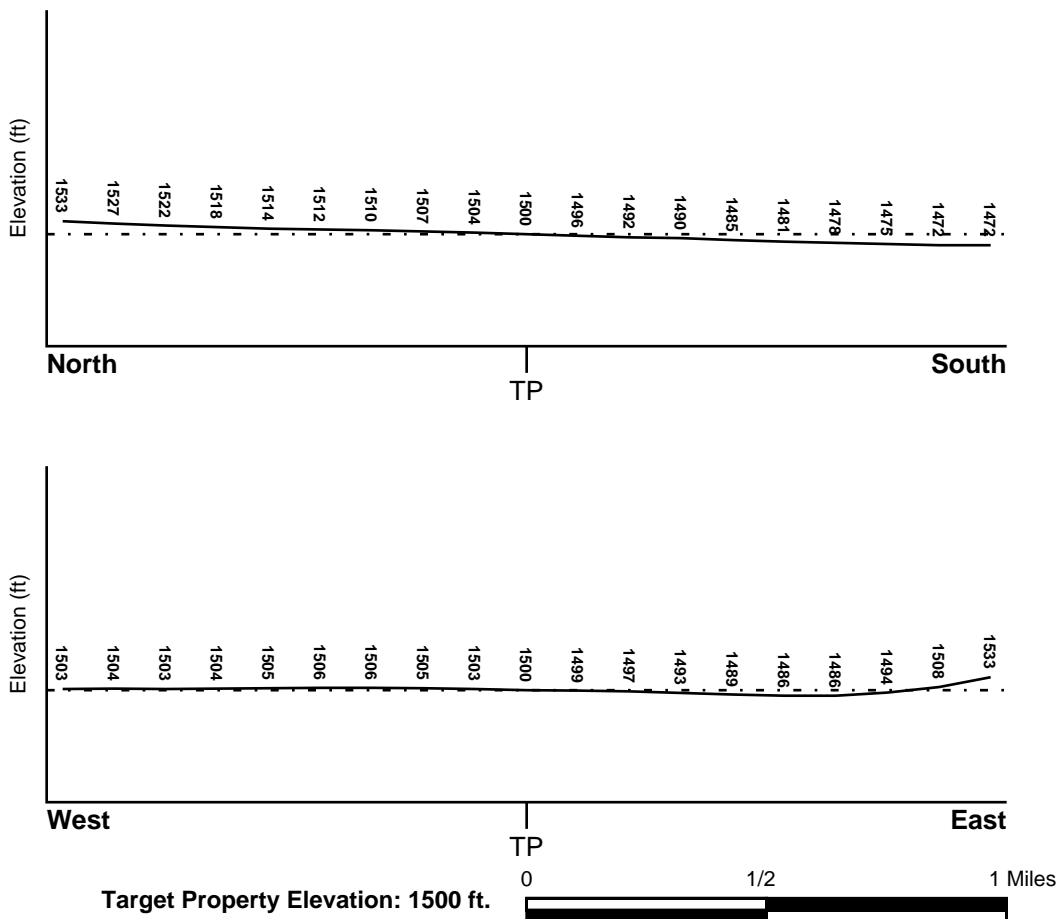
TOPOGRAPHIC INFORMATION

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 SSE

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.

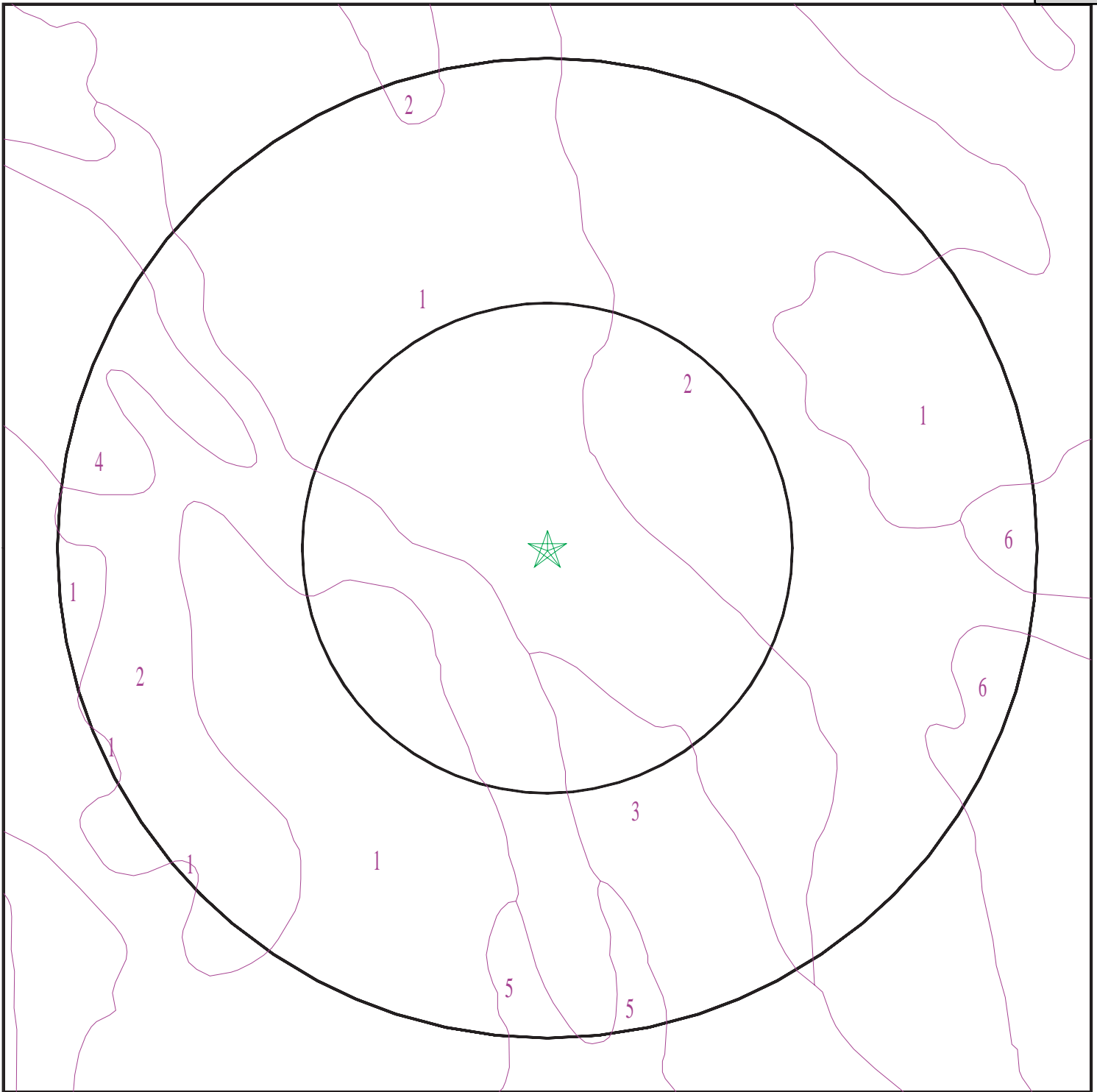
ROCK STRATIGRAPHIC UNIT

Era:	Mesozoic
System:	Cretaceous
Series:	Cretaceous granitic rocks
Code:	Kg <i>(decoded above as Era, System & Series)</i>

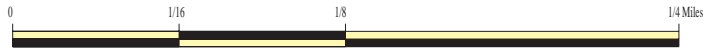
GEOLOGIC AGE IDENTIFICATION

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: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

SITE NAME: Iris Park
 ADDRESS: Iris Avenue & Perris Boulevard
 Moreno Valley CA 92551
 LAT/LONG: 33.887532 / 117.222763

CLIENT: AES Due Diligence, Inc
 CONTACT: Rick Darwicki
 INQUIRY #: 5844302.2s
 DATE: October 25, 2019 2:07 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 Min: 14	Max: 8.4 Min: 6.6
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 Min: 14	Max: 8.4 Min: 6.6
3	42 inches	59 inches	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 Min: 14	Max: 8.4 Min: 6.6

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		
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 Min: 14	Max: 8.4 Min: 6.6

Soil Map ID: 2

Soil Component Name: HANFORD

Soil Surface Texture: fine 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	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: 141 Min: 42	Max: 7.8 Min: 5.6
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: 141 Min: 42	Max: 7.8 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		
3	40 inches	59 inches	stratified loamy sand to 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: 141 Min: 42	Max: 7.8 Min: 5.6

Soil Map ID: 3

Soil Component Name: EXETER

Soil Surface Texture: 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: High

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	16 inches	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%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
2	16 inches	37 inches	sandy clay 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: 4 Min: 1.4	Max: 8.4 Min: 7.4

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	37 inches	50 inches	indurated	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: 4 Min: 1.4	Max: 8.4 Min: 7.4
4	50 inches	59 inches	stratified sandy loam to silt 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: 4 Min: 1.4	Max: 8.4 Min: 7.4

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: 141 Min: 42	Max: 7.8 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: 141 Min: 42	Max: 7.8 Min: 5.6
3	40 inches	59 inches	stratified loamy sand to 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: 141 Min: 42	Max: 7.8 Min: 5.6

Soil Map ID: 5

Soil Component Name: EXETER

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: High

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	16 inches	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%), silt.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

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	16 inches	37 inches	sandy clay 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: 4 Min: 1.4	Max: 8.4 Min: 7.4
3	37 inches	50 inches	indurated	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: 4 Min: 1.4	Max: 8.4 Min: 7.4
4	50 inches	59 inches	stratified sandy loam to silt 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: 4 Min: 1.4	Max: 8.4 Min: 7.4

Soil Map ID: 6

Soil Component Name: PACHAPPA

Soil Surface Texture: fine 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

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		
1	0 inches	20 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	Max: 14 Min: 4	Max: 7.8 Min: 6.6
2	20 inches	62 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%), Lean Clay	Max: 14 Min: 4	Max: 7.8 Min: 6.6

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 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	USGS40000138759	1/2 - 1 Mile SSW

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.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

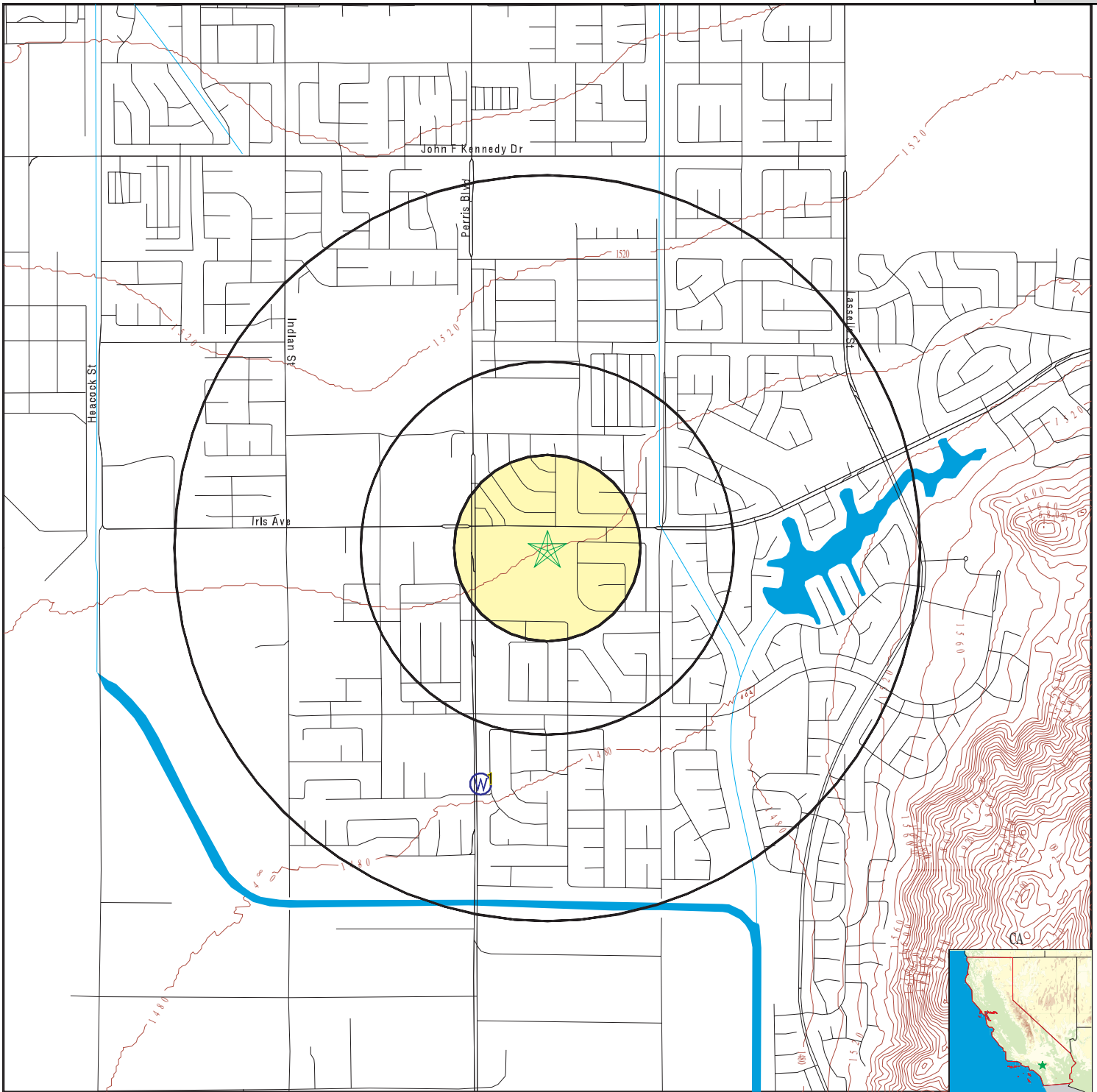
MAP ID

WELL ID

LOCATION
FROM TP

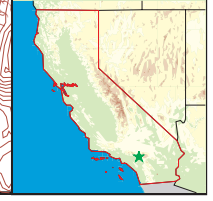
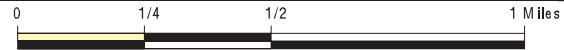
No Wells Found

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



- 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



Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

SITE NAME: Iris Park
 ADDRESS: Iris Avenue & Parris Boulevard
 Moreno Valley CA 92551
 LAT/LONG: 33.887532 / 117.222763

CLIENT: AES Due Diligence, Inc
 CONTACT: Rick Darwicki
 INQUIRY #: 5844302.2s
 DATE: October 25, 2019 2:07 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

Map ID	Direction	Distance	Elevation	Database	EDR ID Number
1	SSW	1/2 - 1 Mile	Lower	FED USGS	USGS40000138759

Organization ID:	USGS-CA	Type:	Well
Organization Name:	USGS California Water Science Center	HUC:	18070202
Monitor Location:	003S003W29M001S	Drainage Area Units:	Not Reported
Description:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Drainage Area:	Not Reported	Aquifer Type:	Not Reported
Contrib Drainage Area:	Not Reported	Well Depth:	622
Aquifer:	California Coastal Basin aquifers	Well Hole Depth:	622
Formation Type:	Not Reported		
Construction Date:	Not Reported		
Well Depth Units:	ft		
Well Hole Depth Units:	ft		

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92551	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%

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 and Wildlife

Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R 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.

California Earthquake Fault Lines

Source: California Division of Mines and Geology

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.

RADON

State Database: CA Radon

Source: Department of Public Health

Telephone: 916-210-8558

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.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

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.

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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Iris Park
Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551

Inquiry Number: 5844302.3
October 25, 2019

Certified Sanborn® Map Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

10/25/19

Certified Sanborn® Map Report**Site Name:**

Iris Park
Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551
EDR Inquiry # 5844302.3

Client Name:

AES Due Diligence, Inc
4542 Ruffner Street, Suite 330
San Diego, CA 92111
Contact: Rick Darwicki



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Certified Sanborn Results:

Certification # 5ED4-440A-9DA6

PO # NA

Project 19004122

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: 5ED4-440A-9DA6

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- Library of Congress
- University Publications of America
- EDR Private Collection

The Sanborn Library LLC Since 1866™

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Iris Park

Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551

Inquiry Number: 5844302.10
October 29, 2019

The EDR-City Directory Image Report



6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

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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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
1990	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1985	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1981	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1975	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory
1971	<input type="checkbox"/>	<input type="checkbox"/>	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551

<u>Year</u>	<u>CD Image</u>	<u>Source</u>	
<u>IRIS AVE</u>			
2014	pg A2	EDR Digital Archive	
2010	pg A12	EDR Digital Archive	
2005	pg A18	EDR Digital Archive	
2000	pg A21	EDR Digital Archive	
1995	pg A23	EDR Digital Archive	
1990	pg A25	Haines Criss-Cross Directory	
1985	pg A27	Haines Criss-Cross Directory	
1981	pg A29	Haines Criss-Cross Directory	
1975	pg A31	Haines Criss-Cross Directory	
1971	-	Haines Criss-Cross Directory	Street not listed in Source

PERRIS BLVD

2014	pg A6	EDR Digital Archive	
2010	pg A16	EDR Digital Archive	
2005	pg A19	EDR Digital Archive	
2000	pg A22	EDR Digital Archive	
1995	pg A24	EDR Digital Archive	
1990	pg A26	Haines Criss-Cross Directory	
1985	pg A28	Haines Criss-Cross Directory	
1981	pg A30	Haines Criss-Cross Directory	
1975	pg A32	Haines Criss-Cross Directory	
1971	-	Haines Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

IRIS AVE 2014

24525 IMANI PRAISE FELLOWSHIP
OCCUPANT UNKNOWN,
24581 REBOLLO, SALVADOR
24601 NILAAD, JOSEPH K
VALLEY MEDIVAN
24623 BERMUDEZ, SAUL
24771 WEST ANGELES CH GOD IN CHRST
24850 KEEGAN, CAROL A
KEEGAN/ROBERTSON COMPANY
25790 GARCIA, VALERIE
25792 MEHDI, KHALIGHI
SPENCER, CHRIS J
25794 CHEN, WENJUN
LACOMBE, JOSEPH J
NATIVIDAD, B
25796 DUPREZ, KEVIN T
NATIVIDAD, HERMIE R
25798 ARCHER, ASHLYNN D
HAYES, SARAH
ROSAS, HENRY M
25800 BEDFORD, LAKEVA
PROUT, AMANDA
WILSON, FRANK
25802 ACHACOSO, CHERRY R
THOMPSON, DARNELL
YORK, ARLISHA
25804 LINDSEY, JUNE A
ZAMEER, AHMAD
25806 CHAVARRIA, VANESSA
FORD, SAMUEL
GOMEZ, JUAN
25808 CHAVEZ, ASTRID
CRETIN, FRANCISCO C
MOORE, KWASI C
25810 BONILLA, ROSALBA
SCOTT, RAY
SMITH, D
25812 HERNANDEZ, DAVID
REYES, LIGIA
25814 KYLES, KENNETH W
25816 BUTLER, PEGGY M
CAMACHO, CHRISTOPHER
PEREZ, FERMIN
TUCKER, JESSE
WILLIAMS, SHIRLEY A
25818 LIN, JASON J
MEJRI, RIDHA
25820 COLLINS, ROBERT W
JONES, KATHRYN L
ROLDAN, JACK

IRIS AVE

2014

(Cont'd)

25822 ALSABIA, AUSAMA A
 JUNO, A S
 TORRES, AUGUST C

25824 GIPSON, DANIELLE
 LANE, JESSICA D
 LUJAN, SANDRA M
 WILLIAMS, MALCOLM E

25826 PERALES, ANTONIO
 ZETINA, GERARDO

25828 CABADING, A
 CABADONG, ADORACION S

25830 DAVIS, RODNEY J
 LYNCH, PONSINETTE W
 RUSSO, BRYAN M

25832 HARDAWAY, DELVON
 LAM, YUET F
 LEWIS-GILL, JOHNNY

25834 ASSAF, GEORGE
 MITCHELL, BRIAN W
 OBRIEN, PATRICK

25836 CHATMAN, TAMOND A
 GILLIAM, CHARLETE
 NELSON, VICTORIA

25838 MCFALL, VIVIAN
 TRAN, CHARLENE

25840 CABADING, BRIGITTE
 CESCOLINI, MICHAEL J
 KOZNA, JONATHAN
 RODRIGUEZ, LYNN M

25842 GE, HEMING
 KANG, SOON O
 LIM, RONALD

25846 ROLDAN, ERIC S
 SEATON, ANGELITA M
 YOUNG, JANET M

25848 FLOWERS, ARTESHA R
 SERRANO, DAVID
 SUMAGAYSAY, TOLLY I

25850 HOWARD, GARRETT
 MONROE, JOHNNY M
 RODRIGUEZ, JOSE J

25852 BAHENA, JOSE
 DAVIDSON, MELVIN
 LING, ANTHONY
 POOLE, LILLIE
 SOLTERO, ANDRES

25854 ALLEN, KIMBERLY I
 HEROD, TERRANCE

25856 DUARTE, TONY L
 SAHA, PALAN K

1.

IRIS AVE

2014

(Cont'd)

25858 CHASE, ANNA M
JOHNSON, DASHION N
TAYLOR, RYAN P

25860 CLARK, GUY R
FONTAINE, PAUL L

25862 BOOHER, BRAD
RICHIER, BRIAN
SMITH, JESSE

25864 CORONADO, ALEJANDRO C
DILLARD, MARCUS T
VELEZ, TERESA T

25866 RAFFERTY, TIMOTHY
SPEARMAN, CHARZETTA

25868 CORLEW, ANNA M
DEPUY, RENEE M
PENA, STEPHANIE

25870 FULK, BRANDON P
GUADARRAMA, ROSEMARIE
KENDALL, MELODY E

25872 RUYZ, JACLYN
TIPPENS, LASHONAY

25874 GILBERT, EBONI

25876 SERENE, PHILLIP M

25878 ARRIZON, SERGIO
BUSH, ASHLEY

25880 BAUTISTA, MIKE
GRAHAM, LANE
XIAO, BO

25882 BARFIELD, WAYNE
WHITE, TIFFANEY

25884 DELATORRE, ALEJANDRO
JUAREZ, ANA
PICKER, MAGGIE J

25886 GROUT, SHAWN F
MATTHEWS, KEISHA

25888 BUFKIN, ANTHONY
CANARE, PABLITO

25890 CASTANEDA, JAVIER J
HIMMAT, HOSAI

25892 BROWN, COREY
JONES, BETTY
SCHULKE, GLEN

25894 MCDANIEL, MELISSA
PERIE, MARTHA R
SANCHEZ, ANGELICA M

25898 COPRICH, PAMELA C
LUI, DAVID
WILEY, CRYSTAL N

25900 STATER BROS MARKETS
US BANK NATIONAL ASSOCIATION

1.

IRIS AVE

2014

(Cont'd)

- 25910 DOAN HA
- HOLCOMB JOHN R
- PLAZA AT LAKESIDE
- 25920 1ST SECURE PRIVATE SECURITY
- CREATIVE WOOD CABINETS INC
- CWT ENTERPRISES INC
- DESERT MOON PROPERTIES LLC
- DUVALL, CYNTHIA D
- G DUB ENTERPRISES INC
- GET IT MOVED TRANSPORT SVCS
- GILLILAN, ANTHONY
- JONES SERVICE CO
- KELLY, DONALD
- KEY ASSET SERVICES
- LOPEZ, NATALIE
- LOVE YOUR NEIGHBOR NOW
- OKADA, TAMARA
- PARAGON DESIGN INC
- PEOPLE EMPOWER PEOPLE
- SANCHEZ, JOSE
- SIMPLY LACED
- TABACCO LEAF
- TELFORD, KENNETH L
- WALLACE, MARQUESE
- WILLIAMS, RENICIA Y
- ZOE CITY REFUGE RSTART MISSIONS
- 25940 BANK AMERICA NATIONAL ASSN
- 25950 JACK IN THE BOX INC
- 25960 RANCHITO TACOS AL CARBON
- STARBUCKS CORPORATION

1.

PERRIS BLVD 2014

15020 7-ELEVEN INC
15025 CVS PHARMACY INC
15030 JACK IN THE BOX INC
15075 FAMILY DOLLAR STORES INC
15146 CRUMP, REGINA A
OLAZABA, GENESYS
PURIOY, CRISTINE
RODRIGUEZ, JOSE
RODRIGUEZ, J
SANCHEZ, EDNA
SLACK, DAEJA
15150 BURNS, SHARINA
RAMIREZ, JOSE
REYES, BRIANDA
VILLALOBOS, ANA M
15154 ARANDA, DANIEL A
COLEMAN, TRASHONA
CROSBY, DEMETRIS
GARCIA, JAIME
GASTELUM, ARTURO G
HALL, NASHAUN
HORNE, JEWIANO A
WILLIAMS, KIM
15158 CANO, ARMANDO
CARRERA, LAURA
CARROSO, ROSALIO
CLOUD, PAUL
GARCIA, MIRNA
HERNANDEZ, JAIME
JIMENEZ, ANA
VALENTIN, ATHENA Y
15162 CARRETO, LETICIA
GIBBS, BARBARA
KNIGHTON, MARCEL
LLOYD, MARIAN
LUNA, JUAN M
MOODY, LATOYA R
REYES, MIRIAM
TORRES, TERESA B
WILSON, MICHEAL
15166 RODRIGUEZ, REBECCA
SMITH, CASSANDRA M
STANDIFER, RAHN K
WALLACE, PAMELA
WATTS, MYRON S
ZUNIGA, GILBERTO
15170 ROSE FRANK CONSTRUCTION
15174 WALKER, JEROME
15178 AZPEITIA, ELENA
CISNEROS, CARLOS

1.

PERRIS BLVD

2014

(Cont'd)

15178	EDWARDS, LAUREN GARNES, KILEENA JIMENEZ, BEATRIZ R JOYA, CLEMENTINA MANNING, MARY ROBERTS, JERMAINE ROBINSON, LARON THEUS, RYSHECIA WILLIAMS, TAMIKA
15182	CAMPOS, RUBEN GAINES, KAREN JONES, ROSHAWN LARA, MARTHA NICHOLS, JESSICA
15186	CLAYTON, TIFFANY DEVANT, JAMES HARDAWAY, DELVON MALECKE, LISA ROBINSON, BRANDI ROCKMORE, AMANDA WILLIAMS, SUZANNE
15190	ALEXANDER, KENISHA BLACKWELL, WENDA B CONLEY, ADRIAN GARCIA, ANABEL JACKSON, SARAH PERKINS, MARNISHA ROBINSON, VIVIAN SANTOYO, ANABEL SHORTERS, P
15194	AGUIRRE, EFREN HUGHES, TIERRA MAGA, A M MENDOZA, KRISTAN POSEY, TAKIEDA ROBLES, ANNA M SAMUELS, BARBARA
15198	BROWN, HOWARD CLAXTON, T GRIMES, LATRICE L HALL, PRINCESS MARTINEZ, YOLANDA MEJIA, WATLER J PARRISH, STEVE PLASCENCIA, JOSE RICO, JUANA SANDERS, CORETTA SANTIAGO, PATRICIA
15202	ANDERSON, ROGER DELGADO, ANTONIO

1.

PERRIS BLVD

2014

(Cont'd)

15202	DENNIS, EARL S DUARTE, LLUVIA GEORGE, CHRIS LETE, THOMAS MIDDLETON, R MOORE, IDA SACRISTAN, LILIA
15206	ALARCON, CINTHYA FLEMING, TERESA GUTIEREZ, ELSA JIMENEZ, M LADET, JOEL V LAIRY, ROSE VELASCO, DANIEL
15210	GRINNER, DARICK GRINNER, VINCENT E HERNANDEZ, MIGUEL MYERS, JEAN C NICKLEBERRY, PATRICK QUIJADA, WENDY
15214	ATKINS, JAMEL AXTELL, SHANNON CONNORS, JERROD DEHARO, VELIA LYON, GERALDINE L MILLER, SIEARA D MORALES, JOE S ROBERSON, JANIE SANDOVAL, MAURICIO SIMMS, ISAAC VILLASENOR, JOSE J
15218	ALBALA, JALILEH ALONSO, MISTY E CAMARENA, JESSICA COVARRUBIA, GINA MENJIVAR, JACQUELINE RANGEL, CHRISTOPHER ROMERO, LAURA L STEFFEN, TIMOTHY W
15222	ALVAREZ, ANTONIA J DOTSON, TERESA GORDON, HOLLY HARRIS, TAMEIKA HUITRON, NAYELI MARTINEZ, ANTONIO MONDRAGON, ANTHONY RIVAS, JOSE F RUZA, MATTHEW A
15226	ESTERS, TANIEKA GALVAN, CATALINO

1.

PERRIS BLVD 2014 (Cont'd)

15226	LEE, DIANA C LIZARRAGA, MARTHA MEDINA, JOSE L PEREZ, FABIOLA
15230	BRANDON, DEREK FIGURES, QUANETHA HUDSPETH, MELISSA JAMERSON, RICKEY JOHNSON, AUTHERIE JONES, BRADLEY LAWTY, CHANDA LUGO, AMY MACKENZIE, DANIELLE MAXWELL, JERRY W RICKS, YETTE
15278	TICKETBIDS
15320	DAVIS, GREGORY LOPEZ, MARIA MITCHELL, EMERALD VASQUEZ, AURELIO
15332	COVARRUBIAS-MONTER, JUAN GARCIA, MARIA GUZMAN, HILDA HERNANDEZ, MARIA KELLY, L MORALES, PEDRO OROZCO, LUIS REYES, ANSELMO M
15344	ALVAREZ, MARTHA M CHAMBERS, STEWART
15360	CARNES, WILLIAM MONTIEL, JORGE A SWAYNE, VALERIE J VELER, LORRIE A
15384	CHAVEZ, HILDA T SARWAR, MUHAMMAD
15394	BRANSON, DONELL FERNANDEZ, DESTINEE PARIS, DAVID H TOLBERT, BARRY S
15414	BANKS, LAURA WATSON, KRISTINA
15426	GUTTIEREZ, LORENA LEAL, MARISA MCCALL, LYDIA PINEDA, MAGDALENO SILVER, TEILIA
15452	GARCIA, LETICIA HERNANDEZ, MARIA D
15670	MORENO VALLEY CITY OF

PERRIS BLVD

2014

(Cont'd)

15928 AK FREIGHT SOLUTIONS INC
 AROCHE, JORGE
 BAXTER, JUNE
 CHAVEZ, GILBERT J
 CLAIR, NATHAN
 ECOGEN RECYCLING CENTER
 FLAGSTAFF TRADERS
 JOBFINDERS INC
 MARTIN, KEVIN T
 MARZETT, DAMIEN
 MEN & WOMEN ON MOVE MINISTRY
 MUNOZ, MIKE H
 NATURALLY YOURS BOUTIQUE
 NEW AGE INVESTMENTS
 ROBERTS, SONYA
 ROSS, CHERRY L
 SHAMOLIAN, HOMAYOON
 WAGNER, REGINA
 WEST GATE LIQUOR
 WHITE, TAMMI
 15952 DENTAL CARE MORENO VALLEY
 15975 HOME DEPOT USA INC
 LA ROSA BAKERY 4
 15980 CAR ENTERPRISES INC
 15982 RADE, MARY E
 15991 FARMER BOY FOODS INC
 16020 WALGREEN CO
 16040 KENTUCKY FRIED CHICKEN
 16080 FITNESS 19
 16090 PIRIS CLEANER
 WATER SHOP
 16100 YUCAIPA COMPANIES LLC
 16110 LOS AMAYA WIRELESS NO3
 SMOKE SHOP MV
 SWEET TART FROZEN YOGURT
 16130 CARLS JR
 16150 DEL TACO
 16190 CERTIFIED TIRE AND SERVICE CTR
 16210 AUTOZONE INC
 16340 EXTRA SPACE MANAGEMENT INC
 16380 ALBERTOS MEXICAN FOOD
 BARRAZA-PENUELAS ANGELICA
 16420 CELLULAR SOLUTIONS
 16466 PRESTIGE STATIONS INC
 SPPI
 16641 LEE KEN SERVICE SUPPLY
 LEE, KEN A
 16659 BRAATEN, LARRY G
 16675 MARTINEZ, CORINA
 17041 WILLIAMS, RICHARD A

1.



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PERRIS BLVD 2014 (Cont'd)

17111 DERDA, MARIA
17300 ELDORADO STONE
STONECRAFT
17500 BERKELEY LEASING
WALGREEN CO
17800 MJO STAFFING-MV
ROSS STORES INC

1.

IRIS AVE 2010

24015 ZIMMER, RANDAL H
 24518 SANTIAGO, CECILIA
 24525 CROWN OF LIFE MINISTRIES
 24581 REBOLLO, SALVADOR
 24601 RANCHO PLUMBING
 VALLEY MEDIVAN
 24623 LUPO, BARBRA H
 24771 WEST ANGELES CH GOD IN CHRST
 24850 KEEGAN, CAROL A
 KEEGAN/ROBERTSON COMPANY
 25790 ALMONTE, CARLO M
 BIG GUYS PIZZA PASTA & SPT BAR
 GRAHAM, MICHELLE M
 PARKER, JEROME
 25792 HARRIS, SHANISHA
 MEJIA, RUBEN L
 PALACIO DE ORO SOUTH ASSOC
 PRILLWITZ, MONIQUE
 SWAUNCY, SHERMAN
 25794 GRAYSON, EDDIE
 JOHNSON, TAURIONA
 SPEIGHTS, SHAWNTIANA
 25796 TAYLOR, AUJAH
 TOROK, MIHAELA
 25798 ARCHER, ASHLYNN D
 SCOTT, PHILIP
 25800 OVANDO, DIANA L
 WILSON, FRANK
 25802 ANNIE, MC C
 RAMIREZ, ELIZABETH F
 SAENZ, ERNEST
 YORK, ARLISHA
 25804 DAUGAARD, TRACY A
 LINDSEY, JUNE A
 25806 KEITH, KEVIN
 WILLIAMS, KRISTIAN L
 25808 KAZOR, JEFF A
 MOORE, KWASI C
 25810 BUSHEY, CRYSTAL M
 EMAT PRODUCTIONS INC
 FREY, SARAH M
 JACKSON, EMANUEL
 25812 CHAVEZ, ARACELI E
 MACWAN, NILESHKUMAR I
 25814 HERNANDEZ, DAVID
 HU, GANG
 JACOBO, IRMA
 25816 RIVERA, HENRY M
 SMITH, WENDY E
 25818 LIN, JASON J

1.

IRIS AVE

2010

(Cont'd)

25820 COLLINS, ROBERT
 25822 CALIMA, ROBERT P
 NAPIER, BRANDON
 TORRES, AUGUST C
 25824 GALVEZ, EULALIO
 HIGGINS, SHAUN
 VINLLAN, JEANETTE
 25826 PERALES, ANTONIO
 RICE, JOSEPH
 25828 BAGIRYAN, IRINA
 JAUREGUI, LYDIA
 25830 DAVIS, RODNEY J
 WHITTED, TARANGELA
 WOODSON, CHANTEL
 25832 ADAMS, EMMITT
 ROBINSON, EBONY J
 25834 MITCHELL, BRIAN W
 VARGAS, ALFONSO R
 WILSON, RICHARD A
 25836 CHATMAN, TAMOND A
 DIMESORO, OGECHUKWU
 LEE, VIVIAN
 25838 GHALY, HANY I
 VILLEGAS, CHARLENE M
 25840 RODRIGUEZ, LYNN M
 WALLER, CHRIS
 25842 KIM, CHRISTOPHER
 SMITH, JATRONA
 25844 SERNA, CLORISSA
 WEYLAND, GORDON P
 25846 LACHAPELLE, NICOLE I
 ROWE, CAREN S
 25848 ESQUIVEL, SERRANO N
 FLOWERS, ARTESHA R
 25850 CRAIG, BETHANY
 MONROE, JOHNNY M
 RODRIGUEZ, STEVEN A
 25852 LING, ANTHONY
 25854 CAWTHORNE, REGINA
 LINARES, BLANCA E
 25856 REESE, HERMAN L
 RODRIGUEZ, NICHOLAS J
 25858 CHASE, ANNA M
 JOHNSON, DONIELLE
 PENRICE, TONYA
 YOUNG, TRAVIS L
 25860 CLARK, GUY R
 DIAZ, MARYANN
 DUARTE, TONY L
 FONTAINE, PAUL L

1.



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IRIS AVE

2010

(Cont'd)

25862 POTTROFF, DENNISE
 RICHIER, MERLE P
 25864 AZAD, ASHLEY
 CORONADO, ALEJANDRO C
 25866 CHRISTENSEN, DUSTIN S
 DASS, SHANE
 STEELE, STEPHANIE L
 25868 DEPUY, RENEE M
 MARINO, MATTHEW
 25870 JIMENES, VIRIDIANA
 KENDALL, MELODY E
 25872 GARCIA, EWING
 LIU, HARRIS H
 ORTIZ, OCTAVIO
 RODRIGUEZ, LIDIA
 RUYZ, JACLYN
 25874 WILKES, ROBERT
 25876 BUTLER, RASHAAD
 25878 GUILLERMO, LEOPOLDO
 OLSEN, BETTY
 QUALLS, JUAN
 25880 GRAHAM, LANE
 REINALDA, STACI
 TORRES, MARK J
 25882 DELEON, ALISIA
 25884 MOORE, CASIE L
 PICKER, MAGGIE J
 25886 GROUT, SHAWN F
 LU, SAM
 WHITE, EFFIE J
 25888 CANARE, PABLITO
 TORRES, THOMAS V
 VILLACORTA, NELSON
 25890 GALVEZ, ROSELLI S
 HIMMAT, HOSAI
 SMITH, ROXANE F
 25892 QUICKLEY, MICHELLE
 ROBINSON, ROBIN
 TURNER, A
 25894 FOK, GORDON
 MILNER, NORMAN V
 ROMERO, MARLON I
 25896 JONES, CLIFFORD N
 PHYLOW, D
 25898 PURIFOY, JEFFERY B
 SPRING, TIMOTHY
 25900 STATER BROS MARKETS INC
 WELLS FARGO BANK NATIONAL ASSN
 25910 HOLCOMB JOHN R
 NAMASTE

1.

IRIS AVE 2010 (Cont'd)

- 25910 PLAZA AT LAKESIDE
Q NAILS & SPA INC
- 25920 1ST SECURE PRIVATE SECURITY
ABC LEARNING TREE ACADEMY INC
BRACKINS, SANDRA L
CREATIVE WOOD CABINETRY INC
CWT ENTERPRISES INC
DIRECT PROTECTIVE SERVICES
EUNICE J ROBLES
KEY ASSET SERVICES
LOVE YOUR NEIGHBOR NOW
NELSON, SAMUEL C
OKADA, TAMARA
PARAGON DESIGN INC
PEOPLE EMPOWER PEOPLE
R6 SYSTEMS
ROCIO ILEANA CAMACHO
SZL
TELFORD, ALICE A
THOMPSON, DARNELL
WCCOMFORT INC
- 25940 BANK AMERICA NATIONAL ASSN
- 25950 JACK IN THE BOX INC
- 25970 BELAL GHALIB SADIK
DONNA ALESANDRO SADIK
- 25976 FORECAST HOMES PLACIDIO DEORO

1.

PERRIS BLVD 2010

15020 7-ELEVEN INC
 15025 CVS PHARMACY INC
 15030 JACK IN THE BOX INC
 15320 BEATRIZ, RANGEL D
 LOPEZ, MARIA
 MUNOZ, BERTA
 PARRA, ELVIRA
 VALENZUELA, VERONICA
 VASQUEZ, AURELIO
 15332 ARREOLA, IGNACIO
 FOUR EAST A CALIF GEN PARTNR
 GOMEZ, F
 GUZMAN, HILDA
 KELLY, L
 MORALES, ALEX
 OROZCO, LUIS
 ORTEGA, RAY
 VILLEGAS, TEODORO
 15344 ALVAREZ, MARTHA M
 DEVIDES, ENRIQUE
 DOMINGUEZ, DIANA
 LEMUZ, ELISEL
 VALENZUELA, APOLONIO M
 15360 CARR, CHANTEL
 MONTIEL, JORGE J
 SWAYNE, VALERIE J
 15384 ARIAS, OLVIN
 BELTRAN, LUIS
 CALDERON, ARACELI
 CHAVEZ, HILDA T
 CUEVAS, RENE A
 HALL, CHRISTINA
 NORIEGA, MABEL
 SARWAR, MUHAMMAD
 15394 TOLBERT, BARRY S
 WILLIAMS, LOUISE
 15414 BROWN, LANESHIA
 TORRES, ERNESTO
 TURNER, ISAAC
 VALENZUELA, VERONICA
 15426 GONZALEZ, EVANGELINA
 15452 GONZALEZ, REYNA
 HERRERA, TORRES M
 15670 MORENO VALLEY CITY OF
 15928 AGUAYO, ROSA E
 DUFFY, SHELLI
 DUFFY-HARRIS, STEPHANIE D
 FLAGSTAFF TRADERS
 HOUSE, THOMAS
 JOBFINDERS INC

PERRIS BLVD 2010 (Cont'd)

15928 MEN & WOMEN ON MOVE MINISTRY
MUNOZ, MIKE H
NEW AGE INVESTMENTS
ROSS, CHERRY L
SHAMOLIAN, HOMAYOON
15952 MD INVESTMENTS
TOUCH ONE CELLULAR
15975 HOME DEPOT USA INC
15982 RADE, MARY E
15991 FARMER BOYS
16020 WALGREEN CO
16080 FITNESS 19
16090 PIRIS CLEANER
16100 FRESH & EASY NEIGHBORHOOD MKT
GO WIRELESS OF SAN DIEGO INC
16110 ALONDRA HOME FASHION
DELGADO WIRELESS
FASHION HAIR SALON
FREEWAY INSURANCE SERVICES
JAMIES
LEVAN, THI K
MISTER YOU EXPRESS 3
ROMEROS PARTY SUPPLY
16150 DEL TACO
16170 ARBYS
CHASE NEWPORT & CO INC
GUS CHAVEZ INC A CORP
16340 EXTRA SPACE MANAGEMENT INC
16380 ALBERTOS MEXICAN FOOD
LYNN GREEN BEAUTY
NICHOLAS JACKSON
TRENDY KIDS
16466 PRESTIGE STATIONS INC
SALIB ENTERPRISES INC
16610 SWEET TART FROZEN YOGURT
16641 KIMBERLY S HOUSE CLEANING
LEE KEN SERVICE SUPPLY
LEE, JOHN L
16659 OCCUPANT UNKNOWN,
17041 WILLIAMS, RICHARD A
17300 ELDORADO STONE
STONECRAFT
17500 BERKELEY LEASING
SELECT STAFFING
17800 DDS DISTRIBUTION CENTER
MJO STAFFING-MV
OCCUPANT UNKNOWN,
ROSS STORES INC

1.

IRIS AVE 2005

24161 BLOOMQIST CHARLES TRAINING CTR
24581 CENDEJAS, DANIEL
24601 GILL, DEREK M
24771 WEST ANGELES CH GOD CHRIST INC
25900 ONSITE BUILDERS
STATER BROS MARKETS
25910 HOLCOMB JOHN R
25920 JON VANESS
NUTRISHOP
PEOPLE EMPOWER PEOPLE
25976 FORECAST HOMES PLACIDIO DEORO

1.

PERRIS BLVD 2005

15020 7-ELEVEN INC
15320 BEATRIZ, RANGEL
CORNEJO, MIGUEL
ORTEGA, ALEJANDRA
VASQUEZ, AURELIO
15332 ARREOLA, IGNACIO
MENDEZ, MARTHA
ORTEGA, CARMEN
PRECIADO, MARTHA
REYES, ANSELMO
15344 DEVIDES, ENRIQUE
GARCIA, MAURICIO
LEMUZ, ELISEL
RODRIGUEZ, JESSICA
15360 GARCIA, ANGELA
GOMEZ, MARCO D
WILLIAMS, DANIELLE L
15384 ARIAS, OLVIN
CALDERON, ARACELI
HALL, CHRISTINA
MONTES, LEONARDA
SAVITZ, EDITH R
SMITH, KELLY
15394 BARNEY, EFFIE
PARRISH, JOANNA
WILLIAMS, LOUISE
15414 BROWN, LANESHIA
LEON, MAXIMO
MCCLENDON, KEMEO
PIERRE, ALVIN
PINEDA, NANCY
RAMIREZ, ROBERT
ROBERTSON, SHAY
SANDOVAL, VENTURA
SKIPPER, JACKIE
TURNER, ISAAC
15426 ALLEN, DONNA
BLACKBURN, JAMES
RUIZ, JORGE M
SADLER, ANGELA
15452 MALDONADO, ROSA
ROBLEDO, CATALINA
RUIZ, PASCUAL
15670 MORENO VALLEY CITY OF
15795 MANNA CHRISTIAN FELLOWSHIP
RAINBOW RANCH
15928 AVERY-JR, CHARLES E
BAILEY, ROBERTA Y
BURNS, ALEXANDER L
COMMONWEALTH COMMUNITY SVC CTR

PERRIS BLVD 2005 (Cont'd)

15928 ESCALERA, FRANCES A
GARCIA, MARGIE A
HAZLETT, WILLIAM H
HERBEST, ANGELA N
LONA, REBECCA
MCQUEEN, SHAREE
MOORE, DENISE
MUNOZ, JONNETTE M
NEW AGE INVESTMENTS
ORNELAZ, JOLENE Y
PEEVY, FREDERICK L
PENA, MARCELINO
RICHARDSON, WILLIE
SORIANO, STANLEY A
TARUMOTO, BRENDA L
TRAVIS, DELORES R
WILLIAMS, ALENE
WILLIAMS, MARLENE M
WINANS, MYRTLE F
15952 MOORE, ERIC C
15975 HOME DEPOT USA INC
16380 EASYSSELL REALTY
SMOKE SHOP & TOBACCO
16420 FAST BUCKS
US HEALTHWORKS INC
16466 PRESTIGE STATIONS INC
SALIB ENTERPRISES INC
16641 LEE KEN SERVICE SUPPLY
LEE, JOHN
16659 BRAATEN, LARRY G
16675 LEE, KEN W
17041 WILLIAMS, RICHARD A
17111 OFF THE COUCH ENTERTAINMENT
RAYMOND AL ENTERPRISES
WEN, MEI Y
17500 GLOBAL INDUSTRIAL

1.



-

IRIS AVE 2000

24161 BLOOMQIST CHARLES TRAINING CTR
24581 KOON, SHIH D
24601 OCCUPANT UNKNOWN,
24623 LUPO, SALVATO
24771 WEST ANGELES CH GOD CHRIST INC

1.

PERRIS BLVD 2000

15298 GILL, WILLIAM
 15310 BATECH, KAMAL
 15320 OCCUPANT UNKNOWN,
 15332 ORTEGA, CARMEN
 15344 ALVAREZ, ELISA
 15360 BAUTISTA, LEA
 GOMEZ, MARCO
 MEADOW VIEW PROPERTIES
 15384 CHAVEZ, M I
 HARROD, EMBERLY J
 SAVITZ, EDITH R
 15394 GILLETTE, ANTHONY G
 RELIFORD, DEREK
 15426 BURCH, BRIAN
 THOMAS, RONALD
 15452 SANCHEZ, DANIEL
 ZBIKOWSKI, MAY
 15670 MORENO VALLEY CITY OF
 15795 KINGS CHAPEL CHRISTIAN CENTER
 MOSLEY, ORVAL C
 15925 TEA ROOM CHINESE REST
 15928 ACE INTERNATIONAL SHIPPER
 B P CONSTRUCTION
 BADON, JEROME L
 BAUTISTA, ERNEST
 BENHAM, P C
 CCC INTERNATIONAL INC
 LOPEZ, CATHY
 LY, S
 PATTEN, P C
 PERRIS DONUT & BURGER SHOP
 RADE, MARY
 RANDALL, KEITH R
 RICHARD, ANTHONY
 SEGAL, M F
 WALLACE, S D
 WILLIAMS, F V
 15952 HERRERA, SANTOS R
 KAMF CORP BUSINESS SERVICES
 MACDONALD, JACKIE
 SISTER LIZS ACCESSORIES
 15974 KUTZ PLUS
 OCCUPANT UNKNOWN,
 15980 SHELL FOOD MART INC
 16466 PRESTIGE STATIONS INC
 SALIB ENTERPRISES INC
 16641 LEE KEN SERVICE SPPLY
 OCCUPANT UNKNOWN,
 16659 BRAATEN, LARRY



-

IRIS AVE 1995

24161 BLOOMQIST CHARLES TRAINING CTR
24756 NORMAN LENNIS H
24771 OOTEN, JOHN

1.

PERRIS BLVD 1995

15310 LAKE PERRIS LIQUOR AND DELI
15394 SCOBAY, RICHARD L
15426 OCCUPANT UNKNOWN
15795 KINGS CHAPEL CHRISTIAN CENTER
15925 TEA ROOM CHINESE REST
15928 NEVINS, RICHARD F
PARKER, TINA
15952 MATULEWICZ JACKI INSURANCE
NAIL COTTAGE
15974 HAIR ETC BARBER & BEAUTY
15980 SHELL FOOD MART INC

1.

IRIS AVE 1990

IRIS AV 92388
MORENO VALLEY

24161	★ VAUGHAN B STABLES	924-5116	6
24581	KOON Shih Doung	924-5235	+0
24601	XXXX	00	
24623	LUPO Salvatore	242-6818	6
24771	SCRUGGS Michele	924-9533	6
24850	KEEGAN James P	00	6
★	1 BUS	5 RES	1 NEW

1.

PERRIS BLVD 1990

15168	CATANZARO Jos	924-2292	6
15320	DELCARMEN Inocencio	924-9649	+0
	WEIL Brent A	247-5282	+0
15332	HOGGAN Nancy K	00	+0
	PATCH Raymond E	00	4
	*PERRIS VLY APTS	247-4770	+0
	SAINZ Maria	247-3269	9
15344	MELENDEZ Tulio N	00	4
15360	ARMSTRONG Paul S	00	+0
	LONG Sheila	247-3282	+0
	LONG Timmy	247-3282	+0
	OKORO Jerry	247-1356	+0
15384	BREWER Richard W	00	+0
	HERNANDEZ Roberto	00	4
	LUMLEY Marc	247-6714	9
15394	CHUNG Jaeyong	242-5054	+0
	CUNNINGHAM Harold	924-5437	+0
	HONG Sam	247-9539	+0
	PACHECO Oscar	247-1495	+0
15414	CHESNUT Cheryl L	00	4
	OSBORNE Roosevelt	00	7
15426	JEFFERSON Kenneth L	00	+0
15452	JACKSON Odessa	00	+0
	SHANLEY Jas F	924-9604	7
15670	*MORENO VLY PUB WRKS	247-2204	9
15795	FLORES D	247-5015	9
	*KINGS CHPL CHRSTN	242-2210	6
	MOSLEY Orval C Rev	242-2210	6
	*RAINBOW RANCH	242-2210	6
16641	BRAATEN Donald J	00	5
	LEE John	242-3588	6
16659	MARCH James H	00	7
16675	HUSETH Audrey	653-8854	
	HUSETH Duane	653-8854	
	NAGGLE Denise D	00	+0
16756	XXXX	00	
17010	*C B I NA CON INC	943-5556	+0
	*SHASTA ELECTRIC	943-0250	9
17041	EIDE David V	00	7
17111	AVONNE Raymond L	00	+0
	RAYMOND Al	653-3551	
	RAYMOND Al	653-6362	5
	*RAYMOND AL ENTPRS	653-1709	9
	RAYMOND Sally	653-3551	
17801	XXXX	00	
17867	*ATLASTA RANCH	653-2000	
	DURFEY Brett F	00	4
	MORENO Joe Jr	657-3031	4
	*MORENO JOE JR	653-2000	4
	MORENO Joe Jr	657-4581	5
	* 72 BUS 208 RES 72 NEW		

1.

IRIS AVE 1985

IRIS AV 92388

SUNNYMEAD

	1	RANCHO PLUMBERS/L	653-1571 +5	
24015		PADDOCK WARREN G	924-3107 +5	
24161		XXXX	00	
24581		ARNOLD WILLIS	653-5663	1
24601		GILL KENNETH	653-7802	3
24623		LUPO SALVATORE	653-6817	2
24756		XXXX	00	
24765		XXXX	00	
24771		MITCHELL CHAS R	653-8009	3
24900		XXXX	00	
	★	1 BUS	9 RES	2 NEW

PERRIS BLVD 1985

15332	LONG PENNY	924-1874 +5
15344	XXXX	00
15360	HAYNES JAS E	924-5287 +5
	MOORE ESKEY J	656-1967 +5
15384	BUCKLEY NANCY	924-2471 +5
	KIRBY TONI	924-2129 +5
15394	XXXX	00
15414	BROCK BILL	656-3852 +5
	WELLS N	924-5559 +5
15426	RAVARE RAYMOND	924-2849 +5
	RICHARDSON CURTIS	653-8347 +5
15452	JENSEN TINA	924-1584 +5
	MARSDEN S A	653-8536 2
15670	GUERDON INDUSTRIES	653-8471 4
15795	KINGS CHPL PENTCSTL	653-2210 2
	MOSLEY ORVAL C REV	653-9211 +5
	RAINBOW RANCH	653-2210 +5
★	43 BUS	151 RES
		73 NEW

1.



-

IRIS AVE 1981

IRIS AV 92388
SUNNYMEAD

24015	XXXX	00	
24161	HAWK PHILLIP	653-0661	0
	PHILLIPS WILLIAM	653-5191	+1
	TATE WILMA V	653-4285	6
24581	ARNOLD WILLIS	653-5663	+1
24756	XXXX	00	
24765	XXXX	00	
24771	CARLTON COY R	653-1345	
24900	XXXX	00	
★	0 BUS	9 RES	2 NEW

1.

PERRIS BLVD 1981

15168	XXXX	00
15260	XXXX	00
15310	XXXX	00
15315	KING WILLIAM	656-2103 +1
15320	LENTA JAMES	653-8672 +1
15332	WERT DIANE L	653-1524 +1
	WOODS TIMOTHY	653-3424 +1
15344	ANDERSON MARY	653-7836 +1
	GARDNER JIMMIE	653-7636 0
	INMAN RANDY M	653-6453 0
15360	COOPER ULYSSES	653-3269 +1
	KELLNER STEVEN	653-4325 +1
15384	MONROE PAUL	653-7282 +1
	STAHL DANL	653-5457 +1
15394	BUNDURA GARY R	656-2417 +1
15414	VORCE JOANNE	653-7829 +1
15426	WALTON C	653-0242 +1
15670	PACIFIC LIVING SYS	653-8471 6
★	17 BUS	133 RES
		48 NEW

1.



-

IRIS AVE 1975

IRIS AV 92388 SUNNYMEAD

24015	LIEBHERR PAUL K	653-	
24161*	RANCHO D E T O D O	653-1590	4
24756	DURBIN P M	653-3095	4
24765*	UNITED CORRUGATING	653-5683	4
24771	CARLTON COY R	653-1345	
24900	SUMMERS DAVID R	653-4787	
24	* 2 BUS	4 RES	0 NEW

1.

PERRIS BLVD 1975

15168	CARLSON MERRITT	653-65
	GARZA RODOLFO	653-39
15260	XXXX	00
15310*	CIRCLE K FOOD 531	653-27
15320	CLARK EUGENE R	653-11
	FOSSE JERRY	653-3
	MINEGAR STEVE	653-1
	RAMIREZ ARTURO	653-1
15332	GILL OWEN J JR	653-6
	HENNING ROBT D	653-1
	OAS JOHN R	653-7
	RESENDEZ BOBBI	653-6
15344	BOWEN TEDDY	653-1
	SHIMEALL ROBT	653-1
15600	XXXX	00
15670*	ARLINGTON HOMES INC	653-
	*GREENBRIAR HOMES	653-
	*RAMADA HOMES INC	653-
16641	LEE JOHN	653-
16659	STAROSTKA WM	653-
16675	XXXX	00
	* 14 BUS 108 RES	34

Iris Park

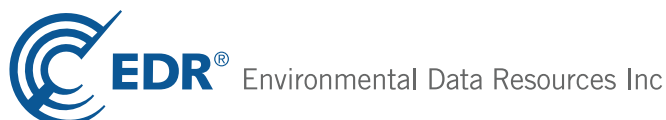
Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551

Inquiry Number: 5844302.2s

October 25, 2019

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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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 EDR. The report was designed to assist parties seeking to meet the search requirements of the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600).

STANDARD ENVIRONMENTAL RECORDS	Default Area of Concern (Miles)*	property	1/10	> 1/10
Federal NPL site list	1.0	0	0	0
Federal Delisted NPL site list	1.0	0	0	0
Federal CERCLIS list	0.5	0	0	0
Federal CERCLIS NFRAP site list	0.5	0	0	0
Federal RCRA CORRACTS facilities list	1.0	0	0	0
Federal RCRA non-CORRACTS TSD facilities list	0.5	0	0	0
Federal RCRA generators list	0.25	0	1	0
Federal institutional controls / engineering controls registries	0.5	0	0	0
Federal ERNS list	property	0	-	-
State- and tribal - equivalent NPL	1.0	0	0	0
State- and tribal - equivalent CERCLIS	1.0	0	0	0
State and tribal landfill and/or solid waste disposal site lists	0.5	0	0	0
State and tribal leaking storage tank lists	0.5	0	2	0
State and tribal registered storage tank lists	0.25	0	0	0
State and tribal institutional control / engineering control registries	not searched	-	-	-
State and tribal voluntary cleanup sites	0.5	0	0	0
State and tribal Brownfields sites	0.5	0	0	0

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists	0.5	0	0	0
Local Lists of Landfill / Solid Waste Disposal Sites	0.5	0	0	0
Local Lists of Hazardous waste / Contaminated Sites	1.0	0	1	0
Local Lists of Registered Storage Tanks	0.25	0	1	0
Local Land Records	0.5	0	0	0
Records of Emergency Release Reports	0.5	0	0	0
Other Ascertainable Records	1.0	0	7	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records	1.0	0	1	0
Exclusive Recovered Govt. Archives	not searched	-	-	-

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

EDR Exclusive Records	1.0	0	1	0
Exclusive Recovered Govt. Archives	not searched	-	-	-

*The Default Area of Concern may be adjusted by the environmental professional using experience and professional judgement. Each category may include several databases, and each database may have a different distance. A list of individual databases is provided at the back of this report.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

IRIS PARK
IRIS AVENUE & PERRIS BOULEVARD
MORENO VALLEY, CA 92551

COORDINATES

Latitude (North): 33.887532 - 33° 53' 15.11261"
Longitude (West): 117.222763 - 117° 13' 21.947021"
Elevation: 1500 ft. above sea level

EXECUTIVE SUMMARY

SEARCH RESULTS

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

<u>Name</u>	<u>Address</u>	<u>Dist/Dir</u>	<u>Map ID</u>	<u>Page</u>
SHELL PERRIS BLVD. LUST: LUST	15980 PERRIS BLVD.	<1/10 WNW	▲ A2	12
SHELL SERVICE STATION RCRA-SQG: RCRA-SQG FINDS: FINDS ECHO: ECHO CERS: CERS LUST: LUST SWEEPS UST: SWEEPS UST HAZNET: HAZNET Cortese: CORTESE	15980 PERRIS BLVD	<1/10 WNW	▲ A3	14

ADDITIONAL ENVIRONMENTAL RECORDS

<u>Name</u>	<u>Address</u>	<u>Dist/Dir</u>	<u>Map ID</u>	<u>Page</u>
WALGREENS CIWQS: CIWQS CERS: CERS CERS HAZ WASTE: CERS HAZ WASTE	16020 PERRIS BLVD	<1/10 W	▲ 1	9
SHELL SERVICE STATION RCRA-SQG: RCRA-SQG FINDS: FINDS ECHO: ECHO CERS: CERS LUST: LUST SWEEPS UST: SWEEPS UST HAZNET: HAZNET Cortese: CORTESE	15980 PERRIS BLVD	<1/10 WNW	▲ A3	14
ROLLING RIDGE CLEANERS DRYCLEANERS: DRYCLEANERS	15974 PERRIS BLVD STE A	<1/10 WNW	▲ A4	35
ROLLING RIDGE CLEANERS INC DRYCLEANERS: DRYCLEANERS	15974 PERRIS BLVD UNIT A	<1/10 WNW	▲ A5	36
ROLLING RIDGE CLEANERS, MALEK AYASS, DBA DRYCLEANERS: DRYCLEANERS	15974 PERRIS BLVD UNIT A	<1/10 WNW	▲ A6	37
ROLLING RIDGE CLEANERS, JOA PROP DBA DRYCLEANERS: DRYCLEANERS	15974 PERRIS BLVD UNIT A	<1/10 WNW	▲ A7	38
TAN TRAN DRYCLEANERS: DRYCLEANERS	15974 PERRIS BLVD UNIT A	<1/10 WNW	▲ A9	39

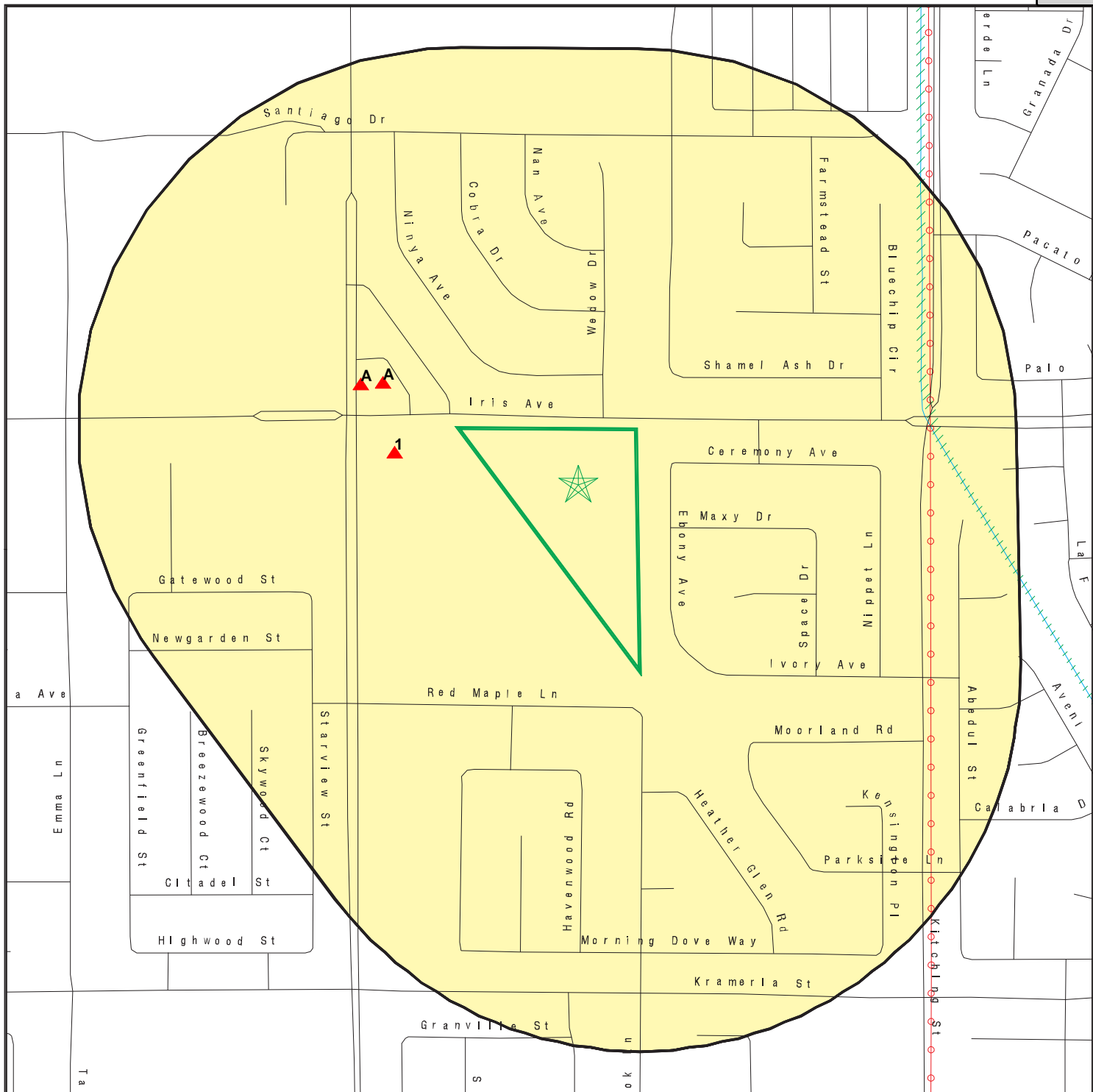
EDR HIGH RISK HISTORICAL RECORDS

EXECUTIVE SUMMARY

<u>Name</u>	<u>Address</u>	<u>Dist/Dir</u>	<u>Map ID</u>	<u>Page</u>
ROLLING RIDGE CLEANERS INC EDR Hist Cleaner: EDR Hist Cleaner	15974 PERRIS BLVD STE A	<1/10 WNW	▲ A8	38

EDR RECOVERED GOVERNMENT ARCHIVES

<u>Name</u>	<u>Address</u>	<u>Dist/Dir</u>	<u>Map ID</u>	<u>Page</u>
Not Reported				



- 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

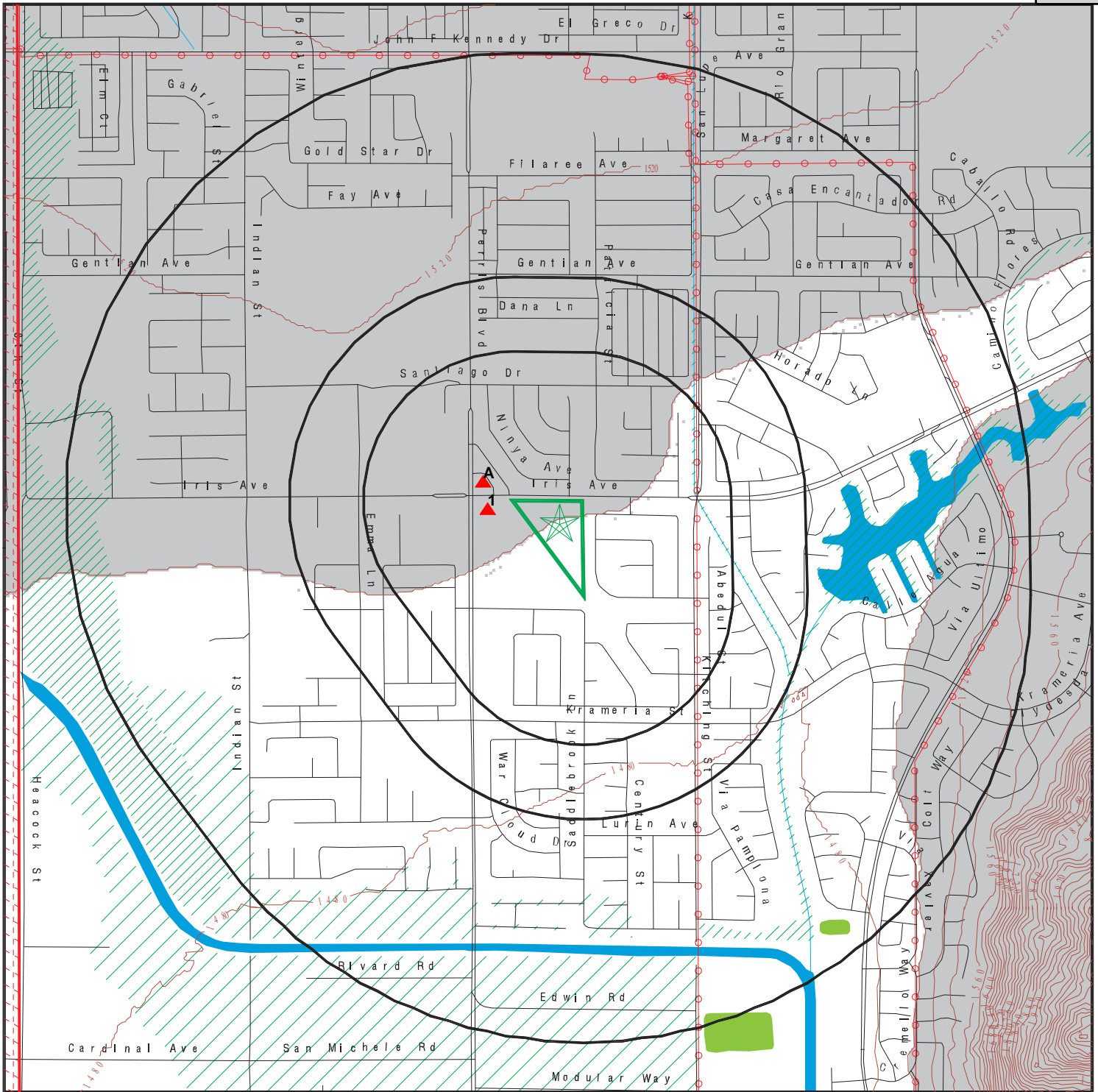
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern















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: Iris Park
 ADDRESS: Iris Avenue & Perris Boulevard
 Moreno Valley CA 92551
 LAT/LONG: 33.887532 / 117.222763

CLIENT: AES Due Diligence, Inc
 CONTACT: Rick Darwicki
 INQUIRY #: 5844302.2S
 DATE: October 25, 2019 2:02 pm

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



-  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: Iris Park
 ADDRESS: Iris Avenue & Perris Boulevard
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 LAT/LONG: 33.887532 / 117.222763

CLIENT: AES Due Diligence, Inc
 CONTACT: Rick Darwicki
 INQUIRY #: 5844302.2S
 DATE: October 25, 2019 1:59 pm

Packet Pg. 715

MAP FINDINGS

LEGEND

FACILITY NAME FACILITY ADDRESS, CITY, ST, ZIP		EDR SITE ID NUMBER
◆ MAP ID#	Direction Distance Range (Distance feet / miles)	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, see the section of the report Records Searched and Currency.
	Relative Elevation Feet Above Sea Level	
Worksheet:		
Comments: Comments may be added on the online Vapor Encroachment Worksheet.		

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

WALGREENS 16020 PERRIS BLVD, MORENO VALLEY, CA, 92551		S121689841
▲ 1	W <1/10 (318 ft. / 0.06 mi.)	Local Lists of Hazardous waste / Contaminated Sites Other Ascertainable Records
	4 ft. Higher Elevation 1504 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

CERS HAZ WASTE: Local Lists of Hazardous waste / Contaminated Sites

Name: WAGLREENS #9616
Address: 16020 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Site ID: 84044
CERS ID: 10326247
CERS Description: Hazardous Waste Generator

CIWQS: Other Ascertainable Records

Name: WALGREENS
Address: 16020 PERRIS BLVD
City,State,Zip: MORENO VALLEY, CA 92551
Agency: Iris Partners LLC
Agency Address: 1150 N Mountain Ave #109, Upland, CA 91786
Place/Project Type: Construction - Commercial
SIC/NAICS: Not Reported
Region: 8
Program: CONSTW
Regulatory Measure Status: Terminated
Regulatory Measure Type: Storm water construction
Order Number: 99-08DW
WDID: 8 33C341703
NPDES Number: CAS000002

MAP FINDINGS

WALGREENS, 16020 PERRIS BLVD, MORENO VALLEY, CA 92551 (Continued)

Adoption Date:	Not Reported
Effective Date:	06/06/2006
Termination Date:	12/18/2007
Expiration/Review Date:	Not Reported
Design Flow:	Not Reported
Major/Minor:	Not Reported
Complexity:	Not Reported
TTWQ:	Not Reported
Enforcement Actions within 5 years:	0
Violations within 5 years:	0
Latitude:	0
Longitude:	0

CERS: Other Ascertainable Records

Name:	WAGLREENS #9616
Address:	16020 PERRIS BLVD
City,State,Zip:	MORENO VALLEY, CA 92551
Site ID:	84044
CERS ID:	10326247
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-11-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRPP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-11-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-10-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not Reported
Eval Division:	Riverside County Department of Env Health
Eval Program:	HMRPP
Eval Source:	CERS
Eval General Type:	Other/Unknown
Eval Date:	10-10-2013

MAP FINDINGS

WALGREENS, 16020 PERRIS BLVD, MORENO VALLEY, CA 92551 (Continued)

Violations Found: No
 Eval Type: Other, not routine, done by local agency
 Eval Notes: Not Reported
 Eval Division: Riverside County Department of Env Health
 Eval Program: HW
 Eval Source: CERS

Coordinates:

Site ID: 84044
 Facility Name: Wagreens #9616
 Env Int Type Code: HWG
 Program ID: 10326247
 Coord Name: Not Reported
 Ref Point Type Desc: Center of a facility or station.
 Latitude: 33.887890
 Longitude: -117.225570

Affiliation:

Affiliation Type Desc: Legal Owner
 Entity Name: Walgreen Co.
 Entity Title: Not Reported
 Affiliation Address: 200 Wilmot Road
 Affiliation City: Deerfield
 Affiliation State: IL
 Affiliation Country: United States
 Affiliation Zip: 60015
 Affiliation Phone: (847) 914-2264

Affiliation Type Desc: Parent Corporation
 Entity Name: Walgreens
 Entity Title: Not Reported
 Affiliation Address: Not Reported
 Affiliation City: Not Reported
 Affiliation State: Not Reported
 Affiliation Country: Not Reported
 Affiliation Zip: Not Reported
 Affiliation Phone: Not Reported

Affiliation Type Desc: Environmental Contact
 Entity Name: Verisk 3E, Regulatory Department/Walgreen Co.
 Entity Title: Not Reported
 Affiliation Address: 3207 Grey Hawk Ct., Suite 200
 Affiliation City: Carlsbad
 Affiliation State: CA
 Affiliation Country: Not Reported
 Affiliation Zip: 92010
 Affiliation Phone: Not Reported

Affiliation Type Desc: Identification Signer
 Entity Name: Melissa Vales, on behalf of Walgreen Co.

MAP FINDINGS

WALGREENS, 16020 PERRIS BLVD, MORENO VALLEY, CA 92551 (Continued)

Entity Title:	Regulatory Compliance Specialist, Verisk 3E
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	Not Reported
Affiliation Type Desc:	Operator
Entity Name:	Walgreen Co.
Entity Title:	Not Reported
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	(847) 914-2264
Affiliation Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	Not Reported
Affiliation Address:	4065 County Circle Drive, Room 104
Affiliation City:	Riverside
Affiliation State:	CA
Affiliation Country:	Not Reported
Affiliation Zip:	92503
Affiliation Phone:	(951) 358-5055
Affiliation Type Desc:	Document Preparer
Entity Name:	Melissa Vales, on behalf of Walgreen Co.
Entity Title:	Not Reported
Affiliation Address:	Not Reported
Affiliation City:	Not Reported
Affiliation State:	Not Reported
Affiliation Country:	Not Reported
Affiliation Zip:	Not Reported
Affiliation Phone:	Not Reported
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not Reported
Affiliation Address:	Verisk 3E, Regulatory Dept/Walgreen Co., 3207 Grey Hawk Court, Ste 200
Affiliation City:	Carlsbad
Affiliation State:	CA
Affiliation Country:	Not Reported
Affiliation Zip:	92010
Affiliation Phone:	Not Reported

SHELL PERRIS BLVD.
15980 PERRIS BLVD., MORENO VALLEY, CA, 92551

S106162092

MAP FINDINGS

▲ A2	WNW <1/10	(403 ft. / 0.076 mi.)	State and tribal leaking storage tank lists
	6 ft. Higher Elevation	1506 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

LUST REG 8: State and tribal leaking storage tank lists

Name: SHELL PERRIS BLVD.
 Address: 15980 PERRIS BLVD.
 City: MORENO VALLEY
 Region: 8
 County: Riverside
 Regional Board: Santa Ana Region
 Facility Status: Leak being confirmed
 Case Number: Not Reported
 Local Case Num: 200420313
 Case Type: Soil only
 Substance: Gasoline
 Qty Leaked: Not Reported
 Abate Method: Not Reported
 Cross Street: IRIS
 Enf Type: Not Reported
 Funding: Not Reported
 How Discovered: OM
 How Stopped: Other Means
 Leak Cause: UNK
 Leak Source: UNK
 Global ID: T0606517323
 How Stopped Date: 7/24/2003
 Enter Date: Not Reported
 Date Confirmation of Leak Began: 2/9/2004
 Date Preliminary Assessment Began: Not Reported
 Discover Date: 2/9/2004
 Enforcement Date: Not Reported
 Close Date: Not Reported
 Date Prelim Assessment Workplan Submitted: Not Reported
 Date Pollution Characterization Began: Not Reported
 Date Remediation Plan Submitted: Not Reported
 Date Remedial Action Underway: Not Reported
 Date Post Remedial Action Monitoring: Not Reported
 Enter Date: Not Reported
 GW Qualifies: Not Reported
 Soil Qualifies: Not Reported
 Operator: Not Reported
 Facility Contact: Not Reported
 Interim: Not Reported
 Oversight Program: Not Reported
 Latitude: 0

MAP FINDINGS

SHELL PERRIS BLVD., 15980 PERRIS BLVD., MORENO VALLEY, CA 92551 (Continued)

Longitude: 0
 MTBE Date: Not Reported
 Max MTBE GW: Not Reported
 MTBE Concentration: 0
 Max MTBE Soil: Not Reported
 MTBE Fuel: 1
 MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
 MTBE Class: *
 Staff: CAB
 Staff Initials: SCB
 Lead Agency: Local Agency
 Local Agency: 33000L
 Hydr Basin #: Not Reported
 Beneficial: Not Reported
 Priority: Not Reported
 Cleanup Fund Id: Not Reported
 Work Suspended: Not Reported
 Summary: Not Reported

SHELL SERVICE STATION 15980 PERRIS BLVD, MORENO VALLEY, CA, 92551-4691			1005904292
▲ A3	WNW <1/10	(403 ft. / 0.076 mi.)	Federal RCRA generators list
	6 ft. Higher Elevation	1506 ft. Above Sea Level	State and tribal leaking storage tank lists Local Lists of Registered Storage Tanks Other Ascertainable Records

Worksheet:

Impact on Target Property: VEC does not exist

RCRA-SQG: Federal RCRA generators list

Date form received by agency: 2002-07-18 00:00:00.0
 Facility name: SHELL SERVICE STATION
 Facility address: 15980 PERRIS BLVD
 S A P 135626
 MORENO VALLEY, CA 92388
 EPA ID: CAR000120600
 Mailing address: P O BOX 2648
 HOUSTON, TX 77252-2648
 Contact: SONDRA BIENVENU
 Contact address: P O BOX 2648
 HOUSTON, TX 77252-2648
 Contact country: US
 Contact telephone: 713-241-5036
 Contact email: Not Reported
 EPA Region: 09
 Classification: Small Small Quantity Generator

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: EQUILON ENT LLC DBA S O P US
 Owner/operator address: P O BOX 2648
 HOUSTON, TX 77252

Owner/operator country: Not Reported
 Owner/operator telephone: 713-241-5036
 Owner/operator email: Not Reported
 Owner/operator fax: Not Reported
 Owner/operator extension: Not Reported
 Legal status: Private
 Owner/Operator Type: Owner
 Owner/Op start date: Not Reported
 Owner/Op end date: Not Reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
 Mixed waste (haz. and radioactive): No
 Recycler of hazardous waste: No
 Transporter of hazardous waste: No
 Treater, storer or disposer of HW: No
 Underground injection activity: No
 On-site burner exemption: No
 Furnace exemption: No
 Used oil fuel burner: No
 Used oil processor: No
 User oil refiner: No
 Used oil fuel marketer to burner: No
 Used oil Specification marketer: No
 Used oil transfer facility: No
 Used oil transporter: No

Hazardous Waste Summary:

. Waste code: D001
 . Waste name: IGNITABLE WASTE

Violation Status: No violations found

LUST: State and tribal leaking storage tank lists

Name: SHELL PERRIS BLVD.
 Address: 15980 PERRIS BLVD.
 City,State,Zip: MORENO VALLEY, CA 92551
 Lead Agency: SANTA ANA RWQCB (REGION 8)
 Case Type: LUST Cleanup Site
 Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606517323

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Global Id: T0606517323
 Latitude: 33.888806364
 Longitude: -117.22591758
 Status: Open - Verification Monitoring
 Status Date: 08/19/2016
 Case Worker: CAB
 RB Case Number: Not Reported
 Local Agency: Not Reported
 File Location: Local Agency
 Local Case Number: 200420313
 Potential Media Affect: Aquifer used for drinking water supply
 Potential Contaminants of Concern: Gasoline
 Site History: ***Data prior to 2005 does not appear in GeoTracker. Consult agency file for all site data*** Site History/Release Information: July 2003
 - Soil samples were taken during dispenser and piping upgrades.
 Petroleum constituents were detected in several of the samples with the highest concentration in the north-central dispenser area (piping sample P4d7 with 17 ppm TBA). All samples were non-detect (ND) for benzene and MTBE. 203 tons of impacted soil was removed during the upgrades. The site was entered into the Local Oversight Program.
 Assessment and Remediation: 2005 - Four groundwater (gw) monitoring wells (MW-1 through MW-4) were installed around the perimeter of the UST cavity and dispenser islands. Heaviest soil impacts were identified near the USTs (MW-1 and MW-4) between 20 and 85 feet below grade (ft bg) with the highest concentrations approx 50 to 55 ft bg (78 ppm MTBE in MW-4@50 ft). The highest TBA detection in the soil was 57 ppm (MW-4@30 ft) while other constituents tested were low or ND. Depth to gw was approx 83 ft bg with flow to the southwest.
 Maximum gw concentrations were: 3800 ppb TPHg (MW-1), 80 ppb B (MW-3), ND<50 ppb TXE, 14000 ppb MTBE (MW-1), ND<500 ppb TBA. Neither the soil or the gw impacts were delineated 2006 - Three gw monitoring wells (MW-6, MW-10, MW-11) were installed at the property boundaries. Two observation wells (OBS-1 and OBS-2) were installed for remedial feasibility pilot testing. One cone penetration test (CPT) boring (CPT-1) was completed adjacent to MW-6. GW grab sample from CPT-1 detected 34000 ppb TPHg, 370000 ppb MTBE, 2600 ppb TBA and 1900 ppb TAME. GW from MW-6 (adjacent to Perris Blvd) and MW-11 (northern portion of the station) had very high MTBE detections (480000 ppb MW-6 and 200000 ppb MW-11). 2007 - Four dual-nested soil vapor extraction (SVE) wells (SVE-1 through SVE-4) were installed for remedial feasibility testing. All four wells had elevated MTBE and

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

TBA in the soil with concentrations up to 42 ppm MTBE (SVE-1@45 feet) and 56 ppm TBA (SVE-4@60 feet). Eleven air sparge (AS) wells (AS-1, AS-3 through AS-11, AS-13) were also installed for remedial feasibility testing. All locations had ppm concentrations of MTBE at depths below 50 ft bg. Three off-site monitoring wells (MW-5, MW-8, and MW-12) were installed northwest (MW-5 and MW-12) and southwest (MW-8) of the site. GW from MW-8 and MW-12 had low to ND concentrations and MW-5 had detections of 1200 ppb TPHg and 2200 ppb MTBE. SVE and gw extraction pilot testing was conducted. SVE mass removal rates were approx 85 lb/day TPHg and 64 lb/day MTBE. Vapor concentrations remained consistent throughout the test. Consultant recommended remediating the site using SVE with air sparging/oxygen injection. 2007 (December) to 2011 SVE and AS remediation was conducted. Beginning December 2007, vapors were extracted from all four dual-nested SVE wells and beginning January 2008, air sparging was implemented on all 11 AS wells. SVE was shut down July 2010 and AS continued to operate until October 2011. A total 836 lbs TPHg and 591 lbs MTBE were removed using SVE. 2008 - One on-site monitoring well (MW-13) and four off-site monitoring wells (MW-14 through MW-16, MW-19) were installed to further delineate the gw plume. The wells provided delineation of the dissolved plume to the north and west. One gw extraction well (EW-1) and two observation wells (OBS-3 and OBS-4) were installed for gw remediation feasibility testing. GW in EW-1 and OBS-4 had elevated concentrations. Nine remedial gw extraction events were conducted to reduce elevated MTBE and TBA in the gw. A vacuum truck was used to pump a total of 2207 gallons of gw from MW-1, MW-4, MW-6, MW-10, and MW-11. 2009 - Off-site monitoring wells MW-17 and MW-18 were installed west of Perris Blvd. The wells provided delineation of the western gw plume boundary as TBA was the only detection in the gw (34 and 79 ppb). Three re-injection wells (RI-1 through RI-3) were installed for injection of treated gw since off-site discharge permits could not be obtained. GW extraction pilot testing was conducted and it was concluded that this would be a feasible remedial technology for reducing gw impacts at the site. Permits for gw discharge were unable to be obtained, so re-injection of treated gw was proposed. Re-injection pilot testing was conducted and it was concluded that re-injection would be feasible method of

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

managing the treated gw. 2010 - Two on-site monitoring wells (MW-20 and MW-21) were installed southwest of the station building. GW sampling indicated the wells defined the southwestern limits of the dissolved plume. SVE rebound testing was conducted. Test results were favorable with rebounded vapor concentrations all below 1 ppmv. Five confirmation soil borings (CB-1 through CB-5) were drilled to 85 ft bg. Soil samples from each 5-ft depth interval from each boring were ND for all constituents except MTBE and TBA. The highest MTBE detection was 0.2 ppm from CB-4-75 and the highest TBA detection was 3 ppm from CB-2-80. All MTBE and TBA detections were from samples collected below the water table. Soil remedial efforts were considered effective, however, MTBE and TBA concentrations in the gw remained elevated. 2011 - Two off-site monitoring wells (MW-7 and MW-9) were installed south of Iris Avenue. GW sampling indicated the wells defined the southern and southeastern limits of the dissolved plume. 2012 - Two additional gw monitoring wells (MW-22 and MW-23) were installed. MW-22 was installed on-site, adjacent to EW-1, and MW-23 was installed off-site, southeast of MW-9. Neither well had GW impacts. Delineation of soil and gw impacts was considered complete. 2013 to 2015 - Monitored natural attenuation (MNA) was implemented, and Oxygen-releasing sleeves (O-Sox) were placed in wells MW-4, MW-6, MW-11, MW-15 and OBS-4 in an attempt to reduce remaining elevated MTBE and TBA concentrations. Notable decreases in concentrations were not observed and the O-Sox were removed January 2015. MTBE and TBA concentrations have remained relatively stable following another year of monitoring since O-Sox removal. 2015 - With a rise in gw levels of approx 30-ft since monitoring began in 2005, most of the wells associated with the cleanup have submerged well screens. RCDEH requested installation of an appropriately screened well in the area with the highest gw concentrations so the results could be compared with nearby submerged well(s). One gw mon well (MW-24) was installed near submerged well MW-6. Soil from MW-24 was ND for all constituents tested from 5 to 65 ft bg. A year of gw monitoring of MW-24 has shown all constituents ND, except one detection of TBA (11 ppb). During this same sampling period, gw from MW-6 had detections up to 6700 ppb TPHg, 3800 ppb MTBE and 42000 ppb TBA. The consultant concludes that the elevated concentrations in MW-6 are attributable to petroleum

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

fuel constituents trapped in the fine grained material and surrounding filter pack at depths below the current gw level. As such, it is not representative of surrounding conditions and should not be used for LTCP evaluation. Groundwater Monitoring: GW monitoring has been conducted at the site since March 2005. During this time period, gw has risen approx 30 ft from an initial depth of approx 80 ft bg to the current depth of approx 50 ft bg. GW flow has been consistently to the south and southeast. Most of the wells have submerged well screens as discussed above. Maximum historic gw concentrations were: 400000 ppb TPHg (MW-6), 80 ppb benzene (MW-3), 480000 ppb MTBE (MW-6), and 260000 ppb TBA (MW-4). Current (August 2016) gw concentrations are: 6600 ppb TPHg, 2500 ppb MTBE, and 35000 ppb TBA (well MW-6). The new properly screened well, MW-24 (near MW-6), did not have any contaminants detected. Low Threat Closure Policy (LTCP) Evaluation: The site meets the General Criteria and the Direct Contact and Outdoor Air Exposure Criteria of the LTCP. The Petroleum Vapor Intrusion to Indoor Air Criteria was not evaluated based on the active commercial petroleum fueling facility LTCP exemption. Except for the MTBE exceedance in well MW-6 (2500 ppb MTBE Q3-2016), the LTCP Groundwater-Specific Criteria was met using scenario 1.2 (plume length <250 ft, no free product, nearest existing water supply well >1000 ft, benzene <3000 ppb, and <1000 ppb MTBE). MW-6 is located approx 25 ft from MW-24, which is ND for MTBE. It should be noted that elevated TBA concentrations remain in the gw at MW-6 (35000 ppb), however, the LTCP does not specifically address concentrations of TBA, but instead considers TBA attributable to the break-down of MTBE. A UST system is currently installed and operating at the site. Prior to a change in land use, the potential threat of petroleum vapor intrusion into indoor air should be evaluated.

LUST:

Global Id:	T0606517323
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	carl.bernhardt@waterboards.ca.gov
Phone Number:	9517824495

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

LUST:

Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	09/01/2009
Action:	Staff Letter - #Riv Co 090109
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	05/30/2014
Action:	Waste Discharge Requirements
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	10/19/2018
Action:	Meeting
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	03/28/2019
Action:	Meeting
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/30/2009
Action:	Pilot Study/ Treatability Report
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/15/2010
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/15/2010
Action:	Monitoring Report - Annually
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/15/2010
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/15/2010
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/13/2009

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Action: Well Installation Report

Global Id: T0606517323
Action Type: RESPONSE
Date: 08/13/2010
Action: Other Report / Document

Global Id: T0606517323
Action Type: RESPONSE
Date: 04/15/2014
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 01/15/2015
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 08/13/2009
Action: Staff Letter - #Riv Co 081309

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 09/16/2009
Action: Technical Correspondence / Assistance / Other - #Riv Co 091609

Global Id: T0606517323
Action Type: RESPONSE
Date: 04/15/2015
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/15/2014
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 05/29/2015
Action: Well Installation Report

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 05/25/2010
Action: Staff Letter - #RCDEH 052510

Global Id: T0606517323
Action Type: RESPONSE
Date: 12/20/2010
Action: Soil and Water Investigation Report

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/15/2015

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Action: Monitoring Report - Quarterly
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 04/09/2007
 Action: Technical Correspondence / Assistance / Other - #040807
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 12/09/2016
 Action: File review - #RCDEH uploaded site file
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 04/15/2011
 Action: Monitoring Report - Annually
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 07/15/2015
 Action: Monitoring Report - Quarterly
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 01/15/2016
 Action: Monitoring Report - Quarterly
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 08/26/2010
 Action: Technical Correspondence / Assistance / Other - #RCDEH 082610
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 10/18/2010
 Action: Staff Letter - #RCDEH 101810
 Global Id: T0606517323
 Action Type: Other
 Date: 02/09/2004
 Action: Leak Discovery
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 07/15/2011
 Action: Monitoring Report - Quarterly
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 10/15/2011
 Action: Monitoring Report - Quarterly
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 01/15/2012

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/15/2016
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/28/2018
Action:	Monitoring Report - Semi-Annually
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	03/28/2019
Action:	Other Report / Document
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/23/2019
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/03/2018
Action:	Other Report / Document
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	06/08/2007
Action:	Notice of Responsibility
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	09/17/2007
Action:	Staff Letter - #RCDEH 091707
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	03/28/2011
Action:	Technical Correspondence / Assistance / Other - #RCDEH 032/11
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	02/22/2011
Action:	Technical Correspondence / Assistance / Other - #RCDEH 022211
Global Id:	T0606517323
Action Type:	Other
Date:	07/24/2003
Action:	Leak Stopped
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	11/16/2007

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Action:	Other Report / Document
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	12/21/2007
Action:	Other Report / Document
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	04/15/2012
Action:	Monitoring Report - Annually
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	06/21/2012
Action:	Well Installation Report
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/15/2012
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/15/2016
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/15/2016
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	05/31/2013
Action:	Corrective Action Plan / Remedial Action Plan - Addendum - Regulator Responded
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	12/17/2014
Action:	Other Workplan - Regulator Responded
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	03/13/2015

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Action: Soil and Water Investigation Workplan - Regulator Responded
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 01/18/2016
 Action: Request for Closure - Regulator Responded
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 08/02/2018
 Action: Request for Closure - Regulator Responded
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 09/25/2017
 Action: Soil and Water Investigation Workplan - Regulator Responded
 Global Id: T0606517323
 Action Type: REMEDIATION
 Date: 01/03/2008
 Action: In Situ Physical/Chemical Treatment (other than SVE)
 Global Id: T0606517323
 Action Type: REMEDIATION
 Date: 12/07/2007
 Action: Soil Vapor Extraction (SVE)
 Global Id: T0606517323
 Action Type: REMEDIATION
 Date: 08/19/2008
 Action: Pump & Treat (P&T) Groundwater
 Global Id: T0606517323
 Action Type: REMEDIATION
 Date: 07/01/2003
 Action: Excavation
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 05/27/2008
 Action: Staff Letter - #RCDEH052708
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 12/23/2007
 Action: File review
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 01/30/2008
 Action: Staff Letter - #RCDEH013008
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 03/30/2016

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Action: LOP Case Closure Summary to RB - #RCDEH 033016

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 10/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 01/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 06/04/2013
Action: Staff Letter - #RCDEH 060413

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 08/25/2010
Action: Meeting

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 05/01/2012
Action: Meeting

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 07/01/2017
Action: Referral to Regional Board - #RCDEH notification letters

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 08/15/2017
Action: Staff Letter

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 02/28/2018
Action: Meeting

Global Id: T0606517323
Action Type: Other
Date: 02/09/2004
Action: Leak Reported

Global Id: T0606517323
Action Type: RESPONSE
Date: 04/15/2013

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Action:	Monitoring Report - Annually
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	07/15/2013
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/31/2013
Action:	Well Installation Report
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	11/10/2008
Action:	Staff Letter - #RCDEH 11-10-08
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	02/23/2011
Action:	Meeting
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	04/22/2013
Action:	Notification - Public Notice of ROD/RAP/CAP - #RCDEH 042213
Global Id:	T0606517323
Action Type:	ENFORCEMENT
Date:	08/17/2009
Action:	Meeting
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	01/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	12/12/2008
Action:	Well Installation Report
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	10/30/2008
Action:	Other Workplan
Global Id:	T0606517323
Action Type:	RESPONSE
Date:	06/29/2007

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Action: CAP/RAP - Final Remediation / Design Plan
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 06/27/2008
 Action: Other Workplan
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 10/15/2013
 Action: Monitoring Report - Quarterly
 Global Id: T0606517323
 Action Type: RESPONSE
 Date: 01/15/2014
 Action: Monitoring Report - Quarterly
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 01/09/2009
 Action: Access Agreement - #RCDEH010909
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 10/17/2008
 Action: File review
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 10/24/2008
 Action: Staff Letter - #RCDEH102408
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 02/13/2009
 Action: File review
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 01/09/2009
 Action: Staff Letter - #RCDEH010909
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 01/07/2009
 Action: NPDES Permit
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 09/21/2011
 Action: Meeting
 Global Id: T0606517323
 Action Type: ENFORCEMENT
 Date: 04/30/2012

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Action: Staff Letter - #RCDEH 043012

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 07/01/2017
Action: File review - #RCDEH site summary

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 04/22/2013
Action: Staff Letter - #RCDEH 042213

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 12/10/2013
Action: Technical Correspondence / Assistance / Other - #RCDEH 121013

Global Id: T0606517323
Action Type: ENFORCEMENT
Date: 11/29/2017
Action: Staff Letter

Global Id: T0606517323
Action Type: RESPONSE
Date: 07/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 04/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0606517323
Action Type: RESPONSE
Date: 05/21/2009
Action: Other Workplan

Global Id: T0606517323
Action Type: RESPONSE
Date: 01/09/2009
Action: Well Installation Report

Global Id: T0606517323
Action Type: RESPONSE
Date: 07/15/2014
Action: Monitoring Report - Quarterly

LUST:

Global Id: T0606517323
Status: Open - Case Begin Date
Status Date: 07/24/2003

Global Id: T0606517323
Status: Open - Site Assessment

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Status Date:	02/09/2004
Global Id:	T0606517323
Status:	Open - Site Assessment
Status Date:	02/01/2005
Global Id:	T0606517323
Status:	Open - Remediation
Status Date:	09/21/2007
Global Id:	T0606517323
Status:	Open - Eligible for Closure
Status Date:	03/11/2016
Global Id:	T0606517323
Status:	Open - Verification Monitoring
Status Date:	08/19/2016

RIVERSIDE CO. LUST:

Name:	SHELL PERRIS BLVD.
Address:	15980 PERRIS BLVD.
City,State,Zip:	MORENO VALLEY, CA
Region:	RIVERSIDE
Facility ID:	200420313
Employee:	Shurlow-LOP
Site Closed:	Referred to Water Board
Case Type:	Drinking Water Aquifer affected
Facility Status:	closed/action completed
Casetype Decode:	An Aquifer used for Drinking Water supply has been contaminated.
Fstatus Decode:	Closed/Action completed

SWEEPS UST: Local Lists of Registered Storage Tanks

Name:	SHELL PERRIS
Address:	15980 PERRIS BLVD
City:	MORENO VALLEY
Status:	Active
Comp Number:	1985
Number:	1
Board Of Equalization:	44-000074
Referral Date:	05-18-93
Action Date:	05-18-93
Created Date:	05-18-93
Owner Tank Id:	1
SWRCB Tank Id:	33-000-001985-000001
Tank Status:	A
Capacity:	12000
Active Date:	05-18-93
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Number Of Tanks:	3
Name:	SHELL PERRIS
Address:	15980 PERRIS BLVD
City:	MORENO VALLEY
Status:	Active
Comp Number:	1985
Number:	1
Board Of Equalization:	44-000074
Referral Date:	05-18-93
Action Date:	05-18-93
Created Date:	05-18-93
Owner Tank Id:	2
SWRCB Tank Id:	33-000-001985-000002
Tank Status:	A
Capacity:	12000
Active Date:	05-18-93
Tank Use:	M.V. FUEL
STG:	P
Content:	PRM UNLEADED
Number Of Tanks:	Not Reported
Name:	SHELL PERRIS
Address:	15980 PERRIS BLVD
City:	MORENO VALLEY
Status:	Active
Comp Number:	1985
Number:	1
Board Of Equalization:	44-000074
Referral Date:	05-18-93
Action Date:	05-18-93
Created Date:	05-18-93
Owner Tank Id:	3
SWRCB Tank Id:	33-000-001985-000003
Tank Status:	A
Capacity:	12000
Active Date:	05-18-93
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not Reported

FINDS: Other Ascertainable Records

Registry ID:	110012538511
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Environmental Interest/Information System:

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

The Click here to access additional FINDS: detail in the EDR Site Report. database contains
<http://www.edrnet.com/srf2/FinalSiteReport.aspx?ID=6.6d6EPb.Pit6O1Ndofg3hMwETHVPzAZbLnYA9NiPOwVigwKtpkv7xSKOsh1dzeNjn83U6Rob8qfcKegBzE4Ntchi3uMLgtwKnTA35gTeoUh6oaV6m48YrAz8lpAkW0ZwQ07YDGLaYsnpkuYWQu34Zi9jxON9QEIqTn6mMV.xgk6F9ZdsuW3gBWERtBPMv4b9cF9ctAP3n8imNHtxmA4wqSOesd13KMNOcJ3T3.oNmcf14ZgBnG5mx.hd0tMVXbw03m8lvQTLiahP.hVjBu4TFIzYwxASxuZn1CK5.LQr0nF1CYf8v6Bln.XS56iAhdePo4sVXEomdPGsXb.1F3AONPgUzilMxtxgR8cdpOHoM16E3NCkuBIayobWGfIKmg3VB7e5GhRaYMcZZwZBp7xCETMD1hlo.VaxR6jctzWknApDfZGYy3LvL.nBnnQ7YPLY5cfl9qTLN.odiLpC2vECOFbQwREMVC.W5nqCgdUWw9s9KJHlvuoZpPGwk68vvPBR64eB.RXv6KCcdWoW4AUWEadHPDLtb9F83CQ0PdieizDCt0vK45SSOoMM1RevNaYE3.XRomHzfL4gSR03XBXhgioMG9zwwams8BYKT.Ryhv4kV7JlChDjzMXnA1WuZaNG3rOhL41tnK8FYQg87Af39arBNyb5icGp5pJROuflwF4tVcfcPMqJg4pOw5.IK.1W5QY7prhrkXwAvXFv3>
 additional records for this site. Please contact your EDR Account Executive for more information.

ECHO: Other Ascertainable Records

Envid: 1005904292
 Registry ID: 110012538511
 DFR URL: <http://echo.epa.gov/detailed-facility-report?fid=110012538511>

CORTESE: Other Ascertainable Records

Name: SHELL PERRIS BLVD.
 Address: 15980 PERRIS BLVD.
 City,State,Zip: MORENO VALLEY, CA 92551
 Region: CORTESE
 Envirositor Id: Not Reported
 Global ID: T0606517323
 Site/Facility Type: LUST CLEANUP SITE
 Cleanup Status: OPEN - VERIFICATION MONITORING
 Status Date: Not Reported
 Site Code: Not Reported
 Latitude: Not Reported
 Longitude: Not Reported
 Owner: Not Reported
 Enf Type: Not Reported
 Swat R: Not Reported
 Flag: active
 Order No: Not Reported
 Waste Discharge System No: Not Reported
 Effective Date: Not Reported
 Region 2: Not Reported
 WID Id: Not Reported
 Solid Waste Id No: Not Reported
 Waste Management Uit Name: Not Reported
 File Name: Active Open

HAZNET: Other Ascertainable Records

Name: SHELL SERVICE STATION
 Address: 15980 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92388
 Year: 2015
 GEPAID: CAR000120600
 Contact: ADAM ESTES

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Telephone:	3172917007
Mailing Name:	Not Reported
Mailing Address:	PO BOX 2099
Mailing City,St,Zip:	HOUSTON, TX 772522099
Gen County:	Riverside
TSD EPA ID:	NVT330010000
TSD County:	99
Tons:	0.1
CA Waste Code:	141-Off-specification, aged or surplus inorganics
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside
Name:	SHELL SERVICE STATION
Address:	15980 PERRIS BLVD
City,State,Zip:	MORENO VALLEY, CA 92388
Year:	2009
GEPAID:	CAR000120600
Contact:	Adam Estes
Telephone:	3172917007
Mailing Name:	Not Reported
Mailing Address:	PO BOX 3127
Mailing City,St,Zip:	HOUSTON, TX 772530000
Gen County:	Riverside
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Tons:	0.03
CA Waste Code:	352-Other organic solids
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside
Name:	SHELL SERVICE STATION
Address:	15980 PERRIS BLVD
City,State,Zip:	MORENO VALLEY, CA 92388
Year:	2007
GEPAID:	CAR000120600
Contact:	Adam Estes
Telephone:	3172917007
Mailing Name:	Not Reported
Mailing Address:	PO BOX 3127
Mailing City,St,Zip:	HOUSTON, TX 772530000
Gen County:	Riverside
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Tons:	0.0075
CA Waste Code:	352-Other organic solids
Method:	H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside
Name:	SHELL SERVICE STATION
Address:	15980 PERRIS BLVD
City,State,Zip:	MORENO VALLEY, CA 92388

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Year: 2007
 GEPAID: CAR000120600
 Contact: Adam Estes
 Telephone: 3172917007
 Mailing Name: Not Reported
 Mailing Address: PO BOX 3127
 Mailing City,St,Zip: HOUSTON, TX 772530000
 Gen County: Riverside
 TSD EPA ID: CAD028409019
 TSD County: Los Angeles
 Tons: 0.02
 CA Waste Code: 352-Other organic solids
 Method: H141-Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
 Facility County: Riverside

 Name: SHELL SERVICE STATION
 Address: 15980 PERRIS BLVD
 City,State,Zip: MORENO VALLEY, CA 92388
 Year: 2006
 GEPAID: CAR000120600
 Contact: Adam Estes
 Telephone: 3172917007
 Mailing Name: Not Reported
 Mailing Address: PO BOX 3127
 Mailing City,St,Zip: HOUSTON, TX 772530000
 Gen County: Riverside
 TSD EPA ID: CAD008302903
 TSD County: Los Angeles
 Tons: 0.085
 CA Waste Code: 352-Other organic solids
 Method: H01-Transfer Station
 Facility County: Riverside

The Click here to access 7 additional CA_HAZNET: record(s) in the EDR Site Report. database contains
<http://www.edrnet.com/srf2/FinalSiteReport.aspx?ID=6.6d6EPb.Pit6O1Ndofg3hMwETHVPzAZbLnYA9NiPOwVigWktpkv7xSKOslh1dzeNjn83U6Rob8qfcKegBzE4Ntchi3uMLgtwKnTA35gTeoUh6oaV6m48YrAz8lpAkW0ZwQ07YDGLaYsnpkuYwQu34Zi9jxON9QEiqTn6mMV.xgk6F9ZdsuW3gBWErTbPMv4b9cF9ctAP3n8imNHtxmA4wqSOesd13KMNoCj3T3.oNmcf14ZgBnG5mx.hd0tMVXbw03m8lvQTLiahP.hVjBu4TFIzYwxASxuZn1CK5.LQR0nF1CYf8v6Bln.XS56iAhdePo4sVXEomdPGsXb.1F3AONPgUzilMxtxgR8cdpOHoM16E3NCkuBIayobWGfIKmg3VB7e5GhRaYMcZZwZBp7xCETMD1hlo.VaxR6jctzWknApDfZGYy3LvIL.nBnnQ7YPLY5cfl9qTLN.odilpC2vECOFbQwREMVC.W5nqCgdUWw9s9KJHlvuoZpPGwk68vvPBR64eB.RXv6KCCdWoW4AUWEadHPDLtb9F83CQ0PdieizDCt0vK45SSOoMM1RevNaYE3.XRomHzfL4gSR03XBXhgioMG9zwams8BYKT.Ryhv4kV7JiChDzjMXnA1WuZaNG3rOhL41tnK8FYQg87Af39arBNyb5icGp5pJROuflwF4tVCfpCMqJg4pOw5.IK.1W5QY7prhrkXwAvXFv3>
 additional records for this site. Please contact your EDR Account Executive for more information.

CERS: Other Ascertainable Records

Name: SHELL PERRIS BLVD.
 Address: 15980 PERRIS BLVD.
 City,State,Zip: MORENO VALLEY, CA 92551
 Site ID: 195812
 CERS ID: T0606517323
 CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc: Regional Board Caseworker
 Entity Name: CARL BERNHARDT - SANTA ANA RWQCB (REGION 8)

MAP FINDINGS

SHELL SERVICE STATION, 15980 PERRIS BLVD, MORENO VALLEY, CA 92551-4691 (Continued)

Entity Title: Not Reported
 Affiliation Address: 3737 MAIN STREET, SUITE 500
 Affiliation City: RIVERSIDE
 Affiliation State: CA
 Affiliation Country: Not Reported
 Affiliation Zip: Not Reported
 Affiliation Phone: 9517824495

ROLLING RIDGE CLEANERS 15974 PERRIS BLVD STE A, MORENO VALLEY, CA, 92551			S103985263
▲ A4	WNW <1/10	(492 ft. / 0.093 mi.)	Other Ascertainable Records
	7 ft. Higher Elevation	1507 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

DRYCLEANERS: Other Ascertainable Records

Name: ROLLING RIDGE CLEANERS INC
 Address: 15974 PERRIS BLVD STE A
 City,State,Zip: MORENO VALLEY, CA 925514694
 EPA Id: CAL000364010
 NAICS Code: 81232
 NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)
 SIC Code: 7211
 SIC Description: Power Laundries, Family and Commercial
 Create Date: 05/26/2011
 Facility Active: No
 Inactive Date: 06/30/2013
 Facility Addr2: Not Reported
 Owner Name: JOA PROPERTIES INC
 Owner Address: 15694 RIO BLANCO TRL
 Owner Address 2: Not Reported
 Owner Telephone: 9512955910
 Contact Name: JESS ANDERSON
 Contact Address: 15694 RIO BLANCO TRL
 Contact Address 2: Not Reported
 Contact Telephone: 9512955910
 Mailing Name: Not Reported
 Mailing Address 1: 15974 PERRIS BLVD STE A
 Mailing Address 2: Not Reported
 Mailing City: MORENO VALLEY
 Mailing State: CA
 Mailing Zip: 925514694
 Owner Fax: Not Reported
 Region Code: 4

Name: ROLLING RIDGE CLEANERS
 Address: 15974 PERRIS BLVD STE A

MAP FINDINGS

ROLLING RIDGE CLEANERS, 15974 PERRIS BLVD STE A, MORENO VALLEY, CA 92551 (Continued)

City,State,Zip: MORENO VALLEY, CA 92551
 EPA Id: CAL000389130
 NAICS Code: 81232
 NAICS Description: Drycleaning and Laundry Services (except Coin-Operated)
 SIC Code: 7211
 SIC Description: Power Laundries, Family and Commercial
 Create Date: 08/30/2013
 Facility Active: No
 Inactive Date: 06/30/2016
 Facility Addr2: Not Reported
 Owner Name: TONY TRAN
 Owner Address: 15974 PERRIS BLVD STE A
 Owner Address 2: Not Reported
 Owner Telephone: 9518135526
 Contact Name: TONY TRAN
 Contact Address: 15974 PERRIS BLVD STE A
 Contact Address 2: Not Reported
 Contact Telephone: 9518135526
 Mailing Name: Not Reported
 Mailing Address 1: 15974 PERRIS BLVD STE A
 Mailing Address 2: Not Reported
 Mailing City: MORENO VALLEY
 Mailing State: CA
 Mailing Zip: 925510000
 Owner Fax: 0000000000
 Region Code: 4

ROLLING RIDGE CLEANERS INC 15974 PERRIS BLVD UNIT A, MORENO VALLEY, CA, 92551			S113047505
▲ A5	WNW <1/10	(492 ft. / 0.093 mi.)	Other Ascertainable Records
	7 ft. Higher Elevation	1507 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

DRYCLEAN SOUTH COAST: Other Ascertainable Records

Name: ROLLING RIDGE CLEANERS INC
 Address: 15974 PERRIS BLVD UNIT A
 City,State,Zip: MORENO VALLEY, CA 92551
 Facility ID: 83714
 Application Number: 243794
 Permit Number: D39143
 Status: I
 Representative Name: DAVID FUJINAMI
 Representative Telephone: 818 4483168
 Permit Status: INACT_NR
 BCAT Number: 000234
 BCAT Description: DRY CLEANING EQUIP PERCHLOROETHYLENE

MAP FINDINGS

ROLLING RIDGE CLEANERS INC, 15974 PERRIS BLVD UNIT A, MORENO VALLEY, CA 92551 (Continued)

CCAT Number: Not Reported
 CCAT Description: Not Reported
 UTM East: 430.73001099
 UTM North: 3763.3200684

ROLLING RIDGE CLEANERS, MALEK AYASS, DBA 15974 PERRIS BLVD UNIT A, MORENO VALLEY, CA, 92551		S121693998
▲ A6	WNW <1/10 (492 ft. / 0.093 mi.)	Other Ascertainable Records
	7 ft. Higher Elevation 1507 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

DRYCLEAN SOUTH COAST: Other Ascertainable Records

Name: ROLLING RIDGE CLEANERS, MALEK AYASS, DBA
 Address: 15974 PERRIS BLVD UNIT A
 City, State, Zip: MORENO VALLEY, CA 92551
 Facility ID: 113640
 Application Number: 437644
 Permit Number: F72936
 Status: S
 Representative Name: MALEK AYASS
 Representative Telephone: 951 4889277
 Permit Status: INACTIVE
 BCAT Number: 000233
 BCAT Description: DRY CLEANING EQUIP PETROLEUM SOLVENT
 CCAT Number: 04
 CCAT Description: VAPOR RECOVERY UNIT COMPRESS & CONDENSE
 UTM East: 479.0920105
 UTM North: 3749.6508789

Name: ROLLING RIDGE CLEANERS, MALEK AYASS, DBA
 Address: 15974 PERRIS BLVD UNIT A
 City, State, Zip: MORENO VALLEY, CA 92551
 Facility ID: 113640
 Application Number: 332174
 Permit Number: F14622
 Status: S
 Representative Name: MALEK AYASS
 Representative Telephone: 951 4889277
 Permit Status: INACTIVE
 BCAT Number: 000601
 BCAT Description: DRY CLEANING, DRY-TO-DRY NON-VENT, PERC
 CCAT Number: 04
 CCAT Description: VAPOR RECOVERY UNIT COMPRESS & CONDENSE
 UTM East: 479.0920105
 UTM North: 3749.6508789

MAP FINDINGS

ROLLING RIDGE CLEANERS, JOA PROP DBA 15974 PERRIS BLVD UNIT A, MORENO VALLEY, CA, 92551			S121696531
▲ A7	WNW <1/10	(492 ft. / 0.093 mi.)	Other Ascertainable Records
	7 ft. Higher Elevation	1507 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

DRYCLEAN SOUTH COAST: Other Ascertainable Records

Name: ROLLING RIDGE CLEANERS, JOA PROP DBA
Address: 15974 PERRIS BLVD UNIT A
City,State,Zip: MORENO VALLEY, CA 92551
Facility ID: 166980
Application Number: 519767
Permit Number: G13180
Status: S
Representative Name: JEFF ANDERSON
Representative Telephone: 951 2955910
Permit Status: INACTIVE
BCAT Number: 000233
BCAT Description: DRY CLEANING EQUIP PETROLEUM SOLVENT
CCAT Number: Not Reported
CCAT Description: Not Reported
UTM East: 479.07998657
UTM North: 3749.6398926

ROLLING RIDGE CLEANERS INC 15974 PERRIS BLVD STE A, MORENO VALLEY, CA, 92551			1020076607
▲ A8	WNW <1/10	(492 ft. / 0.093 mi.)	EDR Exclusive Records
	7 ft. Higher Elevation	1507 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

EDR Hist Cleaner: EDR Exclusive Records

Year:	Name: / Type:
1996:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
1997:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
1998:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
1999:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
2000:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
2001:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
2002:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
2003:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
2004:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
2005:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
2006:	ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs

MAP FINDINGS

ROLLING RIDGE CLEANERS INC, 15974 PERRIS BLVD STE A, MORENO VALLEY, CA 92551 (Continued)

2007: ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
 2008: ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
 2009: ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
 2010: ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
 2011: ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
 2012: ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
 2013: ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs
 2014: ROLLING RIDGE CLEANERS INC / Drycleaning Plants, Except Rugs

TAN TRAN 15974 PERRIS BLVD UNIT A, MORENO VALLEY, CA, 92551			S121696655
▲ A9	WNW <1/10	(492 ft. / 0.093 mi.)	Other Ascertainable Records
	7 ft. Higher Elevation	1507 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist

DRYCLEAN SOUTH COAST: Other Ascertainable Records

Name: TAN TRAN
 Address: 15974 PERRIS BLVD UNIT A
 City,State,Zip: MORENO VALLEY, CA 92551
 Facility ID: 174663
 Application Number: 552438
 Permit Number: G27268
 Status: A
 Representative Name: TAN TRAN
 Representative Telephone: 951 8135526
 Permit Status: ACTIVE
 BCAT Number: 000233
 BCAT Description: DRY CLEANING EQUIP PETROLEUM SOLVENT
 CCAT Number: Not Reported
 CCAT Description: Not Reported
 UTM East: 479.07998657
 UTM North: 3749.6398926

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Dat
ENVIRONMENTAL RECORDS						
Federal NPL site list						
US	NPL	National Priority List	EPA	07/19/2019	07/30/2019	09/03/2019
US	Proposed NPL	Proposed National Priority List Sites	EPA	07/19/2019	07/30/2019	09/03/2019
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
Federal CERCLIS list						
US	SEMS	Superfund Enterprise Management System	EPA	07/19/2019	07/30/2019	09/03/2019
Federal RCRA CORRACTS facilities list						
US	CORRACTS	Corrective Action Report	EPA	06/24/2019	06/26/2019	10/17/2019
Federal RCRA TSD facilities list						
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	06/24/2019	06/26/2019	10/17/2019
Federal RCRA generators list						
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	06/24/2019	06/26/2019	10/17/2019
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	06/24/2019	06/26/2019	10/17/2019
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	06/24/2019	06/26/2019	10/17/2019
Federal institutional controls / engineering controls registries						
US	LUCIS	Land Use Control Information System	Department of the Navy	08/13/2019	08/20/2019	08/26/2019
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	08/19/2019	08/20/2019	08/26/2019
US	US INST CONTROL	Sites with Institutional Controls	Environmental Protection Agency	08/19/2019	08/20/2019	08/26/2019
Federal ERNS list						
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	09/09/2019	09/09/2019	09/23/2019
State and tribal - equivalent NPL						
CA	RESPONSE	State Response Sites	Department of Toxic Substances Control	07/29/2019	07/31/2019	10/08/2019
State and tribal - equivalent CERCLIS						
CA	ENVIROSTOR	EnviroStor Database	Department of Toxic Substances Control	07/29/2019	07/31/2019	10/08/2019
State and tribal landfill / solid waste disposal						
CA	SWF/LF (SWIS)	Solid Waste Information System	Department of Resources Recycling and Recover	08/12/2019	08/13/2019	10/09/2019
State and tribal leaking storage tank lists						
CA	LUST REG 8	Leaking Underground Storage Tanks	California Regional Water Quality Control Boa	02/14/2005	02/15/2005	03/28/2005
CA	LUST REG 7	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	02/26/2004	02/26/2004	03/24/2004
CA	LUST REG 5	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	07/01/2008	07/22/2008	07/31/2008
CA	LUST REG 4	Underground Storage Tank Leak List	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	LUST REG 3	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	05/19/2003	05/19/2003	06/02/2003
CA	LUST REG 2	Fuel Leak List	California Regional Water Quality Control Boa	09/30/2004	10/20/2004	11/19/2004
CA	LUST REG 1	Active Toxic Site Investigation	California Regional Water Quality Control Boa	02/01/2001	02/28/2001	03/29/2001

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Dat
CA	LUST REG 6V	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	06/07/2005	06/07/2005	06/29/2005
CA	LUST REG 6L	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	09/09/2003	09/10/2003	10/07/2003
CA	LUST REG 9	Leaking Underground Storage Tank Report	California Regional Water Quality Control Boa	03/01/2001	04/23/2001	05/21/2001
CA	LUST	Leaking Underground Fuel Tank Report (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	08/05/2019
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/16/2018	03/07/2019	05/01/2019
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	04/12/2019	07/29/2019	10/17/2019
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	04/08/2019	07/30/2019	10/17/2019
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/11/2019	07/29/2019	10/17/2019
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	04/16/2019	07/29/2019	10/17/2019
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	05/01/2019	07/29/2019	10/17/2019
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	04/08/2019	07/29/2019	10/17/2019
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	07/02/2019	10/16/2019	10/24/2019
CA	CPS-SLIC	Statewide SLIC Cases (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	08/05/2019
CA	SLIC REG 1	Active Toxic Site Investigations	California Regional Water Quality Control Boa	04/03/2003	04/07/2003	04/25/2003
CA	SLIC REG 2	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board San Fran	09/30/2004	10/20/2004	11/19/2004
CA	SLIC REG 3	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	05/18/2006	05/18/2006	06/15/2006
CA	SLIC REG 4	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Region Water Quality Control Board Los Angele	11/17/2004	11/18/2004	01/04/2005
CA	SLIC REG 5	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board Central	04/01/2005	04/05/2005	04/21/2005
CA	SLIC REG 6V	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board, Victorv	05/24/2005	05/25/2005	06/16/2005
CA	SLIC REG 6L	SLIC Sites	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	SLIC REG 7	SLIC List	California Regional Quality Control Board, Co	11/24/2004	11/29/2004	01/04/2005
CA	SLIC REG 8	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Region Water Quality Control Board	04/03/2008	04/03/2008	04/14/2008
CA	SLIC REG 9	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	09/10/2007	09/11/2007	09/28/2007
State and tribal registered storage tank lists						
CA	UST	Active UST Facilities	SWRCB	06/10/2019	06/11/2019	07/23/2019
CA	UST CLOSURE	Proposed Closure of Underground Storage Tank (UST) Cases	State Water Resources Control Board	06/10/2019	06/12/2019	07/23/2019
CA	MILITARY UST SITES	Military UST Sites (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	07/24/2019
CA	UST MENDOCINO	Mendocino County UST Database	Department of Public Health	12/04/2018	12/06/2018	12/14/2018
CA	AST	Aboveground Petroleum Storage Tank Facilities	California Environmental Protection Agency	07/06/2016	07/12/2016	09/19/2016
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	04/08/2019	07/29/2019	10/17/2019
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	10/16/2018	03/07/2019	05/01/2019
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	05/01/2019	07/29/2019	10/17/2019
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/08/2019	07/29/2019	10/17/2019
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	04/12/2019	07/29/2019	10/17/2019
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	04/11/2019	07/30/2019	10/17/2019
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	05/02/2019	07/29/2019	10/17/2019
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	04/16/2019	07/30/2019	10/17/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	05/15/2017	05/30/2017	10/13/2017

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Dat
State and tribal voluntary cleanup sites						
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
CA	VCP	Voluntary Cleanup Program Properties	Department of Toxic Substances Control	07/29/2019	07/31/2019	10/08/2019
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
State and tribal Brownfields sites						
CA	BROWNFIELDS	Considered Brownfields Sites Listing	State Water Resources Control Board	06/24/2019	06/25/2019	08/21/2019
Other Records						
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	06/30/2019	07/16/2019	10/02/2019
US	ROD	Records Of Decision	EPA	07/19/2019	07/30/2019	09/03/2019
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	07/30/2019	07/30/2019	09/03/2019
CA	HIST CAL-SITES	Calsites Database	Department of Toxic Substance Control	08/08/2005	08/03/2006	08/24/2006
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
CA	SWRCY	Recycler Database	Department of Conservation	06/11/2019	06/12/2019	08/15/2019
CA	CA FID UST	Facility Inventory Database	California Environmental Protection Agency	10/31/1994	09/05/1995	09/29/1995
CA	HIST UST	Hazardous Substance Storage Container Database	State Water Resources Control Board	10/15/1990	01/25/1991	02/12/1991
CA	SAN FRANCISCO AST	Aboveground Storage Tank Site Listing	San Francisco County Department of Public Hea	08/01/2019	08/02/2019	10/11/2019
CA	SWEEPS UST	SWEEPS UST Listing	State Water Resources Control Board	06/01/1994	07/07/2005	08/11/2005
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	06/11/2019	06/13/2019	09/03/2019
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	08/08/2017	09/11/2018	09/14/2018
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	07/19/2019	07/30/2019	09/03/2019
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	05/24/2017	11/30/2017	12/15/2017
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	07/01/2014	09/10/2014	10/20/2014
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2005	08/07/2009	10/22/2009
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	06/24/2019	06/26/2019	09/23/2019
US	Delisted NPL	National Priority List Deletions	EPA	07/19/2019	07/30/2019	09/03/2019
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	07/19/2019	07/30/2019	09/03/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	06/24/2019	06/26/2019	10/17/2019
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	06/24/2019	06/26/2019	09/23/2019
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	07/01/2019	07/31/2019	10/24/2019
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	06/11/2019	06/13/2019	09/03/2019
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	06/03/2019	06/04/2019	08/26/2019
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	12/31/2005	02/06/2006	01/11/2007
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	05/15/2019	05/21/2019	08/08/2019
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	06/23/2017	10/11/2017	11/03/2017
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	06/06/2019	06/06/2019	10/24/2019
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	05/03/2019	05/29/2019	08/08/2019

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Dat
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	12/05/2005	02/29/2008	04/18/2008
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	PRP	Potentially Responsible Parties	EPA	08/20/2019	09/05/2019	09/23/2019
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2016	01/10/2018	01/12/2018
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/21/2017	01/05/2018
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	SSTS	Section 7 Tracking Systems	EPA	09/30/2018	04/24/2019	08/08/2019
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	PADS	PCB Activity Database System	EPA	03/20/2019	04/10/2019	05/14/2019
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	06/20/2019	06/20/2019	08/08/2019
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	FINDS	Facility Index System/Facility Registry System	EPA	05/03/2019	06/05/2019	09/03/2019
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RMP	Risk Management Plans	Environmental Protection Agency	04/25/2019	05/02/2019	05/23/2019
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2015	02/22/2017	09/28/2017
US	PWS	Public Water System Data	EPA	12/17/2013	01/09/2014	10/15/2014
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	ABANDONED MINES	Abandoned Mines	Department of Interior	09/10/2019	09/10/2019	10/17/2019
CA	CA BOND EXP. PLAN	Bond Expenditure Plan	Department of Health Services	01/01/1989	07/27/1994	08/02/1994
CA	CDL	Clandestine Drug Labs	Department of Toxic Substances Control	06/30/2018	07/16/2019	09/24/2019
CA	CHMIRS	California Hazardous Material Incident Report System	Office of Emergency Services	05/15/2019	06/24/2019	08/21/2019
CA	CORTESE	"Cortese" Hazardous Waste & Substances Sites List	CAL EPA/Office of Emergency Information	06/24/2019	06/25/2019	08/21/2019
CA	CUPA SAN FRANCISCO CO	CUPA Facility Listing	San Francisco County Department of Environmen	08/01/2019	08/02/2019	10/09/2019
CA	CUPA LIVERMORE-PLEASANTON	CUPA Facility Listing	Livermore-Pleasanton Fire Department	05/01/2019	05/14/2019	07/17/2019
CA	DEED	Deed Restriction Listing	DTSC and SWRCB	06/04/2019	06/04/2019	08/08/2019
CA	DRYCLEAN AVAQMD	Antelope Valley Air Quality Management District Drycleaner L	Antelope Valley Air Quality Management Distri	06/03/2019	06/04/2019	08/08/2019
CA	DRYCLEAN SOUTH COAST	South Coast Air Quality Management District Drycleaner Listi	South Coast Air Quality Management District	03/19/2019	03/22/2019	04/09/2019
CA	DRYCLEANERS	Cleaner Facilities	Department of Toxic Substance Control	06/04/2019	06/28/2019	08/22/2019
CA	EMI	Emissions Inventory Data	California Air Resources Board	12/31/2017	06/24/2019	08/22/2019
CA	ENF	Enforcement Action Listing	State Water Resouruces Control Board	07/19/2019	07/22/2019	09/26/2019
CA	Financial Assurance 1	Financial Assurance Information Listing	Department of Toxic Substances Control	07/19/2019	07/23/2019	09/30/2019
CA	Financial Assurance 2	Financial Assurance Information Listing	California Integrated Waste Management Board	08/16/2019	08/20/2019	10/18/2019
CA	HAULERS	Registered Waste Tire Haulers Listing	Integrated Waste Management Board	03/26/2019	03/27/2019	04/30/2019
CA	HAZNET	Facility and Manifest Data	California Environmental Protection Agency	12/31/2017	05/29/2019	07/22/2019
CA	HIST CORTESE	Hazardous Waste & Substance Site List	Department of Toxic Substances Control	04/01/2001	01/22/2009	04/08/2009
CA	HWP	EnviroStor Permitted Facilities Listing	Department of Toxic Substances Control	08/19/2019	08/20/2019	10/18/2019
CA	HWT	Registered Hazardous Waste Transporter Database	Department of Toxic Substances Control	07/08/2019	07/09/2019	09/20/2019
CA	ICE	ICE	Department of Toxic Substances Control	08/19/2019	08/20/2019	10/18/2019
CA	LDS	Land Disposal Sites Listing (GEOTRACKER)	State Water Quality Control Board	06/10/2019	06/11/2019	08/05/2019
CA	LIENS	Environmental Liens Listing	Department of Toxic Substances Control	06/05/2019	06/06/2019	08/09/2019
CA	MCS	Military Cleanup Sites Listing (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	07/24/2019
CA	MINES	Mines Site Location Listing	Department of Conservation	06/10/2019	06/11/2019	08/15/2019

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Dat
CA	MWMP	Medical Waste Management Program Listing	Department of Public Health	05/17/2019	06/04/2019	08/09/2019
CA	NPDES	NPDES Permits Listing	State Water Resources Control Board	08/12/2019	08/13/2019	10/16/2019
CA	PEST LIC	Pesticide Regulation Licenses Listing	Department of Pesticide Regulation	06/04/2019	06/04/2019	08/09/2019
CA	PROC	Certified Processors Database	Department of Conservation	06/11/2019	06/12/2019	08/15/2019
CA	NOTIFY 65	Proposition 65 Records	State Water Resources Control Board	06/17/2019	06/18/2019	08/22/2019
CA	SCH	School Property Evaluation Program	Department of Toxic Substances Control	07/29/2019	07/31/2019	10/08/2019
CA	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	06/06/2012	01/03/2013	02/22/2013
CA	TOXIC PITS	Toxic Pits Cleanup Act Sites	State Water Resources Control Board	07/01/1995	08/30/1995	09/26/1995
CA	UIC	UIC Listing	Deaprtment of Conservation	04/27/2018	06/13/2018	07/17/2018
CA	WASTEWATER PITS	Oil Wastewater Pits Listing	RWQCB, Central Valley Region	05/08/2018	07/11/2018	09/13/2018
CA	WDS	Waste Discharge System	State Water Resources Control Board	06/19/2007	06/20/2007	06/29/2007
CA	WIP	Well Investigation Program Case List	Los Angeles Water Quality Control Board	07/03/2009	07/21/2009	08/03/2009
CA	WMUDS/SWAT	Waste Management Unit Database	State Water Resources Control Board	04/01/2000	04/10/2000	05/10/2000
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	07/06/2019	07/09/2019	10/02/2019
CA	PFAS	PFAS Contamination Site Location Listing	State Water Resources Control Board	06/28/2019	06/28/2019	07/24/2019
CA	WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	07/24/2019
CA	NON-CASE INFO	Non-Case Information Sites (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	07/24/2019
CA	MILITARY PRIV SITES	Military Privatized Sites (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	07/24/2019
CA	CIWQS	California Integrated Water Quality System	State Water Resources Control Board	06/04/2019	06/04/2019	08/08/2019
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/31/2018	07/26/2018	10/05/2018
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	05/20/2019	05/21/2019	08/08/2019
US	UXO	Unexploded Ordnance Sites	Department of Defense	12/31/2017	01/17/2019	04/01/2019
CA	WDR	Waste Discharge Requirements Listing	State Water Resources Control Board	06/11/2019	06/12/2019	08/15/2019
US	MINES MRDS	Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
CA	OTHER OIL GAS	Other Oil & Gas Projects Sites (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	07/24/2019
CA	CERS TANKS	California Environmental Reporting System (CERS) Tanks	California Environmental Protection Agency	08/14/2019	08/14/2019	08/21/2019
CA	CERS HAZ WASTE	CERS HAZ WASTE	CalEPA	08/14/2019	08/14/2019	08/21/2019
CA	CERS	CalEPA Regulated Site Portal Data	California Environmental Protection Agency	08/14/2019	08/14/2019	08/21/2019
CA	UIC GEO	Underground Injection Control Sites (GEOTRACKER)	State Water Resource Control Board	06/10/2019	06/11/2019	07/24/2019
CA	PROJECT	Project Sites (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	07/24/2019
CA	PROD WATER PONDS	Produced Water Ponds Sites (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	07/24/2019
CA	SAMPLING POINT	Sampling Point ? Public Sites (GEOTRACKER)	State Water Resources Control Board	06/10/2019	06/11/2019	07/24/2019
HISTORICAL USE RECORDS						
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			

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St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Dat
COUNTY RECORDS						
CA	CS ALAMEDA	Contaminated Sites	Alameda County Environmental Health Services	01/09/2019	01/11/2019	03/05/2019
CA	UST ALAMEDA	Underground Tanks	Alameda County Environmental Health Services	04/10/2019	04/11/2019	06/20/2019
CA	CUPA AMADOR	CUPA Facility List	Amador County Environmental Health	06/27/2019	06/28/2019	07/24/2019
CA	CUPA BUTTE	CUPA Facility Listing	Public Health Department	04/21/2017	04/25/2017	08/09/2017
CA	CUPA CALVERAS	CUPA Facility Listing	Calveras County Environmental Health	08/05/2019	08/07/2019	10/09/2019
CA	CUPA COLUSA	CUPA Facility List	Health & Human Services	08/14/2019	08/20/2019	10/18/2019
CA	SL CONTRA COSTA	Site List	Contra Costa Health Services Department	08/20/2019	08/23/2019	10/22/2019
CA	CUPA DEL NORTE	CUPA Facility List	Del Norte County Environmental Health Divisio	07/30/2019	08/02/2019	10/09/2019
CA	CUPA EL DORADO	CUPA Facility List	El Dorado County Environmental Management Dep	06/05/2019	06/06/2019	07/23/2019
CA	CUPA FRESNO	CUPA Resources List	Dept. of Community Health	07/11/2019	07/11/2019	09/20/2019
CA	CUPA GLENN	CUPA Facility List	Glenn County Air Pollution Control District	01/22/2018	01/24/2018	03/14/2018
CA	CUPA HUMBOLDT	CUPA Facility List	Humboldt County Environmental Health	07/08/2019	07/10/2019	09/20/2019
CA	CUPA IMPERIAL	CUPA Facility List	San Diego Border Field Office	07/19/2019	07/23/2019	09/26/2019
CA	CUPA INYO	CUPA Facility List	Inyo County Environmental Health Services	04/02/2018	04/03/2018	06/14/2018
CA	UST KERN	Underground Storage Tank Sites & Tank Listing	Kern County Environment Health Services Depar	08/01/2019	08/06/2019	10/08/2019
CA	CUPA KINGS	CUPA Facility List	Kings County Department of Public Health	08/14/2019	08/20/2019	10/18/2019
CA	CUPA LAKE	CUPA Facility List	Lake County Environmental Health	08/16/2019	08/20/2019	10/18/2019
CA	CUPA LASSEN	CUPA Facility List	Lassen County Environmental Health	07/22/2019	07/23/2019	09/26/2019
CA	AOCONCERN	Key Areas of Concerns in Los Angeles County		03/30/2009	03/31/2009	10/23/2009
CA	HMS LOS ANGELES	HMS: Street Number List	Department of Public Works	07/09/2019	07/11/2019	09/20/2019
CA	LF LOS ANGELES	List of Solid Waste Facilities	La County Department of Public Works	07/15/2019	07/17/2019	09/26/2019
CA	LF LOS ANGELES CITY	City of Los Angeles Landfills	Engineering & Construction Division	01/01/2019	01/15/2019	03/07/2019
CA	LOS ANGELES AST	Active & Inactive AST Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	LOS ANGELES CO LF METHANE	Methane Producing Landfills	Los Angeles County Department of Public Works	04/30/2012	04/17/2019	05/29/2019
CA	LOS ANGELES HM	Active & Inactive Hazardous Materials Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	LOS ANGELES UST	Active & Inactive UST Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	SITE MIT LOS ANGELES	Site Mitigation List	Community Health Services	07/15/2019	07/17/2019	08/05/2019
CA	UST EL SEGUNDO	City of El Segundo Underground Storage Tank	City of El Segundo Fire Department	01/21/2017	04/19/2017	05/10/2017
CA	UST LONG BEACH	City of Long Beach Underground Storage Tank	City of Long Beach Fire Department	04/22/2019	04/23/2019	06/27/2019
CA	UST TORRANCE	City of Torrance Underground Storage Tank	City of Torrance Fire Department	06/27/2019	07/30/2019	10/02/2019
CA	CUPA MADERA	CUPA Facility List	Madera County Environmental Health	05/28/2019	05/30/2019	08/05/2019
CA	UST MARIN	Underground Storage Tank Sites	Public Works Department Waste Management	09/26/2018	10/04/2018	11/02/2018
CA	CUPA MERCED	CUPA Facility List	Merced County Environmental Health	05/29/2019	05/30/2019	07/22/2019
CA	CUPA MONO	CUPA Facility List	Mono County Health Department	05/23/2019	05/30/2019	07/22/2019
CA	CUPA MONTEREY	CUPA Facility Listing	Monterey County Health Department	07/25/2019	07/30/2019	09/30/2019
CA	LUST NAPA	Sites With Reported Contamination	Napa County Department of Environmental Manag	01/09/2017	01/11/2017	03/02/2017
CA	UST NAPA	Closed and Operating Underground Storage Tank Sites	Napa County Department of Environmental Manag	02/21/2019	02/22/2019	03/08/2019
CA	CUPA NEVADA	CUPA Facility List	Community Development Agency	07/23/2019	07/30/2019	10/02/2019
CA	IND_SITE ORANGE	List of Industrial Site Cleanups	Health Care Agency	07/10/2019	08/07/2019	10/09/2019
CA	LUST ORANGE	List of Underground Storage Tank Cleanups	Health Care Agency	07/10/2019	08/09/2019	10/09/2019
CA	UST ORANGE	List of Underground Storage Tank Facilities	Health Care Agency	07/10/2019	08/06/2019	10/09/2019
CA	MS PLACER	Master List of Facilities	Placer County Health and Human Services	06/03/2019	06/04/2019	08/12/2019
CA	CUPA PLUMAS	CUPA Facility List	Plumas County Environmental Health	03/31/2019	04/23/2019	06/26/2019
CA	LUST RIVERSIDE	Listing of Underground Tank Cleanup Sites	Department of Environmental Health	07/10/2019	07/11/2019	09/20/2019
CA	UST RIVERSIDE	Underground Storage Tank Tank List	Department of Environmental Health	07/10/2019	07/11/2019	09/23/2019

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Dat
CA	CS SACRAMENTO	Toxic Site Clean-Up List	Sacramento County Environmental Management	05/06/2019	06/28/2019	08/22/2019
CA	ML SACRAMENTO	Master Hazardous Materials Facility List	Sacramento County Environmental Management	05/06/2019	06/28/2019	09/13/2019
CA	CUPA SAN BENITO	CUPA Facility List	San Benito County Environmental Health	07/16/2019	07/16/2019	09/24/2019
CA	PERMITS SAN BERNARDINO	Hazardous Material Permits	San Bernardino County Fire Department Hazardo	05/31/2019	05/31/2019	07/22/2019
CA	HMMD SAN DIEGO	Hazardous Materials Management Division Database	Hazardous Materials Management Division	06/04/2019	06/04/2019	08/08/2019
CA	LF SAN DIEGO	Solid Waste Facilities	Department of Health Services	04/18/2018	04/24/2018	06/19/2018
CA	SAN DIEGO CO LOP	Local Oversight Program Listing	Department of Environmental Health	07/16/2019	07/23/2019	09/30/2019
CA	SAN DIEGO CO SAM	Environmental Case Listing	San Diego County Department of Environmental	03/23/2010	06/15/2010	07/09/2010
CA	LUST SAN FRANCISCO	Local Oversight Facilities	Department Of Public Health San Francisco Cou	09/19/2008	09/19/2008	09/29/2008
CA	UST SAN FRANCISCO	Underground Storage Tank Information	Department of Public Health	08/01/2019	08/02/2019	10/08/2019
CA	UST SAN JOAQUIN	San Joaquin Co. UST	Environmental Health Department	06/22/2018	06/26/2018	07/11/2018
CA	CUPA SAN LUIS OBISPO	CUPA Facility List	San Luis Obispo County Public Health Departme	08/14/2019	08/20/2019	10/18/2019
CA	BI SAN MATEO	Business Inventory	San Mateo County Environmental Health Service	08/06/2019	08/14/2019	08/15/2019
CA	LUST SAN MATEO	Fuel Leak List	San Mateo County Environmental Health Service	03/29/2019	03/29/2019	05/29/2019
CA	CUPA SANTA BARBARA	CUPA Facility Listing	Santa Barbara County Public Health Department	09/08/2011	09/09/2011	10/07/2011
CA	CUPA SANTA CLARA	Cupa Facility List	Department of Environmental Health	08/14/2019	08/20/2019	10/18/2019
CA	HIST LUST SANTA CLARA	HIST LUST - Fuel Leak Site Activity Report	Santa Clara Valley Water District	03/29/2005	03/30/2005	04/21/2005
CA	LUST SANTA CLARA	LOP Listing	Department of Environmental Health	03/03/2014	03/05/2014	03/18/2014
CA	SAN JOSE HAZMAT	Hazardous Material Facilities	City of San Jose Fire Department	07/30/2019	08/02/2019	10/08/2019
CA	CUPA SANTA CRUZ	CUPA Facility List	Santa Cruz County Environmental Health	01/21/2017	02/22/2017	05/23/2017
CA	CUPA SHASTA	CUPA Facility List	Shasta County Department of Resource Managemen	06/15/2017	06/19/2017	08/09/2017
CA	LUST SOLANO	Leaking Underground Storage Tanks	Solano County Department of Environmental Man	06/04/2019	06/06/2019	08/13/2019
CA	UST SOLANO	Underground Storage Tanks	Solano County Department of Environmental Man	06/04/2019	06/06/2019	07/23/2019
CA	CUPA SONOMA	Cupa Facility List	County of Sonoma Fire & Emergency Services De	06/18/2019	06/25/2019	07/24/2019
CA	LUST SONOMA	Leaking Underground Storage Tank Sites	Department of Health Services	07/02/2019	07/02/2019	09/20/2019
CA	CUPA STANISLAUS	CUPA Facility List	Stanislaus County Department of Ennvironmenta	07/18/2019	07/18/2019	09/26/2019
CA	UST SUTTER	Underground Storage Tanks	Sutter County Environmental Health Services	06/03/2019	06/04/2019	07/23/2019
CA	CUPA TEHAMA	CUPA Facility List	Tehama County Department of Environmental Hea	05/20/2019	05/21/2019	07/18/2019
CA	CUPA TRINITY	CUPA Facility List	Department of Toxic Substances Control	07/19/2019	07/23/2019	09/26/2019
CA	CUPA TULARE	CUPA Facility List	Tulare County Environmental Health Services D	08/12/2019	08/14/2019	10/17/2019
CA	CUPA TUOLUMNE	CUPA Facility List	Divison of Environmental Health	04/23/2018	04/25/2018	06/25/2018
CA	BWT VENTURA	Business Plan, Hazardous Waste Producers, and Operating Unde	Ventura County Environmental Health Division	05/29/2019	07/29/2019	09/30/2019
CA	LF VENTURA	Inventory of Illegal Abandoned and Inactive Sites	Environmental Health Division	12/01/2011	12/01/2011	01/19/2012
CA	LUST VENTURA	Listing of Underground Tank Cleanup Sites	Environmental Health Division	05/29/2008	06/24/2008	07/31/2008
CA	MED WASTE VENTURA	Medical Waste Program List	Ventura County Resource Management Agency	05/29/2019	07/29/2019	09/30/2019
CA	UST VENTURA	Underground Tank Closed Sites List	Environmental Health Division	06/10/2019	06/12/2019	07/24/2019
CA	UST YOLO	Underground Storage Tank Comprehensive Facility Report	Yolo County Department of Health	06/26/2019	06/28/2019	07/31/2019
CA	CUPA YUBA	CUPA Facility List	Yuba County Environmental Health Department	07/26/2019	07/31/2019	10/08/2019

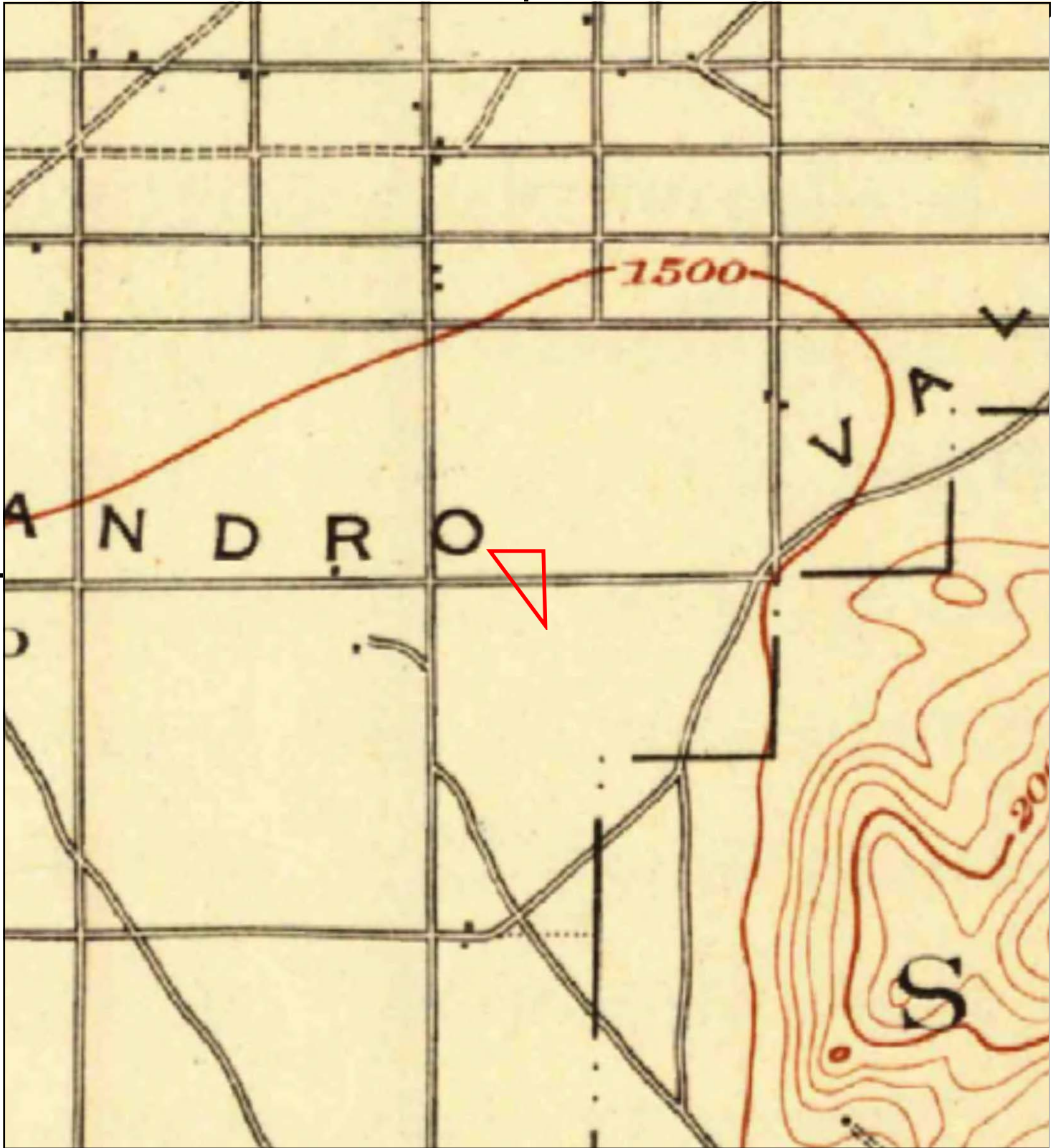
GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Dat
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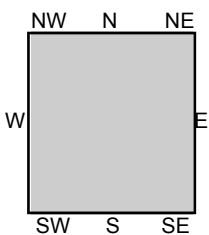
STREET AND ADDRESS INFORMATION

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Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract



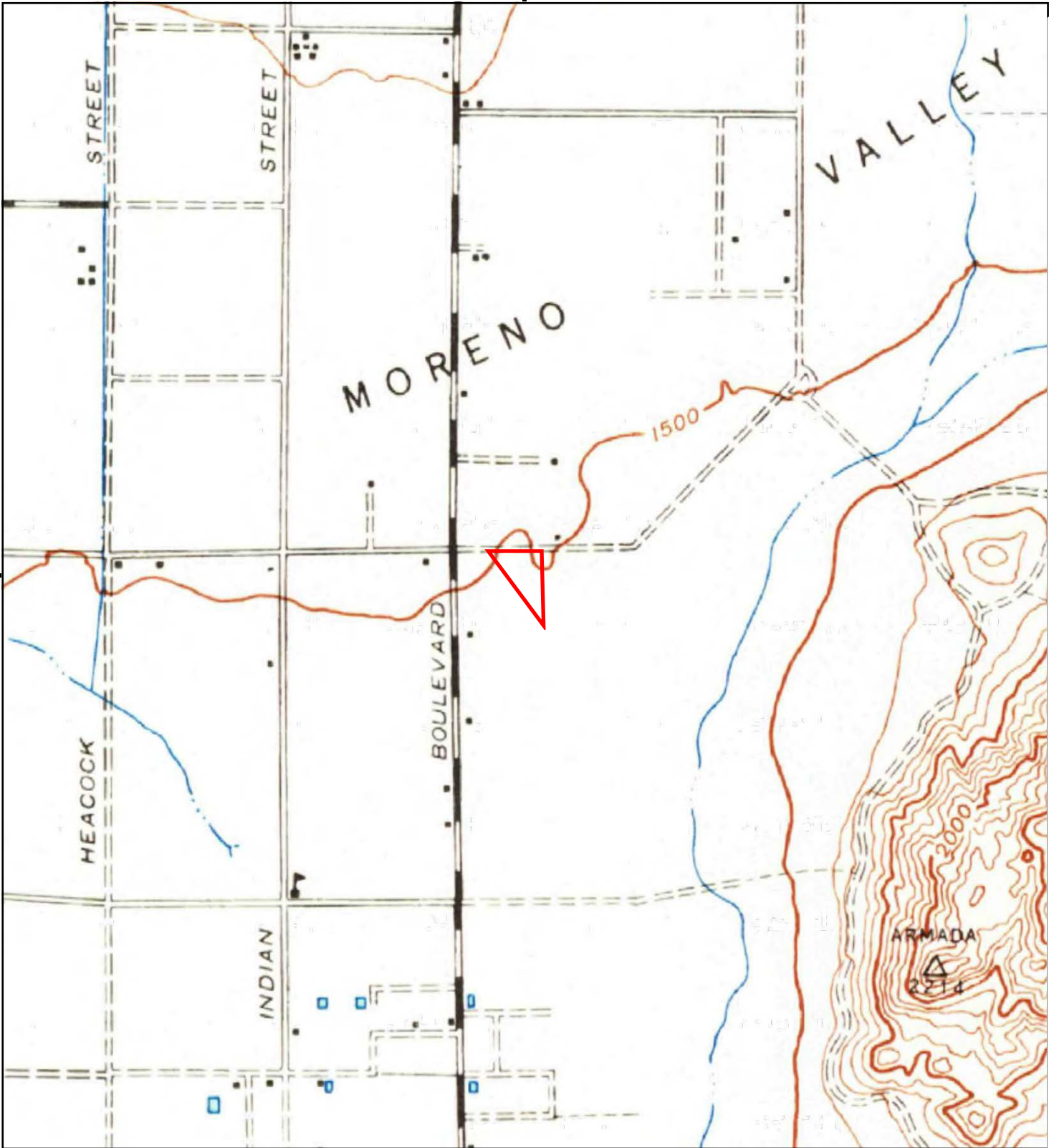
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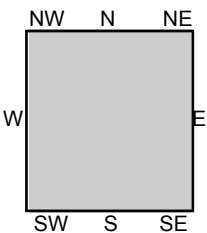
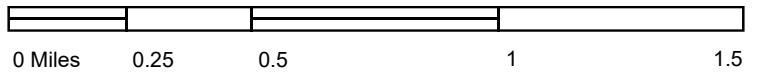
TP, Elsinore, 1901, 30-minute

SITE NAME: Iris Park
 ADDRESS: Iris Avenue & Perris Boulevard
 Moreno Valley, CA 92551
 CLIENT: AES Due Diligence, Inc

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



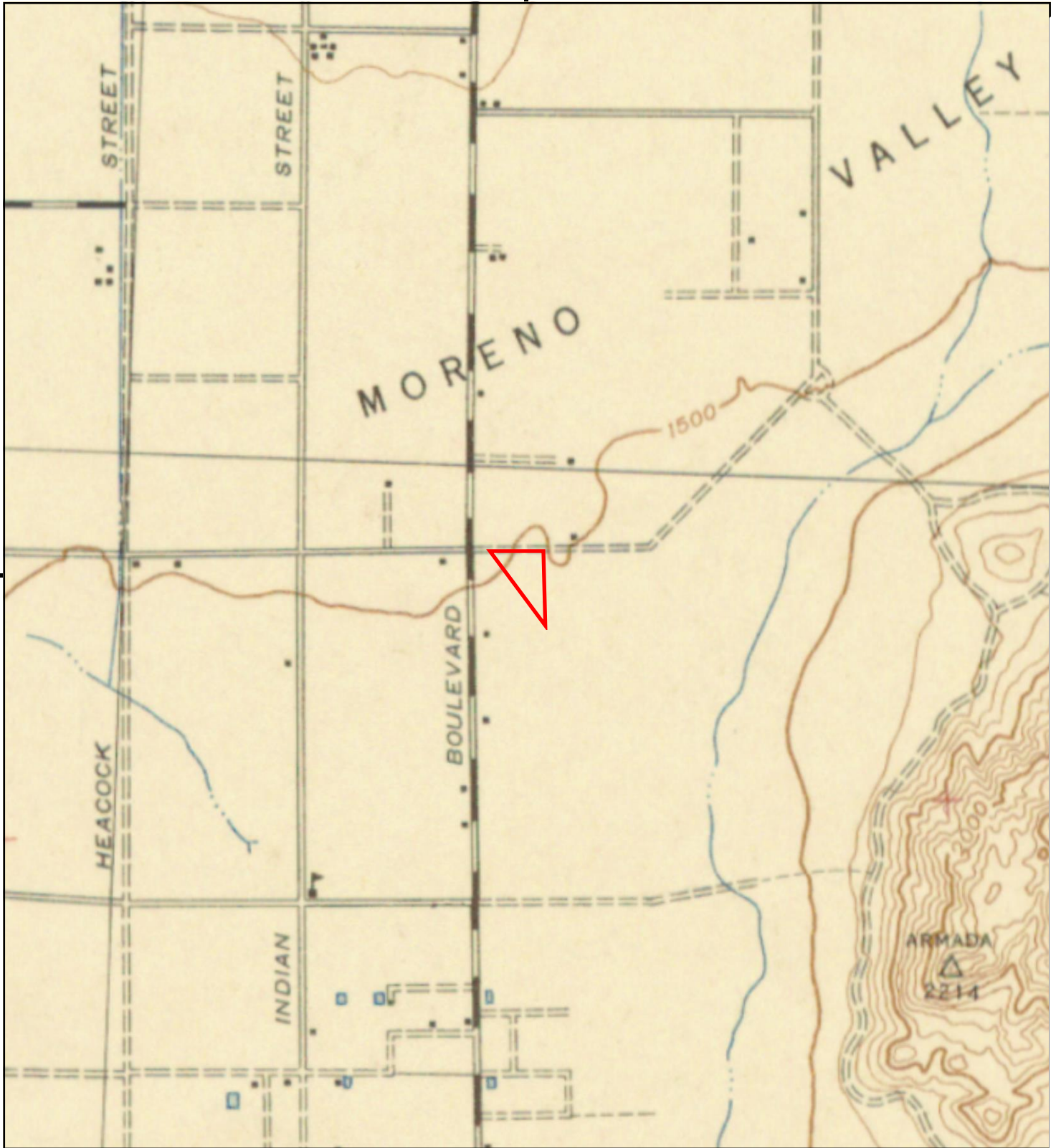
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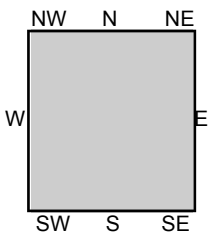
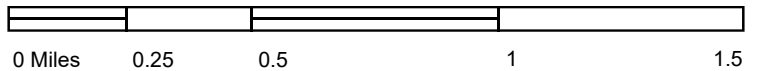
TP, Perris, 1942, 15-minute

SITE NAME: Iris Park
 ADDRESS: Iris Avenue & Perris Boulevard
 Moreno Valley, CA 92551
 CLIENT: AES Due Diligence, Inc

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



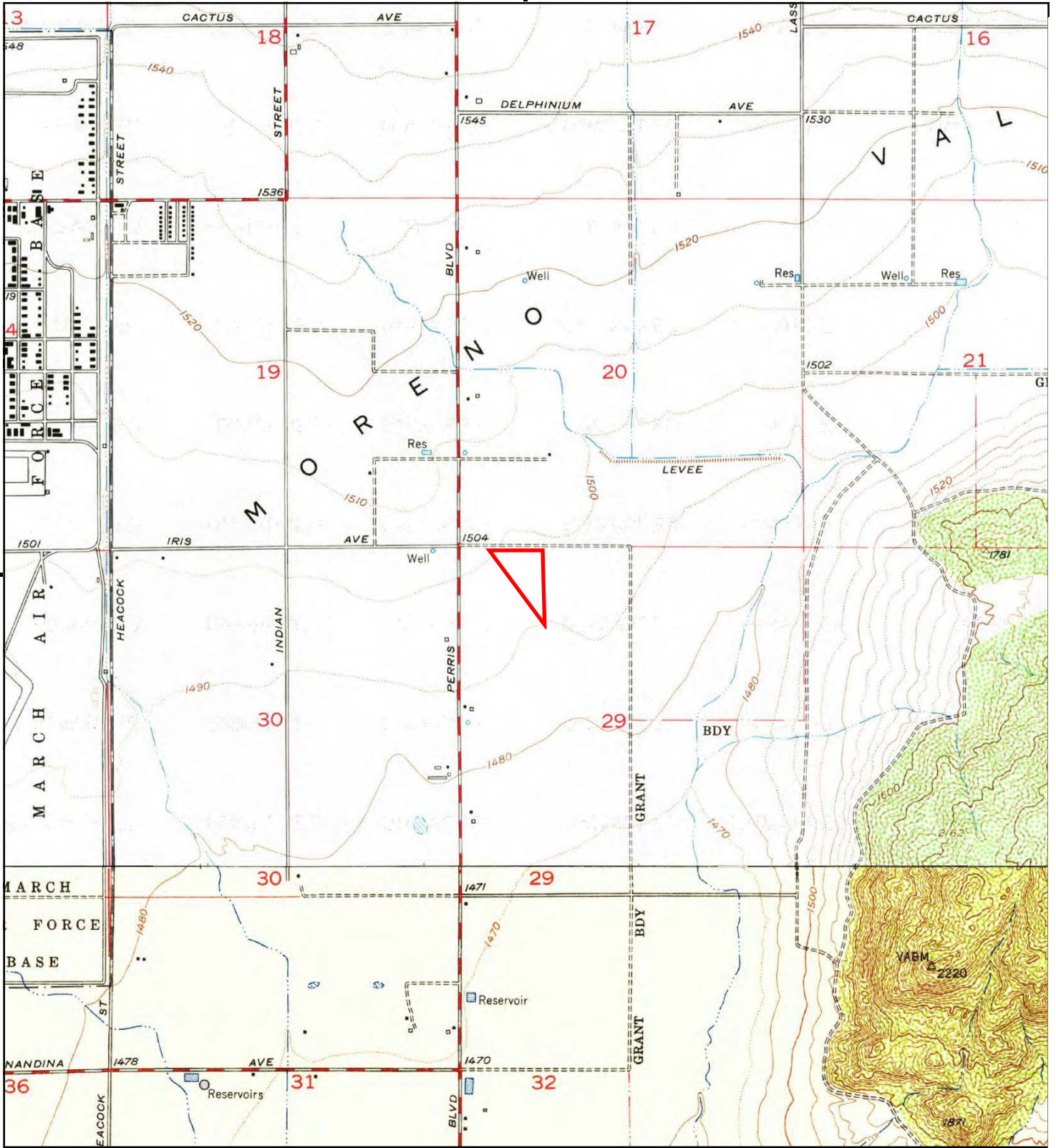
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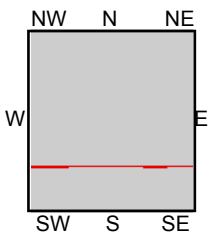
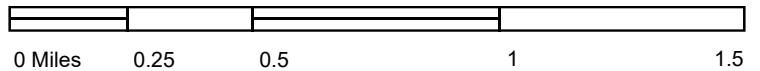
TP, PERRIS, 1943, 15-minute

SITE NAME: Iris Park
 ADDRESS: Iris Avenue & Perris Boulevard
 Moreno Valley, CA 92551
 CLIENT: AES Due Diligence, Inc

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



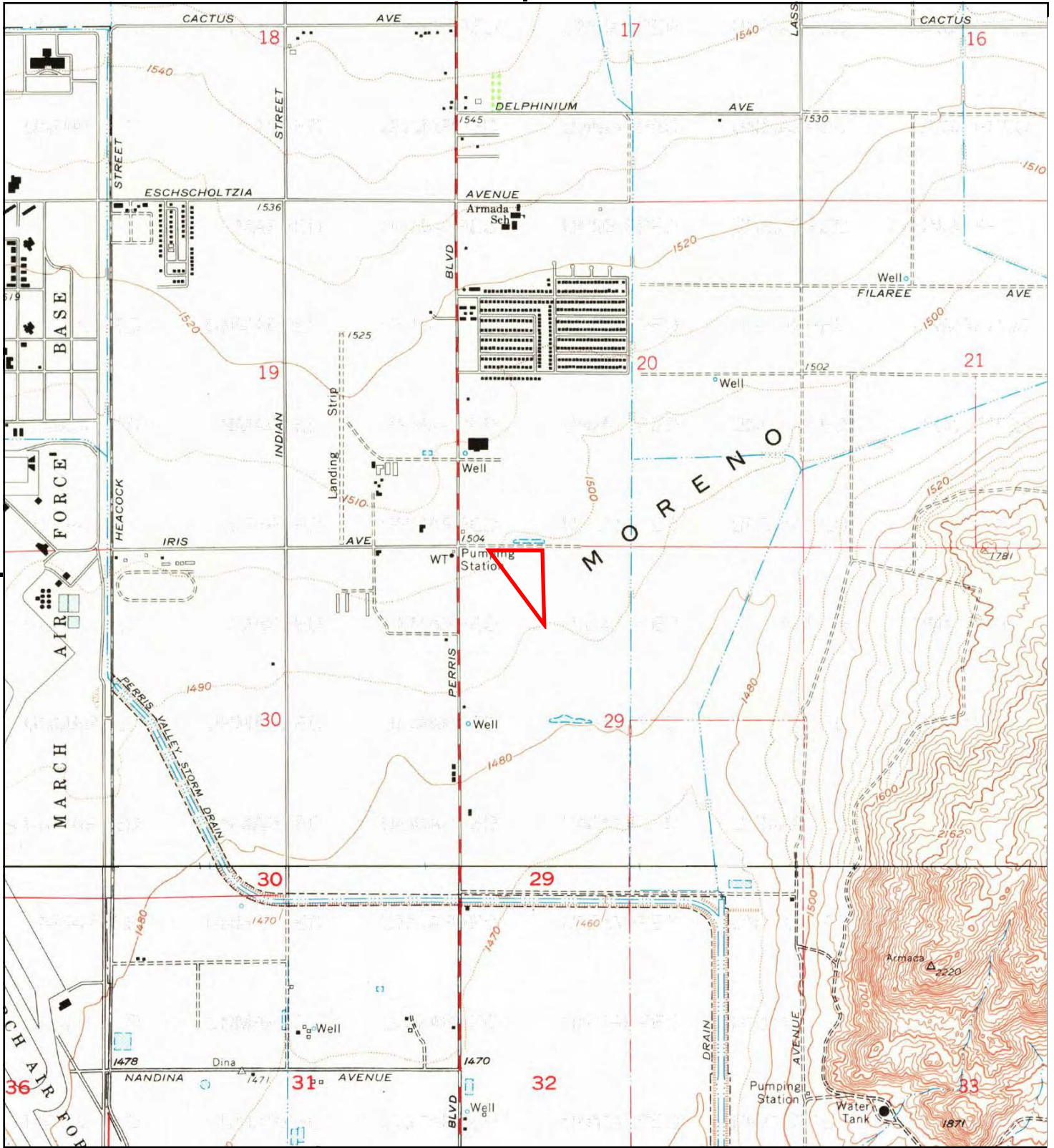
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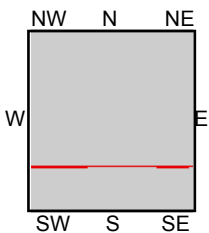
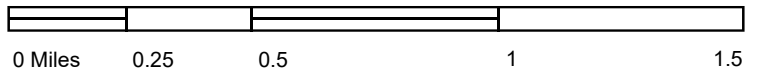
TP, Sunnymead, 1953, 7.5-minute
S, Perris, 1953, 7.5-minute

SITE NAME: Iris Park
ADDRESS: Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551
CLIENT: AES Due Diligence, Inc

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



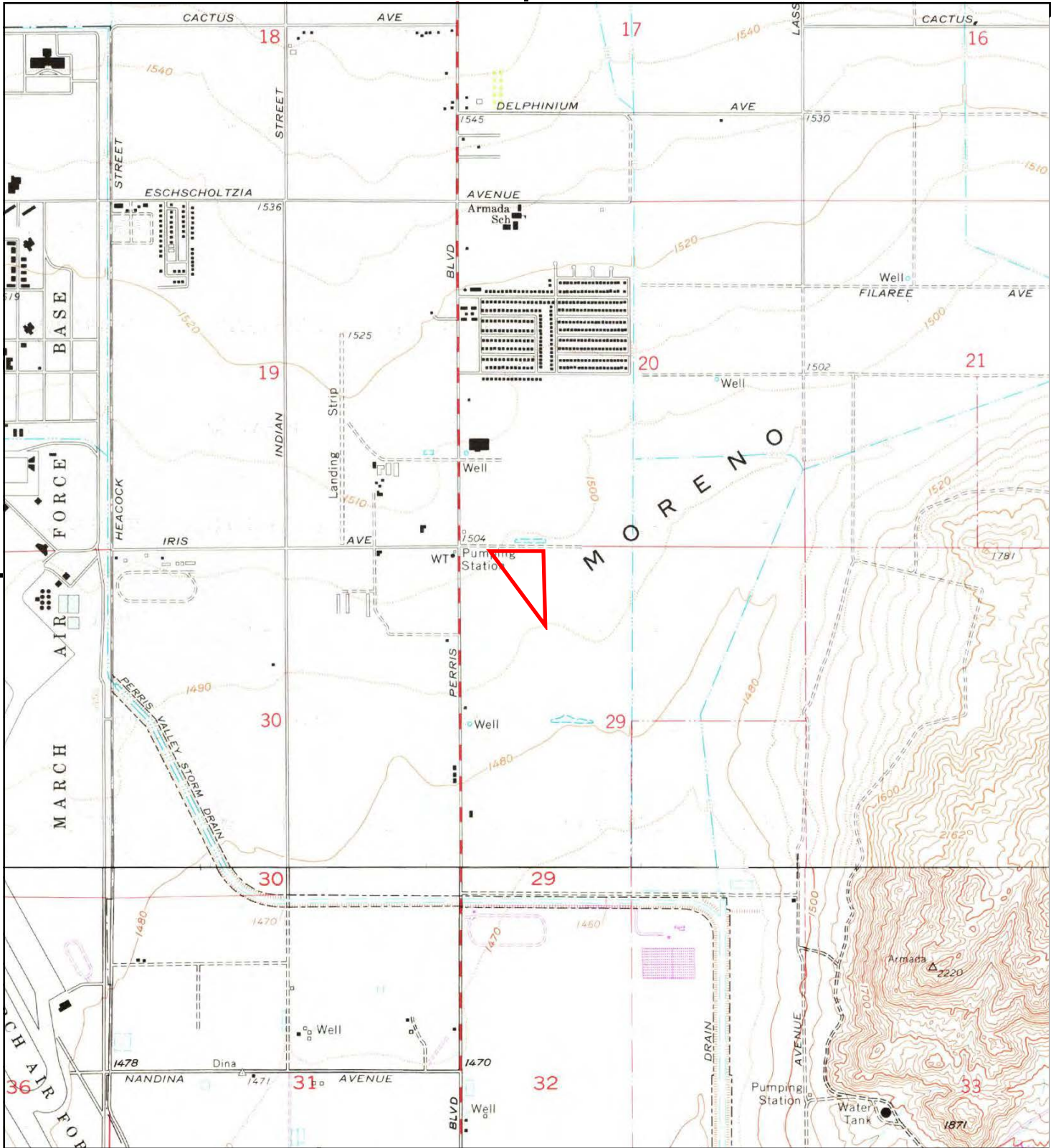
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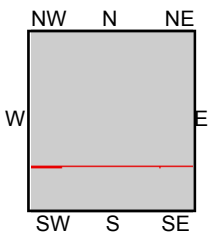
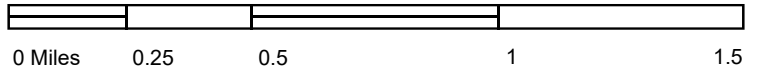
TP, Sunnymead, 1967, 7.5-minute
S, Perris, 1967, 7.5-minute

SITE NAME: Iris Park
ADDRESS: Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551
CLIENT: AES Due Diligence, Inc

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



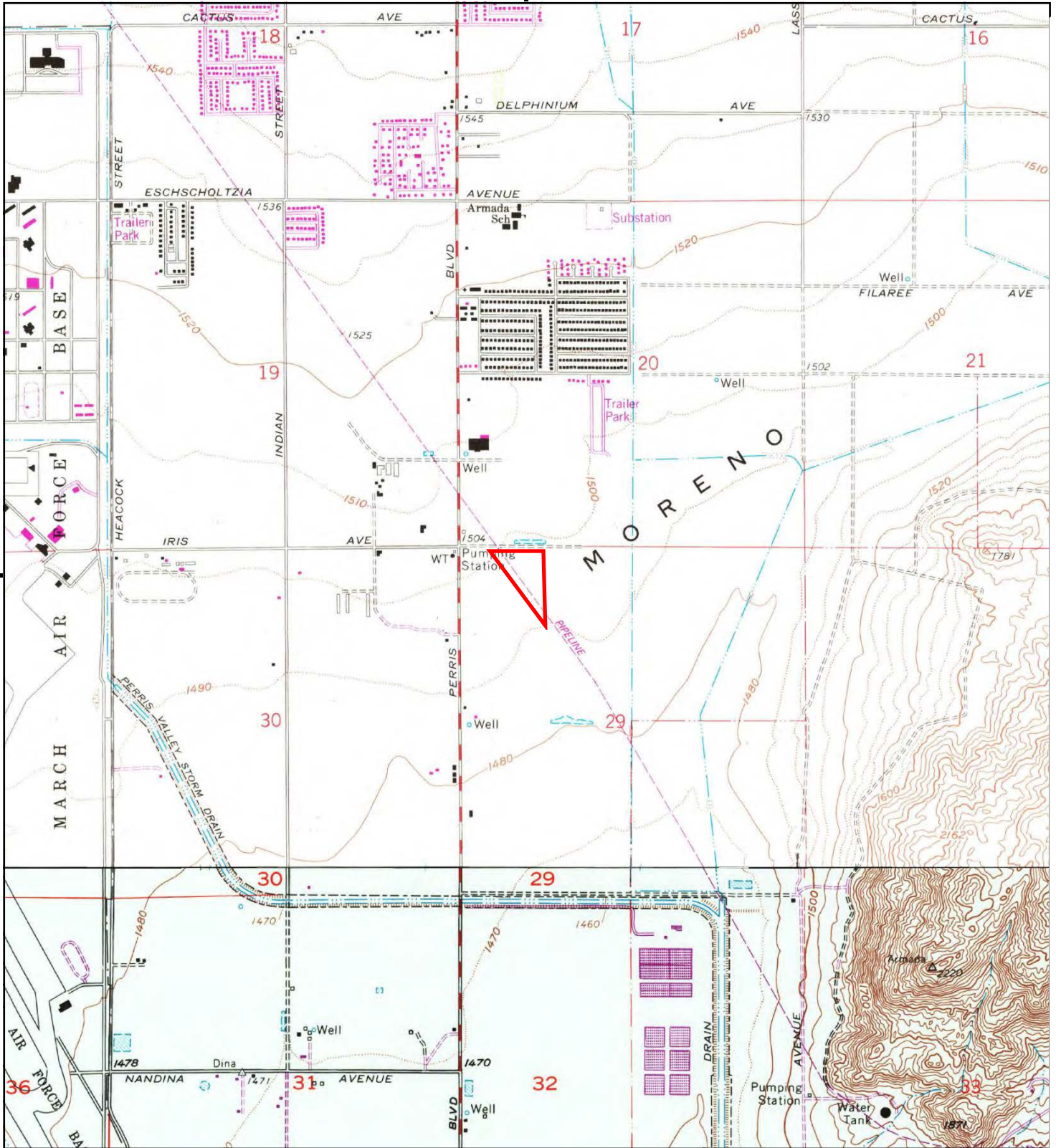
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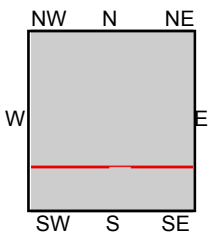
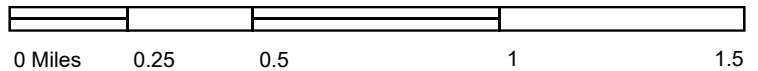
TP, Sunnymead, 1973, 7.5-minute
S, Perris, 1973, 7.5-minute

SITE NAME: Iris Park
ADDRESS: Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551
CLIENT: AES Due Diligence, Inc

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



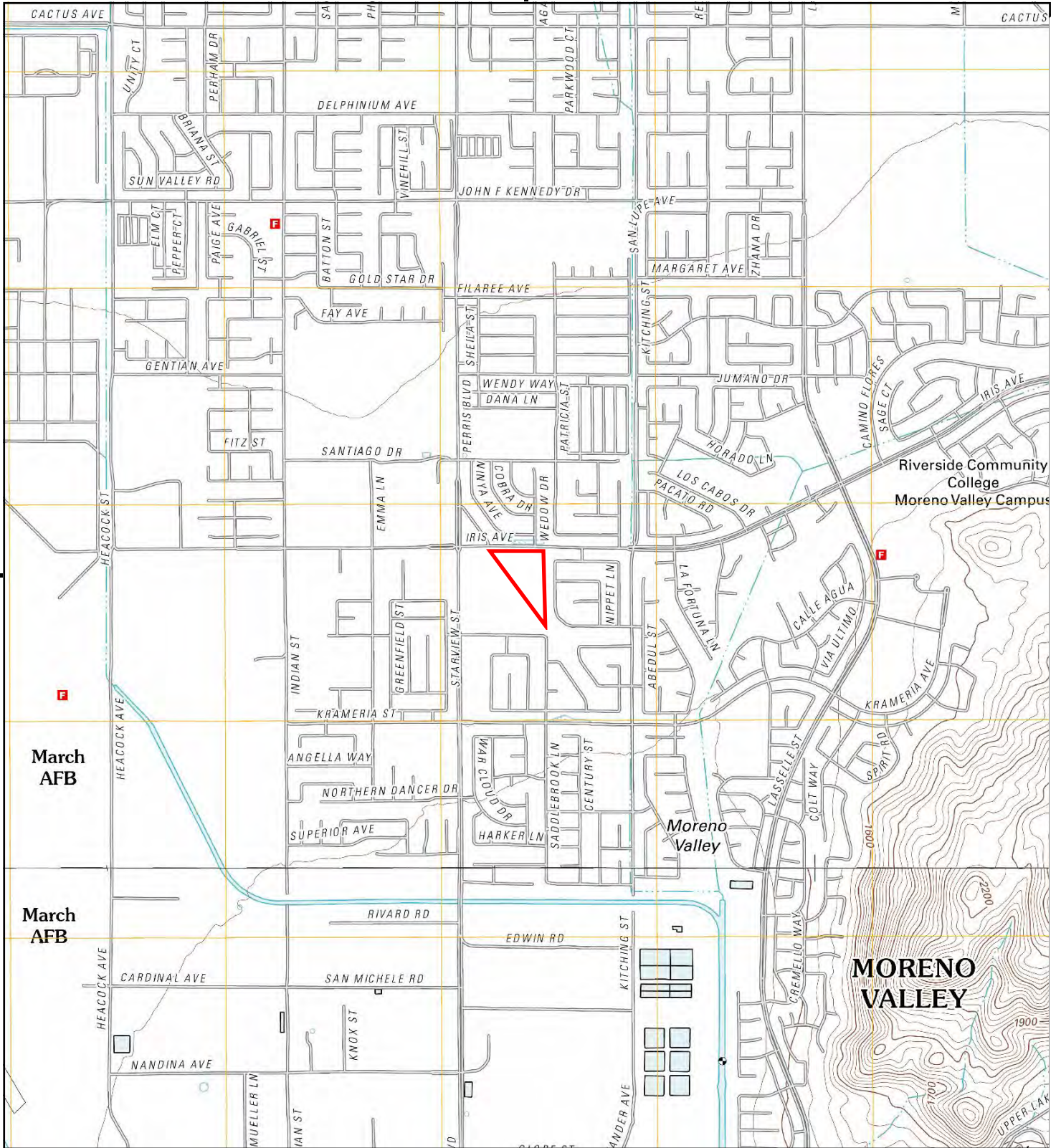
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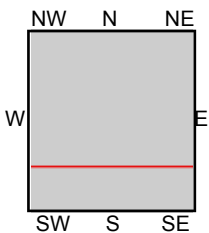
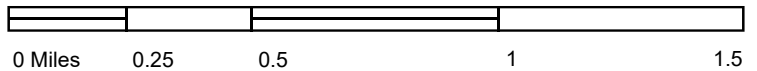
TP, Sunnymead, 1980, 7.5-minute
S, Perris, 1979, 7.5-minute

SITE NAME: Iris Park
ADDRESS: Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551
CLIENT: AES Due Diligence, Inc

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



This report includes information from the following map sheet(s).



TP, Sunnymead, 2012, 7.5-minute
S, Perris, 2012, 7.5-minute

SITE NAME: Iris Park
ADDRESS: Iris Avenue & Perris Boulevard
Moreno Valley, CA 92551
CLIENT: AES Due Diligence, Inc

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197) : Tentative Tract Map 37909 with a Conditional Use



INQUIRY #: 5844302.8

YEAR: 1938

— = 500'





INQUIRY #: 5844302.8

YEAR: 1949

— = 500'

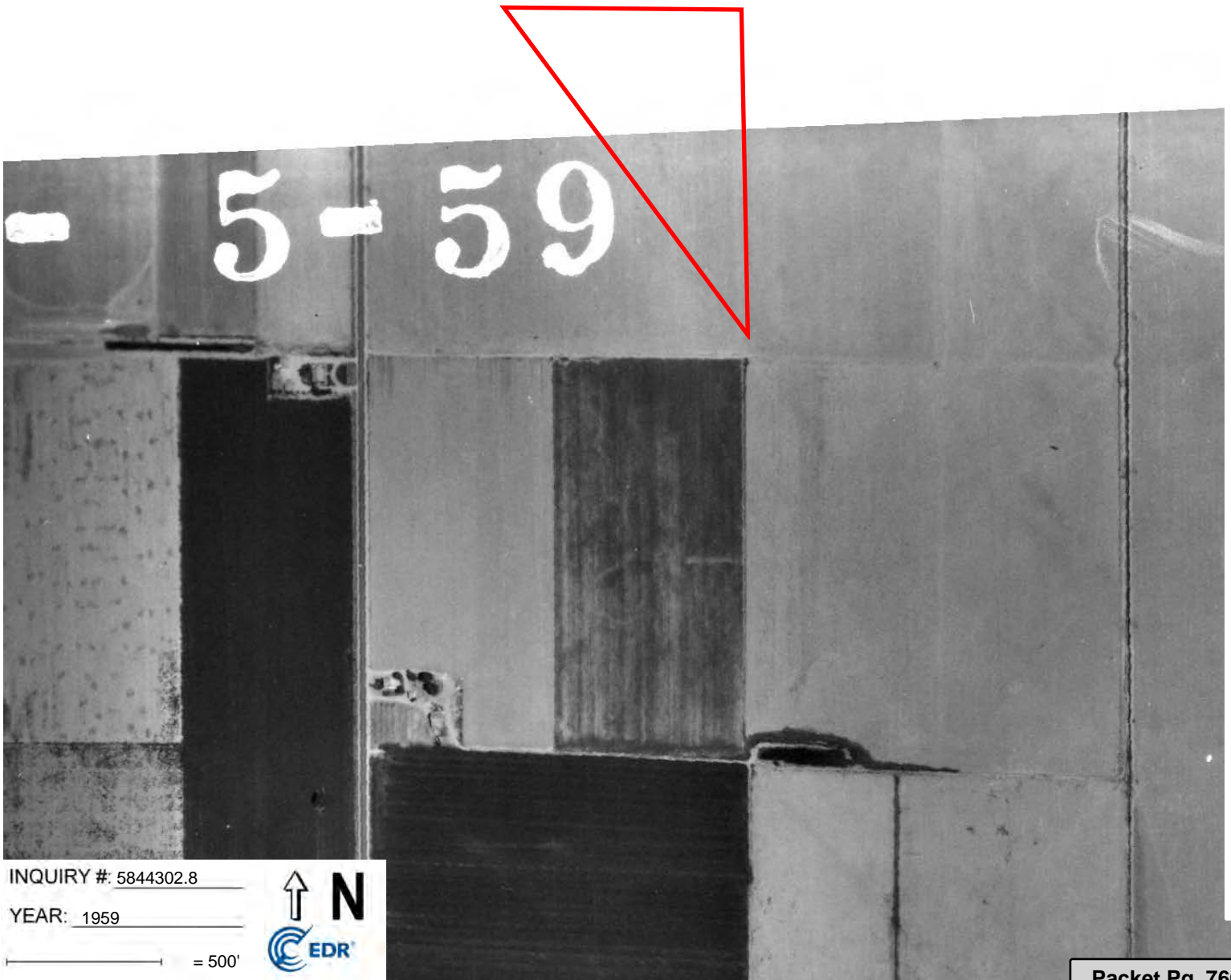




INQUIRY #: 5844302.8
YEAR: 1953

↑ N
CEDR

— = 500'



INQUIRY #: 5844302.8

YEAR: 1959

— = 500'





INQUIRY #: 5844302.8

YEAR: 1961

— = 500'



Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



INQUIRY #: 5844302.8

YEAR: 1967

— = 500'





INQUIRY #: 5844302.8

YEAR: 1978

— = 500'





INQUIRY #: 5844302.8

YEAR: 1985

— = 500'





INQUIRY #: 5844302.8

YEAR: 1989

— = 500'





INQUIRY #: 5844302.8

YEAR: 1997

— = 500'



Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

INQUIRY #: 5844302.8

YEAR: 2002

— = 500'





INQUIRY #: 5844302.8

YEAR: 2006

— = 500'





Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

INQUIRY #: 5844302.8

YEAR: 2009

— = 500'





INQUIRY #: 5844302.8

YEAR: 2012

— = 500'



Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

INQUIRY #: 5844302.8

YEAR: 2016

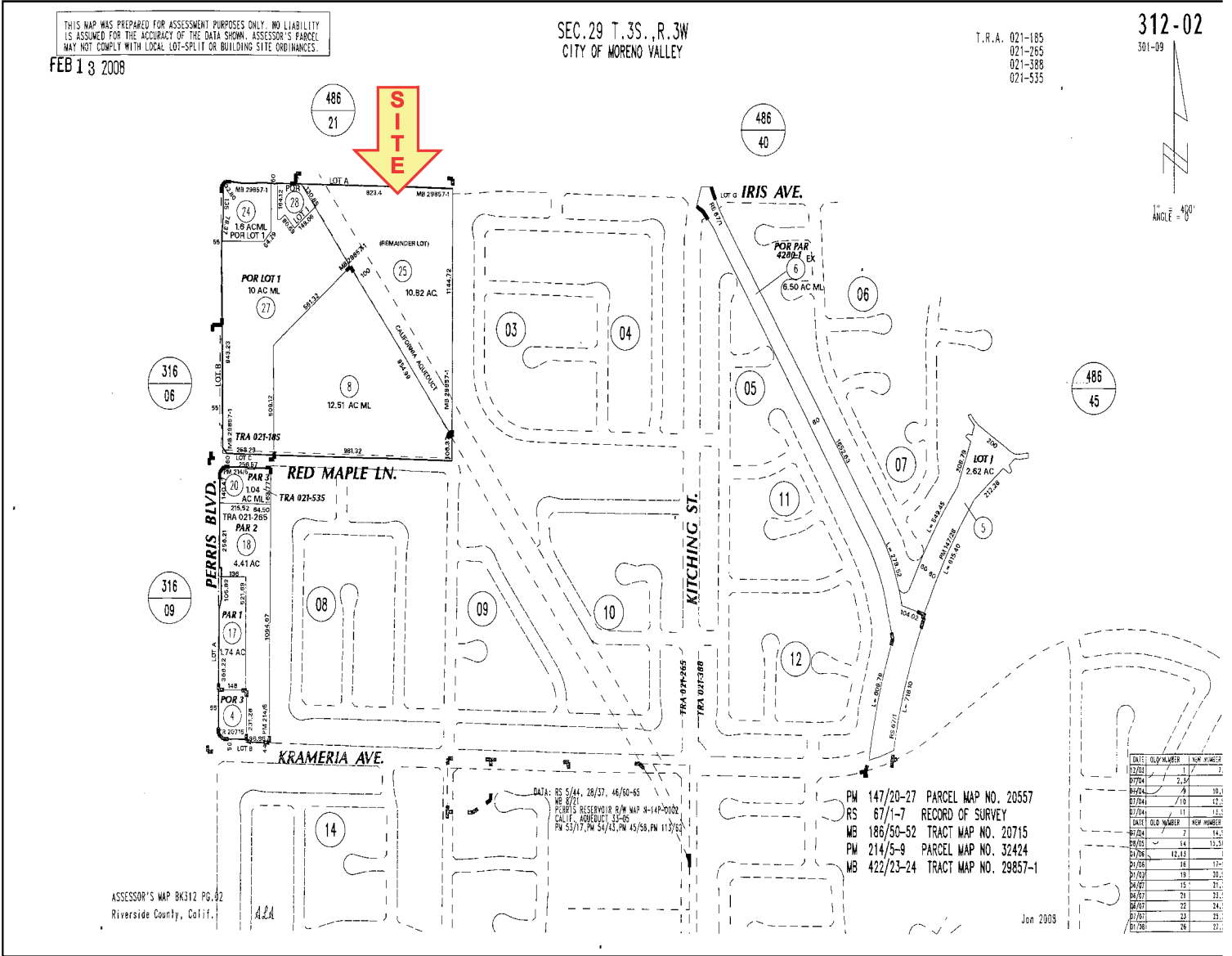
— = 500'





First American

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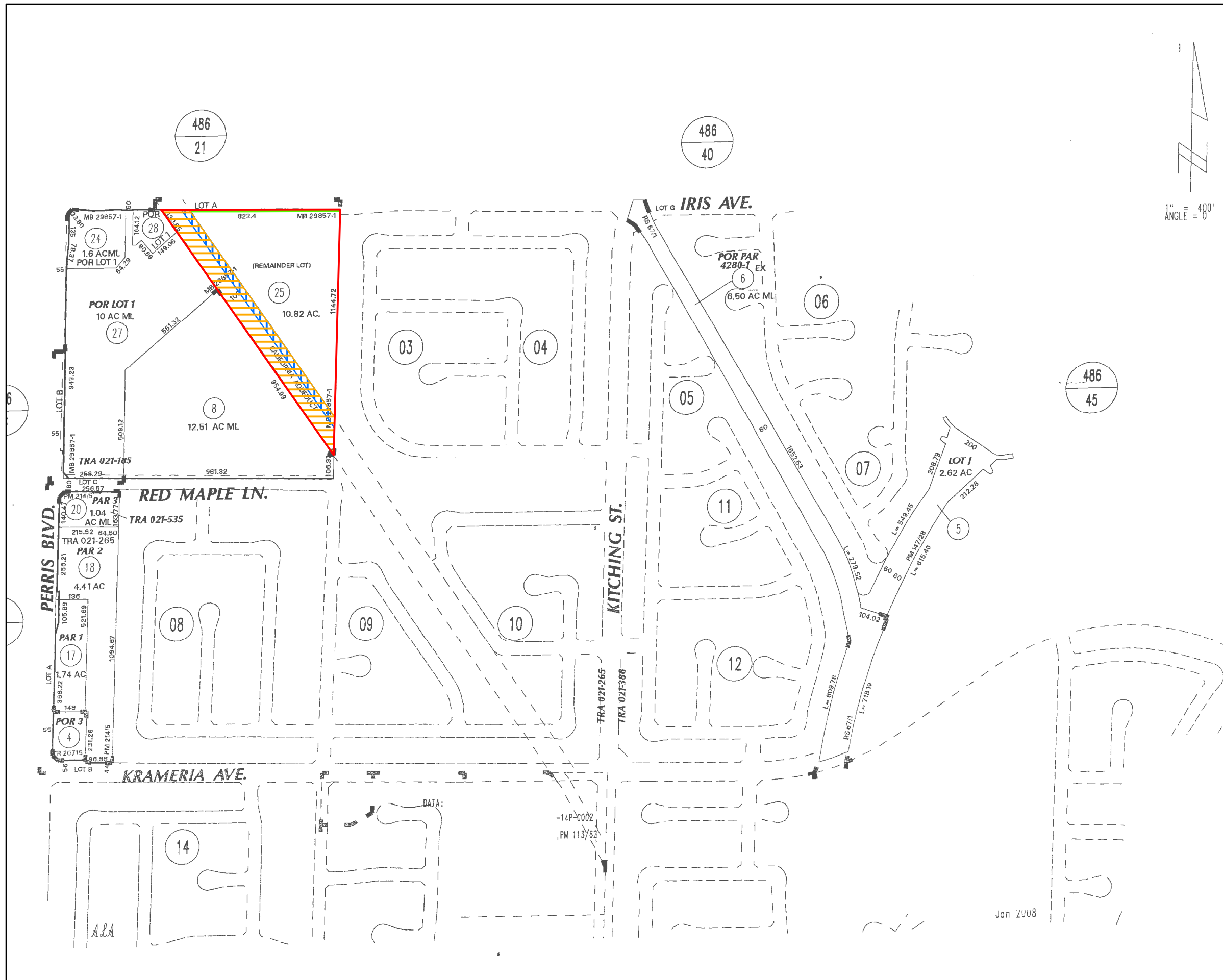
Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



ORDER NO.
00111266-002
06/18/2019
APN
312-020-025-5

Legend

- PIQ
- Ease for Pipelines recorded
01/23/1967 # 5814 OR – Item 2
- Ease for Road recorded
02/16/1984 # 31787 OR – Item 3
- Ease for Landscape recorded
Bk422 Pg23 Tract Map - Item 9
- Ease for Public Utilities recorded
12/07/2007 # 2007-0734119 OR- Item
(Unlocatable)



This map/plat is being furnished as an aid in locating the herei described Land in relation to adjoining streets, natural bounda and other land, and is not a survey of the land depicted. Excep to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions distances, location of easements, acreage or other matters shown thereon.

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

- Pre-Title 27 - CAI
- Title 27 - Land Treatment Unit
- Title 27 - Mining Unit
- Title 27 - Municipal Solid Waste Landfill
- Title 27 - Non-Municipal Solid Waste Landfill
- Title 27 - Surface Impoundment
- Title 27 - Waste Pile
- Unknown

Irrigated Lands Regulatory Program Sites

- Oil / Gas Sites
- Other Oil and Gas Projects
- Produced Water Ponds
- Underground Injection Control (UIC)
- Well Stimulation Project - Exclusion
- Well Stimulation Project - Groundwater Monitoring Plan
- Well Stimulation Projects - Property Owner Sampling

Confined Animal Sites

Other Sites

- Project Sites
- Non-Case Information Sites
- Sampling Points - Public
- Field Points
- AGLand Domestic Wells

SIGNIFIES A CLOSED SITE

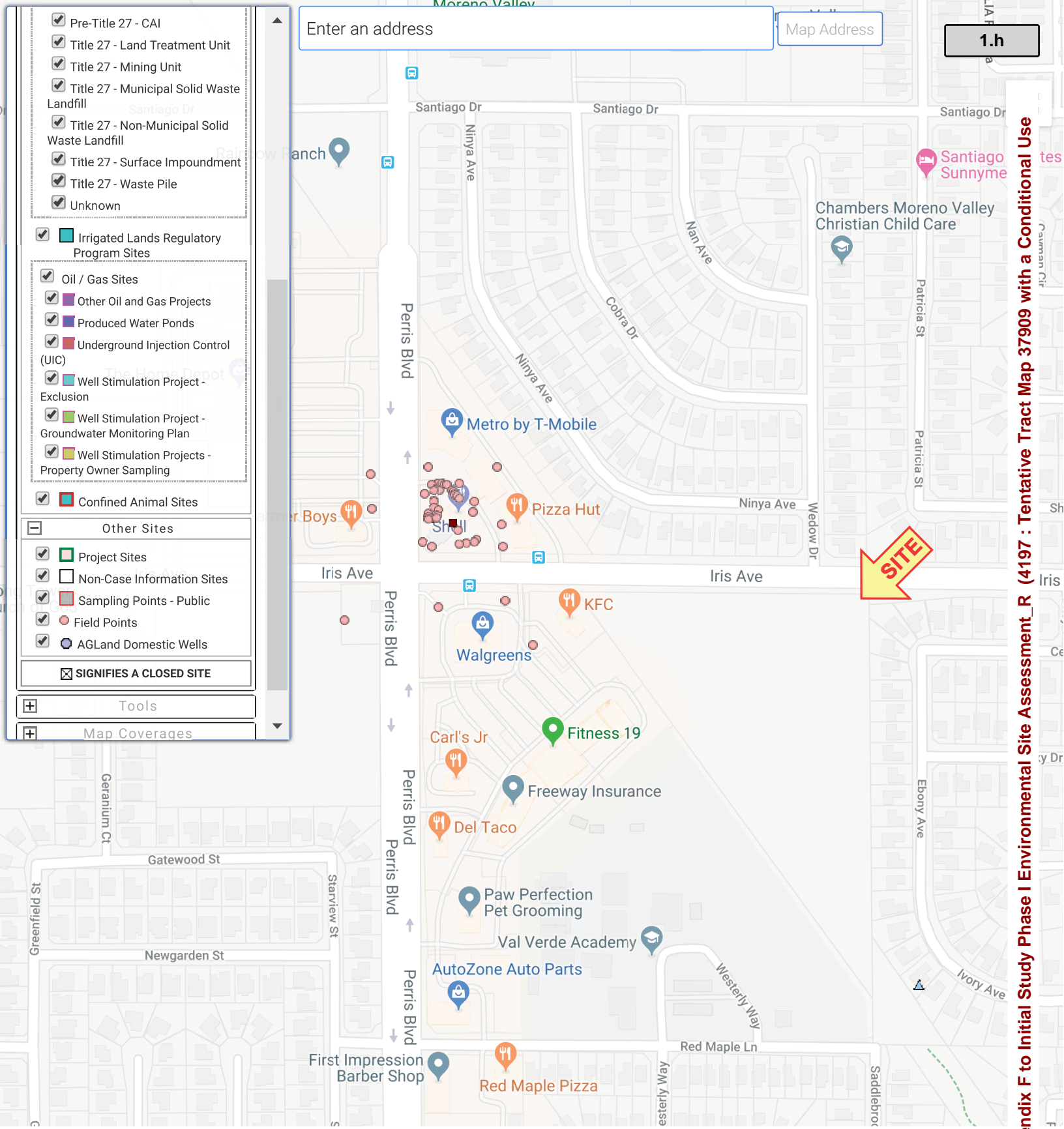
Tools

Map Coverages

Enter an address

Map Address

1.h



Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use



4911 Birch Street, , Newport Beach, CA 92660
Phone: (949) 724-3117 • Fax: (949) 258-5237

Issuing Policies of Chicago Title Insurance Company

ORDER NO.: **00111266-002-KAH-K27**

Escrow/Customer Phone: **(949) 724-3100**

Chicago Title Company
4911 Birch Street
Newport Beach, CA 92660
ATTN: Kathleen Huntsman
Email: KHuntsman@ctt.com

Title Officer: **John Balassi (OC/Comm)**
Title Officer Phone: **(949) 724-3117**
Title Officer Fax: **(949) 258-5237**
Title Officer Email:
CTCommercialTitleNewport@ctt.com

PROPERTY: **VACANT LAND APN 312-020-025, MORENO VALLEY, CA**

PRELIMINARY REPORT

*In response to the application for a policy of title insurance referenced herein, **Chicago Title 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 herein or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations or Conditions 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 Attachment One. 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 Attachment One. Copies of the policy forms should be read. They are available from the office which issued this report.

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.

The policy(s) of title insurance to be issued hereunder will be policy(s) of Chicago Title Insurance Company, a Florida corporation.

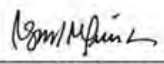

Please read the exceptions shown or referred to herein and the exceptions and exclusions set forth in Attachment One of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be 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.

Chicago Title Company

By: 
Authorized Signature



By: 
Randy Quirk, President
Attest: 
Michael Gravelle, Secretary

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

**PRELIMINARY REPORT**

EFFECTIVE DATE: June 4, 2019 at 7:30 a.m.

ORDER NO.: 00111266-002-KAH-K27

The form of policy or policies of title insurance contemplated by this report is:

CLTA Standard Coverage Owners Policy (04-08-14)

1. THE ESTATE OR INTEREST IN THE LAND HEREINAFTER DESCRIBED OR REFERRED TO COVERED BY THIS REPORT IS:

A FEE

2. TITLE TO SAID ESTATE OR INTEREST AT THE DATE HEREOF IS VESTED IN:

MAPLE LANE GROUP, LLC, a California limited liability company

3. THE LAND REFERRED TO IN THIS REPORT IS DESCRIBED AS FOLLOWS:

See Exhibit A attached hereto and made a part hereof.

PRELIMINARY REPORT
YOUR REFERENCE:

Chicago Title Company
ORDER NO.: 00111266-002-KAH-K27

EXHIBIT "A"

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF MORENO VALLEY, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP 3 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT CONVEYED TO THE CITY OF MORENO VALLEY BY DEED RECORDED [AUGUST 28, 1989 AS INSTRUMENT NO. 89-292505 OFFICIAL RECORDS](#).

ALSO EXCEPTING THEREFROM ALL OIL, WATER, GAS, HYDROCARBONS, PRECIOUS METALS AND MINERALS OF ANY KIND WHETHER DESCRIBED OR NOT, BELOW A DEPTH OF 500 FEET WITHOUT THE RIGHT OF SURFACE ENTRY AS RESERVED IN A DEED RECORDED [JUNE 13, 1991 AS INSTRUMENT NO. 91-199908 OFFICIAL RECORDS](#).

ALSO EXCEPTING THEREFROM THAT PORTION SAID LAND CONVEYED TO VAL VERDE UNIFIED SCHOOL DISTRICT BY DEED RECORDED [OCTOBER 10, 2002 AS INSTRUMENT NO. 02-566961 OFFICIAL RECORDS](#).

ALSO EXCEPTING THEREFROM LOT 1, LETTERED LOTS A THROUGH C OF TRACT NO. 29857-1, AS SHOWN ON FILE IN [BOOK 422 PAGES 23 AND 24 OF MAPS](#), RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

NOTE: SAID PROPERTY IS SHOWN AT THE REMAINDER LOT OF TRACT NO. 29857-1, AS SHOWN ON FILE IN [BOOK 422 PAGES 23 AND 24 OF MAPS](#), RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

[APN: 312-020-025-5](#)

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197) : Tentative Tract Map 37909 with a Conditional Use

EXCEPTIONS**AT THE DATE HEREOF, ITEMS TO BE CONSIDERED AND EXCEPTIONS TO COVERAGE IN ADDITION TO THE PRINTED EXCEPTIONS AND EXCLUSIONS IN SAID POLICY FORM WOULD BE AS FOLLOWS:**

- A. Property taxes, which are a lien not yet due and payable, including any assessments collected with taxes to be levied for the fiscal year 2019-2020.
- B. The lien of supplemental or escaped assessments of property taxes, if any, made pursuant to the provisions of Chapter 3.5 (commencing with Section 75) or Part 2, Chapter 3, Articles 3 and 4, respectively, of the Revenue and Taxation Code of the State of California as a result of the transfer of title to the vestee named in Schedule A or as a result of changes in ownership or new construction occurring prior to Date of Policy.

1. Water rights, claims or title to water, whether or not disclosed by the public records.
2. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: State of California
 Purpose: Pipelines
 Recording Date: January 23, 1967
 Recording No: [5814 Official Records](#)
 Affects: remainder lot

3. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Eastern Municipal Water District, a Municipal Water District
 Purpose: Road
 Recording Date: February 16, 1984
 Recording No: [31787 Official Records](#)
 Affects: remainder lot

4. Covenants, conditions and restrictions but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, citizenship, immigration status, primary language, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

Recording Date: July 6, 2006
 Recording No: [06-493287 Official Records](#)

Said covenants, conditions and restrictions provide that a violation thereof shall not defeat the lien of any mortgage or deed of trust made in good faith and for value.

Modification(s) of said covenants, conditions and restrictions

Recording Date: February 5, 2007
 Recording No: [07-83514 Official Records](#)

Modification(s) of said covenants, conditions and restrictions

Recording Date: July 3, 2007
 Recording No: [2007-0435192 Official Records](#)

PRELIMINARY REPORT
YOUR REFERENCE:

Chicago Title Company
ORDER NO.: 00111266-002-KAH-K27

EXCEPTIONS
(Continued)

5. Matters contained in that certain document

Entitled: Hold Harmless Agreement for Sewer
Recording Date: September 15, 2006
Recording No: [2006-0684612 Official Records](#)

Reference is hereby made to said document for full particulars.

6. Matters contained in that certain document

Entitled: Hold Harmless Agreement for Water
Recording Date: September 15, 2006
Recording No: [2006-0684616 Official Records](#)

Reference is hereby made to said document for full particulars.

7. Matters contained in that certain document

Entitled: Declaration of Covenant and Acknowledgment of Assessments
Recording Date: November 15, 2006
Recording No: [06-844804 Official Records](#)

Reference is hereby made to said document for full particulars.

8. Easement(s) for the purpose(s) shown below and rights incidental thereto as delineated or as offered for dedication, on the map of Tract No. 29857-1;

Purpose: a non-exclusive easement for all common areas including the rights of ingress and egress for the purpose of operation, maintenance, repairs of its facilities and reading meters
Affects: As shown on said map.
Recording No: [Book 422 Pages 23 and 24 of Maps](#)

9. Easement(s) for the purpose(s) shown below and rights incidental thereto as delineated or as offered for dedication, on the map of Tract No. 29857-1;

Purpose: landscape and incidental purposes
Affects: As shown on said map.
Recording No: [Book 422 Pages 23 and 24 of Maps](#)

10. Matters contained in that certain document

Entitled: Agreement for Public Improvements For PA04-0192
Executed by: City of Moreno Valley, State of California, and Evergreen Devco, Inc.
Recording Date: August 10, 2007
Recording No: [2007-0519969 Official Records](#)

Reference is hereby made to said document for full particulars.

Said instrument provides or establishes: This document is without a legal description.

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

PRELIMINARY REPORT
YOUR REFERENCE:

Chicago Title Company
ORDER NO.: 00111266-002-KAH-K27

**EXCEPTIONS
(Continued)**

11. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
- Granted to: Southern California Gas Company, a California Corporation
Purpose: Public utilities
Recording Date: December 7, 2007
Recording No: [2007-0734119 Official Records](#)
Affects: Said land
12. A Notice of Substandard property as disclosed by a document
- Recording Date: October 8, 2010
Recording No: [2010-0484215 Official Records](#)
- Reference is hereby made to said document for full particulars.
13. Please be advised that our search did not disclose any open Deeds of Trust of record. If you should have knowledge of any outstanding obligation, please contact the Title Department immediately for further review prior to closing.
14. Any easements not disclosed by the public records as to matters affecting title to real property, whether or not said easements are visible and apparent.
15. Matters which may be disclosed by an inspection and/or by a correct ALTA/NSPS Land Title Survey of said Land that is satisfactory to the Company, and/or by inquiry of the parties in possession thereof.
16. Any rights of the parties in possession of a portion of, or all of, said Land, which rights are not disclosed by the public records.
- The Company will require, for review, a full and complete copy of any unrecorded agreement, contract, license and/or lease, together with all supplements, assignments and amendments thereto, before issuing any policy of title insurance without excepting this item from coverage.
- The Company reserves the right to except additional items and/or make additional requirements after reviewing said documents.

PLEASE REFER TO THE “INFORMATIONAL NOTES” AND “REQUIREMENTS” SECTIONS WHICH FOLLOW FOR INFORMATION NECESSARY TO COMPLETE THIS TRANSACTION.

END OF EXCEPTIONS

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

REQUIREMENTS SECTION

1. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below:

Limited Liability Company: Maple Lane Group, LLC, a California limited liability company

- a) A copy of its operating agreement, if any, and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.
- b) If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendments thereto with the appropriate filing stamps.
- c) If the Limited Liability Company is member-managed, a full and complete current list of members certified by the appropriate manager or member.
- d) A current dated certificate of good standing from the proper governmental authority of the state in which the entity is currently domiciled.
- e) If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.
- f) If Limited Liability Company is a Single Member Entity, a Statement of Information for the Single Member will be required.
- g) Each member and manager of the LLC without an Operating Agreement must execute in the presence of a notary public the Certificate of California LLC (Without an Operating Agreement) Status and Authority form.

2. Unrecorded matters which may be disclosed by an Owner's Affidavit or Declaration. A form of the Owner's Affidavit/Declaration is attached to this Preliminary Report/Commitment. This Affidavit/Declaration is to be completed by the record owner of the land and submitted for review prior to the closing of this transaction. Your prompt attention to this requirement will help avoid delays in the closing of this transaction. Thank you.

The Company reserves the right to add additional items or make further requirements after review of the requested Affidavit/Declaration.

3. Prior to the close of escrow, the Company requires a Statement of Information to be completed by the following party(s),

Party(s): All Parties

The Company reserves the right to add additional items or make further requirements after review of the requested Statement of Information.

END OF REQUIREMENTS

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

INFORMATIONAL NOTES SECTION

1. Note: Property taxes, including any personal property taxes and any assessments collected with taxes, are paid. For proration purposes the amounts were:

Tax Identification No.: 312-020-025-5
Fiscal Year: 2018-2019
1st Installment: \$1,379.49
2nd Installment: \$1,379.49
Exemption: \$0.00
Code Area: 021-185
2. Note: The policy of title insurance will include an arbitration provision. The Company or the insured may demand arbitration. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the insured arising out of or relating to this policy, any service of the Company in connection with its issuance or the breach of a policy provision or other obligation. Please ask your escrow or title officer for a sample copy of the policy to be issued if you wish to review the arbitration provisions and any other provisions pertaining to your Title Insurance coverage.
3. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.
4. Pursuant to Government Code Section 27388.1, as amended and effective as of 1-1-2018, a Documentary Transfer Tax (DTT) Affidavit may be required to be completed and submitted with each document when DTT is being paid or when an exemption is being claimed from paying the tax. If a governmental agency is a party to the document, the form will not be required. DTT Affidavits may be available at a Tax Assessor-County Clerk-Recorder.
5. Due to the special requirements of SB 50 (California Public Resources Code Section 8560 et seq.), any transaction that includes the conveyance of title by an agency of the United States must be approved in advance by the Company's State Counsel, Regional Counsel, or one of their designees.
6. Note: There are NO conveyances affecting said Land recorded within 24 months of the date of this report.

END OF INFORMATIONAL NOTES

John Balassi (OC/Comm)/aag

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Wire Fraud Alert

This Notice is not intended to provide legal or professional advice. If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. **DO NOT** use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the phone number of relevant parties to the transaction as soon as an escrow account is opened.** **DO NOT** send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do **NOT** reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:
<http://www.fbi.gov>

Internet Crime Complaint Center:
<http://www.ic3.gov>

FIDELITY NATIONAL FINANCIAL, INC. PRIVACY NOTICE

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, “FNF,” “our,” or “we”) respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

Types of Information Collected

We may collect two types of information from you: Personal Information and Browsing Information.

Personal Information. FNF may collect the following categories of Personal Information:

- contact information (e.g., name, address, phone number, email address);
- demographic information (e.g., date of birth, gender, marital status);
- identity information (e.g., Social Security Number, driver’s license, passport, or other government ID number);
- financial account information (e.g., loan or bank account information); and
- other personal information necessary to provide products or services to you.

Browsing Information. FNF may automatically collect the following types of Browsing Information when you access an FNF website, online service, or application (each an “FNF Website”) from your Internet browser, computer, and/or mobile device:

- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website

How Personal Information is Collected

We may collect Personal Information about you from:

- information we receive from you on applications or other forms;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

How Browsing Information is Collected

If you visit or use an FNF Website, Browsing Information may be collected during your visit. Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics

Cookies. When you visit an FNF Website, a “cookie” may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer’s hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to “Do Not Track” features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to other websites. FNF is not responsible for the privacy practices or the content of any of those other websites. We advise you to read the privacy policy of every website you visit.

Use of Personal Information

FNF uses Personal Information for three main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you about our, our affiliates’, and third parties’ products and services, jointly or independently.

When Information Is Disclosed

We may make disclosures of your Personal Information and Browsing Information in the following circumstances:

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;
- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or

- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The Law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Please see “**Choices With Your Information**” to learn the disclosures you can restrict.

Security of Your Information

We maintain physical, electronic, and procedural safeguards to guard your Personal Information. We limit access to nonpublic personal information about you to employees who need to know that information to do their job. When we provide Personal Information to others as discussed in this Privacy Notice, we expect that they process such information in compliance with our Privacy Notice and in compliance with applicable privacy laws.

Choices With Your Information

If you do not want FNF to share your information with our affiliates to directly market to you, you may send an “opt out” request by email, phone, or physical mail as directed at the end of this Privacy Notice. We do not share your Personal Information with nonaffiliates for their use to direct market to you.

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

For California Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties, except as permitted by California law.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information and Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not share information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

Information From Children

The FNF Websites are meant for adults and are not intended or designed to attract persons under the age of eighteen (18). We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

International Users

FNF’s headquarters is located within the United States. If you reside outside the United States and choose to provide Personal Information or Browsing Information to us, please note that we may transfer that information outside of your country of residence for any of the purposes described in this Privacy Notice. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection, transfer, and use of such information in accordance with this Privacy Notice.

FNF Website Services for Mortgage Loans

Certain FNF companies provide services to mortgage loan servicers, including hosting websites that collect customer information on behalf of mortgage loan servicers (the “Service Websites”). The Service Websites may contain links to both this Privacy Notice and the mortgage loan servicer or lender’s privacy notice. The sections of this Privacy Notice titled When Information is Disclosed, Choices with Your Information, and Accessing and Correcting Information do not apply to the Service Websites. The mortgage loan servicer or lender’s privacy notice governs use, disclosure, and access to your Personal Information. FNF does not share Personal Information collected through the Service Websites, except (1) as required or authorized by contract with the mortgage loan servicer or lender, or (2) as required by law or in the good-faith belief that such disclosure is necessary to comply with a legal process or applicable law, to enforce this Privacy Notice, or to protect the rights, property, or safety of FNF or the public.

Your Consent To This Privacy Notice; Notice Changes

By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The revised Privacy Notice, showing the new revision date, will be posted on the FNF Website. Each time you provide information to us following any amendment of this Privacy Notice, your provision of information to us will signify your assent to and acceptance of the terms of the revised Privacy Notice for all previously collected information and information

collected from you in the future. We may use comments, information or feedback that you submit to us in any manner that we may choose without notice or compensation to you.

Accessing and Correcting Information; Contact Us

If you have questions, would like to access or correct your Personal Information, or want to opt-out of information sharing for affiliate marketing, send your requests via email to privacy@fnf.com, by phone to (888) 934-3354, or by mail to:

Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, Florida 32204
Attn: Chief Privacy Officer

Notice of Available Discounts

Pursuant to Section 2355.3 in Title 10 of the California Code of Regulations Fidelity National Financial, Inc. and its subsidiaries (“FNF”) must deliver a notice of each discount available under our current rate filing along with the delivery of escrow instructions, a preliminary report or commitment. Please be aware that the provision of this notice does not constitute a waiver of the consumer’s right to be charged the field rate. As such, your transaction may not qualify for the below discounts.

You are encouraged to discuss the applicability of one or more of the below discounts with a Company representative. These discounts are generally described below; consult the rate manual for a full description of the terms, conditions and requirements for each discount. These discounts only apply to transaction involving services rendered by the FNF Family of Companies. This notice only applies to transactions involving property improved with a one-to-four family residential dwelling.

FNF Underwritten Title Company

CTC - Chicago Title Company

FNF Underwriter

CTIC - Chicago Title Insurance Company

Available Discounts

CREDIT FOR PRELIMINARY REPORTS AND/OR COMMITMENTS ON SUBSEQUENT POLICIES (CTIC)

Where no major change in the title has occurred since the issuance of the original report or commitment, the order may be reopened within 12 months and all or a portion of the charge previously paid for the report or commitment may be credited on a subsequent policy charge within the following time period from the date of the report.

DISASTER LOANS (CTIC)

The charge for a lender’s Policy (Standard or Extended coverage) covering the financing or refinancing by an owner of record, within 24 months of the date of a declaration of a disaster area by the government of the United States or the State of California on any land located in said area, which was partially or totally destroyed in the disaster, will be 50% of the appropriate title insurance rate.

CHURCHES OR CHARITABLE NON-PROFIT ORGANIZATIONS (CTIC)

On properties used as a church or for charitable purposes within the scope of the normal activities of such entities, provided said charge is normally the church’s obligation the charge for an owner’s policy shall be 50% to 70% of the appropriate title insurance rate, depending on the type of coverage selected. The charge for a lender’s policy shall be 40% to 50% of the appropriate title insurance rate, depending on the type of coverage selected.

EMPLOYEE RATE (CTC and CTIC)

No charge shall be made to employees (including employees on approved retirement) of the Company or its underwritten, subsidiary title companies for policies or escrow services in connection with financing, refinancing, sale or purchase of the employees’ bona fide home property. Waiver of such charges is authorized only in connection with those costs which the employee would be obligated to pay, by established custom, as a party to the transaction.

ATTACHMENT ONE

CALIFORNIA LAND TITLE ASSOCIATION
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 HOMEOWNER'S POLICY OF TITLE INSURANCE (12-02-13)

ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE

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:

	Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16:	1.00% % of Policy Amount Shown in Schedule A or \$2,500.00 (whichever is less)	\$ 10,000.00
Covered Risk 18:	1.00% % of Policy Amount Shown in Schedule A or \$5,000.00 (whichever is less)	\$ 25,000.00
Covered Risk 19:	1.00% of Policy Amount Shown in Schedule A or \$5,000.00 (whichever is less)	\$ 25,000.00
Covered Risk 21:	1.00% of Policy Amount Shown in Schedule A or \$2,500.00 (whichever is less)	\$ 5,000.00

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 and 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 in 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 that 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.
7. (Variable exceptions such as taxes, easements, CC&R's, etc. shown here.)

ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (12-02-13)**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, 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.

312-02

T.R.A. 021-185
021-265
021-388
021-535

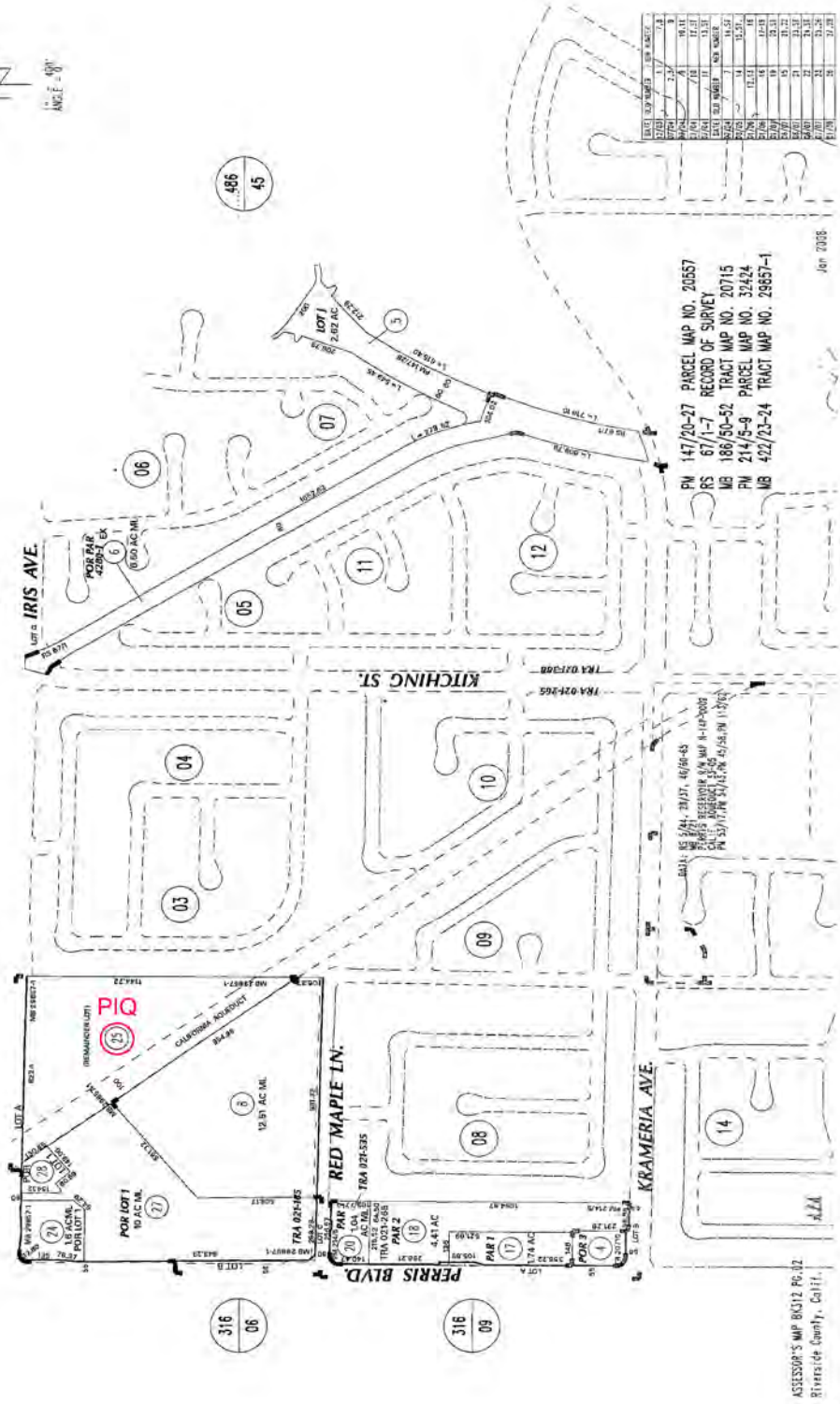
SEC. 29 T. 3S., R. 3W
CITY OF MORENO VALLEY

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.
FEB 13 2008

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ASSESSOR'S MAP BK312 PG. 02
Riverside County, Calif.

PN 147/20-27 PARCEL MAP NO. 20657
RS 67/1-7 RECORD OF SURVEY
MB 186/50-52 TRACT MAP NO. 20715
PN 214/5-9 PARCEL MAP NO. 32424
MB 422/23-24 TRACT MAP NO. 28657-1

This map/plot is being furnished as an aid in locating the herein described Land in relation to adjoining streets, natural boundaries and other land, and is not a survey of the land depicted. Except to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions, distances, location of easements, acreage or other matters shown thereon.

Order: 00111266
Doc: RVA 312-2

Page 1 of 1

Requested By: ddamron, Printed: 8/12/2019 3:06 PM

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

OWNER'S DECLARATION

Escrow No.: 00111266-002-KAH-K27
Property Address: Vacant Land APN 312-020-025
Moreno Valley, CA

The undersigned hereby declares as follows:

1. (Fill in the applicable paragraph and strike the other)
 - a. Declarant ("Owner") is the owner or lessee, as the case may be, of certain premises located at Vacant Land APN 312-020-025, Moreno Valley, CA, further described as follows: See Preliminary Report/Commitment No. for full legal description (the "Land").
 - b. Declarant is the _____ of _____ ("Owner"), which is the owner or lessee, as the case may be, of certain premises located at Vacant Land APN 312-020-025, Moreno Valley, CA, further described as follows: See Preliminary Report/Commitment No. for full legal description (the "Land").
2. (Fill in the applicable paragraph and strike the other)
 - a. During the period of six months immediately preceding the date of this declaration no work has been done, no surveys or architectural or engineering plans have been prepared, and no materials have been furnished in connection with the erection, equipment, repair, protection or removal of any building or other structure on the Land or in connection with the improvement of the Land in any manner whatsoever.
 - b. During the period of six months immediately preceding the date of this declaration certain work has been done and materials furnished in connection with _____ upon the Land in the approximate total sum of \$ _____, but no work whatever remains to be done and no materials remain to be furnished to complete the construction in full compliance with the plans and specifications, nor are there any unpaid bills incurred for labor and materials used in making such improvements or repairs upon the Land, or for the services of architects, surveyors or engineers, except as follows: _____. Owner, by the undersigned Declarant, agrees to and does hereby indemnify and hold harmless Chicago Title Company against any and all claims arising therefrom.
3. Owner has not previously conveyed the Land; is not a debtor in bankruptcy (and if a partnership, the general partner thereof is not a debtor in bankruptcy); and has not received notice of any pending court action affecting the title to the Land.
4. Except as shown in the above-referenced Preliminary Report/Commitment, there are no unpaid or unsatisfied mortgages, deeds of trust, Uniform Commercial Code financing statements, regular assessments, special assessments, periodic assessments or any assessment from any source, claims of lien, special assessments, or taxes that constitute a lien against the Land or that affect the Land but have not been recorded in the public records. There are no violations of the covenants, conditions and restrictions as shown in the above-referenced Preliminary Report/Commitment.
5. The Land is currently in use as _____; _____ occupy/occupies the Land; and the following are all of the leases or other occupancy rights affecting the Land:

6. There are no other persons or entities that assert an ownership interest in the Land, nor are there unrecorded easements, claims of easement, or boundary disputes that affect the Land.
7. There are no outstanding options to purchase or rights of first refusal affecting the Land.
8. Between the most recent Effective Date of the above-referenced Preliminary Report/Commitment and the date of recording of the Insured Instrument(s), Owner has not taken or allowed, and will not take or allow, any action or inaction to encumber or otherwise affect title to the Land.

This declaration is made with the intention that Chicago Title Company (the "Company") and its policy issuing agents will rely upon it in issuing their title insurance policies and endorsements. Owner, by the undersigned Declarant, agrees to indemnify the Company against loss or damage (including attorneys fees, expenses, and costs) incurred by the Company as a result of any untrue statement made herein.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on _____ at _____.

Signature: _____

**Map of Statutory Natural Hazards
For RIVERSIDE County**

Property Address: VACANT LAND
MORENO VALLEY, RIVERSIDE COUNTY, CA 92555
("Property")

APN: 312-020-025
Report Date: 10/01/2019
Report Number: 2555340



Subject Property

- Special Flood Hazard Area
- Area of Potential Flooding, Dam Failure
- Very High Fire Hazard Severity Zone
- Wildland Area, Substantial Forest Fire Risk
- Earthquake Fault Zone
- Seismic Hazard Zone, Landslide
- Seismic Hazard Zone, Liquefaction

This map is provided for convenience only to show the approximate location of the Property and is not based on a field survey.

This COMMERCIAL PROPERTY DISCLOSURE REPORT contains

THIS REPORT PROVIDES THE STATUTORY DISCLOSURES MANDATED BY CALIFORNIA LAWS SPECIFIED HEREIN AND DELIVERY OF THIS REPORT AND THE EXECUTED STATUTORY FORM IS SUFFICIENT TO MEET THE SAFE HARBOR FOR THE SELLER AND SELLER'S AGENT. THIS REPORT ALSO CONTAINS OTHER IMPORTANT DISCLOSURES AND INFORMATION. SELLER AND SELLER'S AGENT MAY HAVE ADDITIONAL RESPONSIBILITIES FOR CERTAIN DISCLOSURES WITHIN THEIR ACTUAL KNOWLEDGE.

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

The Natural Hazard Disclosure Report For RIVERSIDE County

Property Address: VACANT LAND
MORENO VALLEY, RIVERSIDE COUNTY, CA 92555
("Property")

APN: 312-020-025
Report Date: 10/01/2019
Report Number: 2555340

Natural Hazard Disclosure ("NHD") Statement and Acknowledgment of Receipt

The transferor and his or her agent(s) or a third-party consultant disclose the following information with the knowledge that even though this is not a warranty, prospective transferees may rely on this information in deciding whether and on what terms to purchase the Property. Transferor hereby authorizes any agent(s) representing any principal(s) in this action to provide a copy of this statement to any person or entity in connection with any actual or anticipated sale of the Property.

The following are representations made by the transferor and his or her agent(s) or a third-party consultant based on their knowledge and maps drawn by the State. This information is a disclosure and is not intended to be part of any contract between the transferee and the transferor. THIS REAL PROPERTY LIES WITHIN THE FOLLOWING HAZARDOUS AREA(S):

A SPECIAL FLOOD HAZARD AREA (Any type Zone "A" or "V") designated by the Federal Emergency Management Agency

Yes ___ No **X** Do not know and information not available from local jurisdiction ___

AN AREA OF POTENTIAL FLOODING shown on a dam failure inundation map pursuant to Section 8589.5 of the Government Code.

Yes ___ No **X** Do not know and information not available from local jurisdiction ___

A VERY HIGH FIRE HAZARD SEVERITY ZONE pursuant to Section 51178 or 51179 of the Government Code. The owner of this Property is subject to the maintenance requirements of Section 51182 of the Government Code.

Yes ___ No **X**

A WILDLAND AREA THAT MAY CONTAIN SUBSTANTIAL FOREST FIRE RISK AND HAZARDS pursuant to Section 4125 of the Public Resources Code. The owner of this Property is subject to the maintenance requirements of Section 4291 of the Public Resources Code. Additionally, it is not the state's responsibility to provide fire protection services to any building or structure located within the wildlands unless the Department of Forestry and Fire Protection has entered into a cooperative agreement with a local agency for those purposes pursuant to Section 4142 of the Public Resources Code.

Yes ___ No **X**

AN EARTHQUAKE FAULT ZONE pursuant to Section 2622 of the Public Resources Code.

Yes ___ No **X**

A SEISMIC HAZARD ZONE pursuant to Section 2696 of the Public Resources Code.

Yes (Landslide Zone) ___ Yes (Liquefaction Zone) ___

No ___ Map not yet released by state **X**

THESE HAZARDS MAY LIMIT YOUR ABILITY TO DEVELOP THE REAL PROPERTY, TO OBTAIN INSURANCE, OR TO RECEIVE ASSISTANCE AFTER A DISASTER. THE MAPS ON WHICH THESE DISCLOSURES ARE BASED ESTIMATE WHERE NATURAL HAZARDS EXIST. THEY ARE NOT DEFINITIVE INDICATORS OF WHETHER OR NOT A PROPERTY WILL BE AFFECTED BY A NATURAL DISASTER. TRANSFEEE(S) AND TRANSFEROR(S) MAY WISH TO OBTAIN PROFESSIONAL ADVICE REGARDING THOSE HAZARDS AND OTHER HAZARDS THAT MAY AFFECT THE PROPERTY.

Signature of Transferor(s) _____ Date _____ Signature of Transferor(s) _____ Date _____

Signature of Agent _____ Date _____ Signature of Agent _____ Date _____

Transferor(s) and their agent(s) represent that the information herein is true and correct to the best of their knowledge as of the date signed by the transferor(s) and agent(s).

Transferor(s) and their agent(s) acknowledge that they have exercised good faith in the selection of a third-party report provider as required in Civil Code Section 1103.7, and that the representations made in this Natural Hazard Disclosure Statement are based upon information provided by the independent third-party disclosure provider as a substituted disclosure pursuant to Civil Code Section 1103.4. Neither transferor(s) nor their agent(s) (1) has independently verified the information contained in this statement and Report or (2) is personally aware of any errors or inaccuracies in the information contained on the statement. This statement was prepared by the provider below:

Third-Party Disclosure Provider(s) FIRST AMERICAN PROFESSIONAL REAL ESTATE SERVICES, INC. OPERATING THROUGH ITS JCP-LGS DIVISION.
Date 01 October 2019

Transferee represents that he or she has read and understands this document. Pursuant to Civil Code Section 1103.8, the representations in this Natural Hazard Disclosure Statement do not constitute all of the transferor's or agent's disclosure obligations in this transaction.

Signature of Transferee(s) _____ Date _____ Signature of Transferee(s) _____ Date _____

TRANSFEEE(S) REPRESENTS ABOVE HE/SHE HAS RECEIVED, READ AND UNDERSTANDS THE COMPLETE JCP-LGS DISCLOSURE REPORT DELIVERED WITH THIS SUMMARY:

- A. Commercial Natural Hazard Disclosure Report.
- B. Additional Property-specific Statutory Disclosures: Former Military Ordnance Site, Airport Influence Area, Airport Noise, San Francisco Bay Conservation and Development District Jurisdiction (in S.F. Bay counties only).
- C. Additional County and City Regulatory Determinations as applicable: Airports, Avalanche, Blow Sand, Coastal Zone, Dam/Levee Failure Inundation, Debris Flow, Erosion, Flood, Fault Zone, Fire, Groundwater, Landslide, Liquefaction, Methane Gas, Mines, Naturally Occurring Asbestos, Redevelopment Area, Right to Farm, Runoff Area, Seiche, Seismic Shaking, Seismic Ground Failure, Slope Stability, Soil Stability, Subsidence, TRPA, Tsunami.
- D. General advisories: Methamphetamine Contamination, Mold, Radon, Endangered Species Act, Abandoned Mines, Oil & Gas Wells, Tsunami Maps (coastal only), Non-residential Building Energy Use.
- E. Government Guides in Combined Booklet with Report. Refer to Booklet: Commercial Property Owner's Guide to Earthquake Safety. Government Guides are also available on the Company's "Electronic Bookshelf" at <http://www.disclosures.com/>.

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Property Address: VACANT LAND
MORENO VALLEY, RIVERSIDE COUNTY, CA 92555
("Property")

APN: 312-020-025
Report Date: 10/01/2019
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Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

JCP-LGS Commercial Resale Property Disclosure Reports
The Natural Hazard Disclosure Report
For RIVERSIDE County

Property Address: VACANT LAND
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PROPERTY DISCLOSURE SUMMARY - READ FULL REPORT

Statutory NHD Determinations	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Flood		X		NOT IN a Special Flood Hazard Area. The Property is IN a FEMA-designated Flood Zone(s) X.	5
Dam		X		NOT IN an area of potential dam inundation.	5
Very High Fire Hazard Severity		X		NOT IN a very high fire hazard severity zone.	6
Wildland Fire Area		X		Not in a wildland-state responsibility area.	6
Fault		X		NOT IN an earthquake fault zone designated pursuant to the Alquist-Priolo Act.	7
Landslide			X	Map Not Available	7
Liquefaction			X	Map Not Available	7

County-level NHD Determinations	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Fault		X		NOT IN a County-designated fault zone	9
Liquefaction	X			IN an area of moderate liquefaction susceptibility	9

Additional Statutory Disclosures	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Former Military Ordnance	X			WITHIN one mile of a formerly used ordnance site.: March AFB Poorman Range	11
Airport Influence Area	X			IN an airport influence area: MARCH AIR RESERVE BASE	12
Airport Noise Area for 65 Decibel		X		NOT IN a delineated 65 dB CNEL or greater aviation noise zone.	13

General Advisories	Description	NHD Report page:
Methamphetamine Contamination	Provides an advisory that a disclosure may be required pursuant to the "Methamphetamine Contaminated Property Cleanup Act of 2005".	14
Mold	Provides an advisory that all prospective purchasers of residential and commercial property should thoroughly inspect the subject property for mold and sources for additional information on the origins of and the damage caused by mold.	15
Radon	Provides an advisory on the risk associated with Radon gas concentrations.	16
Endangered Species	Provides an advisory on resources to educate the public on locales of endangered or threatened species.	16
Abandoned Mines	Provides an advisory on resources to educate the public on the hazards posed by, and some of the general locales of, abandoned mines.	17
Oil and Gas Wells	Provides an advisory on the potential existence of oil and gas wells and sources for additional general and/or specific information.	17

Determined by First American Professional Real Estate Services, Inc.

For more detailed information as to the foregoing determinations, please read this entire Report.

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Natural Hazard Disclosure Report

Part 1. State Defined Natural Hazard Zones

Statutory Natural Hazard Disclosures

Section 1103 of the California Civil Code mandates the disclosure of six (6) natural hazard zones if the Property is located within any such zone. Those six "statutory" hazard zones, disclosed on the **Natural Hazard Disclosure Statement** ("NHDS") on Page one of this Report, are explained below. Note that the NHDS does not provide for informing buyers if a property is only partially within any of the delineated zones or provide additional flood zone information which could be very important to the process. The following summary is intended to give buyers additional information they may need to help them in the decision-making process and to place the information in perspective.

SPECIAL FLOOD HAZARD AREA

DISCUSSION: Property in a Special Flood Hazard Area (any type of Zone "A" or "V" as designated by the Federal Emergency Management Agency ("FEMA")) is subject to flooding in a "100-year rainstorm." Federally connected lenders require homeowners to maintain flood insurance for buildings in these zones. A 100-year flood occurs on average once every 100 years, but may not occur in 1,000 years or may occur in successive years. According to FEMA, a home located within a SFHA has a 26% chance of suffering flood damage during the term of a 30-year mortgage. Other types of flooding, such as dam failure, are not considered in developing these zones. Flood insurance for properties in Zones B, C, D, X, X500, and X500_Levee is available but is not required.

Zones A, AO, AE, AH, AR, A1-A30: Area of "100-year" flooding - a 1% or greater chance of annual flooding.

Zone A99: An "adequate progress" determination for flood control system construction projects that, once completed, may significantly limit the area of a community that will be included in the Special Flood Hazard Area (SFHA). Such projects reduce but do not eliminate, the risk of flooding to people and structures in "levee-impacted" areas, and allow mandatory flood insurance to be available at a lower cost.

Zones V, V1-V30: Area of "100-year" flooding in coastal (shore front) areas subject to wave action.

Zone B: Area of moderate flood risk. These are areas between the "100" and "500" year flood-risk levels.

Zones C, D: NOT IN an area of "100-year" flooding. Area of minimal (Zone C) or undetermined (Zone D) flood hazard.

Zones X: An area of minimal flood risk. These are areas outside the "500" year flood-risk level.

Zone X500: An area of moderate flood risk. These are areas between the "100" and "500" year flood-risk levels.

Zone X500_LEVEE: An area of moderate flood risk that is protected from "100-year flood" by levee and that is subject to revision to high risk (Zone A) if levee is decertified by FEMA.

Zone N: Area Not Included, no flood zone designation has been assigned or not participating in the National Flood Insurance Program.

Notice: The Company is not always able to determine if the Property is subject to a FEMA Letter of Map Revision ("LOMR") or other FEMA letters of map change. If Seller is aware that the Property is subject to a LOMR or other letters of map change, the Seller shall disclose the map change and attach a copy of the FEMA letter(s) to the Report. Contact FEMA at <http://msc.fema.gov> for additional information.

For more information about flood zones, visit:

https://efotg.sc.egov.usda.gov/references/public/NM/FEMA_FLD_HAZ_guide.pdf

PUBLIC RECORD: Official Flood Insurance Rate Maps ("FIRM") compiled and issued by the Federal Emergency Management Agency ("FEMA") pursuant to 42 United States Code §4001, et seq.

AREA OF POTENTIAL FLOODING (DAM FAILURE)

Since 1998 California law has required seller disclosure of areas of potential inundation due to sudden or total dam failure as delineated on inundation maps submitted by dam owners to the California Office of Emergency Services ("OES") for review and approval; however, as of June 27, 2017, the date on which Senate Bill 92 (SB 92) became operative, the review and approval of inundation maps prepared by licensed civil engineers and submitted by dam owners became the statutory responsibility of the California Department of Water Resources ("DWR") Division of Safety of Dams ("DSOD") as required by California Water Code Section 6161. These inundation maps are a component of emergency action plans submitted by dam owners to comply with statutory requirements set forth under the California Water Code for extremely high, high, and significant hazard dams and their critical appurtenant structures. Inundation maps are not required by the California Water Code for low hazard dams. SB 92 further requires dam owners to update the emergency action plan, including an inundation map, no less frequently than every 10 years or sooner.

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To date DWR has yet to review, approve, and make publicly available inundation maps and data for many facilities with inundation areas that are subject to disclosure requirements. Inundation maps will continue to be posted and updated maps will replace outdated maps as they are approved by DSOD. In the absence of DSOD-approved data, inundation maps previously approved by the OES will be used by the Company to facilitate compliance with specified statutory real estate transfer disclosure requirements. These include inundation maps for federally owned dams over which DSOD has no jurisdictional authority and for which inundation maps are not available from DSOD. These dams include, among others, Folsom Dam, Isabella Dam, Hansen Dam, Prado Dam, and Seven Oaks Reservoir (owned by the U.S. Army Corps of Engineers) as well as Monticello Dam, New Melones Dam, and Shasta Dam (owned by the U.S. Bureau of Reclamation). The Company may also use OES-approved maps should the mapped inundation area for a given facility be greater than that depicted on a DSOD-approved map.

PUBLIC RECORD: (1) Official dam inundation maps made publicly available prior to June 27, 2017 by the State of California Office of Emergency Services ("OES") pursuant to California Government Code §8589.5; (2) Official inundation boundary digital data made publicly available since June 28, 2017 by the State of California Department of Water Resources (DWR) pursuant to California Water Code §6161. DWR states that its inundation boundary data typically includes flooding depths greater than one foot but some information may be redacted for security purposes.

VERY HIGH FIRE HAZARD SEVERITY ZONE (VHFHSZ)

DISCUSSION: VHFHSZs can be defined by the California Department of Forestry and Fire Protection ("Calfire") as well as by local fire authorities within "Local Responsibility Areas" where fire suppression is the responsibility of a local fire department. Properties located within VHFHS Zones may have a higher risk for fire damage and, therefore, may be subject to (i) additional construction requirements such as a "Class A" roof for new construction or replacement of existing roofs; and (ii) additional maintenance responsibilities such as adequate vegetation clearance near the structure, spark screens on chimneys and stovepipes, leaf removal from roofs, and other basic fire-safety practices. Contact the local fire department for a complete list of requirements and exceptions.

PUBLIC RECORD: Maps issued by Calfire pursuant to California Government Code § 51178 recommending VHFHSZs to be adopted by the local jurisdiction within its Local Responsibility Area, or VHFHSZs adopted by the local jurisdiction within the statutory 120-day period defined in California Government Code § 51179.

WILDLAND FIRE AREA (STATE RESPONSIBILITY AREA)

DISCUSSION: The State Board of Forestry classifies all lands within the State of California based on various factors such as ground cover, beneficial use of water from watersheds, probable damage from erosion, and fire risks. Fire prevention and suppression in all areas which are not within a Wildland - State Responsibility Area ("WSRA") is primarily the responsibility of the local or federal agencies, as applicable.

For property located within a WSRA, please note that (1) there may be substantial forest fire risks and hazards; (2) except for property located within a county which has assumed responsibility for prevention and suppression of all fires, it is NOT the state's responsibility to provide fire protection services to any building or structure located within a WSRA unless the Department has entered into a cooperative agreement with a local agency; and (3) the property owner may be subject to (i) additional construction requirements such as a "Class A" roof for new construction or replacement of existing roofs; and (ii) additional maintenance responsibilities such as adequate vegetation clearance near the structure, spark screens on chimneys and stovepipes, leaf removal from roofs, and other basic fire-safety practices.

The existence of local agreements for fire service is not available in the Public Record and, therefore, is not included in this disclosure. For very isolated properties with no local fire services or only seasonal fire services there may be significant fire risk. If the Property is located within a WSRA, please contact the local fire department for more detailed information.

PUBLIC RECORD: Official maps issued by the California Department of Forestry and Fire Protection ("Calfire") pursuant to California Public Resources Code § 4125.

SRA Fire Prevention Benefit Fee Advisory

In 2011, the California Legislature and Governor enacted a "Fire Prevention Fee" on habitable structures in the State's wildland fire responsibility area. The yearly fee, levied on property owners, paid for various activities to prevent and suppress wildfires in the SRA, and was most recently at the rate of \$152.33 per habitable structure on the property.

Effective July 1, 2017, as authorized by Assembly Bill 398 and signed by the Governor, that fire prevention fee is suspended until 2031.

For more information, please refer to "Part 6. State Responsibility Area Fire Prevention Fee" in the JCP-LGS Property Tax Report.

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EARTHQUAKE FAULT ZONE

DISCUSSION: Earthquake Fault Zones are delineated and adopted by California as part of the Alquist-Priolo Earthquake Fault Zone Act of 1972. Property in an Earthquake Fault Zone ("EF Zone") does not necessarily have a fault trace existing on the site. EF Zones are areas or bands delineated on both sides of known active earthquake faults. EF Zones vary in width but average one-quarter (1/4) mile in width with the "typical" zone boundaries set back approximately 660 feet on either side of the fault trace. The potential for "fault rupture" damage (ground cracking along the fault trace) is relatively high only if a structure is located directly on a fault trace. If a structure is not on a fault trace, shaking will be the primary effect of an earthquake. During a major earthquake, shaking will be strong in the vicinity of the fault and may be strong at some distance from the fault depending on soil and bedrock conditions. It is generally accepted that properly constructed wood-frame houses are resistant to shaking damage.

PUBLIC RECORD: Official earthquake fault zone or special study zone maps approved by the State Geologist and issued by the California Department of Conservation, California Geological Survey pursuant to California Public Resources Code §2622.

SEISMIC HAZARD MAPPING ACT ZONE

DISCUSSION: Official Seismic Hazard Zone ("SH Zone") maps delineate Areas of Potential Liquefaction and Areas of Earthquake-Induced Landsliding. A property that lies partially or entirely within a designated SH Zone may be subject to requirements for site-specific geologic studies and mitigation before any new or additional construction may take place.

Earthquake-Induced Landslide Hazard Zones are areas where the potential for earthquake-induced landslides is relatively high. Areas most susceptible to these landslides are steep slopes in poorly cemented or highly fractured rocks, areas underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits. The CGS cautions these maps do not capture all potential earthquake-induced landslide hazards and that earthquake-induced ground failures are not addressed by these maps. Furthermore, no effort has been made to map potential run-out areas of triggered landslides. It is possible that such run-out areas may extend beyond the zone boundaries. An earthquake capable of causing liquefaction or triggering a landslide may not uniformly affect all areas within a SH Zone.

Liquefaction Hazard Zones are areas where there is a potential for, or an historic occurrence of liquefaction. Liquefaction is a soil phenomenon that can occur when loose, water saturated granular sediment within 40 feet of the ground surface, are shaken in a significant earthquake. The soil temporarily becomes liquid-like and structures may settle unevenly. The Public Record is intended to identify areas with a relatively high potential for liquefaction but not to predict the amount or direction of liquefaction-related ground displacement, nor the amount of damage caused by liquefaction. The many factors that control ground failure resulting from liquefaction must be evaluated on a site specific basis.

PUBLIC RECORD: Official seismic hazard maps or digital data thereof approved by the State Geologist and issued by the California Department of Conservation, California Geological Survey pursuant to California Public Resources Code §2696.

STATUTORY NATURAL HAZARD DISCLOSURE REPORTING STANDARD: "IN" shall be reported if any portion of the Property is located within any of the above zones as delineated in the Public Record. "NOT IN" shall be reported if no portion of the Property is located within any of the above zones as delineated in the Public Record. Map Not Available shall be reported in areas not yet evaluated by the governing agency according to the Public Record. Please note that "MAP NOT AVAILABLE" will be applicable to most portions of the state. Official Seismic Hazard Zone ("SH Zone") maps delineate Areas of Potential Liquefaction and Areas of Earthquake-Induced Landsliding.

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Part 2. County and City Defined Natural Hazard Zones

HAZARD MAPS IN THE LOCAL GENERAL PLAN

General Plan regulates property development. There are currently over 530 incorporated cities and counties in California. The state Government Code (Sections 65000 et seq.) requires each of those jurisdictions to adopt a comprehensive, long-term "General Plan" for its physical development. That General Plan regulates land uses within the local jurisdiction in order to protect the public from hazards in the environment and conserve local natural resources. The General Plan is the official city or county policy regarding the location of housing, business, industry, roads, parks, and other land uses.

Municipal hazard zones can affect the cost of ownership. Each county and city adopts its own distinct General Plan according to that jurisdiction's unique vegetation, landscape, terrain, and other geographic and geologic conditions. The "Safety Element" (or Seismic Safety Element) of that General Plan identifies the constraints of earthquake fault, landslide, flood, fire and other natural hazards on local land use, and it delineates hazard zones within which private property improvements may be regulated through the building-permit approval process, which can affect the future cost of ownership. Those locally regulated hazard zones are in addition to the federal and state defined hazard zones associated with statutory disclosures in the preceding section.

City and/or County natural hazard zones explained below. Unless otherwise specified, only those officially adopted Safety Element or Seismic Safety Element maps (or digital data thereof) which are publicly available, are of a scale, resolution, and quality that readily enable parcel-specific hazard determinations, and are consistent in character with those statutory federal or state disclosures will be considered for eligible for use as the basis for county- or city-level disclosures set forth in this Report. Please also note:

- If an officially adopted Safety Element or Seismic Safety Element map relies on data which is redundant of that used for state-level disclosures, this Report will indicate so and advise Report recipients to refer to the state-level hazard discussion section for more information.
- If an officially adopted Safety Element or Seismic Safety Element cites underlying maps created by another agency, those maps may be regarded as incorporated by reference and may be used as the basis for parcel-specific determinations if those maps meet the criteria set forth in this section.
- Because county- and city-level maps are developed independently and do not necessarily define or delineate a given hazard the same way, the boundaries for the "same" hazard may be different.

If one or more maps contained in the Safety Element and/or Seismic Safety Element of an officially adopted General Plan are used as the basis for local disclosure, those maps will appear under the "Public Record(s) Searched" for that county or city.

REPORTING STANDARDS

A good faith effort has been made to disclose all hazard features on pertinent Safety Element and Seismic Safety Element maps with well-defined boundaries; however, those hazards with boundaries that are not delineated will be deemed not suitable for parcel-specific hazard determinations. Some map features, such as lines drawn to represent the location of a fault trace, may be buffered to create a zone to facilitate disclosure. Those map features which can not be readily distinguished from those representing hazards may be included to prevent an omission of a hazard feature. If the width of a hazard zone boundary is in question, "IN" will be reported if that boundary impacts any portion of a property. Further explanations concerning specific map features peculiar to a given county or city will appear under the "Reporting Standards" for that jurisdiction.

PUBLIC RECORDS VS. ON-SITE EVALUATIONS

Mapped hazard zones represent evaluations of generalized hazard information. Any specific site within a mapped zone could be at less or more relative risk than is indicated by the zone designation. A site-specific evaluation conducted by a geotechnical consultant or other qualified professional may provide more detailed and definitive information about the Property and any conditions which may or do affect it.

PROPERTY USE AND PERMITTING

No maps beyond those identified as "Public Record(s)" have been consulted for the purpose of these local disclosures. These disclosures are intended solely to make Report recipient(s) aware of the presence of mapped hazards. For this reason -- and because local authorities may use on these or additional maps or data differently to determine property-specific land use and permitting approvals -- Report recipients are advised to contact the appropriate local agency, usually Community Development, Planning, and/or Building, prior to the transaction to ascertain if these or any other conditions or related regulations may impact the Property use or improvement.

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RIVERSIDE COUNTY GEOLOGIC DISCUSSION

PUBLIC RECORD(S) SEARCHED: The following Public Records, contained in the Safety Element of the General Plan as adopted by the County Board of Supervisors in 2003 and updated in December 2015, are utilized for those county-level disclosures below: County-produced digital data of "Earthquake Fault Study Zones" and "Generalized Liquefaction".

FAULT

Because there are numerous active faults throughout Riverside County, the Safety Element states that "all proposed structures for human occupancy should be required to investigate the potential for and setback from ground rupture". While the County regulates most development projects (including all land divisions and most structures for human occupancy) within earthquake fault zones, the Safety Element notes that the following projects are exempt: Single family, wood-frame and steel-frame dwellings that are one or two stories, are not part of a development of four units or more, and are not located within 50 feet of a fault. The Safety Element also notes that a geologic investigation must show that proposed buildings will not be built across active faults before a project can be permitted within an A-P Earthquake Fault Zone, County Fault Zone, or within 150 feet of any other potentially active or active fault mapped in published United States Geological Survey or California Geological Survey reports. A licensed geologist must prepare a site-specific evaluation and written report. "If an active fault is found, a structure for human occupancy must be set back 50 feet from the fault, unless adequate evidence, as determined and accepted by the County Engineering Geologist, is presented to support a different setback."

Reporting Standards: "IN" shall be reported if any portion of the Property is within a fault zone as delineated in the Public Record. "NOT IN" shall be reported if no portion of the Property is located within a fault zone as delineated in the Public Record. Both vector and .pdf versions of the Public Record identify "Alquist-Priolo Zones" and "Existing County Zones".

LIQUEFACTION SUSCEPTIBILITY

According to the Safety Element, liquefaction occurs primarily in saturated, loose, fine- to medium grained soils in areas where the groundwater table is within approximately 50 feet of the surface. Shaking causes the soils to lose strength and behave as liquid. Excess water pressure is vented upward through fissures and soil cracks, and a water-soil slurry bubbles onto the ground surface. Liquefaction-related effects include loss of bearing strength, ground oscillations, lateral spreading, and flow failures or slumping. Site-specific geotechnical studies are the only practical and reliable way of determining the specific liquefaction potential of a site; however, a determination of general risk potential can be provided based on soil type and depth of groundwater. Please contact the County to determine if there is a site-specific requirement for a geological and geologic investigation.

Reporting Standards: "IN" shall be reported as will the more/most severe level of Generalized Liquefaction as designated in the Public Record (which, for the purposes of this Report, have been grouped as "Very High or High", "Moderate", and "Low or Very Low") affecting any portion of the Property. "NOT IN" shall be reported if no portion of the Property is located within an area of Generalized Liquefaction as designated in the Public Record.

OTHER HAZARDS

NOTE: Not all maps referenced in the Safety Element have been made publicly available in a format that enables reliable parcel-specific determinations. These include "Earthquake-Induced Slope Instability", "Regions Underlain by Steep Slopes", "Engineering Geologic Materials", "Documented Subsidence Areas", "Wind Erosion Susceptibility Areas", "Dam Failure Inundation Areas", and "Wildfire Susceptibility". These will be evaluated for inclusion into future reports should such data be made publicly available by Riverside County. For questions regarding geotechnical development regulations pertaining to these additional hazards, please contact the County of Riverside Planning Department.

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CITY-LEVEL GEOLOGIC AND SEISMIC ZONES DISCUSSION

This Report reviews the officially adopted geologic hazard maps in the Safety Element that each city in California is required to include in its General Plan. The city the subject Property is located in has either not officially adopted hazard zonation maps in its General Plan at an appropriate scale to delineate where hazards may exist on a single parcel basis or will not make such maps available outside city offices. However, all Parties should be California is "earthquake country." Faults that may exist in this city or in neighboring regions could cause earthquake shaking or other fault related-phenomena on the Property. Other geologic hazards such as, but not limited to liquefaction (a type of soil settling that can occur when loose, water-saturated sediments are shaken significantly in an earthquake) may occur in certain valley floor areas and landslides are a possibility in any hillside area. Such potential natural hazards may exist and be delineated on other sources used by the city in its Planning, Engineering, or Building Departments. Such potential sources are not reviewed in this Report.

END OF LOCAL AREA DISCLOSURES AND DISCUSSIONS SECTION

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Part 3. Additional Property Specific Disclosures

FORMER MILITARY ORDNANCE SITE DISCLOSURE

DISCUSSION: Former Military Ordnance (FUD) sites can include sites with common industrial waste (such as fuels), ordnance or other warfare materiel, unsafe structures to be demolished, or debris for removal. California Civil Code Section 1102 requires disclosure of those sites containing unexploded ordnance. "Military ordnance" is any kind of munitions, explosive device/material or chemical agent used in military weapons. Unexploded ordnance are munitions that did not detonate. NOTE: **MOST** FUD sites do not contain unexploded ordnance. Only those FUD sites that the U.S. Army Corps of Engineers (USACE) has identified to contain Military Ordnance or have mitigation projects planned for them are disclosed in this Report. Additional sites may be added as military installations are released under the Federal Base Realignment and Closure (BRAC) Act. Active military sites are NOT included on the FUD site list.

PUBLIC RECORD: Data contained in Inventory Project Reports, Archives Search Reports, and related materials produced for, and made publicly available in conjunction with, the Defense Environmental Restoration Program for Formerly Used Defense Sites by the U.S. Army Corps of Engineers. Sites for which no map has been made publicly available shall not be disclosed.

REPORTING STANDARD: If one or more facility identified in the Public Record is situated within a one (1) mile radius of the Property, "**WITHIN**" shall be reported. The name of that facility or facilities shall also be reported.

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AIRPORT INFLUENCE AREA DISCLOSURE

DISCUSSION:

If any portion of the Property is in either an officially designated "airport influence area" ("AIA") or a two mile radius of a qualifying facility for which an AIA has not yet been officially designated, the following Notice is required:

NOTICE OF AIRPORT IN VICINITY

If this property is presently located in the vicinity of an airport, as identified in the determination section of this Report, within what is known as an airport influence area...the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. In that case, you may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable (California Civil Code, Section 1103.4).

Certain airports are not disclosed in this Report. JCP-LGS has made a good faith effort to identify the airports covered under Section 1102.6a. Sources consulted include official land use maps and/or digital data made available by a governing Airport Land Use Commission (ALUC) or other designated government body. Most facilities for which an Airport Influence Area has been designated are included on the "California Airports List" maintained by the California Department of Transportation's Division of Aeronautics. Not disclosed in this Report are public use airports that are not in the "California Airports List", airports that are physically located outside California, heliports and seaplane bases that do not have regularly scheduled commercial service, and private airports or military air facilities unless specifically identified in the "California Airports List". **If the seller has actual knowledge of an airport in the vicinity of the subject property that is not disclosed in this Report, and that is material to the transaction, the seller should disclose this actual knowledge in writing to the buyer.**

Most facilities for which an Airport Influence Area has been designated are included on the "California Airports List" maintained by the California Department of Transportation's Division of Aeronautics. The inclusion of military and private airports varies by County, and heliports and seaplane bases are not included, therefore, airports in these categories may or may not be included in this disclosure.

NOTE: Proximity to an airport does not necessarily mean that the property is exposed to significant aviation noise levels. Alternatively, there may be properties exposed to aviation noise that are greater than two miles from an airport. Factors that affect the level of aviation noise include weather, aircraft type and size, frequency of aircraft operations, airport layout, flight patterns or nighttime operations. Buyer should be aware that aviation noise levels can vary seasonally or change if airport usage changes.

PUBLIC RECORD: Based on officially adopted land use maps and/or digital data made publicly available by the governing ALUC or other designated government body. If the ALUC or other designated government body has not made publicly available a current officially adopted airport influence area map, then California law states that "a written disclosure of an airport within two (2) statute miles shall be deemed to satisfy any city or county requirements for the disclosure of airports in connection with transfers of real property."

REPORTING STANDARD: "IN" shall be reported along with the facility name(s) and the "Notice of Airport in Vicinity" if any portion of the Property is situated within either (a) an Airport Influence Area as designated on officially adopted maps or digital data or (b) a two (2) mile radius of a qualifying facility for which an official Airport Influence Area map or digital data has not been made publicly available by the ALUC or other designated governing body. "NOT IN" shall be reported if no portion of the Property is within either area.

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

**The Natural Hazard Disclosure Report
For RIVERSIDE County**

Property Address: VACANT LAND
MORENO VALLEY, RIVERSIDE COUNTY, CA 92555
("Property")

APN: 312-020-025
Report Date: 10/01/2019
Report Number: 2555340

AIRPORT NOISE DISCLOSURE

DISCUSSION: California Civil Code §1102.17 requires the seller(s) of residential real property who has/have actual knowledge that the property in the transaction is affected by airport use must give written notice of that knowledge, as soon as practicable, before transfer of title.

Under the Federal Aviation Administration's *Airport Noise Compatibility Planning Program Part 150*, certain 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour maps have been produced for some airports. Not all airports have produced noise exposure maps. A property may be near or at some distance from an airport and not be within a delineated noise exposure area, but still experience aviation noise. Unless 65dB CNEL contour maps are published, helipads and military sites are not included in this section of the Report.

The *Airport Noise Compatibility Planning Program* is voluntary and not all airports have elected to participate. Furthermore, not all property in the vicinity of an airport is exposed to 65dB CNEL or greater average aviation noise levels. Conversely a property may be at some distance from an airport and still experience aviation noise. Buyer should be aware that aviation noise levels can vary seasonally or change if airport usage changes after a map is published or after the Report Date. JCP-LGS uses the most seasonally conservative noise exposures provided.

Federal funding may be available to help airports implement noise reduction programs. Such programs vary and may include purchasing properties, rezoning, and insulating homes for sound within 65dB areas delineated on CNEL maps. Airport owners have also cooperated by imposing airport use restrictions that include curfews, modifying flight paths, and aircraft limitations.

PUBLIC RECORD: Certain 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour maps produced under the Federal Aviation Administration's *Airport Noise Compatibility Planning Program Part 150*.

REPORTING STANDARD: "IN" shall be reported if any portion of the Property is situated within a 65 decibel Community Noise Equivalent Level contour identified in the Public Record. "NOT IN" shall be reported if no portion of the Property is situated within a 65 decibel Community Noise Equivalent Level contour identified in the Public Record.

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**The Natural Hazard Disclosure Report
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Part 4. General Advisories

METHAMPHETAMINE CONTAMINATED PROPERTY DISCLOSURE ADVISORY

DISCUSSION: According to the "Methamphetamine Contaminated Property Cleanup Act of 2005" a property owner must disclose in writing to a prospective buyer if local health officials have issued an order prohibiting the use or occupancy of a property contaminated by meth lab activity. The owner must also give a copy of the pending order to the buyer to acknowledge receipt in writing. Failure to comply with these requirements may subject an owner to, among other things, a civil penalty up to \$5,000. Aside from disclosure requirements, this new law also sets forth procedures for local authorities to deal with meth-contaminated properties, including the filing of a lien against a property until the owner cleans up the contamination or pays for the cleanup costs.

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

**The Natural Hazard Disclosure Report
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APN: 312-020-025
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Report Number: 2555340

MOLD ADVISORY

DISCUSSION: The Buyer is hereby advised that naturally occurring molds may exist both inside and outside of any home and may not be visible to casual inspection. Persons exposed to extensive mold levels can become sensitized and develop allergies to the mold or other health problems. Extensive mold growth can damage a structure and its contents. All prospective purchasers of residential and commercial property are advised to thoroughly inspect the Property for mold. Be sure to inspect the Property inside and out for sources of excess moisture, current water leaks and evidence of past water damage.

As part of a buyer's physical inspection of the condition of a property, the buyer should consider engaging an appropriate and qualified professional to inspect and test for the presence of harmful molds and to advise the buyer of any potential risk and options available. This advisory is not a disclosure of whether harmful mold conditions exist at a property or not. No testing or inspections of any kind have been performed by The Company. Any use of this form is acknowledgement and acceptance that The Company does not disclose, warrant or indemnify mold conditions at a property in any way and is not responsible in any way for mold conditions that may exist. Information is available from the California Department of Health Services Indoor Air Quality Section fact sheet entitled, "Mold in My Home: What Do I Do?" The fact sheet is available at <https://archive.cdph.ca.gov/programs/IAQ/Pages/IndoorMold.aspx> or by calling (510) 620-3620.

The Toxic Mold Protection Act of 2001 requires that information be developed regarding the potential issues surrounding naturally occurring molds within a home. Information was written by environmental authorities for inclusion in the *Residential Environmental Hazards: A Guide for Homeowners, Buyers, Landlords and Tenants* booklet developed by the California Environmental Protection Agency and the Department of Health Services. It is found in Chapter VII of that booklet, and includes references to sources for additional information.

For local assistance, contact your county or city Department of Health, Housing, or Environmental Health.

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197) : Tentative Tract Map 37909 with a Conditional Use

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RADON ADVISORY

DISCUSSION: For its Radon Advisory, JCP-LGS uses the updated assessment of radon exposure published in 1999 by the Lawrence Berkeley National Laboratory (LBNL) and Columbia University, under support from the U.S. Environmental Protection Agency (EPA), the National Science Foundation, and the US Department of Energy (published online at <http://www2.lbl.gov/Science-Articles/Archive/radon-risk-website.html>). Based on this recent assessment, JCP-LGS radon advisory is as follows:

All of California's 58 counties have a predicted median annual-average living-area concentration of radon below 2.0 pCi/L (picocuries per liter of indoor air) -- which is well below the EPA's guideline level of 4 pCi/L and equivalent to the lowest hazard zone (Zone 3) on the 1993 EPA Map of Radon Zones.

The "median concentration" means that half of the homes in a county are expected to be below this value and half to be above it. All houses contain some radon, and a few houses will contain much more than the median concentration. **The only way to accurately assess long-term exposure to radon in a specific house is through long-term testing (sampling the indoor air for a year or more). The EPA recommends that all homes be tested for radon.** Columbia University's "Radon Project" website offers help to homeowners in assessing the cost vs. benefit of testing a specific house for radon or modifying it for radon reduction (see <http://www.stat.columbia.edu/~radon/>).

NOTE: JCP-LGS does not use the EPA's 1993 map for advisory purposes because that map shows "short-term" radon exposure averaged by county. It was based on "screening measurements" that were intentionally designed to sample the worst-case conditions for indoor air in US homes--using spot checks (sampling for just a few days), in the poorest air quality (with sealed doors and windows), at the worst time of the year (winter), in the worst part of the house (the basement, if one was available). These short-term, winter, basement measurements are both biased and variable compared to long-term radon concentrations (averaged over a year) in the living area of a house. Long-term concentrations are a more accurate way to judge the long-term health risk from radon. For the above reasons, the EPA expressly disclaims the use of its 1993 map for determining whether any house should be tested for radon, and authorizes no other use of its map for property-specific purposes. For additional information about EPA guidelines and radon testing, see "Chapter VII--Radon", in the California Department of Real Estate's *Residential Environmental Hazards: A Guide for Homeowners, Homebuyers, Landlords and Tenants*.

ENDANGERED SPECIES ACT ADVISORY

DISCUSSION: The Federal Endangered Species Act of 1973 ("ESA"), as amended, requires that plant and animal species identified and classified ("listed") by the Federal government as "threatened" or "endangered" be protected under U.S. law. Areas of habitat considered essential to the conservation of a listed species may be designated as "critical habitat" and may require special management considerations or protection. All threatened and endangered species -- even if critical habitat is not designated for them -- are equally afforded the full range of protections available under the ESA.

In California alone, over 300 species of plants and animals have been designated under the ESA as threatened or endangered, and over 80 species have critical habitats designated for them. Most California counties are host to a dozen or more protected species and, in many cases, 10 or more species have designated critical habitats within a county.

ADVISORY: An awareness of threatened and endangered species and/or critical habitats is not reasonably expected to be within the actual knowledge of a seller.

No federal or state law or regulation requires a seller or seller's agent to disclose threatened or endangered species or critical habitats, or to otherwise investigate their possible existence on real property. Therefore, Buyer is advised that, prior to purchasing a vacant land parcel or other real property, Buyer should consider investigating the existence of threatened or endangered species, or designated critical habitats, on or in the vicinity of the Property which could affect the use of the Property or the success of any proposed (re)development.

FOR MORE INFORMATION: Complete and current information about the threatened and endangered species in California that are Federally listed in each county -- including all critical habitats designated there -- is available on the website of the U.S. Fish & Wildlife Service, the Federal authority which has enforcement responsibility for the ESA.

U.S. Fish & Wildlife Service Endangered Species Database (TESS)
http://ecos.fws.gov/tess_public/

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

**The Natural Hazard Disclosure Report
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("Property")

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ABANDONED MINES ADVISORY

DISCUSSION: According to the California Department of Conservation, Office of Mine Reclamation, since the Gold Rush of 1849, tens of thousands of mines have been dug in California. Many were abandoned when they became unproductive or unprofitable. The result is that California's landscape contains many thousands of abandoned mines, which can pose health, safety, or environmental hazards on and around the mine property. Mines can present serious physical safety hazards, such as open shafts or adits (mine tunnel), and they may create the potential to contaminate surface water, groundwater, or air quality. Some abandoned mines are such massive problems as to earn a spot on the Federal Superfund environmental hazard list.

No California law requires the disclosure of abandoned mines in a real estate transaction, unless the existence of an abandoned mine is within the actual knowledge of the Seller and is deemed to be a fact material to the transaction.

The Office of Mine Reclamation (OMR) and the U.S. Geological Survey maintain a database of abandoned mines -- however, it is known to be incomplete and based on maps that are often decades out of date. Many mines are not mapped because they are on private land. The OMR warns that, **"Many old and abandoned mines are not recorded in electronic databases, and when they are, the information may not be detailed enough to accurately define, differentiate or locate the mine feature, such as a potentially hazardous vertical shaft or horizontal adit or mine waste."** (See reference below.)

Accordingly, this Report does not contain an abandoned mines disclosure from any government database or map or any other source, in order to protect the seller from liability for non-disclosure of unrecorded abandoned mines.

Parties concerned about the possible existence or impact of abandoned mines in the vicinity of the Property are advised to retain a State-licensed geotechnical consultant to study the site and issue a report. Other sources of information include, but are not limited to, the State Office of Mine Reclamation at (916) 323-9198 (website: <http://www.conservation.ca.gov/OMR>), and the Engineering, Planning or Building Departments in the subject City and County.

FOR MORE INFORMATION: For more information visit the State Office of Mine Reclamation's website at: http://www.conservation.ca.gov/omr/abandoned_mine_lands/Pages/index.aspx

OIL & GAS WELL ADVISORY

California is currently ranked fourth in the nation among oil producing states. Surface oil production is concentrated mainly in the Los Angeles Basin and Kern County, and in districts elsewhere in the state. In recent decades, real estate development has rapidly encroached into areas where oil production has occurred. Because the state's oil production has been in decline since the 1980's, thousands of oil and gas wells have been shut down or abandoned, and many of those wells are in areas where residential neighborhoods now exist.

According to the California Department of Conservation ("DOC"), to date, about 230,000 oil and gas wells have been drilled in California and around 105,000 are still in use. The majority of remaining wells have been sealed ("capped") under the supervision of the DOC's Division of Oil, Gas and Geothermal Resources. A smaller number have been abandoned and have no known responsible operator -- these are called "orphan" wells. The state has a special fund that pays the cost of safely capping orphan wells, however, that program is limited in its scope and progress.

Buyer should be aware that, while the DOC database is the most comprehensive source available for California oil and gas well information, the DOC makes no warranties that the database is absolutely complete, or that reported well locations are known with absolute accuracy.

For More Information

For a search of the state's databases of oil and gas wells and sites of known environmental contamination on or near the Property, please obtain the JCP-LGS Residential Environmental Report. For general information, visit the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources at <http://www.consrv.ca.gov/dog>.

**END OF NATURAL HAZARD DISCLOSURE REPORT SECTION
See Terms and Conditions at end of this Report.**

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

Property Address: VACANT LAND
MORENO VALLEY, RIVERSIDE COUNTY, CA 92555
("Property")

APN: 312-020-025
Report Date: 10/01/2019
Report Number: 2555340

TERMS and CONDITIONS

ACCEPTANCE OR USE OF THIS REPORT CONSTITUTES APPROVAL AND ACCEPTANCE OF THE TERMS, CONDITIONS, AND LIMITATIONS STATED HEREIN.

The Report ("Report") is subject to each of the following Terms and Conditions. Each Recipient (defined below) of the Report agrees that the Report is subject to the following Terms and Conditions, and each Recipient agrees to be bound by such. Use of this Report by any Recipient constitutes acceptance of the Terms and Conditions to the Report. The Terms and Conditions below are incorporated by this reference into the Report. **This Report is not an insurance policy.**

This Report is made for the real property specifically described in the Report (the "Property") and solely for the transaction for which it was originally purchased ("Transaction"). The Property shall not include any property beyond the boundaries of the real property described in the Report. The Property shall not include any structures (whether located on the Property, or not), easements, or any right, title, interest, estate, or easement in any abutting streets, roads, alleys, lanes, ways, or waterways.

IMPORTANT NOTICE: Transferor(s) and transferee(s) shall read the complete Report in its entirety before the close of escrow. A "Signature Page" or "Summary Pages" document may be included in the electronic delivery of this Report. Those documents do not replace the complete Report or remove the need to read the complete Report, and do not remove the requirement to disclose. The Signature Page and Summary Pages documents are subject to the Terms and Conditions of the complete Report.

- A. **No Third Party Reliance on This Report.** Only the transferor(s) and transferee(s), and their agents/brokers, if any, involved in the Transaction (collectively, the "Recipients") may use and rely on this Report and only after they have paid in full for the Report. While disclosures made on the Natural Hazard Disclosure Statement in the Report may indicate certain risks to the Property, the disclosures are only "...between the transferor, the transferor's agents, and the transferee, and shall not be used by any other party, including, but not limited to, insurance companies, lenders, or governmental agencies, for any purpose." Cal. Civil Code section 1103.2, subdivision (g).
- B. **Seller and Seller's Agent's Responsibility of Full Disclosure.** Recipients are obligated to make disclosures, and always disclose material facts, that are within their actual knowledge.
- C. **Scope of Report.** This Report is limited to determining whether the Property is in those specified natural hazard zones and property tax districts, and in proximity to those specified environmental sites (depending on the report product ordered), as defined in the Report. The Report is not a geologic report or a land survey and no site inspection has been made in producing the Report. JCP-LGS makes no determination, expresses no opinion or view, and assumes no responsibility in this Report concerning the right, entitlement, or ability to develop or improve the Property. JCP-LGS has no information concerning whether the Property can be developed or improved. No determination is made and no opinion is expressed, or intended, by this Report concerning structures or soils on or outside of the Property, including, without limitation, habitability of structures or the Property, suitability of the Property for construction or improvement, potential for soil settlement, drainage, soil subsidence, or other soil or site conditions. The Recipient(s) is advised to consult the local Planning Department to determine whether factors beyond the scope of this Report may limit the transferee(s) ability to use or improve the Property.

The Report is not a title report, and no determination is made and no opinion is expressed, or intended, by this Report as to title to the Property or liens against the Property, recorded or otherwise, or whether the Property is comprised of legal lots in conformance with the California Subdivision Map Act or local ordinances. The Report is not a property inspection report, and no determination is made and no opinion is expressed, or intended, by this Report concerning architectural, structural, mechanical, engineering, or legal matters, or the marketability or value of the Property. JCP-LGS has not conducted any testing or physical or visual examination or inspection of the Property, nor is this Report a substitute for any such testing, physical or visual examination, or inspection.

- D. **Tax and Environmental Disclosures (if included in Report).** No determination is made and no opinion is expressed, or intended, by the Report concerning the existence of property tax liabilities, or the existence of hazardous or toxic materials or substances, or any other defects, on, under, or in proximity to the Property, unless specifically described in the Report. JCP-LGS's total liability for any error or omission in its disclosures relating to taxes and/or environmental matters shall be limited to actual proven damages not to exceed the price paid for this Report.
- E. **JCP-LGS Database Updates.** Each database used in this Report is updated by the responsible agency at various intervals. Updates for a database are determined by the responsible agency and may be made at any time and without notice. JCP-LGS maintains an update schedule and makes reasonable efforts to use updated information. For these reasons, JCP-LGS reports information as of the date when the database was last updated by JCP-LGS. That date is specified as the "Database Date" for each database.
- F. **Statutory and Additional Disclosures, Advisories, and Local Addenda (if included in Report).** No determination is made and no opinion is expressed, or intended, by this Report concerning the need to purchase earthquake or flood insurance for the Property. In preparing the Report, JCP-LGS accurately reported on information contained in Government Records. JCP-LGS reviewed and relied upon those Government Records specifically identified and described in the Report. JCP-LGS has not reviewed or relied upon any Government Records that are not specifically identified in the Report. JCP-LGS also has not reviewed any plat maps, survey maps, surveyor maps, assessor maps, assessor parcel maps, developer maps, or engineering maps, whether or not such maps have been recorded. No determination is made and no opinion is expressed, or intended, by the Report concerning any matters identified in Government Records that were not reviewed by JCP-LGS. Local Addenda, where applicable, are included "AS IS" as an accommodation to the local real estate board that provided the content; JCP-LGS assumes no responsibility for the accuracy of any information included in the Local Addenda.
- G. **FEMA Flood Determination Certificate (if accompanying the Report).** No determination is made and no opinion is expressed, or intended, by the Report concerning the requirement for or cost of flood insurance on the Property. Recipient(s) understands that a lender may require flood insurance to secure its loan collateral independent of whether FEMA may require flood insurance under the National Flood Insurance Program on a federally backed mortgage. The FEMA Flood Determination Certificate ("Flood Certificate"), which may accompany the Report, is produced by a third-party expert certified by FEMA to provide Flood Certificates. JCP-LGS assumes no liability for errors in that third-party flood determination.
- H. **Changes to Government Record after Report Date.** This Report is issued as of the Report Date identified in the Report. JCP-LGS shall have no obligation to advise any Recipient of any information learned or obtained after the Report Date even if such information would modify or otherwise affect the Report. Subsequent to JCP-LGS acquisition of Government Records, changes may be made to said Government Records and JCP-LGS is not responsible for advising the Recipients of any changes. JCP-LGS will update this Report upon request and at no charge during the transaction process for which this Report was issued, but not to exceed one year from the date of the Report. Likewise, JCP-LGS is not liable for any impact on the Property that any change to the Government Records may have.

Attachment: Appendix F to Initial Study Phase I Environmental Site Assessment_R (4197 : Tentative Tract Map 37909 with a Conditional Use

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APN: 312-020-025
Report Date: 10/01/2019
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- I. **Government Record Sources.** JCP-LGS relies upon the Government Records specifically identified in the Report without conducting an independent investigation of their accuracy. JCP-LGS assumes no responsibility for the accuracy of the Government Records identified in the Report. JCP-LGS makes no warranty or representation of any kind, express or implied, with respect to the Report. JCP-LGS expressly disclaims and excludes any and all other express and implied warranties, including, without limitation, warranties of merchantability or fitness for a particular purpose. The JCP-LGS Report is "AS IS".
- J. **Limitation of JCP-LGS's Liability**
1. JCP-LGS is not responsible for:
 - Any inaccuracies or incompleteness of the information in the Public Records.
 - Inaccurate address information provided for the Property.
 - Any other information not contained in the Public Records as of the Report Date.
 - Any information which would be disclosed by a physical inspection of the Property.
 - Any information known by one of the Parties.
 - The health or risk to humans or animals that may be associated with any of the disclosed hazards.
 - The costs of investigating or remediating any of the disclosed hazards.
 2. JCP-LGS's total liability and responsibility to all Recipients collectively for any and all liabilities, causes of action, claim or claims, including but not limited to claims for breach of contract or negligence, shall be limited to the price paid for the Report. JCP-LGS expressly disclaims any liability for Recipients indirect, incidental and/or consequential damages, including without limitation lost profits even if such damages are foreseeable. In the event of any error, omission or inaccuracy in the JCP-LGS Report for which JCP-LGS is liable, JCP-LGS shall have no duty to defend or pay any attorneys' fees, costs or expenses incurred by the Recipients, or any of them. The Recipients, and each of them, expressly waive the benefits of California Civil Code Section 2778. JCP-LGS has not conducted an independent investigation of the accuracy of the information provided by the Recipient. JCP-LGS assumes no responsibility for the accuracy of information provided by the Recipient. JCP-LGS shall be subrogated to all rights of any claiming party against anyone including, but not limited to, another party who had actual knowledge of a matter and failed to disclose it to the Recipients in writing prior to the close of escrow.
- K. **Reporting of Risk Elements for Condominium Projects, Planned Unit Developments, and Other Properties with Common or Undivided Interests ("Common Interests")** Unless otherwise noted, this report is based solely on the real Property referenced by the Property's Assessor's Parcel Number ("APN"). An APN whose boundary does not include all Common Interests associated with the parcel will generate a report which does not identify the natural hazards relating to the Common Interests that extend beyond the APN parcel boundary. Accordingly, it is imperative that you consult with the property's homeowners association(s) to determine those risks.
- L. **Governing Law.** The Report shall be governed by, and construed in accordance with, the laws of the State of California.
- M. **Small Claims or Arbitration.** This provision constitutes an agreement to arbitrate disputes on an individual basis. Any party may bring an individual action in small claims court instead of pursuing arbitration. All disputes and claims arising out of or relating to the Report must be resolved by binding arbitration. This Report to arbitrate includes, but is not limited to, all disputes and claims between JCP-LGS, transferor(s) and transferee(s) and claims that arose prior to purchase of the Report. This agreement to arbitrate applies to transferor(s) and transferee(s) successors in interest, assigns, heirs, spouses, and children. As noted above, a party may elect to bring an individual action in small claims court instead of arbitration, so long as the dispute falls within the jurisdictional requirements of small claims court.
- Any arbitration must take place on an individual basis, JCP-LGS, transferor(s) and transferee(s) agree that they are waiving any right to a jury trial and to bring or participate in a class, representative, or private attorney general action, and further agree that the arbitrator lacks the power to consider claims for injunctive or declaratory relief, or to grant relief effecting anyone other than the individual claimant.
- The arbitration is governed by the Commercial Arbitration Rules and the Supplementary Procedures for Consumer Related Disputes (the "AAA Rules") of the American Arbitration Association ("AAA"), as modified by this Agreement, and will be administered by the AAA. Company will pay all AAA filing, administration and arbitrator fees for any arbitration it initiates and for any arbitration initiated by another party for which the value of the claims is \$75,000 or less, unless an arbitrator determines that the claims have been brought in bad faith or for an improper purpose, in which case the payment of AAA fees will be governed by the AAA Rules. **A COPY OF THESE RULES IS AVAILABLE FROM THE AAA'S WEB SITE AT WWW.ADR.ORG OR ON REQUEST FROM THE COMPANY. THE ARBITRATION AWARD MAY INCLUDE ATTORNEY'S FEES IF ALLOWED BY FEDERAL, STATE, OR OTHER APPLICABLE LAW AND MAY BE ENTERED AS A JUDGMENT IN ANY COURT OF PROPER JURISDICTION.**
- The arbitration will take place in the same county in which the property covered by the Report is located. The Federal Arbitration Act will govern the interpretation, applicability and enforcement of this arbitration agreement. This arbitration agreement will survive the termination of this Report.
- N. **Severability.** If any provision of the Terms and Conditions to this Report is determined to be invalid or unenforceable for any reason, then such provision shall be treated as severed from the remainder of the Terms and Conditions, and shall not affect the validity and enforceability of all of the other provisions of the Terms and Conditions.
- O. **Other Agreements.** This Report constitutes the entire, integrated agreement between JCP-LGS and Recipients, and supersedes and replaces all prior statements, representations, negotiations, and agreements.

END OF REPORT

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).

PRODUCER BB&T-John Burnham Ins Services 750 B Street Suite 2400 San Diego, CA 92101 619 231-1010	CONTACT NAME: Fiona Gray
	PHONE (A/C, No, Ext): 619 231-1010 FAX (A/C, No): 6192369134 E-MAIL ADDRESS:
INSURED AES Due Diligence Inc. 4542 Ruffner Street, Suite 330 San Diego, CA 92111	INSURER(S) AFFORDING COVERAGE NAIC #
	INSURER A : Travelers Property Casualty Co of Amer 25674
	INSURER B : Charter Oak Fire Insurance Company 25615
	INSURER C : Phoenix Insurance Company 25623
	INSURER D : Evanston Insurance Company 35378
	INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**


THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY			6805H959585	01/01/2019	01/01/2020	EACH OCCURRENCE \$1,000,000
B	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR			6805H959500	01/01/2019	01/01/2020	DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000
C				6805K582245	01/01/2019	01/01/2020	MED EXP (Any one person) \$10,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY \$1,000,000
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						GENERAL AGGREGATE \$2,000,000
	OTHER:						PRODUCTS - COMP/OP AGG \$2,000,000
							\$
A	AUTOMOBILE LIABILITY			6805H959585	01/01/2019	01/01/2020	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000
	<input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS						BODILY INJURY (Per person) \$
	<input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY						BODILY INJURY (Per accident) \$
							PROPERTY DAMAGE (Per accident) \$
							\$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR			CUP7617Y771	01/01/2019	01/01/2020	EACH OCCURRENCE \$5,000,000
	<input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						AGGREGATE \$5,000,000
	DED <input checked="" type="checkbox"/> RETENTION \$ 0						\$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			UB9J126746	01/01/2019	01/01/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER
	ANY PROPRIETOR/PARTNER/EXECUTIVE/OFFICER/MEMBER EXCLUDED? Y/N		N/A				E.L. EACH ACCIDENT \$1,000,000
	(Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$1,000,000
							E.L. DISEASE - POLICY LIMIT \$1,000,000
D	Prof. E&O Liab			MKLV7PL0003531	02/01/2019	02/01/2020	\$2,000,000 Ea. Claim
	Claims Made						\$2,000,000 Aggregate
	Limt Incl Defense						\$25,000 Ded/Claim

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Certificate is subject to policy limits, conditions, terms & exclusions.

This certificate has been issued as Evidence of Insurance. Coverage only and is not to be reproduced.

CERTIFICATE HOLDER AES Due Diligence Inc. 4542 Ruffner Street, Suite 330 San Diego, CA 92111	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
---	--

Professional Profile

Robert Presta
LICENSED ARCHITECT
PRESIDENT

EDUCATION

Bachelor of Architecture
 Magna Cum Laude, University of Houston

Master of Business Administration
 Pepperdine University

REGISTRATION

Licensed Architect
 State of California

Licensed Contractor
 State of California

CONTINUING EDUCATION

Asbestos and Lead Control Hazard

Conduction Historical Research According
 ASTM Standards & AAI Standards

PROFESSIONAL SUMMARY

- Robert Presta brings over 25 years experience in architecture and real estate to AES Due Diligence.
- Former Regional Manager for a national architectural and engineering consulting firm.
- Due diligence physical surveys of existing properties to determine quality and condition of the structure, equipment, finishes and fixtures, identify items requiring repair or replacement, ADA compliance status; and estimate associated costs.
- Phase One Environmental Site Assessments following ASTM 1527-05 or client standards, including federal and state database searches, on-site observations and screening tests for hazardous materials.
- Review and analysis of construction documents, schedules and budgets for proposed projects.
- On-site monitoring of new construction, renovation and repair work for conformance to documents, quality of workmanship, acceptability of requisition requests and adequacy of remaining funds.
- Held rank of Captain in the U.S. Marine Corps, flew on board F-4B jet fighter aircraft as Radar Intercept Officer.



Professional Profile

TIMOTHY DAHLSTRAND, P.E., P.G.

Manager of Environmental and Engineering Services

Education

M.S., Civil Engineering
Northwestern University

B.S., Geology
Northwestern University

Registrations

Professional Engineer – Illinois, Wisconsin,
Michigan, Indiana, Ohio, Kentucky, Virginia

Professional Geologist – Illinois, Wisconsin

Certified Professional Geologist – National

Professional Activities

American Institute of Professional
Geologists

Professional Summary

- In over twenty-five years of work experience, Mr. Dahlstrand has performed environmental assessments throughout the United States and internationally, supervised other professionals, managed local officers and national environmental consulting operations, conducted training classes for professionals and clients, and authored technical papers.
- Environmental Services Manager for a national consulting firm performing approximately 1,500 Phase I Environmental Site Assessments annually in the United States.
- Project Manager for the engineering design of a portion of a municipal solid waste landfill which included leachate collection system and ground water gradient control system design. Developed a comprehensive data management system to allow rapid access to all QA/QC data and facilitate development of report-quality tables.
- Project Manager for the investigation of PCB contaminated sites at utility-owned substations to determine the extent and severity of contamination. Developed specialized subsurface investigation protocols to assure sample integrity, developed remediation alternatives and costs.
- Project Manager for a RCRA Treatment, Storage and Disposal site in northeastern Illinois.
- Subsurface explorations at three (3) abandon manufactured gas plant sites, which contained hazardous waste.

Professional Profile

STEPHEN J. BAKER
HYDROGEOLOGIST

EDUCATION

Bachelor of Art in Geology
Ohio State University

REGISTRATION

Registered Geologist
States of California and Washington

Certified Hydrogeologist
States of California and Washington

CONTINUING EDUCATION

Recycled Water as Drinking Water: Exploring
Direct Potable Reuse, April 2017.

Sustainable Groundwater Act and Impacts to the
Central Valley of California, February 2017

California Groundwater Law, December 2015

Fractured Rock Conference: State of the
Science and Measuring Success in
Remediation, September 2004

DNAPLs in Fractured Geologic Media:
Monitoring, Remediation & Natural Attenuation,
December 1999, National Groundwater
Association

Professional Summary

- Founded HydroSolutions of California, Inc. in 1985 as a high tech environmental consulting company that focused on pollution liabilities impacting real estate.
- Developed HydroSolutions of California Baseline programs, copyrighted the Enhanced Pollution Awareness Survey utilized by corporate personnel.
- Contributed to developing the environmental policy for the Federal Home Loan Bank Board that included the tiered environmental phase I and II approach to establishing a base level of due diligence in the lending industry.
- Founding Advisory Board Member of the Cooperative Solution Program, Board of Director for the Institute of Environmental Solutions. Represented environmental consulting for the Program's pilot project assigned by California Governor Wilson during the early 1990s. Worked with four national laboratories, California Department of Toxic Substances, Regional Water Quality Control Board, the land development company and the lender. The property was located in Antioch, California.
- Mr. Baker managed approximately 400 projects of the firm. Potential responsible party investigations, groundwater monitoring programs, site characterization of petroleum, solvents and metals, vapor extraction and bioremediation of soils, well head protection programs, aquifer analysis were some projects performed by Mr. Baker.
- Mr. Baker also supported the company by presenting over three hundred presentations, workshops, classes and seminars for the banking, real estate, academia and land development industries.

Professional Profile

RICHARD DARWICKI
Vice President
LICENSED PROFESSIONAL MECHANICAL ENGINEER

EDUCATION

Santa Ana College
 Mechanical Engineering
 California State University at Fullerton

REGISTRATION

Licensed Professional Mechanical Engineer
 State of California

CONTINUING EDUCATION

Carrier Air Conditioning Design
 Trane Air Conditioning Design
 Trace/Trane Training Course
 Micropas and Calpas User Training
 Asbestos and Lead Hazard Control
 ASTM Environmental Site Assessments for
 Commercial Real Estate
 Maintaining Asphalt Pavements –
 University of Wisconsin, Madison
 Mold in Commercial Buildings –
 American Society of Civil Engineers

PROFESSIONAL AFFILIATIONS

A.S.H.A.R.E. –
 National Society of Professional Engineers
 National Fire Protection Associations

Professional Summary

- Richard Darwicki brings over 40 years experience in Engineering and Construction Consulting Services to AES Due Diligence, Inc. These service experience include military, mid- and high-rise structures, retail, industrial, single and multi-family residential, resort and hospitality, assisted living and congregate care, office and medical facilities.
- He has designed wastewater treatment systems, reverse water filtration systems, water chlorinating facilities, vapor recovery fuel islands, double containment fuel tank systems, and site utilities for commercial, industrial, retail, and residential projects.
- He has also participated in Department of Energy studies to establish new energy standards for building construction and to design and develop solar energy collection systems for NASA and Rockwell International.
- As Chief Engineer for several firms, his responsibilities included cost estimations, specification writing, contract administration, field construction monitoring and environmental assessments for public and private projects.
- Due Diligence physical surveys since 1988 of existing properties to determine quality and condition of the structure, equipment, finishes and fixtures Identifying items requiring repair or replacement, ADA Compliance status, and estimating associated costs.
- On-site monitoring of new construction, renovation and repair work.
- Phase I Environmental Site Assessments (ASTM 1527-05) including on-site observations.
- Previously a Registered Environmental Assessor, expired in 1996, with new registration pending.



**PRELIMINARY HYDROLOGY REPORT
FOR**

TTM 37909

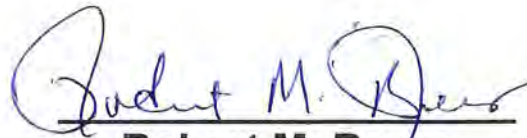
Moreno Valley, CA

Prepared for:

**Passco Pacifica, LLC
333 City Boulevard West, 17th Floor
Orange, CA 92866**

Initial Report: April 4, 2020

Prepared by:



**Robert M. Beers
8175 Limonite Avenue
Suite E
Riverside, CA 92509
(951) 317-2041**



Preliminary Drainage Report

Saturday, April 04, 2020

INTRODUCTION

The following report and calculations were prepared to analyze the 2, 10 & 100-year storm runoff from the development of the TTM 37909 at the east of Perris Boulevard on the south side of Iris Boulevard in the City of Moreno Valley, Ca. An infiltration basin is proposed for both mitigation of increased runoff from the site and for onsite BMPs for treatment of site runoff.

SITE BACKGROUND

The proposed project is located on the south side Iris Boulevard east of Perris Boulevard. The property is vacant and undeveloped and slopes from northwest to southeast.

There is no offsite areas draining onto the property.

The soil type for the area is Type B per Plate C-1.17 “Hydrologic Soils Group Map for Sunnymead” from the Riverside County Hydrology Manual.

METHODOLOGY

Subareas were determined based on the proposed grading of the site. A link-node model was created for each subarea, with flow path length and elevations shown for the upstream and downstream nodes for the subarea. Peak flowrates were determined for each subarea using the CivilDesign Corporation “RIV” rational method hydrology software. The results of those calculations are shown on the site hydrology map included with this report. Separate maps for the existing and developed condition are included with this report.

ANALYSES/DISCUSSION

Rational method hydrology calculations have been prepared for 2, 10 & 100-year existing and proposed condition for the project site. In the existing condition site drainage sheet flows across the property to southeast towards where it flows offsite across the existing MWD and EMWD easements.

In the proposed condition the site will be a several sub-areas where storm flows will flow to the internal street section and be conveyed to the southeast corner of the property where they will be directed into an infiltration basin system. The infiltration basin will be located in the proposed landscape area onsite adjacent to the WMD and EMWD easement areas along the westerly portion of the property and will discharge to the existing point of discharge.

The drainage areas and peak 2, 10 & 100-year discharges are summarized below:

Rational Method Calculations

Existing Condition

Description	Area (Ac.)	2-year discharge (cfs)	10-year discharge (cfs)	100-year discharge (cfs)	Tc mim.
Area 1	7.25	1.98	5.19	10.0	28.27
Area 2	2.32	0.57	1.56	3.09	34.25
Area 3	0.61	0.15	0.42	0.82	34.82
Area 4	0.64	0.14	0.39	0.77	36.40

Proposed Condition

Description	Area (Ac.)	2-year discharge (cfs)	10-year discharge (cfs)	100-year discharge (cfs)	Tc mim.
Area 1	3.04	2.56	4.11	6.40	14.58
Area 2	4.08	3.54	5.69	8.85	13.77
Area 3 – conflued	7.70	6.36	10.25	15.97	14.07
Area 4	2.32	0.57	1.56	3.09	34.25
Area 5	0.61	0.15	0.42	0.82	34.82

PROPOSED PROJECT BMP's

Based on soil infiltration test results we have selected an infiltration basin onsite as the method for treatment of onsite flows. The details of the proposed infiltration basin system are described in detail in the Preliminary Water Quality Management Plan prepared for this project.

CONCLUSION

Based on the calculations and proposed improvements, onsite flows can be conveyed to suitable points of disposal, and the proposed site development will not impact offsite properties.

Appendix A Existing Condition Rational Method Calculations

2-year
10-year
100-year

TTM37909ex2a

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex2a.out

TTM 37909 - Iris Avenue
Existing Condition - Area 1
2 year flow rates
RMBB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 2.00 Antecedent Moisture Condition = 1

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 2.0
Calculated rainfall intensity data:
1 hour intensity = 0.554(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

TTM37909ex2a

Initial area flow distance = 1000.000(Ft.)
 Top (of initial area) elevation = 501.200(Ft.)
 Bottom (of initial area) elevation = 491.200(Ft.)
 Difference in elevation = 10.000(Ft.)
 Slope = 0.01000 s(percent)= 1.00
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 28.266 min.
 Rainfall intensity = 0.808(In/Hr) for a 2.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.338
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 1) = 49.80
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 1.978(CFS)
 Total initial stream area = 7.250(Ac.)
 Pervious area fraction = 1.000
 End of computations, total study area = 7.25 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

TTM37909ex2b

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex2b.out

TTM 37909 - Iris Avenue
Area 2 - undeveloped
2 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 2.00 Antecedent Moisture Condition = 1

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 2.0
Calculated rainfall intensity data:
1 hour intensity = 0.554(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 200.000 to Point/Station 201.000
**** INITIAL AREA EVALUATION ****

TTM37909ex2b

Initial area flow distance = 564.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00585 s(percent)= 0.59
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 25.022 min.
 Rainfall intensity = 0.858(In/Hr) for a 2.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.351
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 1) = 49.80
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.271(CFS)
 Total initial stream area = 0.900(Ac.)
 Pervious area fraction = 1.000

++++
 Process from Point/Station 201.000 to Point/Station 202.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

 Estimated mean flow rate at midpoint of channel = 0.453(CFS)
 Depth of flow = 0.184(Ft.), Average velocity = 0.893(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 2.00
 2 10.00 1.00
 3 20.00 0.00
 4 40.00 1.00
 5 50.00 2.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 0.453(CFS)
 ' ' flow top width = 5.517(Ft.)
 ' ' velocity= 0.893(Ft/s)
 ' ' area = 0.507(Sq.Ft)
 ' ' Froude number = 0.519

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 90.200(Ft.)
 Flow length = 738.000(Ft.)
 Travel time = 13.77 min.

TTM37909ex2b

Time of concentration = 38.80 min.
 Depth of flow = 0.184(Ft.)
 Average velocity = 0.893(Ft/s)
 Total irregular channel flow = 0.453(CFS)
 Irregular channel normal depth above invert elev. = 0.184(Ft.)
 Average velocity of channel(s) = 0.893(Ft/s)

Adding area flow to channel

UNDEVELOPED (fair cover) subarea

Runoff Coefficient = 0.305

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 1.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 0.000

RI index for soil(AMC 1) = 49.80

Pervious area fraction = 1.000; Impervious fraction = 0.000

Rainfall intensity = 0.689(In/Hr) for a 2.0 year storm

Subarea runoff = 0.299(CFS) for 1.420(Ac.)

Total runoff = 0.570(CFS) Total area = 2.320(Ac.)

Depth of flow = 0.200(Ft.), Average velocity = 0.946(Ft/s)

End of computations, total study area = 2.32 (Ac.)

The following figures may

be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000

Area averaged RI index number = 69.0

TTM37909ex2c

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex2c.out

TTM 37909 - Iris Avenue
Existing Condition - Area 3
2 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 2.00 Antecedent Moisture Condition = 1

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 2.0
Calculated rainfall intensity data:
1 hour intensity = 0.554(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 200.000 to Point/Station 301.000
**** INITIAL AREA EVALUATION ****

TTM37909ex2c

Initial area flow distance = 559.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00590 s(percent)= 0.59
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 24.889 min.
 Rainfall intensity = 0.861(In/Hr) for a 2.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.351
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 1) = 49.80
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.082(CFS)
 Total initial stream area = 0.270(Ac.)
 Pervious area fraction = 1.000

++++
 Process from Point/Station 301.000 to Point/Station 302.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

 Estimated mean flow rate at midpoint of channel = 0.133(CFS)
 Depth of flow = 0.185(Ft.), Average velocity = 0.774(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 1.00
 2 2.50 0.50
 3 5.00 0.00
 4 7.50 0.50
 5 10.00 1.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 0.133(CFS)
 ' ' flow top width = 1.854(Ft.)
 ' ' velocity= 0.774(Ft/s)
 ' ' area = 0.172(Sq.Ft)
 ' ' Froude number = 0.448

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 91.900(Ft.)
 Flow length = 686.000(Ft.)
 Travel time = 14.77 min.

TTM37909ex2c

Time of concentration = 39.66 min.
 Depth of flow = 0.185(Ft.)
 Average velocity = 0.774(Ft/s)
 Total irregular channel flow = 0.133(CFS)
 Irregular channel normal depth above invert elev. = 0.185(Ft.)
 Average velocity of channel(s) = 0.774(Ft/s)

Adding area flow to channel

UNDEVELOPED (fair cover) subarea

Runoff Coefficient = 0.303

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 1.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 0.000

RI index for soil(AMC 1) = 49.80

Pervious area fraction = 1.000; Impervious fraction = 0.000

Rainfall intensity = 0.682(In/Hr) for a 2.0 year storm

Subarea runoff = 0.070(CFS) for 0.340(Ac.)

Total runoff = 0.152(CFS) Total area = 0.610(Ac.)

Depth of flow = 0.195(Ft.), Average velocity = 0.800(Ft/s)

End of computations, total study area = 0.61 (Ac.)

The following figures may

be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000

Area averaged RI index number = 69.0

TTM37909ex2d

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex2d.out

TTM 37909 - Iris AVenue
Existing Condition - Area 4
2 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 2.00 Antecedent Moisture Condition = 1

Standard intensity-duration curves data (Plate D-4.1)

For the [Sunnymead-Moreno] area used.

10 year storm 10 minute intensity = 2.010(In/Hr)

10 year storm 60 minute intensity = 0.820(In/Hr)

100 year storm 10 minute intensity = 2.940(In/Hr)

100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 2.0

Calculated rainfall intensity data:

1 hour intensity = 0.554(In/Hr)

Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 200.000 to Point/Station 401.000
**** INITIAL AREA EVALUATION ****

TTM37909ex2d

Initial area flow distance = 772.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 98.000(Ft.)
 Difference in elevation = 1.300(Ft.)
 Slope = 0.00168 s(percent)= 0.17
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 36.395 min.
 Rainfall intensity = 0.712(In/Hr) for a 2.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.312
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 1) = 49.80
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.142(CFS)
 Total initial stream area = 0.640(Ac.)
 Pervious area fraction = 1.000
 End of computations, total study area = 0.64 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

TTM37909ex10a

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex10a.out

TTM 37909 - Iris Avenue
Existing Condition - Area 1
10 year flow rates
RMBB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.820(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

TTM37909ex10a

Initial area flow distance = 1000.000(Ft.)
 Top (of initial area) elevation = 501.200(Ft.)
 Bottom (of initial area) elevation = 491.200(Ft.)
 Difference in elevation = 10.000(Ft.)
 Slope = 0.01000 s(percent)= 1.00
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 28.266 min.
 Rainfall intensity = 1.195(In/Hr) for a 10.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.599
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 2) = 69.00
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 5.192(CFS)
 Total initial stream area = 7.250(Ac.)
 Pervious area fraction = 1.000
 End of computations, total study area = 7.25 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

TTM37909ex10b

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex10b.out

TTM 37909 - Iris Avenue
Area 2 - undeveloped
10 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.820(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 200.000 to Point/Station 201.000
**** INITIAL AREA EVALUATION ****

TTM37909ex10b

Initial area flow distance = 564.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00585 s(percent)= 0.59
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 25.022 min.
 Rainfall intensity = 1.270(In/Hr) for a 10.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.612
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 2) = 69.00
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.699(CFS)
 Total initial stream area = 0.900(Ac.)
 Pervious area fraction = 1.000

++++
 Process from Point/Station 201.000 to Point/Station 202.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

 Estimated mean flow rate at midpoint of channel = 1.162(CFS)
 Depth of flow = 0.262(Ft.), Average velocity = 1.130(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 2.00
 2 10.00 1.00
 3 20.00 0.00
 4 40.00 1.00
 5 50.00 2.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 1.162(CFS)
 ' ' flow top width = 7.854(Ft.)
 ' ' velocity= 1.130(Ft/s)
 ' ' area = 1.028(Sq.Ft)
 ' ' Froude number = 0.551

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 90.200(Ft.)
 Flow length = 738.000(Ft.)
 Travel time = 10.88 min.

TTM37909ex10b

Time of concentration = 35.91 min.
 Depth of flow = 0.262(Ft.)
 Average velocity = 1.130(Ft/s)
 Total irregular channel flow = 1.162(CFS)
 Irregular channel normal depth above invert elev. = 0.262(Ft.)
 Average velocity of channel(s) = 1.130(Ft/s)
 Adding area flow to channel
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.575
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 2) = 69.00
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Rainfall intensity = 1.060(In/Hr) for a 10.0 year storm
 Subarea runoff = 0.866(CFS) for 1.420(Ac.)
 Total runoff = 1.564(CFS) Total area = 2.320(Ac.)
 Depth of flow = 0.293(Ft.), Average velocity = 1.217(Ft/s)
 End of computations, total study area = 2.32 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

TTM37909ex10c

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex10c.out

TTM 37909 - Iris Avenue
Existing Condition - Area 3
10 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.820(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 200.000 to Point/Station 301.000
**** INITIAL AREA EVALUATION ****

TTM37909ex10c

Initial area flow distance = 559.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00590 s(percent)= 0.59
 TC = k(0.710)*[(length^3)/(elevation change)]^0.2
 Initial area time of concentration = 24.889 min.
 Rainfall intensity = 1.273(In/Hr) for a 10.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.612
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 2) = 69.00
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.210(CFS)
 Total initial stream area = 0.270(Ac.)
 Pervious area fraction = 1.000

+++++
 Process from Point/Station 301.000 to Point/Station 302.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

 Estimated mean flow rate at midpoint of channel = 0.343(CFS)
 Depth of flow = 0.264(Ft.), Average velocity = 0.981(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 1.00
 2 2.50 0.50
 3 5.00 0.00
 4 7.50 0.50
 5 10.00 1.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 0.343(CFS)
 ' ' flow top width = 2.644(Ft.)
 ' ' velocity= 0.981(Ft/s)
 ' ' area = 0.350(Sq.Ft)
 ' ' Froude number = 0.475

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 91.900(Ft.)
 Flow length = 686.000(Ft.)
 Travel time = 11.66 min.

TTM37909ex10c

Time of concentration = 36.55 min.
 Depth of flow = 0.264(Ft.)
 Average velocity = 0.981(Ft/s)
 Total irregular channel flow = 0.343(CFS)
 Irregular channel normal depth above invert elev. = 0.264(Ft.)
 Average velocity of channel(s) = 0.981(Ft/s)

Adding area flow to channel

UNDEVELOPED (fair cover) subarea

Runoff Coefficient = 0.573

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 1.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 0.000

RI index for soil(AMC 2) = 69.00

Pervious area fraction = 1.000; Impervious fraction = 0.000

Rainfall intensity = 1.051(In/Hr) for a 10.0 year storm

Subarea runoff = 0.205(CFS) for 0.340(Ac.)

Total runoff = 0.415(CFS) Total area = 0.610(Ac.)

Depth of flow = 0.284(Ft.), Average velocity = 1.029(Ft/s)

End of computations, total study area = 0.61 (Ac.)

The following figures may

be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000

Area averaged RI index number = 69.0

TTM37909ex10d

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex10d.out

TTM 37909 - Iris AVenue
Existing Condition - Area 4
10 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.820(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 200.000 to Point/Station 401.000
**** INITIAL AREA EVALUATION ****

TTM37909ex10d

Initial area flow distance = 772.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 98.000(Ft.)
 Difference in elevation = 1.300(Ft.)
 Slope = 0.00168 s(percent)= 0.17
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 36.395 min.
 Rainfall intensity = 1.053(In/Hr) for a 10.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.574
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 2) = 69.00
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.387(CFS)
 Total initial stream area = 0.640(Ac.)
 Pervious area fraction = 1.000
 End of computations, total study area = 0.64 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

TTM37909ex100a

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex100a.out

TTM 37909 - Iris Avenue
Existing Condition - Area 1
100 year flow rates
RMBB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

TTM37909ex100a

Initial area flow distance = 1000.000(Ft.)
 Top (of initial area) elevation = 501.200(Ft.)
 Bottom (of initial area) elevation = 491.200(Ft.)
 Difference in elevation = 10.000(Ft.)
 Slope = 0.01000 s(percent)= 1.00
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 28.266 min.
 Rainfall intensity = 1.748(In/Hr) for a 100.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.789
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 84.40
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 9.999(CFS)
 Total initial stream area = 7.250(Ac.)
 Pervious area fraction = 1.000
 End of computations, total study area = 7.25 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

TTM37909ex100b

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex100b.out

TTM 37909 - Iris Avenue
Area 2 - undeveloped
100 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 200.000 to Point/Station 201.000
**** INITIAL AREA EVALUATION ****

TTM37909ex100b

Initial area flow distance = 564.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00585 s(percent)= 0.59
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 25.022 min.
 Rainfall intensity = 1.858(In/Hr) for a 100.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.795
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 84.40
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 1.329(CFS)
 Total initial stream area = 0.900(Ac.)
 Pervious area fraction = 1.000

++++
 Process from Point/Station 201.000 to Point/Station 202.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

 Estimated mean flow rate at midpoint of channel = 2.251(CFS)
 Depth of flow = 0.335(Ft.), Average velocity = 1.333(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 2.00
 2 10.00 1.00
 3 20.00 0.00
 4 40.00 1.00
 5 50.00 2.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 2.251(CFS)
 ' ' flow top width = 10.064(Ft.)
 ' ' velocity= 1.333(Ft/s)
 ' ' area = 1.688(Sq.Ft)
 ' ' Froude number = 0.574

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 90.200(Ft.)
 Flow length = 738.000(Ft.)
 Travel time = 9.23 min.

TTM37909ex100b

Time of concentration = 34.25 min.
 Depth of flow = 0.335(Ft.)
 Average velocity = 1.333(Ft/s)
 Total irregular channel flow = 2.251(CFS)
 Irregular channel normal depth above invert elev. = 0.335(Ft.)
 Average velocity of channel(s) = 1.333(Ft/s)
 Adding area flow to channel
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.779
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 84.40
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Rainfall intensity = 1.588(In/Hr) for a 100.0 year storm
 Subarea runoff = 1.757(CFS) for 1.420(Ac.)
 Total runoff = 3.086(CFS) Total area = 2.320(Ac.)
 Depth of flow = 0.378(Ft.), Average velocity = 1.443(Ft/s)
 End of computations, total study area = 2.32 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

TTM37909ex100c

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex100c.out

TTM 37909 - Iris Avenue
Existing Condition - Area 3
100 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 200.000 to Point/Station 301.000
**** INITIAL AREA EVALUATION ****

TTM37909ex100c

Initial area flow distance = 559.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00590 s(percent)= 0.59
 TC = k(0.710)*[(length^3)/(elevation change)]^0.2
 Initial area time of concentration = 24.889 min.
 Rainfall intensity = 1.863(In/Hr) for a 100.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.795
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 84.40
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.400(CFS)
 Total initial stream area = 0.270(Ac.)
 Pervious area fraction = 1.000

++++
 Process from Point/Station 301.000 to Point/Station 302.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

 Estimated mean flow rate at midpoint of channel = 0.652(CFS)
 Depth of flow = 0.336(Ft.), Average velocity = 1.152(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 1.00
 2 2.50 0.50
 3 5.00 0.00
 4 7.50 0.50
 5 10.00 1.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 0.652(CFS)
 ' ' flow top width = 3.364(Ft.)
 ' ' velocity= 1.152(Ft/s)
 ' ' area = 0.566(Sq.Ft)
 ' ' Froude number = 0.495

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 91.900(Ft.)
 Flow length = 686.000(Ft.)
 Travel time = 9.93 min.

TTM37909ex100c

Time of concentration = 34.82 min.
 Depth of flow = 0.336(Ft.)
 Average velocity = 1.152(Ft/s)
 Total irregular channel flow = 0.652(CFS)
 Irregular channel normal depth above invert elev. = 0.336(Ft.)
 Average velocity of channel(s) = 1.152(Ft/s)

Adding area flow to channel

UNDEVELOPED (fair cover) subarea

Runoff Coefficient = 0.778

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 1.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 0.000

RI index for soil(AMC 3) = 84.40

Pervious area fraction = 1.000; Impervious fraction = 0.000

Rainfall intensity = 1.575(In/Hr) for a 100.0 year storm

Subarea runoff = 0.417(CFS) for 0.340(Ac.)

Total runoff = 0.817(CFS) Total area = 0.610(Ac.)

Depth of flow = 0.366(Ft.), Average velocity = 1.219(Ft/s)

End of computations, total study area = 0.61 (Ac.)

The following figures may

be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000

Area averaged RI index number = 69.0

TTM37909ex100d

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909ex100d.out

TTM 37909 - Iris AVenue
Existing Condition - Area 4
100 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 200.000 to Point/Station 401.000
**** INITIAL AREA EVALUATION ****

TTM37909ex100d

Initial area flow distance = 772.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 98.000(Ft.)
 Difference in elevation = 1.300(Ft.)
 Slope = 0.00168 s(percent)= 0.17
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 36.395 min.
 Rainfall intensity = 1.541(In/Hr) for a 100.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.776
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 84.40
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.765(CFS)
 Total initial stream area = 0.640(Ac.)
 Pervious area fraction = 1.000
 End of computations, total study area = 0.64 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

Appendix B Proposed Condition Rational Method Calculations

2-year
10-year
100-year

TTM37909dev2

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/03/20

File:TTM37909dev2.out

TTM 37909 - Iris Avenue
Developed Condition
2 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 2.00 Antecedent Moisture Condition = 1

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 2.0
Calculated rainfall intensity data:
1 hour intensity = 0.554(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

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Initial area flow distance = 957.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 93.600(Ft.)
 Difference in elevation = 5.700(Ft.)
 Slope = 0.00596 s(percent)= 0.60
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 14.578 min.
 Rainfall intensity = 1.125(In/Hr) for a 2.0 year storm
 MOBILE HOME PARK subarea type
 Runoff Coefficient = 0.747
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 1) = 36.00
 Pervious area fraction = 0.250; Impervious fraction = 0.750
 Initial subarea runoff = 2.555(CFS)
 Total initial stream area = 3.040(Ac.)
 Pervious area fraction = 0.250

+++++
 Process from Point/Station 101.500 to Point/Station 201.500
 **** PIPEFLOW TRAVEL TIME (User specified size) ****

Upstream point/station elevation = 89.600(Ft.)
 Downstream point/station elevation = 88.800(Ft.)
 Pipe length = 129.00(Ft.) Manning's N = 0.013
 No. of pipes = 1 Required pipe flow = 2.555(CFS)
 Given pipe size = 24.00(In.)
 Calculated individual pipe flow = 2.555(CFS)
 Normal flow depth in pipe = 6.14(In.)
 Flow top width inside pipe = 20.94(In.)
 Critical Depth = 6.68(In.)
 Pipe flow velocity = 4.03(Ft/s)
 Travel time through pipe = 0.53 min.
 Time of concentration (TC) = 15.11 min.

+++++
 Process from Point/Station 101.500 to Point/Station 201.500
 **** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1
 Stream flow area = 3.040(Ac.)
 Runoff from this stream = 2.555(CFS)
 Time of concentration = 15.11 min.
 Rainfall intensity = 1.105(In/Hr)

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+++++
 Process from Point/Station 200.000 to Point/Station 201.000
 **** INITIAL AREA EVALUATION ****

Initial area flow distance = 870.000(Ft.)
 Top (of initial area) elevation = 98.500(Ft.)
 Bottom (of initial area) elevation = 92.800(Ft.)
 Difference in elevation = 5.700(Ft.)
 Slope = 0.00655 s(percent)= 0.66
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 13.768 min.
 Rainfall intensity = 1.157(In/Hr) for a 2.0 year storm
 MOBILE HOME PARK subarea type
 Runoff Coefficient = 0.749
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 1) = 36.00
 Pervious area fraction = 0.250; Impervious fraction = 0.750
 Initial subarea runoff = 3.536(CFS)
 Total initial stream area = 4.080(Ac.)
 Pervious area fraction = 0.250

+++++
 Process from Point/Station 200.000 to Point/Station 201.000
 **** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2
 Stream flow area = 4.080(Ac.)
 Runoff from this stream = 3.536(CFS)
 Time of concentration = 13.77 min.
 Rainfall intensity = 1.157(In/Hr)
 Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	2.555	15.11	1.105
2	3.536	13.77	1.157

Largest stream flow has longer or shorter time of concentration
 $Q_p = 3.536 + \text{sum of } Q_a \cdot \frac{T_b}{T_a}$
 $2.555 * 0.911 = 2.328$

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Qp = 5.864

Total of 2 streams to confluence:
Flow rates before confluence point:

2.555 3.536

Area of streams before confluence:

3.040 4.080

Results of confluence:

Total flow rate = 5.864(CFS)

Time of concentration = 13.768 min.

Effective stream area after confluence = 7.120(Ac.)

++++
Process from Point/Station 201.500 to Point/Station 202.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****

Upstream point/station elevation = 88.800(Ft.)
Downstream point/station elevation = 85.000(Ft.)
Pipe length = 182.00(Ft.) Manning's N = 0.013
No. of pipes = 1 Required pipe flow = 5.864(CFS)
Given pipe size = 24.00(In.)
Calculated individual pipe flow = 5.864(CFS)
Normal flow depth in pipe = 6.88(In.)
Flow top width inside pipe = 21.70(In.)
Critical Depth = 10.26(In.)
Pipe flow velocity = 7.87(Ft/s)
Travel time through pipe = 0.39 min.
Time of concentration (TC) = 14.15 min.

++++
Process from Point/Station 201.500 to Point/Station 202.000
**** SUBAREA FLOW ADDITION ****

MOBILE HOME PARK subarea type
Runoff Coefficient = 0.748
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 1) = 36.00
Pervious area fraction = 0.250; Impervious fraction = 0.750
Time of concentration = 14.15 min.
Rainfall intensity = 1.141(In/Hr) for a 2.0 year storm
Subarea runoff = 0.495(CFS) for 0.580(Ac.)
Total runoff = 6.359(CFS) Total area = 7.700(Ac.)
End of computations, total study area = 7.70 (Ac.)

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The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 0.250

Area averaged RI index number = 56.0

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Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909dev2b.out

TTM 37909 - Iris Avenue
Area 4 - undeveloped
2 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 2.00 Antecedent Moisture Condition = 1

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 2.0
Calculated rainfall intensity data:
1 hour intensity = 0.554(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 400.000 to Point/Station 401.000
**** INITIAL AREA EVALUATION ****

TTM37909dev2b

Initial area flow distance = 564.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00585 s(percent)= 0.59
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 25.022 min.
 Rainfall intensity = 0.858(In/Hr) for a 2.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.351
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 1) = 49.80
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.271(CFS)
 Total initial stream area = 0.900(Ac.)
 Pervious area fraction = 1.000

++++
 Process from Point/Station 401.000 to Point/Station 402.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

 Estimated mean flow rate at midpoint of channel = 0.453(CFS)
 Depth of flow = 0.184(Ft.), Average velocity = 0.893(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 2.00
 2 10.00 1.00
 3 20.00 0.00
 4 40.00 1.00
 5 50.00 2.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 0.453(CFS)
 ' ' flow top width = 5.517(Ft.)
 ' ' velocity= 0.893(Ft/s)
 ' ' area = 0.507(Sq.Ft)
 ' ' Froude number = 0.519

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 90.200(Ft.)
 Flow length = 738.000(Ft.)
 Travel time = 13.77 min.

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Time of concentration = 38.80 min.
 Depth of flow = 0.184(Ft.)
 Average velocity = 0.893(Ft/s)
 Total irregular channel flow = 0.453(CFS)
 Irregular channel normal depth above invert elev. = 0.184(Ft.)
 Average velocity of channel(s) = 0.893(Ft/s)
 Adding area flow to channel
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.305
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 1) = 49.80
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Rainfall intensity = 0.689(In/Hr) for a 2.0 year storm
 Subarea runoff = 0.299(CFS) for 1.420(Ac.)
 Total runoff = 0.570(CFS) Total area = 2.320(Ac.)
 Depth of flow = 0.200(Ft.), Average velocity = 0.946(Ft/s)
 End of computations, total study area = 2.32 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

TTM37909dev2c

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:TTM37909dev2c.out

TTM 37909 - Iris Avenue
Developed Condition - Area 5
2 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 2.00 Antecedent Moisture Condition = 1

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 2.0
Calculated rainfall intensity data:
1 hour intensity = 0.554(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 400.000 to Point/Station 501.000
**** INITIAL AREA EVALUATION ****

TTM37909dev2c

Initial area flow distance = 559.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00590 s(percent)= 0.59
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 24.889 min.
 Rainfall intensity = 0.861(In/Hr) for a 2.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.351
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 1) = 49.80
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.082(CFS)
 Total initial stream area = 0.270(Ac.)
 Pervious area fraction = 1.000

+++++
 Process from Point/Station 501.000 to Point/Station 502.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

 Estimated mean flow rate at midpoint of channel = 0.133(CFS)
 Depth of flow = 0.185(Ft.), Average velocity = 0.774(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 1.00
 2 2.50 0.50
 3 5.00 0.00
 4 7.50 0.50
 5 10.00 1.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 0.133(CFS)
 ' ' flow top width = 1.854(Ft.)
 ' ' velocity= 0.774(Ft/s)
 ' ' area = 0.172(Sq.Ft)
 ' ' Froude number = 0.448

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 91.900(Ft.)
 Flow length = 686.000(Ft.)
 Travel time = 14.77 min.

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Time of concentration = 39.66 min.
 Depth of flow = 0.185(Ft.)
 Average velocity = 0.774(Ft/s)
 Total irregular channel flow = 0.133(CFS)
 Irregular channel normal depth above invert elev. = 0.185(Ft.)
 Average velocity of channel(s) = 0.774(Ft/s)
 Adding area flow to channel
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.303
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 1) = 49.80
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Rainfall intensity = 0.682(In/Hr) for a 2.0 year storm
 Subarea runoff = 0.070(CFS) for 0.340(Ac.)
 Total runoff = 0.152(CFS) Total area = 0.610(Ac.)
 Depth of flow = 0.195(Ft.), Average velocity = 0.800(Ft/s)
 End of computations, total study area = 0.61 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

TTM37909dev10

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/03/20

File:TTM37909dev10.out

TTM 37909 - Iris Avenue
Developed Condition Areas 1 - 2 & 3
10 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.820(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

TTM37909dev10

Initial area flow distance = 957.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 93.600(Ft.)
 Difference in elevation = 5.700(Ft.)
 Slope = 0.00596 s(percent)= 0.60
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 14.578 min.
 Rainfall intensity = 1.664(In/Hr) for a 10.0 year storm
 MOBILE HOME PARK subarea type
 Runoff Coefficient = 0.813
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 2) = 56.00
 Pervious area fraction = 0.250; Impervious fraction = 0.750
 Initial subarea runoff = 4.112(CFS)
 Total initial stream area = 3.040(Ac.)
 Pervious area fraction = 0.250

+++++
 Process from Point/Station 101.500 to Point/Station 201.500
 **** PIPEFLOW TRAVEL TIME (User specified size) ****

Upstream point/station elevation = 89.600(Ft.)
 Downstream point/station elevation = 88.800(Ft.)
 Pipe length = 129.00(Ft.) Manning's N = 0.013
 No. of pipes = 1 Required pipe flow = 4.112(CFS)
 Given pipe size = 24.00(In.)
 Calculated individual pipe flow = 4.112(CFS)
 Normal flow depth in pipe = 7.84(In.)
 Flow top width inside pipe = 22.51(In.)
 Critical Depth = 8.53(In.)
 Pipe flow velocity = 4.61(Ft/s)
 Travel time through pipe = 0.47 min.
 Time of concentration (TC) = 15.04 min.

+++++
 Process from Point/Station 101.500 to Point/Station 201.500
 **** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1
 Stream flow area = 3.040(Ac.)
 Runoff from this stream = 4.112(CFS)
 Time of concentration = 15.04 min.
 Rainfall intensity = 1.638(In/Hr)

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++++
 Process from Point/Station 200.000 to Point/Station 201.000
 **** INITIAL AREA EVALUATION ****

Initial area flow distance = 870.000(Ft.)
 Top (of initial area) elevation = 98.500(Ft.)
 Bottom (of initial area) elevation = 92.800(Ft.)
 Difference in elevation = 5.700(Ft.)
 Slope = 0.00655 s(percent)= 0.66
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 13.768 min.
 Rainfall intensity = 1.712(In/Hr) for a 10.0 year storm
 MOBILE HOME PARK subarea type
 Runoff Coefficient = 0.815
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 2) = 56.00
 Pervious area fraction = 0.250; Impervious fraction = 0.750
 Initial subarea runoff = 5.689(CFS)
 Total initial stream area = 4.080(Ac.)
 Pervious area fraction = 0.250

++++
 Process from Point/Station 200.000 to Point/Station 201.000
 **** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2
 Stream flow area = 4.080(Ac.)
 Runoff from this stream = 5.689(CFS)
 Time of concentration = 13.77 min.
 Rainfall intensity = 1.712(In/Hr)
 Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	4.112	15.04	1.638
2	5.689	13.77	1.712

Largest stream flow has longer or shorter time of concentration
 $Q_p = Q_a + \sum (Q_a * (T_b/T_a)^{0.915})$
 $4.112 * 0.915 = 3.763$

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Qp = 9.452

Total of 2 streams to confluence:
Flow rates before confluence point:

4.112 5.689

Area of streams before confluence:

3.040 4.080

Results of confluence:

Total flow rate = 9.452(CFS)

Time of concentration = 13.768 min.

Effective stream area after confluence = 7.120(Ac.)

++++
Process from Point/Station 201.500 to Point/Station 202.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****

Upstream point/station elevation = 88.800(Ft.)
Downstream point/station elevation = 85.000(Ft.)
Pipe length = 182.00(Ft.) Manning's N = 0.013
No. of pipes = 1 Required pipe flow = 9.452(CFS)
Given pipe size = 24.00(In.)
Calculated individual pipe flow = 9.452(CFS)
Normal flow depth in pipe = 8.84(In.)
Flow top width inside pipe = 23.15(In.)
Critical Depth = 13.18(In.)
Pipe flow velocity = 9.00(Ft/s)
Travel time through pipe = 0.34 min.
Time of concentration (TC) = 14.11 min.

++++
Process from Point/Station 201.500 to Point/Station 202.000
**** SUBAREA FLOW ADDITION ****

MOBILE HOME PARK subarea type
Runoff Coefficient = 0.814
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 56.00
Pervious area fraction = 0.250; Impervious fraction = 0.750
Time of concentration = 14.11 min.
Rainfall intensity = 1.691(In/Hr) for a 10.0 year storm
Subarea runoff = 0.798(CFS) for 0.580(Ac.)
Total runoff = 10.250(CFS) Total area = 7.700(Ac.)
End of computations, total study area = 7.70 (Ac.)

TTM37909dev10

The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 0.250

Area averaged RI index number = 56.0

ttm37909dev10b

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:ttm37909dev10b.out

TTM 37909 - Iris Avenue
Area 4 - undeveloped
10 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.820(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 400.000 to Point/Station 401.000
**** INITIAL AREA EVALUATION ****

ttm37909dev10b

Initial area flow distance = 564.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00585 s(percent)= 0.59
 $TC = k(0.710)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 25.022 min.
 Rainfall intensity = 1.270(In/Hr) for a 10.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.612
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 2) = 69.00
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.699(CFS)
 Total initial stream area = 0.900(Ac.)
 Pervious area fraction = 1.000

+++++
 Process from Point/Station 401.000 to Point/Station 402.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

 Estimated mean flow rate at midpoint of channel = 1.162(CFS)
 Depth of flow = 0.262(Ft.), Average velocity = 1.130(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 2.00
 2 10.00 1.00
 3 20.00 0.00
 4 40.00 1.00
 5 50.00 2.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 1.162(CFS)
 ' ' flow top width = 7.854(Ft.)
 ' ' velocity= 1.130(Ft/s)
 ' ' area = 1.028(Sq.Ft)
 ' ' Froude number = 0.551

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 90.200(Ft.)
 Flow length = 738.000(Ft.)
 Travel time = 10.88 min.

ttm37909dev10b

Time of concentration = 35.91 min.
 Depth of flow = 0.262(Ft.)
 Average velocity = 1.130(Ft/s)
 Total irregular channel flow = 1.162(CFS)
 Irregular channel normal depth above invert elev. = 0.262(Ft.)
 Average velocity of channel(s) = 1.130(Ft/s)
 Adding area flow to channel
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.575
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 2) = 69.00
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Rainfall intensity = 1.060(In/Hr) for a 10.0 year storm
 Subarea runoff = 0.866(CFS) for 1.420(Ac.)
 Total runoff = 1.564(CFS) Total area = 2.320(Ac.)
 Depth of flow = 0.293(Ft.), Average velocity = 1.217(Ft/s)
 End of computations, total study area = 2.32 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

ttm37909dev100c

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:ttm37909dev100c.out

TTM 37909 - Iris Avenue
Developed Condition - Area 5
100 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 400.000 to Point/Station 501.000
**** INITIAL AREA EVALUATION ****

ttm37909dev100c
 Initial area flow distance = 559.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00590 s(percent)= 0.59
 TC = k(0.710)*[(length^3)/(elevation change)]^0.2
 Initial area time of concentration = 24.889 min.
 Rainfall intensity = 1.863(In/Hr) for a 100.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.795
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 84.40
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 0.400(CFS)
 Total initial stream area = 0.270(Ac.)
 Pervious area fraction = 1.000

++++
 Process from Point/Station 501.000 to Point/Station 502.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

Estimated mean flow rate at midpoint of channel = 0.652(CFS)
 Depth of flow = 0.336(Ft.), Average velocity = 1.152(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 1.00
 2 2.50 0.50
 3 5.00 0.00
 4 7.50 0.50
 5 10.00 1.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 0.652(CFS)
 ' ' flow top width = 3.364(Ft.)
 ' ' velocity= 1.152(Ft/s)
 ' ' area = 0.566(Sq.Ft)
 ' ' Froude number = 0.495

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 91.900(Ft.)
 Flow length = 686.000(Ft.)
 Travel time = 9.93 min.

ttm37909dev100c

Time of concentration = 34.82 min.
 Depth of flow = 0.336(Ft.)
 Average velocity = 1.152(Ft/s)
 Total irregular channel flow = 0.652(CFS)
 Irregular channel normal depth above invert elev. = 0.336(Ft.)
 Average velocity of channel(s) = 1.152(Ft/s)
 Adding area flow to channel
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.778
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 84.40
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Rainfall intensity = 1.575(In/Hr) for a 100.0 year storm
 Subarea runoff = 0.417(CFS) for 0.340(Ac.)
 Total runoff = 0.817(CFS) Total area = 0.610(Ac.)
 Depth of flow = 0.366(Ft.), Average velocity = 1.219(Ft/s)
 End of computations, total study area = 0.61 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

TTM37909deva100

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/03/20

File:TTM37909deva100.out

TTM 37909 - Iris Avenue
Developed Condition Areas 1 - 2 & 3
100 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

TTM37909deva100

Initial area flow distance = 957.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 93.600(Ft.)
 Difference in elevation = 5.700(Ft.)
 Slope = 0.00596 s(percent)= 0.60
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 14.578 min.
 Rainfall intensity = 2.434(In/Hr) for a 100.0 year storm
 MOBILE HOME PARK subarea type
 Runoff Coefficient = 0.865
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 74.80
 Pervious area fraction = 0.250; Impervious fraction = 0.750
 Initial subarea runoff = 6.401(CFS)
 Total initial stream area = 3.040(Ac.)
 Pervious area fraction = 0.250

+++++
 Process from Point/Station 101.500 to Point/Station 201.500
 **** PIPEFLOW TRAVEL TIME (User specified size) ****

Upstream point/station elevation = 89.600(Ft.)
 Downstream point/station elevation = 88.800(Ft.)
 Pipe length = 129.00(Ft.) Manning's N = 0.013
 No. of pipes = 1 Required pipe flow = 6.401(CFS)
 Given pipe size = 24.00(In.)
 Calculated individual pipe flow = 6.401(CFS)
 Normal flow depth in pipe = 9.95(In.)
 Flow top width inside pipe = 23.65(In.)
 Critical Depth = 10.74(In.)
 Pipe flow velocity = 5.21(Ft/s)
 Travel time through pipe = 0.41 min.
 Time of concentration (TC) = 14.99 min.

+++++
 Process from Point/Station 101.500 to Point/Station 201.500
 **** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1
 Stream flow area = 3.040(Ac.)
 Runoff from this stream = 6.401(CFS)
 Time of concentration = 14.99 min.
 Rainfall intensity = 2.401(In/Hr)

TTM37909deva100

+++++
 Process from Point/Station 200.000 to Point/Station 201.000
 **** INITIAL AREA EVALUATION ****

Initial area flow distance = 870.000(Ft.)
 Top (of initial area) elevation = 98.500(Ft.)
 Bottom (of initial area) elevation = 92.800(Ft.)
 Difference in elevation = 5.700(Ft.)
 Slope = 0.00655 s(percent)= 0.66
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
 Initial area time of concentration = 13.768 min.
 Rainfall intensity = 2.505(In/Hr) for a 100.0 year storm
 MOBILE HOME PARK subarea type
 Runoff Coefficient = 0.866
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 74.80
 Pervious area fraction = 0.250; Impervious fraction = 0.750
 Initial subarea runoff = 8.849(CFS)
 Total initial stream area = 4.080(Ac.)
 Pervious area fraction = 0.250

+++++
 Process from Point/Station 200.000 to Point/Station 201.000
 **** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2
 Stream flow area = 4.080(Ac.)
 Runoff from this stream = 8.849(CFS)
 Time of concentration = 13.77 min.
 Rainfall intensity = 2.505(In/Hr)
 Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	6.401	14.99	2.401
2	8.849	13.77	2.505

Largest stream flow has longer or shorter time of concentration
 $Q_p = 8.849 + \text{sum of } Q_a \cdot \frac{T_b}{T_a}$
 $6.401 * 0.918 = 5.879$

TTM37909deva100

Qp = 14.728

Total of 2 streams to confluence:
Flow rates before confluence point:

6.401 8.849

Area of streams before confluence:

3.040 4.080

Results of confluence:

Total flow rate = 14.728(CFS)

Time of concentration = 13.768 min.

Effective stream area after confluence = 7.120(Ac.)

++++
Process from Point/Station 201.500 to Point/Station 202.000
**** PIPEFLOW TRAVEL TIME (User specified size) ****

Upstream point/station elevation = 88.800(Ft.)
Downstream point/station elevation = 85.000(Ft.)
Pipe length = 182.00(Ft.) Manning's N = 0.013
No. of pipes = 1 Required pipe flow = 14.728(CFS)
Given pipe size = 24.00(In.)
Calculated individual pipe flow = 14.728(CFS)
Normal flow depth in pipe = 11.30(In.)
Flow top width inside pipe = 23.96(In.)
Critical Depth = 16.59(In.)
Pipe flow velocity = 10.13(Ft/s)
Travel time through pipe = 0.30 min.
Time of concentration (TC) = 14.07 min.

++++
Process from Point/Station 201.500 to Point/Station 202.000
**** SUBAREA FLOW ADDITION ****

MOBILE HOME PARK subarea type
Runoff Coefficient = 0.865
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3) = 74.80
Pervious area fraction = 0.250; Impervious fraction = 0.750
Time of concentration = 14.07 min.
Rainfall intensity = 2.478(In/Hr) for a 100.0 year storm
Subarea runoff = 1.244(CFS) for 0.580(Ac.)
Total runoff = 15.972(CFS) Total area = 7.700(Ac.)
End of computations, total study area = 7.70 (Ac.)

TTM37909deva100

The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 0.250

Area averaged RI index number = 56.0

ttm37909dev100b

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:ttm37909dev100b.out

TTM 37909 - Iris Avenue
Area 4 - undeveloped
100 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 400.000 to Point/Station 401.000
**** INITIAL AREA EVALUATION ****

ttm37909dev100b

Initial area flow distance = 564.000(Ft.)
 Top (of initial area) elevation = 99.300(Ft.)
 Bottom (of initial area) elevation = 96.000(Ft.)
 Difference in elevation = 3.300(Ft.)
 Slope = 0.00585 s(percent)= 0.59
 TC = k(0.710)*[(length^3)/(elevation change)]^0.2
 Initial area time of concentration = 25.022 min.
 Rainfall intensity = 1.858(In/Hr) for a 100.0 year storm
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.795
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 84.40
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Initial subarea runoff = 1.329(CFS)
 Total initial stream area = 0.900(Ac.)
 Pervious area fraction = 1.000

+++++
 Process from Point/Station 401.000 to Point/Station 402.000
 **** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

 Estimated mean flow rate at midpoint of channel = 2.251(CFS)
 Depth of flow = 0.335(Ft.), Average velocity = 1.333(Ft/s)
 ***** Irregular Channel Data *****

 Information entered for subchannel number 1 :
 Point number 'X' coordinate 'Y' coordinate
 1 0.00 2.00
 2 10.00 1.00
 3 20.00 0.00
 4 40.00 1.00
 5 50.00 2.00

Manning's 'N' friction factor = 0.030

Sub-Channel flow = 2.251(CFS)
 ' ' flow top width = 10.064(Ft.)
 ' ' velocity= 1.333(Ft/s)
 ' ' area = 1.688(Sq.Ft)
 ' ' Froude number = 0.574

Upstream point elevation = 96.000(Ft.)
 Downstream point elevation = 90.200(Ft.)
 Flow length = 738.000(Ft.)
 Travel time = 9.23 min.

ttm37909dev100b

Time of concentration = 34.25 min.
 Depth of flow = 0.335(Ft.)
 Average velocity = 1.333(Ft/s)
 Total irregular channel flow = 2.251(CFS)
 Irregular channel normal depth above invert elev. = 0.335(Ft.)
 Average velocity of channel(s) = 1.333(Ft/s)
 Adding area flow to channel
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.779
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 84.40
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Rainfall intensity = 1.588(In/Hr) for a 100.0 year storm
 Subarea runoff = 1.757(CFS) for 1.420(Ac.)
 Total runoff = 3.086(CFS) Total area = 2.320(Ac.)
 Depth of flow = 0.378(Ft.), Average velocity = 1.443(Ft/s)
 End of computations, total study area = 2.32 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0

ttm37909dev100c

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 04/04/20

File:ttm37909dev100c.out

TTM 37909 - Iris Avenue
Developed Condition - Area 5
100 year flow rates
RMB

***** Hydrology Study Control Information *****

English (in-lb) Units used in input data file

Program License Serial Number 6288

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

Standard intensity-duration curves data (Plate D-4.1)
For the [Sunnymead-Moreno] area used.
10 year storm 10 minute intensity = 2.010(In/Hr)
10 year storm 60 minute intensity = 0.820(In/Hr)
100 year storm 10 minute intensity = 2.940(In/Hr)
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5000

++++
Process from Point/Station 400.000 to Point/Station 501.000
**** INITIAL AREA EVALUATION ****

```

                    ttm37909dev100c
Initial area flow distance = 559.000(Ft.)
Top (of initial area) elevation = 99.300(Ft.)
Bottom (of initial area) elevation = 96.000(Ft.)
Difference in elevation = 3.300(Ft.)
Slope = 0.00590 s(percent)= 0.59
TC = k(0.710)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 24.889 min.
Rainfall intensity = 1.863(In/Hr) for a 100.0 year storm
UNDEVELOPED (fair cover) subarea
Runoff Coefficient = 0.795
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3) = 84.40
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 0.400(CFS)
Total initial stream area = 0.270(Ac.)
Pervious area fraction = 1.000

```

```

+++++
Process from Point/Station 501.000 to Point/Station 502.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

```

```

Estimated mean flow rate at midpoint of channel = 0.652(CFS)
Depth of flow = 0.336(Ft.), Average velocity = 1.152(Ft/s)
***** Irregular Channel Data *****

```

```

-----
Information entered for subchannel number 1 :
Point number      'X' coordinate      'Y' coordinate
      1              0.00              1.00
      2              2.50              0.50
      3              5.00              0.00
      4              7.50              0.50
      5             10.00              1.00

```

```

Manning's 'N' friction factor = 0.030

```

```

-----
Sub-Channel flow = 0.652(CFS)
'   '   flow top width = 3.364(Ft.)
'   '   velocity= 1.152(Ft/s)
'   '   area = 0.566(Sq.Ft)
'   '   Froude number = 0.495

```

```

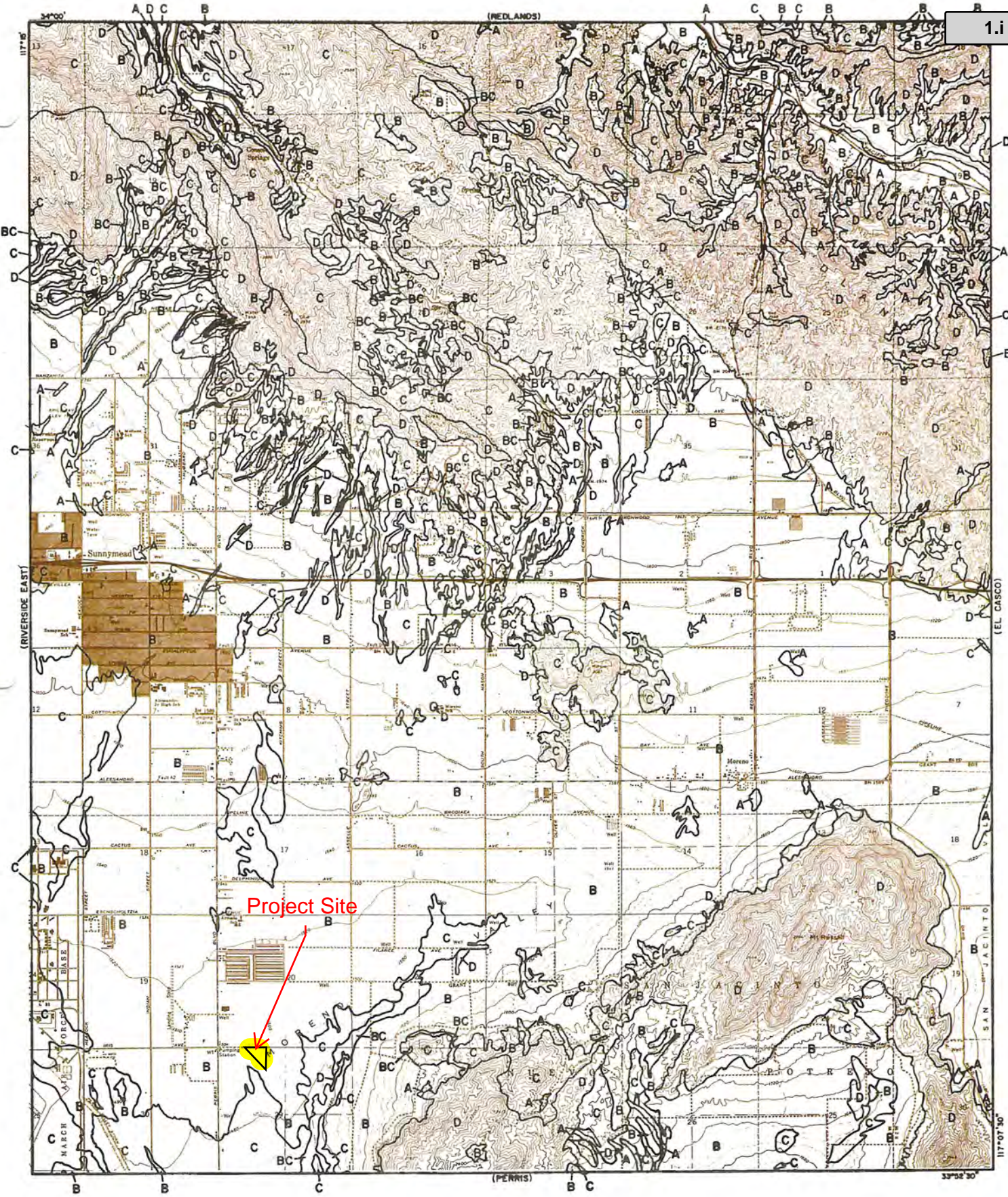
Upstream point elevation = 96.000(Ft.)
Downstream point elevation = 91.900(Ft.)
Flow length = 686.000(Ft.)
Travel time = 9.93 min.

```

ttm37909dev100c

Time of concentration = 34.82 min.
 Depth of flow = 0.336(Ft.)
 Average velocity = 1.152(Ft/s)
 Total irregular channel flow = 0.652(CFS)
 Irregular channel normal depth above invert elev. = 0.336(Ft.)
 Average velocity of channel(s) = 1.152(Ft/s)
 Adding area flow to channel
 UNDEVELOPED (fair cover) subarea
 Runoff Coefficient = 0.778
 Decimal fraction soil group A = 0.000
 Decimal fraction soil group B = 1.000
 Decimal fraction soil group C = 0.000
 Decimal fraction soil group D = 0.000
 RI index for soil(AMC 3) = 84.40
 Pervious area fraction = 1.000; Impervious fraction = 0.000
 Rainfall intensity = 1.575(In/Hr) for a 100.0 year storm
 Subarea runoff = 0.417(CFS) for 0.340(Ac.)
 Total runoff = 0.817(CFS) Total area = 0.610(Ac.)
 Depth of flow = 0.366(Ft.), Average velocity = 1.219(Ft/s)
 End of computations, total study area = 0.61 (Ac.)
 The following figures may
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(A_p) = 1.000
 Area averaged RI index number = 69.0



LEGEND

- SOILS GROUP BOUNDARY
- A SOILS GROUP DESIGNATION

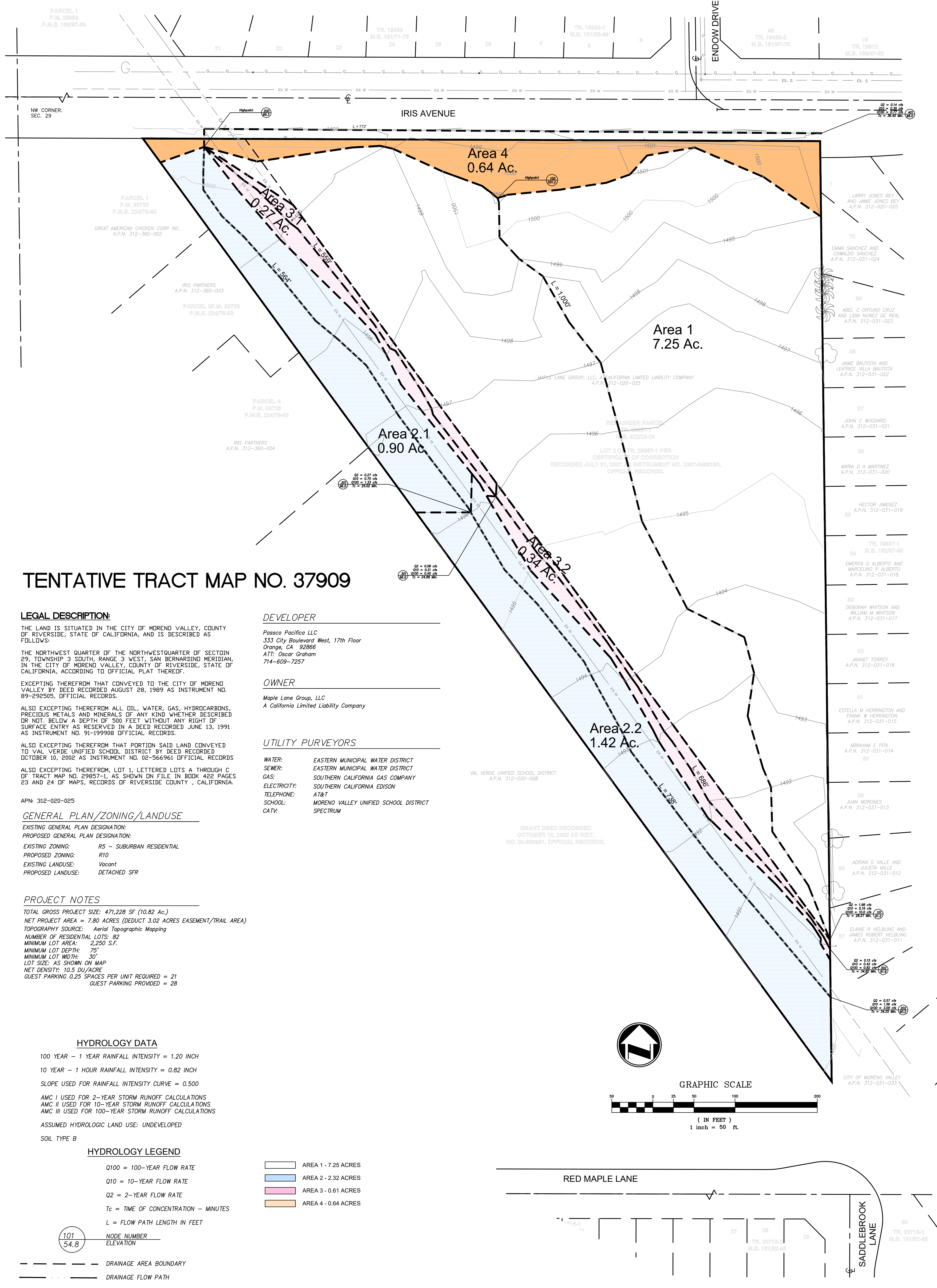
RCFC & WCD
HYDROLOGY MANUAL

0 FEET 5000

HYDROLOGIC SOILS GROUP MAP
FOR
SUNNYMEAD

Attachment: Appendix G to Initial Study Preliminary Hydrology Report_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

Tentative Tract Map No. 37909



TENTATIVE TRACT MAP NO. 37909

LEGAL DESCRIPTION:

THE LAND IS SITUATED IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE NORTHWEST QUARTER OF THE NORTHWESTQUARTER OF SECTION 29, TOWNSHIP 3 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT PORTION SAID LAND CONVEYED TO VAL VERDE UNIFIED SCHOOL DISTRICT BY DEED RECORDED AUGUST 28, 1989 AS INSTRUMENT NO. 89-292505, OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM ALL OIL, WATER, GAS, HYDROCARBONS, PRECIOUS METALS AND MINERALS OF ANY KIND WHETHER DESCRIBED OR NOT BELOW A DEPTH OF 500 FEET WITHOUT ANY RIGHT OF SURFACE ENTRY AS RESERVED IN A DEED RECORDED JUNE 13, 1991 AS INSTRUMENT NO. 91-199908 OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION SAID LAND CONVEYED TO VAL VERDE UNIFIED SCHOOL DISTRICT BY DEED RECORDED OCTOBER 10, 2002 AS INSTRUMENT NO. 02-566961 OFFICIAL RECORDS

ALSO EXCEPTING THEREFROM, LOT 1, LETTERED LOTS A THROUGH C OF TRACT MAP NO. 29857-1, AS SHOWN ON FILE IN BOOK 422 PAGES 23 AND 24 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

APN: 312-020-025

GENERAL PLAN/ZONING/LANDUSE

EXISTING GENERAL PLAN DESIGNATION:

PROPOSED GENERAL PLAN DESIGNATION:

EXISTING ZONING: R5 - SUBURBAN RESIDENTIAL

PROPOSED ZONING: R10

EXISTING LANDUSE: Vacant

PROPOSED LANDUSE: DETACHED SFR

PROJECT NOTES

- TOTAL GROSS PROJECT SIZE: 471,228 SF (10.82 Ac.)
- NET PROJECT AREA = 7.80 ACRES (DEDUCT 3.02 ACRES EASEMENT/TRAIL AREA)
- TOPOGRAPHY SOURCE: Aerial Topographic Mapping
- NUMBER OF RESIDENTIAL LOTS: 82
- MINIMUM LOT AREA: 2,250 S.F.
- MINIMUM LOT DEPTH: 75'
- MINIMUM LOT WIDTH: 30'
- LOT SIZE: AS SHOWN ON MAP
- NET DENSITY: 10.5 DU/ACRE
- GUEST PARKING 0.25 SPACES PER UNIT REQUIRED = 21
- GUEST PARKING PROVIDED = 28

HYDROLOGY DATA

100 YEAR - 1 YEAR RAINFALL INTENSITY = 1.20 INCH

10 YEAR - 1 HOUR RAINFALL INTENSITY = 0.82 INCH

SLOPE USED FOR RAINFALL INTENSITY CURVE = 0.500

AMC I USED FOR 2-YEAR STORM RUNOFF CALCULATIONS
 AMC II USED FOR 10-YEAR STORM RUNOFF CALCULATIONS
 AMC III USED FOR 100-YEAR STORM RUNOFF CALCULATIONS

ASSUMED HYDROLOGIC LAND USE: UNDEVELOPED

SOIL TYPE B

HYDROLOGY LEGEND

Q100 = 100-YEAR FLOW RATE

Q10 = 10-YEAR FLOW RATE

Q2 = 2-YEAR FLOW RATE

Tc = TIME OF CONCENTRATION - MINUTES

L = FLOW PATH LENGTH IN FEET

NODE NUMBER

ELEVATION

--- DRAINAGE AREA BOUNDARY

--- DRAINAGE FLOW PATH

DEVELOPER

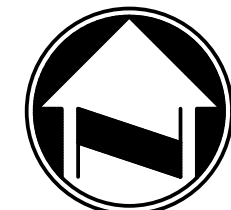
Passco Pacifica LLC
 333 City Boulevard West, 17th Floor
 Orange, CA 92866
 ATT: Oscar Graham
 714-609-7257

OWNER

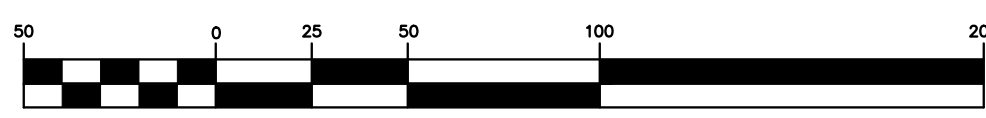
Maple Lane Group, LLC
 A California Limited Liability Company

UTILITY PURVEYORS

- WATER: EASTERN MUNICIPAL WATER DISTRICT
- SEWER: EASTERN MUNICIPAL WATER DISTRICT
- GAS: SOUTHERN CALIFORNIA GAS COMPANY
- ELECTRICITY: SOUTHERN CALIFORNIA EDISON
- TELEPHONE: AT&T
- SCHOOL: MORENO VALLEY UNIFIED SCHOOL DISTRICT
- CATV: SPECTRUM



GRAPHIC SCALE



(IN FEET)
 1 inch = 50 ft.



ROBERT BEERS
 8175 Limonite Avenue, Suite E
 Jurupa Valley, CA 92509
 Ph. (951) 317-2041 Fax (909) 360-2070

Date _____ Robert M. Beers

R.C.E. 39405
 Expires 12-31-21

PREPARED FOR:

Passco Pacifica LLC
 333 City Boulevard West
 17th Floor
 Orange, CA 92866
 PHONE: (714) 609-7257

TTM 37909
Existing Condition
 City of Moreno Valley
 CALIFORNIA

DATE April 4, 2020

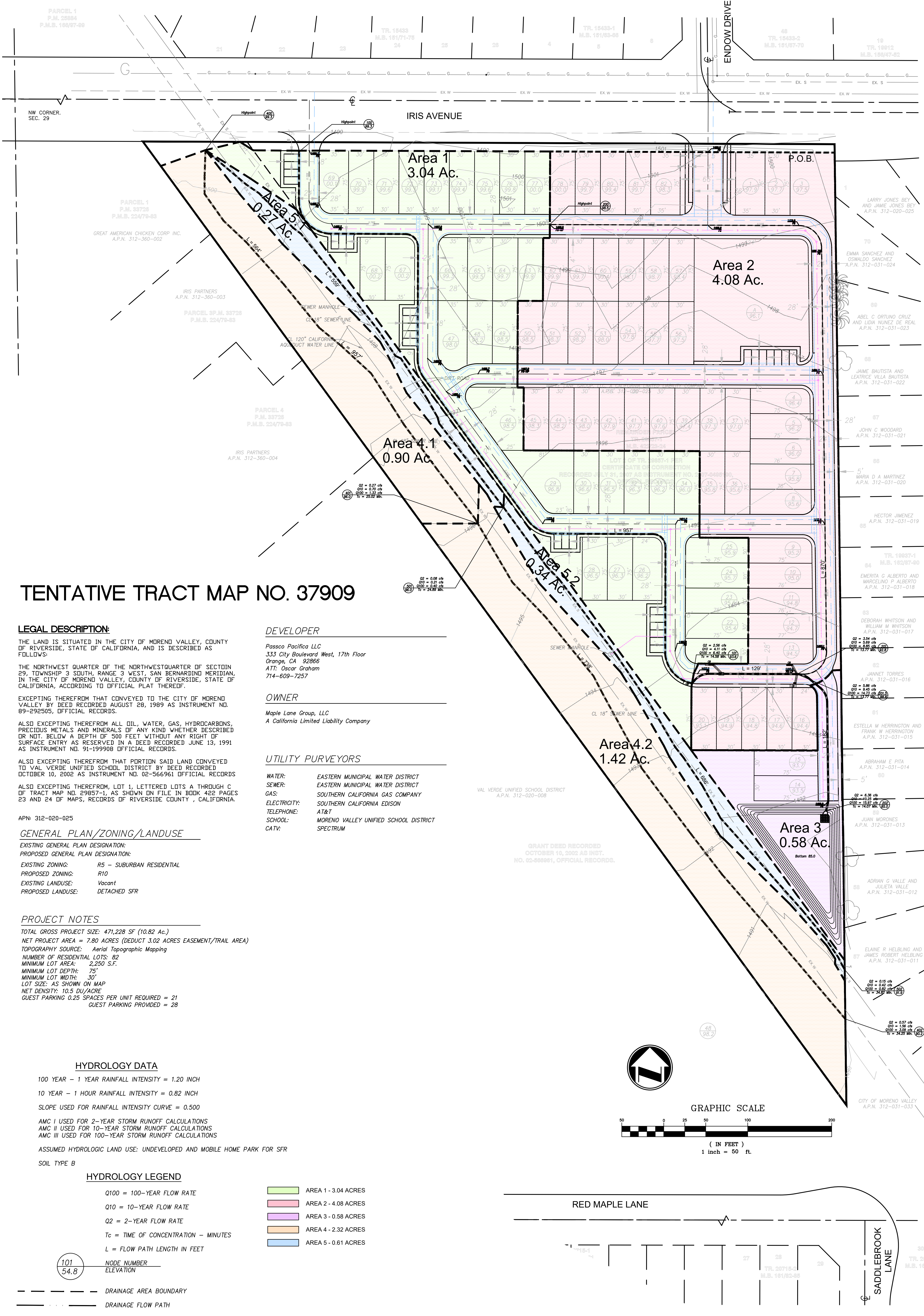
JOB NO. _____

DRAWN BY R.A.H.

CHECKED BY R.M.B.

SHEET 1 OF 1

Tentative Tract Map No. 37909



TENTATIVE TRACT MAP NO. 37909

LEGAL DESCRIPTION:

THE LAND IS SITUATED IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE NORTHWEST QUARTER OF THE NORTHWESTQUARTER OF SECTION 29, TOWNSHIP 3 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT CONVEYED TO THE CITY OF MORENO VALLEY BY DEED RECORDED AUGUST 28, 1989 AS INSTRUMENT NO. 89-292505, OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM ALL OIL, WATER, GAS, HYDROCARBONS, PRECIOUS METALS AND MINERALS OF ANY KIND WHETHER DESCRIBED OR NOT BELOW A DEPTH OF 500 FEET WITHOUT ANY RIGHT OF SURFACE ENTRY AS RESERVED IN A DEED RECORDED JUNE 13, 1991 AS INSTRUMENT NO. 91-199908 OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION SAID LAND CONVEYED TO VAL VERDE UNIFIED SCHOOL DISTRICT BY DEED RECORDED OCTOBER 10, 2002 AS INSTRUMENT NO. 02-566961 OFFICIAL RECORDS

ALSO EXCEPTING THEREFROM, LOT 1, LETTERED LOTS A THROUGH C OF TRACT MAP NO. 29857-1, AS SHOWN ON FILE IN BOOK 422 PAGES 23 AND 24 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

APN: 312-020-025

GENERAL PLAN/ZONING/LANDUSE

EXISTING GENERAL PLAN DESIGNATION:

PROPOSED GENERAL PLAN DESIGNATION:

EXISTING ZONING: R5 - SUBURBAN RESIDENTIAL

PROPOSED ZONING: R10

EXISTING LANDUSE: Vacant

PROPOSED LANDUSE: DETACHED SFR

PROJECT NOTES

- TOTAL GROSS PROJECT SIZE: 471,228 SF (10.82 Ac.)
- NET PROJECT AREA = 7.80 ACRES (DEDUCT 3.02 ACRES EASEMENT/TRAIL AREA)
- TOPOGRAPHY SOURCE: Aerial Topographic Mapping
- NUMBER OF RESIDENTIAL LOTS: 82
- MINIMUM LOT AREA: 2,250 S.F.
- MINIMUM LOT DEPTH: 75'
- MINIMUM LOT WIDTH: 30'
- LOT SIZE: AS SHOWN ON MAP
- NET DENSITY: 10.5 DU/ACRE
- GUEST PARKING 0.25 SPACES PER UNIT REQUIRED = 21
- GUEST PARKING PROVIDED = 28

HYDROLOGY DATA

- 100 YEAR - 1 YEAR RAINFALL INTENSITY = 1.20 INCH
- 10 YEAR - 1 HOUR RAINFALL INTENSITY = 0.82 INCH
- SLOPE USED FOR RAINFALL INTENSITY CURVE = 0.500

AMC I USED FOR 2-YEAR STORM RUNOFF CALCULATIONS
 AMC II USED FOR 10-YEAR STORM RUNOFF CALCULATIONS
 AMC III USED FOR 100-YEAR STORM RUNOFF CALCULATIONS

ASSUMED HYDROLOGIC LAND USE: UNDEVELOPED AND MOBILE HOME PARK FOR SFR

SOIL TYPE B

HYDROLOGY LEGEND

- Q100 = 100-YEAR FLOW RATE
- Q10 = 10-YEAR FLOW RATE
- Q2 = 2-YEAR FLOW RATE
- Tc = TIME OF CONCENTRATION - MINUTES
- L = FLOW PATH LENGTH IN FEET

101
54.8

NODE NUMBER
ELEVATION

--- DRAINAGE AREA BOUNDARY

--- DRAINAGE FLOW PATH

DEVELOPER

Passco Pacifica LLC
 333 City Boulevard West, 17th Floor
 Orange, CA 92866
 ATT: Oscar Graham
 714-609-7257

OWNER

Maple Lane Group, LLC
 A California Limited Liability Company

UTILITY PURVEYORS

- WATER: EASTERN MUNICIPAL WATER DISTRICT
- SEWER: EASTERN MUNICIPAL WATER DISTRICT
- GAS: SOUTHERN CALIFORNIA GAS COMPANY
- ELECTRICITY: SOUTHERN CALIFORNIA EDISON
- TELEPHONE: AT&T
- SCHOOL: MORENO VALLEY UNIFIED SCHOOL DISTRICT
- CATV: SPECTRUM



ROBERT BEERS
 8175 Limonite Avenue, Suite E
 Jurupa Valley, CA 92509
 Ph. (951) 317-2041 Fax (909) 360-2070

Date _____ Robert M. Beers R.C.E. 39405 Expires 12-31-21

PREPARED FOR:
Passco Pacifica LLC
 333 City Boulevard West
 17th Floor
 Orange, CA 92866
 PHONE: (714) 609-7257

TTM 37909
 Developed Condition
 City of Moreno Valley
 CALIFORNIA

DATE April 4, 2020
 JOB NO. _____
 DRAWN BY R.A.H.
 CHECKED BY R.M.B.
 SHEET 1 OF 1

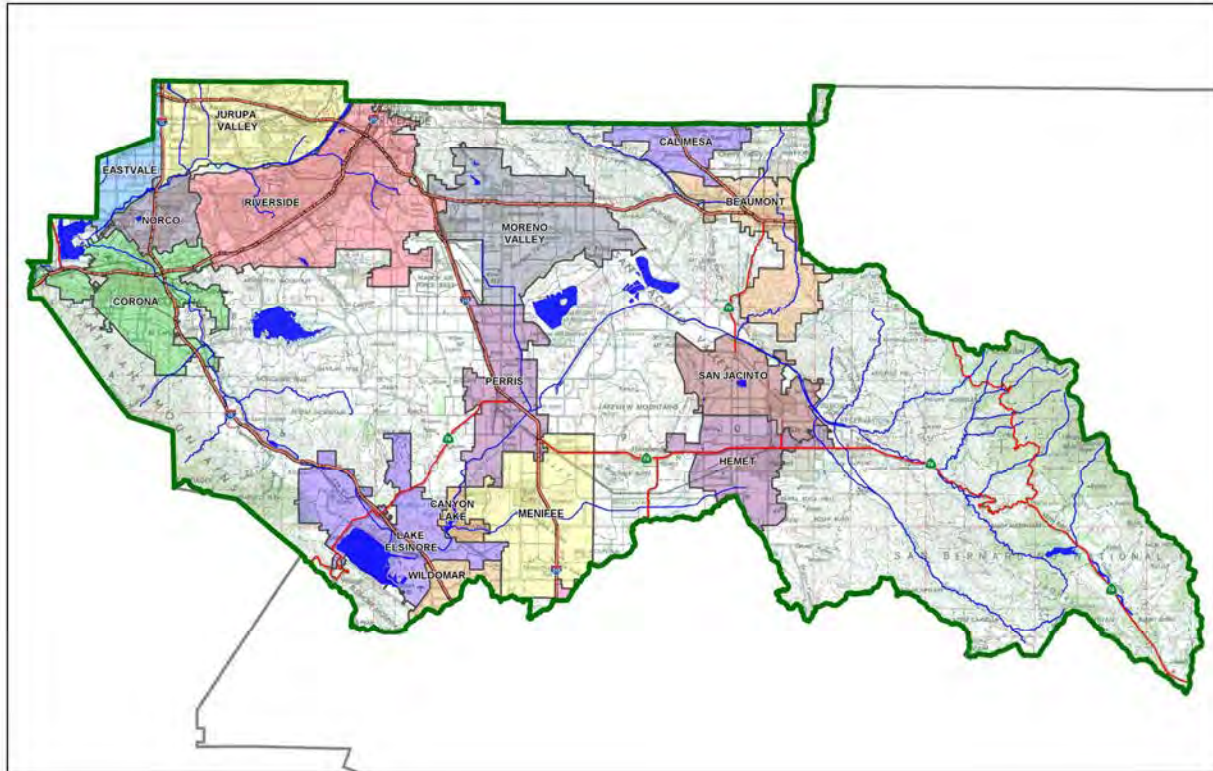
Project Specific Water Quality Management Plan

A Template for Projects located within the **Santa Ana Watershed** Region of Riverside County

Project Title: Iris Park TTM 37909

Development No: Iris Park TTM 37909

Design Review/Case No:



- Preliminary
 Final

Original Date Prepared: April 2020

Revision Date(s):

*Prepared for Compliance with
 Regional Board Order No. **R8-2010-0033***

Template revised June 30, 2016

Contact Information:

Prepared for:

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 333 City Boulevard West 17th Floor
 Orange, CA 92866
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Prepared by:

adkan
ENGINEERS

6879 Airport Drive
 Riverside, CA 92504
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OWNER’S CERTIFICATION

This Project-Specific Water Quality Management Plan (WQMP) has been prepared for Passco Pacifica, LLC by Adkan Engineers for Iris Park Tract 37909 project.

This WQMP is intended to comply with the requirements of City of Moreno Valley which includes the requirement for the preparation and implementation of a Project-Specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation and funding of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. In addition, the property owner accepts responsibility for interim operation and maintenance of Stormwater BMPs until such time as this responsibility is formally transferred to a subsequent owner. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity. The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under City of Moreno Valley Water Quality Ordinance (Municipal Code Section 9.10.080).

"I, the undersigned, certify under penalty of law that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

Owner’s Signature

Date

Owner’s Printed Name

Owner’s Title/Position

PREPARER’S CERTIFICATION

“The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan meet the requirements of Regional Water Quality Control Board Order No. **R8-2010-0033** and any subsequent amendments thereto.”

Preparer’s Signature

Date

Michael Brendecke
Preparer’s Printed Name

Project Manager
Preparer’s Title/Position

Preparer’s Licensure:

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Section A: Project and Site Information

PROJECT INFORMATION	
Type of Project:	Residential
Planning Area:	Residential
Community Name:	Moreno Valley
Development Name:	Iris Park Tract 37909
PROJECT LOCATION	
Latitude & Longitude (DMS):	33.887903, -117.222970
Project Watershed and Sub-Watershed:	Santa Ana River
Gross Acres:	10.82
APN(s):	312-020-025
Map Book and Page No.:	Parcel Map Book 224 Page 79-83
PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s)	R5 Suburban Residential
Proposed or Potential SIC Code(s)	1522
Area of Impervious Project Footprint (SF)	332,910 SF
Total Area of <u>proposed</u> Impervious Surfaces within the Project Footprint (SF)/or Replacement	332,910 SF
Does the project consist of offsite road improvements?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Does the project propose to construct unpaved roads?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Is the project part of a larger common plan of development (phased project)?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
EXISTING SITE CHARACTERISTICS	
Total area of <u>existing</u> Impervious Surfaces within the Project limits Footprint (SF)	0 sf
Is the project located within any MSHCP Criteria Cell?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
If so, identify the Cell number:	N/A
Are there any natural hydrologic features on the project site?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Is a Geotechnical Report attached?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
If no Geotech. Report, list the NRCS soils type(s) present on the site (A, B, C and/or D)	B
What is the Water Quality Design Storm Depth for the project?	0.65

The planned development will consist of 82 single-family residences, street improvements, onsite parking, community park and a stormwater treatment area (Bio-retention Basin) in the southeast corner of the site. All onsite runoff will flow to the south as per the existing drainage path.

A.1 Maps and Site Plans

When completing your Project-Specific WQMP, include a map of the local vicinity and existing site. In addition, include all grading, drainage, landscape/plant palette and other pertinent construction plans in Appendix 2. At a **minimum**, your WQMP Site Plan should include the following:

- Drainage Management Areas
- Proposed Structural BMPs
- Drainage Path
- Drainage Infrastructure, Inlets, Overflows
- Source Control BMPs
- Buildings, Roof Lines, Downspouts
- Impervious Surfaces
- Standard Labeling
- BMP Locations (Lat/Long)

Use your discretion on whether or not you may need to create multiple sheets or can appropriately accommodate these features on one or two sheets. Keep in mind that the Co-Permittee plan reviewer must be able to easily analyze your project utilizing this template and its associated site plans and maps.

A.1 Identify Receiving Waters

Using Table A.1 below, list in order of upstream to downstream, the receiving waters that the project site is tributary to. Continue to fill each row with the Receiving Water's 303(d) listed impairments (if any), designated beneficial uses, and proximity, if any, to a RARE beneficial use. Include a map of the receiving waters in Appendix 1.

Table A.1 Identification of Receiving Waters

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Perris Valley Channel	N/A	N/A	Not a RARE water body
Canyon Lake (Railroad Canyon Reservoir)	Pathogens, Nutrients	MUN, AGR, GWR, REC1, REC2, WARM, WILD	Not a RARE water body
Lake Elsinore	Nutrients, Organic Enrichment/Low Dissolved Oxygen	REC1, REC2, WARM, WILD	Not a RARE water body

A.2 Additional Permits/Approvals required for the Project:

Table A.2 Other Applicable Permits

Agency	Permit Required	
State Department of Fish and Game, 1602 Streambed Alteration Agreement	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Cert.	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
US Army Corps of Engineers, CWA Section 404 Permit	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
US Fish and Wildlife, Endangered Species Act Section 7 Biological Opinion	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Statewide Construction General Permit Coverage	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Statewide Industrial General Permit Coverage	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Western Riverside MSHCP Consistency Approval (e.g., JPR, DBESP)	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Other (please list in the space below as required) City of Moreno Valley Grading permits, encroachment permits	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N

If yes is answered to any of the questions above, the Co-Permittee may require proof of approval/coverage from those agencies as applicable including documentation of any associated requirements that may affect this Project-Specific WQMP.

Section B: Optimize Site Utilization (LID Principles)

Review of the information collected in Section 'A' will aid in identifying the principal constraints on site design and selection of LID BMPs as well as opportunities to reduce imperviousness and incorporate LID Principles into the site and landscape design. For example, **constraints** might include impermeable soils, high groundwater, groundwater pollution or contaminated soils, steep slopes, geotechnical instability, high-intensity land use, heavy pedestrian or vehicular traffic, utility locations or safety concerns. **Opportunities** might include existing natural areas, low areas, oddly configured or otherwise unbuildable parcels, easements and landscape amenities including open space and buffers (which can double as locations for bioretention BMPs), and differences in elevation (which can provide hydraulic head). Prepare a brief narrative for each of the site optimization strategies described below. This narrative will help you as you proceed with your LID design and explain your design decisions to others.

The 2010 Santa Ana MS4 Permit further requires that LID Retention BMPs (Infiltration Only or Harvest and Use) be used unless it can be shown that those BMPs are infeasible. Therefore, it is important that your narrative identify and justify if there are any constraints that would prevent the use of those categories of LID BMPs. Similarly, you should also note opportunities that exist which will be utilized during project design. Upon completion of identifying Constraints and Opportunities, include these on your WQMP Site plan in Appendix 1.

Consideration of "highest and best use" of the discharge should also be considered. For example, Lake Elsinore is evaporating faster than runoff from natural precipitation can recharge it. Requiring infiltration of 85% of runoff events for projects tributary to Lake Elsinore would only exacerbate current water quality problems associated with Pollutant concentration due to lake water evaporation. In cases where rainfall events have low potential to recharge Lake Elsinore (i.e. no hydraulic connection between groundwater to Lake Elsinore, or other factors), requiring infiltration of Urban Runoff from projects is counterproductive to the overall watershed goals. Project proponents, in these cases, would be allowed to discharge Urban Runoff, provided they used equally effective filtration-based BMPs.

Site Optimization

The following questions are based upon Section 3.2 of the WQMP Guidance Document. Review of the WQMP Guidance Document will help you determine how best to optimize your site and subsequently identify opportunities and/or constraints, and document compliance.

Did you identify and preserve existing drainage patterns? If so, how? If not, why?

Yes, existing drainage patterns on site drain all water from the North to the Southeast corner of the site. The proposed design uses catch basins at the southeast area of the site that are ultimately collected at the bioretention basin at the southeast corner of the property and then will connect to a storm drain line at the intersection of Saddlebrook Lane and Red Maple Lane.

Did you identify and protect existing vegetation? If so, how? If not, why?

No, existing natural vegetation will not be protected. All vegetation will be removed.

Did you identify and preserve natural infiltration capacity? If so, how? If not, why?

No, natural infiltration will not be used due to low infiltration rates

Did you identify and minimize impervious area? If so, how? If not, why?

No site design will be typical for this type of development, but will have open spaces of landscape and a community park

Did you identify and disperse runoff to adjacent pervious areas? If so, how? If not, why?

Yes, roof runoff from proposed buildings will be directed to yard swales on site for the majority of the site. However, runoff from impervious areas will drain to a proposed storm drain on site, and then into the bioretention basin on site for water quality purposes.

Section C: Delineate Drainage Management Areas (DMAs)

Utilizing the procedure in Section 3.3 of the WQMP Guidance Document which discusses the methods of delineating and mapping your project site into individual DMAs, complete Table C.1 below to appropriately categorize the types of classification (e.g., Type A, Type B, etc.) per DMA for your project site. Upon completion of this table, this information will then be used to populate and tabulate the corresponding tables for their respective DMA classifications.

Table C.1 DMA Classifications

DMA Name or ID	Surface Type(s) ¹²	Area (Sq. Ft.)	DMA Type
D.1.1	Roofs/Concrete	127,146.00	D
D.1.2	Streets	84,067.00	D
D.1.3	Pad Landscaping	68,466.00	D
D.1.4	Landscaping	53,231.00	D

¹Reference Table 2-1 in the WQMP Guidance Document to populate this column

²If multi-surface provide back-up

Table C.2 Type 'A', Self-Treating Areas

DMA Name or ID	Area (Sq. Ft.)	Stabilization Type	Irrigation Type (if any)

Table C.3 Type 'B', Self-Retaining Areas

Self-Retaining Area				Type 'C' DMAs that are draining to the Self-Retaining Area		
DMA Name/ ID	Post-project surface type	Area (square feet) [A]	Storm Depth (inches) [B]	DMA Name / ID	[C] from Table C.4 = [C]	Required Retention Depth (inches) [D]

$$[D] = [B] + \frac{[B] \cdot [C]}{[A]}$$

Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas

DMA					Receiving Self-Retaining DMA		
DMA Name/ ID	Area (square feet)	Post-project surface type	Impervious fraction	Product	DMA name /ID	Area (square feet)	Ratio
	[A]		[B]	[C] = [A] x [B]		[D]	[C]/[D]

Table C.5 Type 'D', Areas Draining to BMPs

DMA Name or ID	BMP Name or ID
D.1.1	Bio-Retention Basin
D.1.2	Bio-Retention Basin
D.1.3	Bio-Retention Basin
D.1.4	Bio-Retention Basin

Note: More than one drainage management area can drain to a single LID BMP, however, one drainage management area may not drain to more than one BMP.

Section D: Implement LID BMPs

D.1 Infiltration Applicability

Is there an approved downstream 'Highest and Best Use' for stormwater runoff (see discussion in Chapter 2.4.4 of the WQMP Guidance Document for further details)? Y N

If yes has been checked, Infiltration BMPs shall not be used for the site; proceed to section D.3

If no, continue working through this section to implement your LID BMPs. It is recommended that you contact your Co-Permittee to verify whether or not your project discharges to an approved downstream 'Highest and Best Use' feature.

Geotechnical Report

A Geotechnical Report or Phase I Environmental Site Assessment may be required by the Copermitee to confirm present and past site characteristics that may affect the use of Infiltration BMPs. In addition, the Co-Permittee, at their discretion, may not require a geotechnical report for small projects as described in Chapter 2 of the WQMP Guidance Document. If a geotechnical report has been prepared, include it in Appendix 3. In addition, if a Phase I Environmental Site Assessment has been prepared, include it in Appendix 4.

Is this project classified as a small project consistent with the requirements of Chapter 2 of the WQMP Guidance Document? Y N

Infiltration Feasibility

Table D.1 below is meant to provide a simple means of assessing which DMAs on your site support Infiltration BMPs and is discussed in the WQMP Guidance Document in Chapter 2.4.5. Check the appropriate box for each question and then list affected DMAs as applicable. If additional space is needed, add a row below the corresponding answer.

Table D.1 Infiltration Feasibility

Does the project site...	YES	NO
...have any DMAs with a seasonal high groundwater mark shallower than 10 feet? If Yes, list affected DMAs:		X
...have any DMAs located within 100 feet of a water supply well? If Yes, list affected DMAs:		X
...have any areas identified by the geotechnical report as posing a public safety risk where infiltration of stormwater could have a negative impact? If Yes, list affected DMAs:		X
...have measured in-situ infiltration rates of less than 1.6 inches / hour? If Yes, list affected DMAs:	X	
...have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface? If Yes, list affected DMAs:		X
...geotechnical report identify other site-specific factors that would preclude effective and safe infiltration? Describe here:		X

If you answered "Yes" to any of the questions above for any DMA, Infiltration BMPs should not be used for those DMAs and you should proceed to the assessment for Harvest and Use below.

D.2 Harvest and Use Assessment

Please check what applies:

- Reclaimed water will be used for the non-potable water demands for the project.
- Downstream water rights may be impacted by Harvest and Use as approved by the Regional Board (verify with the Copermittee).
- The Design Capture Volume will be addressed using Infiltration Only BMPs. In such a case, Harvest and Use BMPs are still encouraged, but it would not be required if the Design Capture Volume will be infiltrated or evapotranspired.
- None of the above

If any of the above boxes have been checked, Harvest and Use BMPs need not be assessed for the site. If none of the above criteria applies, follow the steps below to assess the feasibility of irrigation use, toilet use and other non-potable uses (e.g., industrial use).

Irrigation Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for Irrigation Use BMPs on your site:

Step 1: Identify the total area of irrigated landscape on the site, and the type of landscaping used.

Total Area of Irrigated Landscape: N/A

Type of Landscaping (Conservation Design or Active Turf): N/A

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for irrigation use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: N/A

Step 3: Cross reference the Design Storm depth for the project site (see Exhibit A of the WQMP Guidance Document) with the left column of Table 2-3 in Chapter 2 to determine the minimum area of Effective Irrigated Area per Tributary Impervious Area (EIATIA).

Enter your EIATIA factor: N/A

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum irrigated area that would be required.

Minimum required irrigated area: N/A

Step 5: Determine if harvesting stormwater runoff for irrigation use is feasible for the project by comparing the total area of irrigated landscape (Step 1) to the minimum required irrigated area (Step 4).

Minimum required irrigated area (Step 4)	Available Irrigated Landscape (Step 1)
N/A	N/A

Toilet Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for toilet flushing uses on your site:

Step 1: Identify the projected total number of daily toilet users during the wet season, and account for any periodic shut downs or other lapses in occupancy:

Projected Number of Daily Toilet Users: N/A

Project Type: N/A

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for toilet use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: N/A

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-2 in Chapter 2 to determine the minimum number of toilet users per tributary impervious acre (TUTIA).

Enter your TUTIA factor: N/A

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of toilet users that would be required.

Minimum number of toilet users: N/A

Step 5: Determine if harvesting stormwater runoff for toilet flushing use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required Toilet Users (Step 4)	Projected number of toilet users (Step 1)
N/A	N/A

Other Non-Potable Use Feasibility

Are there other non-potable uses for stormwater runoff on the site (e.g. industrial use)? See Chapter 2 of the Guidance for further information. If yes, describe below. If no, write N/A.

N/A

Step 1: Identify the projected average daily non-potable demand, in gallons per day, during the wet season and accounting for any periodic shut downs or other lapses in occupancy or operation.

Average Daily Demand: N/A

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for the identified non-potable use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: N/A

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-4 in Chapter 2 to determine the minimum demand for non-potable uses per tributary impervious acre.

Enter the factor from Table 2-4: N/A

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of gallons per day of non-potable use that would be required.

Minimum required use: N/A

Step 5: Determine if harvesting stormwater runoff for other non-potable use is feasible for the project by comparing the projected average daily use (Step 1) to the minimum required non-potable use (Step 4).

<u>Minimum required non-potable use (Step 4)</u>	<u>Projected average daily use (Step 1)</u>
N/A	N/A

If Irrigation, Toilet and Other Use feasibility anticipated demands are less than the applicable minimum values, Harvest and Use BMPs are not required and you should proceed to utilize LID Bioretention and Biotreatment per Section 3.4.2 of the WQMP Guidance Document.

D.3 Bioretention and Biotreatment Assessment

Other LID Bioretention and Biotreatment BMPs as described in Chapter 2.4.7 of the WQMP Guidance Document are feasible on nearly all development sites with sufficient advance planning.

Select one of the following:

LID Bioretention/Biotreatment BMPs will be used for some or all DMAs of the project as noted below in Section D.4 (note the requirements of Section 3.4.2 in the WQMP Guidance Document).

A site-specific analysis demonstrating the technical infeasibility of all LID BMPs has been performed and is included in Appendix 5. If you plan to submit an analysis demonstrating the technical infeasibility of LID BMPs, request a pre-submittal meeting with the Copermittee to discuss this option. Proceed to Section E to document your alternative compliance measures.

D.4 Feasibility Assessment Summaries

From the Infiltration, Harvest and Use, Bioretention and Biotreatment Sections above, complete Table D.2 below to summarize which LID BMPs are technically feasible, and which are not, based upon the established hierarchy.

Table D.2 LID Prioritization Summary Matrix

DMA Name/ID	LID BMP Hierarchy				No LID (Alternative Compliance)
	1. Infiltration	2. Harvest and use	3. Bioretention	4. Biotreatment	
D.1.1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D.1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D.1.3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D.1.4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For those DMAs where LID BMPs are not feasible, provide a brief narrative below summarizing why they are not feasible, include your technical infeasibility criteria in Appendix 5, and proceed to Section E below to document Alternative Compliance measures for those DMAs. Recall that each proposed DMA must pass through the LID BMP hierarchy before alternative compliance measures may be considered.

The site does not have proper infiltration rates at the location where the infiltration basin is being proposed.

D.5 LID BMP Sizing

Each LID BMP must be designed to ensure that the Design Capture Volume will be addressed by the selected BMPs. First, calculate the Design Capture Volume for each LID BMP using the V_{BMP} worksheet in Appendix F of the LID BMP Design Handbook. Second, design the LID BMP to meet the required V_{BMP} using a method approved by the Copermittee. Utilize the worksheets found in the LID BMP Design Handbook or consult with your Copermittee to assist you in correctly sizing your LID BMPs. Complete Table D.3 below to document the Design Capture Volume and the Proposed Volume for each LID BMP. Provide the completed design procedure sheets for each LID BMP in Appendix 6. You may add additional rows to the table below as needed.

Table D.3 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	Enter BMP Name / Identifier Here		
	[A]		[B]	[C]	[A] x [C]			
D.1.1	127,146	Roofs	1.0	0.89	113,414.20	Design Storm Depth (in)	Design Capture Volume, V_{BMP} (cubic feet)	Proposed Volume on Plans (cubic feet)
D.1.2	84,067	Concrete/Asphalt	1.0	0.89	74,987.80			
D.1.3	68,466	Pad Landscaping	0.1	0.11	7,562.60			
D.1.4	53,231	Landscaping	0.1	0.11	5,879.80			
	332,910				201,844.40	0.65	10,933.20	10,933.20

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

Section E: Alternative Compliance (LID Waiver Program)

LID BMPs are expected to be feasible on virtually all projects. Where LID BMPs have been demonstrated to be infeasible as documented in Section D, other Treatment Control BMPs must be used (subject to LID waiver approval by the Copermittee). Check one of the following Boxes:

LID Principles and LID BMPs have been incorporated into the site design to fully address all Drainage Management Areas. No alternative compliance measures are required for this project and thus this Section is not required to be completed.

- Or -

The following Drainage Management Areas are unable to be addressed using LID BMPs. A site-specific analysis demonstrating technical infeasibility of LID BMPs has been approved by the Co-Permittee and included in Appendix 5. Additionally, no downstream regional and/or sub-regional LID BMPs exist or are available for use by the project. The following alternative compliance measures on the following pages are being implemented to ensure that any pollutant loads expected to be discharged by not incorporating LID BMPs, are fully mitigated.

E.1 Identify Pollutants of Concern

Utilizing Table A.1 from Section A above which noted your project's receiving waters and their associated EPA approved 303(d) listed impairments, cross reference this information with that of your selected Priority Development Project Category in Table E.1 below. If the identified General Pollutant Categories are the same as those listed for your receiving waters, then these will be your Pollutants of Concern and the appropriate box or boxes will be checked on the last row. The purpose of this is to document compliance and to help you appropriately plan for mitigating your Pollutants of Concern in lieu of implementing LID BMPs.

Table E.1 Potential Pollutants by Land Use Type

Priority Development Project Categories and/or Project Features (check those that apply)	General Pollutant Categories							
	Bacterial Indicators	Metals	Nutrients	Pesticides	Toxic Organic Compounds	Sediments	Trash & Debris	Oil & Grease
<input checked="" type="checkbox"/> Detached Residential Development	P	N	P	P	N	P	P	P
<input type="checkbox"/> Attached Residential Development	P	N	P	P	N	P	P	P ⁽²⁾
<input type="checkbox"/> Commercial/Industrial Development	P ⁽³⁾	P	P ⁽¹⁾	P ⁽¹⁾	P ⁽⁵⁾	P ⁽¹⁾	P	P
<input type="checkbox"/> Automotive Repair Shops	N	P	N	N	P ^(4, 5)	N	P	P
<input type="checkbox"/> Restaurants (>5,000 ft ²)	P	N	N	N	N	N	P	P
<input type="checkbox"/> Hillside Development (>5,000 ft ²)	P	N	P	P	N	P	P	P
<input type="checkbox"/> Parking Lots (>5,000 ft ²)	P ⁽⁶⁾	P	P ⁽¹⁾	P ⁽¹⁾	P ⁽⁴⁾	P ⁽¹⁾	P	P
<input type="checkbox"/> Retail Gasoline Outlets	N	P	N	N	P	N	P	P
Project Priority Pollutant(s) of Concern	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

P = Potential

N = Not Potential

⁽¹⁾ A potential Pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected

⁽²⁾ A potential Pollutant if the project includes uncovered parking areas; otherwise not expected

⁽³⁾ A potential Pollutant is land use involving animal waste

⁽⁴⁾ Specifically petroleum hydrocarbons

⁽⁵⁾ Specifically solvents

⁽⁶⁾ Bacterial indicators are routinely detected in pavement runoff

E.2 Stormwater Credits

Projects that cannot implement LID BMPs but nevertheless implement smart growth principles are potentially eligible for Stormwater Credits. Utilize Table 3-8 within the WQMP Guidance Document to identify your Project Category and its associated Water Quality Credit. If not applicable, write N/A.

Table E.2 Water Quality Credits

Qualifying Project Categories	Credit Percentage ²
<i>Total Credit Percentage¹</i>	

¹Cannot Exceed 50%

²Obtain corresponding data from Table 3-8 in the WQMP Guidance Document

E.3 Sizing Criteria

After you appropriately considered Stormwater Credits for your project, utilize Table E.3 below to appropriately size them to the DCV, or Design Flow Rate, as applicable. Please reference Chapter 3.5.2 of the WQMP Guidance Document for further information.

Table E.3 Treatment Control BMP Sizing

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I _f	DMA Runoff Factor	DMA Area x Runoff Factor	Enter BMP Name / Identifier Here				
	[A]		[B]	[C]	[A] x [C]					
						Design Storm Depth (in)	Minimum Design Capture Volume or Design Flow Rate (cubic feet or cfs)	Total Storm Water Credit % Reduction	Proposed Volume or Flow on Plans (cubic feet or cfs)	
	$A_T = \sum[A]$				$\Sigma = [D]$	[E]	$[F] = \frac{[D] \times [E]}{[G]}$	$[F] \times (1-[H])$	[I]	

[B], [C] is obtained as described in Section 2.3.1 from the WQMP Guidance Document

[E] is for Flow-Based Treatment Control BMPs [E] = .2, for Volume-Based Control Treatment BMPs, [E] obtained from Exhibit A in the WQMP Guidance Document

[G] is for Flow-Based Treatment Control BMPs [G] = 43,560, for Volume-Based Control Treatment BMPs, [G] = 12

[H] is from the Total Credit Percentage as Calculated from Table E.2 above

[I] as obtained from a design procedure sheet from the BMP manufacturer and should be included in Appendix 6

E.4 Treatment Control BMP Selection

Treatment Control BMPs typically provide proprietary treatment mechanisms to treat potential pollutants in runoff, but do not sustain significant biological processes. Treatment Control BMPs must have a removal efficiency of a medium or high effectiveness as quantified below:

- **High:** equal to or greater than 80% removal efficiency
- **Medium:** between 40% and 80% removal efficiency

Such removal efficiency documentation (e.g., studies, reports, etc.) as further discussed in Chapter 3.5.2 of the WQMP Guidance Document, must be included in Appendix 6. In addition, ensure that proposed Treatment Control BMPs are properly identified on the WQMP Site Plan in Appendix 1.

Table E.4 Treatment Control BMP Selection

Selected Treatment Control BMP Name or ID ¹	Priority Pollutant(s) of Concern to Mitigate ²	Removal Efficiency Percentage ³

¹ Treatment Control BMPs must not be constructed within Receiving Waters. In addition, a proposed Treatment Control BMP may be listed more than once if they possess more than one qualifying pollutant removal efficiency.

² Cross Reference Table E.1 above to populate this column.

³ As documented in a Co-Permittee Approved Study and provided in Appendix 6.

Section F: Hydromodification

F.1 Hydrologic Conditions of Concern (HCOC) Analysis

Once you have determined that the LID design is adequate to address water quality requirements, you will need to assess if the proposed LID Design may still create a HCOC. Review Chapters 2 and 3 (including Figure 3-7) of the WQMP Guidance Document to determine if your project must mitigate for Hydromodification impacts. If your project meets one of the following criteria which will be indicated by the check boxes below, you do not need to address Hydromodification at this time. However, if the project does not qualify for Exemptions 1, 2 or 3, then additional measures must be added to the design to comply with HCOC criteria. This is discussed in further detail below in Section F.2.

HCOC EXEMPTION 1: The Priority Development Project disturbs less than one acre. The Copermitttee has the discretion to require a Project-Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

Does the project qualify for this HCOC Exemption? Y N

If Yes, HCOC criteria do not apply.

HCOC EXEMPTION 2: The volume and time of concentration¹ of storm water runoff for the post-development condition is not significantly different from the pre-development condition for a 2-year return frequency storm (a difference of 5% or less is considered insignificant) using one of the following methods to calculate:

- Riverside County Hydrology Manual
- Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds (NRCS 1986), or derivatives thereof, such as the Santa Barbara Urban Hydrograph Method
- Other methods acceptable to the Co-Permittee

Does the project qualify for this HCOC Exemption? Y N

If Yes, report results in Table F.1 below and provide your substantiated hydrologic analysis in Appendix 7.

Table F.1 Hydrologic Conditions of Concern Summary

	2 year – 24 hour		
	Pre-condition	Post-condition	% Difference
Flow (cubic feet per second)	0.159	1.047	658%
Volume (Cubic Feet)	4,210.70	27,727	658%

¹ Time of concentration is defined as the time after the beginning of the rainfall when all portions of the drainage basin are contributing to flow at the outlet.

HCOC EXEMPTION 3: All downstream conveyance channels to an adequate sump (for example, Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River, or other lake, reservoir or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Susceptibility Maps.

Does the project qualify for this HCOC Exemption? Y N

If Yes, HCOC criteria do not apply and note below which adequate sump applies to this HCOC qualifier:

See receiving waters exhibit in Appendix 1 for downstream conveyance to Lake Elsinore.

See Appendix 7 for HCOC Exemption Map.

F.2 HCOC Mitigation

If none of the above HCOC Exemption Criteria are applicable, HCOC criteria is considered mitigated if they meet one of the following conditions:

- a. Additional LID BMPS are implemented onsite or offsite to mitigate potential erosion or habitat impacts as a result of HCOCs. This can be conducted by an evaluation of site-specific conditions utilizing accepted professional methodologies published by entities such as the California Stormwater Quality Association (CASQA), the Southern California Coastal Water Research Project (SCCRWP), or other Co-Permittee approved methodologies for site-specific HCOC analysis.
- b. The project is developed consistent with an approved Watershed Action Plan that addresses HCOC in Receiving Waters.
- c. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

Be sure to include all pertinent documentation used in your analysis of the items a, b or c in Appendix 7.

Section G: Source Control BMPs

Source control BMPs include permanent, structural features that may be required in your project plans — such as roofs over and berms around trash and recycling areas — and Operational BMPs, such as regular sweeping and “housekeeping”, that must be implemented by the site’s occupant or user. The MEP standard typically requires both types of BMPs. In general, Operational BMPs cannot be substituted for a feasible and effective permanent BMP. Using the Pollutant Sources/Source Control Checklist in Appendix 8, review the following procedure to specify Source Control BMPs for your site:

1. **Identify Pollutant Sources:** Review Column 1 in the Pollutant Sources/Source Control Checklist. Check off the potential sources of Pollutants that apply to your site.
2. **Note Locations on Project-Specific WQMP Exhibit:** Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist. Show the location of each Pollutant source and each permanent Source Control BMP in your Project-Specific WQMP Exhibit located in Appendix 1.
3. **Prepare a Table and Narrative:** Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist. In the left column of Table G.1 below, list each potential source of runoff Pollutants on your site (from those that you checked in the Pollutant Sources/Source Control Checklist). In the middle column, list the corresponding permanent, Structural Source Control BMPs (from Columns 2 and 3 of the Pollutant Sources/Source Control Checklist) used to prevent Pollutants from entering runoff. **Add additional narrative** in this column that explains any special features, materials or methods of construction that will be used to implement these permanent, Structural Source Control BMPs.
4. **Identify Operational Source Control BMPs:** To complete your table, refer once again to the Pollutant Sources/Source Control Checklist. List in the right column of your table the Operational BMPs that should be implemented as long as the anticipated activities continue at the site. Copermittee stormwater ordinances require that applicable Source Control BMPs be implemented; the same BMPs may also be required as a condition of a use permit or other revocable Discretionary Approval for use of the site.

Table G.1 Permanent and Operational Source Control Measures

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
On-site storm drain inlets	Mark all inlets with the words “Only Rain Down the Storm Drain” or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify.	Maintain and periodically repaint or replace inlet markings. Provide stormwater pollution prevention information to new site owners, lessees, or operators. See applicable operational BMPs in Fact Sheet SC-44, “Drainage System Maintenance,”
Landscape / Outdoor Pesticide Use	Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. Consider using pest-resistant plants, especially adjacent to hardscape. To ensure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	Maintain landscaping using minimum or no pesticides. See applicable operational BMPs in Appendix 10. Provide IPM information to new owners, lessees, and operators.
Fire Sprinkler Test Water	Provide a means to drain fire sprinkler test water to the sanitary sewer.	See the note in Fact Sheet SC-41, “Building and Grounds Maintenance,” provided in Appendix 10.
Roofing, gutters, and trim	Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.	
Plazas, sidewalks, and parking lots		Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.
Street Sweeping		See applicable operational BMPs in Appendix 10.

Section H: Construction Plan Checklist

Populate Table H.1 below to assist the plan checker in an expeditious review of your project. The first two columns will contain information that was prepared in previous steps, while the last column will be populated with the corresponding plan sheets. This table is to be completed with the submittal of your final Project-Specific WQMP.

Table H.1 Construction Plan Cross-reference

BMP No. or ID	BMP Identifier and Description	Corresponding Plan Sheet(s)	BMP Location (Lat/Long)
D.4	Bio-Retention Basin	Tentative Tract Map	33.886108, -117.222153

Note that the updated table — or Construction Plan WQMP Checklist — is **only a reference tool** to facilitate an easy comparison of the construction plans to your Project-Specific WQMP. Co-Permittee staff can advise you regarding the process required to propose changes to the approved Project-Specific WQMP.

Section I: Operation, Maintenance and Funding

The Copermittee will periodically verify that Stormwater BMPs on your site are maintained and continue to operate as designed. To make this possible, your Copermittee will require that you include in Appendix 9 of this Project-Specific WQMP:

1. A means to finance and implement facility maintenance in perpetuity, including replacement cost.
2. Acceptance of responsibility for maintenance from the time the BMPs are constructed until responsibility for operation and maintenance is legally transferred. A warranty covering a period following construction may also be required.
3. An outline of general maintenance requirements for the Stormwater BMPs you have selected.
4. Figures delineating and designating pervious and impervious areas, location, and type of Stormwater BMP, and tables of pervious and impervious areas served by each facility. Geo-locating the BMPs using a coordinate system of latitude and longitude is recommended to help facilitate a future statewide database system.
5. A separate list and location of self-retaining areas or areas addressed by LID Principles that do not require specialized O&M or inspections but will require typical landscape maintenance as noted in Chapter 5, pages 85-86, in the WQMP Guidance. Include a brief description of typical landscape maintenance for these areas.

Your local Co-Permittee will also require that you prepare and submit a detailed Stormwater BMP Operation and Maintenance Plan that sets forth a maintenance schedule for each of the Stormwater BMPs built on your site. An agreement assigning responsibility for maintenance and providing for inspections and certification may also be required.

Details of these requirements and instructions for preparing a Stormwater BMP Operation and Maintenance Plan are in Chapter 5 of the WQMP Guidance Document.

Maintenance Mechanism: HOA

Will the proposed BMPs be maintained by a Home Owners' Association (HOA) or Property Owners Association (POA)?

Y N

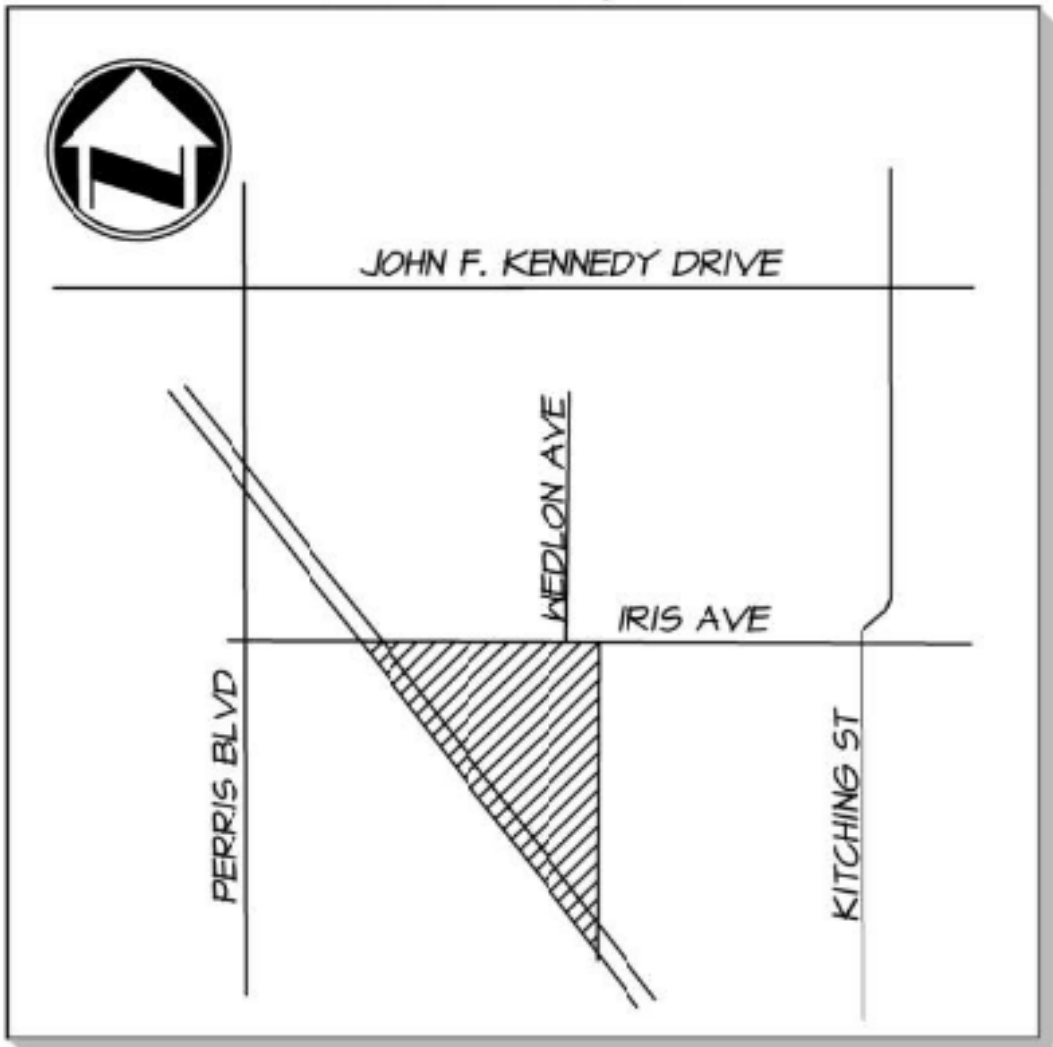
Include your Operation and Maintenance Plan and Maintenance Mechanism in Appendix 9. Additionally, include all pertinent forms of educational materials for those personnel that will be maintaining the proposed BMPs within this Project-Specific WQMP in Appendix 10.

Appendix 1: Maps and Site Plans

Location Map, WQMP Site Plan and Receiving Waters Map

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

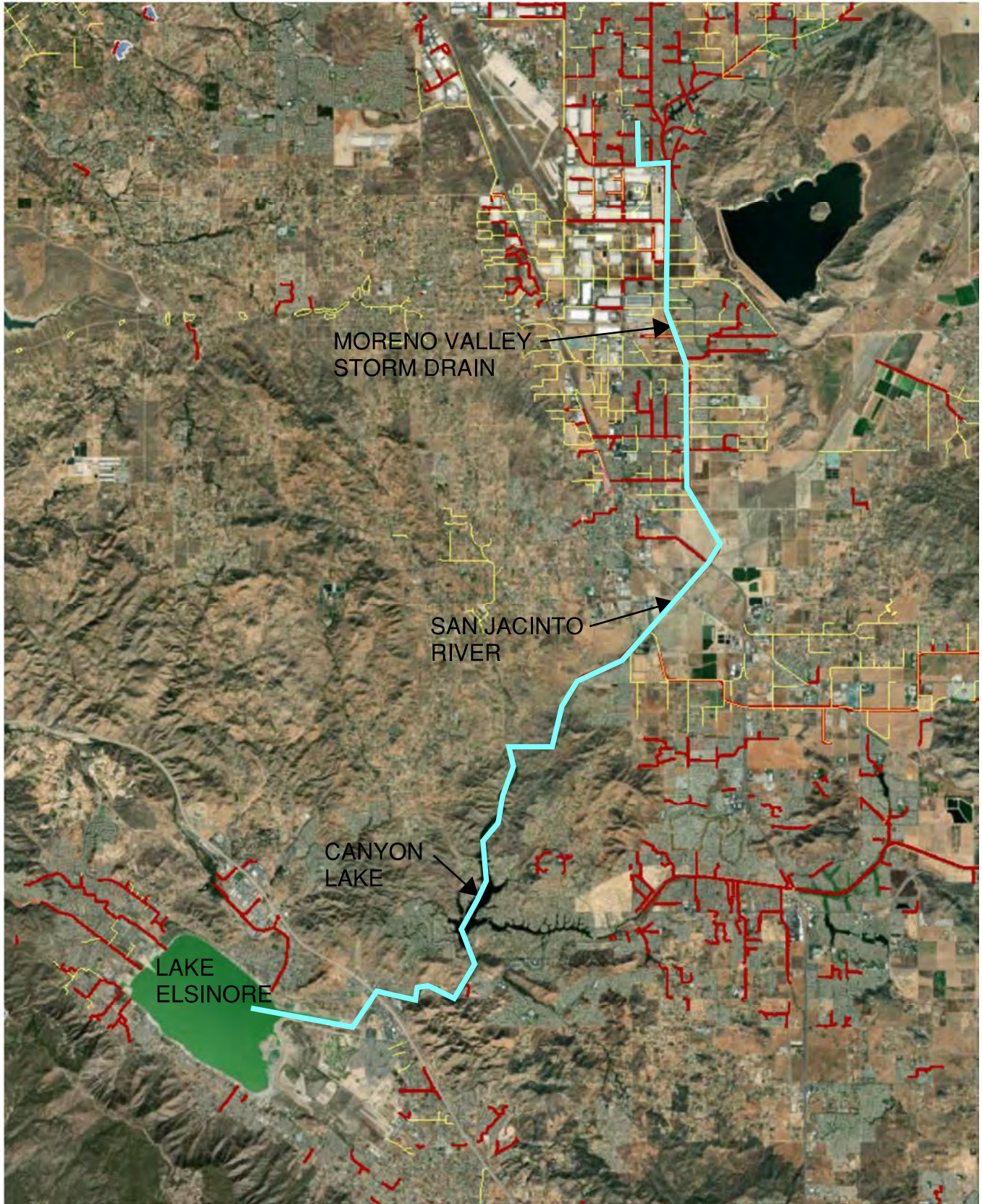
SECTION 29 T35, R3W



VICINITY MAP



Receiving Waters



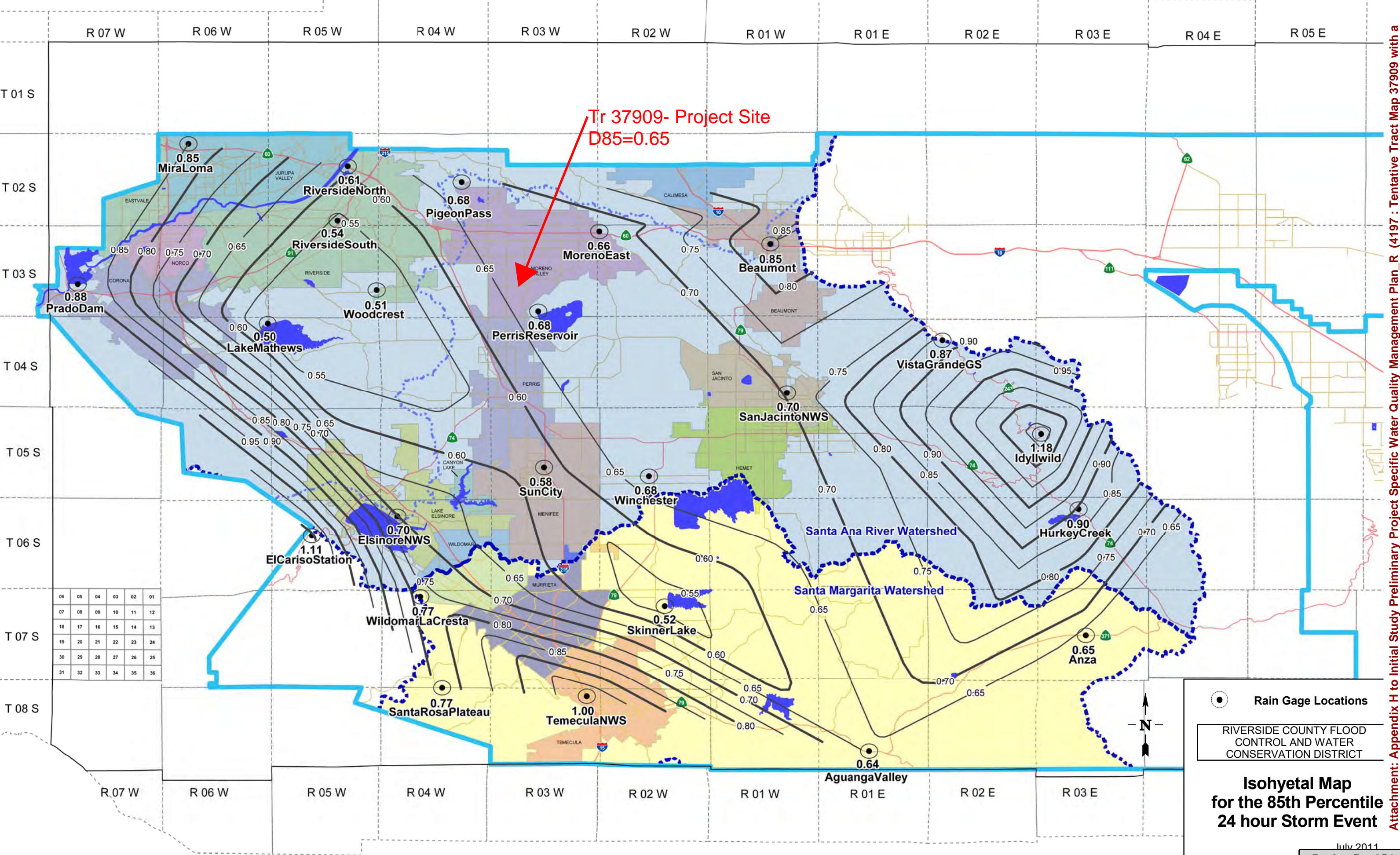
MORENO VALLEY
STORM DRAIN

SAN JACINTO
RIVER

CANYON
LAKE

LAKE
ELSINORE

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with



Tr 37909- Project Site
D85=0.65

06	05	04	03	02	01
07	08	09	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

● Rain Gage Locations

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

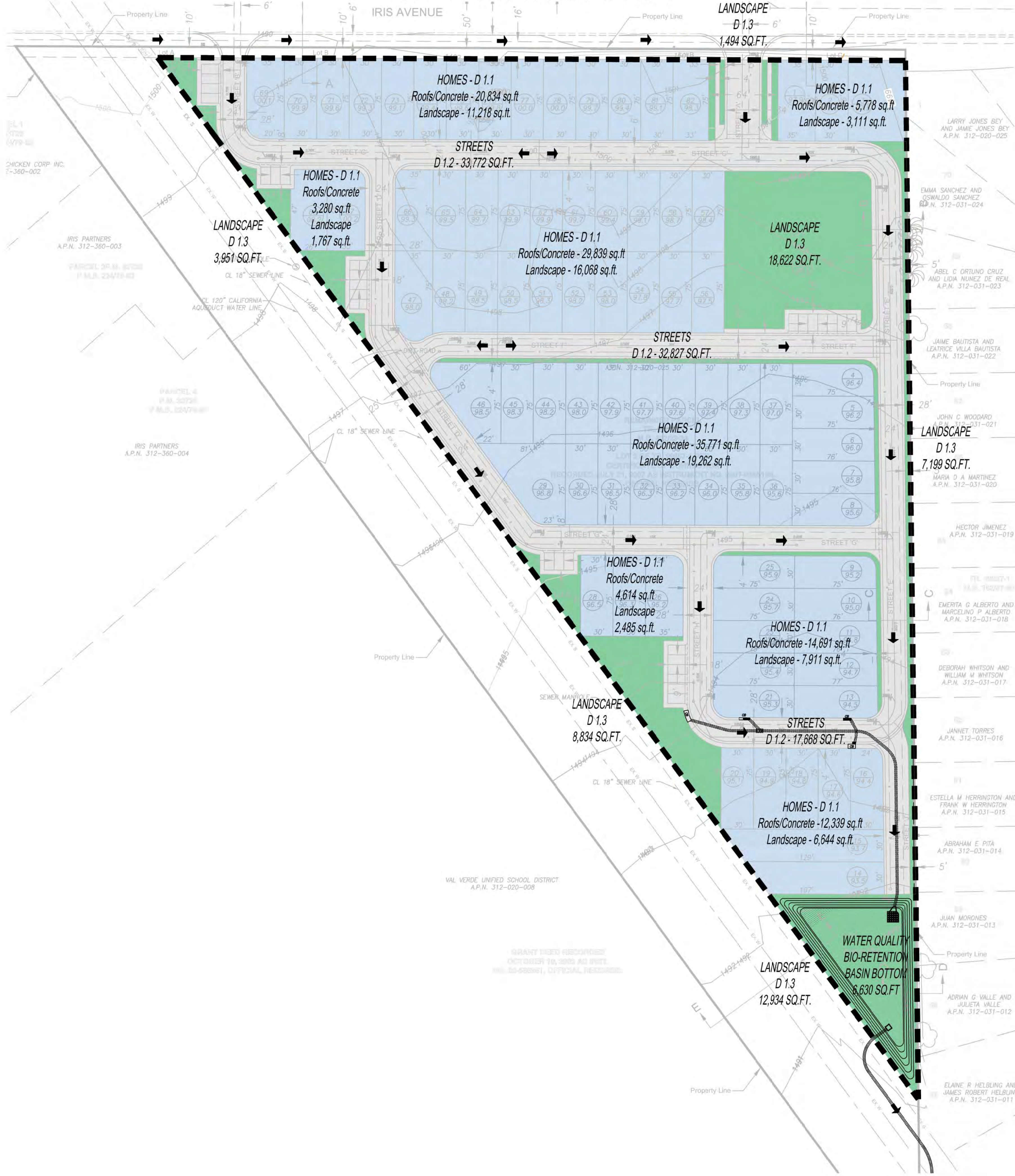
Isohyetal Map for the 85th Percentile 24 hour Storm Event

July 2011

Packet Pg. 954

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with a

BMP MAP IRIS PARK TRACT 31909



OWNER
 PASCO PACIFICA, LLC
 333 CITY BOULEVARD WEST, 11TH FLOOR
 ORANGE, CA
 (714) 604-1251

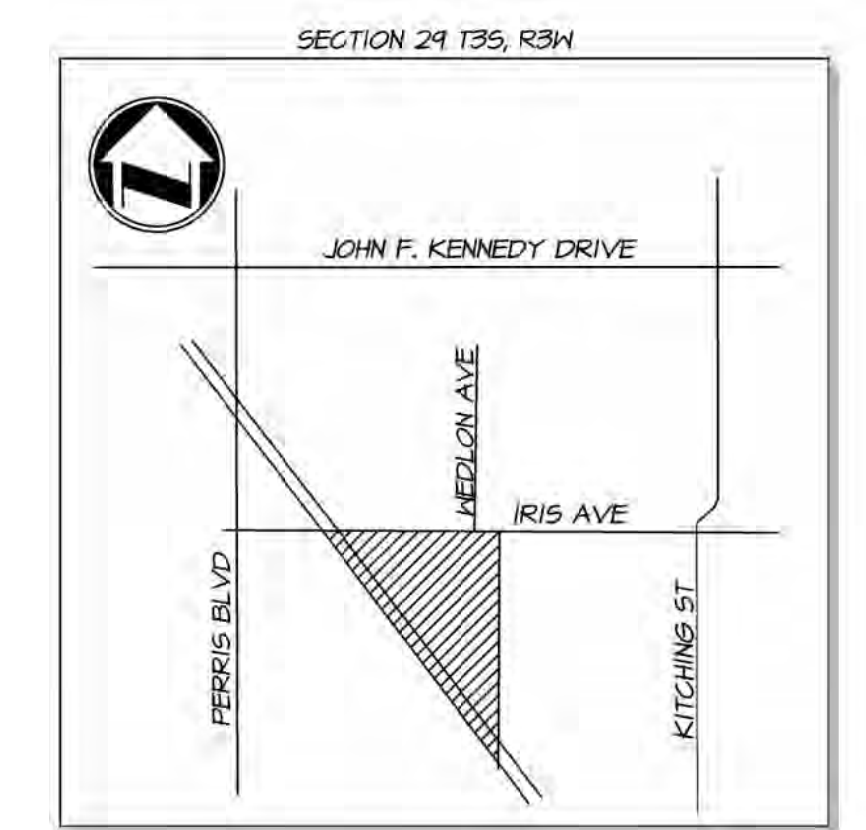
ENGINEER
adkan ENGINEERS
 6879 AIRPORT DRIVE
 RIVERSIDE, CA 92504
 TEL: 951-688-0241
 FAX: 951-688-0599

ASSESSORS PARCEL NUMBERS
 312-020-025

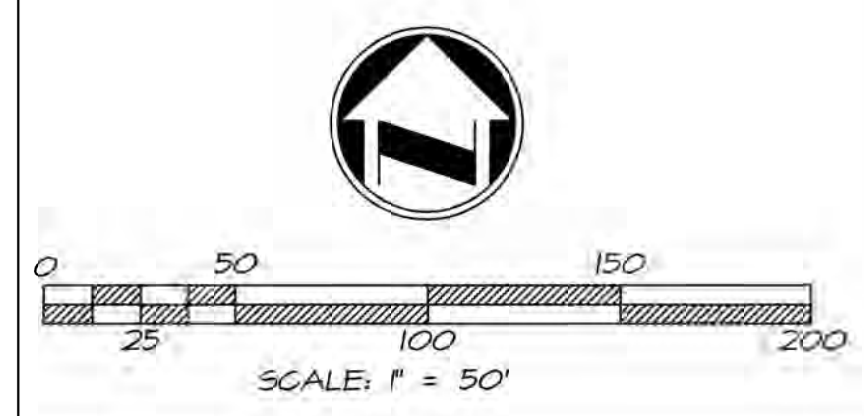
BMP DATA DMA I				
DMA	DMA CLASSIFICATION	NAME	SURFACE TYPE	AREA (SF)
1.1	D	ROOFS	ROOF	127,146
1.2	D	STREETS	ASPHALT/CONCRETE	84,067
1.3	D	PAD LANDSCAPING	ORNAMENTAL LANDSCAPING	69,466
1.4	D	LANDSCAPING	ORNAMENTAL LANDSCAPING	53,231
TOTAL				332,910

LEGEND

- HOMES
- STREET
- LANDSCAPE/BIO-RETENTION BASIN
- DMA BOUNDARY
- PROP. STORM DRAIN
- DRAINAGE PATH



BMP MAP
 IRIS PARK TRACT 31909
 PREPARATION DATE: APRIL 2020
adkan ENGINEERS
 Civil Engineering Surveying Planning
 6879 Airport Drive, Riverside, CA 92504
 Tel: (951) 688-0241 Fax: (951) 688-0599



Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan, R (4197) : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned Unit Development for 81 units

Appendix 2: Construction Plans

Grading and Drainage Plans

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

Tentative Tract Map No. 37909

LEGAL DESCRIPTION:

THE LAND IS SITUATED IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE NORTHWEST QUARTER OF THE NORTHWESTQUARTER OF SECTION 29, TOWNSHIP 3 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT CONVEYED TO THE CITY OF MORENO VALLEY BY DEED RECORDED AUGUST 28, 1989 AS INSTRUMENT NO. 89-292505, OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM ALL OIL, WATER, GAS, HYDROCARBONS, PRECIOUS METALS AND MINERALS OF ANY KIND WHETHER DESCRIBED OR NOT, BELOW A DEPTH OF 500 FEET WITHOUT ANY RIGHT OF SURFACE ENTRY AS RESERVED IN A DEED RECORDED JUNE 13, 1991 AS INSTRUMENT NO. 91-199908 OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION SAID LAND CONVEYED TO VAL VERDE UNIFIED SCHOOL DISTRICT BY DEED RECORDED OCTOBER 10, 2002 AS INSTRUMENT NO. 02-566961 OFFICIAL RECORDS.

APN 312-020-025

GENERAL PLAN/ZONING/LANDUSE

EXISTING GENERAL PLAN DESIGNATION:

PROPOSED GENERAL PLAN DESIGNATION:

EXISTING ZONING: R5 - SUBURBAN RESIDENTIAL

PROPOSED ZONING: R10

EXISTING LANDUSE: Vacant

PROPOSED LANDUSE: DETACHED SFR

PROJECT NOTES

TOTAL GROSS PROJECT SIZE: 471,228 SF (10.82 Ac.)

NET PROJECT AREA = 7.80 ACRES

DEDUCT 3.02 ACRES EASEMENT/TRAIL AREA

TOPOGRAPHY SOURCE: Aerial Topographic Mapping

NUMBER OF RESIDENTIAL LOTS: 82

MINIMUM LOT AREA: 2,250 S.F.

MINIMUM LOT DEPTH: 30'

LOT SIZE: AS SHOWN ON MAP

NET DENSITY: 10.5 DU/ACRE

GUEST PARKING 0.25 SPACES PER UNIT REQUIRED = 21

GUEST PARKING PROVIDED = 28

ALL ONSITE STREETS ARE PRIVATE

DEVELOPER

Passco Pacifica LLC
333 City Boulevard West, 17th Floor
Orange, CA 92866
ATT: Oscar Graham
714-609-7257

OWNER

Maple Lane Group, LLC
A California Limited Liability Company

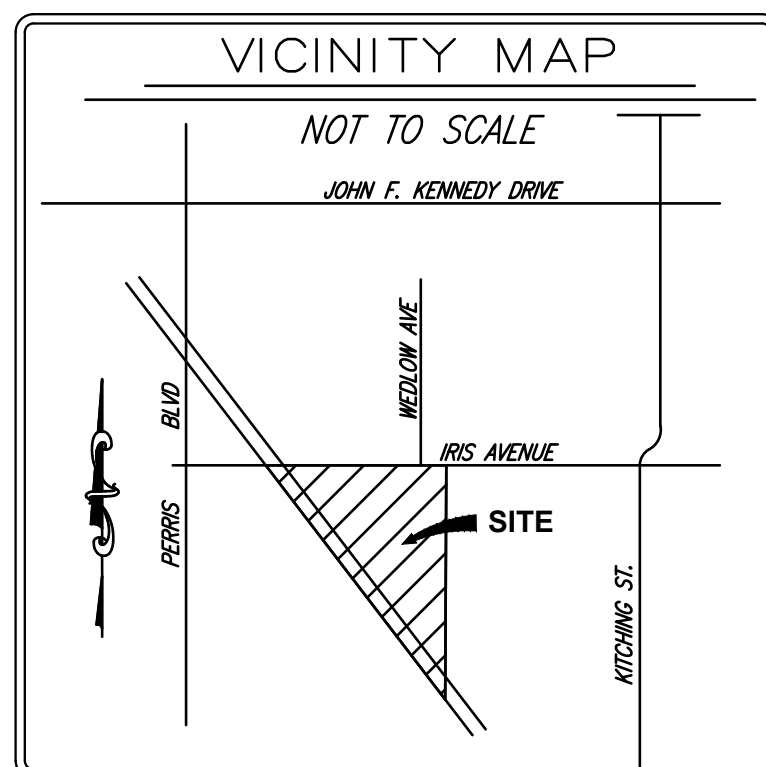
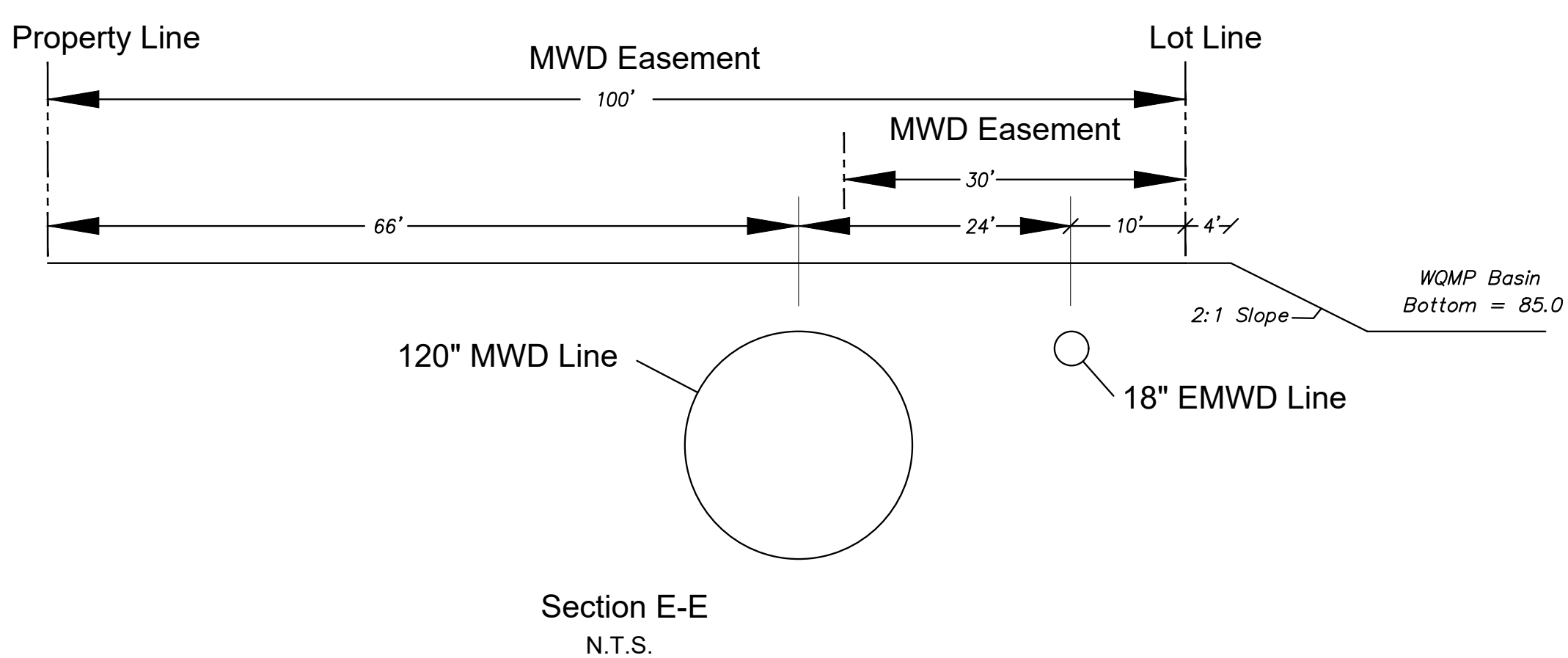
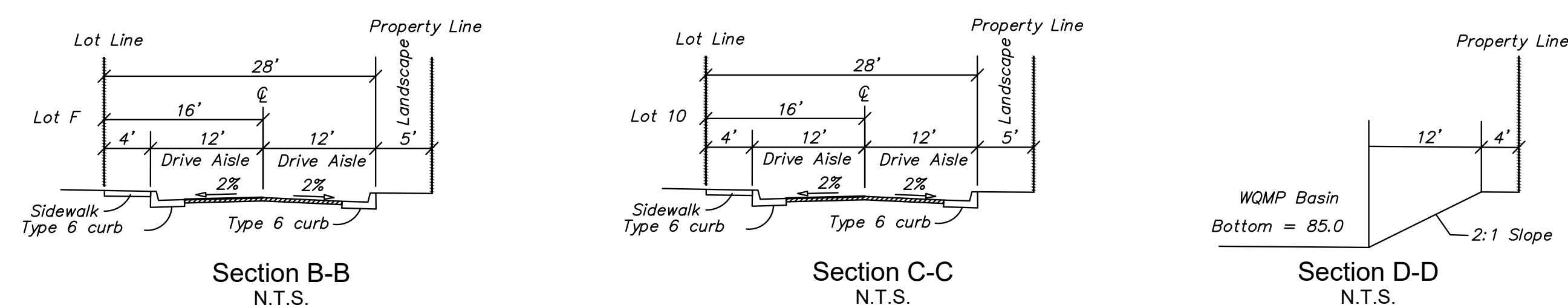
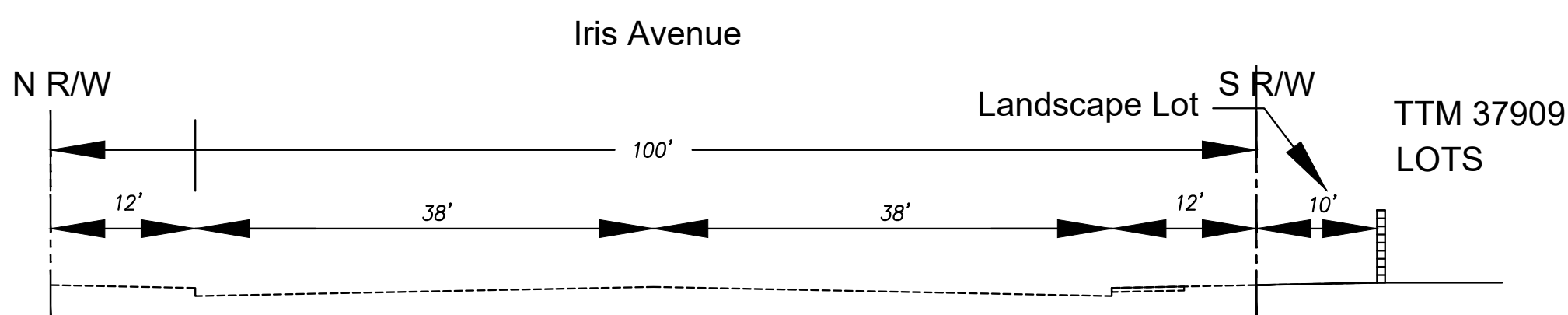
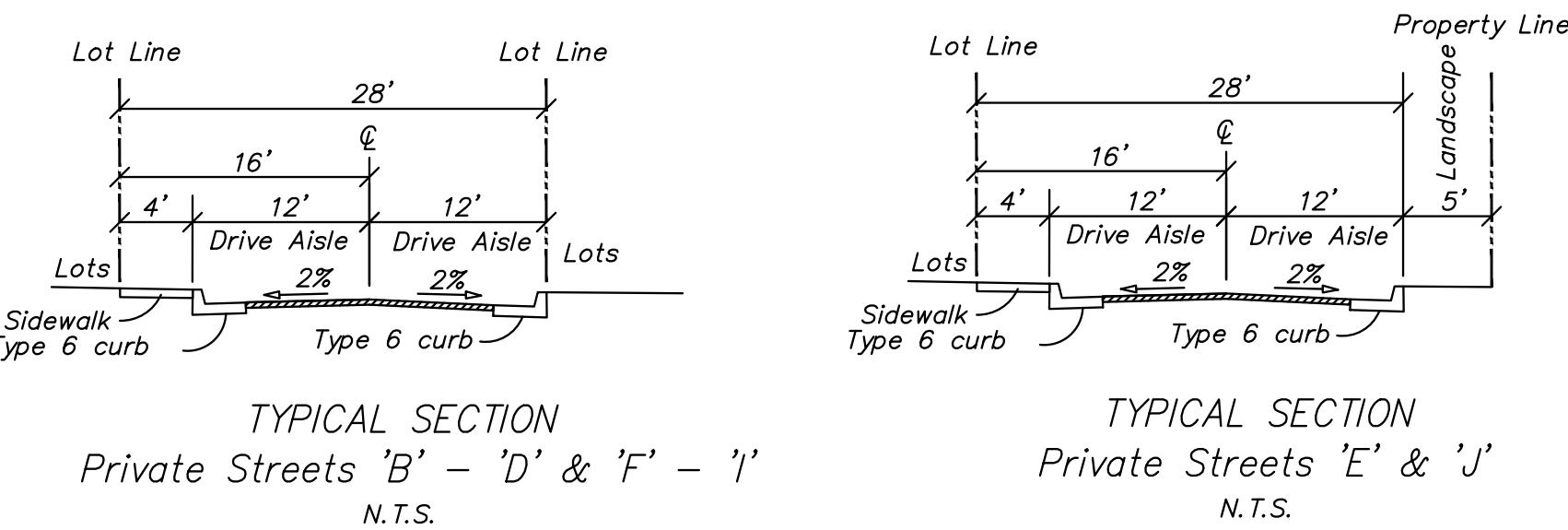
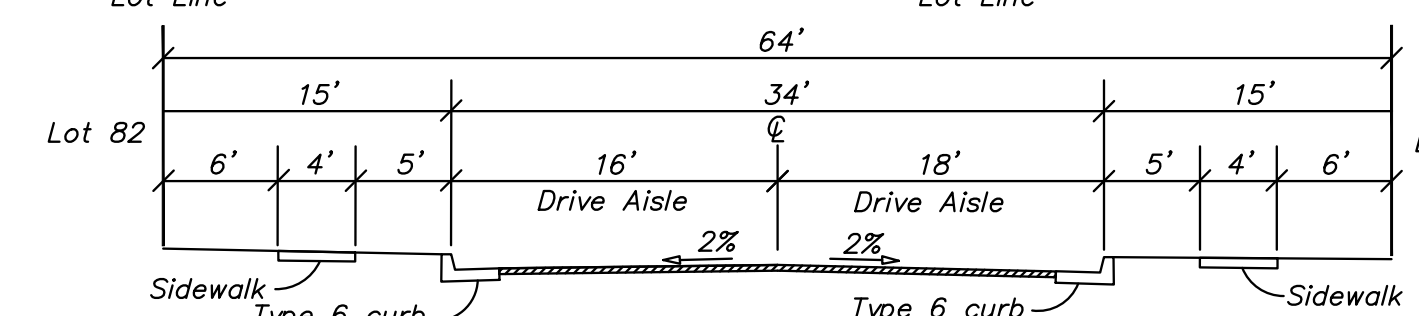
UTILITY PURVEYORS

WATER: EASTERN MUNICIPAL WATER DISTRICT
SEWER: EASTERN MUNICIPAL WATER DISTRICT
GAS: SOUTHERN CALIFORNIA GAS COMPANY
ELECTRICITY: SOUTHERN CALIFORNIA EDISON
TELEPHONE: AT&T
SCHOOL: MORENO VALLEY UNIFIED SCHOOL DISTRICT
CATV: SPECTRUM

LEGEND

- T.C. TOP OF CURB
- F.L. FINISHED SURFACE
- P.E. PAD ELEVATION
- C.B. CATCH BASIN
- H.P. HIGH POINT
- (X) EXIST. LAND USAGE
- (Z) EXIST. ZONING

- (12/24.5) = Lot Number
- (24.5) = Pad Elevation



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TTM 37909
City of Moreno Valley
CALIFORNIA

DATE: April 14, 2020
JOB NO.:
DRAWN BY: R.A.H.
CHECKED BY: R.M.B.
SHEET 1 OF 1

Residential Lots				Residential Lots				Residential Lots				Lettered Lots	
Lot Number	Width (ft)	Depth (ft)	Area (sq ft)	Lot Number	Width (ft)	Depth (ft)	Area (sq ft)	Lot Number	Width (ft)	Depth (ft)	Area (sq ft)	Lot Number	Area (sq ft)
1	35	75	2,625	29	81	75	6,075	56	30	129	3,870	A	619
2	30	75	2,250	30	30	75	2,250	57	30	75	2,250	B	4,399
3	52	75	4,293	31	30	75	2,250	58	30	75	2,250	C	1,313
4	30	75	2,250	32	30	75	2,250	59	30	75	2,250	D	1,219
5	30	75	2,250	33	30	75	2,250	60	30	75	2,250	E	1,081
6	30	76	2,280	34	30	75	2,250	61	30	75	2,250	F	18,623
7	30	76	2,295	35	30	75	2,250	62	30	75	2,250	G	1,701
8	30	76	2,292	36	30	75	2,250	63	30	75	2,250	H	1,323
9	30	75	2,237	37	30	75	2,250	64	30	75	2,250	I	7,238
10	30	76	2,277	38	30	75	2,250	65	30	75	2,250	J	12,934
11	30	76	2,291	39	30	75	2,250	66	35	75	2,606	Subtotal	50,602
12	30	77	2,306	40	30	75	2,250	67	35	75	2,606		
13	30	77	2,303	41	30	75	2,250	68	34	75	2,447		
14	30	107	3,547	42	30	75	2,250	69	35	75	2,576		
15	30	129	4,388	43	30	75	2,250	70	30	75	2,250		
16	30	75	2,250	44	30	75	2,250	71	30	75	2,250		
17	30	75	2,250	45	30	75	2,250	72	30	75	2,250		
18	30	75	2,250	46	60	75	4,506	73	30	75	2,250		
19	30	75	2,250	47	30	75	2,250	74	30	75	2,250		
20	30	75	2,250	48	30	75	2,250	75	30	75	2,250		
21	30	75	2,250	49	30	75	2,250	76	30	75	2,250		
22	30	75	2,250	50	30	75	2,250	77	30	75	2,250		
23	30	75	2,250	51	30	75	2,250	78	30	75	2,250		
24	30	75	2,250	52	30	75	2,250	79	30	75	2,250		
25	30	75	2,233	53	30	75	2,250	80	30	75	2,250		
26	35	75	2,599	54	30	75	2,250	81	30	75	2,250		
27	30	75	2,250	55	30	75	2,250	82	33	75	2,474		
28	30	75	2,250	56	30	75	2,250	Subtotal Residential Lot Area			64,413		
Subtotal Residential Lot Area			66,947	Subtotal Residential Lot Area			64,413	Total Residential Lot Area			195,870		
								Average Lot Size			2,389		

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan, R (4197) - Tentative Tract Map 37909 with a Conditional Use Permit for a Planned Unit Development for 81 units

Appendix 3: Soils Information

Geotechnical Study and Other Infiltration Testing Data

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

**PRELIMINARY GEOTECHNICAL
AND INFILTRATION FEASIBILITY INVESTIGATION
PROPOSED IRIS PARK RESIDENTIAL DEVELOPMENT
MORENO VALLEY, CALIFORNIA**

**PROJECT NO. 33591.1
NOVEMBER 25, 2019**

Prepared For:

Passco Pacifica, LLC
333 City Boulevard, Suite 1700
Orange, California 92868

Attention: Mr. Oscar Graham

November 25, 2019

Passco Pacifica, LLC
333 City Boulevard, Suite 1700
Orange, California 92868

Project No. 33591.1

Attention: Mr. Oscar Graham

Subject: Preliminary Geotechnical and Infiltration Feasibility Investigation, Proposed Iris Park Residential Development, APN 312-020-025, Moreno Valley, California.

LOR Geotechnical Group, Inc., is pleased to present this report summarizing our geotechnical investigation for the above referenced project. In summary, it is our opinion that the proposed development is feasible from a geotechnical perspective, provided the recommendations presented in the attached report are incorporated into design and construction.

To provide adequate support for the proposed residential structures, we recommend that a compacted fill mat be constructed beneath footings and slabs. The compacted fill mat will provide a dense, high-strength soil layer to uniformly distribute the anticipated foundation loads over the underlying soils. All undocumented fill material and any loose alluvial materials should be removed from structural areas and areas to receive engineered compacted fill. The data developed during this investigation indicates that removals on the order of approximately 5 to 7 feet will be required within the currently planned development areas. The given removal depths are preliminary. The actual depths of the removals should be determined during the grading operation by observation and/or in-place density testing.

Very low expansion potential, fair R-value quality, poor infiltration characteristics, and a negligible soluble sulfate content generally characterize the onsite soil materials tested.

LOR Geotechnical Group, Inc.

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Passco Pacifica, LLC
November 25, 2019

Project No. 33591.1

INTRODUCTION

During November of 2019, a Preliminary Geotechnical and Infiltration Feasibility Investigation was performed by LOR Geotechnical Group, Inc., for proposed Iris Park residential development of APN 312-020-025 in the City of Moreno Valley, California. The purpose of this investigation was to conduct a technical evaluation of the geologic setting of the site and to provide geotechnical design recommendations for the proposed improvements. The scope of our services included:

- Review of available pertinent geotechnical literature, reports, maps, and agency information pertinent to the study area;
- Interpretation of aerial photographs of the site and surrounding regions dated 1966 through 2018;
- Geologic field reconnaissance mapping to verify the areal distribution of earth units and significance of surficial features as compiled from documents, literature, and reports reviewed;
- A subsurface field investigation to determine the physical soil conditions pertinent to the proposed development;
- Infiltration testing via the constant head test method at two locations within the approximate area proposed for the infiltration of onsite runoff waters;
- Laboratory testing of selected soil samples obtained during the field investigation;
- Development of geotechnical recommendations for site grading and foundation design; and
- Preparation of this report summarizing our findings, and providing conclusions and recommendations for site development.

The approximate location of the site is shown on the attached Index Map, Enclosure A-1, within Appendix A.

To orient our investigation at the site, you provided us with Site Plan, prepared by IDE Arc Architecture & Planning, undated, that showed the proposed development. As noted on that map, the site will be developed with 84 residential lots and the associated interior streets. An infiltration basin is also proposed. The Site Plan was utilized as a base map for our field investigation and is presented as Enclosure A-2, within Appendix A.

Passco Pacifica, LLC
November 25, 2019

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PROJECT CONSIDERATIONS

Information furnished to this firm indicates that the proposed project will consist of the construction of 84 single-family residences.

These will likely be one or two stories in height and are anticipated to be of wood frame construction with an exterior plaster veneer. Light to moderate foundation loads are anticipated with such structures. Cuts and fills on the order of a few feet are anticipated to create the planar building pads.

EXISTING SITE CONDITIONS

The subject site consists of a triangular shaped, relatively flat, vacant area of land that is approximately 10 acres in size. At the time of our investigation, vegetation on the site consisted of a light moderate growth of weeds. The topography of the site is planar, with a very gentle fall towards the southeast.

Iris Avenue, a fully improved roadway, bounds the site on the north followed by a tract of single family residences. A tract of single family residences bounds the site on the east. The California Aqueduct easement comprises the western 100 feet of the site with a shopping center and school beyond. South of the site is a tract of single family homes.

AERIAL PHOTOGRAPH ANALYSIS

The aerial photographs reviewed consisted of vertical aerial stereoscopic photographs of varying scales. We reviewed imagery available from Google Earth (2018) and from Historic Aerials (2019).

The site consisted of vacant land which appeared to be dry land farmed with surrounding properties from 1966, the earliest photograph available, to 1978. The 1997 photograph shows the site as vacant land with some stockpiles of fill material in the northeast corner. Numerous dirt paths are visible in this area. The 2006 photograph shows additional smoothed out fill to the west of the previously noted fill. An earthen berm is present on the north and west side of this area. A minor amount of additional end dumped fill is visible in the 2009 photograph.

Our review of the aerial photographs did not reveal any adverse geologic conditions, such as possible faults or landslides, as being present at or within close proximity to the site.

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FIELD EXPLORATION PROGRAM

Our subsurface field exploration program was conducted on November 7, 2019 and consisted of drilling 5 exploratory borings with a truck-mounted Mobile B-61 drill rig equipped with 8-inch diameter hollow stem augers. The borings were drilled to depths of approximately 21 to 51.5 feet below the existing ground surface. The approximate locations of our exploratory borings are presented on the attached Site Plan, Enclosure A-2 within Appendix A.

The subsurface conditions encountered in the exploratory borings were logged by a geologist from this firm. Relatively undisturbed and bulk samples were obtained at a maximum depth interval of 5 feet and returned to our geotechnical laboratory in sealed containers for further testing and evaluation. A detailed description of the field exploration program and the boring logs are presented in Appendix B.

LABORATORY TESTING PROGRAM

Selected soil samples obtained during the field investigation were subjected to laboratory testing to evaluate their physical and engineering properties. Laboratory testing included in-place moisture content and dry density, laboratory compaction characteristics, direct shear, sieve analysis, sand equivalent, R-value, consolidation, expansion index, Atterberg limits, and soluble sulfate content. A detailed description of the laboratory testing program and the test results are presented in Appendix C.

GEOLOGIC CONDITIONS

Regional Geologic Setting

The site is located within the south-central portion of Moreno Valley which lies within the northern end of Perris Valley. This area is located on the Perris block, within the northern Peninsular Ranges geologic province of southern California. While the Perris block is considered to be a relatively stable structural block, it is bounded by active faults. The Perris block is underlain predominately by a very large mass of crystalline igneous rocks of Cretaceous age and older metasedimentary and metavolcanic rocks.

The Perris block has a series of erosional surfaces, marked by low topographic relief and capped with unconsolidated alluvial sediments stripped from the surrounding highlands, such as the Box Spring Mountains and the hills around Lake Perris located east of the site.

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These were mapped by the California Division of Mines and Geology as being underlain by deposits of relatively unconsolidated, but weakly to moderately indurated younger to older alluvium (Morton and Matti, 2001 and Morton, 2003).

The nearest known active fault zone is the San Jacinto fault zone located approximately 9.8 kilometers (6.1 miles) to the northeast. Other major faults within the region include the Elsinore fault zone located approximately 26 kilometers (16.2 miles) to the southwest, and San Andreas fault zone located approximately 27 kilometers (17 miles) to the northeast. The site and the regional geologic setting are shown on Enclosure A-3 within Appendix A.

Site Geologic Conditions

Fill/Topsoil: As encountered within the majority of our exploratory borings, fill/topsoil materials on the order of 2 feet thick are present across much of the site. The fill materials were noted to be light brown, dry, and loose silty sand. These materials are most likely the result of weed abatement practices (discing).

Fill: As encountered within our exploratory boring placed in the northeast portion of the site, fill materials on the order of 5 feet are present. These materials consisted of dry, loose, silty sand with some debris and are believed to be end dumped fills noted in our review of aerial photographs.

Older Alluvium: Underlying the fill materials at the site, older alluvial materials were encountered within all of our exploratory borings to the maximum depths explored. These units were noted to consist of silty sand and sandy silt, and lesser amounts unit of well graded sand, clayey sand and lean clay with sand. The older alluvial materials were in a relatively loose to medium dense/stiff state upon first encounter, becoming medium dense/very stiff to dense/hard with depth based on our equivalent Standard Penetration Test (SPT) data and in-place density testing. Consolidation testing of the older alluvial materials indicate normal consolidation/hydro-consolidation characteristics at depths of 7 feet and greater.

A detailed description of the subsurface soil conditions as encountered within our exploratory borings is presented on the Boring Logs within Appendix B.

Groundwater Hydrology

Groundwater was encountered within our exploratory borings B-2 at a depth of approximately 33.5 feet below the existing ground surface.

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Records for nearby wells which were readily available from the State of California Department of Water Resources online database (CDWR, 2019) and the Western Municipal Water District Cooperative Well Measurement Program (WMWD, 2019) were reviewed as a part of this investigation. In addition, historic groundwater level data was reviewed from a groundwater contour map prepared by the U.S.G.S. (Carson and Matti, 1985).

According to the State of California Department for Water resources online database, the nearest well with available data is State Well Number 03S03W32B001S located to the southeast, approximately 1.4 kilometers (0.9 miles). In this well, groundwater was last measured at a depth of 21 feet below the ground surface on April 26, 2019. The depth to groundwater in the past was noted to vary slightly over time. Data for this well was presented from 2011 to 2019 and the elevation was listed as 1,476 feet above mean sea level.

Groundwater well data from the Cooperative Well Measuring Program, Spring 2019, indicates that the nearest well is the well noted above and no additional relevant information is presented within this database.

As illustrated on Enclosure A-1, the elevation of the site is approximately 1,495 feet above mean sea level. Based on the information above, groundwater is anticipated to lie approximately 35 feet in the general site area.

Surface Runoff

Current surface runoff of precipitation waters across the site is generally as sheet flow to the south-southeast.

Mass Movement

Mass movement features such as landslides, rockfalls, or debris flows within the site vicinity are not known to exist and no evidence of mass movement was observed on the site or in the vicinity during our review of aerial photographs or reconnaissance.

Faulting

No active or potentially active faults are known to exist at the subject site. In addition, the subject site does not lie within a current State of California Earthquake Fault Zone (Hart and Bryant, 2003).

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As previously mentioned, the closest known active fault is the San Jacinto Valley segment of the San Jacinto fault zone, located approximately 9.8 kilometers (6.1 miles) to the northeast. In addition, other relatively close active faults include the Glen Ivy segment of the Elsinore fault zone, located approximately 26 kilometers (16.2 miles) to the southwest, and the San Bernardino segment of the San Andreas fault zone located approximately 27 kilometers (17 miles) to the northeast.

The San Jacinto fault zone is a sub-parallel branch of the San Andreas fault zone, extending from the northwestern San Bernardino area, southward into the El Centro region. This fault has been active in recent times with several large magnitude events. It is believed that the San Jacinto fault is capable of producing an earthquake magnitude on the order of 6.5 or greater.

The Elsinore fault zone is one of the largest in southern California. At its northern end it splays into two segments and at its southern end it is cut by the Yuba Wells fault. The primary sense of slip along the Elsinore fault is right lateral strike-slip. It is believed that the Elsinore fault zone is capable of producing an earthquake magnitude on the order of 6.5 to 7.5.

The San Andreas fault is considered to be the major tectonic feature of California, separating the Pacific Plate and the North American Plate. While estimates vary, the San Andreas fault is generally thought to have an average slip rate on the order of 24mm/yr and capable of generating large magnitude events on the order of 7.5 or greater.

Current standards of practice often include a discussion of all potential earthquake sources within a 100 kilometer (62 mile) radius. However, while there are other large earthquake faults within a 100 kilometer (62 mile) radius of the site, none of these are considered as relevant to the site due to their greater distance and/or smaller anticipated magnitudes.

Historical Seismicity

In order to obtain a general perspective of the historical seismicity of the site and surrounding region a search was conducted for seismic events at and around the area within various radii. This search was conducted utilizing the historical seismic search website of the USGS. This website conducts a search of a user selected cataloged seismic events database, within a specified radius and selected magnitudes, and then plots the events onto a map. At the time of our search, the database contained data from January 1, 1932 through November 20, 2019.

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In our first search, the general seismicity of the region was analyzed by selecting an epicenter map listing all events of magnitude 4.0 and greater, recorded since 1932, within a 100 kilometer (62 mile) radius of the site, in accordance with guidelines of the California Division of Mines and Geology. This map illustrates the regional seismic history of moderate to large events. As depicted on Enclosure A-4, within Appendix A, the site lies within a relatively active region associated with the San Andreas fault trending northwest and the northwest trending faulting of the Mojave Desert geomorphic province.

In the second search, the micro seismicity of the area lying within a 15 kilometer (9.3 mile) radius of the site was examined by selecting an epicenter map listing events on the order of 1.0 and greater since 1978. In addition, only the "A" events, or most accurate events were selected. Caltech indicates the accuracy of the "A" events to be approximately 1 km. The results of this search is a map that presents the seismic history around the area of the site with much greater detail, not permitted on the larger map. The reason for limiting the events to the last 40± years on the detail map is to enhance the accuracy of the map. Events recorded prior the mid 1970's are generally considered to be less accurate due to advancements in technology. As depicted on this map, Enclosure A-5, the San Jacinto fault zone appear to be the source of numerous events.

In summary, the historical seismicity of the site entails numerous small to medium magnitude earthquake events occurring around the subject site, predominately associated with the presence of the San Jacinto fault zone. Any future developments at the subject site should anticipate that moderate to large seismic events could occur very near the site.

Secondary Seismic Hazards

Other secondary seismic hazards generally associated with severe ground shaking during an earthquake include liquefaction, seiches and tsunamis, earthquake induced flooding, landsliding and rockfalls, and seismic-induced settlement.

Liquefaction: The potential for liquefaction generally occurs during strong ground shaking within granular, loose, sediments where the groundwater is usually less than 50 feet. The County of Riverside has mapped the overall site area as having low liquefaction potential (TLMA, 2019).

Liquefaction is a process in which strong ground shaking causes saturated soils to lose their strength and behave as a fluid (Matti and Carson, 1991). Ground failure associated with liquefaction can result in severe damage to structures. Soil types susceptible to liquefaction include sand, silty sand, sandy silt, and silt, as well as soils having a plasticity

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index (PI) less than 7 (Boulanger and Idriss, 2004) and loose soils with a PI less than 12 and a moisture content greater than 85 percent of the liquid limit (Bray and Sancio, 2006). The geologic conditions for increased susceptibility to liquefaction are: 1) shallow groundwater (generally less than 50 feet in depth); 2) the presence of unconsolidated sandy alluvium, typically Holocene in age; and 3) strong ground shaking. All three of these conditions must be present for liquefaction to occur.

Severe seismic shaking may cause dry and non-saturated sands to densify, resulting in settlement expressed at the ground surface. Seismic settlement in dry soils generally occurs in loose sands and silty sands, with cohesive soils being less prone to significant settlement.

A quantitative method using an index called the liquefaction potential index (LPI) was developed and presented by Iwasaki et al. (1978, 1982). The LPI is defined as:

$$LPI = \int_0^{20} F_1 W(z) dz$$

where $W(z) = 10 - 0.5z$, $F_1 = 1 - FS$ for $FS < 1.0$, $F_1 = 0$ for $FS > 1.0$ and z is the depth below the ground surface in meters. The LPI presents the risk of liquefaction damage as a single value with the following indicators of liquefaction-induced damage:

LPI Range and Damage	
LPI Range	Damage
LPI = 0	Liquefaction risk is very low.
$0 < LPI \leq 5$	Liquefaction risk is low.
$5 < LPI \leq 15$	Liquefaction risk is high.
LPI > 15	Liquefaction risk is very high.

The most recent development for quantitative descriptions of liquefaction-induced surface damage, called "liquefaction vulnerability", was made by Tonkin & Taylor (2013) after the Christchurch earthquakes occurred between 2010 and 2011 and was based on field observations and analyses of approximately 7,500 CPT investigations. A new index, the liquefaction severity number (LSN), was proposed and defined as:

$$LSN = \int \frac{\varepsilon_v}{z} dz$$

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where ϵ_v is the calculated volumetric densification strain in the subject layer from Zhang et al. (2002) and z is the depth to the layer of interest in meters below the ground surface. The typical behaviors of sites with a given LSN are summarized in following table.

LSN Ranges and Observed Land Effects	
LSN Range	Predominant Performance
0-10	Little to no expression of liquefaction, minor effects
10-20	Minor expression of liquefaction, some sand boils
20-30	Moderate expression of liquefaction, with sand boils and some structural damage
30-40	Moderate to severe expression of liquefaction, settlement can cause structural damage
40-50	Major expression of liquefaction, undulations and damage to ground surface, severe total and differential settlement of structures
>50	Severe damage, extensive evidence of liquefaction at surface, severe total and differential settlements affecting structures, damage to services

Both LPI and LSN indices were calculated for the soil profiles of Exploratory Boring No. B-2. The results indicate that the liquefaction risk of the site is "very low" to "low" per the LPI index of 0. The site exhibits "little to no expression of liquefaction, minor effects" per the LSN index of 0.

The Idriss and Boulanger (2008) and Pradel (1998) methods were used to evaluate liquefaction-induced settlement and dry sand settlement. As input into our calculations a deaggregated modal moment magnitude of 6.5 and an acceleration of 0.553g were utilized for the representative soil profiles as provided in Boring B-2.

The results indicate that a maximum seismic settlement of less than one-half inch can be anticipated. Based on the relative uniformity of soil materials encountered, differential seismic settlement is anticipated to be approximately one-half of the total seismic settlement. The settlement calculated is accumulated from soil layers to a maximum depth of 50 feet and the result of our analysis is provided in Appendix E.

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Seiches/Tsunamis: The potential for the site to be affected by a seiche or tsunami (earthquake generated wave) is considered nil due to the absence of any large bodies of water near the site.

Flooding (Water Storage Facility Failure): There are no large water storage facilities located on or upstream near the site which could possibly rupture during an earthquake and affect the site by flooding.

Seismically-Induced Landsliding: Our research, site reconnaissance and review of aerial imagery of the site and vicinity indicates that there are no known or suspected landslides at the site or in close proximity to the site and, therefore, the potential for seismically-induced landslides occurring at the site is considered very low.

Rockfalls: No large, exposed, loose or unrooted boulders that could affect the integrity of the site are present above the site.

Seismically-Induced Settlement: Settlement generally occurs within areas of loose, granular soils with relatively low density. Since the site is underlain by dense/stiff to dense/hard older alluvial materials, the potential for settlement is considered low. In addition, the earthwork operations recommended to be conducted during the development of the site will mitigate any near surface loose soil conditions.

SOILS AND SEISMIC DESIGN CRITERIA (California Building Code 2016)

Section 1613 of Chapter 16 of the 2016 California Building Code (CBC) contains the procedures and definitions for the calculations of the earthquake loads on structures and non structural components that are permanently attached to structures and their supports and attachments.

It should be noted that the classification of use and occupancy of all proposed structures at the site, and thus design requirements, shall be the responsibility of the structural engineer and the building official.

CBC Earthquake Design Summary

The following earthquake design criteria have been formulated for the site utilizing the source referenced above. However, these values should be reviewed and the final design should be performed by a qualified structural engineer familiar with the region.

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CBC 2016 SEISMIC DESIGN SUMMARY*	
Site Location (WGS 84) 33.8872, -117.2226, Occupancy Category II	
Site Class Definition Chapter 20 ASCE 7	D
S_s Mapped Spectral Response Acceleration at 0.2s Period, (Figure 1613.3.1(1))	1.500
S_1 Mapped Spectral Response Acceleration at 1s Period, (Figure 1613.3.3(2))	0.605
F_a Short Period Site Coefficient at 0.2s Period, (Table 1613.3.3(1))	1.0
F_v Long Period Site Coefficient at 1s Period, (Table 1613.3.3(2))	1.5
S_{MS} Adjusted Spectral Response Acceleration at 0.2s Period, (eq .16-37)	1.500
S_{M1} Adjusted Spectral Response Acceleration at 1s Period, (eq .16-38)	0.907
S_{DS} Design Spectral Response Acceleration at 0.2s Period, (eq .16-39)	1.000
S_{D1} Design Spectral Response Acceleration at 1s Period, (eq .16-40)	0.605
Seismic Design Category - Short Period (Table 1613.3.5(1))	D
Seismic Design Category - Long Period (Table 1613.3.5(2))	D
*Values obtained from OSHPD online U.S. Seismic Design Maps tool	

INFILTRATION TESTING AND TEST RESULTS

Two constant head infiltration tests were conducted within the general area proposed for the infiltration of runoff waters. Testing consisted of two test holes which were excavated using a hollow stem auger drill rig to depths of approximately 5 feet below the existing ground surface. The holes were 8-inches in diameter. Two inches of gravel was placed in the bottom of the holes and perforated plastic liners were placed into each hole. A 2-inch PVC pipe with a preset water level of 0.5 feet was inserted into each liner. A 5-gallon glass bottle was then inverted over each pipe with a vacuum seal in order to maintain a constant 0.5 feet of water with each hole. The volume of water used in a given time period was recorded at various time intervals to establish the infiltration rates.

Infiltration test results are summarized in the following table:

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Test No.	Depth (ft.)*	Infiltration Rate** in/hr
I-1	4	0.10
I-2	4	0.10
* depth measured below existing ground surface ** clear water rate		

The results of our infiltration testing are attached as Enclosures D-1 and D-2. The test results indicate poor infiltration characteristics for the soils tested.

CONCLUSIONS

General

This investigation provides a broad overview of the geotechnical and geologic factors which are expected to influence future site planning and development. On the basis of our field investigation and testing program, it is the opinion of LOR Geotechnical Group, Inc., that the proposed development is feasible from a geotechnical standpoint, provided the recommendations presented in this report are incorporated into design and implemented during grading and construction.

The subsurface conditions encountered in our exploratory borings are indicative of the locations explored. The subsurface conditions presented here are not to be construed as being present the same everywhere on the site. If conditions are encountered during the construction of the project which differ significantly from those presented in this report, this firm should be notified immediately so we may assess the impact to the recommendations provided.

Foundation Support

Based upon the field investigation and test data, it is our opinion that the existing fill/topsoil and fill soils will not, in their present condition, provide uniform and/or adequate support for the proposed improvements. Left as is, this condition could cause unacceptable differential and/or overall settlements upon application of the anticipated foundation loads.

To provide adequate support for the proposed structural improvements, we recommend that a compacted fill mat be constructed beneath footings and slabs.

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This compacted fill mat will provide a dense, high-strength soil layer to uniformly distribute the anticipated foundation loads over the underlying soils. In addition, the construction of this compacted fill mat will allow for the removal of any undocumented fill soils that are present within the proposed building areas. Conventional foundation systems, using either individual spread footings and/or continuous wall footings, will provide adequate support for the anticipated downward and lateral loads when utilized in conjunction with the recommended fill mat.

Soil Expansiveness

Our laboratory testing found the soils tested to have a very low expansion potential. For very low expansive soils, no specialized construction procedures to resist expansive soil activity are necessary.

Careful evaluation of on-site soils and any import fill for their expansion potential should be conducted during the grading operation.

Sulfate Protection

The results of the soluble sulfate tests conducted on selected subgrade soils expected to be encountered at foundation levels indicate that there is a negligible sulfate exposure to concrete elements in contact with the on site soils per the 2016 CBC. Therefore, no specific recommendations are given for concrete elements to be in contact with the onsite soils.

Infiltration

The results of our field investigation and test data indicates the site soils are not conducive to infiltration or percolation. Therefore, water quality storm water systems should not incorporate on-site infiltration/percolation when determining storm water treatment capacity.

Geologic Mitigations

No special geologic recommendation methods are deemed necessary at this time, other than the geotechnical recommendations provided in the following sections.

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Seismicity

Seismic ground rupture is generally considered most likely to occur along pre-existing active faults. Since no known faults are known to exist at, or project into the site, the probability of ground surface rupture occurring at the site is considered nil.

Due to the site's close proximity to the faults described above, it is reasonable to expect a strong ground motion seismic event to occur during the lifetime of the proposed development on the site. Large earthquakes could occur on other faults in the general area, but because of their lesser anticipated magnitude and/or greater distance, they are considered less significant than the faults described above from a ground motion standpoint.

The effects of ground shaking anticipated at the subject site should be mitigated by the seismic design requirements and procedures outlined in Chapter 16 of the California Building Code. However, it should be noted that the current building code requires the minimum design to allow a structure to remain standing after a seismic event, in order to allow for safe evacuation. A structure built to code may still sustain damage which might ultimately result in the demolishing of the structure (Larson and Slosson, 1992).

RECOMMENDATIONS

Geologic Recommendations

No special geologic recommendation methods are deemed necessary at this time, other than the geotechnical recommendations provided in the following sections.

General Site Grading

It is imperative that no clearing and/or grading operations be performed without the presence of a qualified geotechnical engineer. An on-site, pre-job meeting with the owner, the developer, the contractor, and geotechnical engineer should occur prior to all grading related operations. Operations undertaken at the site without the geotechnical engineer present may result in exclusions of affected areas from the final compaction report for the project.

Grading of the subject site should be performed in accordance with the following recommendations as well as applicable portions of the California Building Code, and/or applicable local ordinances.

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All areas to be graded should be stripped of significant vegetation and other deleterious materials.

It is our recommendation that any existing fills under any proposed flatwork and/or paved areas be removed and replaced with engineered compacted fill. If this is not done, premature structural distress (settlement) of the flatwork and pavement may occur. Any undocumented fills encountered during grading should be completely removed and cleaned of significant deleterious materials. These may then be reused as compacted fill.

Cavities created by removal of undocumented fill soils and/or subsurface obstructions should be thoroughly cleaned of loose soil, organic matter and other deleterious materials, shaped to provide access for construction equipment, and backfilled as recommended in the following Engineered Compacted Fill section of this report.

Initial Site Preparation

Any and all existing uncontrolled fills and any loose/soft native alluvial soils should be removed from structural areas and areas to receive structural fills. The data developed during this investigation indicates that removals on the order of 5 to 7 feet will be required to encounter competent older alluvium. However, deeper removals may be required locally. Removals should extend horizontally at a distance equal to the depth of the removals plus proposed fill and at least a minimum of 5 feet. The actual depths of removals should be determined during the grading operation by observation and/or by in-place density testing.

Preparation of Fill Areas

After completion of the removals described above and prior to placing fill, the surfaces of all areas to receive fill should be scarified to a depth of at least 6 inches. The scarified soil should be brought to near optimum moisture content and compacted to a relative compaction of at least 90 percent (ASTM D 1557).

Preparation of Foundation Areas

All footings should rest upon a minimum of 24 inches of properly compacted fill material placed over competent natural alluvial soils. In areas where the required fill thickness is not accomplished by the removal of unsuitable soils, the footing areas should be further subexcavated to a depth of at least 24 inches below the proposed footing base grade, with the subexcavation extending at least 5 feet beyond the footing lines. The bottom of this excavation should then be scarified to a depth of at least 6 inches, brought to near

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optimum moisture content, and recompact to at least 90 percent relative compaction (ASTM D 1557) prior to refilling the excavation to grade as properly compacted fill. Fill areas should not be constructed so as to place structures across any area where the maximum depth of fill to minimum depth of fill is greater than a 3:1 ratio.

To provide adequate support, concrete slabs-on-grade should bear on a minimum of 24 inches of compacted soil. The final pad surfaces should be rolled to provide smooth, dense surfaces upon which to place the concrete.

Engineered Compacted Fill

The on-site soils should provide adequate quality fill material, provided they are free from organic matter and other deleterious materials. Unless approved by the geotechnical engineer, rock or similar irreducible material with a maximum dimension greater than 6 inches should not be buried or placed in fills.

Import fill, if required, should be inorganic, non-expansive granular soils free from rocks or lumps greater than 6 inches in maximum dimension. Sources for import fill should be approved by the geotechnical engineer prior to their use.

Fill should be spread in maximum 8-inch uniform, loose lifts, with each lift brought to near optimum moisture content prior to, during and/or after placement, and compacted to a relative compaction of at least 90 percent in accordance with ASTM D 1557.

Based upon the relative compaction of the near surface soils determined during this investigation and the relative compaction anticipated for compacted fill soil, we estimate a compaction shrinkage factor of approximately 10 to 15 percent. Therefore, 1.10 to 1.15 cubic yards of in-place materials would be necessary to yield one cubic yard of properly compacted fill material. Subsidence is anticipated to be 0.10 feet. These values are for estimating purposes only, and are exclusive of losses due to stripping or the removal of subsurface obstructions.

These values may vary due to differing conditions within the project boundaries and the limitations of this investigation. Shrinkage should be monitored during construction. If percentages vary, provisions should be made to revise final grades or adjust quantities of borrow or export.

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Short-Term Excavations

Following the California Occupational and Safety Health Act (CAL-OSHA) requirements, excavations 5 feet deep and greater should be sloped or shored. All excavations and shoring should conform to CAL-OSHA requirements.

Short-term excavations 5-feet deep and greater shall conform to Title 8 of the California Code of Regulations, Construction Safety Orders, Section 1504 and 1539 through 1547. Based on our exploratory borings, it appears that Type C soil is the predominant type of soil on the project and all short-term excavations should be based on this type of soil. Deviation from the standard short-term slopes are permitted using Option 4, Design by a Registered Professional Engineer (Section 1541.1).

Short-term slope construction and maintenance are the responsibility of the contractor, and should be a consideration of his methods of operation and the actual soil conditions encountered.

Slope Construction

Preliminary data indicates that cut and fill slopes should be constructed no steeper than two horizontal to one vertical. Fill slopes should be overfilled during construction and then cut back to expose fully compacted soil. A suitable alternative would be to compact the slopes during construction, then roll the final slopes to provide dense, erosion-resistant surfaces.

Slope Protection

Since the site soils are susceptible to erosion by running water, measures should be provided to prevent surface water from flowing over slope faces. Slopes at the project should be planted with a deep rooted ground cover as soon as possible after completion. The use of succulent ground covers such as iceplant or sedum is not recommended. If watering is necessary to sustain plant growth on slopes, the watering system should be monitored to assure proper operation and to prevent over watering.

Foundation Design

If the site is prepared as recommended, the proposed structures may be safely founded on conventional shallow foundations, either individual spread footings and/or continuous wall footings, bearing on a minimum of 24 inches of engineered compacted fill.

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All foundations should have a minimum width of 12 inches and should be established a minimum of 12 inches below lowest adjacent grade.

For the minimum width and depth, spread foundations may be designed using an allowable bearing pressure of 1,800 psf. This bearing pressure may be increased by 400 psf for each additional foot of width, and by 400 psf for each additional foot of depth, up to a maximum of 4,000 psf. For example, a footing 3 feet wide and embedded 2 feet will have an allowable bearing pressure of 3,000 psf.

The above values are net pressures; therefore, the weight of the foundations and the backfill over the foundations may be neglected when computing dead loads. The values apply to the maximum edge pressure for foundations subjected to eccentric loads or overturning. The recommended pressures apply for the total of dead plus frequently applied live loads, and incorporate a factor of safety of at least 3.0. The allowable bearing pressures may be increased by one-third for temporary wind or seismic loading. The resultant of the combined vertical and lateral seismic loads should act within the middle one-third of the footing width. The maximum calculated edge pressure under the toe of foundations subjected to eccentric loads or overturning should not exceed the increased allowable pressure. Buildings should be setback from slopes in accordance with the California Building Code.

Resistance to lateral loads will be provided by passive earth pressure and base friction. For footings bearing against compacted fill, passive earth pressure may be considered to be developed at a rate of 400 pounds per square foot per foot of depth. Base friction may be computed at 0.30 times the normal load. Base friction and passive earth pressure may be combined without reduction. These values are for dead load plus live load and may be increased by one-third for wind or seismic loading.

Settlement

Total settlement of individual foundations will vary depending on the width of the foundation and the actual load supported. Maximum settlement of shallow foundations designed and constructed in accordance with the preceding recommendations are estimated to be on the order of 0.5 inch. Differential settlements between adjacent footings should be about one-half of the total settlement. Settlement of all foundations is expected to occur rapidly, primarily as a result of elastic compression of supporting soils as the loads are applied, and should be essentially completed shortly after initial application of the loads.

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Building Area Slab-On-Grade

Concrete floor slabs should bear on a minimum of 24 inches of engineered compacted fill placed over competent native materials. The final pad surfaces should be rolled to provide smooth, dense surfaces upon which to place the concrete.

Slabs to receive moisture-sensitive coverings should be provided with a moisture vapor barrier. This barrier may consist of an impermeable membrane. Two inches of sand over the membrane will reduce punctures and aid in obtaining a satisfactory concrete cure. The sand should be moistened just prior to placing of concrete. The slabs should be protected from rapid and excessive moisture loss which could result in slab curling. Careful attention should be given to slab curing procedures, as the site area is subject to large temperature extremes, humidity, and strong winds.

Exterior Flatwork

To provide adequate support, exterior flatwork improvements should rest on a minimum of 12 inches of soil compacted to at least 90 percent (ASTM D 1557).

Flatwork surface should be sloped a minimum of 1 percent away from buildings and slopes, to approved drainage structures.

Wall Pressures

The design of footings for retaining structures should be performed in accordance with the recommendations described earlier under Preparation of Foundation Areas and Foundation Design. For design of retaining wall footings, the resultant of the applied loads should act in the middle one-third of the footing, and the maximum edge pressure should not exceed the basic allowable value without increase.

For design of retaining walls unrestrained against movement at the top, we recommend an equivalent fluid density of 48 pounds per cubic foot (pcf) be used. This assumes level backfill consisting of recompacted, non-expansive, native soils placed against the structures and with the backcut slope extending upward from the base of the stem at 35 degrees from the vertical or flatter.

To avoid overstressing or excessive tilting during placement of backfill behind walls, heavy compaction equipment should not be allowed within the zone delineated by a 45 degree line extending from the base of the wall to the fill surface.

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The backfill directly behind the walls should be compacted using light equipment such as hand operated vibrating plates and rollers. No material larger than 3-inches in diameter should be placed in direct contact with the wall.

Wall pressures should be verified prior to construction, when the actual backfill materials and conditions have been determined. Recommended pressures are applicable only to level, non-expansive, properly drained backfill (with no additional surcharge loadings).

If inclined backfills are proposed, this firm should be contacted to develop appropriate active earth pressure parameters. Toe bearing pressure for non-structural walls on soils, not prepared as described earlier under Preparation of Foundation Areas, should not exceed California Building Code values.

Sulfate Protection

The results of the soluble sulfate tests conducted on selected subgrade soils expected to be encountered at foundation levels are presented on Enclosure C.

Based on the test results it appears that there is a negligible sulfate exposure to concrete elements in contact with on site soils. The CBC, therefore, does not recommend special design criteria for concrete elements in contact with such materials.

Preliminary Pavement Design

Testing and design for preliminary on-site pavement was conducted in accordance with the California Highway Design Manual. Based upon our preliminary sampling and testing, and upon Traffic Index indicated by the City of Moreno Valley Standard Plans (2018), it appears that the structural section tabulated below should provide satisfactory pavement for the subject pavement improvements:

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AREA	T.I.	DESIGN R-VALUE	PRELIMINARY SECTION
Local Street	6.0	30	0.35' AC*/0.70' CAB
AC - Asphalt Concrete CAB - Crushed Aggregate Base * City of Moreno Valley minimum			

The above structural section is predicated upon 90 percent relative compaction (ASTM D 1557) of all utility trench backfills and 95 percent relative compaction (ASTM D 1557) of the upper 12 inches of pavement subgrade soils and of any aggregate base utilized.

In addition, the aggregate base should meet specifications for Crushed Aggregate Base.

In areas of the pavement which will receive high abrasion loads due to start-ups and stops, or where trucks will move on a tight turning radius, consideration should be given to installing concrete pads. Such pads should be a minimum of 0.5-foot thick concrete, with a 0.35-foot thick aggregate base. Concrete pads are also recommended in areas adjacent to trash storage areas where heavier loads will occur due to operation of trucks lifting trash dumpsters.

It should be noted that all of the above pavement design was based upon the results of preliminary sampling and testing, and should be verified by additional sampling and testing during construction when the actual subgrade soils are exposed.

Infiltration

Based upon our field investigation and infiltration test data, the site soils are not considered suitable for infiltration or percolation. Therefore water quality storm water systems should not incorporate on-site infiltration/percolation when determining storm water treatment capacity.

Construction Monitoring

Post investigative services are an important and necessary continuation of this investigation. Project plans and specifications should be reviewed by the project geotechnical consultant prior to construction to confirm that the intent of the

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recommendations presented herein have been incorporated into the design. Additional expansion index, R-value, and soluble sulfate testing may be required during site rough grading.

During construction, sufficient and timely geotechnical observation and testing should be provided to correlate the findings of this investigation with the actual subsurface conditions exposed during construction. Items requiring observation and testing include, but are not necessarily limited to, the following:

1. Site preparation-stripping and removals.
2. Excavations, including approval of the bottom of excavation prior to filling.
3. Scarifying and recompacting prior to fill placement.
4. Subgrade preparation for pavements and slabs-on-grade.
5. Placement of engineered compacted fill and backfill, including approval of fill materials and the performance of sufficient density tests to evaluate the degree of compaction being achieved.
6. Foundation excavations.

LIMITATIONS

This report contains geotechnical conclusions and recommendations developed solely for use by Passco Pacifica, LLC, and their design consultants, for the purposes described earlier. It may not contain sufficient information for other uses or the purposes of other parties. The contents should not be extrapolated to other areas or used for other facilities without consulting LOR Geotechnical Group, Inc.

The recommendations are based on interpretations of the subsurface conditions concluded from information gained from subsurface explorations and a surficial site reconnaissance. The interpretations may differ from actual subsurface conditions, which can vary horizontally and vertically across the site. If conditions are encountered during the construction of the project which differ significantly from those presented in this report, this firm should be notified immediately in order that we may assess the impact to the recommendations provided.

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Due to possible subsurface variations, all aspects of field construction addressed in this report should be observed and tested by the project geotechnical consultant.

If parties other than LOR Geotechnical Group, Inc., provide construction monitoring services, they must be notified that they will be required to assume responsibility for the geotechnical phase of the project being completed by concurring with the recommendations provided in this report or by providing alternative recommendations.

The report was prepared using generally accepted geotechnical engineering practices under the direction of a state licensed geotechnical engineer. No warranty, expressed or implied, is made as to conclusions and professional advice included in this report. Any persons using this report for bidding or construction purposes should perform such independent investigations as deemed necessary to satisfy themselves as to the surface and subsurface conditions to be encountered and the procedures to be used in the performance of work on this project.

TIME LIMITATIONS

The findings of this report are valid as of this date. Changes in the condition of a property can, however, occur with the passage of time, whether they be due to natural processes or the work of man on this or adjacent properties. In addition, changes in the Standards-of-Practice and/or Governmental Codes may occur. Due to such changes, the findings of this report may be invalidated wholly or in part by changes beyond our control. Therefore, this report should not be relied upon after a significant amount of time without a review by LOR Geotechnical Group, Inc. verifying the suitability of the conclusions and recommendations.

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CLOSURE

It has been a pleasure to assist you with this project. We look forward to being of further assistance to you as construction begins. Should conditions be encountered during construction that appear to be different than as indicated by this report, please contact this office immediately in order that we might evaluate these conditions.

Should you have any questions regarding this report, please do not hesitate to contact our office at your convenience.

Respectfully submitted,
LOR Geotechnical Group, Inc.


Andrew A. Tardie
Staff Geologist


Robert M. Markoff, CEG
Engineering Geologist


John P. Leuer, GE 2030
President

AAT:RMM:JPL:ss



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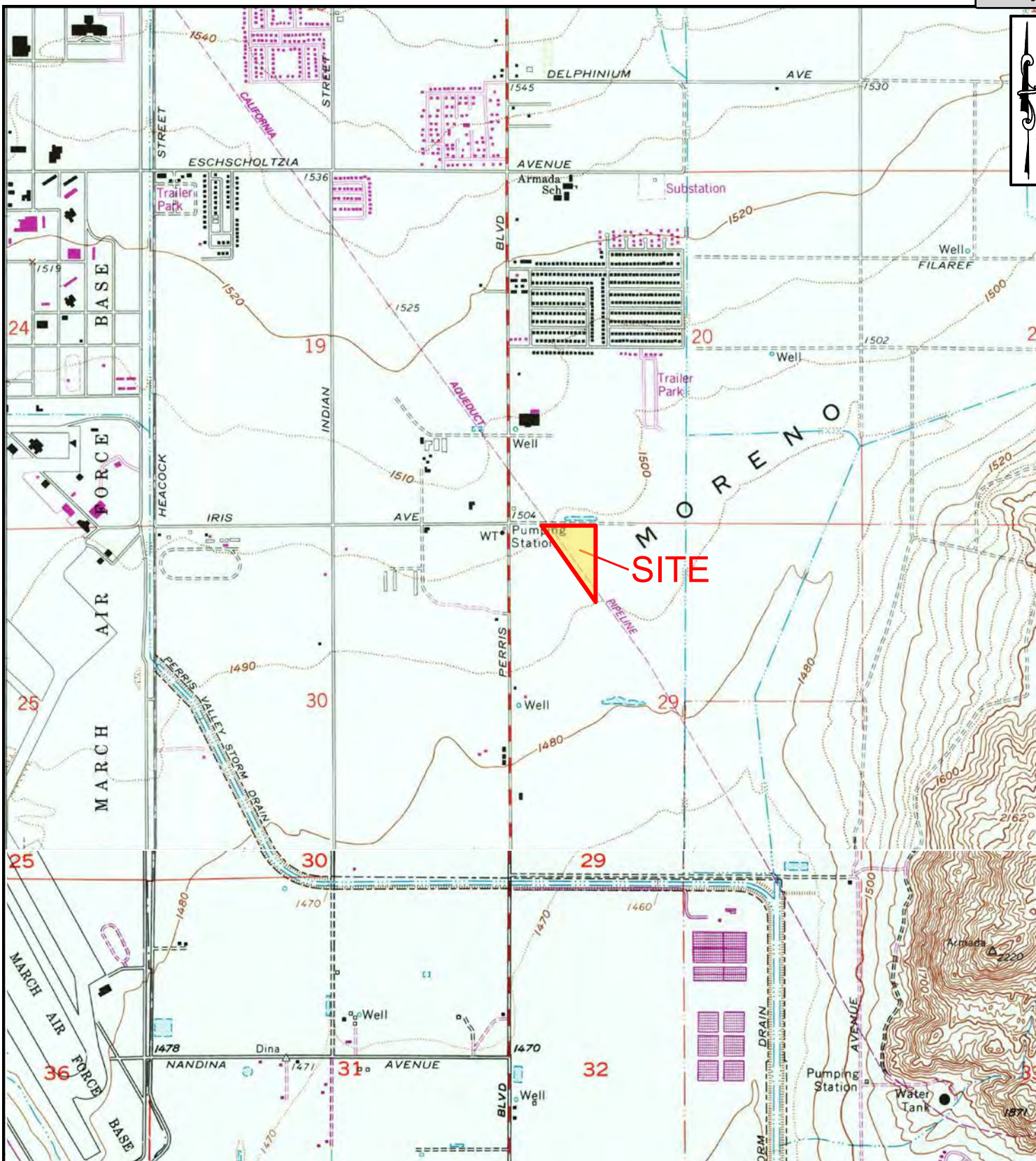
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APPENDIX A

Index Map, Site Plan, Regional Geologic Map and Historical Seismicity Maps



INDEX MAP

PROJECT:	IRIS PARK, MORENO VALLEY, CALIFORNIA	PROJECT NO:	33591.
CLIENT:	PASSCO PACIFICA, LLC	ENCLOSURE:	A-
LOR Geotechnical Group, Inc.		DATE:	NOVEMBER 2011
		SCALE:	1" = 2,000'





SUMMARY:
 AREA: 10.82 TOTAL ACRES
 100' Easement/Trail = 3.00 ACRES
 NO. OF LOTS: 84 @ 2,250 sf
 TOTAL DENSITY: 7.7 DU's/Ac
 NET DENSITY: 10.8 DU's/Ac



Legend
(Locations Approximate)

Map Symbols

-  **B-5** - Exploratory Boring
-  **I-2** - Infiltration Test

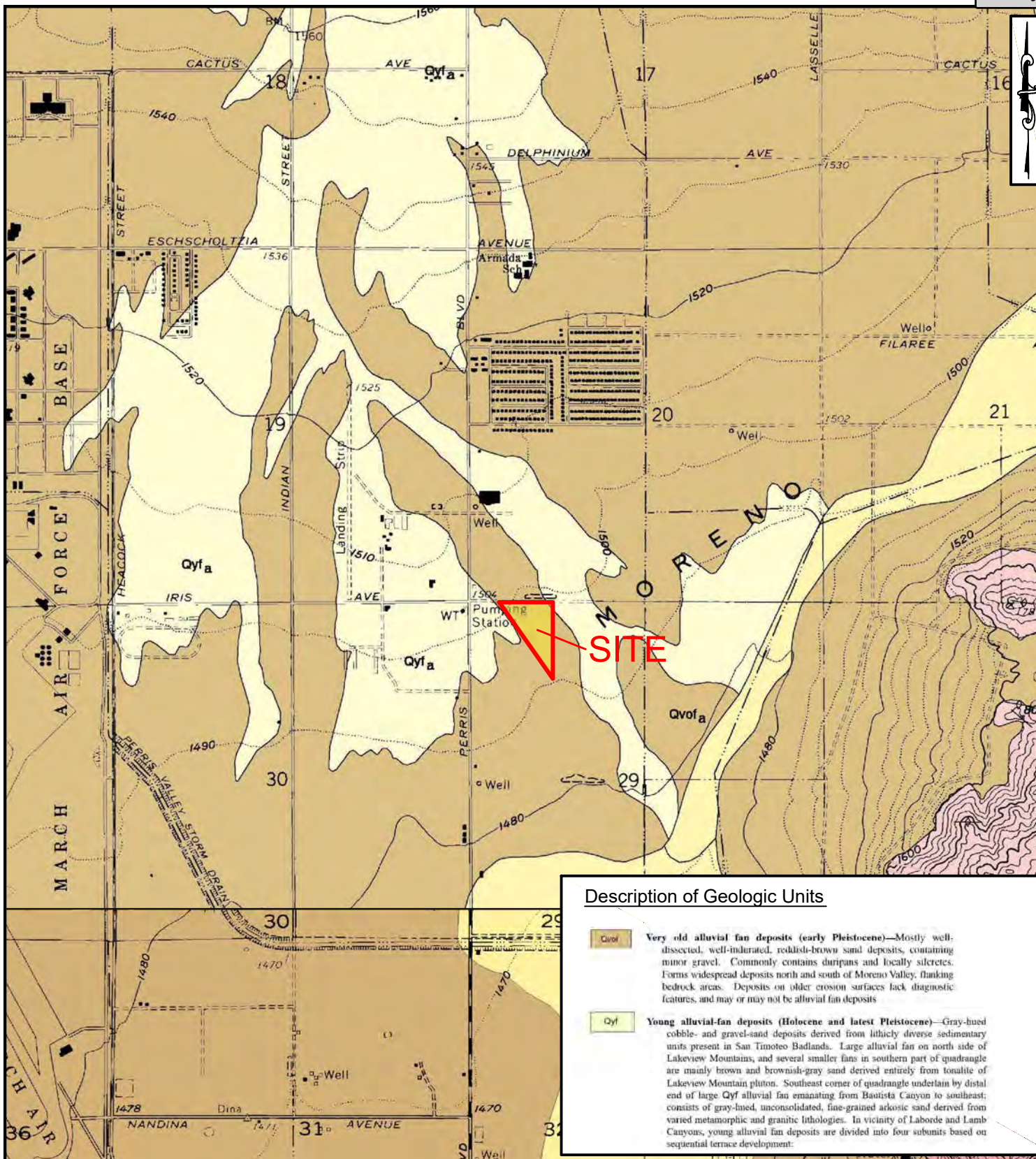


IRIS Park
 Moreno Valley, CA October 25, 2019
 Illustrative Concept Plan

SITE PLAN

PROJECT:	IRIS PARK, MORENO VALLEY, CALIFORNIA	PROJECT NO:	33591.
CLIENT:	PASSCO PACIFICA, LLC	ENCLOSURE:	A.
LOR Geotechnical Group, Inc.		DATE:	NOVEMBER 2019
		SCALE:	1" ≈ 200'

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with



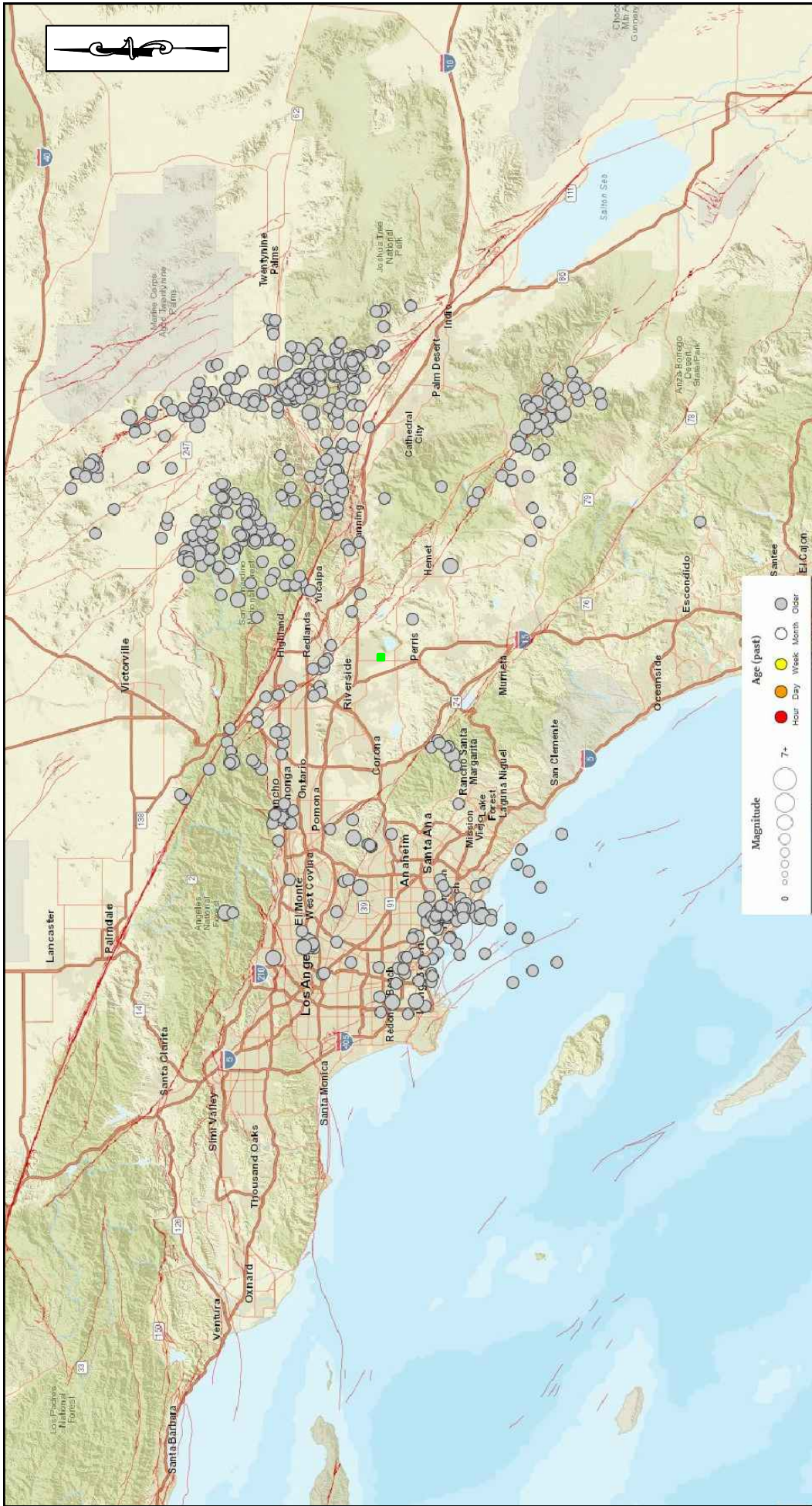
Description of Geologic Units

- Qvof** Very old alluvial fan deposits (early Pleistocene)—Mostly well-dissected, well-indurated, reddish-brown sand deposits, containing minor gravel. Commonly contains duripans and locally siltstones. Forms widespread deposits north and south of Moreno Valley, flanking bedrock areas. Deposits on older erosion surfaces lack diagnostic features, and may or may not be alluvial fan deposits.
- Qyf** Young alluvial-fan deposits (Holocene and latest Pleistocene)—Gray-lined cobble- and gravel-sand deposits derived from lithically diverse sedimentary units present in San Timoteo Badlands. Large alluvial fan on north side of Lakeview Mountains, and several smaller fans in southern part of quadrangle are mainly brown and brownish-gray sand derived entirely from tonalite of Lakeview Mountain pluton. Southeast corner of quadrangle underlain by distal end of large Qyf alluvial fan emanating from Bautista Canyon to southeast; consists of gray-lined, unconsolidated, fine-grained arkosic sand derived from varied metamorphic and granitic lithologies. In vicinity of Laborde and Lamb Canyons, young alluvial fan deposits are divided into four subunits based on sequential terrace development.

REGIONAL GEOLOGIC MAP (Morton, 2003 & Morton & Matti, 200)

PROJECT:	IRIS PARK, MORENO VALLEY, CALIFORNIA	PROJECT NO:	33591.
CLIENT:	PASSCO PACIFICA, LLC	ENCLOSURE:	A.
LOR Geotechnical Group, Inc.		DATE:	NOVEMBER 2011
		SCALE:	1" = 2,000'

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with



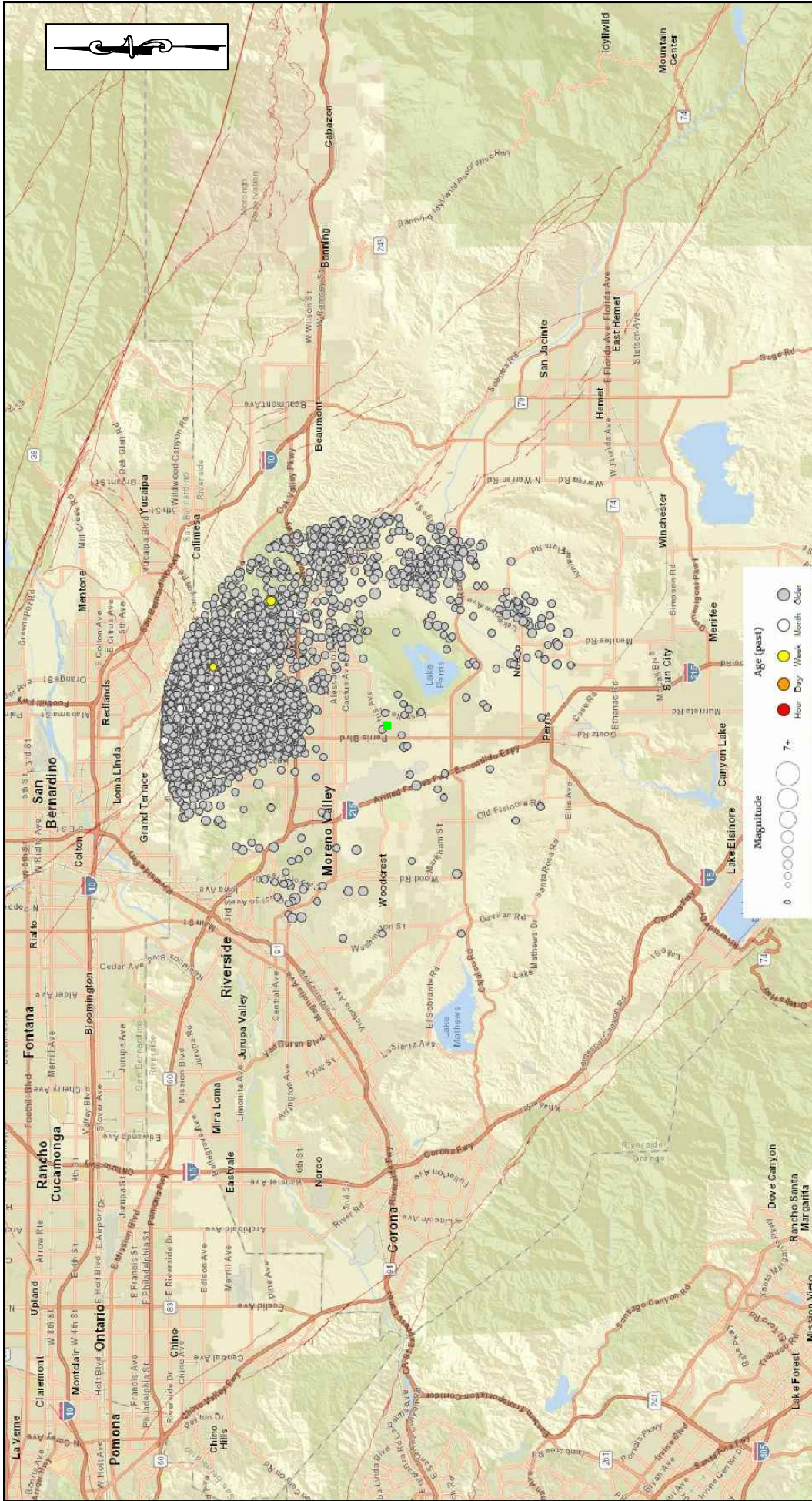
U.S. Geologic Survey (2017a) real-time earthquake epicenter map. Plotted are 544 epicenters of instrument-recorded events from 1978 to present (11/20/19) of local magnitude M4.0 or greater within a radius of ~62 miles (100 kilometers) of the site. Location accuracy varies. The site is indicated by the green square. The selected magnitude corresponds to a threshold intensity value where very light damage potential begins. These events are also generally widely felt by persons. Red lines mark the surface traces of known Quaternary-age faults.

HISTORICAL SEISMICITY MAP - 100km Radius

PROJECT:	IRIS PARK, MORENO VALLEY, CALIFORNIA	PROJECT NO.:	33591.1
CLIENT:	PASSCO PACIFICA, LLC	FIGURE:	A-4
		DATE:	NOVEMBER 2019
		SCALE:	1" ≈ 40km

LOR Geotechnical Group, Inc.

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with



U.S. Geologic Survey (2017a) real-time earthquake epicenter map. Plotted are 4,945 epicenters of instrument-recorded events from 1932 to present (11/20/19) of local magnitude M1.0 or greater within a radius of ~9.3 miles (15 kilometers) of the site. Location accuracy varies. The site is indicated by the green square. Red lines mark the surface traces of known Quaternary-age faults.

HISTORICAL SEISMICITY MAP - 15km Radius

PROJECT:	IRIS PARK, MORENO VALLEY, CALIFORNIA	PROJECT NO.:	33591.1
CLIENT:	PASSCO PACIFICA, LLC	FIGURE:	A-5
		DATE:	NOVEMBER 2019
		SCALE:	1" ≈ 10km

LOR Geotechnical Group, Inc.

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

APPENDIX B

Field Investigation Program and Boring Logs

APPENDIX B FIELD INVESTIGATION

Subsurface Exploration

The site was investigated on November 7, 2019 and consisted of advancing 5 exploratory borings to depths between 21.5 feet and 51.5 feet below the existing ground surface. The approximate locations of the borings are shown on Enclosure A-2, within Appendix A.

The drilling exploration was conducted using a truck-mounted Mobile B-61 drill rig equipped with 8-inch diameter hollow stem augers. The soils were continuously logged by our geologist who inspected the site, created detailed logs of the borings, obtained undisturbed, as well as disturbed, soil samples for evaluation and testing, and classified the soils by visual examination in accordance with the Unified Soil Classification System.

Relatively undisturbed samples of the subsoils were obtained at a maximum interval of 5 feet. The samples were recovered by using a California split barrel sampler of 2.50 inch inside diameter and 3.25 inch outside diameter or a Standard Penetration Sampler (SPT) from the ground surface to the total depth explored. The samplers were driven by a 140 pound automatic trip hammer dropped from a height of 30 inches. The number of hammer blows required to drive the sampler into the ground the final 12 inches were recorded and further converted to an equivalent SPT N-value. Factors such as efficiency of the automatic trip hammer used during this investigation (80%), borehole diameter (8"), and rod length at the test depth were considered for further computing of equivalent SPT N-values corrected for field procedures (N₆₀) which are included in the boring logs, Enclosures B-1 through B-5.

The undisturbed soil samples were retained in brass sample rings of 2.42 inches in diameter and 1.00 inch in height, and placed in sealed containers. Disturbed soil samples were obtained at selected levels within the borings and placed in sealed containers for transport to the laboratory.

All samples obtained were taken to our geotechnical laboratory for storage and testing. Detailed logs of the borings are presented on the enclosed Boring Logs, Enclosures B-1 through B-5. A Boring Log Legend and Soil Classification Chart are presented on Enclosures B-i and B-ii, respectively.

CONSISTENCY OF SOIL

SANDS

SPT BLOWS

CONSISTENCY

0-4	Very Loose
4-10	Loose
10-30	Medium Dense
30-50	Dense
Over 50	Very Dense

COHESIVE SOILS

SPT BLOWS

CONSISTENCY

0-2	Very Soft
2-4	Soft
4-8	Medium
8-15	Stiff
15-30	Very Stiff
30-60	Hard
Over 60	Very Hard

SAMPLE KEY

Symbol

Description



INDICATES CALIFORNIA SPLIT SPOON SOIL SAMPLE

INDICATES BULK SAMPLE

INDICATES SAND CONE OR NUCLEAR DENSITY TEST

INDICATES STANDARD PENETRATION TEST (SPT) SOIL SAMPLE

TYPES OF LABORATORY TESTS

- 1 Atterberg Limits
- 2 Consolidation
- 3 Direct Shear (undisturbed or remolded)
- 4 Expansion Index
- 5 Hydrometer
- 6 Organic Content
- 7 Proctor (4", 6", or Cal216)
- 8 R-value
- 9 Sand Equivalent
- 10 Sieve Analysis
- 11 Soluble Sulfate Content
- 12 Swell
- 13 Wash 200 Sieve

BORING LOG LEGEND

PROJECT: PROPOSED IRIS PARK RESIDENTIAL DEVELOPMENT, MORENO VALLEY, CALIFORNIA		PROJECT NO.: 33591.1
CLIENT: PASSCO PACIFICA, LLC		ENCLOSURE: B-
LOR Geotechnical Group, Inc.		DATE: NOVEMBER 2019

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS <small>MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE</small>	GRAVEL AND GRAVELLY SOILS <small>MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE</small>	CLEAN GRAVELS <small>(LITTLE OR NO FINES)</small>		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
	SAND AND SANDY SOILS <small>MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE</small>	CLEAN SANDS <small>(LITTLE OR NO FINES)</small>		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		SM	SILTY SANDS, SAND - SILT MIXTURES
FINE GRAINED SOILS <small>MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE</small>	SILTS AND CLAYS <small>LIQUID LIMIT LESS THAN 50</small>		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	SILTS AND CLAYS <small>LIQUID LIMIT GREATER THAN 50</small>		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS	
			CH	INORGANIC CLAYS OF HIGH PLASTICITY	
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

PARTICLE SIZE LIMITS

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		COARSE	FINE	COARSE	MEDIUM	FINE	
12"	3"	3/4"	No. 4	No. 10	No. 40	200	
(U.S. STANDARD SIEVE SIZE)							

SOIL CLASSIFICATION CHART

PROJECT PROPOSED IRIS PARK RESIDENTIAL DEVELOPMENT, MORENO VALLEY, CALIFORNIA	PROJECT NO. 33591.1
CLIENT: PASSCO PACIFICA, LLC	ENCLOSURE: B-ii
LOR Geotechnical Group, Inc.	DATE: NOVEMBER 2019

LOG OF BORING B-1

TEST DATA								U.S.C.S.	DESCRIPTION
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY			
0									
14		3, 4, 7, 9, 10, 11	6.0	120.0			SM	@ 0 feet, FILL/TOPSOIL: SILTY SAND, approximately 10% coarse grained sand, 20% medium grained sand, 30% fine grained sand, 40% silty fines, light brown, dry, loose.	
5	7		1.8	105.5			ML	@ 2 feet, ALLUVIUM: SANDY SILT, approximately 5% coarse grained sand, 15% medium grained sand, 20% fine grained sand, 60% silty fines, brown, damp, trace pinhole porosity.	
	21		9.5	101.2			SW SM	@ 5 feet, WELL GRADED SAND with SILT, approximately 25% coarse grained sand, 35% medium grained sand, 30% fine grained sand, 10% silty fines, light brown, dry.	
10	26		9.1	113.8			ML	@ 7 feet, some sandy silt layers approximately 1 to 2" thick, damp.	
15	32		10.6	117.5				@ 10 feet, SANDY SILT, approximately 5% coarse grained sand, 10% medium grained sand, 10% fine grained sand, 75% silty fines with trace clay, brown, damp, trace pinhole porosity.	
20	40		10.9	112.3				@ 15 feet, increase in clay, strong brown.	
25	37		17.9	109.5			SM	@ 20 feet, contains some secondary calcite.	
30								@ 25 feet, SILTY SAND, trace medium grained sand, approximately 80% fine grained sand, 20% silty fines, light brown, damp.	
35								END OF BORING @ 26.5'	
								Fill/topsoil to 2' No groundwater No bedrock	

PROJECT: Proposed Iris Park Residential Development	PROJECT NUMBER: 33591.1
CLIENT: Passco Pacifica, LLC	ELEVATION:
LOR GEOTECHNICAL GROUP INC.	DATE DRILLED: November 7, 2019
	EQUIPMENT: Mobile B-61
	HOLE DIA.: 8" ENCLOSURE: B-1

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

LOG OF BORING B-2

TEST DATA							LITHOLOGY	U.S.C.S.	DESCRIPTION
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE				
0							SM	@ 0 feet, FILL/TOPSOIL: SILTY SAND , approximately 15% coarse grained sand, 20% medium grained sand, 20% fine grained sand, 45% silty fines, light brown, dry, loose.	
9	9	2	3.7	112.4	█			@ 2 feet, ALLUVIUM: SILTY SAND , approximately 15% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 35% silty fines, brown, damp.	
5	8		3.5	100.8	█			@ 5 feet, SILTY SAND , approximately 10% coarse grained sand, 20% medium grained sand, 50% fine grained sand, 20% silty fines, light brown, dry, trace thin calcite stringers.	
	21		4.2	113.5	█			@ 7 feet, becomes coarser grained, approximately 25% coarse grained sand, 30% medium grained sand, 35% fine grained sand, 15% silty fines, brown, dry.	
10	36		4.0	112.4	█		SP SM	@ 10 feet, POORLY GRADED SAND with SILT , approximately 5% coarse grained sand, 25% medium grained sand, 60% fine grained sand, 10% silty fines, light brown, dry, micaceous.	
15	66		13.0	120.6	█		CL	@ 15 feet, LEAN CLAY with SAND , approximately 20% fine grained sand, 80% clayey fines of low plasticity, strong brown, damp.	
20	27		7.7	113.5	█		SM	@ 20 feet, SILTY SAND , approximately 20% coarse grained sand, 20% medium grained sand, 30% fine grained sand, 30% silty fines, brown, damp, some secondary calcite.	
25	48		7.6	115.2	█				
30	31		12.2		|||||				
35	48		12.8		|||||		SW	@ 33.5 feet, groundwater.	
40	29		17.7		|||||		CL	@ 35 feet, WELL GRADED SAND , approximately 35% coarse grained sand, 35% medium grained sand, 35% fine grained sand, 5% silty fines, speckled red-brown, wet.	
45	17	1	14.9		|||||			@ 40 feet, LEAN CLAY with SAND , approximately 10% medium grained sand, 20% fine grained sand, 70% clayey fines of low plasticity, brown, moist.	
50	32		17.3		|||||				
55								END OF BORING @ 51.5'	
								Fill/topsoil to 2' Groundwater @ 33.5' No bedrock	

PROJECT: Proposed Iris Park Residential Development	PROJECT NUMBER: 33591.1
CLIENT: Passco Pacifica, LLC	ELEVATION:
LOR GEOTECHNICAL GROUP INC.	DATE DRILLED: November 7, 2019
	EQUIPMENT: Mobile B-61
	HOLE DIA.: 8" ENCLOSURE: B-2

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

LOG OF BORING B-3

TEST DATA								U.S.C.S.	DESCRIPTION
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY			
0							SM	@ 0 feet, FILL/TOPSOIL: SILTY SAND , approximately 10% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 40% silty fines, light brown, dry, loose.	
9			6.7	106.3	█		ML	@ 2 feet, ALLUVIUM: SANDY SILT , approximately 5% coarse grained sand, 15% medium grained sand, 20% fine grained sand, 60% silty fines, brown, damp, trace pinhole porosity.	
5	6		3.5	106.1	█		SM	@ 5 feet, SILTY SAND , approximately 15% coarse grained sand, 25% medium grained sand, 35% fine grained sand, 20% silty fines, light brown, dry.	
	15		0.6	109.5	█		SP	@ 7 feet, POORLY GRADED SAND , approximately 5% coarse grained sand, 35% medium grained sand, 45% fine grained sand, 5% silty fines, red-brown, dry.	
10	25		11.8	116.9	█		CL	@ 10 feet, LEAN CLAY with SAND , approximately 5% coarse grained sand, 10% medium grained sand, 20% fine grained sand, 65% clayey fines of low plasticity, strong brown, damp, trace thin calcite stringers, trace pinhole porosity, some root hairs.	
15	22		10.6	117.0	█		SC	@ 15 feet, CLAYEY SAND , approximately 15% coarse grained sand, 25% medium grained sand, 30% fine grained sand, 30% clayey fines of low plasticity, brown, damp.	
20	60		8.4	124.8	█				
								END OF BORING @ 21.5'	
								Fill/topsoil to 2' No groundwater No bedrock	
25									

PROJECT: Proposed Iris Park Residential Development	PROJECT NUMBER: 33591.1
CLIENT: Passco Pacifica, LLC	ELEVATION:
LOR GEOTECHNICAL GROUP INC.	DATE DRILLED: November 7, 2019
	EQUIPMENT: Mobile B-61
	HOLE DIA.: 8" ENCLOSURE: B-3

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

LOG OF BORING B-4

TEST DATA								DESCRIPTION
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	
0		8, 9, 10, 11					SM	@ 0 feet, <u>FILL/TOPSOIL</u> : SILTY SAND, approximately 10% coarse grained sand, 15% medium grained sand, 30% fine grained sand, 45% silty fines, brown, dry, loose.
19			5.8	106.8				@ 2 feet, <u>ALLUVIUM</u> : SILTY SAND, approximately 15% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 35% silty fines, brown, dry, trace pinhole porosity.
5	19		4.9	101.1			ML	@ 5 feet, <u>SANDY SILT</u> , approximately 15% medium grained sand, 25% fine grained sand, 60% silty fines, light brown, dry, some root hairs, trace pinhole porosity.
	21	2	2.6	109.8			SM	@ 7 feet, <u>SILTY SAND</u> , approximately 10% coarse grained sand, 35% medium grained sand, 35% fine grained sand, 20% silty fines, light brown, dry.
10	21		3.5	107.9				
15	38		8.1	128.2			SC	@ 15 feet, <u>CLAYEY SAND</u> , approximately 20% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 30% clayey fines of low plasticity, brown, damp.
20	55		8.8	121.3			ML	@ 20 feet, <u>SANDY SILT</u> , approximately 5% coarse grained sand, 15% medium grained sand, 15% fine grained sand, 65% silty fines with trace clay, brown, damp.
								END OF BORING @ 21.5'
								Fill/topsoil to 2' No groundwater No bedrock
25								

PROJECT: Proposed Iris Park Residential Development	PROJECT NUMBER: 33591.1
CLIENT: Passco Pacifica, LLC	ELEVATION:
LOR GEOTECHNICAL GROUP INC.	DATE DRILLED: November 7, 2019
	EQUIPMENT: Mobile B-61
	HOLE DIA.: 8" ENCLOSURE: B-4

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

LOG OF BORING B-5

TEST DATA								DESCRIPTION	
DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.		
0		9, 10, 11					SM	@ 0 feet, <u>FILL</u> : SILTY SAND, approximately 10% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 40% silty fines, dry, loose. @ 2 feet, some rope debris.	
4.3	43		7.7	104.4					
5	19		5.5	103.1			ML	@ 5 feet, <u>ALLUVIUM</u> : SANDY SILT, approximately 10% medium grained sand, 30% fine grained sand, 60% silty fines, light brown, dry, some pinhole porosity.	
6.6	16	2	7.4	105.4					
10	18	2	8.9	107.0					
15	25		11.6				SC	@ 15 feet, <u>CLAYEY SAND</u> , approximately 20% coarse grained sand, 25% medium grained sand, 30% fine grained sand, 25% clayey fines of low plasticity, brown, damp.	
20	28		13.9						
21.5	END OF BORING @ 21.5'								
25	Fill to 5' No groundwater No bedrock								

PROJECT: Proposed Iris Park Residential Development	PROJECT NUMBER: 33591.1
CLIENT: Passco Pacifica, LLC	ELEVATION:
LOR GEOTECHNICAL GROUP INC.	DATE DRILLED: November 7, 2019
	EQUIPMENT: Mobile B-61
	HOLE DIA.: 8" ENCLOSURE: B-5

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

APPENDIX C

Laboratory Testing Program and Test Results

APPENDIX C LABORATORY TESTING

General

Selected soil samples obtained from our borings were tested in our geotechnical laboratory to evaluate the physical properties of the soils affecting foundation design and construction procedures. The laboratory testing program performed in conjunction with our investigation included in-place moisture content and dry density, laboratory compaction characteristics, direct shear, sieve analysis, sand equivalent, R-value, consolidation, expansion index, Atterberg limits, and soluble sulfate content. Descriptions of the laboratory tests are presented in the following paragraphs:

Moisture Density Tests

The moisture content and dry density information provides an indirect measure of soil consistency for each stratum, and can also provide a correlation between soils on this site. The dry unit weight and field moisture content were determined for selected undisturbed samples, in accordance with ASTM D 2922 and ASTM D 2216, respectively, and the results are shown on the Boring Logs, Enclosures B-1 through B-5 for convenient correlation with the soil profile.

Laboratory Compaction

Selected soil samples were tested in the laboratory to determine compaction characteristics using the ASTM D 1557 compaction test method. The results are presented in the following table:

LABORATORY COMPACTION				
Boring Number	Sample Depth (feet)	Soil Description (U.S.G.S.)	Maximum Dry Density (pcf)	Optimum Moisture Content (percent)
B-1	0-3	(SM) Silty Sand	134.0	8.5

C

Direct Shear Tests

Shear tests are performed with a direct shear machine in general accordance with ASTM D 3080 at a constant rate-of-strain (usually 0.04 inches/minute). The machine is designed to test a sample partially extruded from a sample ring in single shear. Samples are tested at varying normal loads in order to evaluate the shear strength parameters, angle of internal friction and cohesion. Samples are tested in a remolded condition (90 percent relative compaction per ASTM D 1557) and soaked, to represent the worst case conditions expected in the field.

The results of the shear tests are presented in the following table:

DIRECT SHEAR TESTS				
Boring Number	Sample Depth (feet)	Soil Description (U.S.G.S.)	Angle of Internal Friction (degrees)	Apparent Cohesion (psf)
B-1	0-3	(SM) Silty Sand	28	200

Sieve Analysis

A quantitative determination of the grain size distribution was performed for selected samples in accordance with the ASTM D 422 laboratory test procedure. The determination is performed by passing the soil through a series of sieves, and recording the weights of retained particles on each screen. The results of the sieve analyses are presented graphically on Enclosure C-1.

Sand Equivalent

The sand equivalent of selected soils were evaluated using the California Sand Equivalent Test Method, Caltrans Number 217. The results of the sand equivalent tests are presented with the grain size distribution analyses on Enclosure C-1.

R-Value Test

Soil samples were obtained at probable pavement subgrade level and was tested to determine its R-value using the California R-Value Test Method, Caltrans Number 301. The results of the R-value test is presented on Enclosure C-1.

Consolidation Tests

The apparatus used for the consolidation tests (odometer) is designed to test a one-inch high portion of the undisturbed soil sample as contained in a sample ring. Porous stones and filler paper are placed in contact with the top and bottom of the specimen to permit the addition or release of water. Loads are applied to the test specimen in specified increments, and the resulting axial deformations are recorded. The results are plotted as log of axial pressure versus consolidation or compression, expressed as strain or sample height.

Samples are tested at field and greater-than field moisture contents. The results are shown on Enclosures C-2 through C-5.

Expansion Index Tests

Remolded samples are tested to determine their expansion potential in accordance with the Expansion Index (EI) test. The test is performed in accordance with the Uniform Building Code Standard 18-2. The test results are presented in the following table:

EXPANSION INDEX TESTS				
Boring Number	Sample Depth (feet)	Soil Description (U.S.C.S.)	Expansion Index (EI)	Expansion Potential
B-1	0-3	(SM) Silty Sand	11	Very Low

Atterberg Limits

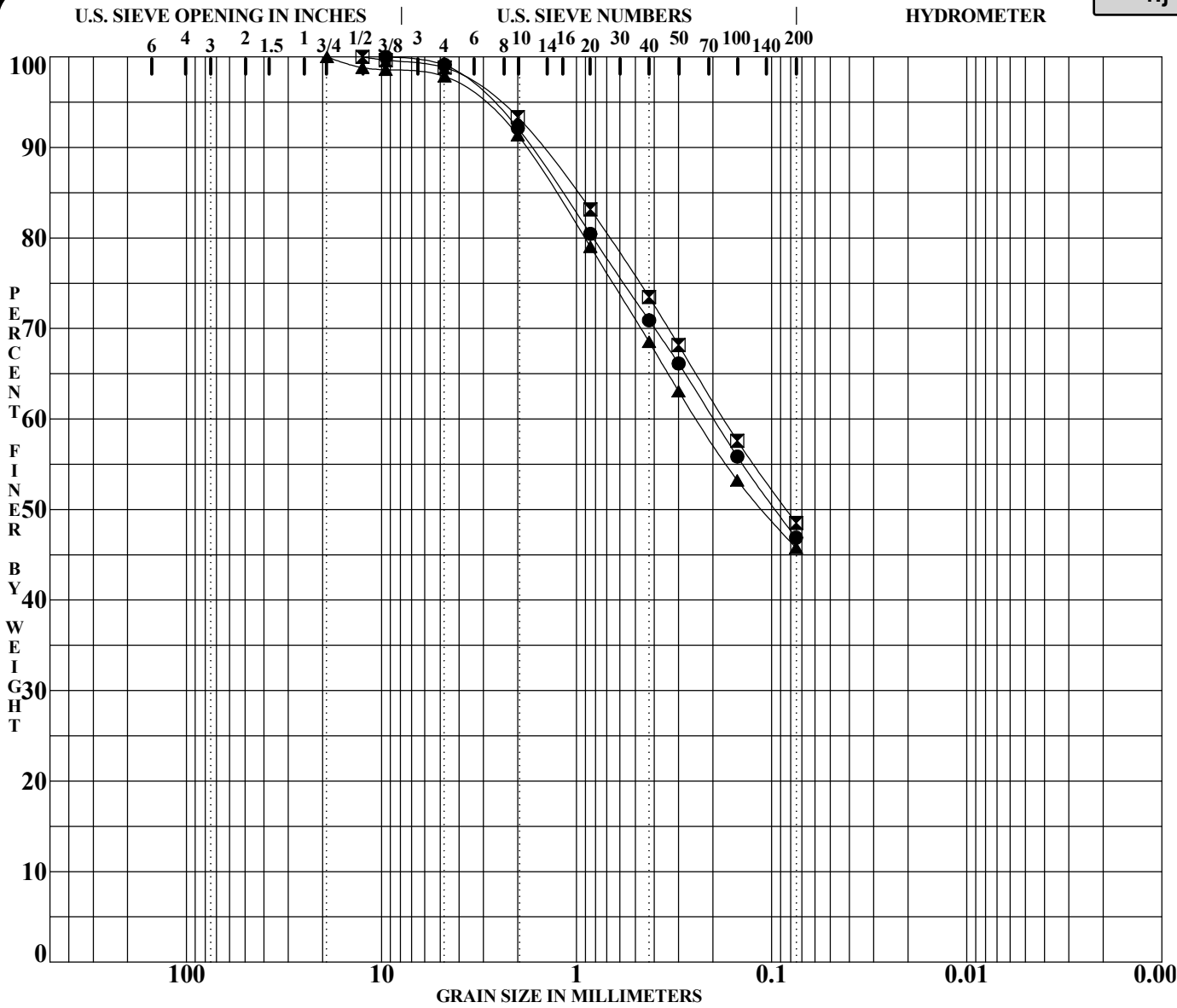
Selected samples of the fine-grained soil units encountered at the site are tested for their Atterberg limits in accordance with ASTM D 4318. The results of these tests are presented on Enclosure C-6.

Soluble Sulfate Content Tests

The soluble sulfate content of selected subgrade soils was evaluated and the concentration of soluble sulfates in the soils was determined by measuring the optical density of a barium sulfate precipitate. The precipitate results from a reaction of barium chloride with water extractions from the soil samples. The measured optical density is correlated with readings on precipitates of known sulfate concentrations. The test results are presented on the following table:

SOLUBLE SULFATE CONTENT TESTS			
Boring Number	Sample Depth (feet)	Soil Description (U.S.G.S.)	Sulfate Content (percent by weight)
B-1	0-3	(SM) Silty Sand	< 0.0085
B-4	0-3	(SM) Silty Sand	< 0.0075
B-5	0-3	(SM) Silty Sand	< 0.0055

C



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Soil Classification	SE	RV	PL	PI	Cc	Cu
● B-1 @ 0-3 ft	(SM) Silty Sand	13	--				
⊠ B-4 @ 0-3 ft	(SM) Silty Sand	13	28				
▲ B-5 @ 0-3 ft	(SM) Silty Sand	16	--				

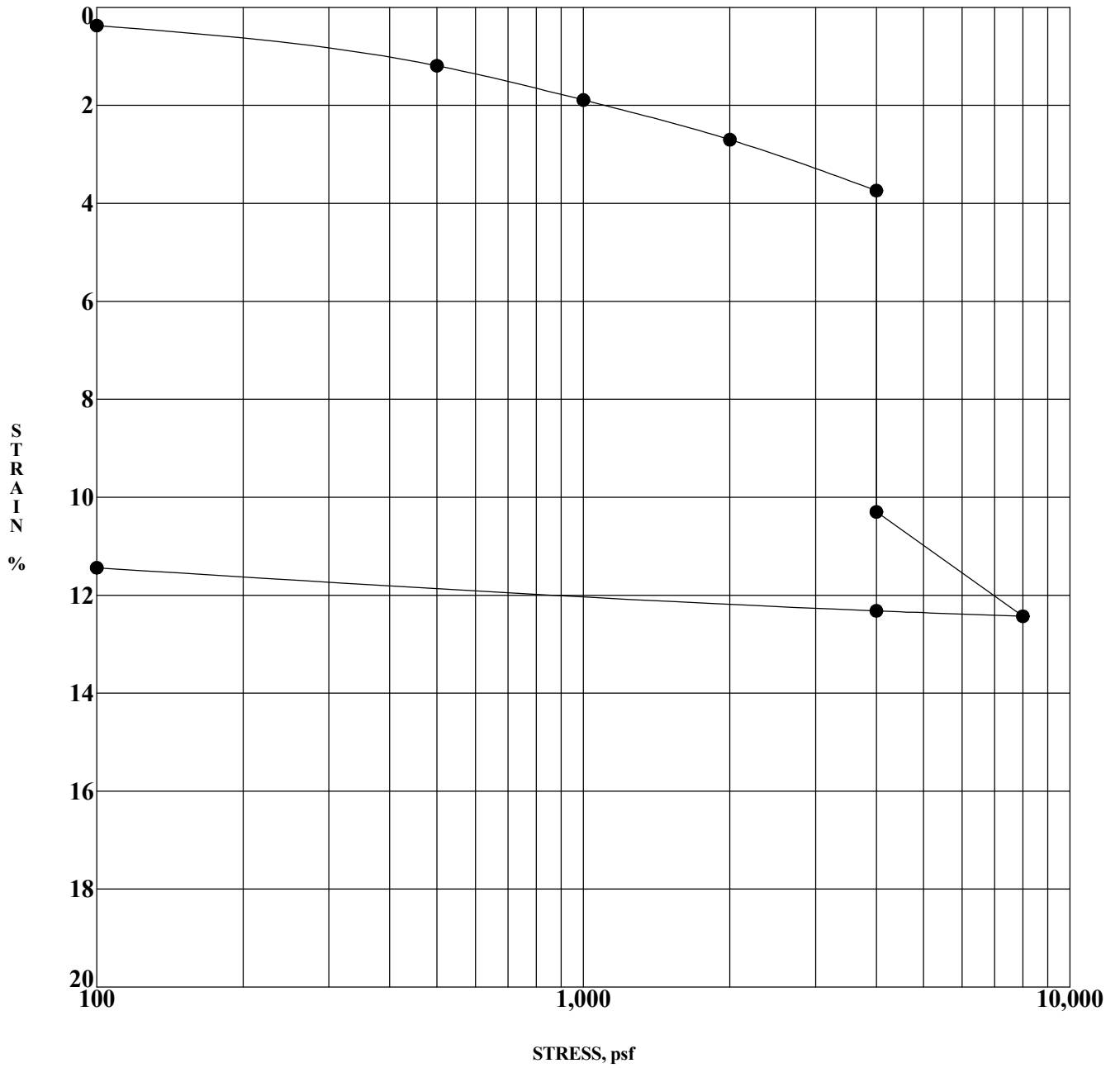
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-1 @ 0-3 ft	9.50	0.20			0.9	52.2		46.9
⊠ B-4 @ 0-3 ft	12.50	0.18			1.2	50.3		48.5
▲ B-5 @ 0-3 ft	19.00	0.24			2.1	52.1		45.8

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

GRADATION CURVES
 LOR Geotechnical Group, Inc.

ENCLOSURE C-1

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with



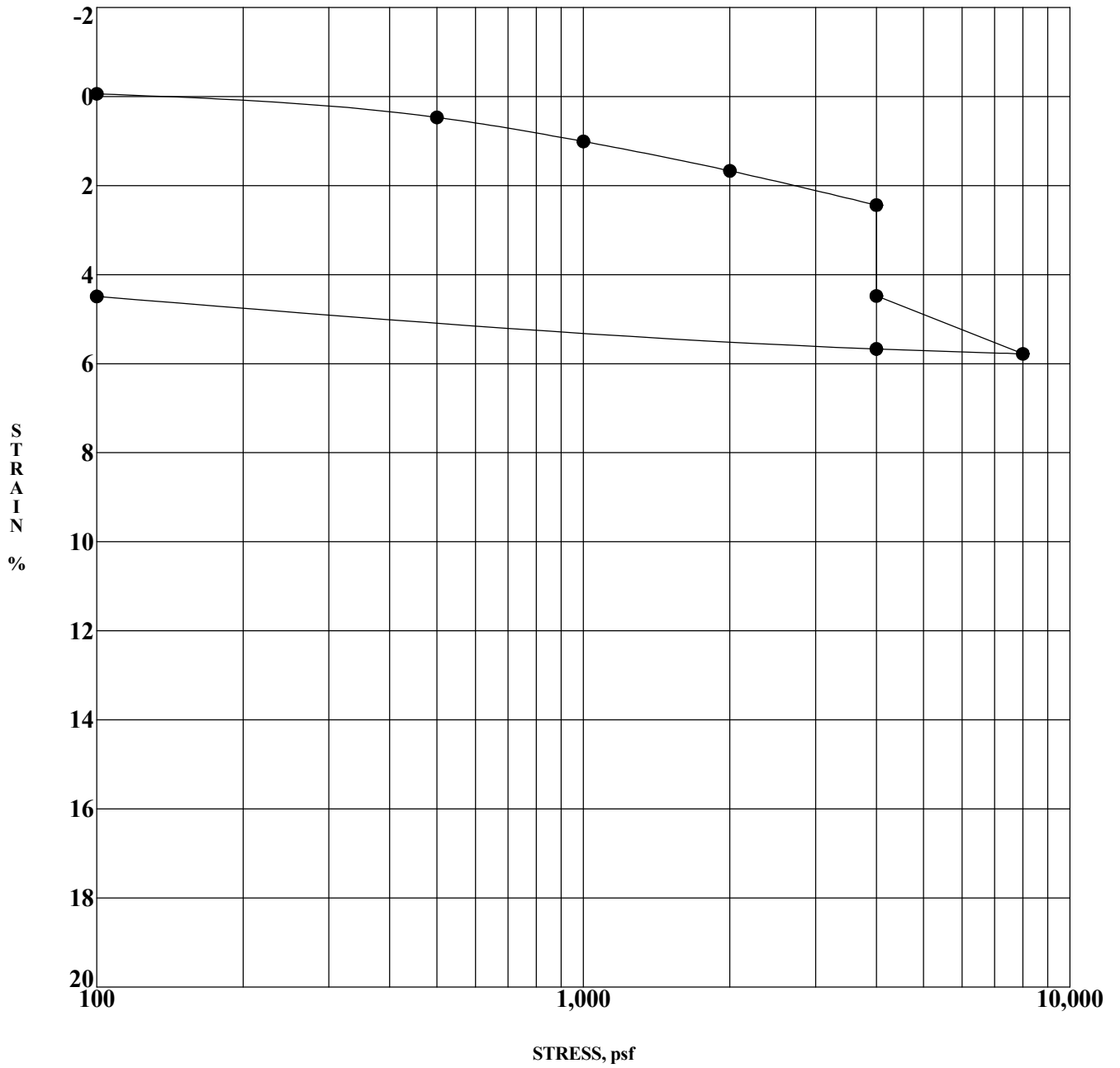
Specimen I.D.	Classification	DD	MC%
● B-2 @ 2 ft	(SM) Silty Sand	107	4

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

CONSOLIDATION TEST
 LOR Geotechnical Group, Inc.

ENCLOSURE C-2

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

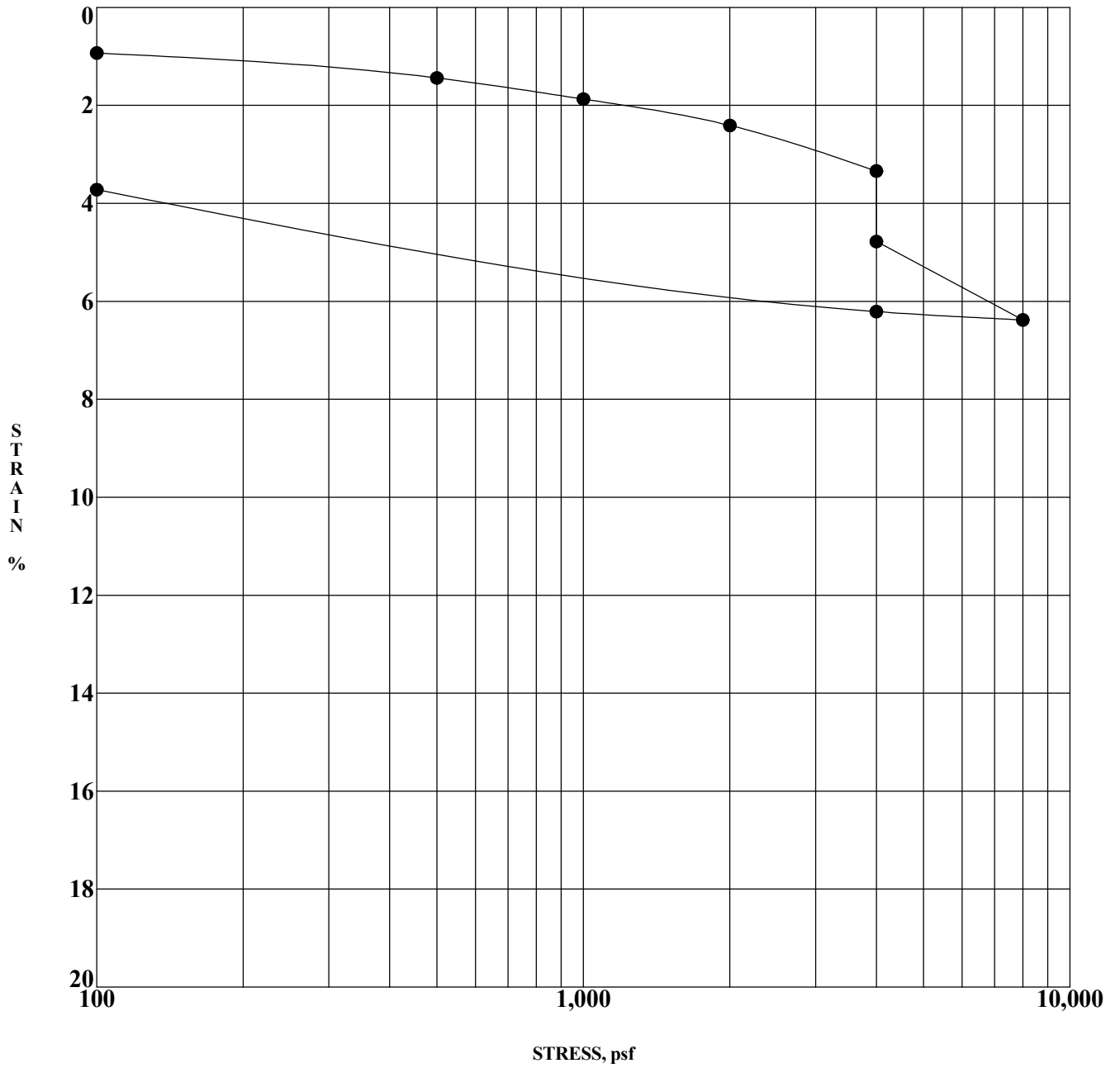


Specimen I.D.	Classification	DD	MC%
● B-4 @ 7 ft	(SM) Silty Sand	103	3

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

CONSOLIDATION TEST
 LOR Geotechnical Group, Inc.

ENCLOSURE C-3

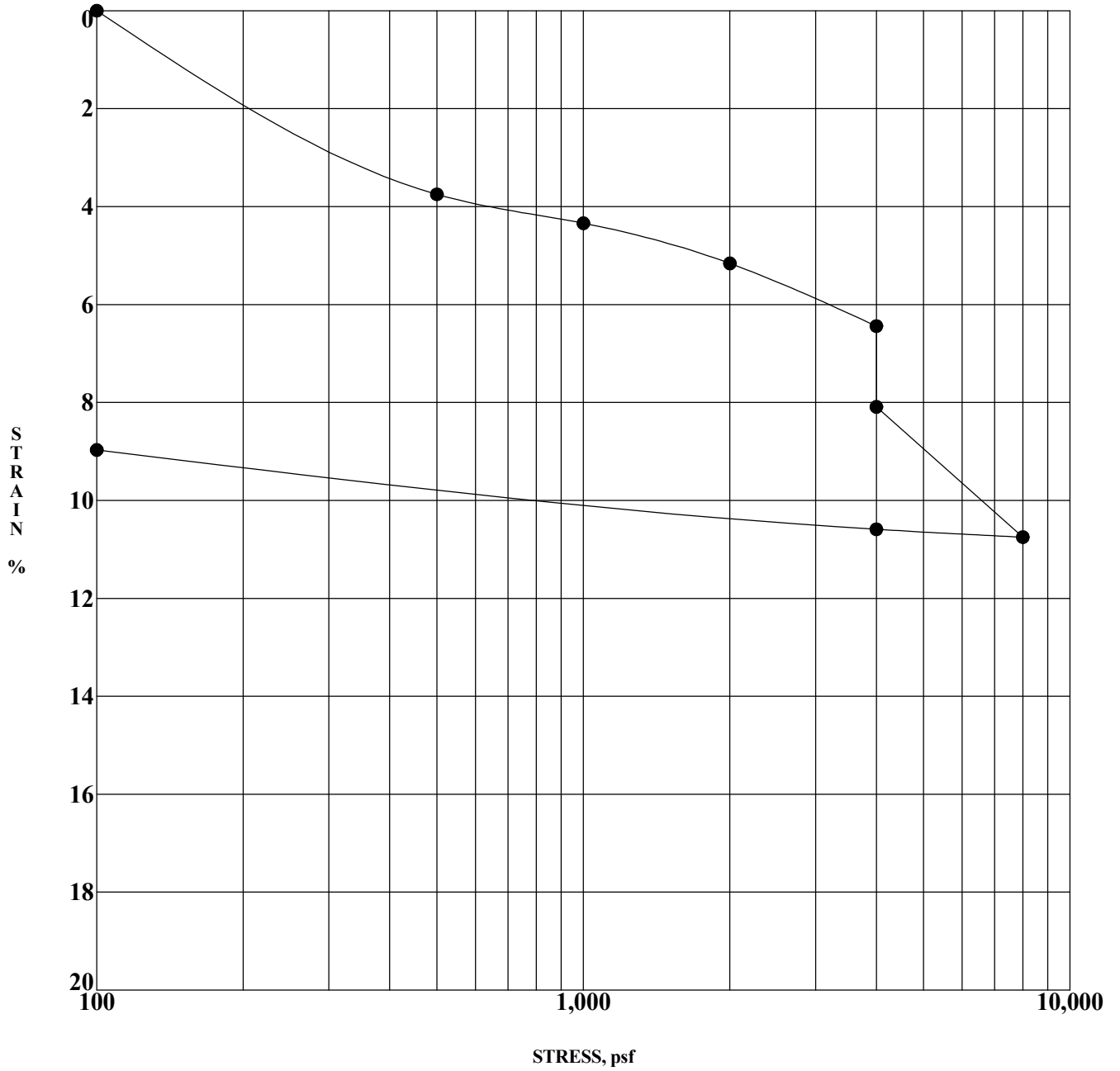


Specimen I.D.	Classification	DD	MC%
● B-5 @ 7 ft	(ML) Sandy Silt	103	7

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

CONSOLIDATION TEST
 LOR Geotechnical Group, Inc.

ENCLOSURE C-4

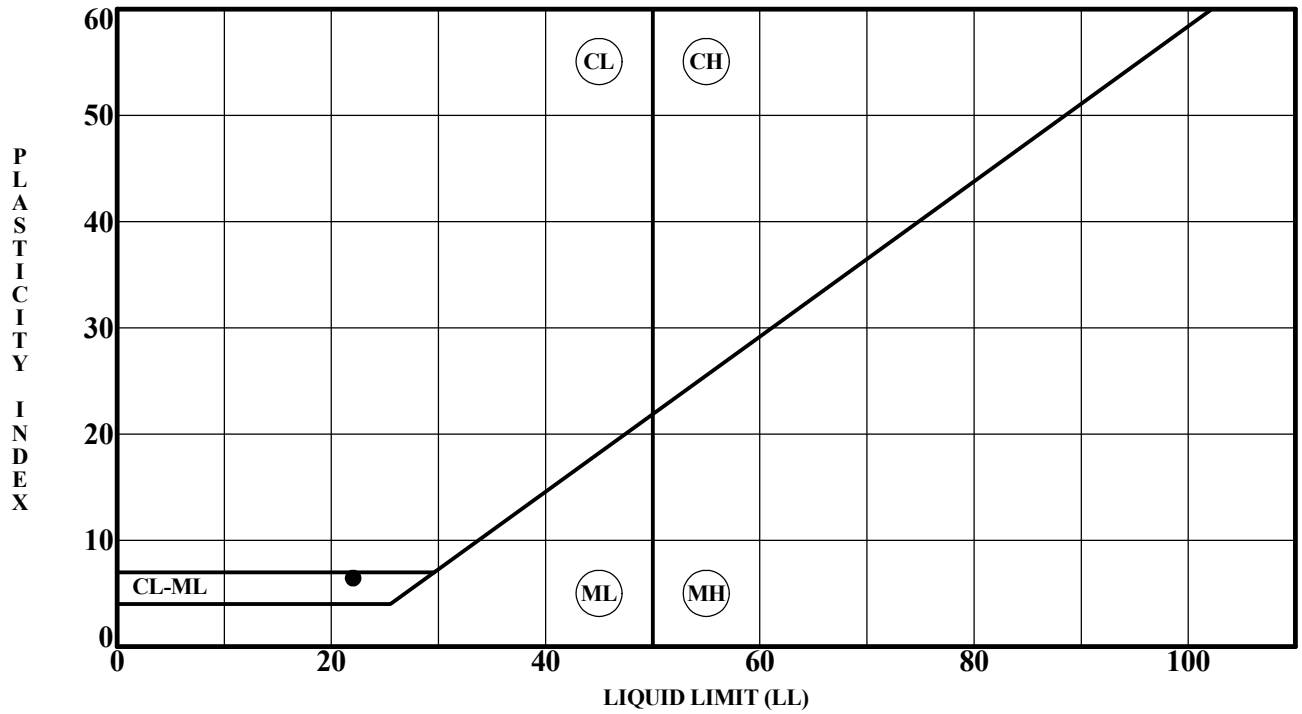


Specimen I.D.	Classification	DD	MC%
● B-5 @ 10 ft	(ML) Sandy Silt	106	9

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

CONSOLIDATION TEST
 LOR Geotechnical Group, Inc.

ENCLOSURE C-5



Specimen Identification	LL	PL	PI	Fines	Soil Classification
● B-2 @ 45 ft	22	16	6		(CL) Lean Clay with Sand

PROJECT Proposed Iris Park Residential Development PROJECT NO. 33591.1
 DATE 11/19/19

ATTERBERG LIMITS RESULTS
 LOR Geotechnical Group, Inc.

ENCLOSURE C-6

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

APPENDIX D

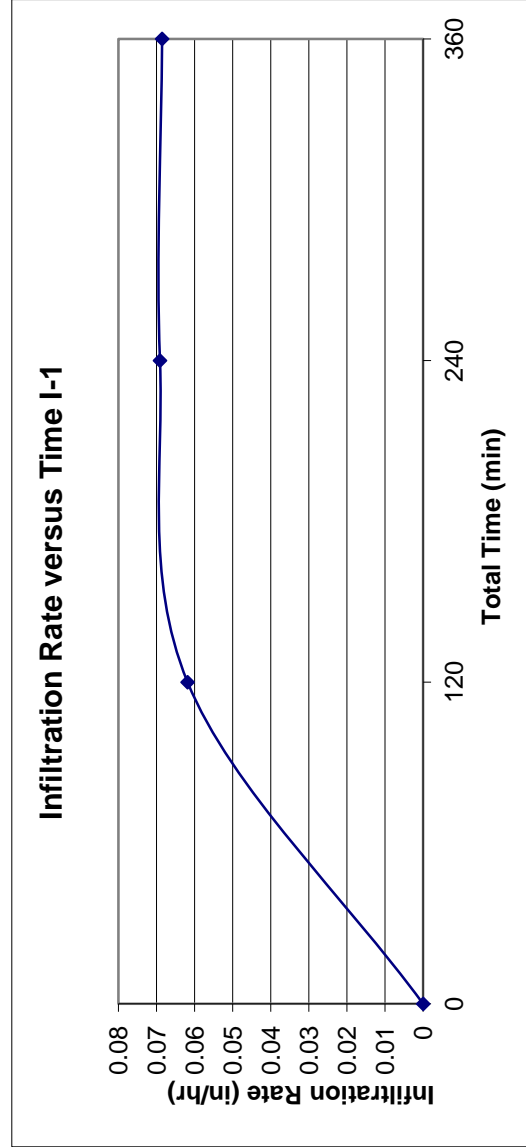
Infiltration Test Results

CONSTANT HEAD INFILTRMETER TEST DATA

Project: Iris Park
 Project No.: 33591.1
 Soil Classification: (ML) Sandy Silt
 Depth of Test Hole: 4 ft.
 Tested By: A.L.

Test Date: November 7, 2019
 Test Hole No.: I-1
 Test Hole Size: 8" x 8"
 Date Excavated: November 7, 2019

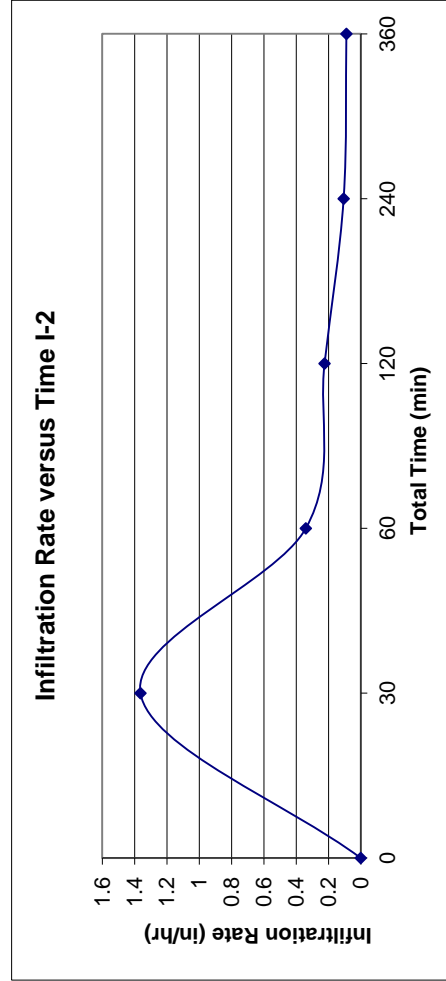
TEST PERIOD								
TRIAL NO.	TIME	TIME INTERVAL (minutes)	TOTAL ELAPSE TIME (minutes)	WATER USED (lbs.)	WATER USED (gal.)	INFILTRATION RATE (gal/sf/day)	INFILTRATION RATE (in/hr)	REMARKS
1	S 8:26	120	120	1.11	0.13	0.9	0.1	
	E 10:26							
2	S 10:26	120	240	1.24	0.15	1.0	0.1	
	E 12:26							
3	S 12:26	120	360	1.23	0.15	1.0	0.1	
	E 14:26							



CONSTANT HEAD INFILTROMETER TEST DATA

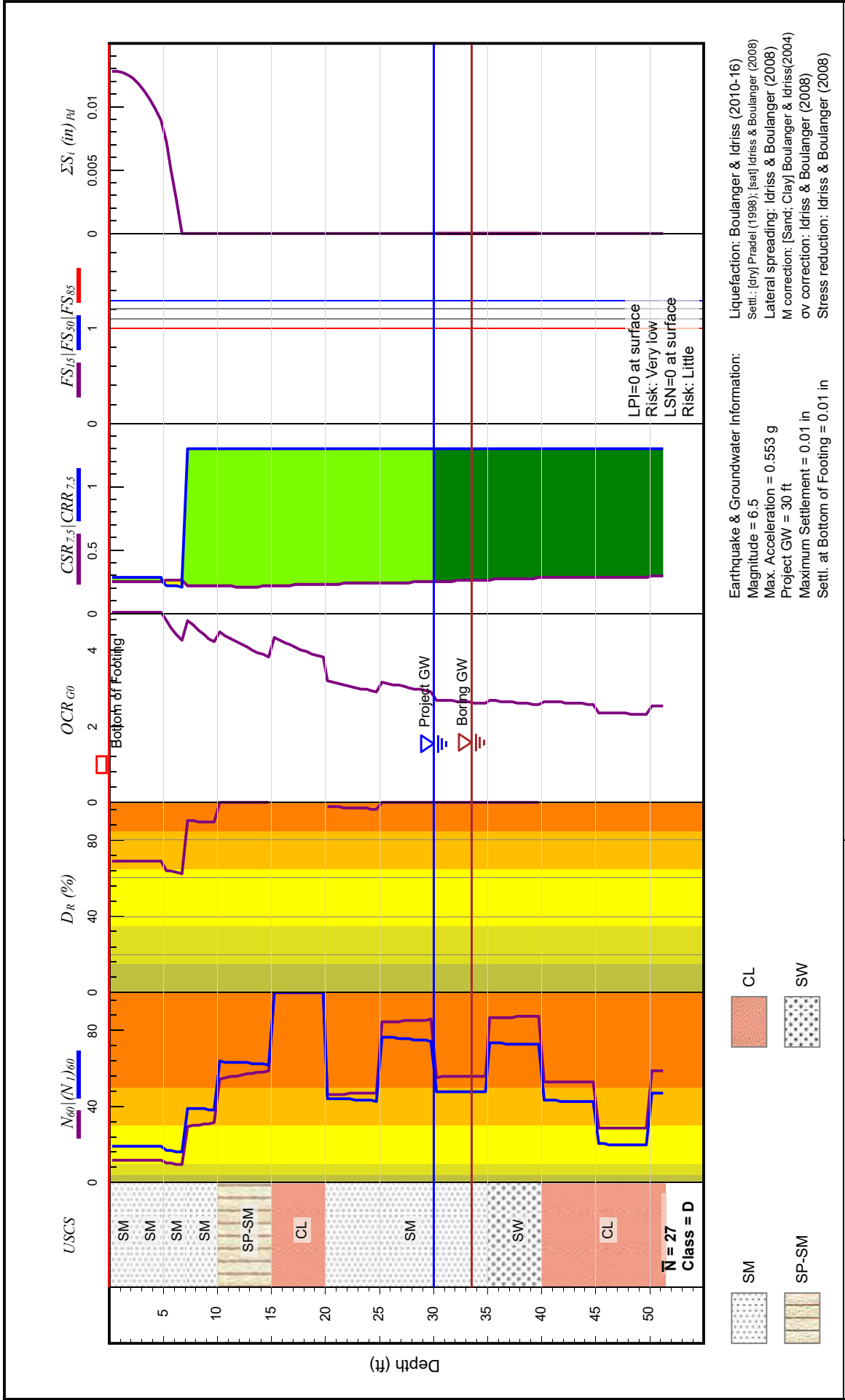
Project:	Iris Park	Test Date:	November 7, 2019
Project No.:	33591.1	Test Hole No.:	I-2
Soil Classification:	(ML) Sandy Silt	Test Hole Size:	6" x 8"
Depth of Test Hole:	4 ft.	Date Excavated:	November 7, 2019
Tested By:	A.L.		

TRIAL NO.	TIME	TEST PERIOD							REMARKS
		TIME INTERVAL (minutes)	TOTAL ELAPSE TIME (minutes)	WATER USED (lbs.)	WATER USED (gal.)	INFILTRATION RATE (gal/sf/day)	INFILTRATION RATE (in/hr)		
1	S 8:20	30	30	4.41	0.53	20.3	1.4		
	E 8:50								
2	S 8:50	30	60	1.10	0.13	5.1	0.3		
	E 9:20								
3	S 9:20	60	120	1.45	0.17	3.3	0.2		
	E 10:20								
4	S 10:20	120	240	1.37	0.16	1.6	0.1		
	E 12:20								
5	S 12:20	120	360	1.15	0.14	1.3	0.1		
	E 14:20								



APPENDIX E

Liquefaction Analysis



Liquefaction Potential - SPT Data			
Project:	Iris Park Residential Development		
Location:	Moreno Valley, California		
Job Number:	33591.1	Boring No.:	B-2
		Enclosure:	E-1

LOR GEOTECHNICAL GROUP, INC.
 Soil Engineering ▲ Geology ▲ Environmental

Appendix 4: Historical Site Conditions

Phase I Environmental Site Assessment or Other Information on Past Site Use

“Not Applicable”

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

Appendix 5: LID Infeasibility

LID Technical Infeasibility Analysis

“Not Applicable”

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

Appendix 6: BMP Design Details

BMP Sizing, Design Details and other Supporting Documentation

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

Santa Ana Watershed - BMP Design Volume, V_{BMP}
 (Rev. 10-2011)

Legend: Required Entries
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name **ADKAN ENGINEERS** Date **4/14/2020**
 Designed by **Jose Contreras** Case No
 Company Project Number/Name **Tract 37909**

BMP Identification

BMP NAME / ID **Bioretention Basin**
Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, D_{85} = **0.65** inches
 from the Isohyetal Map in Handbook Appendix E

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, V_{BMP} (cubic feet)	Proposed Volume on Plans (cubic feet)
D.1.1	127,146.00	Roofs	1	0.89	113414.2			
D.1.2	84,067.00	Concrete or Asphalt	1	0.89	74987.8			
D.1.3	68466	Ornamental Landscaping	0.1	0.11	7562.6			
D.1.4	53231	Ornamental Landscaping	0.1	0.11	5879.8			
Total					201844.4				0.65	10933.2	10933.2

Notes:

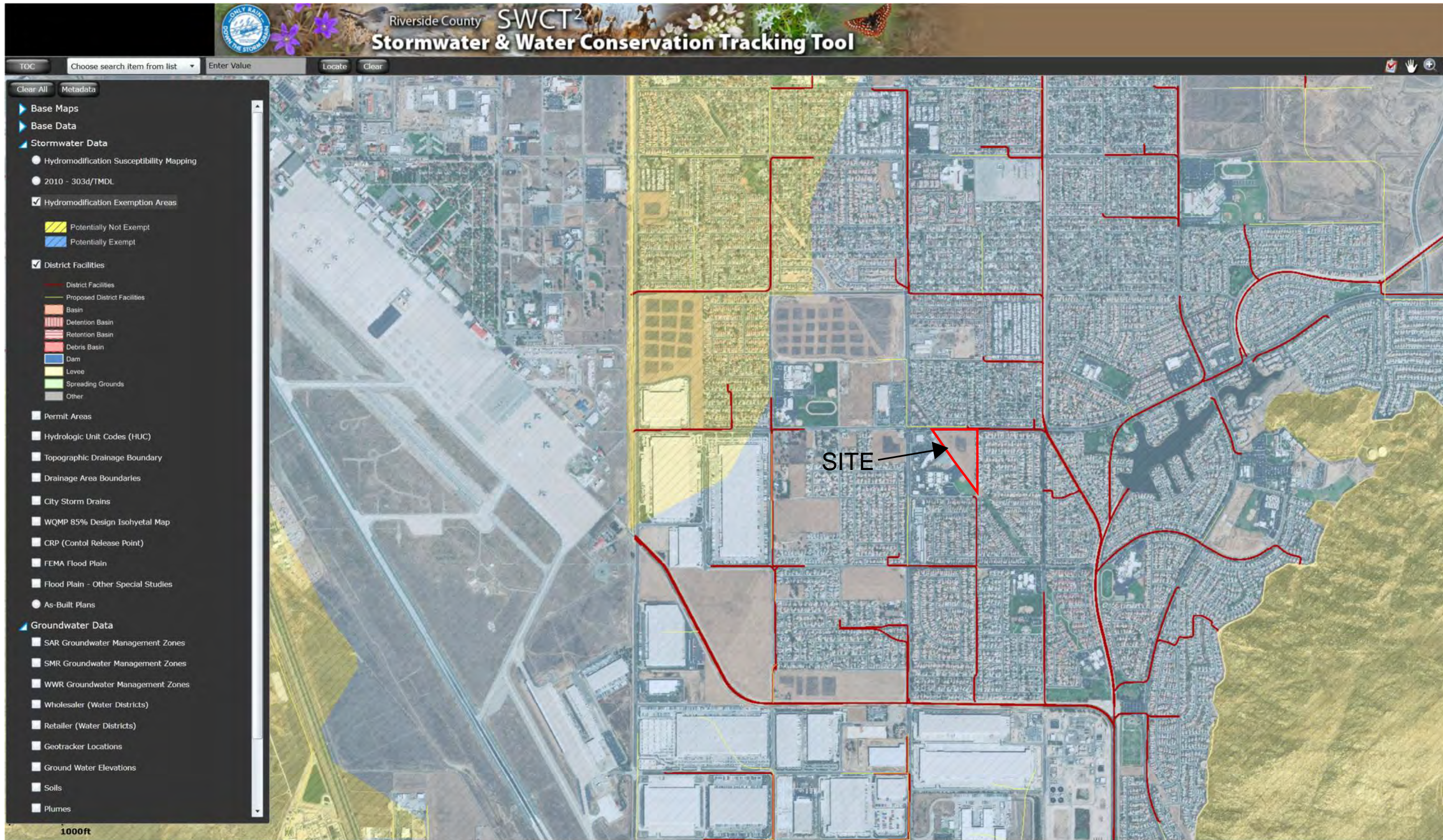
Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

Bioretention Facility - Design Procedure		BMP ID	Legend:	Required Entries
				Calculated Cells
Company Name:	Adkan Engineers		Date: 4/14/2020	
Designed by:	Jose Contreras		County/City Case No.:	
Design Volume				
Enter the area tributary to this feature			$A_T =$	7.64 acres
Enter V_{BMP} determined from Section 2.1 of this Handbook			$V_{BMP} =$	10,933 ft ³
Type of Bioretention Facility Design				
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)				
Bioretention Facility Surface Area				
Depth of Soil Filter Media Layer			$d_S =$	3.0 ft
Top Width of Bioretention Facility, excluding curb			$w_T =$	20.0 ft
Total Effective Depth, d_E $d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$			$d_E =$	1.77 ft
Minimum Surface Area, A_m $A_M (ft^2) = \frac{V_{BMP} (ft^3)}{d_E (ft)}$			$A_M =$	6,195 ft ²
Proposed Surface Area			$A =$	6,500 ft ²
Bioretention Facility Properties				
Side Slopes in Bioretention Facility			$z =$	4 :1
Diameter of Underdrain				6 inches
Longitudinal Slope of Site (3% maximum)				1 %
6" Check Dam Spacing				25 feet
Describe Vegetation:				
Notes:				

Appendix 7: Hydromodification

Supporting Detail Relating to Hydrologic Conditions of Concern

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with



Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
 Study date 04/10/20 File: ex2yr242.out

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Riverside County Synthetic Unit Hydrology Method
 RCFC & WCD Manual date - April 1978
 Program License Serial Number 5006

 English (in-lb) Input Units Used
 English Rainfall Data (Inches) Input Values Used
 English Units used in output format

Drainage Area = 7.25(Ac.) = 0.011 Sq. Mi.
 Drainage Area for Depth-Area Areal Adjustment = 7.25(Ac.) = 0.011 Sq. Mi.
 Length along longest watercourse = 1000.00(Ft.)
 Length along longest watercourse measured to centroid = 500.00(Ft.)
 Length along longest watercourse = 0.189 Mi.
 Length along longest watercourse measured to centroid = 0.095 Mi.
 Difference in elevation = 10.00(Ft.)
 Slope along watercourse = 52.8000 Ft./Mi.
 Average Manning's 'N' = 0.030
 Lag time = 0.074 Hr.
 Lag time = 4.41 Min.
 25% of lag time = 1.10 Min.
 40% of lag time = 1.76 Min.
 Unit time = 5.00 Min.
 Duration of storm = 24 Hour(s)
 User Entered Base Flow = 0.00(CFS)
 2 YEAR Area rainfall data:
 Area(Ac.)[1] Rainfall (In)[2] Weighting[1*2]
 7.25 1.60 11.60
 100 YEAR Area rainfall data:
 Area(Ac.)[1] Rainfall (In)[2] Weighting[1*2]
 7.25 4.00 29.00
 STORM EVENT (YEAR) = 2.00
 Area Averaged 2-Year Rainfall = 1.600(In)
 Area Averaged 100-Year Rainfall = 4.000(In)
 Point rain (area averaged) = 1.600(In)
 Areal adjustment factor = 100.00 %
 Adjusted average point rain = 1.600(In)
 Sub-Area Data:
 Area(Ac.) Runoff Index Impervious %
 7.250 78.00 0.000
 Total Area Entered = 7.25(Ac.)

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-1	(In/Hr)	(Dec.)	(In/Hr)	(Dec.)	(In/Hr)
78.0	60.6	0.464	0.000	0.464	1.000	0.464
						Sum (F) = 0.464

 Area averaged mean soil loss (F) (In/Hr) = 0.464
 Minimum soil loss rate ((In/Hr)) = 0.232
 (for 24 hour storm duration)
 Soil loss rate (decimal) = 0.900

 Unit Hydrograph
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	113.339	23.238
2	0.167	226.678	48.846
3	0.250	340.017	13.938
4	0.333	453.357	6.374
5	0.417	566.696	3.542
6	0.500	680.035	2.153
7	0.583	793.374	1.275
8	0.667	906.713	0.633
		Sum = 100.000	Sum= 7.307

 The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.013	(0.822)	0.012	0.001
2	0.17	0.013	(0.819)	0.012	0.001
3	0.25	0.013	(0.815)	0.012	0.001
4	0.33	0.019	(0.812)	0.017	0.002

5	0.42	0.10	0.019	(0.809)	0.017	0.002
6	0.50	0.10	0.019	(0.806)	0.017	0.002
7	0.58	0.10	0.019	(0.803)	0.017	0.002
8	0.67	0.10	0.019	(0.800)	0.017	0.002
9	0.75	0.10	0.019	(0.796)	0.017	0.002
10	0.83	0.13	0.026	(0.793)	0.023	0.003
11	0.92	0.13	0.026	(0.790)	0.023	0.003
12	1.00	0.13	0.026	(0.787)	0.023	0.003
13	1.08	0.10	0.019	(0.784)	0.017	0.002
14	1.17	0.10	0.019	(0.781)	0.017	0.002
15	1.25	0.10	0.019	(0.778)	0.017	0.002
16	1.33	0.10	0.019	(0.775)	0.017	0.002
17	1.42	0.10	0.019	(0.772)	0.017	0.002
18	1.50	0.10	0.019	(0.769)	0.017	0.002
19	1.58	0.10	0.019	(0.765)	0.017	0.002
20	1.67	0.10	0.019	(0.762)	0.017	0.002
21	1.75	0.10	0.019	(0.759)	0.017	0.002
22	1.83	0.13	0.026	(0.756)	0.023	0.003
23	1.92	0.13	0.026	(0.753)	0.023	0.003
24	2.00	0.13	0.026	(0.750)	0.023	0.003
25	2.08	0.13	0.026	(0.747)	0.023	0.003
26	2.17	0.13	0.026	(0.744)	0.023	0.003
27	2.25	0.13	0.026	(0.741)	0.023	0.003
28	2.33	0.13	0.026	(0.738)	0.023	0.003
29	2.42	0.13	0.026	(0.735)	0.023	0.003
30	2.50	0.13	0.026	(0.732)	0.023	0.003
31	2.58	0.17	0.032	(0.729)	0.029	0.003
32	2.67	0.17	0.032	(0.726)	0.029	0.003
33	2.75	0.17	0.032	(0.723)	0.029	0.003
34	2.83	0.17	0.032	(0.720)	0.029	0.003
35	2.92	0.17	0.032	(0.717)	0.029	0.003
36	3.00	0.17	0.032	(0.714)	0.029	0.003
37	3.08	0.17	0.032	(0.711)	0.029	0.003
38	3.17	0.17	0.032	(0.708)	0.029	0.003
39	3.25	0.17	0.032	(0.705)	0.029	0.003
40	3.33	0.17	0.032	(0.702)	0.029	0.003
41	3.42	0.17	0.032	(0.699)	0.029	0.003
42	3.50	0.17	0.032	(0.697)	0.029	0.003
43	3.58	0.17	0.032	(0.694)	0.029	0.003
44	3.67	0.17	0.032	(0.691)	0.029	0.003
45	3.75	0.17	0.032	(0.688)	0.029	0.003
46	3.83	0.20	0.038	(0.685)	0.035	0.004
47	3.92	0.20	0.038	(0.682)	0.035	0.004
48	4.00	0.20	0.038	(0.679)	0.035	0.004
49	4.08	0.20	0.038	(0.676)	0.035	0.004
50	4.17	0.20	0.038	(0.673)	0.035	0.004
51	4.25	0.20	0.038	(0.670)	0.035	0.004
52	4.33	0.23	0.045	(0.668)	0.040	0.004
53	4.42	0.23	0.045	(0.665)	0.040	0.004
54	4.50	0.23	0.045	(0.662)	0.040	0.004
55	4.58	0.23	0.045	(0.659)	0.040	0.004
56	4.67	0.23	0.045	(0.656)	0.040	0.004
57	4.75	0.23	0.045	(0.653)	0.040	0.004
58	4.83	0.27	0.051	(0.651)	0.046	0.005
59	4.92	0.27	0.051	(0.648)	0.046	0.005
60	5.00	0.27	0.051	(0.645)	0.046	0.005
61	5.08	0.20	0.038	(0.642)	0.035	0.004
62	5.17	0.20	0.038	(0.639)	0.035	0.004
63	5.25	0.20	0.038	(0.637)	0.035	0.004
64	5.33	0.23	0.045	(0.634)	0.040	0.004
65	5.42	0.23	0.045	(0.631)	0.040	0.004
66	5.50	0.23	0.045	(0.628)	0.040	0.004
67	5.58	0.27	0.051	(0.626)	0.046	0.005
68	5.67	0.27	0.051	(0.623)	0.046	0.005
69	5.75	0.27	0.051	(0.620)	0.046	0.005
70	5.83	0.27	0.051	(0.617)	0.046	0.005
71	5.92	0.27	0.051	(0.615)	0.046	0.005
72	6.00	0.27	0.051	(0.612)	0.046	0.005
73	6.08	0.30	0.058	(0.609)	0.052	0.006
74	6.17	0.30	0.058	(0.606)	0.052	0.006
75	6.25	0.30	0.058	(0.604)	0.052	0.006
76	6.33	0.30	0.058	(0.601)	0.052	0.006
77	6.42	0.30	0.058	(0.598)	0.052	0.006
78	6.50	0.30	0.058	(0.596)	0.052	0.006
79	6.58	0.33	0.064	(0.593)	0.058	0.006
80	6.67	0.33	0.064	(0.590)	0.058	0.006
81	6.75	0.33	0.064	(0.588)	0.058	0.006
82	6.83	0.33	0.064	(0.585)	0.058	0.006
83	6.92	0.33	0.064	(0.582)	0.058	0.006
84	7.00	0.33	0.064	(0.580)	0.058	0.006
85	7.08	0.33	0.064	(0.577)	0.058	0.006
86	7.17	0.33	0.064	(0.574)	0.058	0.006
87	7.25	0.33	0.064	(0.572)	0.058	0.006
88	7.33	0.37	0.070	(0.569)	0.063	0.007
89	7.42	0.37	0.070	(0.567)	0.063	0.007
90	7.50	0.37	0.070	(0.564)	0.063	0.007

91	7.58	0.40	0.077	(0.561)	0.069	0.008
92	7.67	0.40	0.077	(0.559)	0.069	0.008
93	7.75	0.40	0.077	(0.556)	0.069	0.008
94	7.83	0.43	0.083	(0.554)	0.075	0.008
95	7.92	0.43	0.083	(0.551)	0.075	0.008
96	8.00	0.43	0.083	(0.549)	0.075	0.008
97	8.08	0.50	0.096	(0.546)	0.086	0.010
98	8.17	0.50	0.096	(0.543)	0.086	0.010
99	8.25	0.50	0.096	(0.541)	0.086	0.010
100	8.33	0.50	0.096	(0.538)	0.086	0.010
101	8.42	0.50	0.096	(0.536)	0.086	0.010
102	8.50	0.50	0.096	(0.533)	0.086	0.010
103	8.58	0.53	0.102	(0.531)	0.092	0.010
104	8.67	0.53	0.102	(0.528)	0.092	0.010
105	8.75	0.53	0.102	(0.526)	0.092	0.010
106	8.83	0.57	0.109	(0.523)	0.098	0.011
107	8.92	0.57	0.109	(0.521)	0.098	0.011
108	9.00	0.57	0.109	(0.518)	0.098	0.011
109	9.08	0.63	0.122	(0.516)	0.109	0.012
110	9.17	0.63	0.122	(0.514)	0.109	0.012
111	9.25	0.63	0.122	(0.511)	0.109	0.012
112	9.33	0.67	0.128	(0.509)	0.115	0.013
113	9.42	0.67	0.128	(0.506)	0.115	0.013
114	9.50	0.67	0.128	(0.504)	0.115	0.013
115	9.58	0.70	0.134	(0.501)	0.121	0.013
116	9.67	0.70	0.134	(0.499)	0.121	0.013
117	9.75	0.70	0.134	(0.497)	0.121	0.013
118	9.83	0.73	0.141	(0.494)	0.127	0.014
119	9.92	0.73	0.141	(0.492)	0.127	0.014
120	10.00	0.73	0.141	(0.489)	0.127	0.014
121	10.08	0.50	0.096	(0.487)	0.086	0.010
122	10.17	0.50	0.096	(0.485)	0.086	0.010
123	10.25	0.50	0.096	(0.482)	0.086	0.010
124	10.33	0.50	0.096	(0.480)	0.086	0.010
125	10.42	0.50	0.096	(0.478)	0.086	0.010
126	10.50	0.50	0.096	(0.475)	0.086	0.010
127	10.58	0.67	0.128	(0.473)	0.115	0.013
128	10.67	0.67	0.128	(0.471)	0.115	0.013
129	10.75	0.67	0.128	(0.468)	0.115	0.013
130	10.83	0.67	0.128	(0.466)	0.115	0.013
131	10.92	0.67	0.128	(0.464)	0.115	0.013
132	11.00	0.67	0.128	(0.462)	0.115	0.013
133	11.08	0.63	0.122	(0.459)	0.109	0.012
134	11.17	0.63	0.122	(0.457)	0.109	0.012
135	11.25	0.63	0.122	(0.455)	0.109	0.012
136	11.33	0.63	0.122	(0.453)	0.109	0.012
137	11.42	0.63	0.122	(0.450)	0.109	0.012
138	11.50	0.63	0.122	(0.448)	0.109	0.012
139	11.58	0.57	0.109	(0.446)	0.098	0.011
140	11.67	0.57	0.109	(0.444)	0.098	0.011
141	11.75	0.57	0.109	(0.441)	0.098	0.011
142	11.83	0.60	0.115	(0.439)	0.104	0.012
143	11.92	0.60	0.115	(0.437)	0.104	0.012
144	12.00	0.60	0.115	(0.435)	0.104	0.012
145	12.08	0.83	0.160	(0.433)	0.144	0.016
146	12.17	0.83	0.160	(0.431)	0.144	0.016
147	12.25	0.83	0.160	(0.428)	0.144	0.016
148	12.33	0.87	0.166	(0.426)	0.150	0.017
149	12.42	0.87	0.166	(0.424)	0.150	0.017
150	12.50	0.87	0.166	(0.422)	0.150	0.017
151	12.58	0.93	0.179	(0.420)	0.161	0.018
152	12.67	0.93	0.179	(0.418)	0.161	0.018
153	12.75	0.93	0.179	(0.416)	0.161	0.018
154	12.83	0.97	0.186	(0.413)	0.167	0.019
155	12.92	0.97	0.186	(0.411)	0.167	0.019
156	13.00	0.97	0.186	(0.409)	0.167	0.019
157	13.08	1.13	0.218	(0.407)	0.196	0.022
158	13.17	1.13	0.218	(0.405)	0.196	0.022
159	13.25	1.13	0.218	(0.403)	0.196	0.022
160	13.33	1.13	0.218	(0.401)	0.196	0.022
161	13.42	1.13	0.218	(0.399)	0.196	0.022
162	13.50	1.13	0.218	(0.397)	0.196	0.022
163	13.58	0.77	0.147	(0.395)	0.132	0.015
164	13.67	0.77	0.147	(0.393)	0.132	0.015
165	13.75	0.77	0.147	(0.391)	0.132	0.015
166	13.83	0.77	0.147	(0.389)	0.132	0.015
167	13.92	0.77	0.147	(0.387)	0.132	0.015
168	14.00	0.77	0.147	(0.385)	0.132	0.015
169	14.08	0.90	0.173	(0.383)	0.156	0.017
170	14.17	0.90	0.173	(0.381)	0.156	0.017
171	14.25	0.90	0.173	(0.379)	0.156	0.017
172	14.33	0.87	0.166	(0.377)	0.150	0.017
173	14.42	0.87	0.166	(0.375)	0.150	0.017
174	14.50	0.87	0.166	(0.373)	0.150	0.017
175	14.58	0.87	0.166	(0.371)	0.150	0.017
176	14.67	0.87	0.166	(0.370)	0.150	0.017

177	14. 75	0. 87	0. 166	(0. 368)	0. 150	0. 017
178	14. 83	0. 83	0. 160	(0. 366)	0. 144	0. 016
179	14. 92	0. 83	0. 160	(0. 364)	0. 144	0. 016
180	15. 00	0. 83	0. 160	(0. 362)	0. 144	0. 016
181	15. 08	0. 80	0. 154	(0. 360)	0. 138	0. 015
182	15. 17	0. 80	0. 154	(0. 358)	0. 138	0. 015
183	15. 25	0. 80	0. 154	(0. 356)	0. 138	0. 015
184	15. 33	0. 77	0. 147	(0. 355)	0. 132	0. 015
185	15. 42	0. 77	0. 147	(0. 353)	0. 132	0. 015
186	15. 50	0. 77	0. 147	(0. 351)	0. 132	0. 015
187	15. 58	0. 63	0. 122	(0. 349)	0. 109	0. 012
188	15. 67	0. 63	0. 122	(0. 347)	0. 109	0. 012
189	15. 75	0. 63	0. 122	(0. 346)	0. 109	0. 012
190	15. 83	0. 63	0. 122	(0. 344)	0. 109	0. 012
191	15. 92	0. 63	0. 122	(0. 342)	0. 109	0. 012
192	16. 00	0. 63	0. 122	(0. 340)	0. 109	0. 012
193	16. 08	0. 13	0. 026	(0. 339)	0. 023	0. 003
194	16. 17	0. 13	0. 026	(0. 337)	0. 023	0. 003
195	16. 25	0. 13	0. 026	(0. 335)	0. 023	0. 003
196	16. 33	0. 13	0. 026	(0. 333)	0. 023	0. 003
197	16. 42	0. 13	0. 026	(0. 332)	0. 023	0. 003
198	16. 50	0. 13	0. 026	(0. 330)	0. 023	0. 003
199	16. 58	0. 10	0. 019	(0. 328)	0. 017	0. 002
200	16. 67	0. 10	0. 019	(0. 327)	0. 017	0. 002
201	16. 75	0. 10	0. 019	(0. 325)	0. 017	0. 002
202	16. 83	0. 10	0. 019	(0. 323)	0. 017	0. 002
203	16. 92	0. 10	0. 019	(0. 322)	0. 017	0. 002
204	17. 00	0. 10	0. 019	(0. 320)	0. 017	0. 002
205	17. 08	0. 17	0. 032	(0. 319)	0. 029	0. 003
206	17. 17	0. 17	0. 032	(0. 317)	0. 029	0. 003
207	17. 25	0. 17	0. 032	(0. 315)	0. 029	0. 003
208	17. 33	0. 17	0. 032	(0. 314)	0. 029	0. 003
209	17. 42	0. 17	0. 032	(0. 312)	0. 029	0. 003
210	17. 50	0. 17	0. 032	(0. 311)	0. 029	0. 003
211	17. 58	0. 17	0. 032	(0. 309)	0. 029	0. 003
212	17. 67	0. 17	0. 032	(0. 308)	0. 029	0. 003
213	17. 75	0. 17	0. 032	(0. 306)	0. 029	0. 003
214	17. 83	0. 13	0. 026	(0. 304)	0. 023	0. 003
215	17. 92	0. 13	0. 026	(0. 303)	0. 023	0. 003
216	18. 00	0. 13	0. 026	(0. 301)	0. 023	0. 003
217	18. 08	0. 13	0. 026	(0. 300)	0. 023	0. 003
218	18. 17	0. 13	0. 026	(0. 299)	0. 023	0. 003
219	18. 25	0. 13	0. 026	(0. 297)	0. 023	0. 003
220	18. 33	0. 13	0. 026	(0. 296)	0. 023	0. 003
221	18. 42	0. 13	0. 026	(0. 294)	0. 023	0. 003
222	18. 50	0. 13	0. 026	(0. 293)	0. 023	0. 003
223	18. 58	0. 10	0. 019	(0. 291)	0. 017	0. 002
224	18. 67	0. 10	0. 019	(0. 290)	0. 017	0. 002
225	18. 75	0. 10	0. 019	(0. 289)	0. 017	0. 002
226	18. 83	0. 07	0. 013	(0. 287)	0. 012	0. 001
227	18. 92	0. 07	0. 013	(0. 286)	0. 012	0. 001
228	19. 00	0. 07	0. 013	(0. 284)	0. 012	0. 001
229	19. 08	0. 10	0. 019	(0. 283)	0. 017	0. 002
230	19. 17	0. 10	0. 019	(0. 282)	0. 017	0. 002
231	19. 25	0. 10	0. 019	(0. 280)	0. 017	0. 002
232	19. 33	0. 13	0. 026	(0. 279)	0. 023	0. 003
233	19. 42	0. 13	0. 026	(0. 278)	0. 023	0. 003
234	19. 50	0. 13	0. 026	(0. 277)	0. 023	0. 003
235	19. 58	0. 10	0. 019	(0. 275)	0. 017	0. 002
236	19. 67	0. 10	0. 019	(0. 274)	0. 017	0. 002
237	19. 75	0. 10	0. 019	(0. 273)	0. 017	0. 002
238	19. 83	0. 07	0. 013	(0. 272)	0. 012	0. 001
239	19. 92	0. 07	0. 013	(0. 270)	0. 012	0. 001
240	20. 00	0. 07	0. 013	(0. 269)	0. 012	0. 001
241	20. 08	0. 10	0. 019	(0. 268)	0. 017	0. 002
242	20. 17	0. 10	0. 019	(0. 267)	0. 017	0. 002
243	20. 25	0. 10	0. 019	(0. 266)	0. 017	0. 002
244	20. 33	0. 10	0. 019	(0. 264)	0. 017	0. 002
245	20. 42	0. 10	0. 019	(0. 263)	0. 017	0. 002
246	20. 50	0. 10	0. 019	(0. 262)	0. 017	0. 002
247	20. 58	0. 10	0. 019	(0. 261)	0. 017	0. 002
248	20. 67	0. 10	0. 019	(0. 260)	0. 017	0. 002
249	20. 75	0. 10	0. 019	(0. 259)	0. 017	0. 002
250	20. 83	0. 07	0. 013	(0. 258)	0. 012	0. 001
251	20. 92	0. 07	0. 013	(0. 257)	0. 012	0. 001
252	21. 00	0. 07	0. 013	(0. 256)	0. 012	0. 001
253	21. 08	0. 10	0. 019	(0. 255)	0. 017	0. 002
254	21. 17	0. 10	0. 019	(0. 254)	0. 017	0. 002
255	21. 25	0. 10	0. 019	(0. 253)	0. 017	0. 002
256	21. 33	0. 07	0. 013	(0. 252)	0. 012	0. 001
257	21. 42	0. 07	0. 013	(0. 251)	0. 012	0. 001
258	21. 50	0. 07	0. 013	(0. 250)	0. 012	0. 001
259	21. 58	0. 10	0. 019	(0. 249)	0. 017	0. 002
260	21. 67	0. 10	0. 019	(0. 248)	0. 017	0. 002
261	21. 75	0. 10	0. 019	(0. 247)	0. 017	0. 002
262	21. 83	0. 07	0. 013	(0. 246)	0. 012	0. 001

263	21.92	0.07	0.013	(0.246)	0.012	0.001
264	22.00	0.07	0.013	(0.245)	0.012	0.001
265	22.08	0.10	0.019	(0.244)	0.017	0.002
266	22.17	0.10	0.019	(0.243)	0.017	0.002
267	22.25	0.10	0.019	(0.242)	0.017	0.002
268	22.33	0.07	0.013	(0.242)	0.012	0.001
269	22.42	0.07	0.013	(0.241)	0.012	0.001
270	22.50	0.07	0.013	(0.240)	0.012	0.001
271	22.58	0.07	0.013	(0.239)	0.012	0.001
272	22.67	0.07	0.013	(0.239)	0.012	0.001
273	22.75	0.07	0.013	(0.238)	0.012	0.001
274	22.83	0.07	0.013	(0.238)	0.012	0.001
275	22.92	0.07	0.013	(0.237)	0.012	0.001
276	23.00	0.07	0.013	(0.236)	0.012	0.001
277	23.08	0.07	0.013	(0.236)	0.012	0.001
278	23.17	0.07	0.013	(0.235)	0.012	0.001
279	23.25	0.07	0.013	(0.235)	0.012	0.001
280	23.33	0.07	0.013	(0.234)	0.012	0.001
281	23.42	0.07	0.013	(0.234)	0.012	0.001
282	23.50	0.07	0.013	(0.233)	0.012	0.001
283	23.58	0.07	0.013	(0.233)	0.012	0.001
284	23.67	0.07	0.013	(0.233)	0.012	0.001
285	23.75	0.07	0.013	(0.232)	0.012	0.001
286	23.83	0.07	0.013	(0.232)	0.012	0.001
287	23.92	0.07	0.013	(0.232)	0.012	0.001
288	24.00	0.07	0.013	(0.232)	0.012	0.001

(Loss Rate Not Used)
 Sum = 100.0 Sum = 1.9

Flood volume = Effective rainfall 0.16(In)
 times area 7.3(Ac.)/[(In)/(Ft.)] = 0.1(Ac. Ft)
 Total soil loss = 1.44(In)
 Total soil loss = 0.870(Ac. Ft)
 Total rainfall = 1.60(In)
 Flood volume = 4210.7 Cubic Feet
 Total soil loss = 37896.7 Cubic Feet

 Peak flow rate of this hydrograph = 0.159(CFS)

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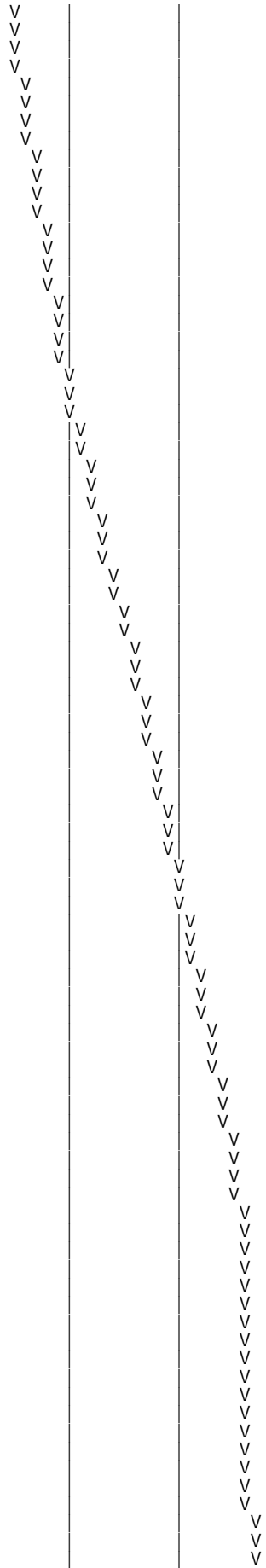
24 - H O U R S T O R M
 R u n o f f H y d r o g r a p h

 Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac. Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0001	0.01	Q				
0+15	0.0001	0.01	Q				
0+20	0.0002	0.01	Q				
0+25	0.0003	0.01	Q				
0+30	0.0004	0.01	Q				
0+35	0.0005	0.01	Q				
0+40	0.0005	0.01	Q				
0+45	0.0006	0.01	Q				
0+50	0.0007	0.02	Q				
0+55	0.0009	0.02	Q				
1+ 0	0.0010	0.02	Q				
1+ 5	0.0011	0.02	Q				
1+10	0.0012	0.02	Q				
1+15	0.0013	0.01	Q				
1+20	0.0014	0.01	Q				
1+25	0.0015	0.01	Q				
1+30	0.0016	0.01	Q				
1+35	0.0017	0.01	Q				
1+40	0.0018	0.01	Q				
1+45	0.0019	0.01	Q				
1+50	0.0020	0.02	Q				
1+55	0.0021	0.02	Q				
2+ 0	0.0022	0.02	Q				
2+ 5	0.0024	0.02	Q				
2+10	0.0025	0.02	QV				
2+15	0.0026	0.02	QV				
2+20	0.0028	0.02	QV				
2+25	0.0029	0.02	QV				
2+30	0.0030	0.02	QV				
2+35	0.0032	0.02	QV				
2+40	0.0033	0.02	QV				
2+45	0.0035	0.02	QV				
2+50	0.0036	0.02	QV				
2+55	0.0038	0.02	QV				
3+ 0	0.0039	0.02	QV				
3+ 5	0.0041	0.02	QV				
3+10	0.0043	0.02	QV				
3+15	0.0044	0.02	QV				
3+20	0.0046	0.02	QV				

3+25	0.0047	0.02	QV			
3+30	0.0049	0.02	Q V			
3+35	0.0051	0.02	Q V			
3+40	0.0052	0.02	Q V			
3+45	0.0054	0.02	Q V			
3+50	0.0056	0.02	Q V			
3+55	0.0057	0.03	Q V			
4+ 0	0.0059	0.03	Q V			
4+ 5	0.0061	0.03	Q V			
4+10	0.0063	0.03	Q V			
4+15	0.0065	0.03	Q V			
4+20	0.0067	0.03	Q V			
4+25	0.0069	0.03	Q V			
4+30	0.0071	0.03	Q V			
4+35	0.0074	0.03	Q V			
4+40	0.0076	0.03	Q V			
4+45	0.0078	0.03	Q V			
4+50	0.0081	0.03	Q V			
4+55	0.0083	0.04	Q V			
5+ 0	0.0086	0.04	Q V			
5+ 5	0.0088	0.03	Q V			
5+10	0.0090	0.03	Q V			
5+15	0.0092	0.03	Q V			
5+20	0.0094	0.03	Q V			
5+25	0.0096	0.03	Q V			
5+30	0.0099	0.03	Q V			
5+35	0.0101	0.03	Q V			
5+40	0.0103	0.04	Q V			
5+45	0.0106	0.04	Q V			
5+50	0.0108	0.04	Q V			
5+55	0.0111	0.04	Q V			
6+ 0	0.0114	0.04	Q V			
6+ 5	0.0116	0.04	Q V			
6+10	0.0119	0.04	Q V			
6+15	0.0122	0.04	Q V			
6+20	0.0125	0.04	Q V			
6+25	0.0128	0.04	Q V			
6+30	0.0131	0.04	Q V			
6+35	0.0133	0.04	Q V			
6+40	0.0137	0.05	Q V			
6+45	0.0140	0.05	Q V			
6+50	0.0143	0.05	Q V			
6+55	0.0146	0.05	Q V			
7+ 0	0.0149	0.05	Q V			
7+ 5	0.0153	0.05	Q V			
7+10	0.0156	0.05	Q V			
7+15	0.0159	0.05	Q V			
7+20	0.0162	0.05	Q V			
7+25	0.0166	0.05	Q V			
7+30	0.0169	0.05	Q V			
7+35	0.0173	0.05	Q V			
7+40	0.0177	0.05	Q V			
7+45	0.0181	0.06	Q V			
7+50	0.0184	0.06	Q V			
7+55	0.0189	0.06	Q V			
8+ 0	0.0193	0.06	Q V			
8+ 5	0.0197	0.06	Q V			
8+10	0.0202	0.07	Q V			
8+15	0.0206	0.07	Q V			
8+20	0.0211	0.07	Q V			
8+25	0.0216	0.07	Q V			
8+30	0.0221	0.07	Q V			
8+35	0.0226	0.07	Q V			
8+40	0.0231	0.07	Q V			
8+45	0.0236	0.07	Q V			
8+50	0.0241	0.08	Q V			
8+55	0.0246	0.08	Q V			
9+ 0	0.0252	0.08	Q V			
9+ 5	0.0257	0.08	Q V			
9+10	0.0263	0.09	Q V			
9+15	0.0269	0.09	Q V			
9+20	0.0276	0.09	Q V			
9+25	0.0282	0.09	Q V			
9+30	0.0288	0.09	Q V			
9+35	0.0295	0.09	Q V			
9+40	0.0301	0.10	Q V			
9+45	0.0308	0.10	Q V			
9+50	0.0315	0.10	Q V			
9+55	0.0322	0.10	Q V			
10+ 0	0.0329	0.10	Q V			
10+ 5	0.0335	0.09	Q V			
10+10	0.0341	0.08	Q V			
10+15	0.0346	0.07	Q V			
10+20	0.0351	0.07	Q V			
10+25	0.0356	0.07	Q V			
10+30	0.0361	0.07	Q V			

10+35	0.0366	0.08	Q
10+40	0.0372	0.09	Q
10+45	0.0378	0.09	Q
10+50	0.0385	0.09	Q
10+55	0.0391	0.09	Q
11+ 0	0.0397	0.09	Q
11+ 5	0.0404	0.09	Q
11+10	0.0410	0.09	Q
11+15	0.0416	0.09	Q
11+20	0.0422	0.09	Q
11+25	0.0428	0.09	Q
11+30	0.0435	0.09	Q
11+35	0.0441	0.09	Q
11+40	0.0446	0.08	Q
11+45	0.0452	0.08	Q
11+50	0.0457	0.08	Q
11+55	0.0463	0.08	Q
12+ 0	0.0469	0.08	Q
12+ 5	0.0475	0.09	Q
12+10	0.0483	0.11	Q
12+15	0.0490	0.11	Q
12+20	0.0498	0.12	Q
12+25	0.0506	0.12	Q
12+30	0.0515	0.12	Q
12+35	0.0523	0.12	Q
12+40	0.0532	0.13	Q
12+45	0.0541	0.13	Q
12+50	0.0550	0.13	Q
12+55	0.0559	0.13	Q
13+ 0	0.0569	0.13	Q
13+ 5	0.0578	0.14	Q
13+10	0.0589	0.15	Q
13+15	0.0600	0.16	Q
13+20	0.0610	0.16	Q
13+25	0.0621	0.16	Q
13+30	0.0632	0.16	Q
13+35	0.0642	0.15	Q
13+40	0.0651	0.12	Q
13+45	0.0659	0.11	Q
13+50	0.0666	0.11	Q
13+55	0.0674	0.11	Q
14+ 0	0.0681	0.11	Q
14+ 5	0.0689	0.11	Q
14+10	0.0697	0.12	Q
14+15	0.0706	0.12	Q
14+20	0.0714	0.12	Q
14+25	0.0723	0.12	Q
14+30	0.0731	0.12	Q
14+35	0.0740	0.12	Q
14+40	0.0748	0.12	Q
14+45	0.0756	0.12	Q
14+50	0.0765	0.12	Q
14+55	0.0773	0.12	Q
15+ 0	0.0781	0.12	Q
15+ 5	0.0789	0.12	Q
15+10	0.0797	0.11	Q
15+15	0.0805	0.11	Q
15+20	0.0812	0.11	Q
15+25	0.0820	0.11	Q
15+30	0.0827	0.11	Q
15+35	0.0834	0.10	Q
15+40	0.0841	0.09	Q
15+45	0.0847	0.09	Q
15+50	0.0853	0.09	Q
15+55	0.0860	0.09	Q
16+ 0	0.0866	0.09	Q
16+ 5	0.0871	0.07	Q
16+10	0.0873	0.04	Q
16+15	0.0875	0.03	Q
16+20	0.0877	0.02	Q
16+25	0.0878	0.02	Q
16+30	0.0880	0.02	Q
16+35	0.0881	0.02	Q
16+40	0.0882	0.02	Q
16+45	0.0883	0.01	Q
16+50	0.0884	0.01	Q
16+55	0.0885	0.01	Q
17+ 0	0.0886	0.01	Q
17+ 5	0.0887	0.02	Q
17+10	0.0889	0.02	Q
17+15	0.0890	0.02	Q
17+20	0.0892	0.02	Q
17+25	0.0893	0.02	Q
17+30	0.0895	0.02	Q
17+35	0.0897	0.02	Q
17+40	0.0898	0.02	Q



17+45	0.0900	0.02	Q	V
17+50	0.0901	0.02	Q	V
17+55	0.0903	0.02	Q	V
18+ 0	0.0904	0.02	Q	V
18+ 5	0.0905	0.02	Q	V
18+10	0.0907	0.02	Q	V
18+15	0.0908	0.02	Q	V
18+20	0.0909	0.02	Q	V
18+25	0.0910	0.02	Q	V
18+30	0.0912	0.02	Q	V
18+35	0.0913	0.02	Q	V
18+40	0.0914	0.02	Q	V
18+45	0.0915	0.01	Q	V
18+50	0.0916	0.01	Q	V
18+55	0.0917	0.01	Q	V
19+ 0	0.0917	0.01	Q	V
19+ 5	0.0918	0.01	Q	V
19+10	0.0919	0.01	Q	V
19+15	0.0920	0.01	Q	V
19+20	0.0921	0.01	Q	V
19+25	0.0922	0.02	Q	V
19+30	0.0923	0.02	Q	V
19+35	0.0925	0.02	Q	V
19+40	0.0926	0.02	Q	V
19+45	0.0927	0.01	Q	V
19+50	0.0928	0.01	Q	V
19+55	0.0928	0.01	Q	V
20+ 0	0.0929	0.01	Q	V
20+ 5	0.0930	0.01	Q	V
20+10	0.0931	0.01	Q	V
20+15	0.0932	0.01	Q	V
20+20	0.0933	0.01	Q	V
20+25	0.0933	0.01	Q	V
20+30	0.0934	0.01	Q	V
20+35	0.0935	0.01	Q	V
20+40	0.0936	0.01	Q	V
20+45	0.0937	0.01	Q	V
20+50	0.0938	0.01	Q	V
20+55	0.0939	0.01	Q	V
21+ 0	0.0940	0.01	Q	V
21+ 5	0.0940	0.01	Q	V
21+10	0.0941	0.01	Q	V
21+15	0.0942	0.01	Q	V
21+20	0.0943	0.01	Q	V
21+25	0.0944	0.01	Q	V
21+30	0.0944	0.01	Q	V
21+35	0.0945	0.01	Q	V
21+40	0.0946	0.01	Q	V
21+45	0.0947	0.01	Q	V
21+50	0.0948	0.01	Q	V
21+55	0.0949	0.01	Q	V
22+ 0	0.0949	0.01	Q	V
22+ 5	0.0950	0.01	Q	V
22+10	0.0951	0.01	Q	V
22+15	0.0952	0.01	Q	V
22+20	0.0953	0.01	Q	V
22+25	0.0953	0.01	Q	V
22+30	0.0954	0.01	Q	V
22+35	0.0955	0.01	Q	V
22+40	0.0955	0.01	Q	V
22+45	0.0956	0.01	Q	V
22+50	0.0957	0.01	Q	V
22+55	0.0957	0.01	Q	V
23+ 0	0.0958	0.01	Q	V
23+ 5	0.0959	0.01	Q	V
23+10	0.0959	0.01	Q	V
23+15	0.0960	0.01	Q	V
23+20	0.0961	0.01	Q	V
23+25	0.0961	0.01	Q	V
23+30	0.0962	0.01	Q	V
23+35	0.0963	0.01	Q	V
23+40	0.0963	0.01	Q	V
23+45	0.0964	0.01	Q	V
23+50	0.0965	0.01	Q	V
23+55	0.0965	0.01	Q	V
24+ 0	0.0966	0.01	Q	V
24+ 5	0.0966	0.01	Q	V
24+10	0.0966	0.00	Q	V
24+15	0.0967	0.00	Q	V
24+20	0.0967	0.00	Q	V
24+25	0.0967	0.00	Q	V
24+30	0.0967	0.00	Q	V
24+35	0.0967	0.00	Q	V

Unit Hydrograph Analysis

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 Study date 04/10/20 File: pro2yr242.out

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Riverside County Synthetic Unit Hydrology Method
 RCFC & WCD Manual date - April 1978
 Program License Serial Number 5006

English (in-lb) Input Units Used
 English Rainfall Data (Inches) Input Values Used
 English Units used in output format

 Drainage Area = 7.70(Ac.) = 0.012 Sq. Mi.
 Drainage Area for Depth-Area Areal Adjustment = 7.70(Ac.) = 0.012 Sq. Mi.
 Length along longest watercourse = 1268.00(Ft.)
 Length along longest watercourse measured to centroid = 634.00(Ft.)
 Length along longest watercourse = 0.240 Mi.
 Length along longest watercourse measured to centroid = 0.120 Mi.
 Difference in elevation = 14.30(Ft.)
 Slope along watercourse = 59.5457 Ft./Mi.
 Average Manning's 'N' = 0.015
 Lag time = 0.043 Hr.
 Lag time = 2.58 Min.
 25% of lag time = 0.65 Min.
 40% of lag time = 1.03 Min.
 Unit time = 5.00 Min.
 Duration of storm = 24 Hour(s)
 User Entered Base Flow = 0.00(CFS)
 2 YEAR Area rainfall data:
 Area(Ac.)[1] Rainfall (In)[2] Weighting[1*2]
 7.70 1.60 12.32
 100 YEAR Area rainfall data:
 Area(Ac.)[1] Rainfall (In)[2] Weighting[1*2]
 7.70 4.00 30.80
 STORM EVENT (YEAR) = 2.00
 Area Averaged 2-Year Rainfall = 1.600(In)
 Area Averaged 100-Year Rainfall = 4.000(In)
 Point rain (area averaged) = 1.600(In)
 Areal adjustment factor = 100.00 %
 Adjusted average point rain = 1.600(In)
 Sub-Area Data:
 Area(Ac.) Runoff Index Impervious %
 7.700 56.00 0.650
 Total Area Entered = 7.70(Ac.)

RI	RI	Infil. Rate	Impervious	Adj. Infil. Rate	Area%	F
AMC2	AMC-1	(In/Hr)	(Dec. %)	(In/Hr)	(Dec.)	(In/Hr)
56.0	36.0	0.706	0.650	0.293	1.000	0.293
						Sum (F) = 0.293

 Area averaged mean soil loss (F) (In/Hr) = 0.293
 Minimum soil loss rate ((In/Hr)) = 0.146
 (for 24 hour storm duration)
 Soil loss rate (decimal) = 0.380

Unit Hydrograph
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	193.625	42.278
2	0.167	387.249	43.815
3	0.250	580.874	9.059
4	0.333	774.498	3.572
5	0.417	968.123	1.276
Sum = 100.000			Sum= 7.760

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate (In./Hr) Max	Loss rate (In./Hr) Low	Effective (In/Hr)
1	0.08	0.013	(0.519)	0.005	0.008
2	0.17	0.013	(0.517)	0.005	0.008
3	0.25	0.013	(0.515)	0.005	0.008
4	0.33	0.019	(0.513)	0.007	0.012
5	0.42	0.019	(0.511)	0.007	0.012
6	0.50	0.019	(0.509)	0.007	0.012
7	0.58	0.019	(0.507)	0.007	0.012
8	0.67	0.019	(0.505)	0.007	0.012

9	0.75	0.10	0.019	(	0.503)	0.007	0.012
10	0.83	0.13	0.026	(	0.501)	0.010	0.016
11	0.92	0.13	0.026	(	0.499)	0.010	0.016
12	1.00	0.13	0.026	(	0.498)	0.010	0.016
13	1.08	0.10	0.019	(	0.496)	0.007	0.012
14	1.17	0.10	0.019	(	0.494)	0.007	0.012
15	1.25	0.10	0.019	(	0.492)	0.007	0.012
16	1.33	0.10	0.019	(	0.490)	0.007	0.012
17	1.42	0.10	0.019	(	0.488)	0.007	0.012
18	1.50	0.10	0.019	(	0.486)	0.007	0.012
19	1.58	0.10	0.019	(	0.484)	0.007	0.012
20	1.67	0.10	0.019	(	0.482)	0.007	0.012
21	1.75	0.10	0.019	(	0.480)	0.007	0.012
22	1.83	0.13	0.026	(	0.478)	0.010	0.016
23	1.92	0.13	0.026	(	0.476)	0.010	0.016
24	2.00	0.13	0.026	(	0.474)	0.010	0.016
25	2.08	0.13	0.026	(	0.472)	0.010	0.016
26	2.17	0.13	0.026	(	0.470)	0.010	0.016
27	2.25	0.13	0.026	(	0.468)	0.010	0.016
28	2.33	0.13	0.026	(	0.467)	0.010	0.016
29	2.42	0.13	0.026	(	0.465)	0.010	0.016
30	2.50	0.13	0.026	(	0.463)	0.010	0.016
31	2.58	0.17	0.032	(	0.461)	0.012	0.020
32	2.67	0.17	0.032	(	0.459)	0.012	0.020
33	2.75	0.17	0.032	(	0.457)	0.012	0.020
34	2.83	0.17	0.032	(	0.455)	0.012	0.020
35	2.92	0.17	0.032	(	0.453)	0.012	0.020
36	3.00	0.17	0.032	(	0.451)	0.012	0.020
37	3.08	0.17	0.032	(	0.450)	0.012	0.020
38	3.17	0.17	0.032	(	0.448)	0.012	0.020
39	3.25	0.17	0.032	(	0.446)	0.012	0.020
40	3.33	0.17	0.032	(	0.444)	0.012	0.020
41	3.42	0.17	0.032	(	0.442)	0.012	0.020
42	3.50	0.17	0.032	(	0.440)	0.012	0.020
43	3.58	0.17	0.032	(	0.438)	0.012	0.020
44	3.67	0.17	0.032	(	0.437)	0.012	0.020
45	3.75	0.17	0.032	(	0.435)	0.012	0.020
46	3.83	0.20	0.038	(	0.433)	0.015	0.024
47	3.92	0.20	0.038	(	0.431)	0.015	0.024
48	4.00	0.20	0.038	(	0.429)	0.015	0.024
49	4.08	0.20	0.038	(	0.427)	0.015	0.024
50	4.17	0.20	0.038	(	0.426)	0.015	0.024
51	4.25	0.20	0.038	(	0.424)	0.015	0.024
52	4.33	0.23	0.045	(	0.422)	0.017	0.028
53	4.42	0.23	0.045	(	0.420)	0.017	0.028
54	4.50	0.23	0.045	(	0.418)	0.017	0.028
55	4.58	0.23	0.045	(	0.417)	0.017	0.028
56	4.67	0.23	0.045	(	0.415)	0.017	0.028
57	4.75	0.23	0.045	(	0.413)	0.017	0.028
58	4.83	0.27	0.051	(	0.411)	0.019	0.032
59	4.92	0.27	0.051	(	0.409)	0.019	0.032
60	5.00	0.27	0.051	(	0.408)	0.019	0.032
61	5.08	0.20	0.038	(	0.406)	0.015	0.024
62	5.17	0.20	0.038	(	0.404)	0.015	0.024
63	5.25	0.20	0.038	(	0.402)	0.015	0.024
64	5.33	0.23	0.045	(	0.401)	0.017	0.028
65	5.42	0.23	0.045	(	0.399)	0.017	0.028
66	5.50	0.23	0.045	(	0.397)	0.017	0.028
67	5.58	0.27	0.051	(	0.395)	0.019	0.032
68	5.67	0.27	0.051	(	0.394)	0.019	0.032
69	5.75	0.27	0.051	(	0.392)	0.019	0.032
70	5.83	0.27	0.051	(	0.390)	0.019	0.032
71	5.92	0.27	0.051	(	0.388)	0.019	0.032
72	6.00	0.27	0.051	(	0.387)	0.019	0.032
73	6.08	0.30	0.058	(	0.385)	0.022	0.036
74	6.17	0.30	0.058	(	0.383)	0.022	0.036
75	6.25	0.30	0.058	(	0.382)	0.022	0.036
76	6.33	0.30	0.058	(	0.380)	0.022	0.036
77	6.42	0.30	0.058	(	0.378)	0.022	0.036
78	6.50	0.30	0.058	(	0.377)	0.022	0.036
79	6.58	0.33	0.064	(	0.375)	0.024	0.040
80	6.67	0.33	0.064	(	0.373)	0.024	0.040
81	6.75	0.33	0.064	(	0.371)	0.024	0.040
82	6.83	0.33	0.064	(	0.370)	0.024	0.040
83	6.92	0.33	0.064	(	0.368)	0.024	0.040
84	7.00	0.33	0.064	(	0.366)	0.024	0.040
85	7.08	0.33	0.064	(	0.365)	0.024	0.040
86	7.17	0.33	0.064	(	0.363)	0.024	0.040
87	7.25	0.33	0.064	(	0.361)	0.024	0.040
88	7.33	0.37	0.070	(	0.360)	0.027	0.044
89	7.42	0.37	0.070	(	0.358)	0.027	0.044
90	7.50	0.37	0.070	(	0.356)	0.027	0.044
91	7.58	0.40	0.077	(	0.355)	0.029	0.048
92	7.67	0.40	0.077	(	0.353)	0.029	0.048
93	7.75	0.40	0.077	(	0.352)	0.029	0.048
94	7.83	0.43	0.083	(	0.350)	0.032	0.052

95	7. 92	0. 43	0. 083	(	0. 348)	0. 032	0. 052
96	8. 00	0. 43	0. 083	(	0. 347)	0. 032	0. 052
97	8. 08	0. 50	0. 096	(	0. 345)	0. 036	0. 060
98	8. 17	0. 50	0. 096	(	0. 344)	0. 036	0. 060
99	8. 25	0. 50	0. 096	(	0. 342)	0. 036	0. 060
100	8. 33	0. 50	0. 096	(	0. 340)	0. 036	0. 060
101	8. 42	0. 50	0. 096	(	0. 339)	0. 036	0. 060
102	8. 50	0. 50	0. 096	(	0. 337)	0. 036	0. 060
103	8. 58	0. 53	0. 102	(	0. 336)	0. 039	0. 063
104	8. 67	0. 53	0. 102	(	0. 334)	0. 039	0. 063
105	8. 75	0. 53	0. 102	(	0. 332)	0. 039	0. 063
106	8. 83	0. 57	0. 109	(	0. 331)	0. 041	0. 067
107	8. 92	0. 57	0. 109	(	0. 329)	0. 041	0. 067
108	9. 00	0. 57	0. 109	(	0. 328)	0. 041	0. 067
109	9. 08	0. 63	0. 122	(	0. 326)	0. 046	0. 075
110	9. 17	0. 63	0. 122	(	0. 325)	0. 046	0. 075
111	9. 25	0. 63	0. 122	(	0. 323)	0. 046	0. 075
112	9. 33	0. 67	0. 128	(	0. 322)	0. 049	0. 079
113	9. 42	0. 67	0. 128	(	0. 320)	0. 049	0. 079
114	9. 50	0. 67	0. 128	(	0. 318)	0. 049	0. 079
115	9. 58	0. 70	0. 134	(	0. 317)	0. 051	0. 083
116	9. 67	0. 70	0. 134	(	0. 315)	0. 051	0. 083
117	9. 75	0. 70	0. 134	(	0. 314)	0. 051	0. 083
118	9. 83	0. 73	0. 141	(	0. 312)	0. 054	0. 087
119	9. 92	0. 73	0. 141	(	0. 311)	0. 054	0. 087
120	10. 00	0. 73	0. 141	(	0. 309)	0. 054	0. 087
121	10. 08	0. 50	0. 096	(	0. 308)	0. 036	0. 060
122	10. 17	0. 50	0. 096	(	0. 306)	0. 036	0. 060
123	10. 25	0. 50	0. 096	(	0. 305)	0. 036	0. 060
124	10. 33	0. 50	0. 096	(	0. 303)	0. 036	0. 060
125	10. 42	0. 50	0. 096	(	0. 302)	0. 036	0. 060
126	10. 50	0. 50	0. 096	(	0. 300)	0. 036	0. 060
127	10. 58	0. 67	0. 128	(	0. 299)	0. 049	0. 079
128	10. 67	0. 67	0. 128	(	0. 298)	0. 049	0. 079
129	10. 75	0. 67	0. 128	(	0. 296)	0. 049	0. 079
130	10. 83	0. 67	0. 128	(	0. 295)	0. 049	0. 079
131	10. 92	0. 67	0. 128	(	0. 293)	0. 049	0. 079
132	11. 00	0. 67	0. 128	(	0. 292)	0. 049	0. 079
133	11. 08	0. 63	0. 122	(	0. 290)	0. 046	0. 075
134	11. 17	0. 63	0. 122	(	0. 289)	0. 046	0. 075
135	11. 25	0. 63	0. 122	(	0. 287)	0. 046	0. 075
136	11. 33	0. 63	0. 122	(	0. 286)	0. 046	0. 075
137	11. 42	0. 63	0. 122	(	0. 285)	0. 046	0. 075
138	11. 50	0. 63	0. 122	(	0. 283)	0. 046	0. 075
139	11. 58	0. 57	0. 109	(	0. 282)	0. 041	0. 067
140	11. 67	0. 57	0. 109	(	0. 280)	0. 041	0. 067
141	11. 75	0. 57	0. 109	(	0. 279)	0. 041	0. 067
142	11. 83	0. 60	0. 115	(	0. 278)	0. 044	0. 071
143	11. 92	0. 60	0. 115	(	0. 276)	0. 044	0. 071
144	12. 00	0. 60	0. 115	(	0. 275)	0. 044	0. 071
145	12. 08	0. 83	0. 160	(	0. 273)	0. 061	0. 099
146	12. 17	0. 83	0. 160	(	0. 272)	0. 061	0. 099
147	12. 25	0. 83	0. 160	(	0. 271)	0. 061	0. 099
148	12. 33	0. 87	0. 166	(	0. 269)	0. 063	0. 103
149	12. 42	0. 87	0. 166	(	0. 268)	0. 063	0. 103
150	12. 50	0. 87	0. 166	(	0. 267)	0. 063	0. 103
151	12. 58	0. 93	0. 179	(	0. 265)	0. 068	0. 111
152	12. 67	0. 93	0. 179	(	0. 264)	0. 068	0. 111
153	12. 75	0. 93	0. 179	(	0. 263)	0. 068	0. 111
154	12. 83	0. 97	0. 186	(	0. 261)	0. 071	0. 115
155	12. 92	0. 97	0. 186	(	0. 260)	0. 071	0. 115
156	13. 00	0. 97	0. 186	(	0. 259)	0. 071	0. 115
157	13. 08	1. 13	0. 218	(	0. 257)	0. 083	0. 135
158	13. 17	1. 13	0. 218	(	0. 256)	0. 083	0. 135
159	13. 25	1. 13	0. 218	(	0. 255)	0. 083	0. 135
160	13. 33	1. 13	0. 218	(	0. 254)	0. 083	0. 135
161	13. 42	1. 13	0. 218	(	0. 252)	0. 083	0. 135
162	13. 50	1. 13	0. 218	(	0. 251)	0. 083	0. 135
163	13. 58	0. 77	0. 147	(	0. 250)	0. 056	0. 091
164	13. 67	0. 77	0. 147	(	0. 248)	0. 056	0. 091
165	13. 75	0. 77	0. 147	(	0. 247)	0. 056	0. 091
166	13. 83	0. 77	0. 147	(	0. 246)	0. 056	0. 091
167	13. 92	0. 77	0. 147	(	0. 245)	0. 056	0. 091
168	14. 00	0. 77	0. 147	(	0. 243)	0. 056	0. 091
169	14. 08	0. 90	0. 173	(	0. 242)	0. 066	0. 107
170	14. 17	0. 90	0. 173	(	0. 241)	0. 066	0. 107
171	14. 25	0. 90	0. 173	(	0. 240)	0. 066	0. 107
172	14. 33	0. 87	0. 166	(	0. 238)	0. 063	0. 103
173	14. 42	0. 87	0. 166	(	0. 237)	0. 063	0. 103
174	14. 50	0. 87	0. 166	(	0. 236)	0. 063	0. 103
175	14. 58	0. 87	0. 166	(	0. 235)	0. 063	0. 103
176	14. 67	0. 87	0. 166	(	0. 234)	0. 063	0. 103
177	14. 75	0. 87	0. 166	(	0. 232)	0. 063	0. 103
178	14. 83	0. 83	0. 160	(	0. 231)	0. 061	0. 099
179	14. 92	0. 83	0. 160	(	0. 230)	0. 061	0. 099
180	15. 00	0. 83	0. 160	(	0. 229)	0. 061	0. 099

181	15.08	0.80	0.154	(	0.228)	0.058	0.095
182	15.17	0.80	0.154	(	0.226)	0.058	0.095
183	15.25	0.80	0.154	(	0.225)	0.058	0.095
184	15.33	0.77	0.147	(	0.224)	0.056	0.091
185	15.42	0.77	0.147	(	0.223)	0.056	0.091
186	15.50	0.77	0.147	(	0.222)	0.056	0.091
187	15.58	0.63	0.122	(	0.221)	0.046	0.075
188	15.67	0.63	0.122	(	0.220)	0.046	0.075
189	15.75	0.63	0.122	(	0.218)	0.046	0.075
190	15.83	0.63	0.122	(	0.217)	0.046	0.075
191	15.92	0.63	0.122	(	0.216)	0.046	0.075
192	16.00	0.63	0.122	(	0.215)	0.046	0.075
193	16.08	0.13	0.026	(	0.214)	0.010	0.016
194	16.17	0.13	0.026	(	0.213)	0.010	0.016
195	16.25	0.13	0.026	(	0.212)	0.010	0.016
196	16.33	0.13	0.026	(	0.211)	0.010	0.016
197	16.42	0.13	0.026	(	0.210)	0.010	0.016
198	16.50	0.13	0.026	(	0.209)	0.010	0.016
199	16.58	0.10	0.019	(	0.208)	0.007	0.012
200	16.67	0.10	0.019	(	0.207)	0.007	0.012
201	16.75	0.10	0.019	(	0.205)	0.007	0.012
202	16.83	0.10	0.019	(	0.204)	0.007	0.012
203	16.92	0.10	0.019	(	0.203)	0.007	0.012
204	17.00	0.10	0.019	(	0.202)	0.007	0.012
205	17.08	0.17	0.032	(	0.201)	0.012	0.020
206	17.17	0.17	0.032	(	0.200)	0.012	0.020
207	17.25	0.17	0.032	(	0.199)	0.012	0.020
208	17.33	0.17	0.032	(	0.198)	0.012	0.020
209	17.42	0.17	0.032	(	0.197)	0.012	0.020
210	17.50	0.17	0.032	(	0.196)	0.012	0.020
211	17.58	0.17	0.032	(	0.195)	0.012	0.020
212	17.67	0.17	0.032	(	0.194)	0.012	0.020
213	17.75	0.17	0.032	(	0.193)	0.012	0.020
214	17.83	0.13	0.026	(	0.192)	0.010	0.016
215	17.92	0.13	0.026	(	0.192)	0.010	0.016
216	18.00	0.13	0.026	(	0.191)	0.010	0.016
217	18.08	0.13	0.026	(	0.190)	0.010	0.016
218	18.17	0.13	0.026	(	0.189)	0.010	0.016
219	18.25	0.13	0.026	(	0.188)	0.010	0.016
220	18.33	0.13	0.026	(	0.187)	0.010	0.016
221	18.42	0.13	0.026	(	0.186)	0.010	0.016
222	18.50	0.13	0.026	(	0.185)	0.010	0.016
223	18.58	0.10	0.019	(	0.184)	0.007	0.012
224	18.67	0.10	0.019	(	0.183)	0.007	0.012
225	18.75	0.10	0.019	(	0.182)	0.007	0.012
226	18.83	0.07	0.013	(	0.182)	0.005	0.008
227	18.92	0.07	0.013	(	0.181)	0.005	0.008
228	19.00	0.07	0.013	(	0.180)	0.005	0.008
229	19.08	0.10	0.019	(	0.179)	0.007	0.012
230	19.17	0.10	0.019	(	0.178)	0.007	0.012
231	19.25	0.10	0.019	(	0.177)	0.007	0.012
232	19.33	0.13	0.026	(	0.176)	0.010	0.016
233	19.42	0.13	0.026	(	0.176)	0.010	0.016
234	19.50	0.13	0.026	(	0.175)	0.010	0.016
235	19.58	0.10	0.019	(	0.174)	0.007	0.012
236	19.67	0.10	0.019	(	0.173)	0.007	0.012
237	19.75	0.10	0.019	(	0.172)	0.007	0.012
238	19.83	0.07	0.013	(	0.172)	0.005	0.008
239	19.92	0.07	0.013	(	0.171)	0.005	0.008
240	20.00	0.07	0.013	(	0.170)	0.005	0.008
241	20.08	0.10	0.019	(	0.169)	0.007	0.012
242	20.17	0.10	0.019	(	0.169)	0.007	0.012
243	20.25	0.10	0.019	(	0.168)	0.007	0.012
244	20.33	0.10	0.019	(	0.167)	0.007	0.012
245	20.42	0.10	0.019	(	0.166)	0.007	0.012
246	20.50	0.10	0.019	(	0.166)	0.007	0.012
247	20.58	0.10	0.019	(	0.165)	0.007	0.012
248	20.67	0.10	0.019	(	0.164)	0.007	0.012
249	20.75	0.10	0.019	(	0.164)	0.007	0.012
250	20.83	0.07	0.013	(	0.163)	0.005	0.008
251	20.92	0.07	0.013	(	0.162)	0.005	0.008
252	21.00	0.07	0.013	(	0.162)	0.005	0.008
253	21.08	0.10	0.019	(	0.161)	0.007	0.012
254	21.17	0.10	0.019	(	0.160)	0.007	0.012
255	21.25	0.10	0.019	(	0.160)	0.007	0.012
256	21.33	0.07	0.013	(	0.159)	0.005	0.008
257	21.42	0.07	0.013	(	0.159)	0.005	0.008
258	21.50	0.07	0.013	(	0.158)	0.005	0.008
259	21.58	0.10	0.019	(	0.157)	0.007	0.012
260	21.67	0.10	0.019	(	0.157)	0.007	0.012
261	21.75	0.10	0.019	(	0.156)	0.007	0.012
262	21.83	0.07	0.013	(	0.156)	0.005	0.008
263	21.92	0.07	0.013	(	0.155)	0.005	0.008
264	22.00	0.07	0.013	(	0.155)	0.005	0.008
265	22.08	0.10	0.019	(	0.154)	0.007	0.012
266	22.17	0.10	0.019	(	0.154)	0.007	0.012

267	22.25	0.10	0.019	(0.153)	0.007	0.012
268	22.33	0.07	0.013	(0.153)	0.005	0.008
269	22.42	0.07	0.013	(0.152)	0.005	0.008
270	22.50	0.07	0.013	(0.152)	0.005	0.008
271	22.58	0.07	0.013	(0.151)	0.005	0.008
272	22.67	0.07	0.013	(0.151)	0.005	0.008
273	22.75	0.07	0.013	(0.151)	0.005	0.008
274	22.83	0.07	0.013	(0.150)	0.005	0.008
275	22.92	0.07	0.013	(0.150)	0.005	0.008
276	23.00	0.07	0.013	(0.149)	0.005	0.008
277	23.08	0.07	0.013	(0.149)	0.005	0.008
278	23.17	0.07	0.013	(0.149)	0.005	0.008
279	23.25	0.07	0.013	(0.148)	0.005	0.008
280	23.33	0.07	0.013	(0.148)	0.005	0.008
281	23.42	0.07	0.013	(0.148)	0.005	0.008
282	23.50	0.07	0.013	(0.148)	0.005	0.008
283	23.58	0.07	0.013	(0.147)	0.005	0.008
284	23.67	0.07	0.013	(0.147)	0.005	0.008
285	23.75	0.07	0.013	(0.147)	0.005	0.008
286	23.83	0.07	0.013	(0.147)	0.005	0.008
287	23.92	0.07	0.013	(0.147)	0.005	0.008
288	24.00	0.07	0.013	(0.147)	0.005	0.008

(Loss Rate Not Used)
 Sum = 100.0 Sum = 11.9
 Flood volume = Effective rainfall times area = $7.7(Ac.) / [(In)/(Ft.)] = 0.99(In) = 0.6(Ac. Ft)$
 Total soil loss = $0.61(In) = 0.390(Ac. Ft)$
 Total rainfall = $1.60(In)$
 Flood volume = 27727.0 Cubic Feet
 Total soil loss = 16994.0 Cubic Feet

 Peak flow rate of this hydrograph = 1.047(CFS)

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 24 - H O U R S T O R M
 R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac. Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0002	0.03	Q				
0+10	0.0005	0.05	Q				
0+15	0.0009	0.06	Q				
0+20	0.0015	0.07	Q				
0+25	0.0021	0.09	Q				
0+30	0.0027	0.09	Q				
0+35	0.0033	0.09	Q				
0+40	0.0040	0.09	Q				
0+45	0.0046	0.09	Q				
0+50	0.0053	0.11	Q				
0+55	0.0061	0.12	Q				
1+ 0	0.0070	0.12	Q				
1+ 5	0.0077	0.11	Q				
1+10	0.0084	0.10	Q				
1+15	0.0091	0.09	Q				
1+20	0.0097	0.09	Q				
1+25	0.0103	0.09	Q				
1+30	0.0110	0.09	Q				
1+35	0.0116	0.09	Q				
1+40	0.0122	0.09	Q				
1+45	0.0129	0.09	Q				
1+50	0.0136	0.11	Q				
1+55	0.0144	0.12	Q				
2+ 0	0.0153	0.12	Q				
2+ 5	0.0161	0.12	QV				
2+10	0.0170	0.12	QV				
2+15	0.0178	0.12	QV				
2+20	0.0186	0.12	QV				
2+25	0.0195	0.12	QV				
2+30	0.0203	0.12	QV				
2+35	0.0213	0.14	QV				
2+40	0.0223	0.15	QV				
2+45	0.0234	0.15	QV				
2+50	0.0244	0.15	QV				
2+55	0.0255	0.15	QV				
3+ 0	0.0265	0.15	QV				
3+ 5	0.0276	0.15	QV				
3+10	0.0287	0.15	Q V				
3+15	0.0297	0.15	QV				
3+20	0.0308	0.15	QV				
3+25	0.0319	0.15	Q V				
3+30	0.0329	0.15	Q V				
3+35	0.0340	0.15	Q V				
3+40	0.0350	0.15	Q V				

3+45	0.0361	0.15	Q	V					
3+50	0.0372	0.17	Q	V					
3+55	0.0385	0.18	Q	V					
4+ 0	0.0398	0.18	Q	V					
4+ 5	0.0410	0.18	Q	V					
4+10	0.0423	0.18	Q	V					
4+15	0.0436	0.18	Q	V					
4+20	0.0449	0.20	Q	V					
4+25	0.0464	0.21	Q	V					
4+30	0.0479	0.21	Q	V					
4+35	0.0493	0.22	Q	V					
4+40	0.0508	0.22	Q	V					
4+45	0.0523	0.22	Q	V					
4+50	0.0539	0.23	Q	V					
4+55	0.0556	0.24	Q	V					
5+ 0	0.0572	0.24	Q	V					
5+ 5	0.0588	0.22	Q	V					
5+10	0.0601	0.19	Q	V					
5+15	0.0614	0.19	Q	V					
5+20	0.0628	0.20	Q	V					
5+25	0.0642	0.21	Q	V					
5+30	0.0657	0.21	Q	V					
5+35	0.0673	0.23	Q	V					
5+40	0.0689	0.24	Q	V					
5+45	0.0706	0.24	Q	V					
5+50	0.0723	0.25	Q	V					
5+55	0.0740	0.25	Q	V					
6+ 0	0.0757	0.25	Q	V					
6+ 5	0.0775	0.26	Q	V					
6+10	0.0794	0.27	Q	V					
6+15	0.0813	0.28	Q	V					
6+20	0.0832	0.28	Q	V					
6+25	0.0851	0.28	Q	V					
6+30	0.0870	0.28	Q	V					
6+35	0.0890	0.29	Q	V					
6+40	0.0911	0.30	Q	V					
6+45	0.0932	0.31	Q	V					
6+50	0.0953	0.31	Q	V					
6+55	0.0974	0.31	Q	V					
7+ 0	0.0996	0.31	Q	V					
7+ 5	0.1017	0.31	Q	V					
7+10	0.1038	0.31	Q	V					
7+15	0.1059	0.31	Q	V					
7+20	0.1081	0.32	Q	V					
7+25	0.1104	0.33	Q	V					
7+30	0.1128	0.34	Q	V					
7+35	0.1152	0.35	Q	V					
7+40	0.1177	0.37	Q	V					
7+45	0.1202	0.37	Q	V					
7+50	0.1229	0.38	Q	V					
7+55	0.1256	0.40	Q	V					
8+ 0	0.1283	0.40	Q	V					
8+ 5	0.1313	0.43	Q	V					
8+10	0.1344	0.45	Q	V					
8+15	0.1376	0.46	Q	V					
8+20	0.1407	0.46	Q	V					
8+25	0.1439	0.46	Q	V					
8+30	0.1471	0.46	Q	V					
8+35	0.1504	0.48	Q	V					
8+40	0.1537	0.49	Q	V					
8+45	0.1571	0.49	Q	V					
8+50	0.1606	0.51	Q	V					
8+55	0.1642	0.52	Q	V					
9+ 0	0.1678	0.52	Q	V					
9+ 5	0.1716	0.55	Q	V					
9+10	0.1755	0.58	Q	V					
9+15	0.1796	0.58	Q	V					
9+20	0.1837	0.60	Q	V					
9+25	0.1879	0.61	Q	V					
9+30	0.1921	0.61	Q	V					
9+35	0.1964	0.63	Q	V					
9+40	0.2009	0.64	Q	V					
9+45	0.2053	0.65	Q	V					
9+50	0.2099	0.66	Q	V					
9+55	0.2145	0.67	Q	V					
10+ 0	0.2192	0.68	Q	V					
10+ 5	0.2232	0.59	Q	V					
10+10	0.2266	0.49	Q	V					
10+15	0.2298	0.47	Q	V					
10+20	0.2330	0.46	Q	V					
10+25	0.2362	0.46	Q	V					
10+30	0.2394	0.46	Q	V					
10+35	0.2430	0.53	Q	V					
10+40	0.2471	0.59	Q	V					
10+45	0.2513	0.61	Q	V					
10+50	0.2556	0.61	Q	V					

10+55	0.2598	0.62	Q			
11+ 0	0.2640	0.62	Q	V		
11+ 5	0.2682	0.60	Q	V		
11+10	0.2723	0.59	Q	V		
11+15	0.2763	0.59	Q	V		
11+20	0.2803	0.59	Q	V		
11+25	0.2844	0.59	Q	V		
11+30	0.2884	0.59	Q	V		
11+35	0.2922	0.56	Q	V		
11+40	0.2959	0.53	Q	V		
11+45	0.2995	0.53	Q	V		
11+50	0.3032	0.54	Q	V		
11+55	0.3070	0.55	Q	V		
12+ 0	0.3108	0.55	Q	V		
12+ 5	0.3153	0.65	Q	V		
12+10	0.3204	0.74	Q	V		
12+15	0.3256	0.76	Q	V		
12+20	0.3310	0.78	Q	V		
12+25	0.3365	0.80	Q	V		
12+30	0.3420	0.80	Q	V		
12+35	0.3477	0.83	Q	V		
12+40	0.3536	0.85	Q	V		
12+45	0.3595	0.86	Q	V		
12+50	0.3655	0.87	Q	V		
12+55	0.3716	0.89	Q	V		
13+ 0	0.3778	0.89	Q	V		
13+ 5	0.3844	0.96	Q	V		
13+10	0.3914	1.03	Q	V		
13+15	0.3986	1.04	Q	V		
13+20	0.4058	1.05	Q	V		
13+25	0.4130	1.05	Q	V		
13+30	0.4202	1.05	Q	V		
13+35	0.4265	0.90	Q	V		
13+40	0.4317	0.76	Q	V		
13+45	0.4367	0.73	Q	V		
13+50	0.4416	0.71	Q	V		
13+55	0.4464	0.71	Q	V		
14+ 0	0.4513	0.71	Q	V		
14+ 5	0.4566	0.76	Q	V		
14+10	0.4622	0.81	Q	V		
14+15	0.4679	0.83	Q	V		
14+20	0.4735	0.82	Q	V		
14+25	0.4790	0.81	Q	V		
14+30	0.4846	0.80	Q	V		
14+35	0.4901	0.80	Q	V		
14+40	0.4956	0.80	Q	V		
14+45	0.5011	0.80	Q	V		
14+50	0.5065	0.79	Q	V		
14+55	0.5119	0.77	Q	V		
15+ 0	0.5172	0.77	Q	V		
15+ 5	0.5224	0.76	Q	V		
15+10	0.5275	0.74	Q	V		
15+15	0.5326	0.74	Q	V		
15+20	0.5376	0.73	Q	V		
15+25	0.5425	0.71	Q	V		
15+30	0.5474	0.71	Q	V		
15+35	0.5520	0.66	Q	V		
15+40	0.5561	0.60	Q	V		
15+45	0.5602	0.59	Q	V		
15+50	0.5642	0.59	Q	V		
15+55	0.5683	0.59	Q	V		
16+ 0	0.5723	0.59	Q	V		
16+ 5	0.5750	0.39	Q	V		
16+10	0.5763	0.19	Q	V		
16+15	0.5773	0.15	Q	V		
16+20	0.5782	0.13	Q	V		
16+25	0.5790	0.12	Q	V		
16+30	0.5798	0.12	Q	V		
16+35	0.5806	0.11	Q	V		
16+40	0.5813	0.10	Q	V		
16+45	0.5819	0.09	Q	V		
16+50	0.5826	0.09	Q	V		
16+55	0.5832	0.09	Q	V		
17+ 0	0.5838	0.09	Q	V		
17+ 5	0.5846	0.12	Q	V		
17+10	0.5857	0.15	Q	V		
17+15	0.5867	0.15	Q	V		
17+20	0.5877	0.15	Q	V		
17+25	0.5888	0.15	Q	V		
17+30	0.5899	0.15	Q	V		
17+35	0.5909	0.15	Q	V		
17+40	0.5920	0.15	Q	V		
17+45	0.5931	0.15	Q	V		
17+50	0.5940	0.14	Q	V		
17+55	0.5949	0.13	Q	V		
18+ 0	0.5958	0.12	Q	V		

18+ 5	0. 5966	0. 12	Q	V
18+10	0. 5975	0. 12	Q	V
18+15	0. 5983	0. 12	Q	V
18+20	0. 5992	0. 12	Q	V
18+25	0. 6000	0. 12	Q	V
18+30	0. 6009	0. 12	Q	V
18+35	0. 6016	0. 11	Q	V
18+40	0. 6023	0. 10	Q	V
18+45	0. 6029	0. 09	Q	V
18+50	0. 6035	0. 08	Q	V
18+55	0. 6039	0. 07	Q	V
19+ 0	0. 6044	0. 06	Q	V
19+ 5	0. 6049	0. 08	Q	V
19+10	0. 6055	0. 09	Q	V
19+15	0. 6061	0. 09	Q	V
19+20	0. 6068	0. 11	Q	V
19+25	0. 6077	0. 12	Q	V
19+30	0. 6085	0. 12	Q	V
19+35	0. 6093	0. 11	Q	V
19+40	0. 6099	0. 10	Q	V
19+45	0. 6106	0. 09	Q	V
19+50	0. 6111	0. 08	Q	V
19+55	0. 6116	0. 07	Q	V
20+ 0	0. 6120	0. 06	Q	V
20+ 5	0. 6125	0. 08	Q	V
20+10	0. 6131	0. 09	Q	V
20+15	0. 6138	0. 09	Q	V
20+20	0. 6144	0. 09	Q	V
20+25	0. 6150	0. 09	Q	V
20+30	0. 6157	0. 09	Q	V
20+35	0. 6163	0. 09	Q	V
20+40	0. 6169	0. 09	Q	V
20+45	0. 6176	0. 09	Q	V
20+50	0. 6181	0. 08	Q	V
20+55	0. 6186	0. 07	Q	V
21+ 0	0. 6190	0. 06	Q	V
21+ 5	0. 6195	0. 08	Q	V
21+10	0. 6201	0. 09	Q	V
21+15	0. 6208	0. 09	Q	V
21+20	0. 6213	0. 08	Q	V
21+25	0. 6218	0. 07	Q	V
21+30	0. 6222	0. 06	Q	V
21+35	0. 6227	0. 08	Q	V
21+40	0. 6233	0. 09	Q	V
21+45	0. 6239	0. 09	Q	V
21+50	0. 6245	0. 08	Q	V
21+55	0. 6249	0. 07	Q	V
22+ 0	0. 6254	0. 06	Q	V
22+ 5	0. 6259	0. 08	Q	V
22+10	0. 6265	0. 09	Q	V
22+15	0. 6271	0. 09	Q	V
22+20	0. 6277	0. 08	Q	V
22+25	0. 6281	0. 07	Q	V
22+30	0. 6286	0. 06	Q	V
22+35	0. 6290	0. 06	Q	V
22+40	0. 6294	0. 06	Q	V
22+45	0. 6298	0. 06	Q	V
22+50	0. 6303	0. 06	Q	V
22+55	0. 6307	0. 06	Q	V
23+ 0	0. 6311	0. 06	Q	V
23+ 5	0. 6315	0. 06	Q	V
23+10	0. 6320	0. 06	Q	V
23+15	0. 6324	0. 06	Q	V
23+20	0. 6328	0. 06	Q	V
23+25	0. 6332	0. 06	Q	V
23+30	0. 6336	0. 06	Q	V
23+35	0. 6341	0. 06	Q	V
23+40	0. 6345	0. 06	Q	V
23+45	0. 6349	0. 06	Q	V
23+50	0. 6353	0. 06	Q	V
23+55	0. 6358	0. 06	Q	V
24+ 0	0. 6362	0. 06	Q	V
24+ 5	0. 6364	0. 04	Q	V
24+10	0. 6365	0. 01	Q	V
24+15	0. 6365	0. 00	Q	V
24+20	0. 6365	0. 00	Q	V

Appendix 8: Source Control

Pollutant Sources/Source Control Checklist

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

How to use this worksheet (also see instructions in Section G of the WQMP Template):

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your WQMP Exhibit.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs in your WQMP. Use the format shown in Table G.1 on page 23 of this WQMP Template. Describe your specific BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting BMPs or substituting alternative BMPs for those shown here.

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input checked="" type="checkbox"/> A. On-site storm drain inlets	<input checked="" type="checkbox"/> Locations of inlets.	<input checked="" type="checkbox"/> Mark all inlets with the words “Only Rain Down the Storm Drain” or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify.	<input checked="" type="checkbox"/> Maintain and periodically repaint or replace inlet markings. <input checked="" type="checkbox"/> Provide stormwater pollution prevention information to new site owners, lessees, or operators. <input checked="" type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-44, “Drainage System Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com <input checked="" type="checkbox"/> Include the following in lease agreements: “Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains.”
<input type="checkbox"/> B. Interior floor drains and elevator shaft sump pumps		<input type="checkbox"/> State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.
<input type="checkbox"/> C. Interior parking garages		<input type="checkbox"/> State that parking garage floor drains will be plumbed to the sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	1	2	3	4
	Permanent Controls—Show on WQMP Drawings	Permanent Controls—List in WQMP Table and Narrative	Operational BMPs—Include in WQMP Table and Narrative	
<p><input type="checkbox"/> D1. Need for future indoor & structural pest control</p> <p><input checked="" type="checkbox"/> D2. Landscape/ Outdoor Pesticide Use</p>	<p><input type="checkbox"/> Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained.</p> <p><input checked="" type="checkbox"/> Show self-retaining landscape areas, if any.</p> <p><input checked="" type="checkbox"/> Show stormwater treatment and hydrograph modification management BMPs. (See instructions in Chapter 3, Step 5 and guidance in Chapter 5.)</p>	<p><input type="checkbox"/> Note building design features that discourage entry of pests.</p> <p>State that final landscape plans will accomplish all of the following.</p> <p><input type="checkbox"/> Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.</p> <p><input checked="" type="checkbox"/> Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.</p> <p><input checked="" type="checkbox"/> Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</p> <p><input checked="" type="checkbox"/> Consider using pest-resistant plants, especially adjacent to hardscape.</p> <p><input checked="" type="checkbox"/> To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.</p>	<p><input type="checkbox"/> Provide Integrated Pest Management information to owners, lessees, and operators.</p> <p><input checked="" type="checkbox"/> Maintain landscaping using minimum or no pesticides.</p> <p><input checked="" type="checkbox"/> See applicable operational BMPs in “What you should know for....Landscape and Gardening” at http://rcflood.org/stormwater/Error! Hyperlink reference not valid.</p> <p><input checked="" type="checkbox"/> Provide IPM information to new owners, lessees and operators.</p>	

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE			
1	2	3	4
Potential Sources of Runoff Pollutants	Permanent Controls—Show on WQMP Drawings	Permanent Controls—List in WQMP Table and Narrative	Operational BMPs—Include in WQMP Table and Narrative
<input checked="" type="checkbox"/> E. Pools, spas, ponds, decorative fountains, and other water features.	<input checked="" type="checkbox"/> Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet. (Exception: Public pools must be plumbed according to County Department of Environmental Health Guidelines.)	If the Co-Permittee requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	<input checked="" type="checkbox"/> See applicable operational BMPs in "Guidelines for Maintaining Your Swimming Pool, Jacuzzi and Garden Fountain" at http://rcflood.org/stormwater/
<input type="checkbox"/> F. Food service	<input type="checkbox"/> For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. <input type="checkbox"/> On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	<input type="checkbox"/> Describe the location and features of the designated cleaning area. <input type="checkbox"/> Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	<input type="checkbox"/> See the brochure, "The Food Service Industry Best Management Practices for: Restaurants, Grocery Stores, Delicatessens and Bakeries" at http://rcflood.org/stormwater/ Provide this brochure to new site owners, lessees, and operators.
<input type="checkbox"/> G. Refuse areas	<input type="checkbox"/> Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas. <input type="checkbox"/> If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent runoff and show locations of berms to prevent runoff from the area. <input type="checkbox"/> Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	<input type="checkbox"/> State how site refuse will be handled and provide supporting detail to what is shown on plans. <input type="checkbox"/> State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	<input type="checkbox"/> State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

<p>IF THESE SOURCES WILL BE ON THE PROJECT SITE ...</p>	<p>... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE</p>		
<p>1 Potential Sources of Runoff Pollutants</p> <p><input type="checkbox"/> H. Industrial processes.</p>	<p>2 Permanent Controls—Show on WQMP Drawings</p> <p><input type="checkbox"/> Show process area.</p>	<p>3 Permanent Controls—List in WQMP Table and Narrative</p> <p><input type="checkbox"/> If industrial processes are to be located on site, state: “All process activities to be performed indoors. No processes to drain to exterior or to storm drain system.”</p>	<p>4 Operational BMPs—Include in WQMP Table and Narrative</p> <p><input type="checkbox"/> See Fact Sheet SC-10, “Non-Stormwater Discharges” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com See the brochure “Industrial & Commercial Facilities Best Management Practices for: Industrial, Commercial Facilities” at http://rcflood.org/stormwater/</p>

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE
<p>1</p> <p>Potential Sources of Runoff Pollutants</p> <p><input type="checkbox"/> i. Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)</p>	<p>2</p> <p>Permanent Controls—Show on WQMP Drawings</p> <p><input type="checkbox"/> Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent runoff or run-off from area.</p> <p><input type="checkbox"/> Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults.</p> <p><input type="checkbox"/> Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.</p>
	<p>3</p> <p>Permanent Controls—List in WQMP Table and Narrative</p> <p>Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains.</p> <p>Where appropriate, reference documentation of compliance with the requirements of Hazardous Materials Programs for:</p> <ul style="list-style-type: none"> ▪ Hazardous Waste Generation ▪ Hazardous Materials Release Response and Inventory ▪ California Accidental Release (CalARP) ▪ Aboveground Storage Tank ▪ Uniform Fire Code Article 80 Section 103(b) & (c) 1991 ▪ Underground Storage Tank <p>www.cchealth.org/groups/hazmat/</p>
	<p>4</p> <p>Operational BMPs—Include in WQMP Table and Narrative</p> <p><input type="checkbox"/> See the Fact Sheets SC-31, “Outdoor Liquid Container Storage” and SC-33, “Outdoor Storage of Raw Materials ” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com</p>

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input type="checkbox"/> J. Vehicle and Equipment Cleaning	<input type="checkbox"/> Show on drawings as appropriate: (1) Commercial/industrial facilities having vehicle/equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses. (2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use). (3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer. (4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.	<input type="checkbox"/> If a car wash area is not provided, describe any measures taken to discourage on-site car washing and explain how these will be enforced.	Describe operational measures to implement the following (if applicable): <input type="checkbox"/> Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system. Refer to “Outdoor Cleaning Activities and Professional Mobile Service Providers” for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/ <input type="checkbox"/> Car dealerships and similar may rinse cars with water only.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE
<p>1</p> <p>Potential Sources of Runoff Pollutants</p> <p><input type="checkbox"/> K. Vehicle/Equipment Repair and Maintenance</p>	<p>2</p> <p>Permanent Controls—Show on WQMP Drawings</p> <p><input type="checkbox"/> Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and designate the area to prevent run-on and runoff of stormwater.</p> <p><input type="checkbox"/> Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas.</p> <p><input type="checkbox"/> Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.</p>
	<p>3</p> <p>Permanent Controls—List in WQMP Table and Narrative</p> <p><input type="checkbox"/> State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area.</p> <p><input type="checkbox"/> State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.</p> <p><input type="checkbox"/> State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.</p>
	<p>4</p> <p>Operational BMPs—Include in WQMP Table and Narrative</p> <p>In the Stormwater Control Plan, note that all of the following restrictions apply to use the site:</p> <p><input type="checkbox"/> No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains.</p> <p><input type="checkbox"/> No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately.</p> <p><input type="checkbox"/> No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.</p> <p>Refer to "Automotive Maintenance & Car Care Best Management Practices for Auto Body Shops, Auto Repair Shops, Car Dealerships, Gas Stations and Fleet Service Operations". Brochure can be found at http://rcflood.org/stormwater/</p> <p>Refer to Outdoor Cleaning Activities and Professional Mobile Service Providers for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/</p>

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input type="checkbox"/> L. Fuel Dispensing Areas	<input type="checkbox"/> Fueling areas ⁶ shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable. <input type="checkbox"/> Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area ¹ .] The canopy [or cover] shall not drain onto the fueling area.		<input type="checkbox"/> The property owner shall dry sweep the fueling area routinely. <input type="checkbox"/> See the Fact Sheet SD-30, "Fueling Areas" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

⁶ The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input type="checkbox"/> M. Loading Docks	<input type="checkbox"/> Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas shall be drained to the sanitary sewer, or diverted and collected for ultimate discharge to the sanitary sewer. <input type="checkbox"/> Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. <input type="checkbox"/> Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		<input type="checkbox"/> Move loaded and unloaded items indoors as soon as possible. <input type="checkbox"/> See Fact Sheet SC-30, “Outdoor Loading and Unloading,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE
<p>1</p> <p>Potential Sources of Runoff Pollutants</p> <p><input checked="" type="checkbox"/> N. Fire Sprinkler Test Water</p>	<p>2</p> <p>Permanent Controls—Show on WQMP Drawings</p>
<p><input type="checkbox"/> O. Miscellaneous Drain or Wash Water or Other Sources</p> <p><input type="checkbox"/> Boiler drain lines</p> <p><input checked="" type="checkbox"/> Condensate drain lines</p> <p><input type="checkbox"/> Rooftop equipment</p> <p><input type="checkbox"/> Drainage sumps</p> <p><input checked="" type="checkbox"/> Roofing, gutters, and trim.</p> <p><input type="checkbox"/> Other sources</p>	<p>3</p> <p>Permanent Controls—List in WQMP Table and Narrative</p> <p><input checked="" type="checkbox"/> Provide a means to drain fire sprinkler test water to the sanitary sewer.</p>
<p><input type="checkbox"/> Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system.</p> <p><input checked="" type="checkbox"/> Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system.</p> <p><input checked="" type="checkbox"/> Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment.</p> <p><input type="checkbox"/> Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water.</p> <p><input checked="" type="checkbox"/> Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.</p> <p><input type="checkbox"/> Include controls for other sources as specified by local reviewer.</p>	<p>4</p> <p>Operational BMPs—Include in WQMP Table and Narrative</p> <p><input checked="" type="checkbox"/> See the note in Fact Sheet SC-41, “Building and Grounds Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com</p>

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input checked="" type="checkbox"/> P. Plazas, sidewalks, and parking lots.			<input checked="" type="checkbox"/> Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.

Appendix 9: O&M

Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms

“Will be provided in Final WQMP”

Appendix 10: Educational Materials

BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

Site Design & Landscape Planning SD-10



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Integrating and incorporating appropriate landscape planning methodologies into the project design is the most effective action that can be done to minimize surface and groundwater contamination from stormwater.

Approach

Landscape planning should couple consideration of land suitability for urban uses with consideration of community goals and projected growth. Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for site design and landscapes planning should conform to applicable standards and specifications of agencies with jurisdiction and be consistent with applicable General Plan and Local Area Plan policies.



SD-10 Site Design & Landscape Planning

Designing New Installations

Begin the development of a plan for the landscape unit with attention to the following general principles:

- Formulate the plan on the basis of clearly articulated community goals. Carefully identify conflicts and choices between retaining and protecting desired resources and community growth.
- Map and assess land suitability for urban uses. Include the following landscape features in the assessment: wooded land, open unwooded land, steep slopes, erosion-prone soils, foundation suitability, soil suitability for waste disposal, aquifers, aquifer recharge areas, wetlands, floodplains, surface waters, agricultural lands, and various categories of urban land use. When appropriate, the assessment can highlight outstanding local or regional resources that the community determines should be protected (e.g., a scenic area, recreational area, threatened species habitat, farmland, fish run). Mapping and assessment should recognize not only these resources but also additional areas needed for their sustenance.

Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Conserve Natural Areas during Landscape Planning

If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

- Cluster development on least-sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.
- Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
- Promote natural vegetation by using parking lot islands and other landscaped areas.
- Preserve riparian areas and wetlands.

Maximize Natural Water Storage and Infiltration Opportunities Within the Landscape Unit

- Promote the conservation of forest cover. Building on land that is already deforested affects basin hydrology to a lesser extent than converting forested land. Loss of forest cover reduces interception storage, detention in the organic forest floor layer, and water losses by evapotranspiration, resulting in large peak runoff increases and either their negative effects or the expense of countering them with structural solutions.
- Maintain natural storage reservoirs and drainage corridors, including depressions, areas of permeable soils, swales, and intermittent streams. Develop and implement policies and

Site Design & Landscape Planning SD-10

regulations to discourage the clearing, filling, and channelization of these features. Utilize them in drainage networks in preference to pipes, culverts, and engineered ditches.

- Evaluating infiltration opportunities by referring to the stormwater management manual for the jurisdiction and pay particular attention to the selection criteria for avoiding groundwater contamination, poor soils, and hydrogeological conditions that cause these facilities to fail. If necessary, locate developments with large amounts of impervious surfaces or a potential to produce relatively contaminated runoff away from groundwater recharge areas.

Protection of Slopes and Channels during Landscape Design

- Convey runoff safely from the tops of slopes.
- Avoid disturbing steep or unstable slopes.
- Avoid disturbing natural channels.
- Stabilize disturbed slopes as quickly as possible.
- Vegetate slopes with native or drought tolerant vegetation.
- Control and treat flows in landscaping and/or other controls prior to reaching existing natural drainage systems.
- Stabilize temporary and permanent channel crossings as quickly as possible, and ensure that increases in run-off velocity and frequency caused by the project do not erode the channel.
- Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
- Line on-site conveyance channels where appropriate, to reduce erosion caused by increased flow velocity due to increases in tributary impervious area. The first choice for linings should be grass or some other vegetative surface, since these materials not only reduce runoff velocities, but also provide water quality benefits from filtration and infiltration. If velocities in the channel are high enough to erode grass or other vegetative linings, riprap, concrete, soil cement, or geo-grid stabilization are other alternatives.
- Consider other design principles that are comparable and equally effective.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define “redevelopment” in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of “redevelopment” must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under “designing new installations” above should be followed.

SD-10 Site Design & Landscape Planning

Redevelopment may present significant opportunity to add features which had not previously been implemented. Examples include incorporation of depressions, areas of permeable soils, and swales in newly redeveloped areas. While some site constraints may exist due to the status of already existing infrastructure, opportunities should not be missed to maximize infiltration, slow runoff, reduce impervious areas, disconnect directly connected impervious areas.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Stormwater Management Manual for Western Washington, Washington State Department of Ecology, August 2001.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Roof Runoff Controls

SD-11



Rain Garden

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Various roof runoff controls are available to address stormwater that drains off rooftops. The objective is to reduce the total volume and rate of runoff from individual lots, and retain the pollutants on site that may be picked up from roofing materials and atmospheric deposition. Roof runoff controls consist of directing the roof runoff away from paved areas and mitigating flow to the storm drain system through one of several general approaches: cisterns or rain barrels; dry wells or infiltration trenches; pop-up emitters, and foundation planting. The first three approaches require the roof runoff to be contained in a gutter and downspout system. Foundation planting provides a vegetated strip under the drip line of the roof.

Approach

Design of individual lots for single-family homes as well as lots for higher density residential and commercial structures should consider site design provisions for containing and infiltrating roof runoff or directing roof runoff to vegetative swales or buffer areas. Retained water can be reused for watering gardens, lawns, and trees. Benefits to the environment include reduced demand for potable water used for irrigation, improved stormwater quality, increased groundwater recharge, decreased runoff volume and peak flows, and decreased flooding potential.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Designing New Installations

Cisterns or Rain Barrels

One method of addressing roof runoff is to direct roof downspouts to cisterns or rain barrels. A cistern is an above ground storage vessel with either a manually operated valve or a permanently open outlet. Roof runoff is temporarily stored and then released for irrigation or infiltration between storms. The number of rain



barrels needed is a function of the rooftop area. Some low impact developers recommend that every house have at least 2 rain barrels, with a minimum storage capacity of 1000 liters. Roof barrels serve several purposes including mitigating the first flush from the roof which has a high volume, amount of contaminants, and thermal load. Several types of rain barrels are commercially available. Consideration must be given to selecting rain barrels that are vector proof and childproof. In addition, some barrels are designed with a bypass valve that filters out grit and other contaminants and routes overflow to a soak-away pit or rain garden.

If the cistern has an operable valve, the valve can be closed to store stormwater for irrigation or infiltration between storms. This system requires continual monitoring by the resident or grounds crews, but provides greater flexibility in water storage and metering. If a cistern is provided with an operable valve and water is stored inside for long periods, the cistern must be covered to prevent mosquitoes from breeding.

A cistern system with a permanently open outlet can also provide for metering stormwater runoff. If the cistern outlet is significantly smaller than the size of the downspout inlet (say $\frac{1}{4}$ to $\frac{1}{2}$ inch diameter), runoff will build up inside the cistern during storms, and will empty out slowly after peak intensities subside. This is a feasible way to mitigate the peak flow increases caused by rooftop impervious land coverage, especially for the frequent, small storms.

Dry wells and Infiltration Trenches

Roof downspouts can be directed to dry wells or infiltration trenches. A dry well is constructed by excavating a hole in the ground and filling it with an open graded aggregate, and allowing the water to fill the dry well and infiltrate after the storm event. An underground connection from the downspout conveys water into the dry well, allowing it to be stored in the voids. To minimize sedimentation from lateral soil movement, the sides and top of the stone storage matrix can be wrapped in a permeable filter fabric, though the bottom may remain open. A perforated observation pipe can be inserted vertically into the dry well to allow for inspection and maintenance.

In practice, dry wells receiving runoff from single roof downspouts have been successful over long periods because they contain very little sediment. They must be sized according to the amount of rooftop runoff received, but are typically 4 to 5 feet square, and 2 to 3 feet deep, with a minimum of 1-foot soil cover over the top (maximum depth of 10 feet).

To protect the foundation, dry wells must be set away from the building at least 10 feet. They must be installed in solids that accommodate infiltration. In poorly drained soils, dry wells have very limited feasibility.

Infiltration trenches function in a similar manner and would be particularly effective for larger roof areas. An infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. These are described under Treatment Controls.

Pop-up Drainage Emitter

Roof downspouts can be directed to an underground pipe that daylights some distance from the building foundation, releasing the roof runoff through a pop-up emitter. Similar to a pop-up irrigation head, the emitter only opens when there is flow from the roof. The emitter remains flush to the ground during dry periods, for ease of lawn or landscape maintenance.

Foundation Planting

Landscape planting can be provided around the base to allow increased opportunities for stormwater infiltration and protect the soil from erosion caused by concentrated sheet flow coming off the roof. Foundation plantings can reduce the physical impact of water on the soil and provide a subsurface matrix of roots that encourage infiltration. These plantings must be sturdy enough to tolerate the heavy runoff sheet flows, and periodic soil saturation.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define “redevelopment” in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of “redevelopment” must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under “designing new installations” above should be followed.

Supplemental Information

Examples

- City of Ottawa’s Water Links Surface –Water Quality Protection Program
- City of Toronto Downspout Disconnection Program
- City of Boston, MA, Rain Barrel Demonstration Program

Other Resources

Hager, Marty Catherine, Stormwater, “Low-Impact Development”, January/February 2003.
www.stormh2o.com

Low Impact Urban Design Tools, Low Impact Development Design Center, Beltsville, MD.
www.lid-stormwater.net

Start at the Source, Bay Area Stormwater Management Agencies Association, 1999 Edition

Efficient Irrigation

SD-12



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Designing New Installations

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.



- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
 - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
 - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
 - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
 - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define “redevelopment” in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of “redevelopment” must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under “designing new installations” above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Storm Drain Signage

SD-13



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include “NO DUMPING



SD-13

Storm Drain Signage

– DRAINS TO OCEAN” and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define “redevelopment” in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of “redevelopment”, then the requirements stated under “designing new installations” above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner’s association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.
- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Bioretention

TC-32



Design Considerations

- Soil for Infiltration
- Tributary Area
- Slope
- Aesthetics
- Environmental Side-effects

Description

The bioretention best management practice (BMP) functions as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. These facilities normally consist of a grass buffer strip, sand bed, ponding area, organic layer or mulch layer, planting soil, and plants. The runoff's velocity is reduced by passing over or through buffer strip and subsequently distributed evenly along a ponding area. Exfiltration of the stored water in the bioretention area planting soil into the underlying soils occurs over a period of days.

California Experience

None documented. Bioretention has been used as a stormwater BMP since 1992. In addition to Prince George's County, MD and Alexandria, VA, bioretention has been used successfully at urban and suburban areas in Montgomery County, MD; Baltimore County, MD; Chesterfield County, VA; Prince William County, VA; Smith Mountain Lake State Park, VA; and Cary, NC.

Advantages

- Bioretention provides stormwater treatment that enhances the quality of downstream water bodies by temporarily storing runoff in the BMP and releasing it over a period of four days to the receiving water (EPA, 1999).
- The vegetation provides shade and wind breaks, absorbs noise, and improves an area's landscape.

Limitations

- The bioretention BMP is not recommended for areas with slopes greater than 20% or where mature tree removal would

Targeted Constituents

<input checked="" type="checkbox"/>	Sediment	■
<input checked="" type="checkbox"/>	Nutrients	▲
<input checked="" type="checkbox"/>	Trash	■
<input checked="" type="checkbox"/>	Metals	■
<input checked="" type="checkbox"/>	Bacteria	■
<input checked="" type="checkbox"/>	Oil and Grease	■
<input checked="" type="checkbox"/>	Organics	■

Legend (Removal Effectiveness)

- Low ■ High
▲ Medium



be required since clogging may result, particularly if the BMP receives runoff with high sediment loads (EPA, 1999).

- Bioretention is not a suitable BMP at locations where the water table is within 6 feet of the ground surface and where the surrounding soil stratum is unstable.
- By design, bioretention BMPs have the potential to create very attractive habitats for mosquitoes and other vectors because of highly organic, often heavily vegetated areas mixed with shallow water.
- In cold climates the soil may freeze, preventing runoff from infiltrating into the planting soil.

Design and Sizing Guidelines

- The bioretention area should be sized to capture the design storm runoff.
- In areas where the native soil permeability is less than 0.5 in/hr an underdrain should be provided.
- Recommended minimum dimensions are 15 feet by 40 feet, although the preferred width is 25 feet. Excavated depth should be 4 feet.
- Area should drain completely within 72 hours.
- Approximately 1 tree or shrub per 50 ft² of bioretention area should be included.
- Cover area with about 3 inches of mulch.

Construction/Inspection Considerations

Bioretention area should not be established until contributing watershed is stabilized.

Performance

Bioretention removes stormwater pollutants through physical and biological processes, including adsorption, filtration, plant uptake, microbial activity, decomposition, sedimentation and volatilization (EPA, 1999). Adsorption is the process whereby particulate pollutants attach to soil (e.g., clay) or vegetation surfaces. Adequate contact time between the surface and pollutant must be provided for in the design of the system for this removal process to occur. Thus, the infiltration rate of the soils must not exceed those specified in the design criteria or pollutant removal may decrease. Pollutants removed by adsorption include metals, phosphorus, and hydrocarbons. Filtration occurs as runoff passes through the bioretention area media, such as the sand bed, ground cover, and planting soil.

Common particulates removed from stormwater include particulate organic matter, phosphorus, and suspended solids. Biological processes that occur in wetlands result in pollutant uptake by plants and microorganisms in the soil. Plant growth is sustained by the uptake of nutrients from the soils, with woody plants locking up these nutrients through the seasons. Microbial activity within the soil also contributes to the removal of nitrogen and organic matter. Nitrogen is removed by nitrifying and denitrifying bacteria, while aerobic bacteria are responsible for the decomposition of the organic matter. Microbial processes require oxygen and can result in depleted oxygen levels if the bioretention area is not adequately

aerated. Sedimentation occurs in the swale or ponding area as the velocity slows and solids fall out of suspension.

The removal effectiveness of bioretention has been studied during field and laboratory studies conducted by the University of Maryland (Davis et al, 1998). During these experiments, synthetic stormwater runoff was pumped through several laboratory and field bioretention areas to simulate typical storm events in Prince George's County, MD. Removal rates for heavy metals and nutrients are shown in Table 1.

Pollutant	Removal Rate
Total Phosphorus	70-83%
Metals (Cu, Zn, Pb)	93-98%
TKN	68-80%
Total Suspended Solids	90%
Organics	90%
Bacteria	90%

Results for both the laboratory and field experiments were similar for each of the pollutants analyzed. Doubling or halving the influent pollutant levels had little effect on the effluent pollutants concentrations (Davis et al, 1998).

The microbial activity and plant uptake occurring in the bioretention area will likely result in higher removal rates than those determined for infiltration BMPs.

Siting Criteria

Bioretention BMPs are generally used to treat stormwater from impervious surfaces at commercial, residential, and industrial areas (EPA, 1999). Implementation of bioretention for stormwater management is ideal for median strips, parking lot islands, and swales. Moreover, the runoff in these areas can be designed to either divert directly into the bioretention area or convey into the bioretention area by a curb and gutter collection system.

The best location for bioretention areas is upland from inlets that receive sheet flow from graded areas and at areas that will be excavated (EPA, 1999). In order to maximize treatment effectiveness, the site must be graded in such a way that minimizes erosive conditions as sheet flow is conveyed to the treatment area. Locations where a bioretention area can be readily incorporated into the site plan without further environmental damage are preferred. Furthermore, to effectively minimize sediment loading in the treatment area, bioretention only should be used in stabilized drainage areas.

Additional Design Guidelines

The layout of the bioretention area is determined after site constraints such as location of utilities, underlying soils, existing vegetation, and drainage are considered (EPA, 1999). Sites with loamy sand soils are especially appropriate for bioretention because the excavated soil can be backfilled and used as the planting soil, thus eliminating the cost of importing planting soil.

The use of bioretention may not be feasible given an unstable surrounding soil stratum, soils with clay content greater than 25 percent, a site with slopes greater than 20 percent, and/or a site with mature trees that would be removed during construction of the BMP.

Bioretention can be designed to be off-line or on-line of the existing drainage system (EPA, 1999). The drainage area for a bioretention area should be between 0.1 and 0.4 hectares (0.25 and 1.0 acres). Larger drainage areas may require multiple bioretention areas. Furthermore, the maximum drainage area for a bioretention area is determined by the expected rainfall intensity and runoff rate. Stabilized areas may erode when velocities are greater than 5 feet per second (1.5 meter per second). The designer should determine the potential for erosive conditions at the site.

The size of the bioretention area, which is a function of the drainage area and the runoff generated from the area is sized to capture the water quality volume.

The recommended minimum dimensions of the bioretention area are 15 feet (4.6 meters) wide by 40 feet (12.2 meters) long, where the minimum width allows enough space for a dense, randomly-distributed area of trees and shrubs to become established. Thus replicating a natural forest and creating a microclimate, thereby enabling the bioretention area to tolerate the effects of heat stress, acid rain, runoff pollutants, and insect and disease infestations which landscaped areas in urban settings typically are unable to tolerate. The preferred width is 25 feet (7.6 meters), with a length of twice the width. Essentially, any facilities wider than 20 feet (6.1 meters) should be twice as long as they are wide, which promotes the distribution of flow and decreases the chances of concentrated flow.

In order to provide adequate storage and prevent water from standing for excessive periods of time the ponding depth of the bioretention area should not exceed 6 inches (15 centimeters). Water should not be left to stand for more than 72 hours. A restriction on the type of plants that can be used may be necessary due to some plants' water intolerance. Furthermore, if water is left standing for longer than 72 hours mosquitoes and other insects may start to breed.

The appropriate planting soil should be backfilled into the excavated bioretention area. Planting soils should be sandy loam, loamy sand, or loam texture with a clay content ranging from 10 to 25 percent.

Generally the soil should have infiltration rates greater than 0.5 inches (1.25 centimeters) per hour, which is typical of sandy loams, loamy sands, or loams. The pH of the soil should range between 5.5 and 6.5, where pollutants such as organic nitrogen and phosphorus can be adsorbed by the soil and microbial activity can flourish. Additional requirements for the planting soil include a 1.5 to 3 percent organic content and a maximum 500 ppm concentration of soluble salts.

Soil tests should be performed for every 500 cubic yards (382 cubic meters) of planting soil, with the exception of pH and organic content tests, which are required only once per bioretention area (EPA, 1999). Planting soil should be 4 inches (10.1 centimeters) deeper than the bottom of the largest root ball and 4 feet (1.2 meters) altogether. This depth will provide adequate soil for the plants' root systems to become established, prevent plant damage due to severe wind, and provide adequate moisture capacity. Most sites will require excavation in order to obtain the recommended depth.

Planting soil depths of greater than 4 feet (1.2 meters) may require additional construction practices such as shoring measures (EPA, 1999). Planting soil should be placed in 18 inches or greater lifts and lightly compacted until the desired depth is reached. Since high canopy trees may be destroyed during maintenance the bioretention area should be vegetated to resemble a terrestrial forest community ecosystem that is dominated by understory trees. Three species each of both trees and shrubs are recommended to be planted at a rate of 2500 trees and shrubs per hectare (1000 per acre). For instance, a 15 foot (4.6 meter) by 40 foot (12.2 meter) bioretention area (600 square feet or 55.75 square meters) would require 14 trees and shrubs. The shrub-to-tree ratio should be 2:1 to 3:1.

Trees and shrubs should be planted when conditions are favorable. Vegetation should be watered at the end of each day for fourteen days following its planting. Plant species tolerant of pollutant loads and varying wet and dry conditions should be used in the bioretention area.

The designer should assess aesthetics, site layout, and maintenance requirements when selecting plant species. Adjacent non-native invasive species should be identified and the designer should take measures, such as providing a soil breach to eliminate the threat of these species invading the bioretention area. Regional landscaping manuals should be consulted to ensure that the planting of the bioretention area meets the landscaping requirements established by the local authorities. The designers should evaluate the best placement of vegetation within the bioretention area. Plants should be placed at irregular intervals to replicate a natural forest. Trees should be placed on the perimeter of the area to provide shade and shelter from the wind. Trees and shrubs can be sheltered from damaging flows if they are placed away from the path of the incoming runoff. In cold climates, species that are more tolerant to cold winds, such as evergreens, should be placed in windier areas of the site.

Following placement of the trees and shrubs, the ground cover and/or mulch should be established. Ground cover such as grasses or legumes can be planted at the beginning of the growing season. Mulch should be placed immediately after trees and shrubs are planted. Two to 3 inches (5 to 7.6 cm) of commercially-available fine shredded hardwood mulch or shredded hardwood chips should be applied to the bioretention area to protect from erosion.

Maintenance

The primary maintenance requirement for bioretention areas is that of inspection and repair or replacement of the treatment area's components. Generally, this involves nothing more than the routine periodic maintenance that is required of any landscaped area. Plants that are appropriate for the site, climatic, and watering conditions should be selected for use in the bioretention cell. Appropriately selected plants will aide in reducing fertilizer, pesticide, water, and overall maintenance requirements. Bioretention system components should blend over time through plant and root growth, organic decomposition, and the development of a natural

soil horizon. These biologic and physical processes over time will lengthen the facility's life span and reduce the need for extensive maintenance.

Routine maintenance should include a biannual health evaluation of the trees and shrubs and subsequent removal of any dead or diseased vegetation (EPA, 1999). Diseased vegetation should be treated as needed using preventative and low-toxic measures to the extent possible. BMPs have the potential to create very attractive habitats for mosquitoes and other vectors because of highly organic, often heavily vegetated areas mixed with shallow water. Routine inspections for areas of standing water within the BMP and corrective measures to restore proper infiltration rates are necessary to prevent creating mosquito and other vector habitat. In addition, bioretention BMPs are susceptible to invasion by aggressive plant species such as cattails, which increase the chances of water standing and subsequent vector production if not routinely maintained.

In order to maintain the treatment area's appearance it may be necessary to prune and weed. Furthermore, mulch replacement is suggested when erosion is evident or when the site begins to look unattractive. Specifically, the entire area may require mulch replacement every two to three years, although spot mulching may be sufficient when there are random void areas. Mulch replacement should be done prior to the start of the wet season.

New Jersey's Department of Environmental Protection states in their bioretention systems standards that accumulated sediment and debris removal (especially at the inflow point) will normally be the primary maintenance function. Other potential tasks include replacement of dead vegetation, soil pH regulation, erosion repair at inflow points, mulch replenishment, unclogging the underdrain, and repairing overflow structures. There is also the possibility that the cation exchange capacity of the soils in the cell will be significantly reduced over time. Depending on pollutant loads, soils may need to be replaced within 5-10 years of construction (LID, 2000).

Cost

Construction Cost

Construction cost estimates for a bioretention area are slightly greater than those for the required landscaping for a new development (EPA, 1999). A general rule of thumb (Coffman, 1999) is that residential bioretention areas average about \$3 to \$4 per square foot, depending on soil conditions and the density and types of plants used. Commercial, industrial and institutional site costs can range between \$10 to \$40 per square foot, based on the need for control structures, curbing, storm drains and underdrains.

Retrofitting a site typically costs more, averaging \$6,500 per bioretention area. The higher costs are attributed to the demolition of existing concrete, asphalt, and existing structures and the replacement of fill material with planting soil. The costs of retrofitting a commercial site in Maryland, Kettering Development, with 15 bioretention areas were estimated at \$111,600.

In any bioretention area design, the cost of plants varies substantially and can account for a significant portion of the expenditures. While these cost estimates are slightly greater than those of typical landscaping treatment (due to the increased number of plantings, additional soil excavation, backfill material, use of underdrains etc.), those landscaping expenses that would be required regardless of the bioretention installation should be subtracted when determining the net cost.

Perhaps of most importance, however, the cost savings compared to the use of traditional structural stormwater conveyance systems makes bioretention areas quite attractive financially. For example, the use of bioretention can decrease the cost required for constructing stormwater conveyance systems at a site. A medical office building in Maryland was able to reduce the amount of storm drain pipe that was needed from 800 to 230 feet - a cost savings of \$24,000 (PGDER, 1993). And a new residential development spent a total of approximately \$100,000 using bioretention cells on each lot instead of nearly \$400,000 for the traditional stormwater ponds that were originally planned (Rappahanock,). Also, in residential areas, stormwater management controls become a part of each property owner's landscape, reducing the public burden to maintain large centralized facilities.

Maintenance Cost

The operation and maintenance costs for a bioretention facility will be comparable to those of typical landscaping required for a site. Costs beyond the normal landscaping fees will include the cost for testing the soils and may include costs for a sand bed and planting soil.

References and Sources of Additional Information

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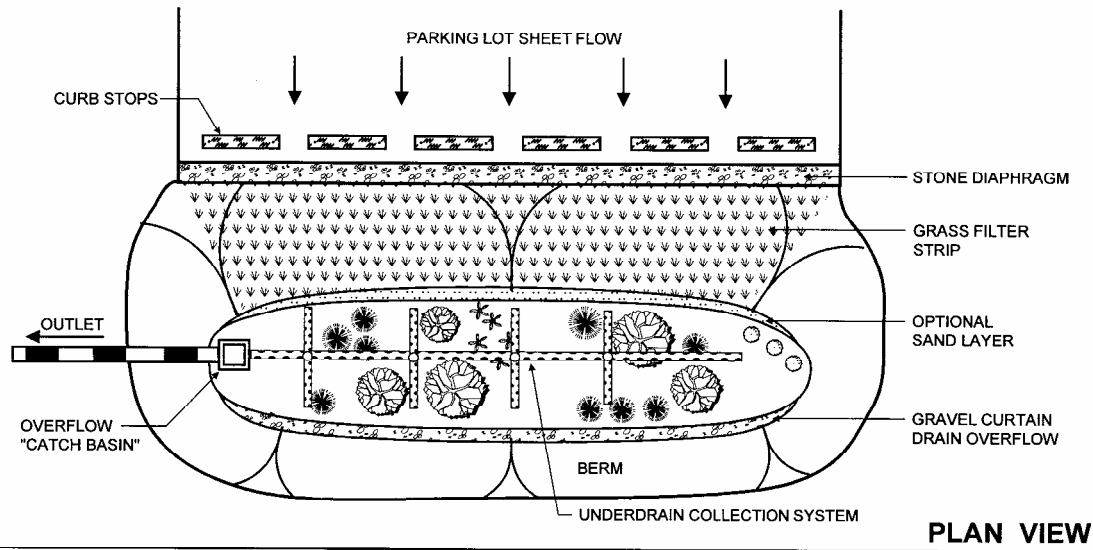
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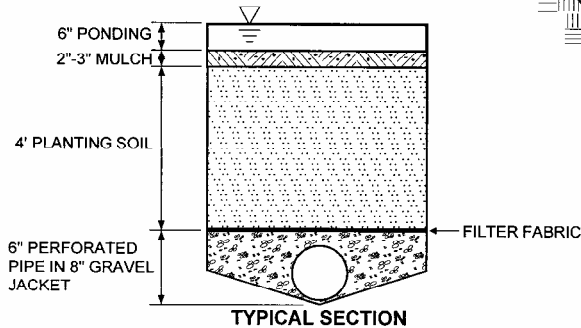
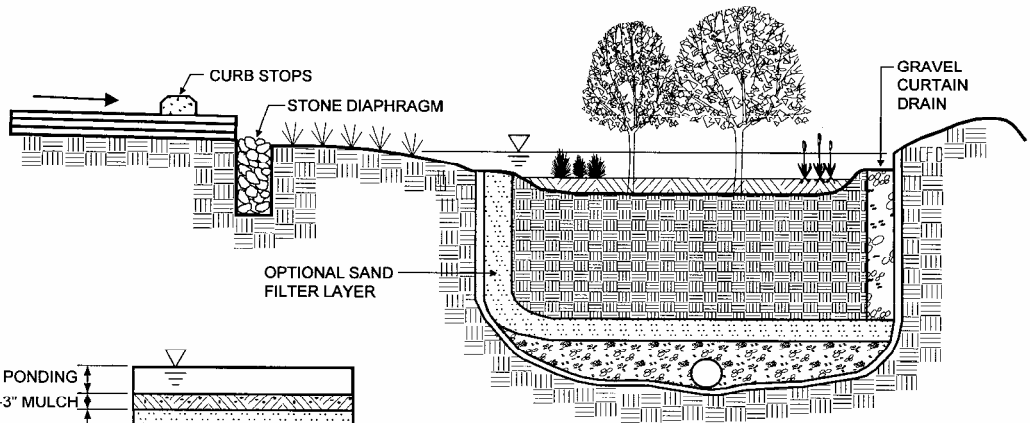
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TC-32

Bioretention



PLAN VIEW



TYPICAL SECTION

PROFILE

Schematic of a Bioretention Facility (MDE, 2000)

Attachment: Appendix H to Initial Study Preliminary Project Specific Water Quality Management Plan_R (4197 : Tentative Tract Map 37909 with

NOISE IMPACT ANALYSIS
IRIS PARK SINGLE-FAMILY RESIDENTIAL PROJECT
CITY OF MORENO VALLEY

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September 22, 2020

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Moreno Valley
cmu	concrete masonry unit
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibels
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
EPA	Environmental Protection Agency
Hz	Hertz
Ldn	Day-night average noise level
Leq	Equivalent sound level
Lmax	Maximum noise level
ONAC	Federal Office of Noise Abatement and Control
OSHA	Occupational Safety and Health Administration
PPV	Peak particle velocity
RMS	Root mean square
SEL	Single Event Level or Sound Exposure Level
STC	Sound Transmission Class
TTM	Tentative Tract Map
UMTA	Federal Urban Mass Transit Administration
VdB	Vibration velocity level in decibels

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Noise Impact Analysis has been prepared to determine the noise impacts associated with the proposed Iris Park Single-Family Residential project (proposed project). The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- Information regarding the fundamentals of vibration;
- A description of the local noise guidelines and standards;
- An evaluation of the current noise environment;
- An analysis of the potential short-term construction-related noise impacts from the proposed project; and
- An analysis of long-term operations-related noise impacts from the proposed project.

1.2 Site Location and Study Area

The project site is located in the southern portion of the City of Moreno Valley (City). The approximately 10.82-acre project site is a triangular lot, with the California Aqueduct running along the southwestern side of the project site that consists of a 100-foot easement. The project site is bounded by Iris Avenue and single-family homes to the north, single-family homes to the east, vacant land and Red Maple Lane to the south, and a commercial shopping center and Val Verde Academy, which is a K-12 charter school. The project study area is shown in Figure 1.

Sensitive Receptors in Project Vicinity

The nearest sensitive receptors to the project site are the single-family homes located adjacent to the east side of the project site, where the nearest residential structure is as near as 25 feet east of the project site. In addition, Val Verde Academy is located adjacent to the southwest side of the project site, where the nearest school structure is as near as 180 feet southwest of the project site.

1.3 Proposed Project Description

The proposed project would consist of construction and operation of a proposed 81-lot single-family detached subdivision. The project site is triangular in shape and has a gross acreage of approximately 10.82 acres, including 3.02 acres that is planned for development by the City of Moreno Valley as a public park and trail over the California Aqueduct. The community will have two gated access points off Iris Avenue. Three small park areas are spread out on the site. Residential lots would range from 2,197 sq. ft. to 4,741 sq. ft. Homes would range from 1,848 sq. ft. to 2,201 sq. ft., with 3 to 5 bedrooms and 2.5 to 3 baths. Homes would be two stories, include a back yard approximately 12 to 14 feet deep, and have an attached two-car garage. The project overall would provide 217 parking spaces, including 162 garage spaces and 49 spaces on private streets.. The proposed site plan is shown in Figure 2.

1.4 Executive Summary

Standard Noise Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the City and State of California (State).

City of Moreno Valley Noise Regulations

The following lists the noise and vibration regulations from the Municipal Code that are applicable, but not limited to the proposed project.

- Section 9.10.030 Temporary Construction Exemptions;
- Section 9.10.170 Vibration;
- Section 11.80.030(B)(2) Sound Level Limits;

State of California Noise Regulations

The following lists the State of California noise regulations that are applicable, but not limited to the proposed project.

- California Vehicle Code Section 2700-27207 – On Road Vehicle Noise Limits
- California Vehicle Code Section 38365-38350 – Off-Road Vehicle Noise Limits

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines noise checklist questions.

Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than significant impact.

Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact.

For a project located within the vicinity of a private airstrip or 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?

Less than significant impact.

1.5 Project Design Features Incorporated into the Proposed Project

This analysis was based on implementation of the following project design features that are either already depicted on the proposed project site plan and architectural plans or are required from City and State Regulations.

Project Design Feature 1:

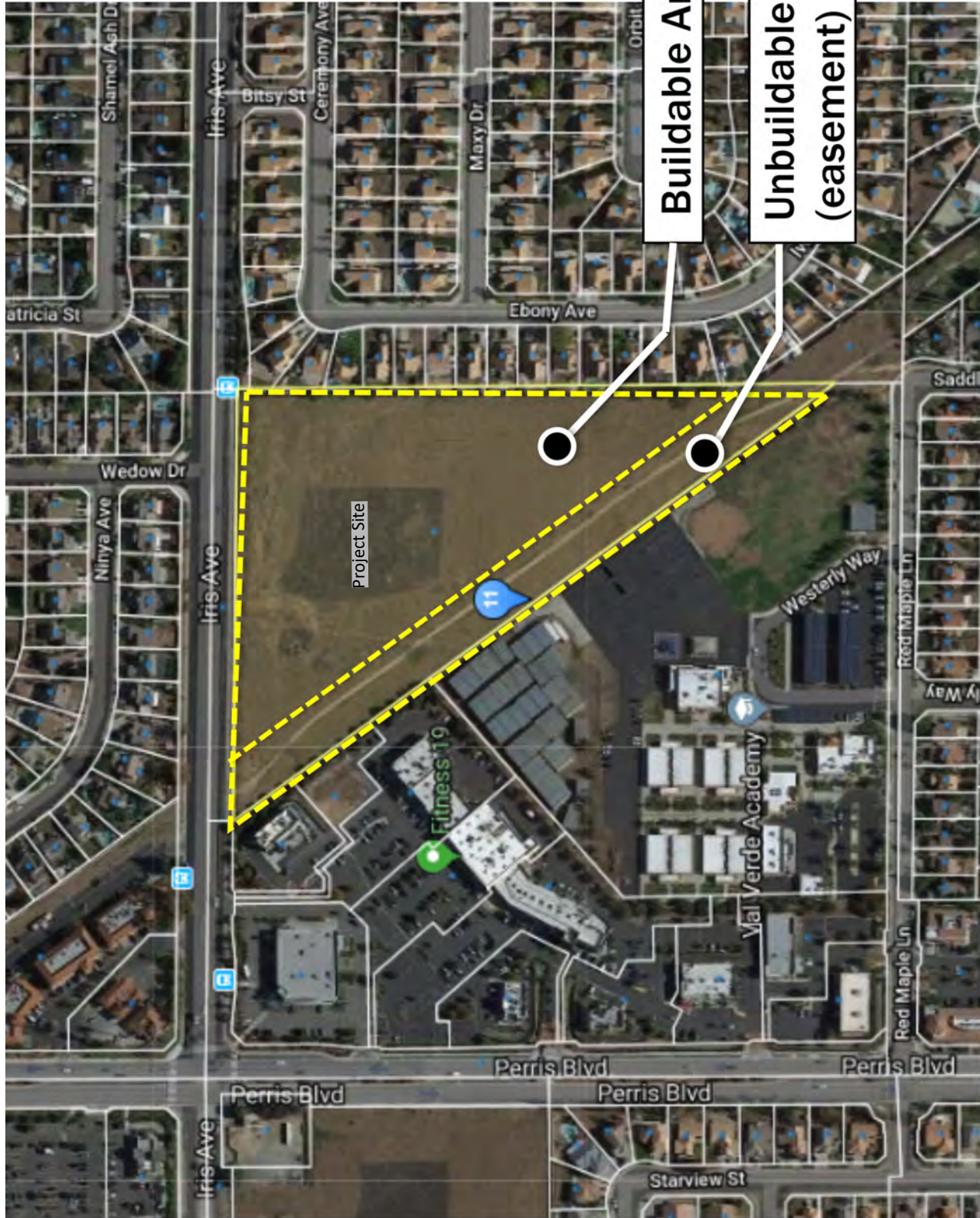
The project applicant shall construct all walls shown on the Proposed Fence and Wall (see Figure 3) that includes a 5 to 6-foot high concrete masonry unit (cmu) wall at the rear property lines of Lots 1 to 3 and 69 to 81 that are adjacent to Iris Avenue.

Project Design Feature 2:

The project applicant shall provide a “windows closed” condition for each proposed single-family home. A “window closed” condition requires a means of mechanical ventilation per Chapter 12, Section 1205 of the Uniform Building Code. This shall be achieved with a standard forced air conditioning and heating system with a filtered outside air intake vent for each residential unit.

1.6 Mitigation Measures for the Proposed Project

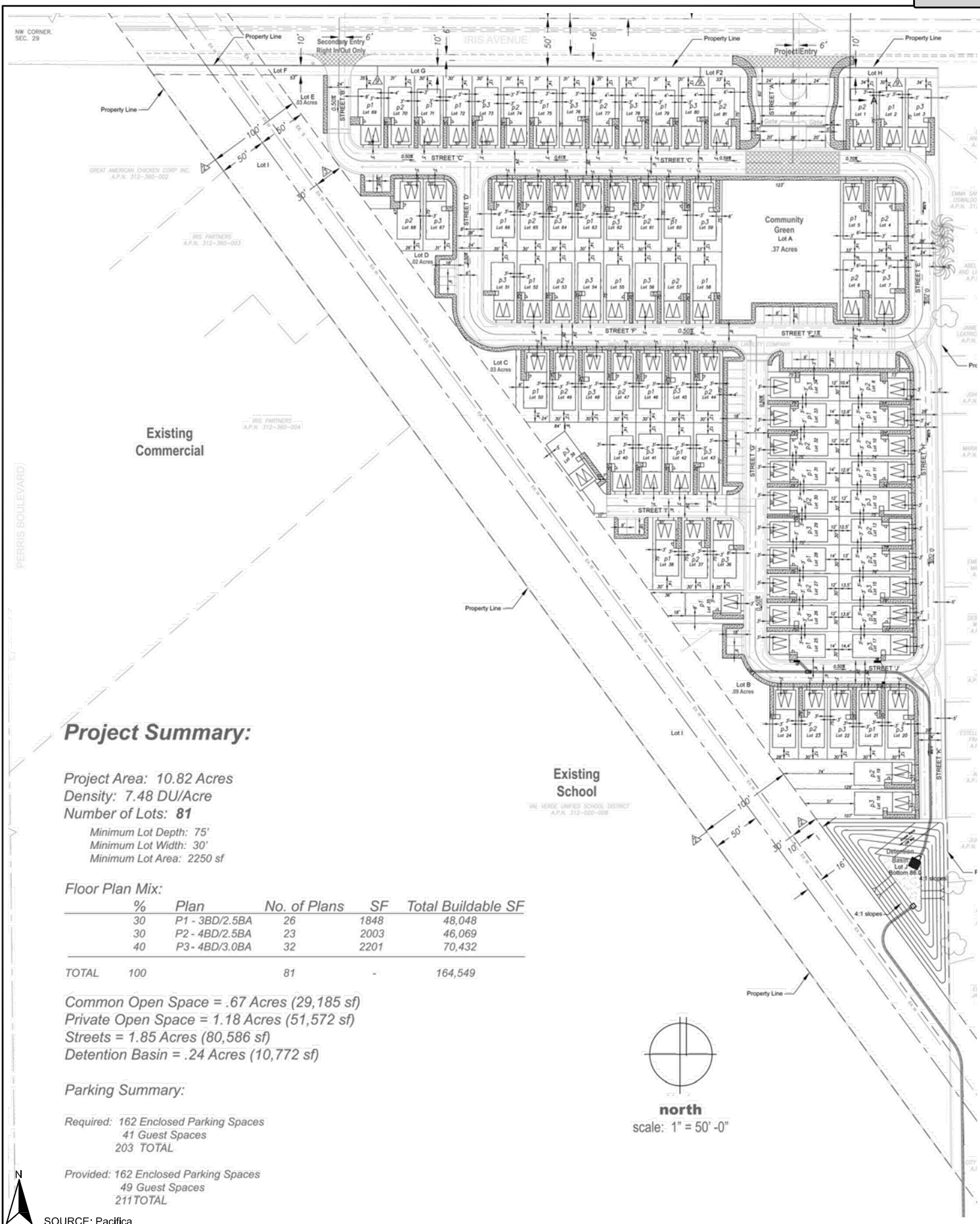
This analysis found that through adherence to the noise and vibration regulations detailed in Section 1.4 above and through implementation of the Project Design Features detailed in Section 1.5 above, all noise and vibration impacts would be reduced to less than significant levels. No mitigation measures are required for the proposed project with respect to noise and vibration impacts.



SOURCE: Pacifica.



Figure 1
Project Location Map



Project Summary:

Project Area: 10.82 Acres
 Density: 7.48 DU/Acre
 Number of Lots: 81
 Minimum Lot Depth: 75'
 Minimum Lot Width: 30'
 Minimum Lot Area: 2250 sf

Floor Plan Mix:

%	Plan	No. of Plans	SF	Total Buildable SF
30	P1 - 3BD/2.5BA	26	1848	48,048
30	P2 - 4BD/2.5BA	23	2003	46,069
40	P3 - 4BD/3.0BA	32	2201	70,432
TOTAL	100	81		164,549

Common Open Space = .67 Acres (29,185 sf)
 Private Open Space = 1.18 Acres (51,572 sf)
 Streets = 1.85 Acres (80,586 sf)
 Detention Basin = .24 Acres (10,772 sf)

Parking Summary:

Required: 162 Enclosed Parking Spaces
 41 Guest Spaces
 203 TOTAL

Provided: 162 Enclosed Parking Spaces
 49 Guest Spaces
 211 TOTAL

SOURCE: Pacifica.

Attachment: Appendix I to Initial Study Noise Impact Analysis_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned



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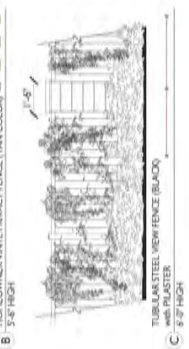
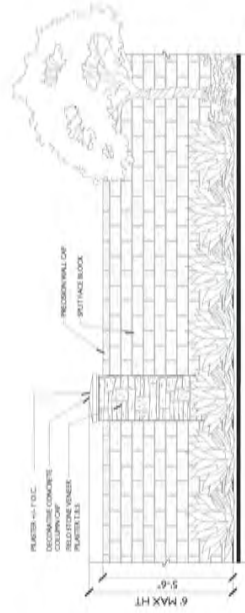


Figure 3
Proposed Wall and Fence Plan

Attachment: Appendix I to Initial Study Noise Impact Analysis_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

2.0 NOISE FUNDAMENTALS

Noise is 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. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit which expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a 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.

2.1 Noise Descriptors

Noise 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 (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The peak traffic hour Leq is the noise metric used by California Department of Transportation (Caltrans) for all traffic noise impact analyses.

The Day-Night Average Level (Ldn) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of ten decibels to sound levels at night between 10 p.m. and 7 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the Ldn, except that it has another addition of 4.77 decibels to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these time periods because during the evening and nighttime hours, when compared to daytime hours, there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds. For this reason the sound appears louder in the evening and nighttime hours and is weighted accordingly. The City of Moreno Valley relies on the CNEL dB(A) noise standard to assess transportation-related impacts on noise sensitive land uses.

2.2 Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown that humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a “pure tone,” there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to “stand out” against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by:

- 5 dB for center frequencies of 500 hertz (Hz) and above
- 8 dB for center frequencies between 160 and 400 Hz
- 15 dB for center frequencies of 125 Hz or less

2.3 Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound

from point sources, such as air conditioning condensers, radiate uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

2.4 Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3.0 dBA/DD drop-off rate for hard-site conditions. Caltrans research has shown that the use of soft-site conditions is more appropriate for the application of the Federal Highway Administration (FHWA) traffic noise prediction model used in this analysis.

3.0 GROUND-BORNE VIBRATION FUNDAMENTALS

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

3.1 Vibration Descriptors

There are several different methods that are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Due to the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels and is denoted as (L_v) and is based on the rms velocity amplitude. A commonly used abbreviation is “VdB”, which in this text, is when L_v is based on the reference quantity of 1 micro inch per second.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration.

3.3 Vibration Propagation

The propagation of ground-borne vibration is not as simple to model as airborne noise. This is due to the fact that noise in the air travels through a relatively uniform median, while ground-borne vibrations travel through the earth which may contain significant geological differences. There are three main types of vibration propagation; surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground’s surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a “push-pull” fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or “side-to-side and perpendicular to the direction of propagation.”

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 REGULATORY SETTING

The project site is located in the City of Moreno Valley. Noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA). Transit noise is regulated by the federal Urban Mass Transit Administration (UMTA), while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Although the proposed project is not under the jurisdiction of the FTA, the FTA is the only agency that has defined what constitutes a significant noise impact from implementing a project. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise and a summary of the FTA findings are provided below in Table A.

Table A – FTA Project Effects on Cumulative Noise Exposure

Existing Noise Exposure (dBA Leq or Ldn)	Allowable Noise Impact Exposure dBA Leq or Ldn		
	Project Only	Combined	Noise Exposure Increase
45	51	52	+7
50	53	55	+5
55	55	58	+3
60	57	62	+2
65	60	66	+1
70	64	71	+1
75	65	75	0

Source: Federal Transit Administration, 2006.

As shown in Table A, the allowable cumulative noise level increase created from a project would range from 0 to 7 dBA, which is based on the existing (ambient) noise levels in the project vicinity. The justification for the sliding scale, is that people already exposed to high levels of noise should be expected to tolerate only a small increase in the amount of noise in their community. In contrast, if the existing noise levels are quite low, it is reasonable to allow a greater change in the community noise for the equivalent difference in annoyance.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Noise Standards

California Department of Health Services Office of Noise Control

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

California Noise Insulation Standards

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

California Vehicle Code Section 27200-27207 – On-Road Vehicle Noise

California Vehicle Code Section 27200-27207 provides noise limits for vehicles operated in California. For vehicles over 10,000 pounds noise is limited to 88 dB for vehicles manufactured before 1973, 86 dB for vehicles manufactured before 1975, 83 dB for vehicles manufactured before 1988, and 80 dB for vehicles manufactured after 1987. All measurements are based at 50 feet from the vehicle.

California Vehicle Section 38365-38380 – Off-Road Vehicle Noise

California Vehicle Code Section 38365-38380 provides noise limits for off-highway motor vehicles operated in California. 92 dBA for vehicles manufactured before 1973, 88 dBA for vehicles manufactured before 1975, 86 dBA for vehicles manufactured before 1986, and 82 dBA for vehicles manufactured after December 31, 1985. All measurements are based at 50 feet from the vehicle.

Vibration Standards

Title 14 of the California Administrative Code Section 15000 requires that all state and local agencies implement the California Environmental Quality Act (CEQA) Guidelines, which requires the analysis of exposure of persons to excessive groundborne vibration. However, no statute has been adopted by the state that quantifies the level at which excessive groundborne vibration occurs.

Caltrans issued the *Transportation- and Construction-Induced Vibration Guidance Manual* in 2004. The manual provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. However, this manual is also used as a reference point by many lead agencies and CEQA practitioners throughout California, as it provides numeric thresholds for vibration impacts. Thresholds are established for continuous (construction-related) and transient (transportation-related) sources of vibration, which found that the human response becomes distinctly perceptible at 0.25 inch per second PPV for transient sources and 0.04 inch per second PPV for continuous sources.

4.3 Local Regulations

The City of Moreno Valley General Plan and Municipal Code establishes the following applicable policies related to noise and vibration.

City of Moreno Valley General Plan

The following applicable goals and policies to the proposed project are from the Noise Element of the General Plan.

Objective 6.3

Provide noise compatible land use relationships by establishing noise standards utilized for design and siting purposes.

Policies

- 6.3.1** The following uses shall require mitigation to reduce noise exposure where current or future exterior noise levels exceed 20 CNEL above the desired interior noise level:
- a. Single and multiple family residential buildings shall achieve an interior noise level of 45 CNEL or less. Such buildings shall include sound-insulating windows, walls, roofs and ventilation systems. Sound barriers shall also be installed (e.g. masonry walls or walls with berms) between single-family residences and major roadways.
- 6.3.2** Discourage residential uses where current or projected exterior noise due to aircraft over flights will exceed 65 CNEL.

6.3.5 Enforce the California Administrative Code, Title 24 noise insulation standards for new multi-family housing developments, motels and hotels.

6.3.6 Building shall be limited in areas of sensitive receptors.

Objective 6.4

Review noise issues during the planning process and require noise attenuation measures to minimize acoustic impacts to existing and future surrounding land uses.

Policies

6.4.1 Site, landscape and architectural design features shall be encouraged to mitigate noise impacts for new developments, with a preference for noise barriers that avoid freeway sound barrier walls.

Objective 6.5

Minimize noise impacts from significant noise generators such as, but not limited to, motor vehicles, trains, aircraft, commercial, industrial, construction, and other activities.

Policies

6.5.2 Construction activities shall be operated in a manner that limits noise impacts on surrounding uses.

City of Moreno Valley Municipal Code

The City of Moreno Valley Municipal Code establishes the following applicable standards related to noise.

Section 9.10.1010 Performance Standards - Purpose and Intent

The purpose and intent of this chapter is to explicitly describe the location, configuration, design, amenities, operation and other standards for proposed development projects that may impact the surrounding neighborhood. The performance standards set maximum tolerance limits on certain adverse effects created by any use or development of land.

Section 9.10.030 Performance Standards - Exemptions

The following uses or activities are exempt from the provisions of this chapter:

- A. Emergency equipment, vehicles, devices and activities.
- B. Temporary construction, maintenance, or demolition activities between the hours of seven a.m. and seven p.m.

Section 9.10.170 Performance Standards - Vibration

No vibration shall be permitted which can be felt at or beyond the property line.

Section 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 for in Tables 11.80.030-1 [see Table B] and 11.80.030-1-A [see Table C] of this chapter:

Table B – City of Moreno Valley Maximum Continuous Sound Levels

Duration per Day (Continuous Hours)	Sound Level [dB(A)]
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
.5	110
.25	115

Source: City of Moreno Valley Municipal Code Section 11.80.030.

Table C – City of Moreno Valley Maximum Impulsive Sound Levels

Number of Repetitions per 24-Hour Period	Sound Level [dB(A)]
1	145
10	135
100	125

Source: City of Moreno Valley Municipal Code Section 11.80.030.

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 [see Table D] 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 D – City of Moreno Valley Maximum Sound Levels for Source Land Uses

Residential		Commercial	
Daytime ¹	Nighttime ²	Daytime ¹	Nighttime ²
60	55	65	60

Notes:

¹ Daytime defined as 8:00 a.m. to 10:00 p.m.

² Nighttime define as 10:01 p.m. to 7:59 a.m. the following day.

Source: City of Moreno Valley Municipal Code Section 11.80.030.

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:

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 8 p.m. and 7 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.

5.0 EXISTING NOISE CONDITIONS

To determine the existing noise levels, noise measurements have been taken in the vicinity of the project site. The field survey noted that noise within the proposed project area is generally characterized by vehicle traffic on Iris Avenue and from commercial activities at the shopping center located adjacent to the west side of the project site. It should be noted that due to COVID-19 Val Verde School was closed and was not producing any noise at the time of the noise measurements. The following describes the measurement procedures, measurement locations, noise measurement results, and the modeling of the existing noise environment.

5.1 Noise Measurement Equipment

The noise measurements were taken using three Larson Davis Model LXT1 Type 1 sound level meters programmed in “slow” mode to record the sound pressure level at 1-second intervals for 24 hours in “A” weighted form. In addition, the L_{eq} averaged over the entire measuring time and L_{max} were recorded with both sound level meters. The sound level meters and microphones were mounted on fence along the property lines of the project site, were placed between four and six feet above the ground and were equipped with windscreens during all measurements. The noise meters were calibrated before and after the monitoring using a Larson Davis Cal200 calibrator. All noise level measurement equipment meets American National Standards Institute specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

Noise Measurement Locations

The noise monitoring locations were selected in order to obtain noise levels on the project site. Descriptions of the noise monitoring sites are provided below in Table E and are shown in Figure 4. Appendix A includes a photo index of the study area and noise level measurement locations.

Noise Measurement Timing and Climate

The noise measurements were recorded between 2:27 p.m. on Saturday, May 9, 2020 and 2:45 p.m. on Sunday, May 10, 2020. A weekend was selected for the noise measurement, since that is when the greatest noise impacts would occur from the adjacent shopping center on the west side of the project site.

At the start of the noise measurements, the sky was partly cloudy, the temperature was 86 degrees Fahrenheit, the humidity was 37 percent, barometric pressure was 28.30 inches of mercury, and the wind was blowing around five miles per hour. Overnight, the temperature dropped to 60 degrees Fahrenheit. At the conclusion of the noise measurements, the sky was hazy, the temperature was 85 degrees Fahrenheit, the humidity was 44 percent, barometric pressure was 28.30 inches of mercury, and the wind was blowing around four miles per hour.

5.2 Noise Measurement Results

The results of the noise level measurements are presented in Table E. The measured sound pressure levels in dBA have been used to calculate the minimum and maximum L_{eq} averaged over 1-hour intervals. Table E also shows the L_{eq} , L_{max} , and CNEL, based on the entire measurement time. The noise monitoring data printouts are included in Appendix B.

Table E – Existing (Ambient) Noise Level Measurements

Site No.	Site Description	Average (dBA L _{eq})		1-hr Average (dBA L _{eq} /Time)		Weighted-Average ³ (dBA CNEL)
		Daytime ¹	Nighttime ²	Minimum	Maximum	
1	Located on the southwest property line fence, approximately 8 feet south of the shopping center and adjacent to the northern portion of Val Verde Academy.	50.0	45.4	37.3 2:52 a.m.	56.2 8:10 p.m.	54.4
2	Located on the east property line fence, approximately 100 feet south of the centerline for Iris Avenue.	61.1	53.5	47.3 3:06 a.m.	63.9 5:00 p.m.	63.3
3	Located at the south corner of the project site on the fence for Val Verde Academy.	51.4	41.5	35.1 3:46 a.m.	54.8 4:18 p.m.	52.1

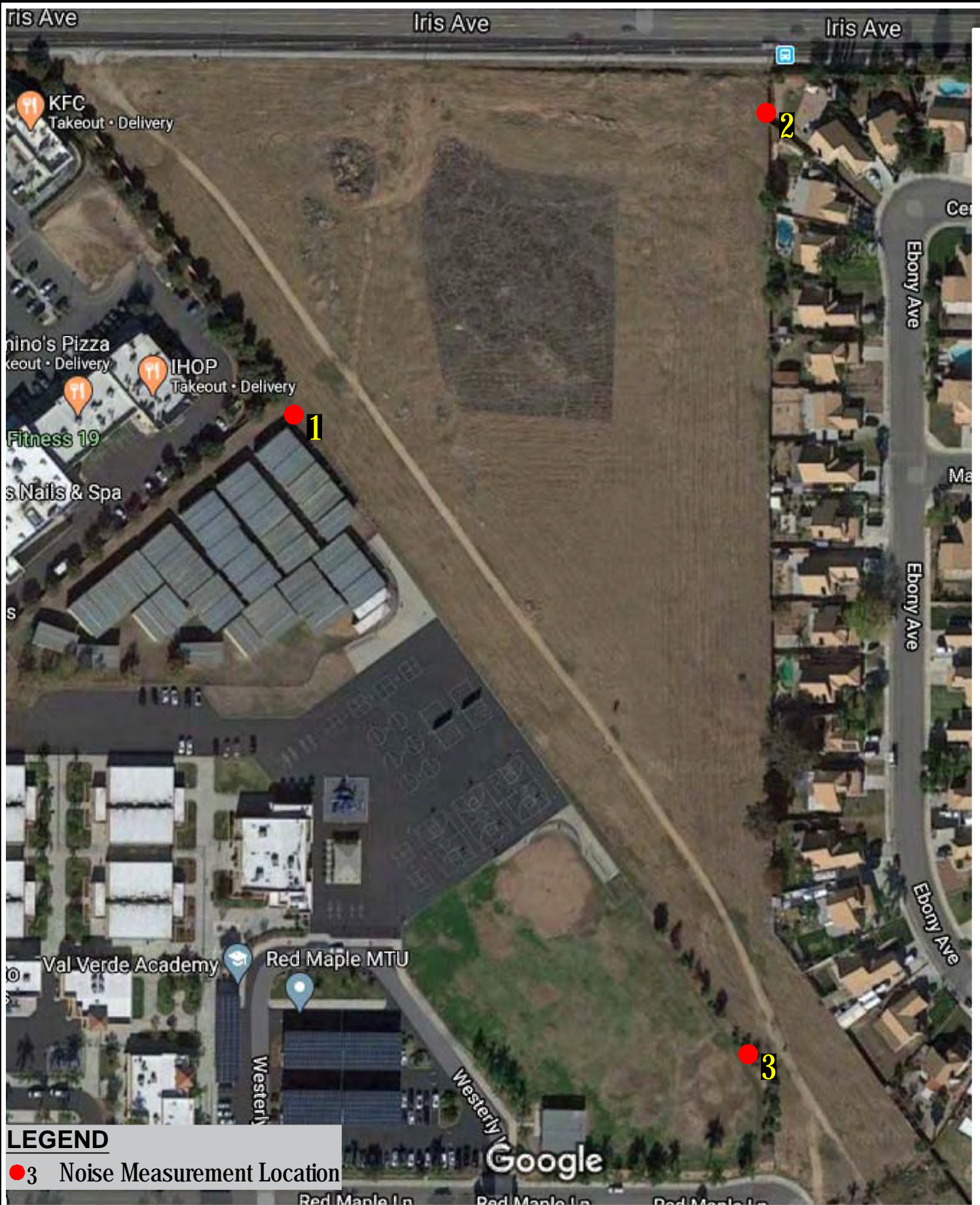
Notes:

¹ Daytime defined as 8:00 a.m. to 10:00 p.m. (Section 11.80.020 of the Municipal Code)

² Nighttime define as 10:01 p.m. to 8:01 a.m. (Section 11.80.020 of the Municipal Code)

³ The weighted-average noise level (dBA CNEL) includes an additional 4.77 dBA noise penalty to account for the evening noise sensitive hours of 7 p.m. to 10 p.m. and an additional 10 dBA penalty to account for the nighttime noise sensitive hours of 10 p.m. to 7 a.m..

Source: Noise measurements taken between Saturday, May 9 and Sunday, May 10, 2020.



LEGEND
 ● 3 Noise Measurement Location

SOURCE: Google Maps.

Attachment: Appendix I to Initial Study Noise Impact Analysis_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned



6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 Construction Noise

The noise impacts from construction of the proposed project have been analyzed through use of the FHWA's Roadway Construction Noise Model (RCNM). The FHWA compiled noise measurement data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table F below provides a list of the construction equipment anticipated to be used for each phase of construction that was calculated through use of the default equipment mixes provided by the CalEEMod model published by Breeze Software under a contract from the South Coast Air Quality Management District for estimating air emissions from land use projects.

Table F – Construction Equipment Noise Emissions and Usage Factors

Equipment Description	Number of Equipment	Acoustical Use Factor ¹ (percent)	Spec 721.560 Lmax at 50 feet ² (dBA, slow ³)	Actual Measured Lmax at 50 feet ⁴ (dBA, slow ³)
Site Preparation				
Rubber Tired Dozer	3	40	85	82
Tractor, Loader, or Backhoe	4	40	84	N/A
Grading				
Excavator	1	40	85	81
Grader	1	40	85	83
Rubber Tired Dozer	1	40	85	82
Tractor, Loader or Backhoe ⁵	3	40	84	N/A
Building Construction				
Crane	1	16	85	81
Forklift (Gradall)	3	40	85	83
Generator	1	50	82	81
Tractor, Loader or Backhoe ⁵	3	40	84	N/A
Welder	1	40	73	74
Paving				
Paver	2	50	85	77
Paving Equipment	2	50	85	77
Roller	2	20	85	80
Architectural Coating				
Air Compressor	1	40	80	78

Notes:

¹ Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.

² Spec 721.560 is the equipment noise level utilized by the RCNM program.

³ The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.

⁴ Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.

⁵ For the tractor/loader/backhoe, the tractor noise level was utilized, since it is the loudest of the three types of equipment.

⁶ For the cement & mortar mixer, the concrete mixer truck noise level was utilized.

Source: Federal Highway Administration, 2006 and CalEEMod default equipment mix.

Table F shows the associated measured noise emissions for each piece of equipment from the RCNM model and measured percentage of typical equipment use per day. Construction noise impacts to the nearby sensitive receptors have been calculated according to the equipment noise levels and usage

factors listed Table F and through use of the RCNM. For each phase of construction, the nearest piece of equipment was placed at 200 feet from the property line, per the methodology detailed in Section 11.80.030(C) of the Municipal Code, and each subsequent piece of equipment was placed an additional 50 feet away.

6.2 Operations-Related Noise

FHWA Model Methodology

The proposed project would result in increases in traffic noise to the nearby roadways as well as introduce new sensitive receptors to the project site. The project impacts to the offsite roadways were analyzed through use of the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108 (FHWA Model). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the reference energy mean emission level to account for: 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) and the percentage of ADT which flows during the day, evening and night, the travel speed, the vehicle mix on the roadway, which is a percentage of the volume of automobiles, medium trucks and heavy trucks, the roadway grade, the angle of view of the observer exposed to the roadway and site conditions ("hard" or "soft" relates to the absorption of the ground, pavement or landscaping). The following section provides a discussion of the software and modeling input parameters used in this analysis and a discussion of the resultant existing noise model.

FHWA Model Traffic Noise Prediction Model Inputs

The roadway parameters used for this study are presented in Table G. The roadway classifications are based on the City's General Plan Circulation Element. The roadway speeds are based on the posted speed limits. The distance to the nearest sensitive receptor was determined by measuring the distance from the roadway centerline to the nearest residence. Since the study area is located in a suburban environment and landscaping exists along the sides of all analyzed roadways, soft site conditions were modeled.

Table G – FHWA Model Roadway Parameters

Roadway	Segment	General Plan Classification	Vehicle Speed (MPH)	Distance to Nearest Receptor ¹ (feet)
Iris Avenue	East of Perris Boulevard	Arterial	50	70

Notes:

¹ Distance measured from nearest residential structure to centerline of roadway.

Source: City of Moreno Valley, 2006.

Since the proposed project was only required to prepare the *Trip Generation Analysis for Proposed Iris Park Residential Project*, (Trip Generation Memo), prepared by EPD Solutions, Inc., May 12, 2020, the average daily traffic (ADT) volume for Iris Avenue in the vicinity of the project site was obtained from the *Moreno Valley Traffic Counts*, updated in 2017, that shows Iris Avenue east of Perris Boulevard currently has 21,400 daily vehicle trips. Since the trip distribution is unknown, in order to provide a worst-case analysis, 100 percent of project traffic was assumed to travel the roadway segment of Iris Avenue east of Perris Boulevard. The ADT volumes used in this analysis are shown in Table H.

Table H – Average Daily Traffic Volumes

Roadway	Segment	Average Daily Traffic Volumes	
		Existing	Existing + Project
Iris Avenue	East of Perris Boulevard	21,400	22,174

Source: EPD Solutions, Inc., 2020; City of Moreno Valley, 2017.

The vehicle mix used in the FHWA-RD-77-108 Model is shown in Table I and is based on the vehicle mix utilized for Iris Avenue in the Kaiser Permanente DEIR (Dudek, 2019), which are based on vehicle counts of autos, medium trucks, and heavy trucks taken on Iris Avenue in the vicinity of the project site. The vehicle mix provides the hourly distribution percentages of automobiles, medium trucks, and heavy trucks for input into the FHWA model.

Table I – Arterial Roadway Vehicle Mix

Vehicle Type	Traffic Flow Distributions			Overall
	Day (7 a.m. to 7 p.m.)	Evening (7 p.m. to 10 p.m.)	Night (10 p.m. to 7 a.m.)	
Automobiles	71.4%	13.2%	12.4%	97.0%
Medium Trucks	1.4%	0.2%	0.4%	2.0%
Heavy Trucks	0.7%	0.1%	0.2%	1.0%

Source: Dudek, 2019.

FHWA Model Source Assumptions

To assess the roadway noise generation in a uniform manner, all vehicles are analyzed at the single lane equivalent acoustic center of the roadway being analyzed. In order to determine the height above the road grade where the noise is being emitted from, each type of vehicle has been analyzed independently with autos at road grade, medium trucks at 2.3 feet above road grade, and heavy trucks at 8 feet above road grade. These elevations were determined through a noise-weighted average of the elevation of the exhaust pipe, tires and mechanical parts in the engine, which are the primary noise emitters from a vehicle.

6.3 Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Table J gives approximate vibration levels for particular construction activities. The data in Table J provides a reasonable estimate for a wide range of soil conditions.

Table J – Vibration Source Levels for Construction Equipment

Equipment		Peak Particle Velocity (inches/second)	Approximate Vibration Level (L_v)at 25 feet
Pile driver (impact)	Upper range	1.518	112
	typical	0.644	104
Pile driver (sonic)	Upper range	0.734	105
	typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drill		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Federal Transit Administration, May 2006.

The construction-related vibration impacts have been calculated through the vibration levels shown above in Table J and through typical vibration propagation rates. The equipment assumptions were based on the equipment lists provided above in Table F.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generation of excessive groundborne vibration or groundborne noise levels; or
- For a project located within the vicinity of a private airstrip or 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.

7.2 Generation of Noise Levels in Excess of Standards

The proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the proposed project and compares the noise levels to the City standards.

Construction-Related Noise

The construction activities for the proposed project are anticipated to include site preparation and grading of the project site, building construction of the 81 single-family homes, paving of the onsite roads, driveways and trails, and application of architectural coatings. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptors to the project site are the single-family homes located adjacent to the east side of the project site. In addition, there are commercial uses and Val Verde Academy are located adjacent to the southwest side of the project site.

Section 11.80.030(C) of the City's Municipal Code limits all noise sources, including construction noise to 60 dBA at the nearby residential uses and 65 dBA at the nearby commercial uses during the daytime. Section 11.80.030(D)(7) of the City's Municipal Code provides additional prohibitions on construction activities by restricting construction activities from occurring between the hours of 8:00 p.m. and 7:00 a.m..

Construction noise impacts to the nearby sensitive receptors have been calculated through use of the RCNM and the parameters and assumptions detailed in Section 6.1 of this report including Table F that shows the anticipated construction equipment per phase. The results are shown below in Table K and the RCNM printouts are provided in Appendix C.

Table K – Construction Noise Levels at the Nearest Sensitive Receptors

Construction Phase	Construction Noise Level ¹ (dBA Leq) at:	
	Homes to the East ²	School and Commercial to Southwest ³
Site Preparation	59	64
Grading	59	64
Building Construction	58	61
Paving	55	59
Painting	50	52
City's Noise Threshold⁴	60	65
Exceed Thresholds?	No	No

Notes:

¹ The construction noise levels were calculated at 200 feet from the project's property line pursuant to Section 11.80.030(C) of the Municipal Code.

² In order to account for the existing 6-foot high wall on the east property line and the first row of homes that are located within 200 feet of the property line 10 dB of shielding was added to the RCNM Model.

³ In order to account for the commercial and school structures that are located within 200 feet of the property line, 5 dB of shielding was added to the RCNM Model.

⁴ City Noise Thresholds obtained from Section 11.80.030(C) of the Municipal Code.

Source: RCNM, Federal Highway Administration, 2006

Table K shows that the greatest noise impacts would occur during the site preparation and grading phases, with noise levels as high as 59 dBA at the nearest homes to the east, which is within the City's residential noise threshold of 60 dBA and as high as 64 dBA at the school and commercial uses to the southwest, which is within the City's commercial noise threshold of 65 dBA. Through adherence to the limitation of allowable construction times provided in Section 9.10.030(B) of the City's Municipal Code, the construction-related noise levels would not exceed any standards. Therefore, impacts would be less than significant.

Operational-Related Noise

The proposed project would consist of the development of 81 single-family homes. Potential noise impacts associated with the operations of the proposed project would be from project-generated vehicular traffic on the nearby roadways. In addition, the proposed development would be adjacent to Iris Avenue, which may create exterior and interior noise levels in excess of City standards at the proposed homes. The noise impacts to the nearby existing homes and proposed homes have been analyzed separately below.

The proposed project would also include improvements to the existing trail along the California Aqueduct easement, however since the trail currently exists, no new noise sources would be created on this portion of the project site. As such no further analysis of the operational noise impacts from the California Aqueduct easement is provided in this analysis.

Roadway Vehicular Noise Impact to Nearby Homes

Vehicle noise is a combination of the noise produced by the engine, exhaust and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. The proposed project does not propose any uses that would require a substantial number of truck trips and the proposed project would not alter the speed limit on any existing roadway so the proposed project's potential offsite noise impacts have been focused on the noise

impacts associated with the change of volume of traffic that would occur with development of the proposed project.

Objective 6.5 of the City’s General Plan Noise Element, requires the City to minimize noise impacts from significant noise generators including roadway noise impacts. However neither the General Plan nor the CEQA Guidelines define what constitutes a “substantial permanent increase to ambient noise levels”, as such, this impact analysis has utilized guidance from the Federal Transit Administration for a moderate impact that has been detailed above in Table A that shows that the project contribution to the noise environment can range between 0 and 7 dB, which is dependent on the existing noise levels.

The potential offsite traffic noise impacts created by the on-going operations of the proposed project have been analyzed through utilization of the FHWA model and parameters described above in Section 6.2 and the FHWA model traffic noise calculation spreadsheets are provided in Appendix D. The proposed project’s offsite traffic noise impacts have been calculated through a comparison of the without project scenario to the with project scenario. The results of this comparison are shown in Table L.

Table L – Proposed Project Traffic Noise Contributions

Roadway	Segment	dBA CNEL at Nearest Receptor ¹			Increase Threshold ²
		Without Project	With Project	Project Contribution	
Iris Avenue	East of Perris Boulevard	68.8	69.0	0.2	+1 dBA

Notes:
¹ Distance to nearest residential use shown in Table G, does not take into account existing noise barriers.
² Increase Threshold obtained from the FTA’s allowable noise impact exposures detailed above in Table A..
 Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108.

Table L shows that the proposed project’s permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the traffic noise increase thresholds detailed above. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels. Impacts would be less than significant.

Roadway Vehicular Noise Impacts to Proposed Homes

The proposed project would consist of the development of a residential community with 81 single-family homes. General Plan Policy 6.3.1 limits the interior noise levels in new homes to 45 dBA CNEL or less and requires the exterior noise levels at new homes to not exceed 20 dBA above the desired interior noise levels, which results in an exterior noise level limit of 65 dBA CNEL. It is anticipated that the primary source of noise impacts to the project site will be traffic noise from Iris Avenue. The proposed homes will also experience some background traffic noise impacts from the proposed project’s internal roadways. As the traffic on these local streets would consist of low traffic volumes at slower speeds and the traffic noise from these roads would not make a significant contribution to the noise environment, the noise levels from these local roads were not analyzed. The FHWA traffic noise prediction model parameters used in this analysis are discussed above in detail in Section 6.2 and the FHWA model printouts are provided in Appendix F.

Roadway Noise Impacts to the Proposed Homes Backyards

The anticipated noise levels have been calculated for backyards that are adjacent to Iris Avenue for representative lots and the results are shown below in Table M.

Table M – Proposed Homes Exterior Backyard Noise Levels from Nearby Roads

Lot Number	Roadway	Exterior Backyard Noise Levels (dBA CNEL)		Sound Wall Height ¹ (feet)
		Without Sound Wall	With Sound Wall	
3	Iris Avenue	69	62	6.0
69	Iris Avenue	69	61	6.0
73	Iris Avenue	69	61	6.0
77	Iris Avenue	69	61	6.0
81	Iris Avenue	69	61	6.0

Notes:

¹ Project Design Feature 1 is included that requires construction of a 6-foot high cmu wall at rear property lines of Lots 1 to 3 and 69 to 81, that are adjacent to Iris Avenue.

Exceedance of City's 65 dBA CNEL residential exterior noise standard shown in **bold**.

Source: FHWA RD-77-108 Model.

Table M shows that with implementation of Project Design Feature 1 that requires a 6 foot high cmu wall to be constructed at the rear property lines of Lots 1 to 3 and 69 to 81 that are adjacent to Iris Avenue, the noise levels at all proposed homes backyards would be within the City's 65 dBA CNEL residential exterior noise standard. Impacts would be less than significant with implementation of Project Design Feature 1.

Proposed Homes Interior Roadway Noise Impacts

To assess the interior noise levels related to compliance with the 45 dBA CNEL interior noise standard, the same proposed homes analyzed for the exterior private backyard analysis were also analyzed for their interior noise levels. The exterior noise level at the façade of the first and second floors were calculated through use of the same methodology detailed above for the outdoor noise calculations (see Section 6.2 above) and the results are shown below in Table N. Table N also show the interior noise levels calculated based on 25 dB of attenuation, since new homes that are designed to meet the Title 24 Part 6 energy efficiency standards that require installation of dual-paned windows as well as installation of forced-air mechanical ventilation systems (see Project Design Feature 2) provide a minimum of 25 dB of exterior to interior noise reduction.

Table N – Proposed Homes Interior Noise Levels from Cactus Avenue

Lot Number	Roadway	Floor	Exterior Noise Level at Building	Interior Noise Levels ¹
			Façade (dBA CNEL)	(dBA CNEL)
3	Iris Avenue	1	62	37
		2	68	43
69	Iris Avenue	1	62	37
		2	68	43
73	Iris Avenue	1	62	37
		2	68	43
77	Iris Avenue	1	62	37
		2	68	43
81	Iris Avenue	1	62	37
		2	68	43

Notes:

¹ Interior noise levels based on 25 dBA of noise reduction with implementation of Project Design Feature 2 and Title 24 Part 6 requirements.

Source: FHWA RD-77-108 Model.

Table N shows that with implementation of Project Design Feature 2 that requires installation of forced air mechanical ventilation systems on all of the proposed homes as well as adherence to Title 24 Part 6 energy efficiency standards that require installation of dual-paned windows, the noise levels at the interior of all proposed homes would be within the City's 45 dBA CNEL residential interior noise standard. Impacts would be less than significant with implementation of Project Design Feature 2.

Level of Significance

Less than significant impact.

7.3 Generation of Excessive Groundborne Vibration

The proposed project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the proposed project.

Construction-Related Vibration Impacts

The construction activities for the proposed project are anticipated to include site preparation and grading of the project site, building construction of the 81 single-family homes, paving of the onsite roads, driveways and trails, and application of architectural coatings. Vibration impacts from construction activities associated with the proposed project would typically be created from the operation of heavy off-road equipment. The nearest sensitive receptors to the project site are the single-family homes located adjacent to the east side of the project site, where the nearest residential structure is as near as 25 feet east of the project site.

Chapter 9.10 of the Municipal Code includes performance standards for proposed development projects that may impact the surrounding neighborhood and Section 9.10.030(B), which is part of this Chapter, exempts temporary construction activities from Section 9.10.170 that restricts the creation of vibration that can be felt at the property line, provided that construction activities occur between the hours of 7 a.m. and 7 p.m.. Since the City's Municipal does not provide a quantifiable vibration level for construction activities, Caltrans guidance that is detailed above in Section 4.2 has been utilized, which defines the threshold of perception from transient sources at 0.25 inch per second PPV.

The primary source of vibration during construction would be from the operation of a bulldozer. From Table J above a large bulldozer would create a vibration level of 0.089 inch-per-second PPV at 25 feet, which is the approximate distance to the nearest home. The vibration level at the nearest offsite home is within the 0.25 inch per second PPV threshold detailed above. Therefore, a less than significant vibration impact is anticipated from construction of the proposed project.

Operations-Related Vibration Impacts

The proposed project would consist of the development of 81 single-family homes. The on-going operation of the proposed project would not include the operation of any known vibration sources other than typical onsite vehicle operations for a residential development. Therefore, a less than significant vibration impact is anticipated from operation of the proposed project.

Level of Significance

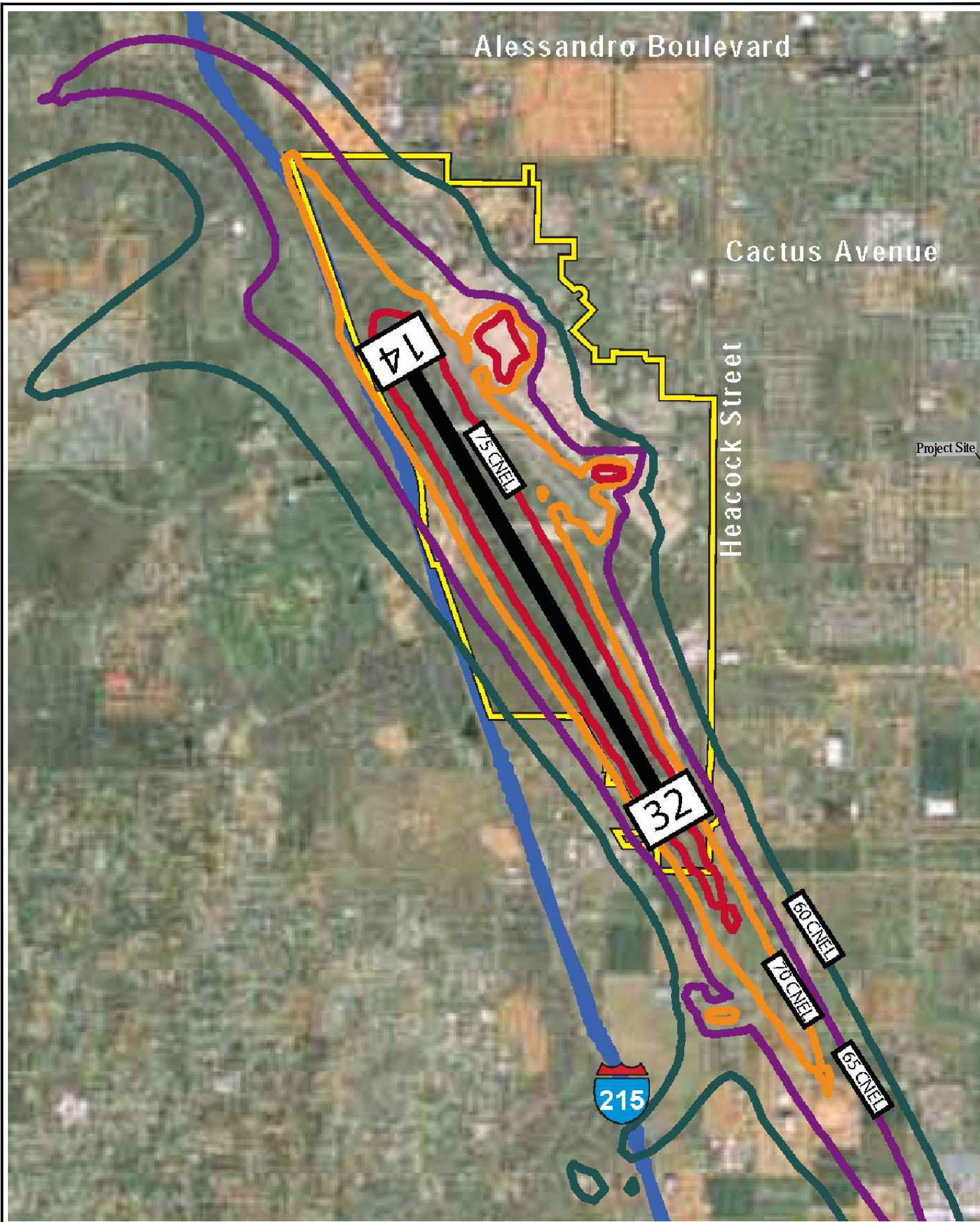
Less than significant impact.

7.4 Aircraft Noise

The proposed project may expose people residing in the project area to excessive noise levels from aircraft. The nearest airport is March Air Reserve Base that is located as near as 1.2 mile west of the project site. As detailed in Figure 5, the project site is located outside of the 60 dBA CNEL noise contours. Site observations during the noise measurements found that aircraft rarely fly over the project site, since the project site is located on the side of March Air Reserve Base and is not lined up with any of the runways. Therefore, the proposed project would not expose people to excessive noise levels from aircraft. Impacts would be less than significant.

Level of Significance

Less than significant impact.



SOURCE: MIP General Aviation Facilities Development Environmental Impact Report, May 2012.

Attachment: Appendix I to Initial Study Noise Impact Analysis_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

8.0 REFERENCES

California Department of Transportation, *2016 Annual Average Daily Truck Traffic on the California State Highway System*, 2018.

California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analytics Protocol*, September 2013.

California Department of Transportation, *Transportation- and Construction-Induced Vibration Guidance Manual*, September 2013.

City of Moreno Valley, *City of Moreno Valley General Plan*, July 11, 2006.

City of Moreno Valley, *Moreno Valley General Plan Final Program EIR*, July 2006.

City of Moreno Valley, *City of Moreno Valley Municipal Code*, May 2014.

City of Moreno Valley, *Moreno Valley Traffic Counts*, updated 2017.

County of Riverside, *Comprehensive Update to the General Plan*, December 2008.

Dudek, *Draft Environmental Impact Report for the Kaiser Permanente Moreno Valley Medical Center Project*, October 2019.

EPD Solutions, Inc., *Trip Generation Analysis for Proposed Iris Park Residential Project*, May 12, 2020.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

U.S. Department of Transportation, *FHWA Roadway Construction Noise Model User's Guide*, January, 2006.

APPENDIX A

Field Noise Measurements Photo Index



Noise Measurement Site 1 - looking north



Noise Measurement Site 1 - looking northeast



Noise Measurement Site 1 - looking east



Noise Measurement Site 1 - looking southeast



Noise Measurement Site 1 - looking south



Noise Measurement Site 1 - looking southwest



Noise Measurement Site 1 - looking west



Noise Measurement Site 1 - looking northwest



Noise Measurement Site 2 - looking north



Noise Measurement Site 2 - looking northeast



Noise Measurement Site 2 - looking east



Noise Measurement Site 2 - looking southeast



Noise Measurement Site 2 - looking south



Noise Measurement Site 2 - looking southwest



Noise Measurement Site 2 - looking west



Noise Measurement Site 2 - looking northwest



Noise Measurement Site 3 - looking north



Noise Measurement Site 3 - looking northeast



Noise Measurement Site 3 - looking east



Noise Measurement Site 3 - looking southeast



Noise Measurement Site 3 - looking south



Noise Measurement Site 3 - looking southwest



Noise Measurement Site 3 - looking west



Noise Measurement Site 3 - looking northwest

APPENDIX B

Field Noise Measurements Printouts

Attachment: Appendix I to Initial Study Noise Impact Analysis_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

Measurement Report

Report Summary

Meter's File Name	LxT_Data.001	Computer's File Name	SLM_0004671_LxT_Da	1.11
Meter	LxT1			
Firmware	2.302			
User	GT		Location	
Description	Moreno Valley - Iris Park			
Note	Located on SW Property Line Fence, approx 8 feet SE from Val Verde Academy North Property Corner			
Start Time	2020-05-09 14:37:04	Duration	24:00:00.0	
End Time	2020-05-10 14:37:04	Run Time	24:00:00.0	Pause Time 0:00:00.0

Results

Overall Metrics

LA _{eq}	48.3 dB		
LAE	97.7 dB	SEA	--- dB
EA	649.2 μPa²h		
EA8	216.4 μPa²h		
EA40	1.1 mPa²h		
LAS _{peak}	106.1 dB	2020-05-09 14:37:18	
LAS _{max}	84.2 dB	2020-05-09 20:27:44	
LAS _{min}	32.0 dB	2020-05-10 03:19:17	
LA _{eq}	48.3 dB		
LC _{eq}	62.1 dB	LC _{eq} - LA _{eq}	13.8 dB
LAI _{eq}	52.3 dB	LAI _{eq} - LA _{eq}	4.0 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LAS _{peak} > 135.0 dB	0	0:00:00.0
LAS _{peak} > 137.0 dB	0	0:00:00.0
LAS _{peak} > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
--- dB	--- dB	0.0 dB
LDEN	LDay	LEve
--- dB	--- dB	--- dB
		LNight
		--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	48.3 dB		--- dB		--- dB	
L _{S(max)}	84.2 dB	2020-05-09 20:27:44	--- dB		--- dB	
L _{S(min)}	32.0 dB	2020-05-10 03:19:17	--- dB		--- dB	
L _{Peak(max)}	106.1 dB	2020-05-09 14:37:18	--- dB		--- dB	

Overloads

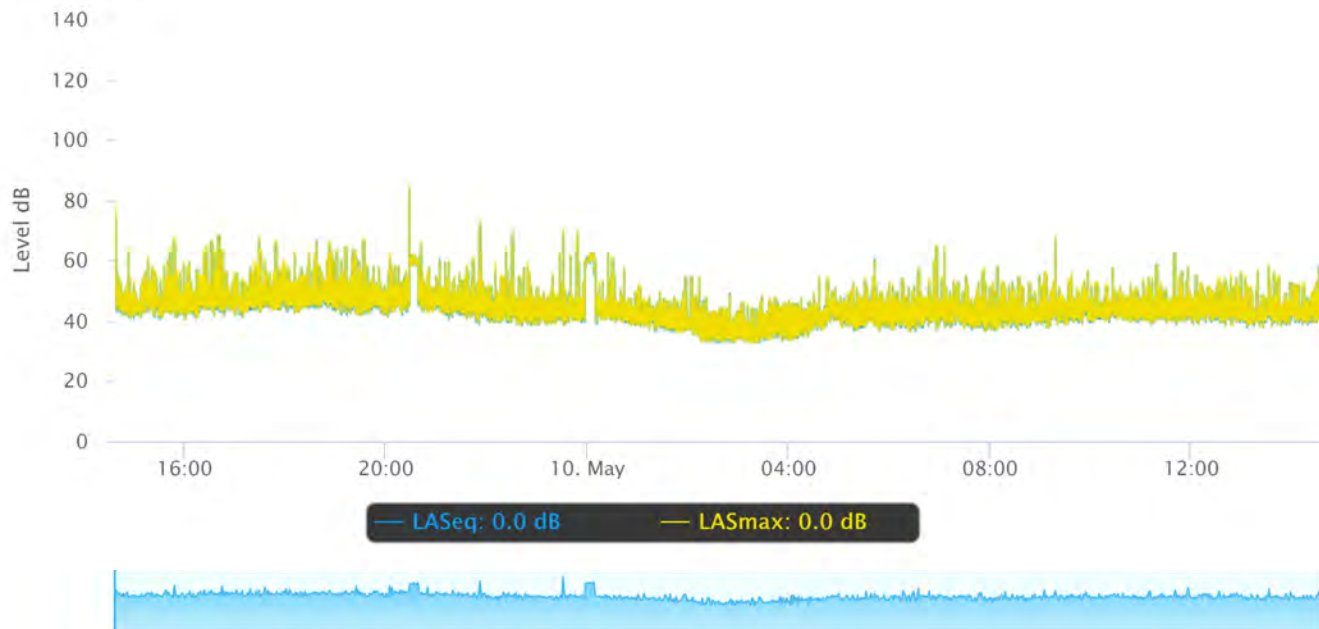
Count	Duration
0	0:00:00.0

Statistics

LAS 5.0	51.2 dB
LAS 10.0	48.9 dB
LAS 33.3	45.3 dB
LAS 50.0	43.6 dB
LAS 66.6	42.0 dB
LAS 90.0	38.8 dB

Attachment: Appendix I to Initial Study Noise Impact Analysis_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

Time History



Measurement Report

Report Summary

Meter's File Name	LxT_Data.001	Computer's File Name	SLM_0006082_LxT_Data_001.03.ldbin
Meter	LxT1		
Firmware	2.402		
User	GT	Location	
Description	Moreno Valley - Iris Park		
Note	Located on East Property Line Fence, Approx 100 ft south of Iris Ave CL		
Start Time	2020-05-09 14:45:26	Duration	24:00:00.0
End Time	2020-05-10 14:45:26	Run Time	24:00:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA _{eq}	58.8 dB		
LAE	108.1 dB	SEA	--- dB
EA	7.2 mPa²h		
EA8	2.4 mPa²h		
EA40	12.1 mPa²h		
LZS _{peak}	114.7 dB	2020-05-09 16:40:17	
LAS _{max}	93.2 dB	2020-05-09 16:40:17	
LAS _{min}	33.3 dB	2020-05-10 02:23:13	
LA _{eq}	58.8 dB		
LC _{eq}	69.1 dB	LC _{eq} - LA _{eq}	10.3 dB
LAI _{eq}	62.0 dB	LAI _{eq} - LA _{eq}	3.2 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	2	0:00:04.4
LAS > 115.0 dB	0	0:00:00.0
LZSpeak > 135.0 dB	0	0:00:00.0
LZSpeak > 137.0 dB	0	0:00:00.0
LZSpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
--- dB	--- dB	0.0 dB
LDEN	LDay	LEve
--- dB	--- dB	--- dB
		LNight
		--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	58.8 dB		--- dB		--- dB	
LS _(max)	93.2 dB	2020-05-09 16:40:17	--- dB		--- dB	
LS _(min)	33.3 dB	2020-05-10 02:23:13	--- dB		--- dB	
L _{Peak(max)}	--- dB		--- dB		114.7 dB	2020-05-09 16:40:17

Overloads

Count	Duration
0	0:00:00.0

Statistics

LAS 5.0	63.6 dB
LAS 10.0	61.9 dB
LAS 33.3	57.4 dB
LAS 50.0	54.2 dB
LAS 66.6	49.7 dB
LAS 90.0	39.9 dB

Time History



Measurement Report

Report Summary

Meter's File Name	LxT_Data.001	Computer's File Name	SLM_0004209_LxT_Data_001.10.ldbin
Meter	LxT1		
Firmware	2.302		
User	GT	Location	
Description	Moreno Valley - Iris Park		
Note	Located on Fence at South Property Corner		
Start Time	2020-05-09 14:27:02	Duration	24:00:00.0
End Time	2020-05-10 14:27:02	Run Time	24:00:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA _{eq}	48.8 dB		
LAE	98.1 dB	SEA	--- dB
EA	721.1 μPa²h		
EA8	240.4 μPa²h		
EA40	1.2 mPa²h		
LAS _{peak}	105.9 dB	2020-05-09 14:27:53	
LAS _{max}	76.9 dB	2020-05-10 12:17:06	
LAS _{min}	32.0 dB	2020-05-10 04:00:52	
LA _{eq}	48.8 dB		
LC _{eq}	61.4 dB	LC _{eq} - LA _{eq}	12.6 dB
LAI _{eq}	53.9 dB	LAI _{eq} - LA _{eq}	5.1 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LAS _{peak} > 135.0 dB	0	0:00:00.0
LAS _{peak} > 137.0 dB	0	0:00:00.0
LAS _{peak} > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
--- dB	--- dB	0.0 dB	
LDEN	LDay	LEve	LNight
--- dB	--- dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L _{eq}	48.8 dB		--- dB		--- dB	
LS _(max)	76.9 dB	2020-05-10 12:17:06	--- dB		--- dB	
LS _(min)	32.0 dB	2020-05-10 04:00:52	--- dB		--- dB	
L _{Peak(max)}	105.9 dB	2020-05-09 14:27:53	--- dB		--- dB	

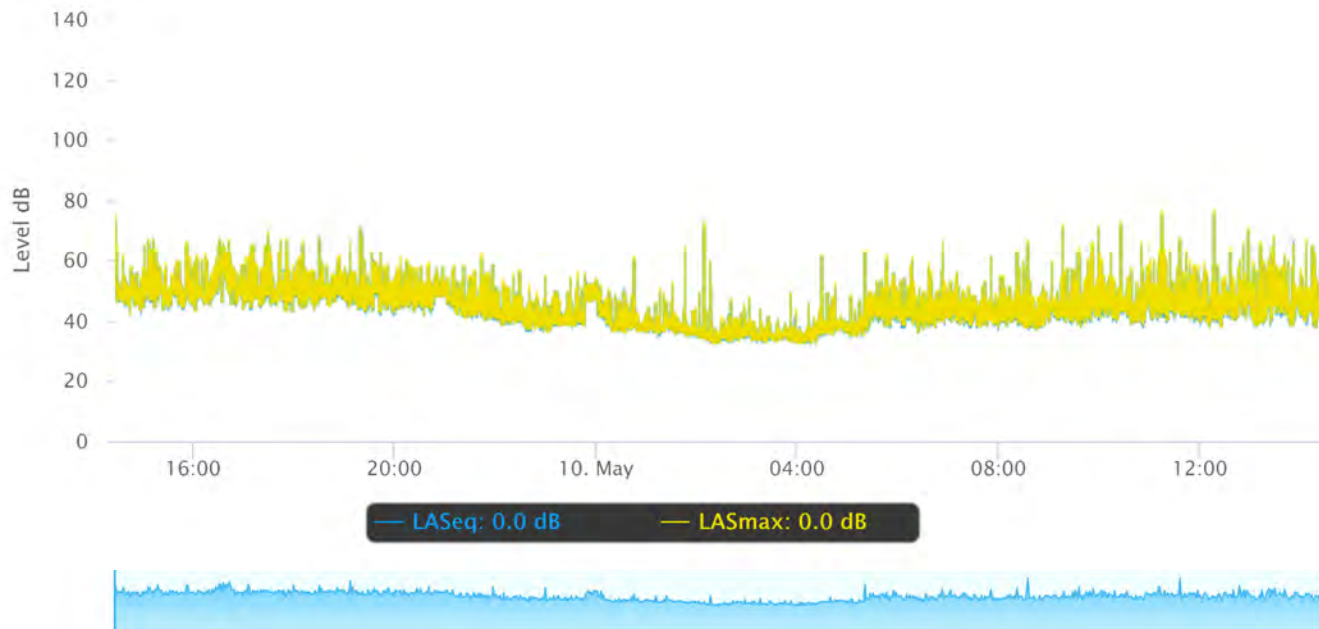
Overloads

Count	Duration
0	0:00:00.0

Statistics

LAS 5.0	53.2 dB
LAS 10.0	50.8 dB
LAS 33.3	46.7 dB
LAS 50.0	44.1 dB
LAS 66.6	41.3 dB
LAS 90.0	36.3 dB

Time History



APPENDIX C

RCNM Model Construction Noise Calculation Printouts

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/22/2020
 Case Description: Iris Park Residential Project - Site Preparation

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Homes to East	Residential	61.1	61.1	53.5

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	225	10
Dozer	No	40		81.7	325	10
Dozer	No	40		81.7	425	10
Tractor	No	40	84		525	10
Tractor	No	40	84		625	10
Tractor	No	40	84		725	10
Tractor	No	40	84		825	10

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Dozer	58.6	54.6	N/A	N/A	N/A	N/A
Dozer	55.4	51.4	N/A	N/A	N/A	N/A
Dozer	53.1	49.1	N/A	N/A	N/A	N/A
Tractor	53.6	49.6	N/A	N/A	N/A	N/A
Tractor	52.1	48.1	N/A	N/A	N/A	N/A
Tractor	50.8	46.8	N/A	N/A	N/A	N/A
Tractor	49.7	45.7	N/A	N/A	N/A	N/A
Total	59	59	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/22/2020
 Case Description: Iris Park Residential Project - Site Preparation

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest School to SW	Commercial	50.0	50.0	45.4

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	225	5
Dozer	No	40		81.7	325	5
Dozer	No	40		81.7	425	5
Tractor	No	40	84		525	5
Tractor	No	40	84		625	5
Tractor	No	40	84		725	5
Tractor	No	40	84		825	5

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Dozer	64	60	N/A	N/A	N/A	N/A
Dozer	60	56	N/A	N/A	N/A	N/A
Dozer	58	54	N/A	N/A	N/A	N/A
Tractor	59	55	N/A	N/A	N/A	N/A
Tractor	57	53	N/A	N/A	N/A	N/A
Tractor	56	52	N/A	N/A	N/A	N/A
Tractor	55	51	N/A	N/A	N/A	N/A
Total	64	64	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/22/2020
 Case Description: Iris Park Residential Project - Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Homes to East	Residential	61.1	61.1	53.5

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Excavator	No	40		80.7	225	10
Grader	No	40	85		325	10
Dozer	No	40		81.7	425	10
Tractor	No	40	84		525	10
Tractor	No	40	84		625	10
Tractor	No	40	84		725	10

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Excavator	57.6	53.7	N/A	N/A	N/A	N/A
Grader	58.7	54.8	N/A	N/A	N/A	N/A
Dozer	53.1	49.1	N/A	N/A	N/A	N/A
Tractor	53.6	49.6	N/A	N/A	N/A	N/A
Tractor	52.1	48.1	N/A	N/A	N/A	N/A
Tractor	50.8	46.8	N/A	N/A	N/A	N/A
Total	59	59	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/22/2020
 Case Description: Iris Park Residential Project - Grading

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest School to SW	Residential	50	50	45.4

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	225	5
Grader	No	40	85		325	5
Dozer	No	40		81.7	425	5
Tractor	No	40	84		525	5
Tractor	No	40	84		625	5
Tractor	No	40.0	84		725	5

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Excavator	62.6	58.7	N/A	N/A	N/A	N/A
Grader	63.7	59.8	N/A	N/A	N/A	N/A
Dozer	58.1	54.1	N/A	N/A	N/A	N/A
Tractor	58.6	54.6	N/A	N/A	N/A	N/A
Tractor	57.1	53.1	N/A	N/A	N/A	N/A
Tractor	55.8	51.8	N/A	N/A	N/A	N/A
Total	64	64	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 9/22/2020
 Case Description: Iris Park Residential Project - Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Homes to East	Residential	61.1	61.1	53.5

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Crane	No	16		80.6	255	10
Gradall	No	40		83.4	355	10
Gradall	No	40		83.4	455	10
Gradall	No	40		83.4	555	10
Generator	No	50		80.6	655	10
Tractor	No	40	84		755	10
Tractor	No	40	84		855	10
Tractor	No	40	84		955	10
Welder / Torch	No	40		74	1055	10

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Crane	56.4	48.4	N/A	N/A	N/A	N/A
Gradall	56.4	52.4	N/A	N/A	N/A	N/A
Gradall	54.2	50.2	N/A	N/A	N/A	N/A
Gradall	52.5	48.5	N/A	N/A	N/A	N/A
Generator	48.3	45.3	N/A	N/A	N/A	N/A
Tractor	50.4	46.4	N/A	N/A	N/A	N/A
Tractor	49.3	45.4	N/A	N/A	N/A	N/A
Tractor	48.4	44.4	N/A	N/A	N/A	N/A
Welder / Torch	37.5	33.5	N/A	N/A	N/A	N/A
Total	56	58	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/22/2020
 Case Description: Iris Park Residential Project - Building Construction

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest School to SW	Residential	50.0	50.0	45.4

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Crane	No	16		80.6	325	5
Gradall	No	40		83.4	425	5
Gradall	No	40		83.4	525	5
Gradall	No	40		83.4	625	5
Generator	No	50		80.6	725	5
Tractor	No	40	84		825	5
Tractor	No	40	84		925	5
Tractor	No	40	84		1025	5
Welder / Torch	No	40		74	1125	5

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Crane	59.3	51.3	N/A	N/A	N/A	N/A
Gradall	59.8	55.8	N/A	N/A	N/A	N/A
Gradall	58.0	54.0	N/A	N/A	N/A	N/A
Gradall	56.5	52.5	N/A	N/A	N/A	N/A
Generator	52.4	49.4	N/A	N/A	N/A	N/A
Tractor	54.7	50.7	N/A	N/A	N/A	N/A
Tractor	53.7	49.7	N/A	N/A	N/A	N/A
Tractor	52.8	48.8	N/A	N/A	N/A	N/A
Welder / Torch	42.0	38.0	N/A	N/A	N/A	N/A
Total	60	61	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/22/2020
 Case Description: Iris Park Residential Project - Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Homes to East	Residential	61.1	61.1	53.5

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	230	10
Concrete Mixer Truck	No	40		78.8	330	10
Paver	No	50		77.2	430	10
Paver	No	50		77.2	530	10
Roller	No	20		80	630	10
Roller	No	20		80	730	10
Tractor	No	40	84		830	10

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	55.5	51.6	N/A	N/A	N/A	N/A
Concrete Mixer Truck	52.4	48.4	N/A	N/A	N/A	N/A
Paver	48.5	45.5	N/A	N/A	N/A	N/A
Paver	46.7	43.7	N/A	N/A	N/A	N/A
Roller	48.0	41.0	N/A	N/A	N/A	N/A
Roller	46.7	39.7	N/A	N/A	N/A	N/A
Tractor	49.6	45.6	N/A	N/A	N/A	N/A
Total	56	55	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/22/2020
 Case Description: Iris Park Residential Project - Paving

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest School to SW	Residential	50	50	45.4

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Concrete Mixer Truck	No	40		78.8	275	5
Concrete Mixer Truck	No	40		78.8	375	5
Paver	No	50		77.2	475	5
Paver	No	50		77.2	575	5
Roller	No	20		80	675	5
Roller	No	20		80	775	5
Tractor	No	40	84		875	5

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	59.0	55.0	N/A	N/A	N/A	N/A
Concrete Mixer Truck	56.3	52.3	N/A	N/A	N/A	N/A
Paver	52.7	49.7	N/A	N/A	N/A	N/A
Paver	51.0	48.0	N/A	N/A	N/A	N/A
Roller	52.4	45.4	N/A	N/A	N/A	N/A
Roller	51.2	44.2	N/A	N/A	N/A	N/A
Tractor	54.1	50.2	N/A	N/A	N/A	N/A
Total	59	59	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/22/2020
 Case Description: Iris Park Residential Project - Painting

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest Homes to East	Residential	61.1	61.1	53.5

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor Distance	Estimated Shielding
			Lmax (dBA)	Lmax (dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	255	10

Equipment	Calculated (dBA)	Results					
		Noise Limits (dBA)		Noise Limits (dBA)			
		Day	Evening	Day	Evening	Day	Evening
Compressor (air)	*Lmax	Leq	Lmax	Leq	Lmax	Leq	
	53.5	49.5	N/A	N/A	N/A	N/A	
Total	54	50	N/A	N/A	N/A	N/A	

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Nearest School to SW	Residential	50.0	50.0	45.4

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor Distance	Estimated Shielding
			Lmax (dBA)	Lmax (dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	325	5

Equipment	Calculated (dBA)	Results					
		Noise Limits (dBA)		Noise Limits (dBA)			
		Day	Evening	Day	Evening	Day	Evening
Compressor (air)	*Lmax	Leq	Lmax	Leq	Lmax	Leq	
	56.4	52.4	N/A	N/A	N/A	N/A	
Total	56	52	N/A	N/A	N/A	N/A	

*Calculated Lmax is the Loudest value.

Attachment: Appendix I to Initial Study Noise Impact Analysis_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

APPENDIX D

FHWA Model Offsite Traffic Noise Calculation Printouts

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: **EXISTING CONDITIONS**

Project: **Iris Park Residential**

Site Conditions: **Soft**

Vehicle Type	Vehicle Mix 1 (Local)			Vehicle Mix 2 (Arterial)			Vehicle Mix 3 (Iris Ave)		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Automobiles	73.60%	13.60%	10.22%	69.50%	12.90%	9.60%	71.37%	13.19%	12.41%
Medium Trucks	0.90%	0.90%	0.04%	1.44%	0.06%	1.50%	1.40%	0.20%	0.40%
Heavy Trucks	0.35%	0.04%	0.35%	2.40%	0.10%	2.50%	0.73%	0.10%	0.21%

Road Name: Iris Avenue				Segment: Perris Blvd to Kitching St				Roadway Classification: Arterial			
Average Daily Traffic: 21400 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 3		NOISE PARAMETERS AT 70 FEET FROM CENTERLINE		Vehicle Mix: 3		Centerline Distance to Noise Contour (in feet)	
Noise Adjustments				Unmitigated Noise Levels				Noise Contour (in feet)			
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Ldn	CNEL
Automobiles	71.12	0.88	-1.96	68.84	66.58	65.27	60.23	68.23	68.79	70 dBA:	54 58
Medium Trucks	78.79	-15.99	-1.96	59.65	40.31	37.87	36.11	43.32	43.64	65 dBA:	115 126
Heavy Trucks	83.02	-18.83	-1.96	61.03	38.85	36.42	34.66	41.86	42.19	60 dBA:	249 271
				69.93	66.60	65.28	60.26	68.26	68.81	55 dBA:	536 583
Total:											

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: Iris Park Residential
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Local)			Vehicle Mix 2 (Arterial)			Vehicle Mix 3 (Iris Ave)		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Automobiles	73.60%	13.60%	10.22%	69.50%	12.90%	9.60%	71.37%	13.19%	12.41%
Medium Trucks	0.90%	0.90%	0.04%	1.44%	0.06%	1.50%	1.40%	0.20%	0.40%
Heavy Trucks	0.35%	0.04%	0.35%	2.40%	0.10%	2.50%	0.73%	0.10%	0.21%
			0.74%			5.00%			1.04%

Road Name: Iris Avenue

Segment: Perris Blvd to Kitching St

Average Daily Traffic: 22174 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 3		Roadway Classification: Arterial	
NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 66.45 ft)							
Noise Adjustments				Unmitigated Noise Levels			
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj.	Leg Peak	Leg Day	Leg Eve.	Leg Night
Automobiles	71.12	1.03	-1.96	68.99	66.74	65.42	60.39
Medium Trucks	78.79	-15.84	-1.96	59.80	40.46	38.03	36.27
Heavy Trucks	83.02	-18.68	-1.96	61.19	39.01	36.58	34.81
Total:				70.09	66.75	65.44	60.42
				Leg Peak	Leg Day	Leg Eve.	Leg Night
				68.99	66.74	65.42	60.39
				68.39	68.94	68.94	60
				43.47	43.79	43.79	118
				42.02	42.34	42.34	277
				68.41	68.96	68.96	597

Centerline Distance to Noise Contour (in feet)	
Ldn	CNEL
55	60
118	129
255	277
548	597

APPENDIX E

FHWA Model Onsite Traffic Noise Calculation Printouts

Attachment: Appendix I to Initial Study Noise Impact Analysis_R (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Iris Avenue
Lot Number: 3

Project Name: Iris Park
Job Number: 20010

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	22,174 vehicles	Day	Evening	Night	Daily	
Peak Hour Volume:	2,217 vehicles	Autos:	71.4%	13.2%	12.4%	97.0%
Vehicle Speed:	50 mph	Medium Trucks:	1.4%	0.2%	0.4%	2.0%
Near/Far Lane Distance:	44 feet	Heavy Trucks:	0.7%	0.1%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,497.9 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,499.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	60 feet	Autos: 0 feet				
C.L. Dist. To Observer (Backyard):	66 feet	Med Trucks: 2.3 feet				
Barrier Dist. To Observer (Backyard):	6 feet	Hvy Trucks: 8 feet				
C.L. Dist. To Observer (Structure):	72 feet	Pad Elevation: 1,497.9 feet				
Barrier Dist. To Observer (Structure):	12 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.00 %	Exterior: 5 feet				
Left View:	-90 degrees	First Floor: 5.5 feet				
Right View:	90 degrees	Second Floor: 14 feet				

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation		
						Exterior	1st Flr	2nd Flr
Autos:	71.12	0.80	-1.54	-1.20	0.00	-7.6	-6.32	0
Med Trucks:	78.79	-14.07	-1.54	-1.20	0.00	-7.43	-5.8	0
Hvy Trucks:	83.02	-11.85	-1.54	-1.20	0.00	-5.8	-4.9	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.2	66.8	65.5	59.5	67.9	68.5
Med Trucks:	62.0	42.8	35.0	44.2	50.4	50.4
Hvy Trucks:	68.4	51.4	43.7	52.9	59.0	59.1
Traffic Noise:	72.3	66.9	65.5	60.4	68.5	69.0

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.6	59.2	57.9	51.9	60.3	60.9
Med Trucks:	54.6	35.3	27.6	36.8	42.9	43.0
Hvy Trucks:	62.6	45.6	37.9	47.1	53.2	53.3
Traffic Noise:	65.5	59.4	58.0	53.2	61.1	61.7

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.5	59.9	58.6	52.5	60.9	61.6
Med Trucks:	53.8	36.3	28.6	37.8	43.9	44.0
Hvy Trucks:	56.1	45.9	38.1	47.3	53.5	53.5
Traffic Noise:	63.8	60.0	58.6	53.8	61.7	62.3

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	66.1	64.8	58.7	67.2	67.8
Med Trucks:	59.5	42.0	34.3	43.5	49.6	49.7
Hvy Trucks:	60.9	50.7	42.9	52.1	58.3	58.3
Traffic Noise:	69.8	66.2	64.8	59.7	67.7	68.3

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Iris Avenue
Lot Number: 69

Project Name: Iris Park
Job Number: 20010

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	22,174 vehicles	Day	Evening	Night	Daily	
Peak Hour Volume:	2,217 vehicles	Autos:	71.4%	13.2%	12.4%	97.0%
Vehicle Speed:	50 mph	Medium Trucks:	1.4%	0.2%	0.4%	2.0%
Near/Far Lane Distance:	44 feet	Heavy Trucks:	0.7%	0.1%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,500.3 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,500.5 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	60 feet	Autos: 0 feet				
C.L. Dist. To Observer (Backyard):	66 feet	Med Trucks: 2.3 feet				
Barrier Dist. To Observer (Backyard):	6 feet	Hvy Trucks: 8 feet				
C.L. Dist. To Observer (Structure):	72 feet	Pad Elevation: 1,500.3 feet				
Barrier Dist. To Observer (Structure):	12 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.00 %	Exterior: 5 feet				
Left View:	-90 degrees	First Floor: 5.5 feet				
Right View:	90 degrees	Second Floor: 14 feet				

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation		
						Exterior	1st Flr	2nd Flr
Autos:	71.12	0.80	-1.55	-1.20	0.00	-7.8	-6.64	0
Med Trucks:	78.79	-14.07	-1.55	-1.20	0.00	-7.7	-6.16	0
Hvy Trucks:	83.02	-11.85	-1.55	-1.20	0.00	-6.08	-4.9	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.2	66.8	65.5	59.5	67.9	68.5
Med Trucks:	62.0	42.8	35.0	44.2	50.4	50.4
Hvy Trucks:	68.4	51.4	43.7	52.9	59.0	59.1
Traffic Noise:	72.3	66.9	65.5	60.4	68.5	69.0

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.4	59.0	57.7	51.7	60.1	60.7
Med Trucks:	54.3	35.1	27.3	36.5	42.7	42.7
Hvy Trucks:	62.3	45.4	37.6	46.8	52.9	53.0
Traffic Noise:	65.3	59.2	57.8	53.0	60.9	61.4

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	59.5	58.2	52.2	60.6	61.2
Med Trucks:	53.4	36.0	28.2	37.4	43.6	43.6
Hvy Trucks:	56.1	45.9	38.1	47.3	53.5	53.5
Traffic Noise:	63.5	59.7	58.3	53.5	61.5	62.0

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	66.1	64.8	58.7	67.1	67.8
Med Trucks:	59.5	42.0	34.2	43.4	49.6	49.6
Hvy Trucks:	60.8	50.7	42.9	52.1	58.3	58.3
Traffic Noise:	69.7	66.2	64.8	59.7	67.7	68.3

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Iris Avenue
Lot Number: 73

Project Name: Iris Park
Job Number: 20010

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	22,174 vehicles	Day	Evening	Night	Daily	
Peak Hour Volume:	2,217 vehicles	Autos:	71.4%	13.2%	12.4%	97.0%
Vehicle Speed:	50 mph	Medium Trucks:	1.4%	0.2%	0.4%	2.0%
Near/Far Lane Distance:	44 feet	Heavy Trucks:	0.7%	0.1%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,499.7 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,500.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	60 feet	Autos: 0 feet				
C.L. Dist. To Observer (Backyard):	66 feet	Med Trucks: 2.3 feet				
Barrier Dist. To Observer (Backyard):	6 feet	Hvy Trucks: 8 feet				
C.L. Dist. To Observer (Structure):	72 feet	Pad Elevation: 1,499.7 feet				
Barrier Dist. To Observer (Structure):	12 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.00 %	Exterior: 5 feet				
Left View:	-90 degrees	First Floor: 5.5 feet				
Right View:	90 degrees	Second Floor: 14 feet				

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation		
						Exterior	1st Flr	2nd Flr
Autos:	71.12	0.80	-1.55	-1.20	0.00	-7.8	-6.64	0
Med Trucks:	78.79	-14.07	-1.55	-1.20	0.00	-7.65	-6.16	0
Hvy Trucks:	83.02	-11.85	-1.55	-1.20	0.00	-6.08	-4.9	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.2	66.8	65.5	59.5	67.9	68.5
Med Trucks:	62.0	42.8	35.0	44.2	50.4	50.4
Hvy Trucks:	68.4	51.4	43.7	52.9	59.0	59.1
Traffic Noise:	72.3	66.9	65.5	60.4	68.5	69.0

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.4	59.0	57.7	51.7	60.1	60.7
Med Trucks:	54.3	35.1	27.3	36.5	42.7	42.7
Hvy Trucks:	62.3	45.4	37.6	46.8	52.9	53.0
Traffic Noise:	65.3	59.2	57.8	53.0	60.9	61.5

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	59.5	58.2	52.2	60.6	61.2
Med Trucks:	53.4	36.0	28.2	37.4	43.6	43.6
Hvy Trucks:	56.1	45.9	38.1	47.3	53.5	53.5
Traffic Noise:	63.5	59.7	58.3	53.5	61.5	62.0

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	66.1	64.8	58.7	67.1	67.8
Med Trucks:	59.5	42.0	34.2	43.5	49.6	49.6
Hvy Trucks:	60.8	50.7	42.9	52.1	58.3	58.3
Traffic Noise:	69.7	66.2	64.8	59.7	67.7	68.3

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Iris Avenue
Lot Number: 77

Project Name: Iris Park
Job Number: 20010

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	22,174 vehicles	Day	Evening	Night	Daily	
Peak Hour Volume:	2,217 vehicles	Autos:	71.4%	13.2%	12.4%	97.0%
Vehicle Speed:	50 mph	Medium Trucks:	1.4%	0.2%	0.4%	2.0%
Near/Far Lane Distance:	44 feet	Heavy Trucks:	0.7%	0.1%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,500.6 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,500.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	60 feet	Autos: 0 feet				
C.L. Dist. To Observer (Backyard):	66 feet	Med Trucks: 2.3 feet				
Barrier Dist. To Observer (Backyard):	6 feet	Hvy Trucks: 8 feet				
C.L. Dist. To Observer (Structure):	72 feet	Pad Elevation: 1,500.6 feet				
Barrier Dist. To Observer (Structure):	12 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.00 %	Exterior: 5 feet				
Left View:	-90 degrees	First Floor: 5.5 feet				
Right View:	90 degrees	Second Floor: 14 feet				

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation		
						Exterior	1st Flr	2nd Flr
Autos:	71.12	0.80	-1.55	-1.20	0.00	-8	-6.94	0
Med Trucks:	78.79	-14.07	-1.55	-1.20	0.00	-7.9	-6.4	0
Hvy Trucks:	83.02	-11.85	-1.55	-1.20	0.00	-6.24	-4.9	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.2	66.8	65.5	59.4	67.9	68.5
Med Trucks:	62.0	42.8	35.0	44.2	50.3	50.4
Hvy Trucks:	68.4	51.4	43.6	52.9	59.0	59.0
Traffic Noise:	72.2	66.9	65.5	60.4	68.5	69.0

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.2	58.8	57.5	51.4	59.9	60.5
Med Trucks:	54.1	34.9	27.1	36.3	42.4	42.5
Hvy Trucks:	62.2	45.2	37.4	46.6	52.8	52.8
Traffic Noise:	65.1	59.0	57.5	52.8	60.7	61.2

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.8	59.2	57.9	51.9	60.3	60.9
Med Trucks:	53.2	35.7	28.0	37.2	43.3	43.3
Hvy Trucks:	56.1	45.9	38.1	47.3	53.5	53.5
Traffic Noise:	63.3	59.4	58.0	53.3	61.2	61.7

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.6	66.0	64.7	58.7	67.1	67.8
Med Trucks:	59.4	42.0	34.2	43.4	49.6	49.6
Hvy Trucks:	60.8	50.7	42.9	52.1	58.3	58.3
Traffic Noise:	69.7	66.2	64.8	59.7	67.7	68.3

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Iris Avenue
Lot Number: 81

Project Name: Iris Park
Job Number: 20010

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	22,174 vehicles	Day	Evening	Night	Daily	
Peak Hour Volume:	2,217 vehicles	Autos:	71.4%	13.2%	12.4%	97.0%
Vehicle Speed:	50 mph	Medium Trucks:	1.4%	0.2%	0.4%	2.0%
Near/Far Lane Distance:	44 feet	Heavy Trucks:	0.7%	0.1%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,499.9 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,499.5 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	60 feet	Autos: 0 feet				
C.L. Dist. To Observer (Backyard):	66 feet	Med Trucks: 2.3 feet				
Barrier Dist. To Observer (Backyard):	6 feet	Hvy Trucks: 8 feet				
C.L. Dist. To Observer (Structure):	72 feet	Pad Elevation: 1,499.9 feet				
Barrier Dist. To Observer (Structure):	12 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.00 %	Exterior: 5 feet				
Left View:	-90 degrees	First Floor: 5.5 feet				
Right View:	90 degrees	Second Floor: 14 feet				

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation		
						Exterior	1st Flr	2nd Flr
Autos:	71.12	0.80	-1.55	-1.20	0.00	-7.95	-6.87	0
Med Trucks:	78.79	-14.07	-1.55	-1.20	0.00	-7.85	-6.4	0
Hvy Trucks:	83.02	-11.85	-1.55	-1.20	0.00	-6.24	-4.9	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.2	66.8	65.5	59.4	67.9	68.5
Med Trucks:	62.0	42.8	35.0	44.2	50.3	50.4
Hvy Trucks:	68.4	51.4	43.6	52.9	59.0	59.0
Traffic Noise:	72.2	66.9	65.5	60.4	68.5	69.0

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.2	58.8	57.6	51.5	59.9	60.6
Med Trucks:	54.1	34.9	27.1	36.3	42.5	42.5
Hvy Trucks:	62.2	45.2	37.4	46.6	52.8	52.8
Traffic Noise:	65.1	59.0	57.6	52.8	60.8	61.3

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.9	59.3	58.0	51.9	60.4	61.0
Med Trucks:	53.2	35.7	28.0	37.2	43.3	43.4
Hvy Trucks:	56.1	45.9	38.1	47.3	53.5	53.5
Traffic Noise:	63.3	59.5	58.1	53.3	61.3	61.8

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.6	66.0	64.7	58.7	67.1	67.8
Med Trucks:	59.4	42.0	34.2	43.4	49.6	49.6
Hvy Trucks:	60.8	50.7	42.9	52.1	58.3	58.3
Traffic Noise:	69.7	66.2	64.8	59.7	67.7	68.3

ENVIRONMENT | PLANNING | DEVELOPMENT SOLUTIONS, INC.

To: Eric Lewis, PE, TE, City Traffic Engineer, City of Moreno Valley
 From: Meghan Macias, TE
 CC:
 Date: 5/12/2020
 Re: Trip Generation Analysis for Proposed Iris Park Residential Project

This technical memorandum presents an analysis of the trip generation for the proposed Iris Park Residential Project located south of Iris Avenue and across Wedow Drive, in the City of Moreno Valley. The project proposes the construction of 81 new single-family residences on a 10.82-acre site. The project site plan is shown in Figure 1. The project site is currently vacant.

The project trip generation was prepared using trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation*, 10th Edition (2017). Table 1 presents the trip generation estimate for the proposed project.

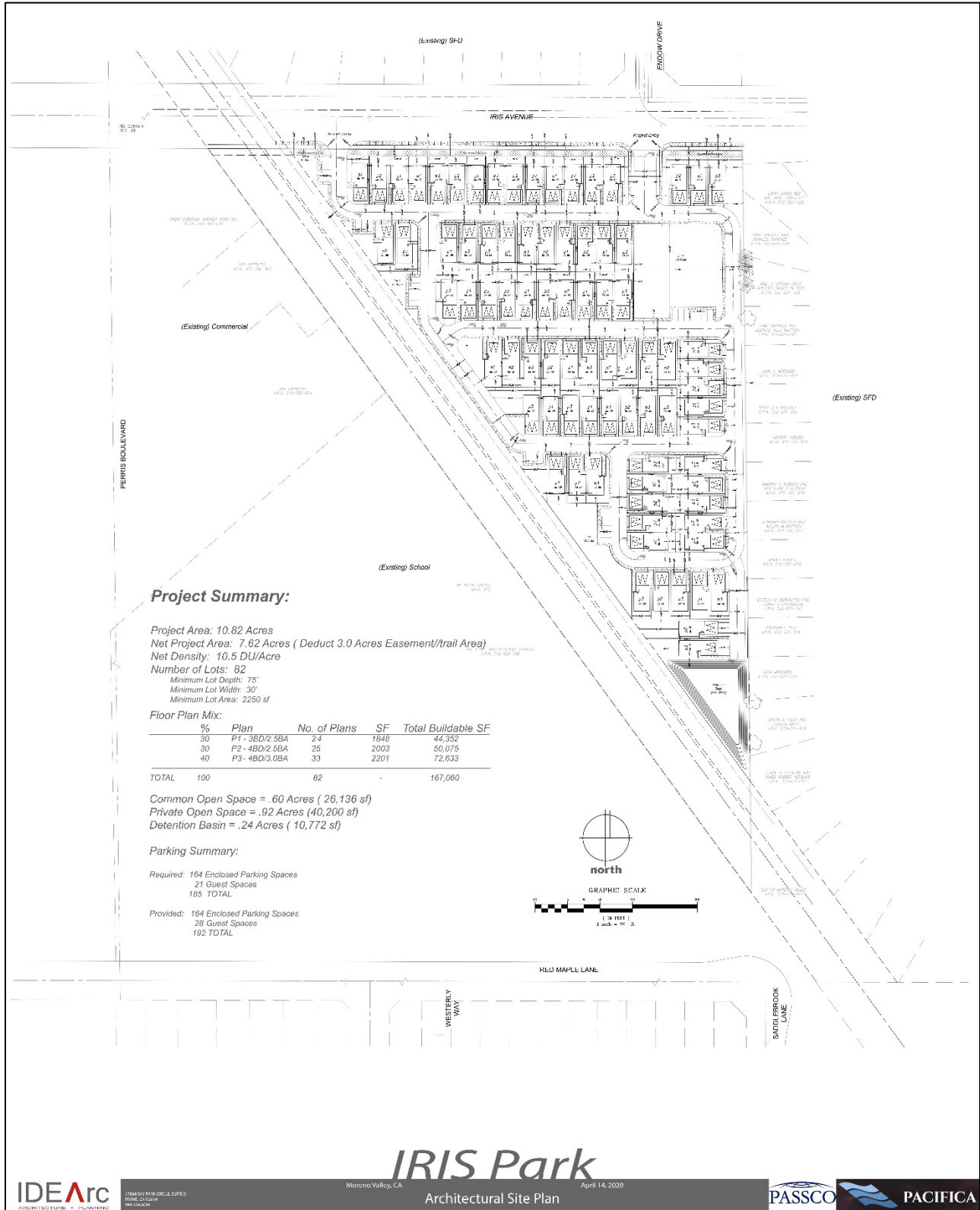
As shown in Table 1, the project is forecast to generate 774 daily trips including 61 trips during the AM peak hour and 81 trips during the PM peak hour. According to Exhibit A of the City of Moreno Valley *Traffic Impact Analysis Preparation Guide*, projects that generate fewer than 100 vehicle trips during the peak hours are generally exempt from the requirement to prepare a traffic impact analysis. The worst-case peak hour trip generation of the project is 81 PM peak hour trips, fewer than 100 peak hour trips, and would therefore be exempt from the requirement to prepare a TIA.

If you have any questions about this analysis, please contact me at (949) 794-1186 or at meghan@epdsolutions.com.

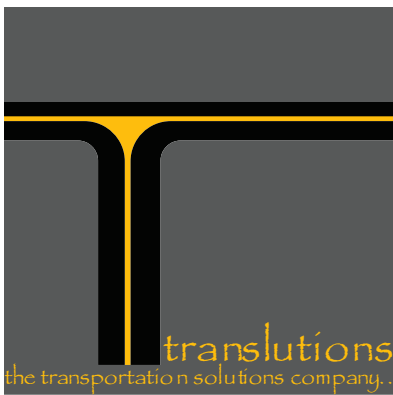
Table 1. Project Trip Generation

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Rates</u>								
Single-Family Detached Housing ¹	DU	9.440	0.185	0.555	0.740	0.624	0.366	0.990
<u>Project Trip Generation</u>								
Single Family Homes	82 DU	774	15	46	61	51	30	81
DU = Dwelling Units								
¹ Trip rates from the Institute of Transportation Engineers, <i>Trip Generation, 10th Edition</i> , 2017. Land Use Code 210 - Single-Family Detached Housing.								

Figure 1: Project Site Plan



Attachment: Appendix J to Initial Study Trip Generation Analysis (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned



memorandum

DATE: October 7, 2020
TO: Meghan Macias, TE, EPD Solutions
FROM: Sandipan Bhattacharjee, PE, TE, AICP, ENV-SP
SUBJECT: Iris Park – VMT Analysis

Translutions, Inc. (Translutions) is pleased to provide this memorandum discussing the Vehicle Miles Traveled (VMT) evaluation for the proposed Iris Park residential project (the Project). This report is intended to satisfy the requirements for a VMT analysis established by the City of Moreno Valley *Traffic Impact Analysis Guidelines* (June 2020), as well as the requirements for the disclosure of potential impacts and mitigation measures per the California Environmental Quality Act (CEQA). The proposed project site is located on the south side of Iris Avenue east of Perris Boulevard in the City of Moreno Valley. The project proposes the construction of 81 single family homes.

BACKGROUND AND GUIDANCE

Senate Bill 743 (SB-743), which was codified in Public Resources Code section 21099, was signed by the Governor in 2013 and directed the Governor's Office of Planning and Research (OPR) to identify alternative metrics for evaluating transportation impacts under CEQA. Pursuant to Section 21099, the criteria for determining the significance of transportation impacts must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." Recently adopted changes to the CEQA Guidelines in response to Section 21099 include a new section (15064.3) that specifies that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts. A separate Technical Advisory issued by OPR provides additional technical details on calculating VMT and assessing transportation impacts for various types of projects.

The City of Moreno Valley has prepared updated *Traffic Impact Analysis Guidelines* (Guidelines) for Land Use Projects in June 2020 to address changes to CEQA pursuant to SB-743 to include VMT analysis methodology and thresholds. The City recommends using VMT per capita for home-based trips for residential projects. Based on the Guidelines, a project would result in a significant project generated VMT impact under either of the following conditions:

1. A project would have a significant VMT impact if, in the Existing Plus Project scenario, its net VMT per capita (for residential projects) or per employee (for office and industrial projects) exceeds the average VMT for Moreno Valley. For all other uses, a net increase in VMT would be considered a significant impact.
2. If a project is consistent with the regional RTP/SCS, then the cumulative impacts shall be considered less than significant subject to consideration of other substantial evidence. If it is not consistent with the RTP/SCS, then it would have a significant VMT impact if:
 - a. For residential projects its net VMT per capita exceeds the average VMT per capita for Moreno Valley in the RTP/SCS horizon-year.
 - b. For office and industrial projects its net VMT per employee exceeds the average VMT per employee for Moreno Valley in the RTP/SCS horizon-year
 - c. For all other land development project types, a net increase in VMT in the RTP/SCS horizon-year would be considered a significant impact.

While the City doesn't specify impact thresholds for project effect on VMT, the Guidelines require disclosure of the cumulative link-level boundary VMT per service population within City of Moreno Valley increases under the plus project condition compared to the no project condition.

Analysis Methodology. The VMT analysis was conducted using two steps. First, the Per Capita VMT was calculated from the Riverside Transportation Analysis Model (RivTAM). Since the project includes several project characteristics which reduce VMT but cannot be evaluated using the RivTAM, those calculations were conducted off-model. The methodology for the analysis is discussed below.

- **RivTAM Calculations.** The RivTAM uses a base year of 2012 and a future year of 2040. Both the base year and future year models were run for the without and with project scenarios. VMT outputs are included in Attachment A. Consistent to the Guidelines, the baseline (2020) conditions VMT was calculated by interpolating between the Base Year (2012) and Future Year (2040) RivTAM runs. As with the Baseline Without Project Conditions, the Project Baseline (2020) conditions were calculated by interpolating between the Base Year (2012) and Future Year (2040) RivTAM runs. The base and future year “plus project” conditions VMT was derived by adding the project land use to a separate TAZ and full model runs were performed to isolate the VMT for the project. The project generated VMT was extracted from the RivTAM using the production-attraction (P/A) trip matrix to isolate the VMT related to home-based-trips to isolate the residential VMT.
- **Off-Model Calculations.** The RivTAM is not very responsive to some land use inputs such as increased density, bicycle and pedestrian connections, and proximity to transit (for example, TAZs are typically large which precludes the 0.25-mile transit accessibility radius). VMT reductions from such inputs are typically conducted outside the model. This section discusses the methodology applied for project characteristics that cannot be adequately evaluated in the model. The project includes the following Project Design Features (PDFs) that the RivTAM is not responsive to:
 - The project will participate in the construction and maintenance of a trail along its westerly edge which will connect to the existing trail south of the project site. There will be two pedestrian access points to the trail through the wall on the western boundary. This trail will provide easy access to the retail uses adjacent to the project site as well as a bike/pedestrian connection to Val Verde Academy, also located adjacent to the project site. This trail completion will also connect Iris Avenue to other development to the south of the project. Due to the fact that the RivTAM does not adequately account for active transportation modes, VMT reductions due to the trail completion was based on percentage reduction in VMT based on annual VMT under a business as usual (no trail scenario) and reductions under “with trail” conditions from the California Emissions Estimator Model (CalEEMod). It should be noted that since only percentage reductions were used, trip parameters in the CalEEMod were not changed.
 - The project is located adjacent to a Riverside Transit Agency bus stop (Route 19). RTA Route 19 operates with 15-minute headways during peak hours of operation and at less than 30-minute headways during other times in each direction. The bus stop is steps away from the main project entrance on Iris Avenue. Due to the fact that the RivTAM does not adequately evaluate diversion to transit, the modeled project VMT was based on a business as usual (no transit scenario). Reductions in VMT from adjacent transit were calculated using CalEEMod. Again, since only percentage reductions were used, trip parameters in the CalEEMod were not changed.
 - The existing General Plan designation allows for a maximum density of 5 DU/Acre. The project proposes General Plan Amendment to allow a density of 7.57 DU/Acre. Since the RivTAM does not account for density, VMT reductions due to increased density was based on guidance provided in the California Air Pollution Control Officers Association (CAPCOA) Table 6-2. According to the CAPCOA Guidance, VMT reductions between 1.5% and 30% can occur due to increased density. Site specific reduction percentages were calculated based on the CAPCOA Quantification Document by multiplying the percentage increase in density by the density elasticity (0.07) from the *Cervero & Ewing*¹.

PROJECT ANALYSIS

RivTAM Analysis. As stated earlier, the first part of the VMT analysis was conducted using the RivTAM. Table A summarizes the findings of the Base Year (2012) model runs while Table B summarizes the findings of the Future Year (2040) model runs respectively. As seen on Table B, the Future Year (2040) project VMT per Capita is 11.8 miles, which is less than the City of Moreno Valley VMT/Capita of 13.7 miles, showing a less than significant impact under cumulative conditions.

¹ Ewing R, Cervero R. Travel and the Built Environment: A Meta-Analysis. *Journal of the American Planning Association*. 2010;76(3):265-294.
doi:10.1080/01944361003766766

Table A - Base Year (2012) Model VMT Summary

	Homebased VMT	Total Households	Total Population	VMT/Capita
Iris Park (Project)	4,937	81	343	14.4
City of Moreno Valley *				12.8

*From WRCOG

Table B - Future Year (2040) Model VMT Summary

	Homebased VMT	Total Households	Total Population	VMT/Capita
Iris Park (Project)	4,039	81	343	11.8
City of Moreno Valley *				13.7

*From WRCOG

Based on the City's Guidelines, Baseline VMT was calculated by interpolating between the model base and future years. Table C shows the resulting VMT for the City and the Project. As seen on Table C, the project VMT per Capita is 13.6 miles, which is 4.58% greater than the City of Moreno Valley VMT/Capita of 13.0 miles.

Table B - Future Year (2040) Model VMT Summary

	Homebased VMT	Total Households	Total Population	VMT/Capita
Iris Park (Project)	4,681	81	343	13.6
				13.0
Project VMT as a Percentage of City				104.58%

*From WRCOG

The City also requires analysis of project effect on VMT within the City's roadways for disclosure although no thresholds are specified. This analysis was based on the RivTAM. Tables D, E, and F show the results of the analysis for the Base Year (2012), Future Year (2040), and Baseline Year (2020) conditions. As seen from the table, the project reduces per capita VMT within the City limits under all scenarios.

Table D - City of Moreno Valley - Project Effect on VMT (Base Year 2012)

	Without Project	With Project
Roadway VMT	1,717,720	1,716,263
Service Population	225,662	226,005
VMT/Service Population	7.61	7.59

Table E - City of Moreno Valley - Project Effect on VMT (Future Year 2040)

	Without Project	With Project
Roadway VMT	2,783,726	2,759,709
Service population	307,007	307,350
VMT/Service population	9.07	8.98

Table F - City of Moreno Valley - Project Effect on VMT (Baseline Year 2020)

	Without Project	With Project
Roadway VMT	2,022,293	2,014,391
Service population	248,903	249,246
VMT/Service population	8.12	8.08

Off-Model Analysis. As stated earlier, specific project design features that cannot be conducted using the RivTAM were calculated separately using CalEEMod and CAPCOA guidelines. Table G shows the calculations for these reductions. CalEEMod worksheets are included in Attachment B.

Table G - VMT Reductions due to Project Design Features

	Annual VMT	% Reduction	Source
BAU VMT	2,669,967		CalEEMod
Pedestrian Connections Off Site	2,616,568	2.00%	CalEEMod
Proximity to Transit	2,536,469	5.00%	CalEEMod
Increase Density (Compared to GP)		3.60%	LUT 1 (CAPCOA)
Mitigated VMT	2,387,004		
Reduction Due to PDFs	89.40%	10.60%	

Table H shows the project generated VMT after accounting for these project features. As shown on Table H, the project VMT is lower than the City VMT for both the baseline and cumulative conditions. Therefore, the project will have less than significant VMT impacts under CEQA.

Table H - Project VMT Including Project Design Features

	Project VMT/Capita	% of City VMT
Baseline (2020) Project VMT/Capita (from RivTAM)	13.6	104.58%
Baseline (2020) Project VMT/Capita After PDF	12.2	93.50%
Cumulative (2040) Project VMT/Capita (from RivTAM)	11.8	86.15%
Cumulative (2040) Project VMT/Capita (after PDFs)	10.5	80.67%

CONCLUSION

The project generated VMT is under baseline conditions is 12.2 miles which is less than the City average of 13.0 miles. The project generated VMT under cumulative conditions is 10.5 miles, which is less than the City average of 13.7 miles. Therefore, the project has a less than significant VMT impact under CEQA. The “with project” VMT per service population on City roadways under the baseline and cumulative conditions are less than those under “without project” conditions.

Enclosures:

- Attachment A – RivTAM Outputs
- Attachment B – CalEEMod Reduction Worksheets

Attachment: Appendix K to Initial Study VMT Memo (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned Unit

2012 (With Project)

Iris Park

[seq #]	1	3800
TAZ_ID	1	404190680
District	1	4
POP	1	343
RES	1	343
HH	1	81
Tot_emp	1	0
MS_HBWA_VMT	1	0
MS_HBP_VMT	1	4,937
MS_TotP_VMT	1	5,186
MS_TotA_VMT	1	1,074
OD_CarP_VMT	1	5,773
OD_CarA_VMT	1	6,498
OD_CarP_Trps	0	
OD_CarA_Trps	0	
OD_TrkP_VMT	1	66
OD_TrkA_VMT	1	66
OD_TrkP_Trps	0	
OD_TrkA_Trps	0	
OD_TotP_VMT	1	5,839
OD_TotA_VMT	1	6,564
Tot HBP_VMT		4,937
TotHBWA_VMT		-
TotPA_VMT		6,259
TotOD_VMT		12,403
Tot_SerPop		343
VMT/Cap		14.4
VMT/Emp	#DIV/0!	
PAVMT/Serpop		18.2
ODVMT/Serpop		36.2

City of Moreno Valley

no project run

[seq #]	76	290786	
TAZ_ID	76	30718493666	
District	76	304	
POP	76	195,012	194,669
RES	76	194,477	194,134
HH	76	51119	
Tot_emp	76	30993	
MS_HBWA	76	346288.913	
MS_HBP_V	76	2579312.307	
MS_TotP_\	76	3156409.734	
MS_TotA_\	76	1693070.496	
OD_CarP_\	76	2548752.618	
OD_CarA_\	76	2587049.795	
OD_CarP_T	0		
OD_CarA_T	0		
OD_TrkP_\	76	99754.30709	
OD_TrkA_\	76	99688.2399	
OD_TrkP_T	0		
OD_TrkA_T	0		
OD_TotP_\	76	2648506.925	
OD_TotA_\	76	2686738.035	
Tot HBP_VMT		2,579,312	2,575,208
TotHBWA_VMT		346,289	
TotPA_VMT		4,849,480	
TotOD_VMT		5,335,245	
Tot_SerPop		226,005	
VMT/Cap		13.3	13.3
VMT/Emp		11.2	
PAVMT/Serpop		21.5	
ODVMT/Serpop		23.6	

with project dy_vmt 644 1,716,263
dy_vmt/serpop 7.59

no project dy_vmt 644 1,717,720
dy_vmt/serpop 7.61

Attachment: Appendix K to Initial Study VMT Memo (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned Unit

2040 (With Project)

Iris Park

[seq #]	1	3800
TAZ_ID	1	404190680
District	1	4
POP	1	343
RES	1	343
HH	1	81
Tot_emp	1	-
MS_HBWA_VMT	1	-
MS_HBP_VMT	1	4,039
MS_TotP_VMT	1	4,238
MS_TotA_VMT	1	1,095
OD_CarP_VMT	1	6,657
OD_CarA_VMT	1	7,413
OD_CarP_Trps	0	
OD_CarA_Trps	0	
OD_TrkP_VMT	1	537
OD_TrkA_VMT	1	537
OD_TrkP_Trps	0	
OD_TrkA_Trps	0	
OD_TotP_VMT	1	7,194
OD_TotA_VMT	1	7,950

Tot HBP_VMT	4,039
TotHBWA_VMT	-
TotPA_VMT	5,334
TotOD_VMT	15,143
Tot_SerPop	343

VMT/Cap	11.8
VMT/Emp	#DIV/0!
PAVMT/Serpop	15.5
ODVMT/Serpop	44.1

City of Moreno Valley

no project run

[seq #]	76	290786	
TAZ_ID	76	30718493666	
District	76	304	
POP	76	247,284	246941
RES	76	246,624	246,281
HH	76	71,527	
Tot_emp	76	60,066	
MS_HBWA	76	741,364	
MS_HBP_V	76	3,360,590	
MS_TotP_\	76	4,210,184	
MS_TotA_\	76	2,794,036	
OD_CarP_\	76	3,713,061	
OD_CarA_\	76	3,782,958	
OD_CarP_T	0		
OD_CarA_T	0		
OD_TrkP_\	76	177,362	
OD_TrkA_\	76	177,315	
OD_TrkP_T	0		
OD_TrkA_T	0		
OD_TotP_\	76	3,890,424	
OD_TotA_\	76	3,960,273	

Tot HBP_VMT	3,360,590	3,366,152
TotHBWA_VMT	741,364	
TotPA_VMT	7,004,220	
TotOD_VMT	7,850,697	
Tot_SerPop	307,350	

VMT/Cap	13.6	13.7
VMT/Emp	12.3	
PAVMT/Serpop	22.8	
ODVMT/Serpop	25.5	

dy_vmt	849	2,759,709
dy_vmt/serpop		8.98

no project dy_vmt	849	2,783,726
dy_vmt/serpop		9.06

Attachment: Appendix K to Initial Study VMT Memo (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned Unit

Iris Park
Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	82.00	Dwelling Unit	16.40	164,549.00	343

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Area & Site Acreage from Site Plan

Population from RivTAM

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	147,600.00	164,549.00
tblLandUse	LotAcreage	26.62	16.40
tblLandUse	Population	235.00	343.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

Attachment: Appendix K to Initial Study VMT Memo (4197 : Tentative Tract Map 37909 with a Conditional

3.7 Architectural Coating - 2022

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	1.3000e-004	1.8000e-004	1.8300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.4626	0.4626	2.0000e-005	0.0000	0.4629
Total	1.3000e-004	1.8000e-004	1.8300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.4626	0.4626	2.0000e-005	0.0000	0.4629

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	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	0.3934	1.3003	4.4402	0.0140	0.9924	0.0218	1.0142	0.2652	0.0201	0.2853	0.0000	984.4853	984.4853	0.0292	0.0000	985.0973
Unmitigated	0.3960	1.3230	4.5027	0.0143	1.0127	0.0222	1.0349	0.2706	0.0204	0.2911	0.0000	1,004.0198	1,004.0198	0.0297	0.0000	1,004.6433

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	784.74	826.56	719.14	2,669,967	2,616,568
Total	784.74	826.56	719.14	2,669,967	2,616,568

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
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.457065	0.068684	0.178597	0.172280	0.046891	0.007460	0.012475	0.043976	0.000902	0.001056	0.006515	0.000828	0.003272

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Iris Park
Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	82.00	Dwelling Unit	16.40	164,549.00	343

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Area & Site Acreage from Site Plan

Population from RivTAM

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	147,600.00	164,549.00
tblLandUse	LotAcreage	26.62	16.40
tblLandUse	Population	235.00	343.00
tblProjectCharacteristics	OperationalYear	2014	2020

2.0 Emissions Summary

3.7 Architectural Coating - 2022

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	1.3000e-004	1.8000e-004	1.8300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.4626	0.4626	2.0000e-005	0.0000	0.4629
Total	1.3000e-004	1.8000e-004	1.8300e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.4626	0.4626	2.0000e-005	0.0000	0.4629

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	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	0.3895	1.2661	4.3463	0.0136	0.9621	0.0211	0.9832	0.2571	0.0195	0.2766	0.0000	955.1835	955.1835	0.0283	0.0000	955.7784
Unmitigated	0.3960	1.3230	4.5027	0.0143	1.0127	0.0222	1.0349	0.2706	0.0204	0.2911	0.0000	1,004.0198	1,004.0198	0.0297	0.0000	1,004.6433

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	784.74	826.56	719.14	2,669,967	2,536,469
Total	784.74	826.56	719.14	2,669,967	2,536,469

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
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.457065	0.068684	0.178597	0.172280	0.046891	0.007460	0.012475	0.043976	0.000902	0.001056	0.006515	0.000828	0.003272

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Attachment: Appendix K to Initial Study VMT Memo (4197 : Tentative Tract Map 37909 with a Conditional

VIA TELECONFERENCE ONLY
PURSUANT TO COVID-19
GOVERNOR EXECUTIVE ORDER N-29-20

**NOTICE OF PUBLIC HEARING AND
ENVIRONMENTAL DETERMINATION**

NOTICE IS HEREBY GIVEN that a teleconferenced Public Hearing will be held by the Planning Commission of the City of Moreno Valley on the date and time set forth below:

Date and Time: November 12, 2020 at 7:00 p.m.
Location: **VIA TELECONFERENCE ONLY**
Go to <http://morenovalleyca.igm2.com/Citizens/default.aspx> for instructions.

Item: PEN20-0063 Tentative Tract 37909
PEN20-0065 Conditional Use Permit for a Planned Unit Development
PEN20-0066 General Plan Amendment
PEN20-0067 Change of Zone

Applicant: Passco Pacifica LLC
Property Owner: Maple Lane Group LLC
APN: 312-020-025
Location: South side of Iris Avenue east of Perris Boulevard
Proposal: The applicant is requesting approval of the following entitlements for an 10.82-acre site: 1) a General Plan Amendment (GPA) amending Figure 2-2 "Land Use Map" of the Moreno Valley General Plan to change the land use designation of the project site from Residential 5 (R5) to Residential 10 (R10); 2) a Change of Zone amending the City of Moreno Valley Zoning Atlas to rezone the project site from Residential 5 (R5) District to Residential Single-Family 10 (RS10) District; 3) a Tentative Tract Map 37909 to subdivide into eighty-two (82) single family lots; and 4) a Conditional Use Permit for a Planned Unit Development with associated amenities and public improvements.

Council District: 4

Environmental Determination: The project has been evaluated against criteria set forth in the California Environmental Quality Act (CEQA) Guidelines Section 15070 and has determined that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because mitigation measures have been required of the project that will reduce potential impacts to a less than significant level. Therefore, a Mitigated Negative Declaration is recommended for the project.

PUBLIC TESTIMONY: All interested parties will be provided an opportunity to submit oral testimony during the teleconferenced Public Hearing and/or provide written testimony during or prior to the teleconferenced Public Hearing. The application file and related environmental documents may be inspected by appointment at the Community Development Department at 14177 Frederick Street, Moreno Valley, California by calling (951) 413-3206 during normal business hours (7:30 a.m. to 5:30 p.m., Monday through Thursday).

COVID-19 – IMPORTANT NOTICES: Please note that due to the COVID-19 pandemic situation, staff will attempt to make reasonable arrangements to ensure accessibility to inspect the aforementioned records. **In addition, special instructions on how to effectively participate in the teleconferenced Public Hearing, as approved by Governor Executive Order No. N-25-20, will be posted at <http://morenovalleyca.igm2.com/Citizens/default.aspx> and will be described in the Planning Commission agenda.**

PLEASE NOTE: The Planning Commission may consider and approve changes to the proposed items under consideration during the teleconferenced Public Hearing.

GOVERNMENT CODE § 65009 NOTICE: If you challenge any of the proposed actions taken by the Planning Commission in court, you may be limited to raising only those issues you or someone else raised during the teleconferenced Public Hearing described in this notice, or in written correspondence delivered to the Planning Division of the City of Moreno Valley during or prior to, the teleconferenced Public Hearing.

ACCESSIBILITY: Upon request and in compliance with the Americans with Disabilities Act of 1990, a 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.

STAFF CONTACT: Due to the COVID-19 pandemic situation, if you have questions regarding this Public Hearing, please contact Julia Descoteaux, Associate Planner, by telephone at (951) 413-3209 or via email at juliad@moval.org.

/s/Patty Nevins	Press-Enterprise	October 23, 2020
Patty Nevins	Newspaper	Date of Publication
Planning Official		
Community Development Department		

Mitigation Monitoring and Reporting Program

Introduction

The California Environmental Quality Act (CEQA) requires a lead or public agency that approves or carries out a project for which an Mitigated Negative Declaration has been certified which identifies one or more significant adverse environmental effects and where findings with respect to changes or alterations in the project have been made, to adopt a "...reporting or monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment" (CEQA, Public Resources Code Sections 21081, 21081.6).

A Mitigation Monitoring and Reporting Program (MMRP) is required to ensure that adopted mitigation measures are successfully implemented for the Iris Park project (project). The City of Moreno Valley is the Lead Agency for the project and is responsible for implementation of the MMRP. This report describes the MMRP for the project and identifies the parties that will be responsible for monitoring implementation of the individual mitigation measures in the MMRP.

Mitigation Monitoring and Reporting Program

The MMRP for the project will be active through all phases of the project, including design, construction, and operation. The attached table identifies the mitigation program required to be implemented by the City for the Iris Park project. The table identifies the Standard Conditions; Plan, Program, Policies (PPPs); and mitigation measures required by the City to mitigate or avoid significant adverse impacts associated with the implementation of the project, the timing of implementation, and the responsible party or parties for monitoring compliance.

The MMRP also includes a column that will be used by the compliance monitor (individual responsible for monitoring compliance) to document when implementation of the measure is completed. As individual Plan, Program, Policies; and mitigation measures are completed, the compliance monitor will sign and date the MMRP, indicating that the required actions have been completed.

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Attachment: Exhibit C to Resolution No. 2020-49 Initial Study MMRP (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a

**TABLE 1: MITIGATION MONITORING AND REPORTING PROGRAM
IRIS PARK PROJECT MND**

Standard Condition/ Plan, Program, Policy / Mitigation Measure	Timing	Responsible for Ensuring Compliance / Verification	Date Completed and Initials
AIR QUALITY			
<p>Plan, Program, or Policy PPP AQ-1: Rule 822. The project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 822. The project shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.</p>	<p>In Construction Plans and Specifications. Prior to Demolition, Grading and Building Permits</p>	<p>City of Moreno Valley Building and Safety Division</p>	
<p>Plan, Program, or Policy PPP AQ-2: Rule 823. The project is required to comply with the provisions of South Coast Air Quality Management District (SCAQMD) Rule 823, which includes the following:</p> <ul style="list-style-type: none"> • 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, with complete coverage of disturbed areas, at least 3 times daily during dry weather; 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. 	<p>In Construction Plans and Specifications. Prior to Grading and Building Permits</p>	<p>City of Moreno Valley Building and Safety Division</p>	
<p>Plan, Program, or Policy PPP Rule 1113. The project is required to comply with the provisions of South Coast Air Quality Management District Rule (SCAQMD) Rule 1113. Only “Low-Volatile Organic Compounds” paints (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications shall be used.</p>	<p>In Construction Plans and Specifications. Prior to Grading and Building Permits</p>	<p>City of Moreno Valley Building and Safety Division</p>	

Standard Condition/ Plan, Program, Policy / Mitigation Measure	Timing	Responsible for Ensuring Compliance / Verification	Date Completed and Initials
BIOLOGICAL RESOURCES			
<p>Mitigation Measure MM-BIO 1: Payment of MSHCP Mitigation Fees. Prior to issuance of a grading or building permit, the applicant will be required to pay relevant MSHCP mitigation fees per the Final Mitigation Fee Nexus Report. These fees will be determined in consultation with the Riverside Conservation Authority based on final project classification and impacts. Payment of all mitigation fees will be required as part of the project approval process.</p>	<p>In Construction Plans and Specifications. Prior to Demolition and Building Permits</p>	<p>City of Moreno Valley Planning Division</p>	
<p>Mitigation Measure MM-BIO 2: Preconstruction Nesting Bird Surveys. To the extent feasible, conduct vegetation removal outside of the nesting bird season (generally between March 1 and August 31). If vegetation removal is required during the nesting bird season, conduct take avoidance surveys for nesting birds within 100-feet of areas proposed for vegetation removal. Surveys should be conducted by a qualified biologist(s) within 14 days of vegetation removal. If active nests are observed, a qualified biologist will determine appropriate minimum disturbance buffers or other adaptive mitigation techniques (e.g., biological monitoring of active nests during construction-related activities, staggered schedules, etc.) to ensure that impacts to nesting birds are avoided until the nest is no longer active.</p>	<p>In Construction Plans and Specifications. Prior to Grading Permits</p>	<p>City of Moreno Valley Planning Division</p>	

Attachment: Exhibit C to Resolution No. 2020-49 Initial Study MMRP (4197 : Tentative Tract Map 37909

Standard Condition/ Plan, Program, Policy / Mitigation Measure	Timing	Responsible for Ensuring Compliance / Verification	Date Completed and Initials
CULTURAL RESOURCES			
<p>Plan, Program, or Policy PPP CUL-1: Human Remains. Should human remains be encountered, all work in the immediate vicinity of the burial must cease and any necessary steps to ensure the integrity of the immediate area must be taken. The Riverside County Coroner shall be immediately notified and must then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner has 24 hours to notify the NAHC, who will in turn, notify the person they identify as the Most-Likely-Descendent (MLD) of any human remains. Further actions will be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC.</p>	<p>In Construction Plans and Specifications. Prior to Grading Permits</p>	<p>City of Moreno Valley Planning Division</p>	
<p>Mitigation Measure MM CUL-1: Inadvertent Discoveries. In the event that buried archaeological resources are inadvertently discovered during ground-disturbing activities, work must be halted within 50 feet of the find until it can be evaluated by a qualified archaeologist. Construction activities could continue in other areas. If the discovery proves to be significant, additional work, such as data recovery excavation or fossil recovery, may be warranted and would be discussed in consultation with the appropriate regulatory agency(ies).</p>	<p>In Construction Plans and Specifications. Prior to Grading Permits.</p>	<p>City of Moreno Valley Planning Division</p>	
GEOLOGY AND SOILS			
<p>Plan, Program, or Policy PPP GEO-1: California Building Code. The project is required to comply with the California Building Code as included in the City's Municipal Code Chapter 8.20 to preclude significant adverse effects associated with seismic hazards. California Building Code related and geologist and/or civil engineer specifications for the project are required to be incorporated into grading plans and specifications as a condition of project approval.</p>	<p>In Construction Plans and Specifications. Prior to Building Permits</p>	<p>City of Moreno Valley Building and Safety Division</p>	

Standard Condition/ Plan, Program, Policy / Mitigation Measure	Timing	Responsible for Ensuring Compliance / Verification	Date Completed and Initials
<p>Mitigation Measure MM PAL-1: Paleontological Resources. Prior to issuance of grading permits, the developer will retain a qualified paleontologist to provide the following monitoring and reporting services during construction:</p> <ul style="list-style-type: none"> • A trained and qualified paleontological monitor will perform full-time monitoring of any excavations on the project that have the potential to impact paleontological resources in undisturbed native sediments below 5 feet in depth. The monitor will have the ability to redirect construction activities to ensure avoidance of adverse impacts to paleontological resources. • The project paleontologist may re-evaluate the necessity for paleontological monitoring after examination of the affected sediments during excavation. • Any potentially significant fossils observed shall be collected and recorded in conjunction with best management practices and SVP professional standards. • Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations. • A report documenting the results of the monitoring, including any salvage activities and the significance of any fossils, will be prepared and submitted to the appropriate City personnel. 	<p>In Construction Plans and Specifications. Prior to Grading Permits</p>	<p>City of Moreno Valley Planning Division</p>	
GREENHOUSE GAS EMISSIONS			
<p>Plan, Program, or Policy PPP GHG-1: CalGreen Compliance. The project is required to comply with the CalGreen Building Code as included in the City's Municipal Code to ensure efficient use of energy. CalGreen specifications are required to be incorporated into building plans as a condition of building permit approval.</p>	<p>In Construction Plans and Specifications. Prior to Building Permits</p>	<p>City of Moreno Valley Building and Safety Division</p>	
HYDROLOGY AND WATER QUALITY			
<p>Plan, Program, or Policy PPP WQ-1: Stormwater Pollution Prevention Plan. Prior to grading permit issuance, the project developer shall have a Stormwater Pollution Prevention Plan (SWPPP) prepared by a Qualified SWPPP Developer (QSD) in accordance with the City's Municipal Code Chapter 8.10 and the Santa Ana Regional Water Quality Control Board National Pollution Discharge Elimination System (NPDES) Storm Water Permit</p>	<p>In Construction Plans and Specifications. Prior to Demolition, Grading, and Building Permits</p>	<p>City of Moreno Valley Building and Safety Division</p>	

Standard Condition/ Plan, Program, Policy / Mitigation Measure	Timing	Responsible for Ensuring Compliance / Verification	Date Completed and Initials
Order No. R4-2012-0175 (MS4 Permit). The SWPPP shall incorporate all necessary Best Management Practices (BMPs) and other NPDES regulations to limit the potential of erosion and polluted runoff during construction activities. Project contractors shall be required to ensure compliance with the SWPPP and permit periodic inspection of the construction site by the City of Moreno Valley staff or its designee to confirm compliance.			
Plan, Program, or Policy PPP WQ-2: Water Quality Management Plan , Prior to grading permit issuance, the project applicant shall have a Water Quality Management Plan (WQMP) approved by the City for implementation. The project shall comply with the City's Municipal Chapter 8.10 and the Municipal Separate Storm Sewer System (MS4) permit requirements in effect for the Regional Water Quality Control Board (RWQCB) at the time of grading permit to control discharges of sediments and other pollutants during operations of the project.	In Construction Plans and Specifications. Prior to Grading and Building Permits	City of Moreno Valley Building and Safety Division	
PUBLIC SERVICES			
Plan, Program, or Policy PPP PS-1: The project will be required to pay applicable development fees levied by the Moreno Valley Unified School District pursuant to the School Facilities Act (Senate Bill [SB] 50, Stats. 1998, c.827) to offset any effects on school facilities resulting from new development.	Prior to Building Permits.	City of Moreno Valley Planning Division	
Plan, Program, or Policy PPP PS-2: Park Fees. As a condition of the approval of a residential development, the project shall pay applicable park related fees and/or dedicate parkland pursuant to Municipal Code Section 3.38.080 and Chapter 3.40.	Prior to Building Permits.	City of Moreno Valley Planning Division	
TRIBAL CULTURAL RESOURCES			
Mitigation Measure MM TCR-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	Prior to Grading Permits.	City of Moreno Valley Planning Division	

Standard Condition/ Plan, Program, Policy / Mitigation Measure	Timing	Responsible for Ensuring Compliance / Verification	Date Completed and Initials
<p>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"> 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. 			
<p>Mitigation Measure MM TCR-2: Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Luiseño Indians and the Soboba Band of Luiseño Indians for tribal monitoring. The Developer 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</p>	<p>Prior to Grading Permits.</p>	<p>City of Moreno Valley Planning Division</p>	

Standard Condition/ Plan, Program, Policy / Mitigation Measure	Timing	Responsible for Ensuring Compliance / Verification	Date Completed and Initials
<p>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.</p>			
<p>Mitigation Measure MM TCR-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:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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. 	<p>During Project Grading and Construction.</p>	<p>City of Moreno Valley Planning Division</p>	
<p>Mitigation Measure MM TCR-4: The City shall verify that the following note is included on the Grading Plan:</p>	<p>Prior to Grading Permit.</p>	<p>City of Moreno Valley Planning Division</p>	

Standard Condition/ Plan, Program, Policy / Mitigation Measure	Timing	Responsible for Ensuring Compliance / Verification	Date Completed and Initials
<p>"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."</p>			
<p>Mitigation Measure MM TCR-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 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.</p>	<p>During Project Excavation, Grading, and Construction.</p>	<p>City of Moreno Valley Planning Division</p>	
<p>Mitigation Measure MM TCR-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 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).</p>	<p>During Project Excavation, Grading, and Construction.</p>	<p>City of Moreno Valley Planning Division</p>	

RESOLUTION NUMBER 2020-50

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL APPROVE GENERAL PLAN AMENDMENT PEN20-0066 TO AMEND THE GENERAL PLAN LAND USE MAP, CHANGING THE LAND USE DESIGNATION FROM RESIDENTIAL 5 (R5) TO RESIDENTIAL 10 (R10) FOR THE PROPERTY LOCATED ON THE SOUTH SIDE OF IRIS AVENUE EAST OF PERRIS BOULEVARD (APN 312-020-025)

WHEREAS, the City of Moreno Valley (“City”) is a general law city and a municipal corporation of the State of California; and

WHEREAS, Passco Pacifica LLC., (“Developer”) has filed an application for the approval of General Plan Amendment PEN20-0066 (“Application”) to amend the Moreno Valley General Plan from Residential 5 (R5) to Residential 10 (R10) for Iris Park Community located on the south side of Iris Avenue east of Perris Boulevard (APN 312-020-025) (“Site”); and

WHEREAS, pursuant to the provisions of Section 9.02.200 (Public Hearing and Notification Procedures) of the Moreno Valley Municipal Code and Government Code section 65905, a public hearing was scheduled for November 12, 2020, and notice thereof was duly published and posted, and mailed to all property owners of record within 600 feet of the Site; and

WHEREAS, on November 12, 2020 a duly noticed public hearing was conducted by the Planning Commission where the item was continued to the December 10, 2020 Planning Commission meeting; and

WHEREAS, on December 10, 2020, in accordance with the provisions of the California Environmental Quality Act (CEQA¹) and CEQA Guidelines,² the Planning Commission considered and recommended that the City Council approve Resolution 2020-49.

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

Section 1. Recitals and Exhibits

That the foregoing Recitals and attached exhibits are true and correct and are hereby incorporated by this reference.

Section 2. Notice

¹ Public Resources Code §§ 21000-21177

² 14 California Code of Regulations §§15000-15387

That pursuant to Government Code section 66020(d)(1), notice is hereby given that the proposed Project is subject to certain fees, dedications, reservations and other exactions as provided herein.

Section 3. Evidence

That the Planning Commission has considered all of the evidence submitted into the administrative record for the General Plan Amendment, including, but not limited to, the following:

- (a) Moreno Valley General Plan and all relevant provisions contained therein;
- (b) Title 9 (Planning and Zoning) of the Moreno Valley Municipal Code and all relevant provisions referenced therein;
- (c) The Moreno Valley General Plan amendment changing the land use designation from Residential 5 (R5) to Residential 10 (R10) and all relevant provisions contained therein as shown on Exhibit A;
- (d) Application for the approval of a General Plan Amendment PEN20-0066 and all documents, records and references contained therein;
- (e) Staff Report prepared for the Planning Commission's consideration and all documents, records and references related thereto, and Staff's presentation at the public hearing;
- (f) Testimony and/or comments from Applicant and its representatives during the public hearing; and
- (g) Testimony, comments and correspondence from all persons that were provided in written format or correspondence, at, or prior to, the public hearing.

Section 4. Findings

That based on the foregoing Recitals and the Evidence contained in the Administrative Record as set forth above, the Planning Commission makes the following findings:

- (a) The proposed Change of Zone and General Plan amendment are consistent with the existing goals, objectives, policies and programs of the General Plan; and
- (b) The proposed Change of Zone and General Plan amendment will not adversely affect the public health, safety or general welfare.

Section 5. Approval

That based on the foregoing Recitals, Evidence contained in the Administrative Record and Findings, as set forth herein, the Planning Commission hereby recommends that the City Council approve General Plan Amendment PEN20-0066 attached hereto as Exhibit A.

Section 6. Repeal of Conflicting Provisions

That all the provisions as heretofore adopted by the Planning Commission that are in conflict with the provisions of this Resolution are hereby repealed.

Section 7. Severability

That the Planning Commission declares that, should any provision, section, paragraph, sentence or word of this Resolution be rendered or declared invalid by any final court action in a court of competent jurisdiction or by reason of any preemptive legislation, the remaining provisions, sections, paragraphs, sentences or words of this Resolution as hereby adopted shall remain in full force and effect.

Section 8. Effective Date

That this Resolution shall take effect immediately upon the date of adoption.

Section 9. Certification

That the Secretary of the Planning Commission shall certify to the passage of this Resolution.

PASSED AND ADOPTED THIS _____ day of _____, 2020.

CITY OF MORENO VALLEY
PLANNING COMMISSION

Patricia Korzec, Chairperson

ATTEST:

Patty Nevins,
Planning Official

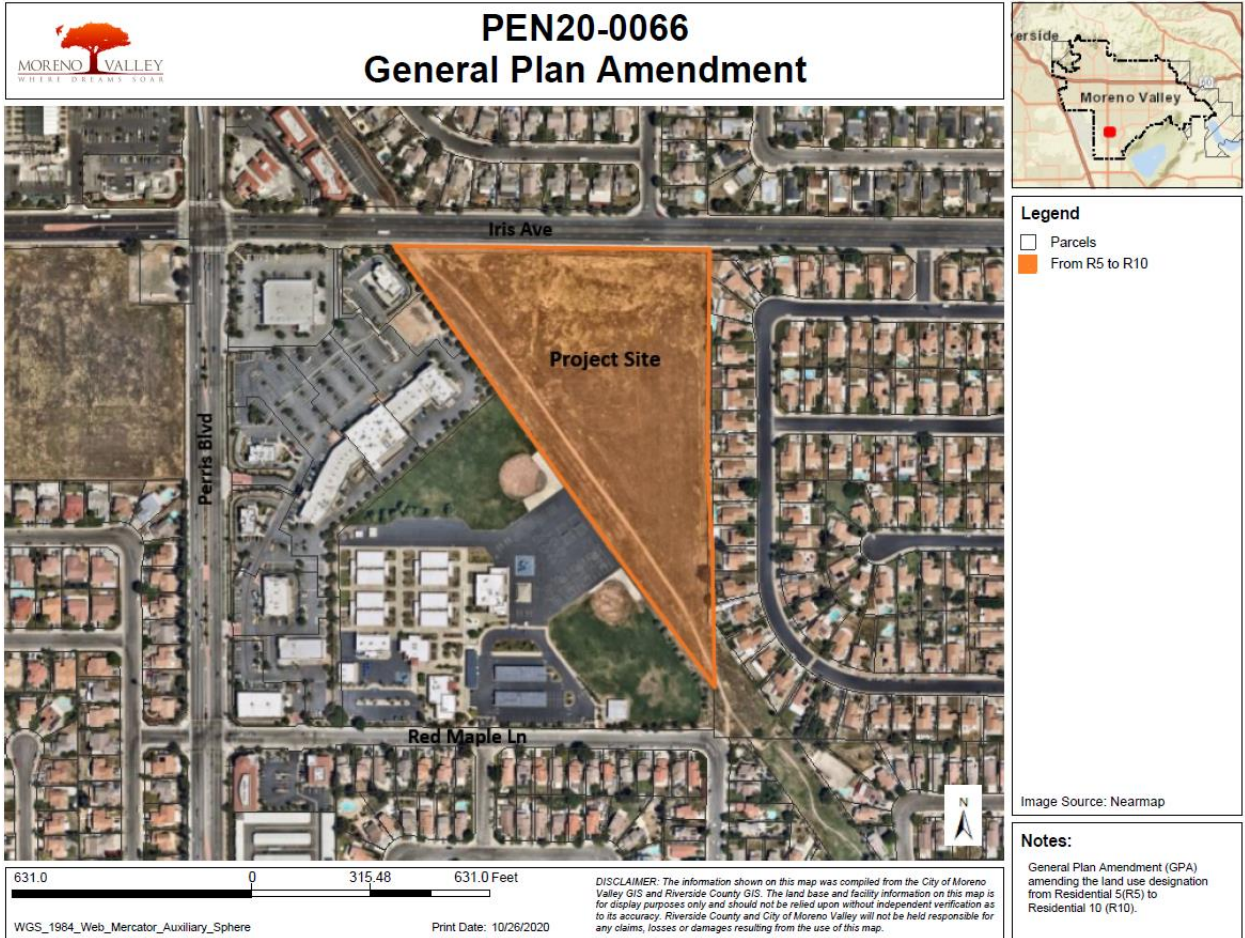
APPROVED AS TO FORM:

Steven B. Quintanilla,
Interim City Attorney

Exhibits:
Exhibit A General Plan Land Use Designation

Exhibit A

General Plan Amendment Land Use Designation Map



Attachment: Resolution No. 2020-50 General Plan Amendment [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for

RESOLUTION NUMBER 2020-51

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL APPROVE CHANGE OF ZONE PEN20-0067 TO AMEND THE CITY ZONING ATLAS FROM RESIDENTIAL 5 (R5) DISTRICT TO RESIDENTIAL SINGLE-FAMILY 10 (RS10) DISTRICT FOR THE PROPERTY LOCATED ON THE SOUTH SIDE OF IRIS AVENUE EAST OF PERRIS BOULEVARD (APN 312-020-025)

WHEREAS, the City of Moreno Valley (“City”) is a general law city and a municipal corporation of the State of California; and

WHEREAS, Passco Pacifica LLC., (“Developer”) has filed an application for the approval of Change of Zone PEN20-0067 (“Application”) requesting a Change of Zone changing the City’s Zoning Atlas from Residential 5 (R5) District to Residential Single-Family 10 (RS10) District for the property located on the south side of Iris Avenue east of Perris Boulevard (APN 312-020-024) (“Site”); and

WHEREAS, pursuant to the provisions of Section 9.02.200 (Public Hearing and Notification Procedures) of the Moreno Valley Municipal Code and Government Code section 65905, a public hearing was scheduled for November 12, 2020, and notice thereof was duly published and posted, and mailed to all property owners of record within 600 feet of the Site; and

WHEREAS, on November 12, 2020 a duly noticed public hearing was conducted by the Planning Commission where the item was continued to the December 10, 2020 Planning Commission meeting; and

WHEREAS, on December 10, 2020, in accordance with the provisions of the California Environmental Quality Act (CEQA¹) and CEQA Guidelines,² the Planning Commission considered and recommended that the City Council approve Resolution 2020-49.

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

Section 1. Recitals and Exhibits

That the foregoing Recitals and attached exhibits are true and correct and are hereby incorporated by this reference.

Section 2. Notice

¹ Public Resources Code §§ 21000-21177

² 14 California Code of Regulations §§15000-15387

That pursuant to Government Code section 66020(d)(1), notice is hereby given that the proposed project is subject to certain fees, dedications, reservations and other exactions as provided herein.

Section 3. Evidence

That the Planning Commission has considered all of the evidence submitted into the administrative record for the General Plan Amendment, including, but not limited to, the following:

- (a) Moreno Valley General Plan and all relevant provisions contained therein;
- (b) Title 9 (Planning and Zoning) of the Moreno Valley Municipal Code and all relevant provisions referenced therein;
- (c) The Change of Zone to change the City's Zoning Atlas from Residential 5 (R5) District to Residential Single-Family (RS10) District and all other relevant provisions contained therein as shown on Exhibit A;
- (d) Application for the approval of a Change of Zone PEN20-0067 and all documents, records and references contained therein;
- (e) Staff Report prepared for the Planning Commission's consideration and all documents, records and references related thereto, and Staff's presentation at the public hearing;
- (f) Testimony and/or comments from Applicant and its representatives during the public hearing; and
- (g) Testimony comments and/or correspondence from all persons that were provided in written format or correspondence, at, or prior to, the public hearing.

Section 4. Findings

That based on the foregoing Recitals and the Evidence contained in the Administrative Record as set forth above, the Planning Commission hereby finds as follows:

- (a) The proposed Change of Zone is consistent with the existing goals, objectives, policies and programs of the General Plan;
- (b) The proposed Change of Zone will not adversely affect the public health, safety or general welfare; and
- (c) The proposed Change of Zone is consistent with the purposes and intent of Title 9.

Section 5. Approval

That based on the foregoing Recitals, Evidence in the Administrative Record and Findings, as set forth herein, the Planning Commission hereby recommends that the City Council approve Change of Zone PEN20-0067 attached hereto as Exhibit A.

Section 6. Repeal of Conflicting Provisions

That all the provisions as heretofore adopted by the Planning Commission that are in conflict with the provisions of this Resolution are hereby repealed.

Section 7. Severability

That the Planning Commission declares that, should any provision, section, paragraph, sentence or word of this Resolution be rendered or declared invalid by any final court action in a court of competent jurisdiction or by reason of any preemptive legislation, the remaining provisions, sections, paragraphs, sentences or words of this Resolution as hereby adopted shall remain in full force and effect.

Section 8. Effective Date

That this Resolution shall take effect immediately upon the date of adoption.

Section 9. Certification

That the Secretary of the Planning Commission shall certify to the passage of this Resolution.

PASSED AND ADOPTED THIS _____ day of _____, 2020.

CITY OF MORENO VALLEY
PLANNING COMMISSION

Patricia Korzec, Chairperson

ATTEST:

Patty Nevins,
Planning Official

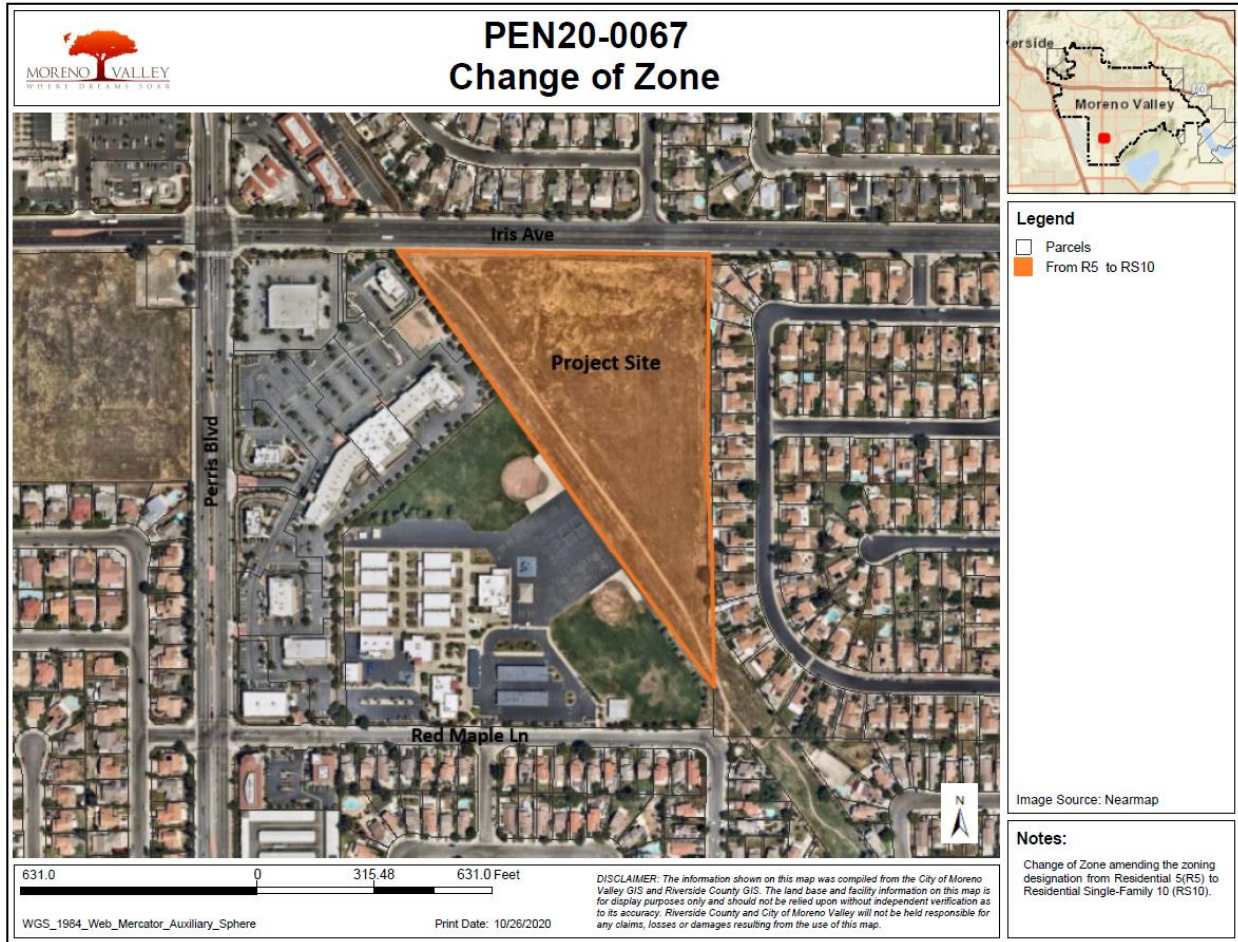
APPROVED AS TO FORM:

Steven B. Quintanilla,
Interim City Attorney

Exhibits:
Exhibit A Proposed Zoning Map

Attachment: Resolution No. 2020-51 Change of Zone [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

Exhibit A



Attachment: Resolution No. 2020-51 Change of Zone [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned

RESOLUTION NUMBER 2020-52

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL APPROVE TENTATIVE TRACT MAP 37909 (PEN20-0063) FOR THE IRIS PARK COMMUNITY LOCATED ON THE SOUTH SIDE OF IRIS AVENUE EAST OF PERRIS BOULEVARD (APN 312-020-025)

WHEREAS, the City of Moreno Valley (“City”) is a general law city and a municipal corporation of the State of California; and

WHEREAS, Passco Pacifica LLC., (“Developer”) has filed an application for the approval of Tentative Tract Map 37909, PEN20-0063 (“Application”) for a Planned Unit development associated with (“Project”) located on the south side of Iris Avenue east of Perris Boulevard (“Site”); and

WHEREAS, the Application has been evaluated in accordance with Chapter 9.14 (Land Divisions) of the Municipal Code with consideration given to the City’s General Plan, Zoning Ordinance, and other applicable laws and regulations; and

WHEREAS, Chapter 9.14 of the Municipal Code imposes conditions of approval upon projects for which a Tentative Tract Map is required, which conditions may be imposed by the Planning Commission to address on-site improvements, off-site improvements, the manner in which the site is used and any other conditions as may be deemed necessary to protect public health, safety and welfare and ensure that the proposed Project will be developed in accordance with the purpose and intent of Title 9 (“Planning and Zoning”) of the Municipal Code; and

WHEREAS, Staff has presented for the Planning Commission’s consideration Conditions of Approval to be imposed upon Tentative Tract Map 37909 PEN20-0063 (TTM), which conditions have been deemed necessary to protect the public health, safety and welfare and ensure that the proposed Project will be developed in accordance with the purpose and intent of Title 9 (“Planning and Zoning”) of the Municipal Code; and

WHEREAS, pursuant to the provisions of Section 9.02.200 (Public Hearing and Notification Procedures) of the Municipal Code and Government Code section 65905, a public hearing was scheduled for November 12, 2020 and notice thereof was duly published and posted, and mailed to all property owners of record within 600 feet of the Site; and

WHEREAS, on November 12, 2020 a duly noticed public hearing was conducted by the Planning Commission where the item was continued to the December 10, 2020 Planning Commission meeting; and

WHEREAS, on December 10, 2020, the public hearing to consider the Application was duly conducted by the Planning Commission at which time all interested persons were provided with an opportunity to testify and to present evidence; and

WHEREAS, consistent with the requirements of Chapter 9.14 (Land Divisions) of the Municipal Code, at the public hearing the Planning Commission considered Conditions of Approval to be imposed upon Tentative Tract Map 37909 PEN20-0063 (TTM), which conditions were prepared by Planning Division staff who deemed said conditions to be necessary to protect public health, safety and welfare and to ensure the proposed Project will be developed in accordance with the purpose and intent of Title 9 (Planning and Zoning) of the Municipal Code; and

WHEREAS, at the public hearing, the Planning Commission considered whether each of the requisite findings specified in Section 9.14.070 of the Municipal Code as set forth herein could be made with respect to the proposed Project as conditioned by the proposed Conditions of Approval; and

WHEREAS, on December 10, 2020, in accordance with the provisions of the California Environmental Quality Act (CEQA¹) and CEQA Guidelines,² the Planning Commission considered and recommended that the City Council approve Resolution 2020-49.

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

Section 1. Recitals and Exhibits

That the foregoing Recitals and attached Exhibits are true and correct and are hereby incorporated by this reference.

Section 2. Notice

That pursuant to Government Code section 66020(d)(1), notice is hereby given that the proposed project is subject to certain fees, dedications, reservations and other exactions as provided herein.

Section 3. Evidence

That the Planning Commission has considered all of the evidence submitted into the administrative record for the proposed TTM, including, but not limited to, the following:

- (a) Moreno Valley General Plan and all relevant provisions contained therein;
- (b) Title 9 (Planning and Zoning) of the Moreno Valley Municipal Code and all relevant provisions referenced therein;
- (c) Application for the approval of Tentative Tract Map 37909 (TTM) PEN20-0063 and all documents, records and references contained therein;
- (d) Conditions of Approval for CUP PEN20-0063, attached hereto as Exhibit A:

¹ Public Resources Code §§ 21000-21177

² 14 California Code of Regulations §§15000-15387

- (e) Staff Report prepared for the Planning Commission's consideration and all documents, records and references related thereto, and Staff's presentation at the public hearing;
- (f) Testimony and/or comments from Applicant and its representatives during the public hearing; and
- (g) Testimony comments and/or correspondence from all persons that were submitted at, or prior to, the public hearing.

Section 4. Findings

That based on the foregoing Recitals and the Evidence contained in the Administrative Record as set forth above, the Planning Commission makes the following findings in approving TTM PEN20-0063.

- (a) That the proposed map is consistent with applicable general and specific plans and the zoning ordinance;
- (b) That the design or improvement of the proposed subdivision is consistent with applicable general and specific plans;
- (c) That the site is physically suitable for the type of development;
- (d) That the site of the proposed land division is physically suitable for the proposed density of the development;
- (e) 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;
- (f) That the design of the subdivision or type of improvements is not likely to cause serious public health problems;
- (g) 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;
- (h) That the proposed land division is not subject the Williamson Act pursuant to the California Land Conservation Act of 1965;
- (i) That the proposed land division and the associated design and improvements are not consistent with applicable ordinances of the City.
- (j) That the design of the land division provides, to the extent feasible, for future passive or natural heating and cooling opportunities in the subdivision; and
- (k) That the effect of the proposed land division on the housing needs of the region were considered and balanced against the public service needs of the residents of Moreno Valley and available fiscal and environmental resources.

Section 5. Approval

That based on the foregoing Recitals, Evidence contained in the Administrative Record and Findings set forth above, the Planning Commission hereby recommends that the City Council approve TTM PEN20-0063 subject to the Conditions of Approval for TTM PEN20-0063 attached hereto as Exhibit A.

Section 6. Repeal of Conflicting Provisions

That all the provisions as heretofore adopted by the Planning Commission that are in conflict with the provisions of this Resolution are hereby repealed.

Section 7. Severability

That the Planning Commission declares that, should any provision, section, paragraph, sentence or word of this Resolution be rendered or declared invalid by any final court action in a court of competent jurisdiction or by reason of any preemptive legislation, the remaining provisions, sections, paragraphs, sentences or words of this Resolution as hereby adopted shall remain in full force and effect.

Section 8. Effective Date

That this Resolution shall take effect immediately upon the date of adoption.

Section 9. Certification

That the Secretary of the Planning Commission shall certify to the passage of this Resolution.

PASSED AND ADOPTED THIS _____ day of _____, 2020.

CITY OF MORENO VALLEY
PLANNING COMMISSION

Patricia Korzec, Chairperson

ATTEST:

Patty Nevins,
Planning Official

APPROVED AS TO FORM:

Steven B. Quintanilla,
Interim City Attorney

Exhibits:
Exhibit A: Conditions of Approval PEN20-0063

Exhibit A
CONDITIONS OF APPROVAL

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

Conditional Use Permit

(PEN20-0065)

Page 1

CITY OF MORENO VALLEY
 CONDITIONS OF APPROVAL
 Tentative Tract Map (PEN20-0063)
 Conditional Use Permit (PEN-0065)

EFFECTIVE DATE:

EXPIRATION DATE:

COMMUNITY DEVELOPMENT DEPARTMENTPlanning Division

1. 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.
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. All landscaped areas shall be maintained in a healthy and thriving condition, free from weeds, trash and debris. (MC 9.02.030)
5. 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 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)
6. 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)
7. 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.

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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Special Conditions

8. Prior to grading plan approval, Basin fencing shall include wrought iron fencing with pilasters.
9. Prior to building final, a basin maintained by an HOA or other private entity, landscape (trees, shrubs and groundcover) and irrigation shall be installed, and maintained by the HOA or other private entity with documentation provided to the Planning Division.
10. Prior to issuance of building permits, final front and street side yard landscape and irrigation plans, and slope landscape plans and basin landscape plans, shall be approved.
11. This approval shall comply with all applicable requirements of the City of Moreno Valley Municipal Code.
12. The grading plans shall show all easements including an easement for trail purposes for the Juan Bautista de Anza trail per the Tentative Tract Map.
13. 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)
14. 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)
15. A drought tolerant landscape palette shall be utilized throughout the tract in compliance with the City's Landscape Requirements. (9.17)
16. This tentative map and Conditional Use Permit for the Planned Unit Development shall expire three years after the approval date of this tentative map and conditional use permit 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)
17. 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.
18. Prior to any site disturbance and/or grading plan submittal, and or final map

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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- 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)
19. 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.)
 20. Prior to approval of any grading plan, local and master-planned multi-use trail easements shall be shown on the rough and precise grading plans in accordance with the City's Master Trail Plan.
 21. 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)
 22. 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. Mailboxes shall be clustered and include security lighting per U. S. Postal standards.
 23. All site plans, grading plans, landscape and irrigation plans, and street improvement plans shall be coordinated for consistency with this approval.
 24. Prior to the start of any construction, temporary security fencing shall be erected. The fencing shall be a minimum of six (6) feet high with locking, gated access and shall remain through the duration of construction. Security shall remain in place until the project is completed or the above conditions no longer exist. (Security fencing is required if there is: construction, unsecured structures, unenclosed storage of materials and/or equipment, and/or the condition of the site constitutes a public hazard).
 25. The site has been approved for Tentative Tract Map 37909 (PEN20-0063) to subdivide approximately 10.82 acres into eighty-one single family residential lots including the approval of a Conditional Use Permit (PEN20-0065) for a Planned Unit Development to design and implement the residential community as designed per the approved plans for the Tentative Tract Map 37909 and the Planned Unit Development. The Tentative Tract Map 37909 and the Conditional Use Permit for the Planned Unit Development must be developed in conjunction with each other as approved. A change or modification shall require separate approval.
 26. 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:

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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- 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 general maintenance of the site, joint access to proposed parcels, open space use restrictions, conservation easements, guest parking, feeder trails, water quality basins, lighting, landscaping and common area use items such as 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.
 - d. A conservation easement for lettered lots shall be recorded on the deed of the property and shown on the final map. Said easement shall include access restrictions prohibiting motorized vehicles from these areas.
 - e. Oleander plants or trees shall be prohibited on open space lots adjacent to multi-use trails.
27. Separate Administrative Plot Plans, including, Design Review (product approval) and Model Home Complex and/or temporary sales trailers, are required for approval of the design of the future single-family homes for Tentative Tract Map 37909.
28. Prior to building final, slope landscape and irrigation shall be installed, certified by the Landscape Architect with documentation provided to the Planning Division with an inspection performed and approved by the Planning Division. Landscaping on lots not yet having dwelling units shall be maintained by the developer weed and disease free. (MC 9.03.040)

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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Prior to Grading Permit

29. Prior to issuance of any grading permit, all Conditions of Approval and Mitigation Measures shall be printed on the grading plans.
30. Prior to the issuance of grading permits, decorative (e.g. colored/scored concrete or as approve 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 with open space and/or parking. and/or the public right-of-way. The pathways shall be shown on the precise grading plan. (GP Objective 46.8, DG)
31. Prior to issuance of grading permits, the developer shall pay the applicable Stephens' Kangaroo Rat (SKR) Habitat Conservation Plan mitigation fee. (Ord)
32. 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).

33. 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.

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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34. Prior to approval of any grading permits, plans for any security gate system shall be submitted to and approved by to the Planning Division.
35. 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.
36. Prior to issuance of grading permits, the developer shall submit wall/fence plans to be included in the Building and Safety submittal for review and approval consistent with the approved plans, the Planned Unit Development Guidelines, the Landscape Requirements and the Municipal Code.
37. 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:
 - a. The name (if applicable) and address of the development.
 - b. The developer's name, address, and a 24-hour emergency telephone number.
38. Prior to issuance of any building permit, all Conditions of Approval and Mitigation Measures shall be printed on the building plans.
39. 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.
40. 41. Prior to the issuance of building permits, final landscape and irrigation plans shall be submitted for review and approved by the Planning Division for the following:
 - a. Areas maintained by the Homeowner's Association including parks, site entry driveways, and other on-site landscaping;
 - b. Areas along Iris Avenue;
 - c. Trail Easement (per Parks and Community Services design standards); and
 - d. Front yards.

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.

The plans shall be prepared in accordance with the City's Landscape Development

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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Guidelines and the Planned Unit Development Guidelines.

A detailed, on-site, computer generated, point-by-point comparison lighting plan shall be provided with and integrated into the landscape plan. The plan shall include all project lighting within the community to include street lights, exterior building lights, parking area lighting and park lights. 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.

41. 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)
42. 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)
43. 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)
44. 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.
45. Photometric Plans shall be submitted to the Building and Safety Division for review and approval as part of the lighting and electrical building plan submittal.
46. 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)

Prior to Building Final or Occupancy

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Tentative Tract Map (PEN20-0063)

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47. 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).
48. Prior to building final, Planning approved/stamped landscape plans shall be provided to the Community Development Department – Planning Division on a CD disk.
49. 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).

Building Division

50. 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.
51. Contact the Building Safety Division for permit application submittal requirements.
52. Any construction within the city shall only be as follows: Monday through Friday seven a.m. to seven p.m.(except for holidays which occur on weekdays), eight a.m. to four p.m.; weekends and holidays (as observed by the city and described in the Moreno Valley Municipal Code Chapter 2.55), unless written approval is first obtained from the Building Official or City Engineer.
53. Building plans submitted shall be signed and sealed by a California licensed design professional as required by the State Business and Professions Code.
54. The proposed development shall be subject to the payment of required development fees as required by the City's current Fee Ordinance at the time a building application is submitted or prior to the issuance of permits as determined by the City.
55. 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.
56. 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 2019 CBC.

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Tentative Tract Map (PEN20-0063)

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57. 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 2019 California Plumbing Code, Table 422.1. The occupant load and occupancy classification shall be determined in accordance with the California Building Code.
58. The proposed residential project shall comply with The 2019 California Green Building Standards Code, Section 4.106.4, mandatory requirements for Electric Vehicle Charging Station (EVCS).
59. 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)

FIRE DEPARTMENT**Fire Prevention Bureau**

60. All Fire Department access roads or driveways shall not exceed 12 percent grade. (CFC 503.2.7 and MVMC 8.36.060[G])
61. The Fire Department emergency vehicular access road shall be (all weather surface) capable of sustaining an imposed load of 80,000 lbs. GVW, based on street standards approved by the Public Works Director and the Fire Prevention Bureau. The approved fire access road shall be in place during the time of construction. Temporary fire access roads shall be approved by the Fire Prevention Bureau. (CFC 501.4, and MV City Standard Engineering Plan 108d)
62. The angle of approach and departure for any means of Fire Department access shall not exceed 1 ft drop in 20 ft (0.3 m drop in 6 m), and the design limitations of the fire apparatus of the Fire Department shall be subject to approval by the AHJ. (CFC 503 and MVMC 8.36.060)
63. Prior to issuance of Building Permits, the applicant/developer shall provide the Fire Prevention Bureau with an approved site plan for Fire Lanes and signage. (CFC 501.3)
64. Prior to issuance of Certificate of Occupancy or Building Final, "Blue Reflective Markers" shall be installed to identify fire hydrant locations in accordance with City specifications. (CFC 509.1 and MVLT 440A-0 through MVLT 440C-0)
65. Existing fire hydrants on public streets are allowed to be considered available. Existing fire hydrants on adjacent properties shall not be considered available unless fire apparatus access roads extend between properties and easements are

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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- established to prevent obstruction of such roads. (CFC 507, 501.3) a - After the local water company signs the plans, the originals shall be presented to the Fire Prevention Bureau for signatures. The required water system, including fire hydrants, shall be installed, made serviceable, and be accepted by the Moreno Valley Fire Department prior to beginning construction. They shall be maintained accessible.
66. Final fire and life safety conditions will be addressed when the Fire Prevention Bureau reviews building plans. These conditions will be based on occupancy, use, California Building Code (CBC), California Fire Code (CFC), and related codes, which are in effect at the time of building plan submittal.
 67. The Fire Code Official is authorized to enforce the fire safety during construction requirements of Chapter 33. (CFC Chapter 33 & CBC Chapter 33)
 68. Fire lanes and fire apparatus access roads shall have an unobstructed width of not less than twenty-four (24) feet and an unobstructed vertical clearance of not less than thirteen (13) feet six (6) inches. (CFC 503.2.1 and MVMC 8.36.060[E])
 69. Prior to issuance of Certificate of Occupancy or Building Final, the applicant/developer shall install a fire sprinkler system based on square footage and type of construction, occupancy or use. Fire sprinkler plans shall be submitted to the Fire Prevention Bureau for approval prior to installation. (CFC Chapter 9, MVMC 8.36.100[D])
 70. Prior to issuance of the building permit for development, independent paved access to the nearest paved road, maintained by the City shall be designed and constructed by the developer within the public right of way in accordance with City Standards. (MVMC 8.36.060, CFC 501.4)
 71. The minimum number of fire hydrants required, as well as the location and spacing of fire hydrants, shall comply with the C.F.C., MVMC, and NFPA 24. Fire hydrants shall be located no closer than 40 feet to a building. The size and number of outlets required for the approved fire hydrants are (6" x 4" x 2 ½") (CFC 507.5.1, 507.5.7, Appendix C, NFPA 24-7.2.3, MVMC 912.2.1)
 72. During phased construction, dead end roadways and streets which have not been completed shall have a turn-around capable of accommodating fire apparatus. (CFC 503.1 and 503.2.5)
 73. If construction is phased, each phase shall provide an approved emergency vehicular access way for fire protection prior to any building construction. (CFC 501.4)
 74. Plans for private water mains supplying fire sprinkler systems and/or private fire

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Tentative Tract Map (PEN20-0063)

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- hydrants shall be submitted to the Fire Prevention Bureau for approval. (CFC 105 and CFC 3312.1)
75. Prior to issuance of Certificate of Occupancy or Building Final, all residential dwellings shall display street numbers in a prominent location on the street side of the residence in such a position that the numbers are easily visible to approaching emergency vehicles. The numbers shall be located consistently on each dwelling throughout the development. The numerals shall be no less than four (4) inches in height and shall be low voltage lighted fixtures. (CFC 505.1, MVMC 8.36.060[1])
 76. Single Family Dwellings. Schedule "A" fire prevention approved standard fire hydrants (6" x 4" x 2 ½") shall be located at each intersection of all residential streets. Hydrants shall be spaced no more than 500 feet apart in any direction so that no point on the street is more than 250 feet from a hydrant. Minimum fire flow shall be 1000 GPM for 1 hour duration of 20 PSI. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, serving one and two-family residential developments, standard fire hydrants shall be provided at spacing not to exceed 1000 feet along the tract boundary for transportation hazards. (CFC 507.3, Appendix B, MVMC 8.36.060).
 77. Prior to construction, all traffic calming designs/devices must be approved by the Fire Marshal and City Engineer.
 78. Prior to issuance of Building Permits, the applicant/developer shall furnish one copy of the water system plans to the Fire Prevention Bureau for review. Plans shall: a. Be signed by a registered civil engineer or a certified fire protection engineer; b. Contain a Fire Prevention Bureau approval signature block; and c. Conform to hydrant type, location, spacing of new and existing hydrants and minimum fire flow required as determined by the Fire Prevention Bureau. The required water system, including fire hydrants, shall be installed, made serviceable, and be accepted by the Moreno Valley Fire Department prior to beginning construction. They shall be maintained accessible.
 79. Prior to construction, all locations where structures are to be built shall have an approved Fire Department access based on street standards approved by the Public Works Director and the Fire Prevention Bureau. (CFC 501.4)
 80. Prior to issuance of building permits, plans specifying the required structural materials for building construction in high fire hazard severity zones shall be submitted to the Fire Prevention Bureau for approval. (CFC, 4905)
 81. Prior to issuance of Building Permits, plans for structural protection from vegetation fires shall be submitted to the Fire Prevention Bureau for review and approval. Measures shall include, but are not limited to: noncombustible barriers (cement or

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block walls), fuel modification zones, etc. (CFC Chapter 49)

PUBLIC WORKS DEPARTMENT**Land Development**

82. Aggregate slurry, as defined in Section 203-5 of Standard Specifications for Public Works Construction, shall be required prior to 90% security reduction or the end of the one-year warranty period of the public streets as approved by 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.
83. 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]
84. The final approved conditions of approval (COAs) issued and any applicable Mitigation Measures by the Planning Division shall be photographically or electronically placed on mylar sheets and included in the Grading and Street Improvement plans.
85. 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

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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- 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.
86. 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.
 87. 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]
 88. 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]
 89. 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.
 90. A storm drain manhole shall be placed at the right-of-way line to mark the beginning of the publicly maintained portion of any private storm drain.
 91. For single family residential subdivisions, all lots shall drain to the street at a minimum surface grade of 2.0% and on-site drainage shall be conveyed onto the street with subsurface drains at a minimum grade of 0.5% per current City Standards MVSI-152 and MVSI-153A. No cross-lot or over the public sidewalk drainage shall be allowed.
 92. 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. Final (Tract) 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 grading permit issuance);

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- d. Public improvement plan (e.g., street/storm drain w/ striping, RCFC storm drain, sewer/water, etc.) (prior to map approval);
 - e. Final drainage study (prior to map approval);
 - f. Final WQMP (prior to grading plan approval);
 - g. Legal documents (e.g., easement(s), dedication(s), etc.) (prior to Building Permit issuance);
 - h. As-Built revision for all plans (prior to Occupancy release);
93. 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.
94. 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)]

Prior to Grading Plan Approval

95. Resolution of all drainage issues shall be as approved by the City Engineer.
96. 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.
97. 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

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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.

98. 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.
99. For any offsite grading, the developer shall submit written permission from adjacent property owners. If applicable, all areas outside of the project boundaries where grading results in slopes, the developer shall submit recorded slope easements.
100. The developer shall pay all remaining plan check fees.
101. Landscape & Irrigation plans (prepared by a registered/licensed landscape architect) for water quality BMPs shall be submitted for review and approved by the City Engineer per the current submittal requirements, if applicable.
102. 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.
103. 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.
104. The final project-specific Water Quality Management Plan (WQMP) shall be consistent with the conditionally approved P-WQMP, as well as in full conformance with the document: "Water Quality Management Plan - A Guidance Document for the Santa Ana Region of Riverside County" dated October 22, 2012. The F-WQMP shall be submitted and approved prior to application for and issuance of grading permits. 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.
 - a. The Applicant has proposed to incorporate the use of Bioretention. Final

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design and sizing details of all BMPs must be provided in the first submittal of the F-WQMP. The Applicant acknowledges that more area than currently shown on the plans may be required to treat site runoff as required by the WQMP guidance document and may result in the lost of lot(s).

b. The Applicant shall substantiate the applicable Hydrologic Condition of Concerns (HCOC) in Section F of the F-WQMP. <The HCOC designates that the project will be exempt from mitigation requirements based on Exemption 3>.

c. All proposed LID BMP's shall be designed in accordance with the RCFC&WCD's Design Handbook for Low Impact Development Best Management Practices, dated September 2011.

d. The proposed LID BMP's as identified in the project-specific P-WQMP shall be incorporated into the Final WQMP.

e. The NPDES notes per City Standard Drawing No. MVFE-350-0 shall be included in the grading plans.

f. Post-construction treatment control BMPs, once placed into operation for post-construction water quality control, shall not be used to treat runoff from construction sites or unstabilized areas of the site.

g. Prior to precise grading plan approval, the grading plan shall show any proposed trash enclosure to include a cover (roof) and sufficient size for dual bin (1 for trash and 1 for recyclables). The architecture shall be approved by the Planning Division and any structural approvals shall be made by the Building and Safety Division.

Prior to Grading Permit

105. 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)]
106. 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.
107. A digital (pdf) copy of all approved grading plans shall be submitted to the Land Development Division.
108. Security, in the form of a cash deposit (preferable), bond 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)]
109. Security, in the form of a cash deposit (preferable), bond or letter of credit shall be submitted as a guarantee of the completion of the grading operations for the project. [MC 8.21.070]

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- 110. The developer shall pay all applicable inspection fees.
- 111. All necessary permits from Department of Water Resources for grading, storm drain construction, etc. shall be obtained, if applicable.

Prior to Map Approval

- 112. All proposed street names shall be submitted for review and approved by the City Engineer, if applicable. [MC 9.14.090(E.2.k)]
- 113. 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 single-family residential development, bylaws and articles of incorporation shall also be included as part of the maintenance agreement for any water quality BMPs.
- 114. 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 required to be constructed as part of the project.
- 115. After recordation, a digital (pdf) copy of the recorded map shall be submitted to the Land Development Division.
- 116. Resolution of all drainage issues shall be as approved by the City Engineer.
- 117. 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]
- 118. 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.

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119. 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 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]
120. 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]
121. All public improvement plans required for this project shall be approved by the City Engineer in order to execute the Public Improvement Agreement (PIA).
122. 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.

Prior to Improvement Plan Approval

123. 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

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with current ADA requirements, unless otherwise approved by the City Engineer.

124. The developer shall submit clearances from all applicable agencies, and pay all applicable plan check fees.
125. The street improvement plans shall comply with current City policies, plans and applicable City standards (i.e. MVSI-160 series, etc.) throughout this project.
126. Any missing or deficient existing improvements along the project frontage within 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 is per current City Standards; additional signing & striping to accommodate increased traffic imposed by the development, etc.
127. 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 may be allowed for emergency repairs or as specifically approved in writing by the City Engineer. Special requirements shall be imposed for repaving, limits to be determined by the City Engineer.
128. 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.
129. 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.
130. 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.

Prior to Encroachment Permit

131. A digital (pdf) copy of all approved improvement plans shall be submitted to the Land Development Division.
132. All applicable inspection fees shall be paid.

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133. 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 may be allowed for emergency repairs or as specifically approved in writing by the City Engineer. Special requirements shall be imposed for repaving, limits to be determined by the City Engineer.
134. Any work performed within public right-of-way requires an encroachment permit.

Prior to Building Permit

135. 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.
136. For all subdivision projects, the map shall be recorded (excluding model homes). [MC 9.14.190]
137. 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 ADA 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.
138. 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 (excluding models homes).

Prior to Occupancy

139. All outstanding fees shall be paid.
140. 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.
141. The final/precise grade certification shall be submitted for review and approved by the City Engineer.

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142. 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 (SL-2), signing, striping, under sidewalk drains, landscaping and irrigation, medians, pavement tapers/transitions and traffic control devices as appropriate.
 - b. Grind and overlay full street width along the project's frontage shall be required.
 - c. Storm drain facilities including, but not limited to: storm drain pipe, storm drain laterals, open channels, catch basins and local depressions.
 - d. City-owned utilities.
 - e. Sewer and water systems including, but not limited to: sanitary sewer, potable water and recycled water.
 - f. Under grounding of all existing and proposed utilities adjacent to and on-site. [MC 9.14.130]
 - g. Relocation of overhead electrical utility lines including, but not limited to: electrical, cable and telephone.
143. 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 last 20% or last 5% (whichever is greater, unless as otherwise determined by the City Engineer).
144. 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.
145. 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.

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- 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.
146. Prior to the first occupancy, the developer shall be required to construct Riverside County Flood Control and Water Conservation District's Sunnymead MDP Line M-2 from its current terminus to the project's westerly boundary.

Special Districts Division

147. The ongoing maintenance of any landscaping required to be installed behind the curb shall be the responsibility of the property owner.
148. MAJOR INFRASTRUCTURE FINANCING DISTRICT. This project has been identified to potentially be included in the formation of a special financing district for the construction and maintenance of major infrastructure improvements which may include but are not limited to thoroughfares, bridges, and certain flood control 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 or annexation into the district, the qualified elector(s) will not protest the formation or annexation, but will retain the right to object to any eventual tax/assessment/fee that is not equitable should the financial burden of the tax/assessment/fee not be reasonably proportionate to the benefit the affected property obtains from the improvements to be installed and/or maintained. The Developer must notify the Special Districts Division at 951.413.3480 or at specialdistricts@moval.org 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 minimum 90-day process in compliance with the provisions of Article 13C of the California Constitution.
149. The parcel(s) associated with this project have been incorporated into the Moreno Valley Community Services District Zone A (Parks & Community Services) and Zone C (Arterial Street Lighting). All assessable parcels therein shall be subject to annual parcel taxes for Zone A and Zone C for operations and capital improvements.
150. This project is conditioned 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 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

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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 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.

The financial option selected shall be in place prior to the issuance of the first building permit for the project.

151. 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 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 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.

152. 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

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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 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.)

153. 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 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 (Ord. 708 Section 3.1, 2006) & City of Moreno Valley Municipal Code Title 3, Section 3.50.050.)

Transportation Engineering Division

154. Private streets' road width shall be a minimum of 24-feet with no parking allowed on either side. Applicant shall provide signage (NO PARKING) along the streets per current MUTCD standards.
155. The design and proposed location of the project driveways shall conform to City of Moreno Valley Standard No. MVSI-112C-0 for Commercial Driveway Approaches and Section 9.11.080, and Table 9.11.080-14 of the City's Municipal Code - Design Guidelines or as approved by the City Engineer. Applicant needs to show driveways per City Standard, including additional dedications for public improvements.
156. Right-of-way at driveway(s) entrances shall accommodate all public improvements (i.e. curb ramps, utility controllers, etc.); applicant shall provide dedication as required and appropriate. Show driveways per City standards (curb radii, ramps, grades, so for.)
157. Any proposed driveway gate shall be set back at a minimum of 60 feet from the

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property line or as determined by the traffic study to provide sufficient storage length in front of the gate for entering traffic. Gate doors shall be rolling type or swing away from Iris Avenue.

1. Shown gate for westerly driveway needs to swing away from Iris Avenue.

2. Main entrance storage length for visitors is not adequate, location of visitor call box needs to be relocated in order to provide at least two (2) cars on the visitor lane.

158. Applicant shall plan to accommodate gates at entrances and provide road width and improvements accordingly.

For main access point, easterly driveway at proposed Street A, the entrance design shall provide the following:

- a. Gate shall be set back a minimum of 60 feet from the property line.
- b. A turnaround area - Applicant needs to provide vehicle turning template to show adequacy of provided turnaround area.
- c. A storage lane with a minimum of 60 feet queuing length for entering traffic.
- d. A second storage lane for visitors to stop and use a call box (or other service) for permission to enter the community. Visitor storage lane seems insufficient due to location of call box, relocate call box or propose design with adequate vehicle storage.
- e. No Parking signs posted in the turnaround area.
- f. A separate pedestrian entry.
- g. Presence loop detectors (or another device) within 1 to 2 feet of the gate that ensures that the gate remain open while any vehicle in in the queue.
- h. Slide doors or gate doors that swing away from incoming traffic.
- i. A median will be required as traffic calming measure into residential development. Median shall be kept within private property and shall not encroach onto public right-of-way.

159. Conditions of approval may be modified or added if a phasing plan is submitted for this development.

160. All project driveways to public streets shall conform to Section 9.11.080, and Table 9.11.080-14 of the City's Development Code – Design Guidelines and City of Moreno Valley Standard Plans No. MVS1-112A~D-0 for commercial driveway approaches.

161. The 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 in 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

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- ensures that the gates remain open while any vehicle is in the queue. All of these items shall be kept in working order.
162. 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.
 163. During construction activity, developer is responsible for regularly scheduled street sweeping per approved street sweeping schedule.
 164. Prior to issuance of a construction permit, construction traffic control plans prepared by a qualified, registered Civil or Traffic engineer may be required for plan approval or as required by the City Traffic Engineer.
 165. Prior to final approval of any landscaping or monument sign plans, the project plans shall demonstrate that sight distance at the project driveways conforms to City Standard Plan No. MVSI-164A, B, C-0.
 166. Prior to the final approval of the street improvement plans, a signing and striping plan shall be prepared per City of Moreno Valley Standard Plans - Section 4 for all streets within the project area.
 167. Prior to issuance of a Building Final or Certificate of Occupancy, all approved street improvements shall be installed to the satisfaction of the City Engineer.
 168. Prior to issuance of a Building Final or Certificate of Occupancy, all approved signing and striping shall be installed per current City Standards

PARKS & COMMUNITY SERVICES DEPARTMENT

169. This project is subject to current Quimby Fees.
170. Bikeways shall not be shared with any above ground utilities, blocking total width access.
171. According to the General Plan and City's Juan Bautista de Anza trail plan, project improvements include a Class I Bikeway, walkway, and landscaped area. City shall construct paved Class I bike trail only. Developer shall design and construct landscape and irrigation improvements for the Juan Bautista de Anza trail greenbelt, including lighting along the trail. Landscaping and irrigation shall be maintained by City following acceptance of the public improvements into the City's Community Services District. The greenbelt shall conform to City of Moreno Valley standard plans and specifications, "CalTrans Design Manual," and Department of Water Resources (DWR) requirements. The developer shall comply with the following conditions:

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- a. Concurrent with the recordation of the final map, an easement for trail purposes shall be dedicated to the City of Moreno Valley Community Services District.
- b. Bonds for construction of the landscaping within the project and these COA's shall be provided (per Parks and Community Services criteria) concurrent with the Subdivision Improvements Agreement process.
- d. Plans for improvements at the greenbelt shall be submitted and approved by the Director of Parks and Community Services or designee prior to the approval of Precise Grading Plans.
- e. Prior to the issuance of any building permits, detailed final plans for the greenbelt, street improvement, and fence or wall shall be reviewed and approved by the Director of the Parks and Community Services Department or his/her designee.
- g. Where feasible, walkways from the project may connect to the bikeway/walkway.
- f. Landscape improvements shall be surveyed and staked by the developer's Civil Engineer. The landscape improvements shall be inspected and approved by the Director of Parks and Community Services or designee prior to the issuance of any building permits.
- g. Eight sets of complete park and/or trail plans shall be submitted to Parks and Community Services for routing. Adjacent landscaping and walls shall be shown on the plans. Final construction plans and details require wet stamped and signed mylars, two sets of bond copies from the City signed mylars, and AutoCAD.dwf and PDF files on CD.
- h. Construction of landscape improvements shall begin no later than issuance of 30% building permits and be completed no later than issuance of 70% building permits.
172. All street crossings for Class-I Bikeways shall be signed with approved signage.
173. In order to prevent the delay of building permit issuance, any deviation from materials shall be submitted to Parks and Community Services and approved in writing (at the Department's discretion) 60-days prior to the commencement of construction. Any unauthorized deviation from the approved plan and/or the City's specifications and/or Conditions of Approval may result in the holding of building permits and/or building finals.
174. All inspections shall be requested two (2) working days' in advance from the Parks and Community Services Department at the time of rough and precise grading, fence/wall installation, curb and drainage, flatwork, mulch installation, graffiti coating, soil preparation, irrigation placement, site electrical, weed abatement, planting, and final inspection. Failure to schedule inspections may result in cessation of work and/or re-inspection fees/penalties.

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175. This project is subject to current Development Impact Fees. Section 3.38.150 of the City's Municipal Code allows for the developer to receive credits for qualifying public improvements. For consideration of a DIF credit, the developer shall provide an Architect's Cost Estimate. The developer's maximum credit amount is based on the lower of the DIF Study Costs, the Architect's Estimate and the DIF Fee Obligation. Allowance of DIF credits is subject to City review and approval, and is not guaranteed by these Conditions of Approval.

Standard Conditions

176. Detailed final plans (mylars, PDF, and AutoCAD file on a DVD-R) for parks, trails/bikeways, fencing, and adjoining landscaped areas shall be submitted to and approved by the Director of Parks and Community Services, or his/her designee, prior to the issuance of any building permits. All plans are to include a profile showing grade changes.
177. Within the improvements for PCS, the applicant shall show all existing and planned easements on all maps and plans. Easements on City/CSD owned or maintained parks, trails, bikeways, and landscape shall be identified on each of these plans with the instrument number of the recorded easement.
178. Prior to recordation of the Final Map, the applicant shall post security to guarantee construction or modification of parks, trails and/or bikeways for the City/CSD. Copies of said documentation shall be provided to PCS, prior to the approval of the Final Map.
179. Applicable plan check and inspection fees shall be paid, per the approved City fee schedule.
180. A restriction shall be placed on lots that back up to City/CSD owned or maintained parks, trails, bikeways, and landscaped areas, preventing openings or gates accessing the City/CSD owned or maintained property. This shall be documented through Covenants, Conditions, and Restrictions (CC&R's). A copy of the CC&R's with this restriction noted shall be submitted and approved by the Director of Parks and Community Services or his/her designee, prior to the recordation of the Final Map.
181. The following plans require PCS written approval: Tentative tract/parcel maps; rough grading plans (including all Delta changes); Final Map; precise grading plans; street improvement plans; traffic signal plans; fence and wall plans; landscape plans for areas adjacent to bikeways; trail improvement plans. PCS will not approve any permits without review and approval of the above items.

RESOLUTION NUMBER 2020-53

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL APPROVE CONDITIONAL USE PERMIT PEN20-0065 FOR THE IRIS PARK COMMUNITY, A PLANNED UNIT DEVELOPMENT ASSOCIATED WITH TENTATIVE TRACT MAP 37909, PEN20-0063 LOCATED ON THE SOUTH SIDE OF IRIS AVENUE EAST OF PERRIS BOULEVARD (APN 312-020-025)

WHEREAS, the City of Moreno Valley (“City”) is a general law city and a municipal corporation of the State of California; and

WHEREAS, Passco Pacifica LLC., (“Developer”) has filed an application for the approval of Conditional Use Permit PEN20-0065 (“Application”) for a Planned Unit development associated with Tentative Tract Map 37909, PEN20-0063 (“Project”) located on the south side of Iris Avenue east of Perris Boulevard (“Site”); and

WHEREAS, Section 9.02.060 (Conditional Use Permits) of the Moreno Valley Municipal Code acknowledges that the purpose of conditional use permits is to allow the establishment of uses that may have special impacts or uniqueness such that their effect on the surrounding environment cannot be determined in advance of the use being proposed for a particular location and that the conditional use permit application process involves the review of location, design and configuration of improvements related to the project, and the potential impact of the project on the surrounding area based on fixed and established standards; and

WHEREAS, the Application has been evaluated in accordance with Section 9.02.060 (Conditional Use Permits) of the Municipal Code with consideration given to the City’s General Plan, Zoning Ordinance, and other applicable laws and regulations; and

WHEREAS, Section 9.02.060 of the Municipal Code imposes conditions of approval upon projects for which a CUP is required, which conditions may be imposed by the Planning Commission to address on-site improvements, off-site improvements, the manner in which the site is used and any other conditions as may be deemed necessary to protect public health, safety and welfare and ensure that the proposed Project will be developed in accordance with the purpose and intent of Title 9 (Planning and Zoning) of the Municipal Code; and

WHEREAS, Staff has presented for the Planning Commission’s consideration Conditions of Approval to be imposed upon Conditional Use Permit PEN20-0065 (“CUP”), which conditions have been deemed necessary to protect public health, safety and welfare and ensure that the proposed Project will be developed in accordance with the purpose and intent of Title 9 (Planning and Zoning) of the Municipal Code; and

WHEREAS, pursuant to the provisions of Section 9.02.200 (Public Hearing and Notification Procedures) of the Municipal Code and Government Code section 65905, a public hearing was scheduled for November 12, 2020 and notice thereof was duly published and posted, and mailed to all property owners of record within 600 feet of the Site; and

WHEREAS, on November 12, 2020 a duly noticed public hearing was conducted by the Planning Commission where the item was continued to the December 10, 2020 Planning Commission meeting; and

WHEREAS, consistent with the requirements of Section 9.02.060 (Conditional Use Permits) of the Municipal Code, at the public hearing the Planning Commission considered Conditions of Approval to be imposed upon Conditional Use Permit PEN20-0065 (CUP), which were prepared by Planning Division staff who deemed said conditions to be necessary to protect public health, safety and welfare and to ensure the proposed Project will be developed in accordance with the purpose and intent of Title 9 (Planning and Zoning) of the Municipal Code; and

WHEREAS, at the public hearing, the Planning Commission considered whether each of the requisite findings specified in Section 9.02.060 of the Municipal Code and set forth herein could be made with respect to the proposed Project as conditioned by the Conditions of Approval; and

WHEREAS, on December 10, 2020, in accordance with the provisions of the California Environmental Quality Act (CEQA¹) and CEQA Guidelines,² the Planning Commission considered and recommended that the City Council approve Resolution 2020-49.

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

Section 1. Recitals and Exhibits

That the foregoing Recitals and attached Exhibits are true and correct and are hereby incorporated by this reference.

Section 2. Notice

That pursuant to Government Code section 66020(d)(1), notice is hereby given that the proposed project is subject to certain fees, dedications, reservations and other exactions as provided herein.

Section 3. Evidence

¹ Public Resources Code §§ 21000-21177

² 14 California Code of Regulations §§15000-15387

That the Planning Commission has considered all of the evidence submitted into the administrative record for the proposed CUP, including, but not limited to, the following:

- (a) Moreno Valley General Plan and all relevant provisions contained therein;
- (b) Title 9 (Planning and Zoning) of the Moreno Valley Municipal Code and all relevant provisions referenced therein;
- (c) Application for the approval of Conditional Use Permit (CUP) PEN20-0065 and all documents, records and contained therein;
- (d) Conditions of Approval for CUP PEN20-0065, attached hereto as Exhibit A;
- (e) Staff Report prepared for the Planning Commission's consideration and all documents, records and references related thereto, and Staff's presentation at the public hearing;
- (f) Testimony and/or comments from Applicant and its representatives during the public hearing; and
- (g) Testimony, comments and/or correspondence from all persons that were provided in written format or correspondence, at, or prior to, the public hearing.

Section 4. Findings

That based on the foregoing Recitals and the Evidence contained in the Administrative Record as set forth above, the Planning Commission makes the following findings in approving CUP PEN20-0065.

- (a) The proposed Project is consistent with the goals, objectives, policies and programs of the General Plan;
- (b) The proposed Project complies with all applicable zoning and other regulations;
- (c) The proposed Project will not be detrimental to the public health, safety or welfare or materially injurious to properties or improvements in the vicinity; and
- (d) The location, design and operation of the proposed Project will be compatible with existing and planned land uses in the vicinity.

Section 5. Approval

That based on the foregoing Recitals, Evidence contained in the Administrative Record and Findings set forth above, the Planning Commission hereby recommends that the City Council approve CUP PEN20-0065 subject to the Conditions of Approval of CUP PEN20-0065, attached hereto as Exhibit A.

Section 6. Repeal of Conflicting Provisions

That all the provisions as heretofore adopted by the Planning Commission that are in conflict with the provisions of this Resolution are hereby repealed.

Section 7. Severability

That the Planning Commission declares that, should any provision, section, paragraph, sentence or word of this Resolution be rendered or declared invalid by any final court action in a court of competent jurisdiction or by reason of any preemptive legislation, the remaining provisions, sections, paragraphs, sentences or words of this Resolution as hereby adopted shall remain in full force and effect.

Section 8. Effective Date

That this Resolution shall take effect immediately upon the date of adoption.

Section 9. Certification

That the Secretary of the Planning Commission shall certify to the passage of this Resolution.

PASSED AND ADOPTED THIS _____ day of _____, 2020.

CITY OF MORENO VALLEY
PLANNING COMMISSION

Patricia Korzec, Chairperson

ATTEST:

Patty Nevins,
Planning Official

APPROVED AS TO FORM:

Steven B. Quintanilla,
Interim City Attorney

Exhibits:
Exhibit A: Conditions of Approval PEN20-0065

Exhibit A
CONDITIONS OF APPROVAL

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

Conditional Use Permit

(PEN20-0065)

Page 1

CITY OF MORENO VALLEY
 CONDITIONS OF APPROVAL
 Tentative Tract Map (PEN20-0063)
 Conditional Use Permit (PEN-0065)

EFFECTIVE DATE:

EXPIRATION DATE:

COMMUNITY DEVELOPMENT DEPARTMENTPlanning Division

1. 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.
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. All landscaped areas shall be maintained in a healthy and thriving condition, free from weeds, trash and debris. (MC 9.02.030)
5. 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 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)
6. 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)
7. 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.

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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Special Conditions

8. Prior to grading plan approval, Basin fencing shall include wrought iron fencing with pilasters.
9. Prior to building final, a basin maintained by an HOA or other private entity, landscape (trees, shrubs and groundcover) and irrigation shall be installed, and maintained by the HOA or other private entity with documentation provided to the Planning Division.
10. Prior to issuance of building permits, final front and street side yard landscape and irrigation plans, and slope landscape plans and basin landscape plans, shall be approved.
11. This approval shall comply with all applicable requirements of the City of Moreno Valley Municipal Code.
12. The grading plans shall show all easements including an easement for trail purposes for the Juan Bautista de Anza trail per the Tentative Tract Map.
13. 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)
14. 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)
15. A drought tolerant landscape palette shall be utilized throughout the tract in compliance with the City's Landscape Requirements. (9.17)
16. This tentative map and Conditional Use Permit for the Planned Unit Development shall expire three years after the approval date of this tentative map and conditional use permit 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)
17. 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.
18. Prior to any site disturbance and/or grading plan submittal, and or final map

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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- 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)
19. 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.)
 20. Prior to approval of any grading plan, local and master-planned multi-use trail easements shall be shown on the rough and precise grading plans in accordance with the City's Master Trail Plan.
 21. 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)
 22. 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. Mailboxes shall be clustered and include security lighting per U. S. Postal standards.
 23. All site plans, grading plans, landscape and irrigation plans, and street improvement plans shall be coordinated for consistency with this approval.
 24. Prior to the start of any construction, temporary security fencing shall be erected. The fencing shall be a minimum of six (6) feet high with locking, gated access and shall remain through the duration of construction. Security shall remain in place until the project is completed or the above conditions no longer exist. (Security fencing is required if there is: construction, unsecured structures, unenclosed storage of materials and/or equipment, and/or the condition of the site constitutes a public hazard).
 25. The site has been approved for Tentative Tract Map 37909 (PEN20-0063) to subdivide approximately 10.82 acres into eighty-one single family residential lots including the approval of a Conditional Use Permit (PEN20-0065) for a Planned Unit Development to design and implement the residential community as designed per the approved plans for the Tentative Tract Map 37909 and the Planned Unit Development. The Tentative Tract Map 37909 and the Conditional Use Permit for the Planned Unit Development must be developed in conjunction with each other as approved. A change or modification shall require separate approval.
 26. 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:

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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- 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 general maintenance of the site, joint access to proposed parcels, open space use restrictions, conservation easements, guest parking, feeder trails, water quality basins, lighting, landscaping and common area use items such as 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.
 - d. A conservation easement for lettered lots shall be recorded on the deed of the property and shown on the final map. Said easement shall include access restrictions prohibiting motorized vehicles from these areas.
 - e. Oleander plants or trees shall be prohibited on open space lots adjacent to multi-use trails.
27. Separate Administrative Plot Plans, including, Design Review (product approval) and Model Home Complex and/or temporary sales trailers, are required for approval of the design of the future single-family homes for Tentative Tract Map 37909.
28. Prior to building final, slope landscape and irrigation shall be installed, certified by the Landscape Architect with documentation provided to the Planning Division with an inspection performed and approved by the Planning Division. Landscaping on lots not yet having dwelling units shall be maintained by the developer weed and disease free. (MC 9.03.040)

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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Prior to Grading Permit

29. Prior to issuance of any grading permit, all Conditions of Approval and Mitigation Measures shall be printed on the grading plans.
30. Prior to the issuance of grading permits, decorative (e.g. colored/scored concrete or as approve 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 with open space and/or parking. and/or the public right-of-way. The pathways shall be shown on the precise grading plan. (GP Objective 46.8, DG)
31. Prior to issuance of grading permits, the developer shall pay the applicable Stephens' Kangaroo Rat (SKR) Habitat Conservation Plan mitigation fee. (Ord)
32. 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).

33. 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.

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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34. Prior to approval of any grading permits, plans for any security gate system shall be submitted to and approved by to the Planning Division.
35. 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.
36. Prior to issuance of grading permits, the developer shall submit wall/fence plans to be included in the Building and Safety submittal for review and approval consistent with the approved plans, the Planned Unit Development Guidelines, the Landscape Requirements and the Municipal Code.
37. 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:
 - a. The name (if applicable) and address of the development.
 - b. The developer's name, address, and a 24-hour emergency telephone number.
38. Prior to issuance of any building permit, all Conditions of Approval and Mitigation Measures shall be printed on the building plans.
39. 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.
40. 41. Prior to the issuance of building permits, final landscape and irrigation plans shall be submitted for review and approved by the Planning Division for the following:
 - a. Areas maintained by the Homeowner's Association including parks, site entry driveways, and other on-site landscaping;
 - b. Areas along Iris Avenue;
 - c. Trail Easement (per Parks and Community Services design standards); and
 - d. Front yards.

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.

The plans shall be prepared in accordance with the City's Landscape Development

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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Guidelines and the Planned Unit Development Guidelines.

A detailed, on-site, computer generated, point-by-point comparison lighting plan shall be provided with and integrated into the landscape plan. The plan shall include all project lighting within the community to include street lights, exterior building lights, parking area lighting and park lights. 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.

41. 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)
42. 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)
43. 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)
44. 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.
45. Photometric Plans shall be submitted to the Building and Safety Division for review and approval as part of the lighting and electrical building plan submittal.
46. 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)

Prior to Building Final or Occupancy

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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47. 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).
48. Prior to building final, Planning approved/stamped landscape plans shall be provided to the Community Development Department – Planning Division on a CD disk.
49. 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).

Building Division

50. 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.
51. Contact the Building Safety Division for permit application submittal requirements.
52. Any construction within the city shall only be as follows: Monday through Friday seven a.m. to seven p.m.(except for holidays which occur on weekdays), eight a.m. to four p.m.; weekends and holidays (as observed by the city and described in the Moreno Valley Municipal Code Chapter 2.55), unless written approval is first obtained from the Building Official or City Engineer.
53. Building plans submitted shall be signed and sealed by a California licensed design professional as required by the State Business and Professions Code.
54. The proposed development shall be subject to the payment of required development fees as required by the City's current Fee Ordinance at the time a building application is submitted or prior to the issuance of permits as determined by the City.
55. 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.
56. 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 2019 CBC.

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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57. 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 2019 California Plumbing Code, Table 422.1. The occupant load and occupancy classification shall be determined in accordance with the California Building Code.
58. The proposed residential project shall comply with The 2019 California Green Building Standards Code, Section 4.106.4, mandatory requirements for Electric Vehicle Charging Station (EVCS).
59. 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)

FIRE DEPARTMENT**Fire Prevention Bureau**

60. All Fire Department access roads or driveways shall not exceed 12 percent grade. (CFC 503.2.7 and MVMC 8.36.060[G])
61. The Fire Department emergency vehicular access road shall be (all weather surface) capable of sustaining an imposed load of 80,000 lbs. GVW, based on street standards approved by the Public Works Director and the Fire Prevention Bureau. The approved fire access road shall be in place during the time of construction. Temporary fire access roads shall be approved by the Fire Prevention Bureau. (CFC 501.4, and MV City Standard Engineering Plan 108d)
62. The angle of approach and departure for any means of Fire Department access shall not exceed 1 ft drop in 20 ft (0.3 m drop in 6 m), and the design limitations of the fire apparatus of the Fire Department shall be subject to approval by the AHJ. (CFC 503 and MVMC 8.36.060)
63. Prior to issuance of Building Permits, the applicant/developer shall provide the Fire Prevention Bureau with an approved site plan for Fire Lanes and signage. (CFC 501.3)
64. Prior to issuance of Certificate of Occupancy or Building Final, "Blue Reflective Markers" shall be installed to identify fire hydrant locations in accordance with City specifications. (CFC 509.1 and MVLT 440A-0 through MVLT 440C-0)
65. Existing fire hydrants on public streets are allowed to be considered available. Existing fire hydrants on adjacent properties shall not be considered available unless fire apparatus access roads extend between properties and easements are

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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- established to prevent obstruction of such roads. (CFC 507, 501.3) a - After the local water company signs the plans, the originals shall be presented to the Fire Prevention Bureau for signatures. The required water system, including fire hydrants, shall be installed, made serviceable, and be accepted by the Moreno Valley Fire Department prior to beginning construction. They shall be maintained accessible.
66. Final fire and life safety conditions will be addressed when the Fire Prevention Bureau reviews building plans. These conditions will be based on occupancy, use, California Building Code (CBC), California Fire Code (CFC), and related codes, which are in effect at the time of building plan submittal.
 67. The Fire Code Official is authorized to enforce the fire safety during construction requirements of Chapter 33. (CFC Chapter 33 & CBC Chapter 33)
 68. Fire lanes and fire apparatus access roads shall have an unobstructed width of not less than twenty-four (24) feet and an unobstructed vertical clearance of not less than thirteen (13) feet six (6) inches. (CFC 503.2.1 and MVMC 8.36.060[E])
 69. Prior to issuance of Certificate of Occupancy or Building Final, the applicant/developer shall install a fire sprinkler system based on square footage and type of construction, occupancy or use. Fire sprinkler plans shall be submitted to the Fire Prevention Bureau for approval prior to installation. (CFC Chapter 9, MVMC 8.36.100[D])
 70. Prior to issuance of the building permit for development, independent paved access to the nearest paved road, maintained by the City shall be designed and constructed by the developer within the public right of way in accordance with City Standards. (MVMC 8.36.060, CFC 501.4)
 71. The minimum number of fire hydrants required, as well as the location and spacing of fire hydrants, shall comply with the C.F.C., MVMC, and NFPA 24. Fire hydrants shall be located no closer than 40 feet to a building. The size and number of outlets required for the approved fire hydrants are (6" x 4" x 2 ½") (CFC 507.5.1, 507.5.7, Appendix C, NFPA 24-7.2.3, MVMC 912.2.1)
 72. During phased construction, dead end roadways and streets which have not been completed shall have a turn-around capable of accommodating fire apparatus. (CFC 503.1 and 503.2.5)
 73. If construction is phased, each phase shall provide an approved emergency vehicular access way for fire protection prior to any building construction. (CFC 501.4)
 74. Plans for private water mains supplying fire sprinkler systems and/or private fire

CONDITIONS OF APPROVAL

Tentative Tract Map (PEN20-0063)

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- hydrants shall be submitted to the Fire Prevention Bureau for approval. (CFC 105 and CFC 3312.1)
75. Prior to issuance of Certificate of Occupancy or Building Final, all residential dwellings shall display street numbers in a prominent location on the street side of the residence in such a position that the numbers are easily visible to approaching emergency vehicles. The numbers shall be located consistently on each dwelling throughout the development. The numerals shall be no less than four (4) inches in height and shall be low voltage lighted fixtures. (CFC 505.1, MVMC 8.36.060[1])
 76. Single Family Dwellings. Schedule "A" fire prevention approved standard fire hydrants (6" x 4" x 2 ½") shall be located at each intersection of all residential streets. Hydrants shall be spaced no more than 500 feet apart in any direction so that no point on the street is more than 250 feet from a hydrant. Minimum fire flow shall be 1000 GPM for 1 hour duration of 20 PSI. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, serving one and two-family residential developments, standard fire hydrants shall be provided at spacing not to exceed 1000 feet along the tract boundary for transportation hazards. (CFC 507.3, Appendix B, MVMC 8.36.060).
 77. Prior to construction, all traffic calming designs/devices must be approved by the Fire Marshal and City Engineer.
 78. Prior to issuance of Building Permits, the applicant/developer shall furnish one copy of the water system plans to the Fire Prevention Bureau for review. Plans shall: a. Be signed by a registered civil engineer or a certified fire protection engineer; b. Contain a Fire Prevention Bureau approval signature block; and c. Conform to hydrant type, location, spacing of new and existing hydrants and minimum fire flow required as determined by the Fire Prevention Bureau. The required water system, including fire hydrants, shall be installed, made serviceable, and be accepted by the Moreno Valley Fire Department prior to beginning construction. They shall be maintained accessible.
 79. Prior to construction, all locations where structures are to be built shall have an approved Fire Department access based on street standards approved by the Public Works Director and the Fire Prevention Bureau. (CFC 501.4)
 80. Prior to issuance of building permits, plans specifying the required structural materials for building construction in high fire hazard severity zones shall be submitted to the Fire Prevention Bureau for approval. (CFC, 4905)
 81. Prior to issuance of Building Permits, plans for structural protection from vegetation fires shall be submitted to the Fire Prevention Bureau for review and approval. Measures shall include, but are not limited to: noncombustible barriers (cement or

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block walls), fuel modification zones, etc. (CFC Chapter 49)

PUBLIC WORKS DEPARTMENT**Land Development**

82. Aggregate slurry, as defined in Section 203-5 of Standard Specifications for Public Works Construction, shall be required prior to 90% security reduction or the end of the one-year warranty period of the public streets as approved by 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.
83. 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]
84. The final approved conditions of approval (COAs) issued and any applicable Mitigation Measures by the Planning Division shall be photographically or electronically placed on mylar sheets and included in the Grading and Street Improvement plans.
85. 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

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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.

86. 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.
87. 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]
88. 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]
89. 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.
90. A storm drain manhole shall be placed at the right-of-way line to mark the beginning of the publicly maintained portion of any private storm drain.
91. For single family residential subdivisions, all lots shall drain to the street at a minimum surface grade of 2.0% and on-site drainage shall be conveyed onto the street with subsurface drains at a minimum grade of 0.5% per current City Standards MVSI-152 and MVSI-153A. No cross-lot or over the public sidewalk drainage shall be allowed.
92. 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. Final (Tract) 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 grading permit issuance);

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- d. Public improvement plan (e.g., street/storm drain w/ striping, RCFC storm drain, sewer/water, etc.) (prior to map approval);
 - e. Final drainage study (prior to map approval);
 - f. Final WQMP (prior to grading plan approval);
 - g. Legal documents (e.g., easement(s), dedication(s), etc.) (prior to Building Permit issuance);
 - h. As-Built revision for all plans (prior to Occupancy release);
93. 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.
94. 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)]

Prior to Grading Plan Approval

95. Resolution of all drainage issues shall be as approved by the City Engineer.
96. 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.
97. 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

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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.

98. 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.
99. For any offsite grading, the developer shall submit written permission from adjacent property owners. If applicable, all areas outside of the project boundaries where grading results in slopes, the developer shall submit recorded slope easements.
100. The developer shall pay all remaining plan check fees.
101. Landscape & Irrigation plans (prepared by a registered/licensed landscape architect) for water quality BMPs shall be submitted for review and approved by the City Engineer per the current submittal requirements, if applicable.
102. 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.
103. 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.
104. The final project-specific Water Quality Management Plan (WQMP) shall be consistent with the conditionally approved P-WQMP, as well as in full conformance with the document: "Water Quality Management Plan - A Guidance Document for the Santa Ana Region of Riverside County" dated October 22, 2012. The F-WQMP shall be submitted and approved prior to application for and issuance of grading permits. 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.
 - a. The Applicant has proposed to incorporate the use of Bioretention. Final

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design and sizing details of all BMPs must be provided in the first submittal of the F-WQMP. The Applicant acknowledges that more area than currently shown on the plans may be required to treat site runoff as required by the WQMP guidance document and may result in the lost of lot(s).

b. The Applicant shall substantiate the applicable Hydrologic Condition of Concerns (HCOC) in Section F of the F-WQMP. <The HCOC designates that the project will be exempt from mitigation requirements based on Exemption 3>.

c. All proposed LID BMP's shall be designed in accordance with the RCFC&WCD's Design Handbook for Low Impact Development Best Management Practices, dated September 2011.

d. The proposed LID BMP's as identified in the project-specific P-WQMP shall be incorporated into the Final WQMP.

e. The NPDES notes per City Standard Drawing No. MVFE-350-0 shall be included in the grading plans.

f. Post-construction treatment control BMPs, once placed into operation for post-construction water quality control, shall not be used to treat runoff from construction sites or unstabilized areas of the site.

g. Prior to precise grading plan approval, the grading plan shall show any proposed trash enclosure to include a cover (roof) and sufficient size for dual bin (1 for trash and 1 for recyclables). The architecture shall be approved by the Planning Division and any structural approvals shall be made by the Building and Safety Division.

Prior to Grading Permit

105. 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)]
106. 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.
107. A digital (pdf) copy of all approved grading plans shall be submitted to the Land Development Division.
108. Security, in the form of a cash deposit (preferable), bond 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)]
109. Security, in the form of a cash deposit (preferable), bond or letter of credit shall be submitted as a guarantee of the completion of the grading operations for the project. [MC 8.21.070]

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110. The developer shall pay all applicable inspection fees.
111. All necessary permits from Department of Water Resources for grading, storm drain construction, etc. shall be obtained, if applicable.

Prior to Map Approval

112. All proposed street names shall be submitted for review and approved by the City Engineer, if applicable. [MC 9.14.090(E.2.k)]
113. 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 single-family residential development, bylaws and articles of incorporation shall also be included as part of the maintenance agreement for any water quality BMPs.
114. 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 required to be constructed as part of the project.
115. After recordation, a digital (pdf) copy of the recorded map shall be submitted to the Land Development Division.
116. Resolution of all drainage issues shall be as approved by the City Engineer.
117. 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]
118. 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.

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119. 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 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]
120. 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]
121. All public improvement plans required for this project shall be approved by the City Engineer in order to execute the Public Improvement Agreement (PIA).
122. 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.

Prior to Improvement Plan Approval

123. 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

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with current ADA requirements, unless otherwise approved by the City Engineer.

124. The developer shall submit clearances from all applicable agencies, and pay all applicable plan check fees.
125. The street improvement plans shall comply with current City policies, plans and applicable City standards (i.e. MVSI-160 series, etc.) throughout this project.
126. Any missing or deficient existing improvements along the project frontage within 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 is per current City Standards; additional signing & striping to accommodate increased traffic imposed by the development, etc.
127. 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 may be allowed for emergency repairs or as specifically approved in writing by the City Engineer. Special requirements shall be imposed for repaving, limits to be determined by the City Engineer.
128. 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.
129. 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.
130. 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.

Prior to Encroachment Permit

131. A digital (pdf) copy of all approved improvement plans shall be submitted to the Land Development Division.
132. All applicable inspection fees shall be paid.

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133. 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 may be allowed for emergency repairs or as specifically approved in writing by the City Engineer. Special requirements shall be imposed for repaving, limits to be determined by the City Engineer.
134. Any work performed within public right-of-way requires an encroachment permit.

Prior to Building Permit

135. 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.
136. For all subdivision projects, the map shall be recorded (excluding model homes). [MC 9.14.190]
137. 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 ADA 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.
138. 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 (excluding models homes).

Prior to Occupancy

139. All outstanding fees shall be paid.
140. 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.
141. The final/precise grade certification shall be submitted for review and approved by the City Engineer.

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142. 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 (SL-2), signing, striping, under sidewalk drains, landscaping and irrigation, medians, pavement tapers/transitions and traffic control devices as appropriate.
 - b. Grind and overlay full street width along the project's frontage shall be required.
 - c. Storm drain facilities including, but not limited to: storm drain pipe, storm drain laterals, open channels, catch basins and local depressions.
 - d. City-owned utilities.
 - e. Sewer and water systems including, but not limited to: sanitary sewer, potable water and recycled water.
 - f. Under grounding of all existing and proposed utilities adjacent to and on-site. [MC 9.14.130]
 - g. Relocation of overhead electrical utility lines including, but not limited to: electrical, cable and telephone.
143. 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 last 20% or last 5% (whichever is greater, unless as otherwise determined by the City Engineer).
144. 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.
145. 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.

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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.

146. Prior to the first occupancy, the developer shall be required to construct Riverside County Flood Control and Water Conservation District's Sunnymead MDP Line M-2 from its current terminus to the project's westerly boundary.

Special Districts Division

147. The ongoing maintenance of any landscaping required to be installed behind the curb shall be the responsibility of the property owner.
148. MAJOR INFRASTRUCTURE FINANCING DISTRICT. This project has been identified to potentially be included in the formation of a special financing district for the construction and maintenance of major infrastructure improvements which may include but are not limited to thoroughfares, bridges, and certain flood control 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 or annexation into the district, the qualified elector(s) will not protest the formation or annexation, but will retain the right to object to any eventual tax/assessment/fee that is not equitable should the financial burden of the tax/assessment/fee not be reasonably proportionate to the benefit the affected property obtains from the improvements to be installed and/or maintained. The Developer must notify the Special Districts Division at 951.413.3480 or at specialdistricts@moval.org 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 minimum 90-day process in compliance with the provisions of Article 13C of the California Constitution.
149. The parcel(s) associated with this project have been incorporated into the Moreno Valley Community Services District Zone A (Parks & Community Services) and Zone C (Arterial Street Lighting). All assessable parcels therein shall be subject to annual parcel taxes for Zone A and Zone C for operations and capital improvements.
150. This project is conditioned 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 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

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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 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.

The financial option selected shall be in place prior to the issuance of the first building permit for the project.

151. 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 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 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.

152. 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

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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 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.)

153. 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 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 (Ord. 708 Section 3.1, 2006) & City of Moreno Valley Municipal Code Title 3, Section 3.50.050.)

Transportation Engineering Division

154. Private streets' road width shall be a minimum of 24-feet with no parking allowed on either side. Applicant shall provide signage (NO PARKING) along the streets per current MUTCD standards.
155. The design and proposed location of the project driveways shall conform to City of Moreno Valley Standard No. MVSI-112C-0 for Commercial Driveway Approaches and Section 9.11.080, and Table 9.11.080-14 of the City's Municipal Code - Design Guidelines or as approved by the City Engineer. Applicant needs to show driveways per City Standard, including additional dedications for public improvements.
156. Right-of-way at driveway(s) entrances shall accommodate all public improvements (i.e. curb ramps, utility controllers, etc.); applicant shall provide dedication as required and appropriate. Show driveways per City standards (curb radii, ramps, grades, so for.)
157. Any proposed driveway gate shall be set back at a minimum of 60 feet from the

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property line or as determined by the traffic study to provide sufficient storage length in front of the gate for entering traffic. Gate doors shall be rolling type or swing away from Iris Avenue.

1. Shown gate for westerly driveway needs to swing away from Iris Avenue.

2. Main entrance storage length for visitors is not adequate, location of visitor call box needs to be relocated in order to provide at least two (2) cars on the visitor lane.

158. Applicant shall plan to accommodate gates at entrances and provide road width and improvements accordingly.

For main access point, easterly driveway at proposed Street A, the entrance design shall provide the following:

a. Gate shall be set back a minimum of 60 feet from the property line.

b. A turnaround area - Applicant needs to provide vehicle turning template to show adequacy of provided turnaround area.

c. A storage lane with a minimum of 60 feet queuing length for entering traffic.

d. A second storage lane for visitors to stop and use a call box (or other service) for permission to enter the community. Visitor storage lane seems insufficient due to location of call box, relocate call box or propose design with adequate vehicle storage.

e. No Parking signs posted in the turnaround area.

f. A separate pedestrian entry.

g. Presence loop detectors (or another device) within 1 to 2 feet of the gate that ensures that the gate remain open while any vehicle in in the queue.

h. Slide doors or gate doors that swing away from incoming traffic.

i. A median will be required as traffic calming measure into residential development. Median shall be kept within private property and shall not encroach onto public right-of-way.

159. Conditions of approval may be modified or added if a phasing plan is submitted for this development.

160. All project driveways to public streets shall conform to Section 9.11.080, and Table 9.11.080-14 of the City's Development Code – Design Guidelines and City of Moreno Valley Standard Plans No. MVS1-112A~D-0 for commercial driveway approaches.

161. The 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 in 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

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Tentative Tract Map (PEN20-0063)

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- ensures that the gates remain open while any vehicle is in the queue. All of these items shall be kept in working order.
162. 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.
 163. During construction activity, developer is responsible for regularly scheduled street sweeping per approved street sweeping schedule.
 164. Prior to issuance of a construction permit, construction traffic control plans prepared by a qualified, registered Civil or Traffic engineer may be required for plan approval or as required by the City Traffic Engineer.
 165. Prior to final approval of any landscaping or monument sign plans, the project plans shall demonstrate that sight distance at the project driveways conforms to City Standard Plan No. MVSI-164A, B, C-0.
 166. Prior to the final approval of the street improvement plans, a signing and striping plan shall be prepared per City of Moreno Valley Standard Plans - Section 4 for all streets within the project area.
 167. Prior to issuance of a Building Final or Certificate of Occupancy, all approved street improvements shall be installed to the satisfaction of the City Engineer.
 168. Prior to issuance of a Building Final or Certificate of Occupancy, all approved signing and striping shall be installed per current City Standards

PARKS & COMMUNITY SERVICES DEPARTMENT

169. This project is subject to current Quimby Fees.
170. Bikeways shall not be shared with any above ground utilities, blocking total width access.
171. According to the General Plan and City's Juan Bautista de Anza trail plan, project improvements include a Class I Bikeway, walkway, and landscaped area. City shall construct paved Class I bike trail only. Developer shall design and construct landscape and irrigation improvements for the Juan Bautista de Anza trail greenbelt, including lighting along the trail. Landscaping and irrigation shall be maintained by City following acceptance of the public improvements into the City's Community Services District. The greenbelt shall conform to City of Moreno Valley standard plans and specifications, "CalTrans Design Manual," and Department of Water Resources (DWR) requirements. The developer shall comply with the following conditions:

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Tentative Tract Map (PEN20-0063)

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- a. Concurrent with the recordation of the final map, an easement for trail purposes shall be dedicated to the City of Moreno Valley Community Services District.
 - b. Bonds for construction of the landscaping within the project and these COA's shall be provided (per Parks and Community Services criteria) concurrent with the Subdivision Improvements Agreement process.
 - d. Plans for improvements at the greenbelt shall be submitted and approved by the Director of Parks and Community Services or designee prior to the approval of Precise Grading Plans.
 - e. Prior to the issuance of any building permits, detailed final plans for the greenbelt, street improvement, and fence or wall shall be reviewed and approved by the Director of the Parks and Community Services Department or his/her designee.
 - g. Where feasible, walkways from the project may connect to the bikeway/walkway.
 - f. Landscape improvements shall be surveyed and staked by the developer's Civil Engineer. The landscape improvements shall be inspected and approved by the Director of Parks and Community Services or designee prior to the issuance of any building permits.
 - g. Eight sets of complete park and/or trail plans shall be submitted to Parks and Community Services for routing. Adjacent landscaping and walls shall be shown on the plans. Final construction plans and details require wet stamped and signed mylars, two sets of bond copies from the City signed mylars, and AutoCAD.dwf and PDF files on CD.
 - h. Construction of landscape improvements shall begin no later than issuance of 30% building permits and be completed no later than issuance of 70% building permits.
172. All street crossings for Class-I Bikeways shall be signed with approved signage.
173. In order to prevent the delay of building permit issuance, any deviation from materials shall be submitted to Parks and Community Services and approved in writing (at the Department's discretion) 60-days prior to the commencement of construction. Any unauthorized deviation from the approved plan and/or the City's specifications and/or Conditions of Approval may result in the holding of building permits and/or building finals.
174. All inspections shall be requested two (2) working days' in advance from the Parks and Community Services Department at the time of rough and precise grading, fence/wall installation, curb and drainage, flatwork, mulch installation, graffiti coating, soil preparation, irrigation placement, site electrical, weed abatement, planting, and final inspection. Failure to schedule inspections may result in cessation of work and/or re-inspection fees/penalties.

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175. This project is subject to current Development Impact Fees. Section 3.38.150 of the City's Municipal Code allows for the developer to receive credits for qualifying public improvements. For consideration of a DIF credit, the developer shall provide an Architect's Cost Estimate. The developer's maximum credit amount is based on the lower of the DIF Study Costs, the Architect's Estimate and the DIF Fee Obligation. Allowance of DIF credits is subject to City review and approval, and is not guaranteed by these Conditions of Approval.

Standard Conditions

176. Detailed final plans (mylars, PDF, and AutoCAD file on a DVD-R) for parks, trails/bikeways, fencing, and adjoining landscaped areas shall be submitted to and approved by the Director of Parks and Community Services, or his/her designee, prior to the issuance of any building permits. All plans are to include a profile showing grade changes.
177. Within the improvements for PCS, the applicant shall show all existing and planned easements on all maps and plans. Easements on City/CSD owned or maintained parks, trails, bikeways, and landscape shall be identified on each of these plans with the instrument number of the recorded easement.
178. Prior to recordation of the Final Map, the applicant shall post security to guarantee construction or modification of parks, trails and/or bikeways for the City/CSD. Copies of said documentation shall be provided to PCS, prior to the approval of the Final Map.
179. Applicable plan check and inspection fees shall be paid, per the approved City fee schedule.
180. A restriction shall be placed on lots that back up to City/CSD owned or maintained parks, trails, bikeways, and landscaped areas, preventing openings or gates accessing the City/CSD owned or maintained property. This shall be documented through Covenants, Conditions, and Restrictions (CC&R's). A copy of the CC&R's with this restriction noted shall be submitted and approved by the Director of Parks and Community Services or his/her designee, prior to the recordation of the Final Map.
181. The following plans require PCS written approval: Tentative tract/parcel maps; rough grading plans (including all Delta changes); Final Map; precise grading plans; street improvement plans; traffic signal plans; fence and wall plans; landscape plans for areas adjacent to bikeways; trail improvement plans. PCS will not approve any permits without review and approval of the above items.



IRIS PARK

SINGLE FAMILY DETACHED HOMES

MORENO VALLEY, CALIFORNIA

PUD GUIDELINES



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1.1 How to use this Document

This PUD guideline is for the design of homes within the **Iris Park** neighborhood.

The handbook includes both Standards and Guidelines. Standards are meant to provide information that is more definitive while Guidelines provide a vision for the project.

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1.2 Residential Design Standards

TABLE 1

30X75 LOT SETBACKS/MAX HEIGHT					
FRONT		ENTRY COURTYARD	SIDES	REAR	MAX HEIGHT
TO FRONT OF GARAGE	TO HOUSE	BLDG TO BLDG			
3'	24'	6'-2" MIN	3'-1"	12'-14'	35'

This table is provided for quick reference for setback and height information required within the project. Planning officials at the City of can also be helpful regarding determining setback and height requirements for special conditions.

TABLE 2

FLOOR PLAN/ELEVATION TO LOT RATIO	
1-100 LOTS	3 FLOOR PLANS WITH 4 ELEVATIONS EACH AND 4 COLOR SCHEMES PER ELEVATION

This table shows the mix of plan types and elevations suggested within the project to ensure and appropriate amount of variety along the street. However, alternate means of achieving this end are encouraged.

1.3 Residential Design Guidelines

Varied Plot Plans

Streets within the project should vary in their architectural character to create a sense of individual ownership and personality.

Make sure similar plans and elevations are plotted as far from one another as possible.

Homes with identical:

floor plan
elevation styles
color palette
orientation

should not be plotted within six (6) lots of one another on either side of the street. However, if one of those four (4) elements are changed, floor plans may be moved closer to one another as follows:

Different floor plans plotted next to one another shall provide different elevation styles with dissimilar color palettes

The same floor plan with different elevation styles, color palettes, and garage orientation can be plotted within two (2) lots of one another

The same floor plan with different elevation styles, color palettes, but the same garage orientation can be plotted within three (3) lots of one another

The same floor plan with different elevation styles, but similar color palettes, and the same garage orientation can be plotted within four (4) lots of one another

The same floor plan with the same elevation style, dissimilar color palettes, and different garage orientation can be plotted within five (5) lots of one another

Elevations & Front Yards

Minimum roof pitch 3:12

All windows and doors should be trimmed. Each elevation style should have a different trim design in keeping with the style of the home. This trim should be composed in accordance with the style.

Elevations should be painted in an architecturally authentic way based on the elevation style's historical precedents

Each elevation style should have a different roofing color.

Entry Courtyards should have a minimum width of 6'-2"

All elevations visible from streets or common open space should have the same level of detailing as is present on the front elevation.

Varied window grid patterns in each elevation style is recommended. The grid pattern should be historically accurate.

Front elevation siding/veneer, if different from that on the side elevations, should return a minimum of 3' down the side elevations.

Windows in garage doors should be optional

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A walkway should join principle entry doors directly to the public sidewalk

Trash & recycling bins should be screened fully with walls or fencing in keeping with the architectural style of the home

Composition shingle roofing should be 40 year minimum

Minimum plate heights:

9' for first & second floor

Foundation walls should be painted to match siding where visible from streets or common open space

Condenser units should be placed in private side yards to screen them from view

Massing

Minimize building height when possible and appropriate to the style of the home.

Try to use side to side roofs and hip main spans whenever possible to minimize the impact of the roof on neighboring homes.

Use single story porches & verandas against two story masses to help break them down.

Proportion

Individual building elements and masses should be sized in proportion to one another.

Entry elements can be proportioned so as to make them the dominant feature of an elevation.

To reduce the proportional dominance of garage doors on any elevation style, they should be more detailed in design so as to become an important part of the elevation's style - rather than a large block of uninteresting color.

Proportion plays an important part in authentically interpreting historically accurate styles. Pay close attention to the images presented in the style palette section for clues relating to each style's treatment of various design elements.

Scale

Scale is important in that elements of a building's composition need to be in balance, as do buildings sited next to one another. That is to say, one element of a building shouldn't be so dominant so as to "outweigh" other elements in a building's makeup. Likewise, a building on one site, should not dominate a building on an adjacent lot.

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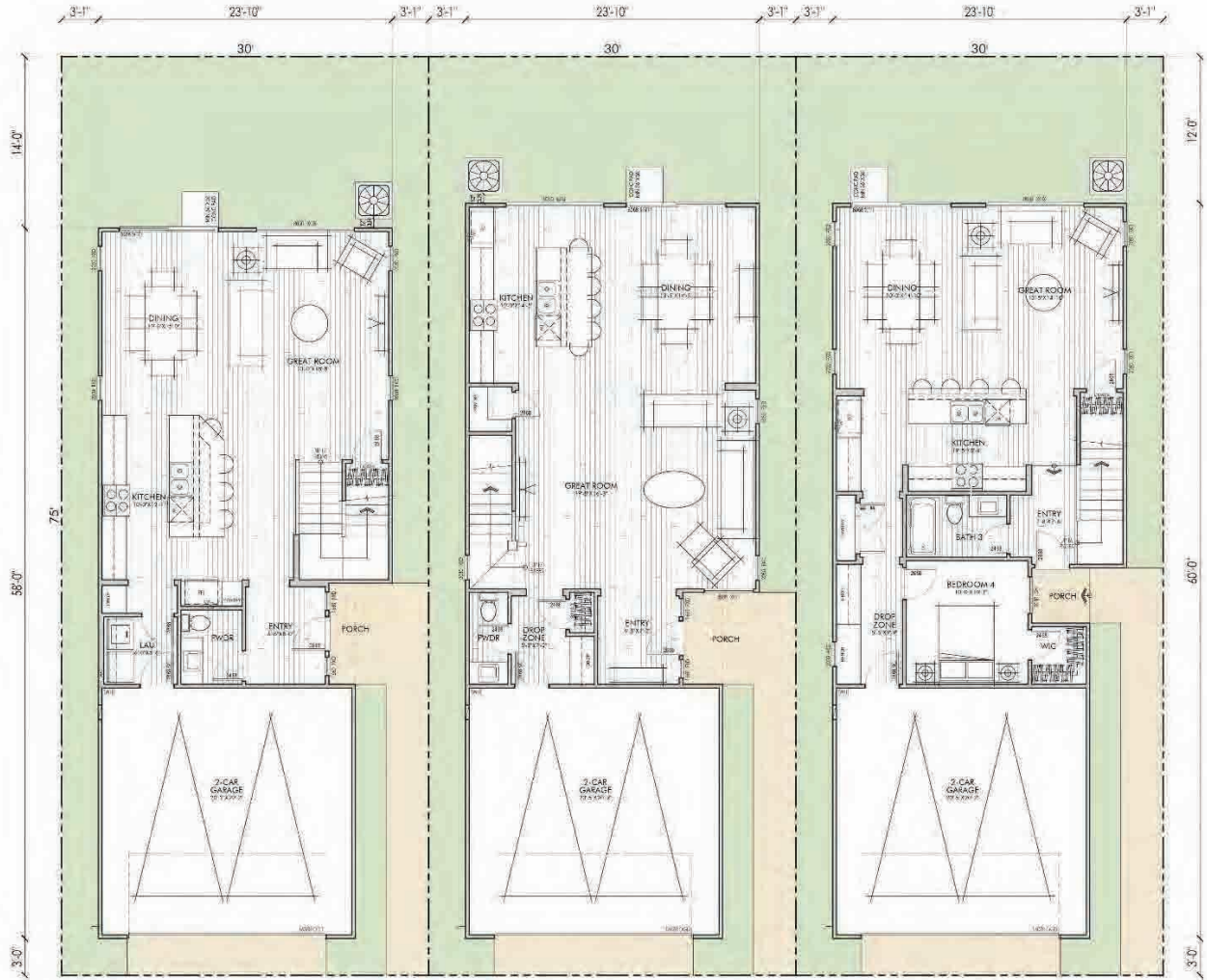
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1.4 Typical Lot Module

This typical lot module demonstrates how the homes are meant to be plotted throughout the project. Note the typical setback dimensions.



30x75 Lots
Fig. 1

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1.5 Style Palettes

This section will focus on the architectural styles envisioned for the housing in Iris Park. Three architectural characters are proposed including Farmhouse, Spanish & French. The following images & text will give an outline of each styles roof & detail hallmarks for reference.

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Typical FRENCH Elevation

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French

A French style house can be simple or more complex in form with steeper roof pitches and lower, “broken pitch” shed roofs covering porch elements to break down the scale of the structure. Gable, shed or hip dormers can be employed to give the home a more cottage feel. Also, bay and bow windows are hallmarks of the style. It is versatile as it works well with both single and two story masses.

Roof

Roofs usually have steeper pitches as gables, hips, or a combination of both. As mentioned, broken pitch sheds are common, as are dormers in various forms

Materials

Siding (sometimes combined with gable element being different than body)

- Stucco
- Lap siding
- Board & Batten
- Masonry elements including both brick and stone can be good choices to help breakdown the scale where needed. There is precedent for both wainscots and full height masonry

Roofing

- Concrete tile (slate or shake)
- Composition shingles (40 year – high profile)
- Small areas of metal may be acceptable

Fenestrations

Windows

- Windows should be vertical rectangles with a regular muntin pattern. 3050 SHs are a good choice and can be paired together to create more interesting glazing expressions to the street.
- Bay & bow window elements are also common as mentioned.

Doors

- Entry doors represent a great opportunity to create a sense of individuality. Doors can be of many different arrangements and may include glass in the upper panel with mulled sidelights.
- Garage doors should have a “carriage door” design with X bracing and arched top panels. Decorative hinge & handle hardware options are encouraged

Porches & Balconies

Columns

- Tapered classical round
- Square with smooth finished wood
- Masonry columns are common

Posts

- 6x8 with the 8” façade facing the street in single or multiple groupings
- Corbels with simple to complex designs

- Simple collar banding and skirting can help finish the posts at the top and bottom

Railings

- Various wood railings from simple to complex, including plank picket designs
- Painted metal from simple to complex

Detailing

- Shutters can be in a variety of design patterns, but usually more informal

- Gables vents & windows

- Flower boxes

- Exposed rafter tails, sometimes with shaped ends

Arched top or shed dormers

- Masonry sills & lintels at windows

Lighting

- Top to bottom tapered designs with grid patterns
- There is precedent for many different finishes

Colors

Body

- Light tones
- Middle tones
- Some precedent for dark tones

Trim

- Off whites
- Middle tones when paired with light tone bodies
- Dark tones when paired with middle tone bodies.

Accents

- Middle tones
- Dark tones
- Jewel tones

Windows

- Middle tones
- Dark tones

Roofs

- Middle tones
- Some precedent for dark tones

Doors

- Entry doors
 - Wood stain
 - Shutter color
- Garage doors
 - Trim color
 - Body color
 - Some precedent for shutter color

Masonry

- Brick Veneer: light and middle tones
- Stone Veneer: middle tones

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Typical FARMHOUSE Elevation

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Farmhouse

Drawn from the simplified Victorian farmhouses of the 19th century which dotted the midwestern US, the modern reinterpretation of this style has been popular in all areas of the country for some time. With variants of all types, the farmhouse style of today tends to emulate more cottage expressions to the street.

Roofs

Steep to low pitched gables. Dormers, especially shed, are acceptable, but not needed to create an authentic elevation. Broken pitches work well at porches to create a more subtle entry statement

Materials

Siding

- Board & Batten
- Lap siding
- Shingle siding
- Masonry elements including brick and stone are rare within the building composition except at porch ground planes and fireplace/chimneys

Roofing

- Concrete tile (slate or shake)
- Composition shingles (40 year – high profile)
- Small areas of metal are popular

Fenestrations

Windows

- Windows should be vertical rectangles and display more ordered muntin patterns. 3050 SHs are a good choice for most variants and can be paired together to create more interesting glazing expressions to the street. Shutters are rarely used, but can be used to broaden window statements.

-

Doors

- Entry doors tend to follow Victorian or Colonial precedents
- Garage doors should have a “carriage door” design with X bracing and arched top panels. Decorative hinge & handle hardware options are encouraged

Porches & Balconies

Columns

- Simple posts with corbels
- Square with smooth finished wood

Posts

- 6x8 with the 8” façade facing the street in single or multiple groupings
- Corbels are common
- Simple collar banding and high skirting can help finish the posts at the top and bottom

Railings

- Various wood railings from simple to complex, including turned pickets
- No railing is also appropriate to the style

Detailing

- Shutters, though rarely used, can be in a variety of design patterns, but usually more informal
- Gables vents & windows
- Flower boxes can be used as focal points
- Exposed rafter tails, sometimes with shaped ends

Lighting

- Simple boxy shapes with grids
- There is precedent for many different finishes

Colors

Body

- Light tones
- Light/Middle tones

Trim

- Off whites

Accents

- Grays
- Middle Jewel tones

Windows

- Off whites
- Black

Doors

- Entry doors
 - Wood stain
 - Shutter color
- Garage doors
 - Trim color
 - Body color
 - Some precedent for shutter color

Roofs

- Middle tones
- Dark tones

Masonry

- Light tones

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Typical SPANISH Elevation

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Spanish

Spanish style homes draw from several variants, but commonly have low pitched roofs in either gable or hip forms that sit atop simple rectangular forms organized in L, T or cruciform plans. Massing tends to be blocky and somewhat horizontal extending the composition laterally. This style works very well with both single and two story homes.

Roof

Roofs are usually low in pitch as gables or hips with some precedent for dropped sheds, sometimes in sweeping arcs at one side of an entry gable form

Materials

Siding

Stucco

Masonry elements are sometimes added on individual massing blocks to break down the composition

Roofing

Concrete tile (barrel or villa)

Fenestrations

Windows

Windows should be vertical rectangles with varied muntin patterns in the upper sash. 3050 SHs are a good choice for most variants and can be paired together to create more interesting glazing expressions to the street

Doors

- Arched entry doors are preferred, but square top with a single slatted panel in the middle also work well. Optional decorative hinge hardware is encouraged
- Garage doors can be simple vertical slatted designs with clavos & hinges, but more conventional doors with styles & rails are also common. An elliptical arch soffit above and forward of the door can further animate the elevation

Porches & Balconies

Columns

- Square or rectangular stucco finished box framed columns
- Masonry
 - Brick or stone can add texture to a porch colonnade

Posts

- 6x8 with the 8" façade facing the street in single or multiple groupings: corbels are acceptable, large collar banding and skirting can help finish the posts at the top and bottom

Railings

- Simple wood railings with square or turned pickets
- Spaced solid plank rails
- Decorative iron

Detailing

- Simple plank shutters
- Shaped, soffited eaves
- Wood rafter tails with shaped ends
- Various venting details based on terra cotta precedents in round, rectangular and triangular shapes
- Decorative iron pot racks
- Decorative tile insets and panels
- Battered finial towers
- Wood box out window seat elements
- “Stone” window trim surrounds

Lighting

- More elaborate vertical designs with dark metal and decorative glass

Colors

Body

- Off Whites
- Middle tones

Trim

- Middle tones
- Dark tones

Accents

- Middle tones
- Dark tones
- Jewel tones

Windows

- Middle tones
- Dark tones

Doors

- Entry doors
 - Wood stain
 - Shutter color
- Garage doors
 - Trim color
 - Body color
 - Some precedent for shutter color

Roofs

- Terra Cotta tones

Masonry

- Middle tones

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PROPOSED TREE LIST				
STREET TREE	BOTANICAL NAME	COMMON NAME	SIZE	WJ/COLS
IRIS AVENUE	CINNAMOMUM CAMPHORA	CAMPHOR TREE	36" BOX	Moderate
ENTRY DRIVE	CERCIS CANADENSIS FOREST PANEY	FOREST PANEY REDBUDD	24" BOX	Moderate
	LAGERSTROEMIA X TUSCARORA	CAPE MYRTLE	24" BOX	Moderate
	RHUS LANCEA	AFRICAN SUMAC	36" BOX	Low
PROJECT PERIMETER - SCREENING	CERCIS CANADENSIS FOREST PANEY	FOREST PANEY REDBUDD	24" BOX	Moderate
	PHOENIX DACTYLIFERA MESQUON	DATE PALM	18 BTH	Low
	PINUS ELDBARICA	AFGHAN PINE	36" BOX	Low
SIDE STREET AND STREET TERMINUS	LAGERSTROEMIA X TUSCARORA	CAPE MYRTLE	24" BOX	Moderate
	PINUS ELDBARICA	AFGHAN PINE	36" BOX	Low
	MAGNOLIA GRANDIFLORA ST. MARY	SOUTHERN MAGNOLIA	36" BOX	Moderate
	LAGERSTROEMIA X TUSCARORA	CAPE MYRTLE	24" BOX	Moderate
FITNESS PARK	ABUTILON X NERINA	HYBRID STRAUBERRY TREE	36" BOX	Moderate
	OLEA EUROPAEA SWAN HILL	SWAN HILL OLIVE	48" BOX	Low
	ROBINIA PSEUDOCACIA	PURPLE ROBE LOCUST	24" BOX	Low
	LELIS PARVIFLORA TRUE GREEN	TRUE GREEN CHINESE ELM	36" BOX	Low
COMMUNITY PARK	LAGERSTROEMIA X TUSCARORA	CAPE MYRTLE	24" BOX	Moderate
	OLEA EUROPAEA SWAN HILL	FRUITLESS OLIVE - MULTI-TRUNK	48" BOX	Low
	PHOENIX DACTYLIFERA MESQUON	DATE PALM	18 BTH	Low
	PODOCARPUS ELONGATUS ICEE BLUE	ICEE BLUE YELLOW-WOOD	24" BOX	Moderate
	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	36" BOX	Low
	ROBINIA PSEUDOCACIA	PURPLE ROBE LOCUST	24" BOX	Low

PROPOSED SHRUB LIST				
ALL PROPOSED SHRUBS WILL BE COMPLIANT WITH CAL GREEN REQUIREMENTS FOR WATER CONSERVING AND NON-INVASIVE AS DEFINED BY IPC.				
SHRUBS & GROUNDCOVER	BOTANICAL NAME	COMMON NAME	SIZE	WJ/COLS
SHRUBS & GROUNDCOVER	AGAVE ATTENUATA NOVA	FOXTAIL AGAVE	15 GAL	Vary Low
	ARCOSTAPHYLOS WOODS CAREPET	COMPACT MANZANITA	1 GAL	Low
	BOLDIARIA	BOLDIARIA	1 GAL	Low
	CALLISTEMON LITTLE JOHN	DWARF WEEPING BOTTLE BRUSH	1 GAL	Low
	CISTUS PURPUREUS	ORCHID ROCKROSE	1 GAL	Low
	DIANELLA TROPANICA	GOLDEN FLAX LILY	1 GAL	Moderate
	ENIPHORA DIVARICA	RED HOT FINGER	1 GAL	Low
	LANTANA X NEW GOLD	NEW GOLD LANTANA	1 GAL	Low
	LEUCOPHYLLUM FRUTESCENS	TEXAS SAGE	1 GAL	Low
	LIGULSTRUM LUCIDUM	GLASSY PRIVET	1 GAL	Moderate
	MIMALENERGIA REGINA	DEER GRASS	1 GAL	Moderate
	MYOPORUM PARVIFOLIUM	MYOPORUM	1 GAL	Low
	NANDINA DOMESTICA COMPACTA	DWARF HEAVENLY BAMBOO	1 GAL	Moderate
	OLEA LITTLE OLIVE	DWARF OLIVE	1 GAL	Low
	PINUS LITTLE PIN	PURPLE FOUNTAIN GRASS	1 GAL	Low
	RHAPHIDOPUS INDICA	INDIA HAWTHORN	1 GAL	Moderate
	ROSA CALIFORNICA	CALIFORNIA WILD ROSE	1 GAL	Low
	SANTOLINA CHAMAECYPARISSUS	LAVENDER COTTON	1 GAL	Low
	SALVIA LAVANDULIFOLIA	SPANISH SAGE	1 GAL	Low
	SENECIO SERPENS	BLUE CHALKSTICKS	1 GAL	Low
STRUTZIA REGINA	BIRDS OF PARADISE	1 GAL	Moderate	
SHRUBS IN WATER QUALITY DETENTION BASIN	CAREX PANSA	DUNE SEDGE	1 gal. at 12" O.C.	Moderate
	CHORODREPTALUM TECTORIUM	CAPE RUSH	1 gal. at 18" O.C.	Moderate
	LOPHANDRA PLATINUM BEAUTY	PLATINUM BEAUTY RUSH	1 gal. at 24" O.C.	Moderate
	PHILETIFLORA REGINA	PHILETIFLORA REGINA	1 gal. at 24" O.C.	Moderate
PUBLIC RIGHT-OF-WAY CURBS ADJACENT	ALOPE STRIATA	CORAL ALOE	1 gal. at 24" O.C.	Low
	FESTUCA OVINA GLAUCA	BLUE FESCUE	1 gal. at 12" O.C.	Moderate
	FESTUCA HAMPS	ATLAS FESCUE	1 gal. at 18" O.C.	Moderate
	LANTANA NEW GOLD	NEW GOLD LANTANA	1 gal. at 24" O.C.	Low
	RAPHIDOPUS CLARA	INDIAN HAWTHORN	1 gal. at 24" O.C.	Moderate
SCREENING OF ABOVE-GROUND UTILITIES	LIGULSTRUM TEXANUM	WAX-LEAF PRIVET - COLLIPP	15 gal. at 36" O.C.	Moderate
	PRUNUS C. BRIGHT & TIGHT	CAROLINA LAUREL CHERRY	15 gal. at 36" O.C.	Moderate
TURF AT COMMUNITY PARK	HYBRID BIRFLUDA TRUE GREEN	TURF GRASS	SCD	Low

- GENERAL PLANTING NOTES**
- ALL SHRUB AREAS SHALL RECEIVE A 3" MINIMUM LAYER OF BARK MULCH.
 - SCREENING NOTE:** SCREENING SHALL BE PROVIDED FOR ALL UTILITIES, INCLUDING TRANSFORMERS AND TELEPHONE BINS. NO UTILITIES SHALL CONFLICT WITH PLANTING.
 - IRRIGATION DESIGN SHALL COMPLY WITH AB1881 AND ESTIMATED ANNUAL WATER USE (EAWU) WILL NOT EXCEED MAX ANNUAL WATER USE (MAWA) CALCULATIONS.
 - LANDSCAPE WORK SHALL BE IN ACCORDANCE WITH CITY OF MORENO VALLEY DEVELOPMENT STANDARDS AND CODES. LANDSCAPE IMPROVEMENTS.
 - TREES WITHIN 6 FEET OF LANDSCAPE SHALL BE INSTALLED WITH APPROVED ROOT CONTROL BARRIER (16 FEET LENGTH EACH TREE).
 - PLANTER AREAS WILL BE ON A DRIP IRRIGATION. TREES WILL BE IRRIGATED BY A DEEP ROOT WATERING BUBBLER.
 - PROVIDE ROOT BARRIER ALONG IRIS AVENUE ADJACENT HARDSCAPES.

Attachment: Planned Unit Development Document [Revision 2] (4197 : Tentative Tract Map 37909 with a



Attachment: Planned Unit Development Document [Revision 2] (4197 : Tentative Tract Map 37909 with a

LINEAR PARK WITHIN EASEMENT
• PRELIMINARY DESIGN ONLY, FINAL DESIGN TO BE COORDINATED WITH THE CITY OF MORENO VALLEY

COMMUNITY FITNESS STATION
with EQUIPMENT on DG PAVING
(4) STATIONS SITE WIDE

6' HT. TUBULAR STEEL FENCE AT
EASEMENT BOUNDARY

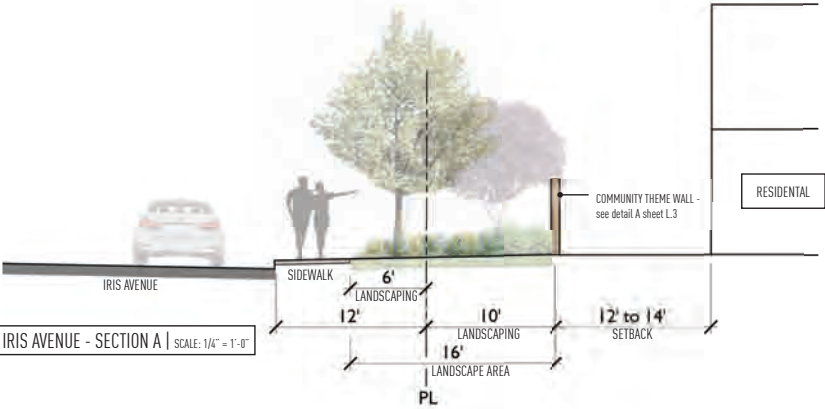
POTENTIAL CONNECTION TO
FUTURE LINEAR PARK

MULTI-PURPOSE SYNTHETIC
TURF LAWN

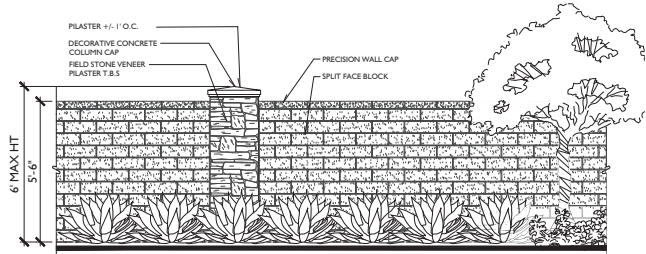
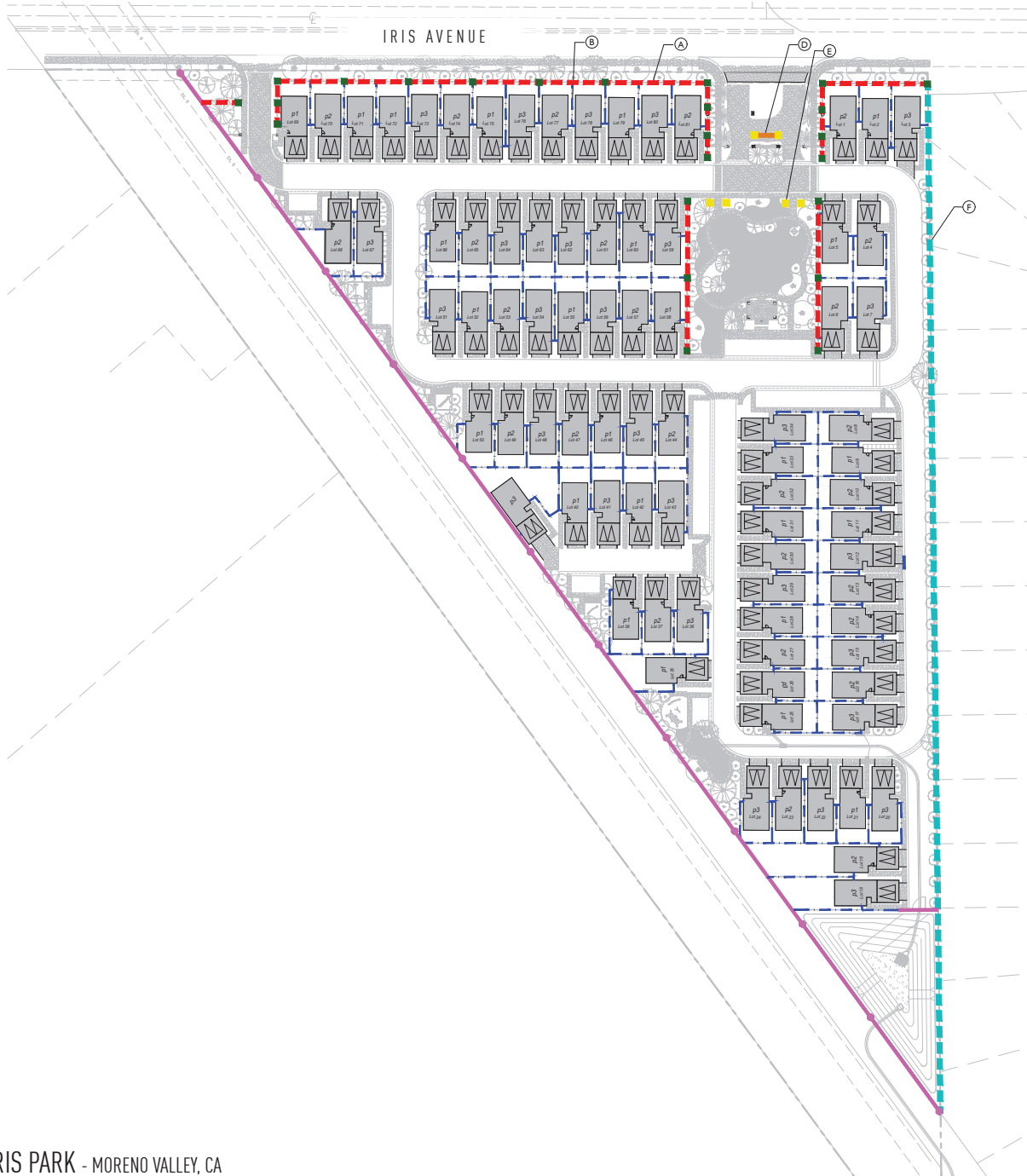
CONCRETE WALKING PATH with
BENCH SEATING

COMMUNITY THEME WALL -
see detail A sheet L.3

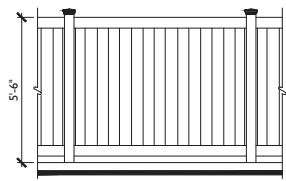
RESIDENTIAL



LOT B - FITNESS PARK ENLARGEMENT
±40' x ±135' (4,619 SF)



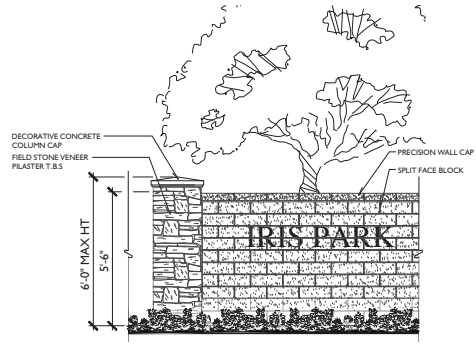
A COMMUNITY THEME WALL and PILASTER
3'-6" HIGH



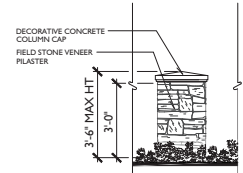
B HOMEOWNER VINYL PRIVACY FENCE (TAN COLOR)
3'-6" HIGH



C TUBULAR STEEL VIEW FENCE (BLACK) with PILASTER
6'-0" HIGH

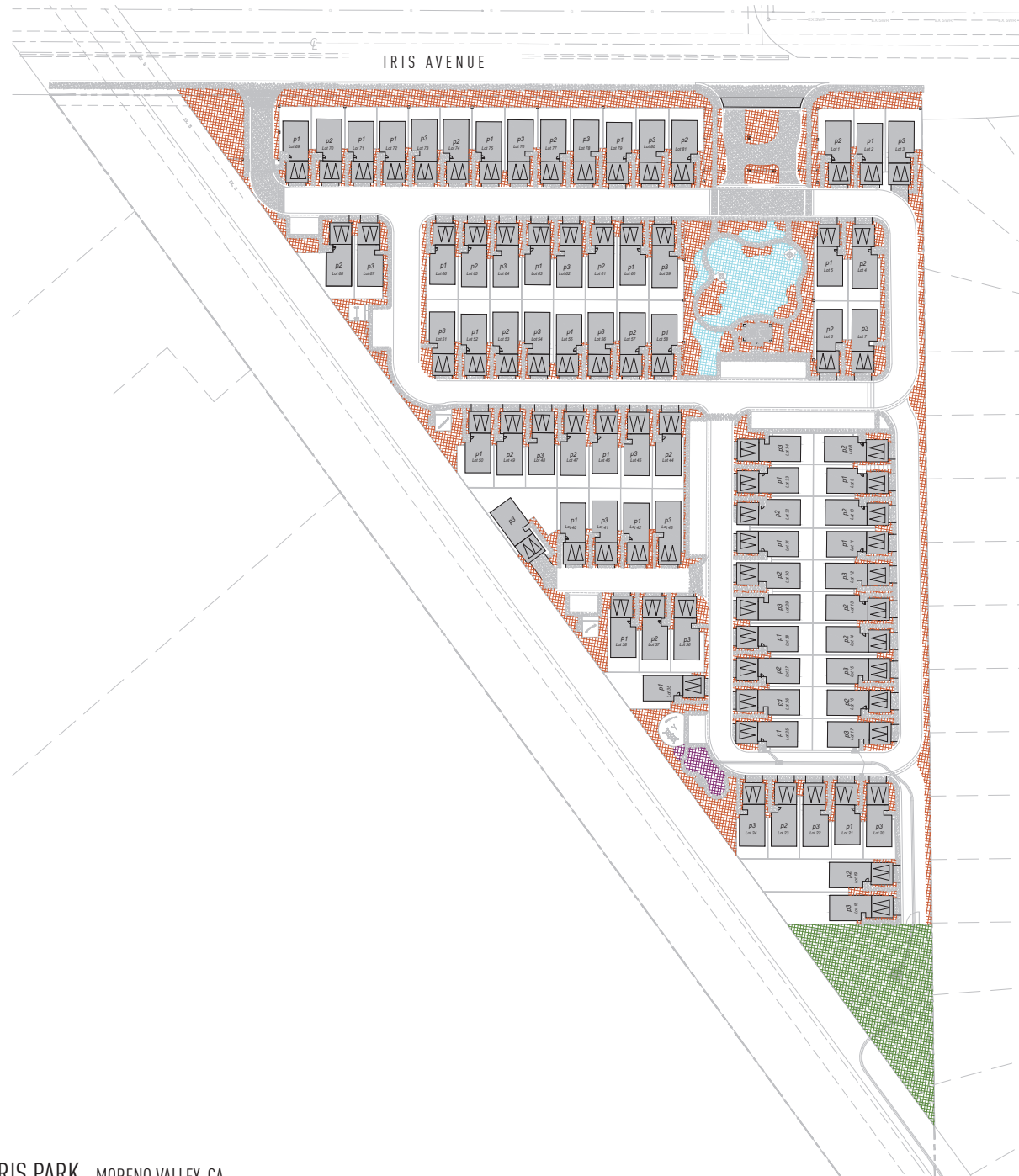


D ENTRY MONUMENT WALL and PILASTER
3'-6" HIGH



E LOW PILASTER at COMMUNITY PARK - PILASTER AS INDICATED ON PLAN
3'-6" HIGH

F EXISTING PERIMETER WALL TO REMAIN



IRRIGATION HYDROZONES:

- HYDRO-ZONE 1 - Common Landscape Areas - Enhanced Plant Palette - Sub Surface Irrigation - 48,251 s.f.**
- HYDRO-ZONE 2 - Water Quality Planting in Basin - Water Conserving Plant Palette - Overhead Spray - 12,932 s.f.**
- HYDRO-ZONE 3 - Synthetic Turf - 1,021 s.f.**
- SPECIAL LANDSCAPE AREA - Active Turf Area at Community Park - 6,463 s.f.**

TOTAL LANDSCAPE AREA: 68,667 s.f.

WATER CONSERVATION STATEMENT

PURPOSE: To provide the maintenance staff a mechanical device to distribute water in the most efficient manner and within a time frame with the activities of the community.

The irrigation system for each hydrozone will be automatic and incorporate emitters, bubblers and high efficiency low angle spray heads at turf only. may be employed where considered to be effective and feasible. Irrigation separated to allow for the systems operation in response to orientation a

Planting will be designed to enhance the visual character of the site and its elements. Plants shall be grouped with similar water, climatic and soil re water and create a drought responsive landscape.

Each hydrozone consists of moderate to low water consuming plants. In water consuming plants they shall be properly amended to retain moisture and to conserve water.

Plant Material within each hydrozone shall be specified in consideration o west exposures.

Soil shall be prepared and amended to provide for maximum moisture re percolation. Planted beds shall be mulched to retain soil moisture and re evapotranspiration.

To avoid wasted water, the controls will be overseen by a flow monitor t broken sprinkler heads to stop that station's operation, advancing to the In the event of pressure supply line breakage, it will completely stop the e system. All material will be non-flammable, with the exception of the brass p the backflow units. All work will be in the best acceptable manner in acco codes and standards prevailing in the industry.

- ### WATER CONSERVATION FEATURES
- THE FOLLOWING MEASURES WILL BE INCORPORATED INTO THE PROJECT TO CONSERVE WATER:
1. Installation of automatic 'smart' irrigation controller with rain-sensor.
 2. The use of low precipitation/low angle irrigation spray heads.
 3. The use of low water consuming plants.
 4. Soil amendment to achieve good soil moisture retention.
 5. Mulching to reduce evapotranspiration from the root zone.
 6. Installation of automatic irrigation system to provide deep-root watering to trees if required.

WATER USE CLASSIFICATION OF LAND (WUCOLS):

WUCOLS: Water Use Classification of Landscape California Cooperative Extension Publication and needs of landscape plants.

CROP FACTOR	PERCE
H - HIGH	70% -
M - MEDIUM	40% -
L - LOW	10% -
VL - VERY LOW	< 10%

WATER EFFICIENT LANDSCAPE WORKSHEET

Reference Evapotranspiration (ETo)	56.40	ETAF for MAWA	0.55	(F)				
Hydrozone # / Planting Description	Plant Factor (PF)	Irrigation Method*	Irrigation Efficiency (IE)†	ETAF (PF/IE)	Landscape Area (sq. ft.)	ETAF x Area	Es	
Regular Landscape Areas								
1 Common Areas-Low	0.30	drip	0.81	0.37	48,251	17,871		
2 Water Quality Basin-Medium	0.50	spray	0.75	0.67	12,932	8,621		
3 Synthetic Turf	-	-	-	-	1,021	-		
					Totals	61,183	26,492	
Special Landscape Areas								
Active Turf Area	-	-	-	1.00	6,463	6,463		
					Totals	6,463	6,463	
						ETWU Total		
						Maximum Allowed Water Allowance (MAWA)		

*Hydrozone #/Planting Description
E.g. 1) front lawn
2) new water-use plantings
3) medium water use planting

*Irrigation Method
overhead spray
or drip

*Irrigation Efficiency
0.75 for spray head
0.81 for drip

*ETWU (Annual Gallons Allowed) = ETo x 0.62 x ETAF x Area where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year. LA is the total landscape area in square feet. SLA is the total special landscape area in square feet, and ETAF is .50 for residential areas and 0.45 for non-residential areas.

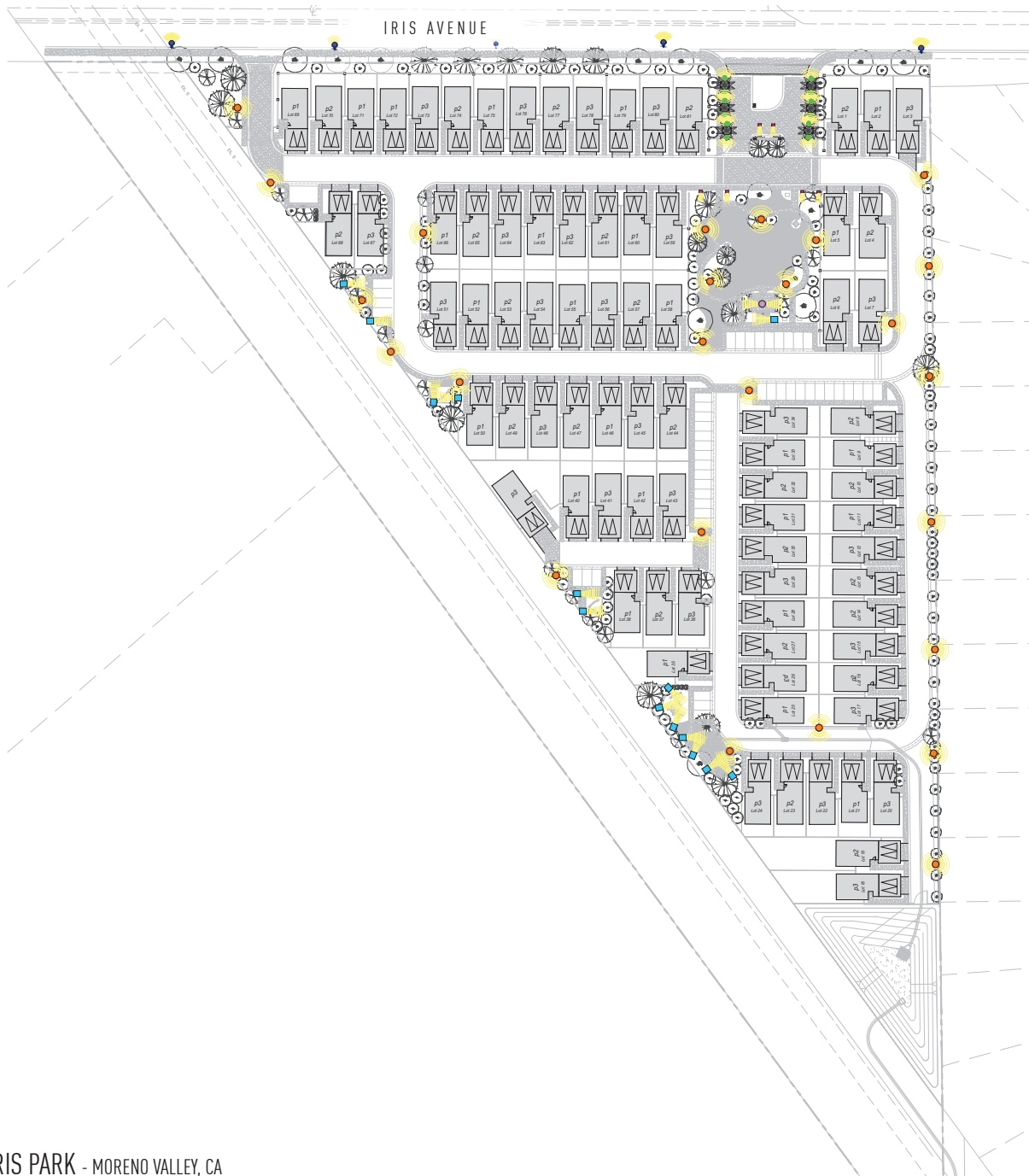
ETAF Calculations

Regular Landscape Areas	
Total ETAF x Area	36,492
Total Area	61,183
Average ETAF	0.63
All Landscape Areas	
Total ETAF x Area	31,955
Total Area	67,646
Sitewide ETAF	0.49

Average ETAF for Regular Landscape Area is 0.55 or below for residential areas, and below for non-residential areas.

Eto data for city of Moreno Valley from MWEO Appendix A

Attachment: Planned Unit Development Document [Revision 2] (4197 : Tentative Tract Map 37909 with a



EXTERIOR LIGHTING LEGEND		
SYMBOL	TYPE/TECHNIQUE	LOCATION
	BOLLARD	COMMON AREA WALKWAYS
	POLE LIGHT	PRIVATE STREETS
	DOWN LIGHT	MOUNTED ON OVERHEAD PAVILION AT COMMUNITY PARK
	PALM TREE UPLIGHT	ENTRY DRIVE
	EXISTING LIGHT	IRIS AVENUE
	UPLIGHT	ENTRY DRIVE AND PARK ENTRY

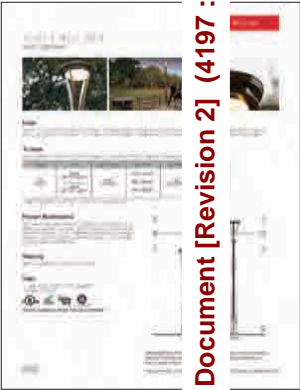
LIGHTING CONCEPT:

THE OUTDOOR LIGHTING CONCEPT IS TO PROVIDE LEVELS OF LIGHTING SUFFICIENT TO MEET SAFETY AND ORIENTATION NEEDS.

WITHIN PUBLIC AREAS LIGHTING WILL BE WARM COLORED AND UNOBTUSIVE. LIGHT SOURCES WILL BE LED 4000K - 4800K.

LIGHTING SOURCES FOR THE LANDSCAPE AND PAVED AREAS WILL BE CONCEALED AND THE LIGHTING INDIRECT NOT VISIBLE FROM A PUBLIC VIEWPOINT. LIGHT SOURCES SHOULD BE DIRECTED SO THAT IT DOES NOT FALL OUTSIDE THE AREA TO BE LIGHTED.


ALL EXTERIOR SURFACE AND ABOVE GROUND MOUNTED FIXTURES WILL BE SYMPHATIC AND COMPLEMENTARY TO THE ARCHITECTURAL THEME.



Attachment: Planned Unit Development Document [Revision 2] (4197 : Tentative Tract Map 37909 with a

landscape forms

Product Data Sheet



Harvest Luminaire

- The Harvest Series are available with an optional LED luminaire enclosure.
- The Harvest Luminaire is constructed of aluminum, available with coating.
- LED light has a color temperature of 3000K.
- Harvest Luminaire is available in 6' height and a 12' height.
- Pressure fit from the side top surface to the top of the luminaire.
- When installed, luminaire is mounted on top of the luminaire.
- When installed, luminaire is mounted on top of the luminaire.
- When installed, luminaire is mounted on top of the luminaire.
- When installed, luminaire is mounted on top of the luminaire.

Model	Height	Length	Weight	Material
HL-6	6'0"	48" x 24"	60 lbs	Aluminum
HL-12	12'0"	96" x 48"	120 lbs	Aluminum

Finishes

- Available in anodized aluminum colors.
- Available in powder coated colors.
- Available in stainless steel.

Designed by Jeff Deane

Landscape Forms, Inc. | 888.520.2546 | 1.200.396.3482 | 75001, Millersburg, Minnesota, MN 55555

PICNIC TABLE (TOTAL : 2)

landscape forms

PLAINWELL

Product Data Sheet



Bench

- The Plainwell Bench is available with steel construction of aluminum or wood.
- The maximum weight on the seat should not exceed 250 lbs.
- The maximum weight on the seat should not exceed 250 lbs.
- The maximum weight on the seat should not exceed 250 lbs.
- The maximum weight on the seat should not exceed 250 lbs.

Model	Material	Length	Width	Height	Weight
PL-6	Aluminum	6'0"	18"	18"	120 lbs
PL-12	Aluminum	12'0"	18"	18"	240 lbs
PL-6	Wood	6'0"	18"	18"	120 lbs
PL-12	Wood	12'0"	18"	18"	240 lbs

Litter Receptacles

- The litter receptacle is available in 30 gallon capacity, and includes a black powder coat finish.
- The litter receptacle is available in 30 gallon capacity, and includes a black powder coat finish.
- The litter receptacle is available in 30 gallon capacity, and includes a black powder coat finish.
- The litter receptacle is available in 30 gallon capacity, and includes a black powder coat finish.

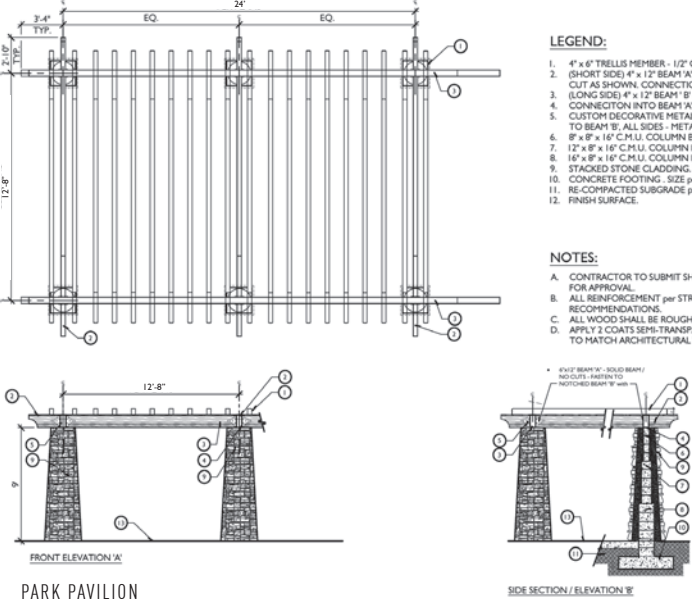
Model	Material	Length	Width	Height	Weight
LR-30	Aluminum	30"	18"	30"	120 lbs
LR-30	Wood	30"	18"	30"	120 lbs

Designed by Jeff Deane

Landscape Forms, Inc. | 888.520.2546 | 1.200.396.3482 | 75001, Millersburg, Minnesota, MN 55555

TRASH RECEPTACLE & BENCH (TRASH RECEPTACLE TOTAL : 2) (BENCH TOTAL : 2)

PARK PAVILION



LEGEND:

- 4" x 6" TRELLIS MEMBER - 1/2" CHAMFER END CUTS ALL SIDES AS SHOWN.
- (SHORT SIDE) 4" x 12" BEAM 'A' - NOTCH BEAM TO FIT INTO BEAM 'B', END CUT AS SHOWN. CONNECTION TO POSTS per STRUCTURAL.
- (LONG SIDE) 4" x 12" BEAM 'B' - END CUT AS SHOWN.
- CONNECTION INTO BEAM 'A' per STRUCTURAL.
- CUSTOM DECORATIVE METAL 'L' BRACKET - CONNECTION TO BEAM 'A' TO BEAM 'B', ALL SIDES - METAL TO BE PAINTED BLACK.
- 8" x 8" x 16" C.M.U. COLUMN BLOCK.
- 12" x 8" x 16" C.M.U. COLUMN BLOCK.
- 18" x 8" x 16" C.M.U. COLUMN BLOCK.
- STACKED STONE CLADDING, TBD.
- CONCRETE FOOTING, SIZE per STRUCTURAL ENGINEER.
- RE-COMPACTED SUBGRADE per STRUCTURAL SOILS REPORT.
- FINISH SURFACE.

NOTES:

- CONTRACTOR TO SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION FOR APPROVAL.
- ALL REINFORCEMENT per STRUCTURAL ENGINEER RECOMMENDATIONS.
- ALL WOOD SHALL BE ROUGH SAWN.
- APPLY 2 COATS SEMI-TRANSPARENT STAIN TO ALL WOOD. COLOR TO MATCH ARCHITECTURAL WOOD.

FRONT ELEVATION 'A'

SIDE SECTION / ELEVATION 'B'

landscape forms

Product Data Sheet



Park Tables

- The Park Tables are available with an optional LED luminaire enclosure.
- The Park Tables are constructed of aluminum, available with coating.
- LED light has a color temperature of 3000K.
- Park Tables are available in 6' height and a 12' height.
- Pressure fit from the side top surface to the top of the luminaire.
- When installed, luminaire is mounted on top of the luminaire.
- When installed, luminaire is mounted on top of the luminaire.
- When installed, luminaire is mounted on top of the luminaire.
- When installed, luminaire is mounted on top of the luminaire.

Model	Height	Length	Weight	Material
PT-6	6'0"	48" x 24"	60 lbs	Aluminum
PT-12	12'0"	96" x 48"	120 lbs	Aluminum

Finishes

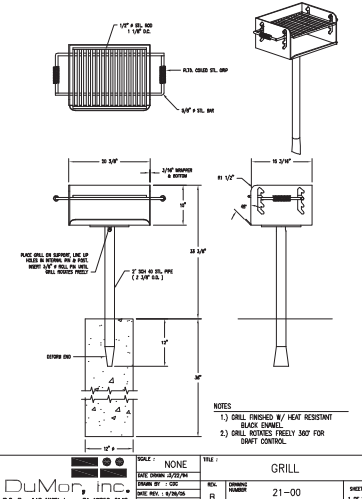
- Available in anodized aluminum colors.
- Available in powder coated colors.
- Available in stainless steel.

Designed by Jeff Deane

Landscape Forms, Inc. | 888.520.2546 | 1.200.396.3482 | 75001, Millersburg, Minnesota, MN 55555

PARK TABLES (TOTAL : 2)

PEDESTAL GRILL



GRILL

1.3 GRILL FINISHED BY HALF RESISTANT BLACK ENAMEL.

2.3 GRILL FINISHED GREEN PAINT FOR SMART CONTROL.

DRINK: NONE

DATE DRAWN: 02/20/21

DRAWN BY: T. SHER

CHECK BY: J. KIMMEL

REV. BY: J. SHER

REV. NO.: 2

SCALE: 1" = 1'-0"

SHEET: 1 OF 2

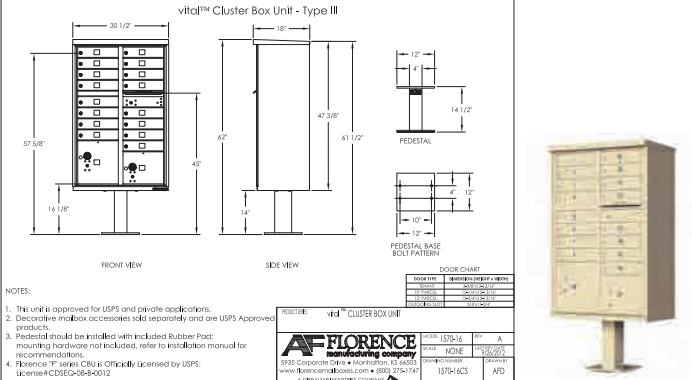
DuMor, Inc.

P.O. Box 142, Millersburg, PA 17098-0142

PEDESTAL GRILL (TOTAL : 2)



MAILBOX KIOSK



vital™ Cluster Box Unit - Type III

FRONT VIEW

SIDE VIEW

DOOR CHART

Model	Material	Length	Width	Height	Weight
V3	Aluminum	30"	18"	62"	120 lbs
V6	Aluminum	30"	18"	62"	120 lbs
V9	Aluminum	30"	18"	62"	120 lbs

NOTES:

- This unit is approved for USPS and private applications.
- Decorative mailbox accessories sold separately and are USPS Approved products.
- Pedestal should be installed with included Rubber Pad; mounting hardware not included, refer to installation manual for recommendations.
- Florence "F" series CBUs are Officially Licensed by USPS. License# K0560-094-0012

FLORENCE manufacturing company

3933 Corporate Drive • Monroeville, PA 15146

www.florencecbu.com • 800.254.7412

1515-HCS

AND

MAILBOX KIOSK (TOTAL : 6)

IRIS PARK

SINGLE FAMILY HOME COMMUNITY



DEVELOPMENT TEAM:

PACIFICA INVESTMENTS AND DEVELOPMENT
333 CITY BLVD WEST, SUITE 1700, ORANGE, CA
CONTACT: OSCAR GRAHAM
714.609.7257

PASSCO COMPANIES DEVELOPMENT
2050 MAIN STREET, SUITE 650, IRVINE, CA
CONTACT: SCOTT ALLEN
949.263.7908

PROJECT TEAM:

IDEArc ARCHITECTURE AND PLANNING
17848 SKY PARK CIRCLE, SUITE D, IRVINE, CA
CONTACT: VANCE GRAHAM
949.336.6056

MJS LANDSCAPE ARCHITECTURE
507 30TH STREET, NEWPORT BEACH, CA
CONTACT: PAUL MAKSY
949.675.9964

RMB ENGINEERING
5172 QUEEN STREET, RIVERSIDE, CA
CONTACT: BOB BEERS
951.317.2041

EPD SOLUTIONS
2030 MAIN STREET, SUITE 200, IRVINE, CA
CONTACT: RAFIK ALBERT
949.794.1180

SHEET INDEX:

LANDSCAPE			
L.1	CONCEPTUAL LANDSCAPE PLAN	A11	PLAN 2 - LOWER AND UPPER LEVEL FLOOR PLAN
L.2	COMMUNITY PARK & FITNESS PARK ENLARGEMENT	A12	PLAN 2 - FRONT ELEVATIONS
L.3	FITNESS PARK ENLARGEMENT	A13	PLAN 2 - SPANISH ELEVATIONS 'A'
L.4	WALL AND FENCE PLAN	A14	PLAN 2 - FARMHOUSE ELEVATIONS 'B'
L.5	HYDROZONE PLAN AND WATER-USE	A15	PLAN 2 - FARMHOUSE ELEVATIONS 'B' ENHANCED
L.6	CALCULATIONS LANDSCAPE LIGHTING PLAN	A16	PLAN 2 - FRENCH ELEVATIONS 'C'
L.7	SITE FURNISHINGS & CUT SHEETS	A17	PLAN 2 - ROOF PLANS
ARCHITECTURE		A18	PLAN 3 - LOWER AND UPPER LEVEL FLOOR PLAN
A00	COVER SHEET	A19	PLAN 3 - FRONT ELEVATIONS
A01	ARCHITECTURAL SITE PLAN	A20	PLAN 3 - SPANISH ELEVATIONS 'A'
A02	TYPICAL LOT MODULE	A21	PLAN 3 - FARMHOUSE ELEVATIONS 'B'
A03	STREET SCENE	A22	PLAN 3 - FRENCH ELEVATIONS 'C'
A04	PLAN 1 - LOWER AND UPPER LEVEL FLOOR PLAN	A23	PLAN 3 - FRENCH ELEVATIONS 'C' ENHANCED
A05	PLAN 1 - FRONT ELEVATIONS	A24	PLAN 3 - ROOF PLANS
A06	PLAN 1 - SPANISH ELEVATIONS 'A'		
A07	PLAN 1 - SPANISH ELEVATIONS 'A' ENHANCED	CIVL	
A08	PLAN 1 - FARMHOUSE ELEVATIONS 'B'	C-1	TENTATIVE TRACT MAP
A09	PLAN 1 - FRENCH ELEVATIONS 'C'	C-2	PRELIMINARY GRADING PLAN
A10	PLAN 1 - ROOF PLANS		

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit

IRIS PARK

MORENO VALLEY, CA

April 16, 2020

DESIGN DEVELOPMENT FLOOR PLAN



17848 SKY PARK CIRCLE, SUITE D
IRVINE, CA 92614
949.336.6056



PROPOSED TREE LIST				
STREET TREE	BOTANICAL NAME	COMMON NAME	SIZE	WUCOLS
IRIS AVENUE	CINNAMOMUM CAMPHORA	CAMPHOR TREE	36" BOX	Moderate
ENTRY DRIVE	CERCIS CANADENSIS FOREST PANEY	FOREST PANEY REDBUDB	24" BOX	Moderate
	LAGERSTROEMIA X TUSCARORA	CAPE MYRTLE	24" BOX	Moderate
	RHUS LANCEA	AFRICAN SUMAC	36" BOX	Low
PROJECT PERIMETER - SCREENING	CERCIS CANADENSIS FOREST PANEY	FOREST PANEY REDBUDB	24" BOX	Moderate
	PHOENIX DACTYLIFERA YESODOI	DATE PALM	18 BTH	Low
	PINUS ELDARICA	AFGHAN PINE	36" BOX	Low
SIDE STREET AND STREET TERMINUS	LAGERSTROEMIA X TUSCARORA	CAPE MYRTLE	24" BOX	Moderate
	PINUS ELDARICA	AFGHAN PINE	36" BOX	Low
	MAGNOLIA GRANDIFLORA ST. MARY	SOUTHERN MAGNOLIA	36" BOX	Moderate
	LAGERSTROEMIA X TUSCARORA	CAPE MYRTLE	24" BOX	Moderate
FITNESS PARK	ABUTILON X MINNA	HYBRID STRAUBERRY TREE	36" BOX	Moderate
	OLEA EUROPAEA SWAN HILL	SWAN HILL OLIVE	48" BOX	Low
	ROBINIA PSEUDACACIA	PURPLE ROBE LOCUST	24" BOX	Low
	LELIS PARVIFLORA TRUE GREEN	TRUE GREEN CHINESE ELM	36" BOX	Low
COMMUNITY PARK	LAGERSTROEMIA X TUSCARORA	CAPE MYRTLE	24" BOX	Moderate
	OLEA EUROPAEA SWAN HILL	FRUITLESS OLIVE - MULTI-TRUNK	48" BOX	Low
	PHOENIX DACTYLIFERA YESODOI	DATE PALM	18 BTH	Low
	PODOCARPUS ELONGATUS ICEE BLUE	ICEE BLUE YELLOW-WOOD	24" BOX	Moderate
	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	36" BOX	Low
	ROBINIA PSEUDACACIA	PURPLE ROBE LOCUST	24" BOX	Low

PROPOSED SHRUB LIST					
ALL PROPOSED SHRUBS WILL BE COMPLIANT WITH CAL GREEN REQUIREMENTS FOR WATER CONSERVING AND NON-INVASIVE AS DEFINED BY IPC.					
SHRUBS & GROUNDCOVER	BOTANICAL NAME	COMMON NAME	SIZE	WUCOLS	
SHRUBS & GROUNDCOVER	AGAVE ATTENUATA NOVA	FOXTAIL AGAVE	15 GAL	Vary Low	
	ARCOSTAPHYLOS WOODS CAREPET	COMPACT MANZANITA	1 GAL	Low	
	BOLDIARIA	BOLDIARIA	1 GAL	Low	
	CALLISTEMON LITTLE JOHN	DWARF WEEPING BOTTLE BRUSH	1 GAL	Low	
	CISTUS PURPUREUS	ORCHID ROCKROSE	1 GAL	Low	
	DIANELLA TROPICANA	GOLDEN FLAX LILY	1 GAL	Moderate	
	ENIPHORA DIVARICA	RED HOT FOXGLOVE	1 GAL	Low	
	LANTANA X NEW GOLD	NEW GOLD LANTANA	1 GAL	Low	
	LEUCOPHYLLUM FRUTESCENS	TEXAS SAGE	1 GAL	Low	
	LIGULSTRUM LUCIDUM	GLASSY PRIVET	1 GAL	Moderate	
	MIMALENERGIA REGINA	DEER GRASS	1 GAL	Moderate	
	MYOPORUM PARVIFOLIUM	MYOPORUM	1 GAL	Low	
	NANDINA DOMESTICA COMPACTA	DWARF HEAVENLY BAMBOO	1 GAL	Moderate	
	OLEA LITTLE OLIVE	DWARF OLIVE	1 GAL	Low	
	PERNETTIA SETICULUM RUBRIFL	PURPLE FOUNTAIN GRASS	1 GAL	Low	
	RHAPHIDOPUS INDICA	INDIA HAWTHORN	1 GAL	Moderate	
	ROSA CALIFORNICA	CALIFORNIA WILD ROSE	1 GAL	Low	
	SANTOLINA CHAMAECRYSSARIS	LAVENDER COTTON	1 GAL	Low	
	SALVIA LAVANDULIFOLIA	SPANISH SAGE	1 GAL	Low	
	SENECIO SERPENS	BLUE CHALKSTICKS	1 GAL	Low	
	STRUTZIA REGINA	BIRDS OF PARADISE	1 GAL	Moderate	
	SHRUBS IN WATER QUALITY DETENTION BASIN	CAREX PANSA	DUNE SEDGE	1 gal. at 12" O.C.	Moderate
		CHORODREPETALUM TECTORIUM	CAPE RUSH	1 gal. at 18" O.C.	Moderate
		LOPHANDRA PLATINUM BEAUTY	PLATINUM BEAUTY RUSH	1 gal. at 24" O.C.	Moderate
		PHLEPS BERBERIS	BIRDS OF PARADISE	1 gal. at 24" O.C.	Moderate
PUBLIC RIGHT-OF-WAY CURBS ADJACENT	ALOPE STRIATA	CORAL ALOE	1 gal. at 24" O.C.	Low	
	FESTUCA OVINA GLAUCA	BLUE FESCUE	1 gal. at 12" O.C.	Moderate	
	FESTUCA HAMBS	ATLAS FESCUE	1 gal. at 18" O.C.	Moderate	
	LANTANA NEW GOLD	NEW GOLD LANTANA	1 gal. at 24" O.C.	Low	
	RAPHIDOPUS CLARA	INDIAN HAWTHORN	1 gal. at 24" O.C.	Moderate	
SCREENING OF ABOVE-GROUND UTILITIES	LIGULSTRUM TEXANUM	WAX-LEAF PRIVET - COLLIPP	15 gal. at 36" O.C.	Moderate	
	PRUNUS C. BRIGHT & TIGHT	CAROLINA LAUREL CHERRY	15 gal. at 36" O.C.	Moderate	
TURF AT COMMUNITY PARK	HYBRID BIRUPLIDA TRUE GREEN	TURF GRASS	SCD	Low	

- GENERAL PLANTING NOTES**
- ALL SHRUB AREAS SHALL RECEIVE A 3" MINIMUM LAYER OF BARK MULCH.
 - SCREENING NOTE:** SCREENING SHALL BE PROVIDED FOR ALL UTILITIES, INCLUDING TRANSFORMERS AND TELEPHONE BINS. NO UTILITIES SHALL CONFLICT WITH PLANTING.
 - IRRIGATION DESIGN SHALL COMPLY WITH AB1881 AND ESTIMATED ANNUAL WATER USE (EAWU) WILL NOT EXCEED MAX ANNUAL WATER USE (MAWA) CALCULATIONS.
 - LANDSCAPE WORK SHALL BE IN ACCORDANCE WITH CITY OF MORENO VALLEY DEVELOPMENT STANDARDS AND CODES LANDSCAPE IMPROVEMENTS.
 - TREES WITHIN 6 FEET OF LANDSCAPE SHALL BE INSTALLED WITH APPROVED ROOT CONTROL BARRIER (16 FEET LENGTH EACH TREE).
 - PLANTER AREAS WILL BE ON A DRIP IRRIGATION. TREES WILL BE IRRIGATED BY A DEEP ROOT WATERING BUBBLER.
 - PROVIDE ROOT BARRIER ALONG IRIS AVENUE ADJACENT HARDSCAPES.

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit



Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit

LINEAR PARK WITHIN EASEMENT
• PRELIMINARY DESIGN ONLY, FINAL DESIGN TO BE COORDINATED WITH THE CITY OF MORENO VALLEY

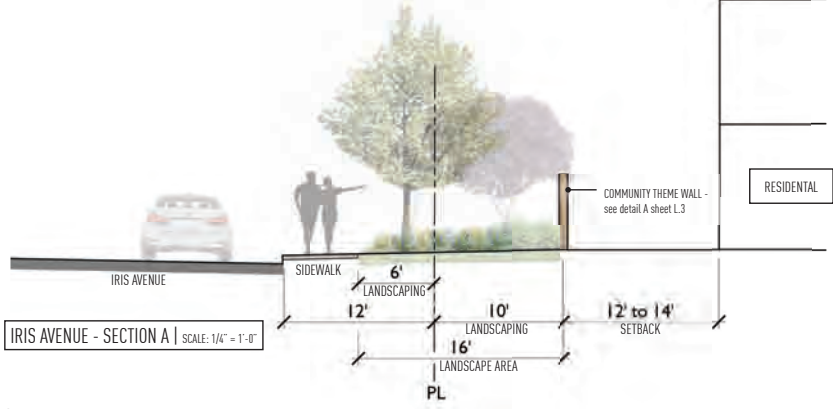
COMMUNITY FITNESS STATION
with EQUIPMENT on DG PAVING
(4) STATIONS SITE WIDE

6' HT. TUBULAR STEEL FENCE AT
EASEMENT BOUNDARY

POTENTIAL CONNECTION TO
FUTURE LINEAR PARK

MULTI-PURPOSE SYNTHETIC
TURF LAWN

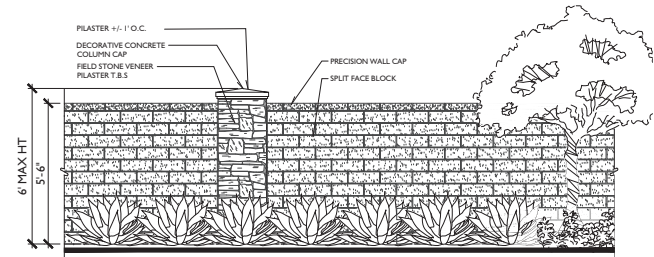
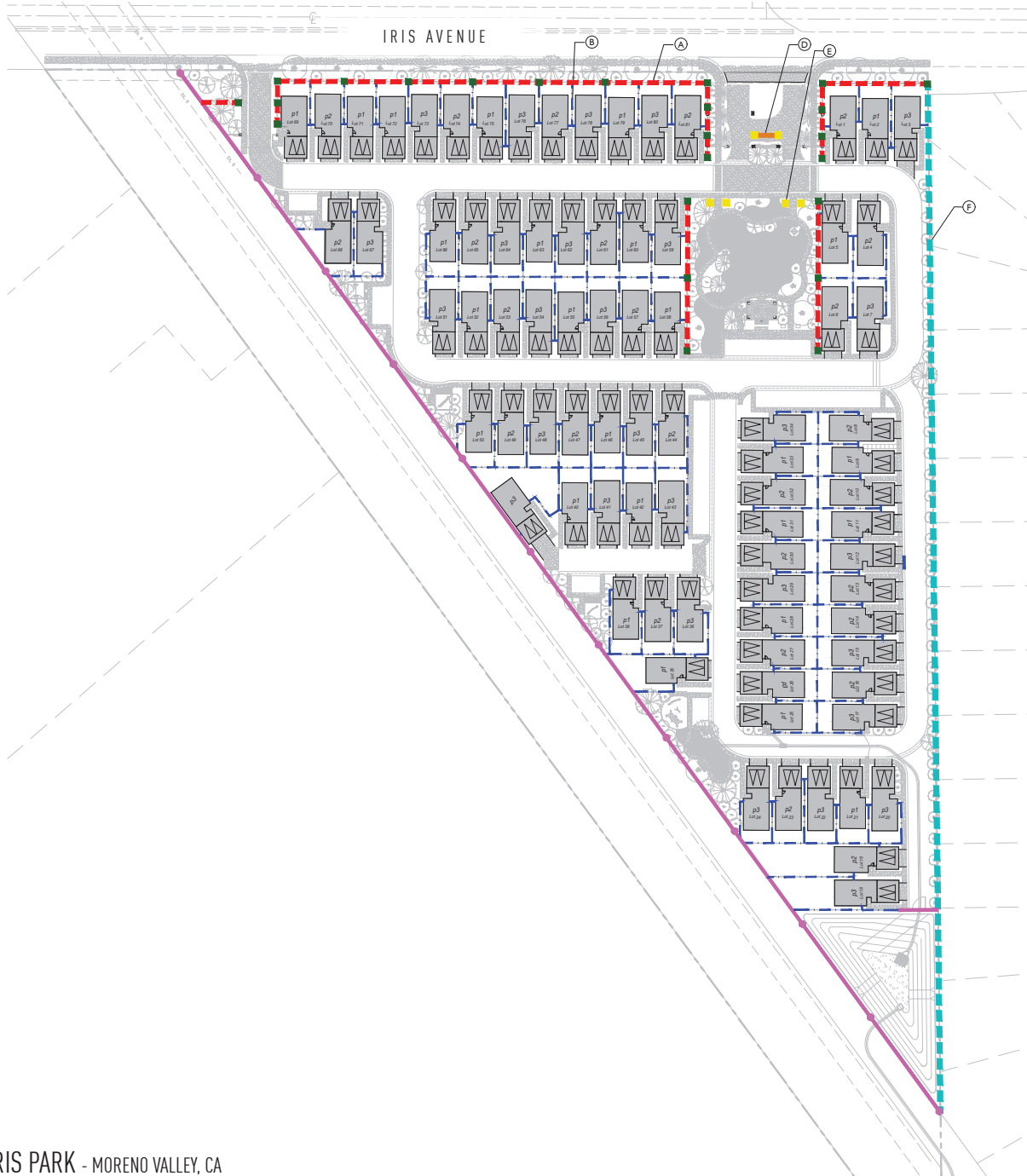
CONCRETE WALKING PATH with
BENCH SEATING



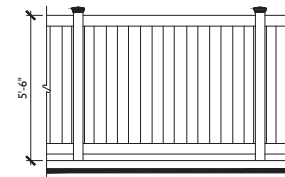
LOT B - FITNESS PARK ENLARGEMENT
±40' x ±135' (4,619 SF)

FITNESS PARK ENLARGEMENT - L.3





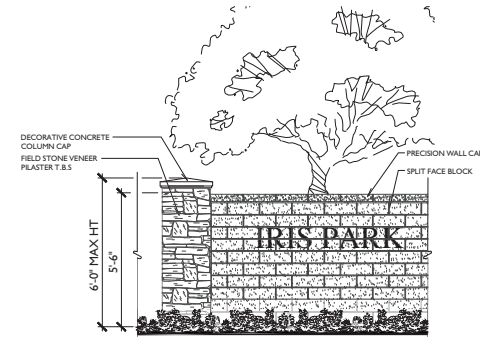
A COMMUNITY THEME WALL and PILASTER
3'-6" HIGH



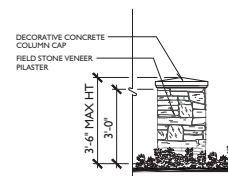
B HOMEOWNER VINYL PRIVACY FENCE (TAN COLOR)
3'-6" HIGH



C TUBULAR STEEL VIEW FENCE (BLACK) with PILASTER
6'-0" HIGH

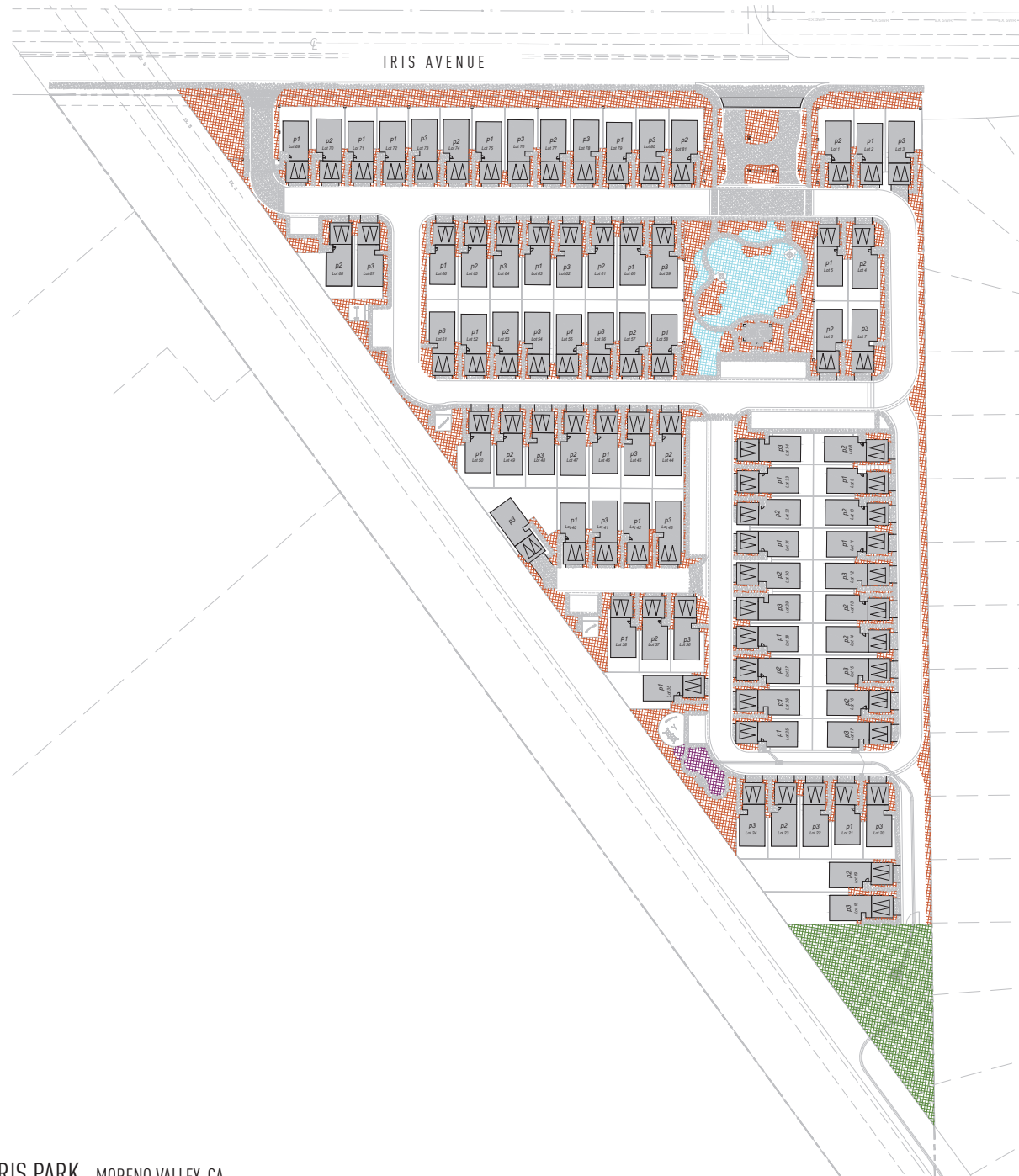


D ENTRY MONUMENT WALL and PILASTER
3'-6" HIGH



E LOW PILASTER at COMMUNITY PARK - PILASTER AS INDICATED ON PLAN
3'-6" HIGH

F EXISTING PERIMETER WALL TO REMAIN



IRRIGATION HYDROZONES:

- HYDRO-ZONE 1 - Common Landscape Areas - Enhanced Plant Palette - Sub Surface Irrigation - 48,251 s.f.**
- HYDRO-ZONE 2 - Water Quality Planting in Basin - Water Conserving Plant Palette - Overhead Spray - 12,932 s.f.**
- HYDRO-ZONE 3 - Synthetic Turf - 1,021 s.f.**
- SPECIAL LANDSCAPE AREA - Active Turf Area at Community Park - 6,463 s.f.**

TOTAL LANDSCAPE AREA: 68,667 s.f.

WATER CONSERVATION FEATURES

THE FOLLOWING MEASURES WILL BE INCORPORATED INTO THE PROJECT TO CONSERVE WATER:

- Installation of automatic 'smart' irrigation controller with rain-sensor.
- The use of low precipitation/low angle irrigation spray heads.
- The use of low water consuming plants.
- Soil amendment to achieve good soil moisture retention.
- Mulching to reduce evapotranspiration from the root zone.
- Installation of automatic irrigation system to provide deep-root watering to trees if required.

WATER CONSERVATION STATEMENT

PURPOSE: To provide the maintenance staff a mechanical device to distribute water in the most efficient manner and within a time frame with the activities of the community.

The irrigation system for each hydrozone will be automatic and incorporate emitters, bubblers and high efficiency low angle spray heads at turf only. It may be employed where considered to be effective and feasible. Irrigation systems shall be designed to enhance the visual character of the site and its elements. Plants shall be grouped with similar water, climatic and soil requirements to allow for the systems operation in response to orientation a

Each hydrozone consists of moderate to low water consuming plants. In water consuming plants they shall be properly amended to retain moisture and to conserve water.

Plant Material within each hydrozone shall be specified in consideration of west exposures.

Soil shall be prepared and amended to provide for maximum moisture retention. Planted beds shall be mulched to retain soil moisture and reduce evapotranspiration.

To avoid wasted water, the controls will be overseen by a flow monitor or broken sprinkler heads to stop that station's operation, advancing to the next station. In the event of pressure supply line breakage, it will completely stop the system. All material will be non-flammable, with the exception of the brass parts of the backflow units. All work will be in the best acceptable manner in accordance and standards prevailing in the industry.

WATER USE CLASSIFICATION OF LAND (WUCOLS):

WUCOLS: Water Use Classification of Landscape California Cooperative Extension Publication and needs of landscape plants.

CROP FACTOR	PERCENTAGE
H - HIGH	70% - 100%
M - MEDIUM	40% - 70%
L - LOW	10% - 40%
VL - VERY LOW	< 10%

WATER EFFICIENT LANDSCAPE WORKSHEET

Reference Evapotranspiration (ETo) 56.40 ETAF for MAWA 0.55 (F)

Hydrozone # / Planting Description	Plant Factor (PF)	Irrigation Method*	Irrigation Efficiency (IE)†	ETAF (PF/IE)	Landscape Area (sq. ft.)	ETAF x Area	ETW
Regular Landscape Areas							
1 Common Areas - Low	0.30	drip	0.81	0.37	48,251	17,871	
2 Water Quality Basin - Medium	0.50	spray	0.75	0.67	12,932	8,621	
3 Synthetic Turf	-	-	-	-	1,021	-	
					Totals	61,183	26,492
Special Landscape Areas							
Active Turf Area	-	-	-	1.00	6,463	6,463	
					Totals	6,463	6,463
						ETWU Total	32,955
						Maximum Allowed Water Allowance (MAWA)	32,955

*Hydrozone #/Planting Description
E.g. 1) front lawn
2) new water-use plantings
3) medium water use planting

*Irrigation Method
overhead spray
or drip

*Irrigation Efficiency
0.75 for spray head
0.81 for drip

*ETWU (Annual Gallons Allowed) = ETo x 0.62 x ETAF x Area where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year. LA is the total landscape area in square feet. SLA is the total special landscape area in square feet, and ETAF is .50 for residential areas and 0.45 for non-residential areas.

ETAF Calculations

Area Type	Total ETAF x Area
Regular Landscape Areas	26,492
Total Area	61,183
Average ETAF	0.43

All Landscape Areas

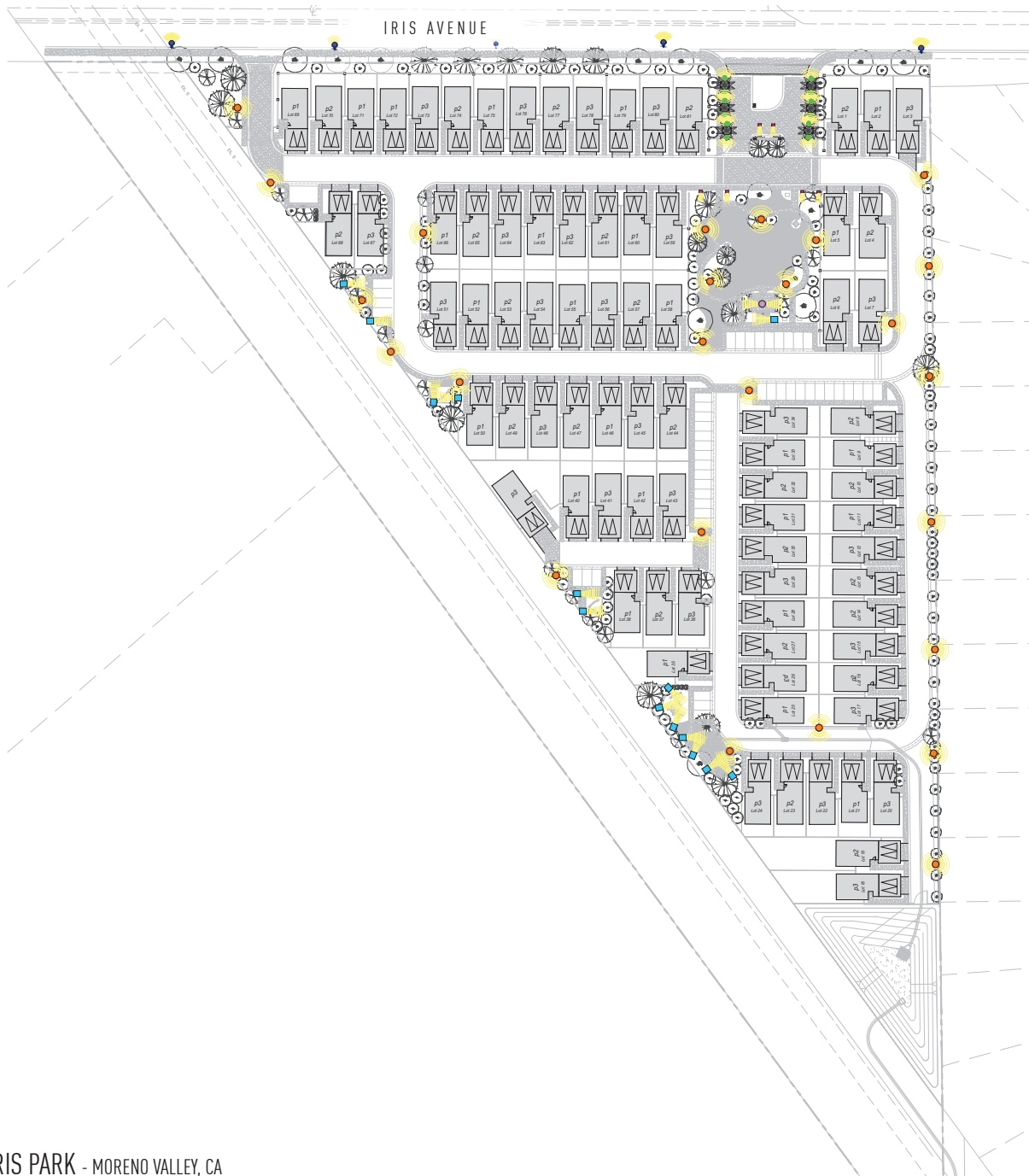
Area Type	Total ETAF x Area
All Landscape Areas	32,955
Total Area	67,646
Sitewide ETAF	0.49

Average ETAF for Regular Landscape Area is 0.55 or below for residential areas, and below for non-residential areas.

Eto data for city of Moreno Valley from MWEO Appendix A

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit)





EXTERIOR LIGHTING LEGEND		
SYMBOL	TYPE/TECHNIQUE	LOCATION
	BOLLARD	COMMON AREA WALKWAYS
	POLE LIGHT	PRIVATE STREETS
	DOWN LIGHT	MOUNTED ON OVERHEAD PAVILLION AT COMMUNITY PARK
	PALM TREE UPLIGHT	ENTRY DRIVE
	EXISTING LIGHT	IRIS AVENUE
	UPLIGHT	ENTRY DRIVE AND PARK ENTRY

LIGHTING CONCEPT:

THE OUTDOOR LIGHTING CONCEPT IS TO PROVIDE LEVELS OF LIGHTING SUFFICIENT TO MEET SAFETY AND ORIENTATION NEEDS.

WITHIN PUBLIC AREAS LIGHTING WILL BE WARM COLORED AND UNOBTUSIVE. LIGHT SOURCES WILL BE LED 4000K - 4800K.

LIGHTING SOURCES FOR THE LANDSCAPE AND PAVED AREAS WILL BE CONCEALED AND THE LIGHTING INDIRECT NOT VISIBLE FROM A PUBLIC VIEWPOINT. LIGHT SOURCES SHOULD BE DIRECTED SO THAT IT DOES NOT FALL OUTSIDE THE AREA TO BE LIGHTED.


ALL EXTERIOR SURFACE AND ABOVE GROUND MOUNTED FIXTURES WILL BE SYMPHATIC AND COMPLEMENTARY TO THE ARCHITECTURAL THEME.



Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit

landscape forms

Product Data Sheet



Harvest Luminaire

- The Harvest Tables are available with an optional LED luminaire enclosure.
- The Harvest Luminaire is a suspended-style aluminum luminaire with a cooling fan.
- LED light has a color temperature of 3000K.
- Harvest Luminaire is available in 8' height and 4' height and in 4'x3' height.

Product	Height	Weight	Width	Depth	Capacity
4'x3' Harvest Luminaire	4' - 0"	42.70	36.00	36.00	300 lbs.
4'x3' Harvest Luminaire	8' - 0"	44.00	36.00	36.00	300 lbs.
8' Harvest Luminaire	8' - 0"	54.00	72.00	48"	500 lbs.

Harvest Table

- Harvest Table is available in 8' length and 4' width and in 4'x3' length.
- Harvest Table is available in 8' length and 8' width and in 4'x3' length.

Finishes

Harvest Tables are finished with a powder coated finish. Harvest Tables are available in a variety of colors. Harvest Tables are available in a variety of finishes. Harvest Tables are available in a variety of finishes. Harvest Tables are available in a variety of finishes.

Designed by Jeff Deane

PICNIC TABLE (TOTAL : 2)

landscape forms

PLAINWELL

Product Data Sheet



Bench

- The Plainwell Bench is available with steel construction of aluminum or wood.
- The maximum weight on the seat per bench at maximum capacity (two people) is 300 lbs. (136 kg).
- Available in two heights, the 10' and 8' bench may only be specified with a wood seat.
- The 10' bench may also be specified with a metal seat, which is not recommended.
- Plainwell benches must support a standard.

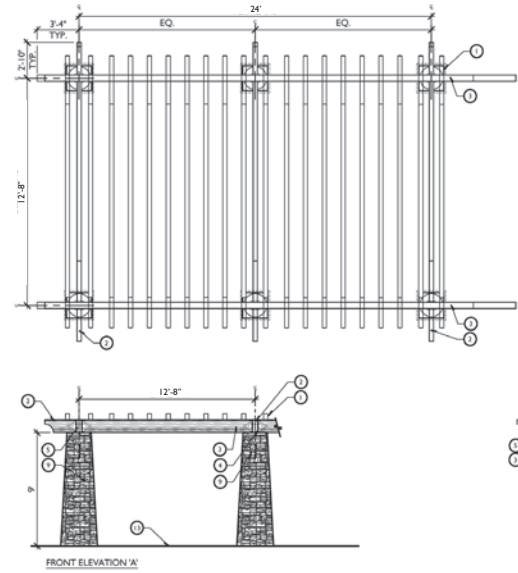
Product	Height	Weight	Width	Depth	Capacity
10' Plainwell Bench	10' - 0"	120.00	60.00	30.00	300 lbs.
8' Plainwell Bench	8' - 0"	100.00	60.00	30.00	300 lbs.

Litter Receptacles

- The litter receptacle is available in 30 gallon capacity and includes a trash compartment. Size varies are available in aluminum or a selection of wood.
- Aluminum receptacles are available in a variety of finishes.
- Litter receptacle is available in a variety of finishes.
- Aluminum receptacle may be specified in different colors.
- Aluminum receptacle may be specified in different colors.
- Aluminum receptacle may be specified in different colors.
- Aluminum receptacle may be specified in different colors.
- Aluminum receptacle may be specified in different colors.

Trash Receptacle & Bench (Trash Receptacle Total : 2) (Bench Total : 2)

TRASH RECEPTACLE & BENCH (TRASH RECEPTACLE TOTAL : 2) (BENCH TOTAL : 2)



- LEGEND:**
- 4" x 6" TRELLIS MEMBER - 1/2" CHAMFER END CUTS ALL SIDES AS SHOWN.
 - (SHORT SIDE) 4" x 12" BEAM 'A' - NOTCH BEAM TO FIT INTO BEAM 'B', END CUT AS SHOWN. CONNECTION TO POSTS per STRUCTURAL.
 - (LONG SIDE) 4" x 12" BEAM 'B' - END CUT AS SHOWN.
 - CONNECTION INTO BEAM 'A' per STRUCTURAL.
 - CUSTOM DECORATIVE METAL 'L' BRACKET - CONNECTION TO BEAM 'A' TO BEAM 'B'. ALL SIDES - METAL TO BE PAINTED BLACK.
 - 8" x 8" x 16" C.M.U. COLUMN BLOCK.
 - 12" x 8" x 16" C.M.U. COLUMN BLOCK.
 - 18" x 8" x 16" C.M.U. COLUMN BLOCK.
 - STACKED STONE CLADDING TBD.
 - CONCRETE FOOTING - SIZE per STRUCTURAL ENGINEER.
 - RE-COMPACTED SURGRADE per STRUCTURAL SOILS REPORT.
 - FINISH SURFACE.

- NOTES:**
- CONTRACTOR TO SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION FOR APPROVAL.
 - ALL REINFORCEMENT per STRUCTURAL ENGINEER RECOMMENDATIONS.
 - ALL WOOD SHALL BE ROUGH SAWN.
 - APPLY 2 COATS SEMI-TRANSPARENT STAIN TO ALL WOOD. COLOR TO MATCH ARCHITECTURAL WOOD.

PARK PAVILION

landscape forms

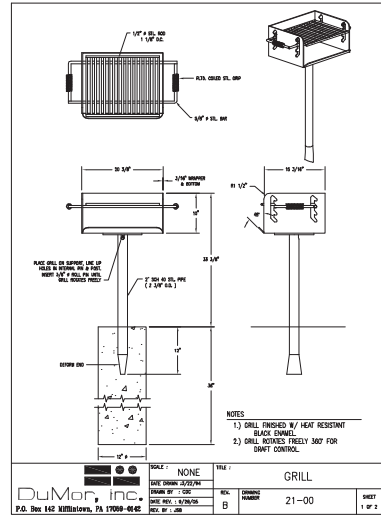
Park Tables



Product Data Sheet

- Product Name
- Product Description
- Product Features
- Product Specifications
- Product Dimensions

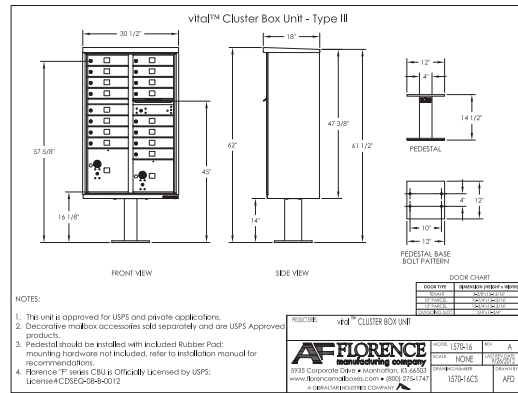
PARK TABLES (TOTAL : 2)



PEDESTAL GRILL (TOTAL : 2)

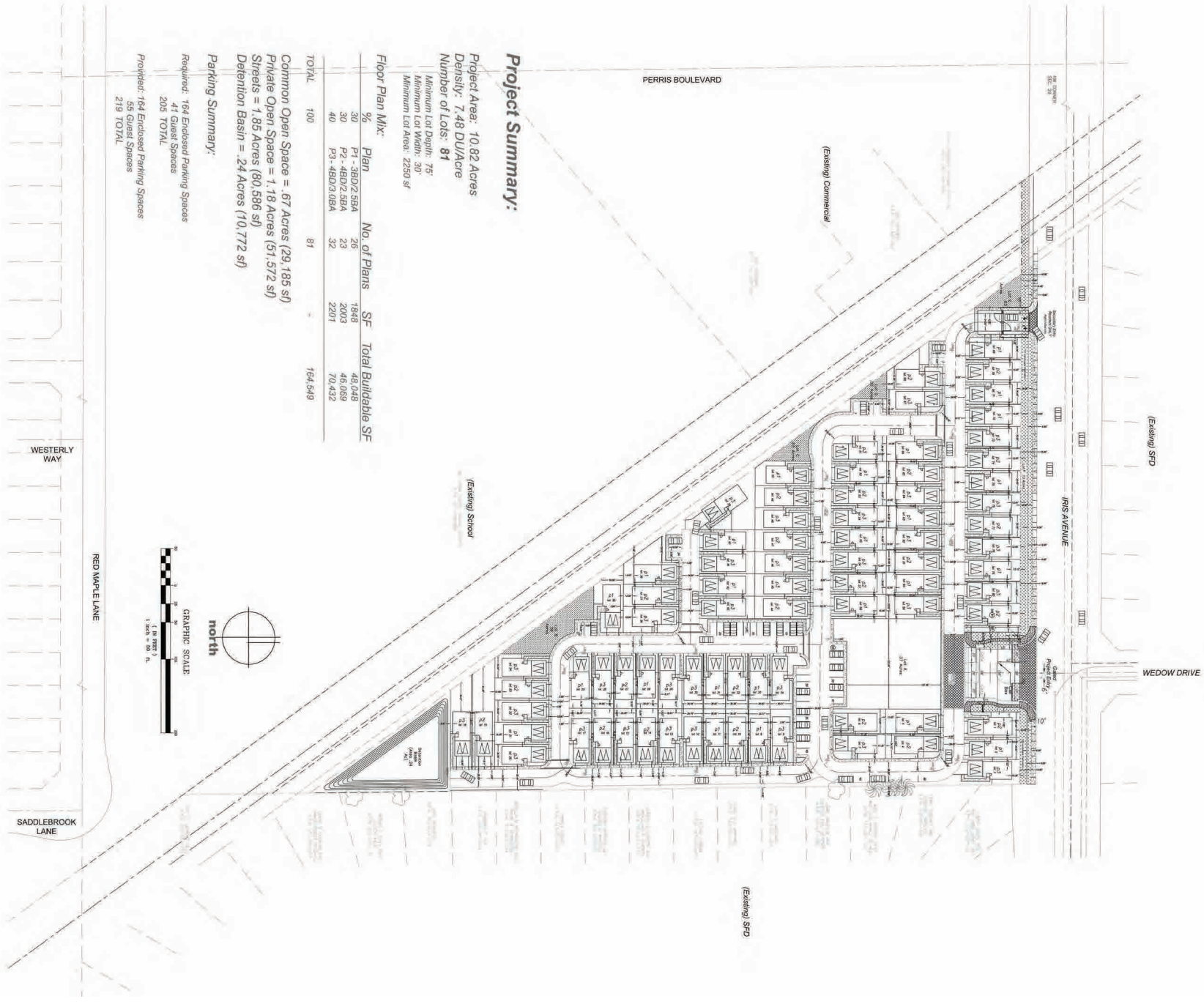


BBQ ASH URN (TOTAL : 1)



MAILBOX KIOSK (TOTAL : 6)





Project Summary:

Project Area: 10.82 Acres
 Density: 7.48 DU/Acre
 Number of Lots: 81
 Minimum Lot Depth: 75'
 Minimum Lot Width: 30'
 Minimum Lot Area: 2250 sf

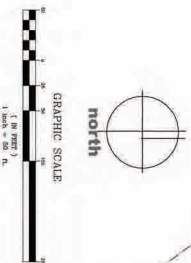
Floor Plan Mix:

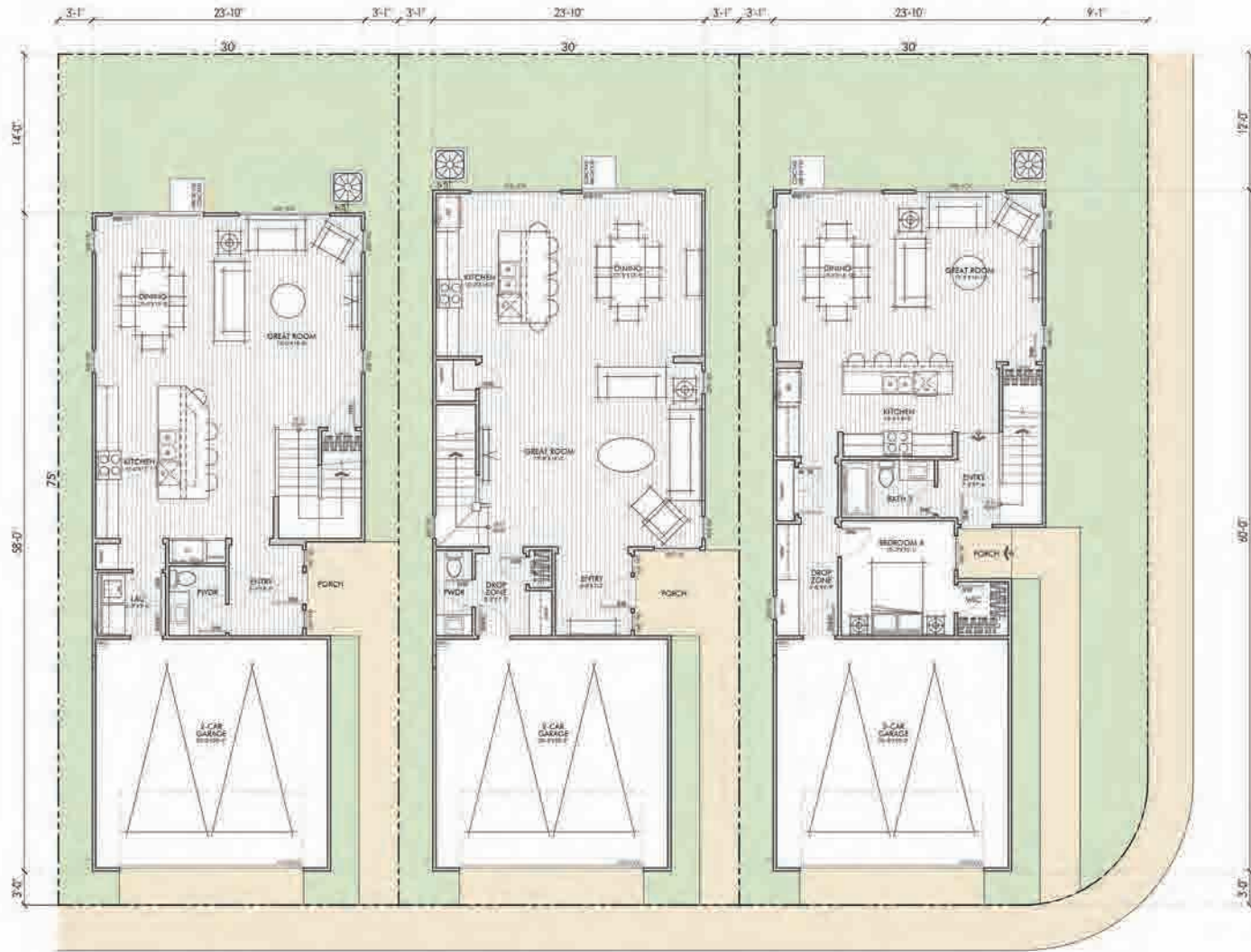
%	Plan	No. of Plans	SF	Total Buildable SF
30	P1 - 3BD/2.5BA	26	1988	46,048
30	P2 - 4BD/2.5BA	23	2003	46,069
40	P3 - 4BD/3.0BA	32	2201	70,432
TOTAL		81		164,549

Common Open Space = .67 Acres (29,185 sf)
 Private Open Space = 1.18 Acres (51,572 sf)
 Streets = 1.85 Acres (80,586 sf)
 Detention Basin = .24 Acres (10,772 sf)

Parking Summary:

Required: 164 Enclosed Parking Spaces
 41 Guest Spaces
 205 TOTAL
 Provided: 164 Enclosed Parking Spaces
 55 Guest Spaces
 219 TOTAL





PLAN 1

1,848 SQFT
 3 BEDROOM
 2.5 BATH
 2 CAR GARAGE

PLAN 2

2,003 SQFT
 4 BEDROOM
 2.5 BATH
 2 CAR GARAGE

**PLAN 3
 CORNER LOT**

2,201 SQFT
 4 BEDROOM + TEEN ROOM/OPT. BED 5
 3 BATH
 2 CAR GARAGE

TYPICAL LOT MODULE

SCALE: 1/8"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT FLOOR PLAN

APRIL 16, 2020

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit





PLAN 1B
(FARMHOUSE)

PLAN 2A
(SPANISH)

PLAN 3C
(FRENCH)

STREET SCENE

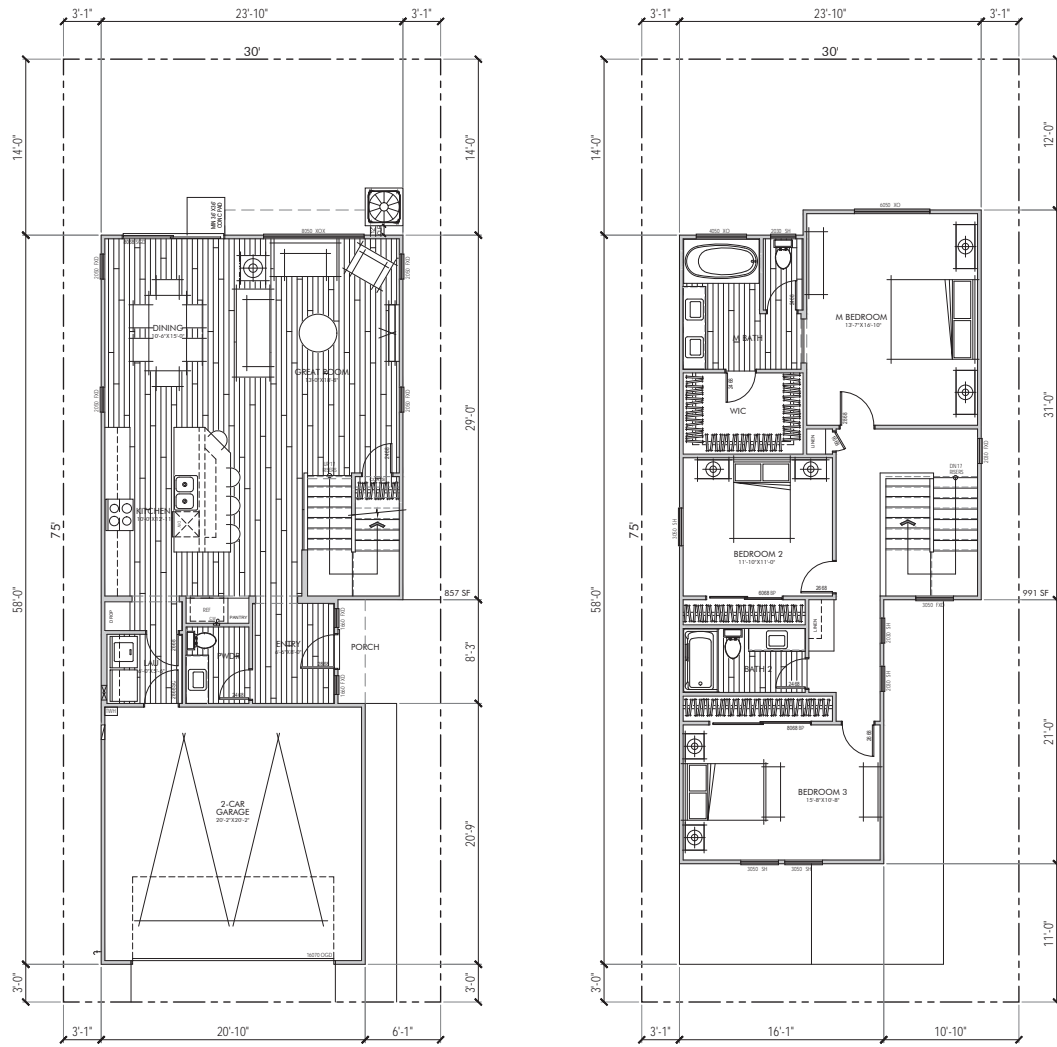
SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT FLOOR PLAN

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit





1,848 SQFT
 3 BEDROOM
 2.5 BATH
 2 CAR GARAGE

FIRST AND SECOND LEVEL

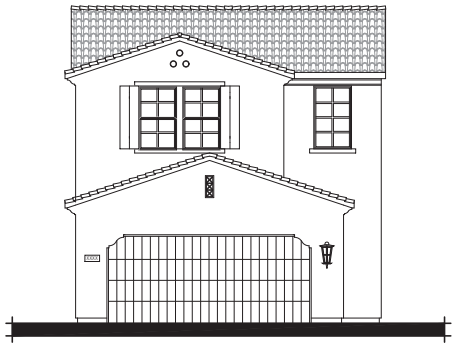
PLAN 1

SCALE: 1/4" = 1'-0"

IRIS PARK

DESIGN DEVELOPMENT FLOOR PLAN

April 17, 2020



1A - FRONT (SPANISH)



1B - FRONT (FARMHOUSE)



1C - FRONT (FRENCH)

PLAN 1

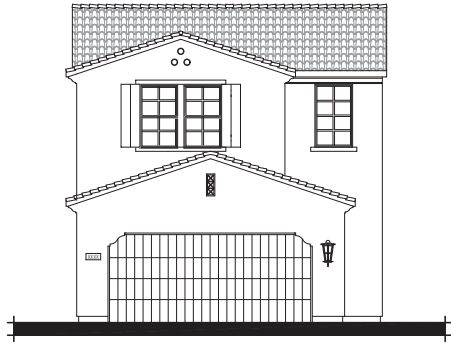
SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

April 17, 2020

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit



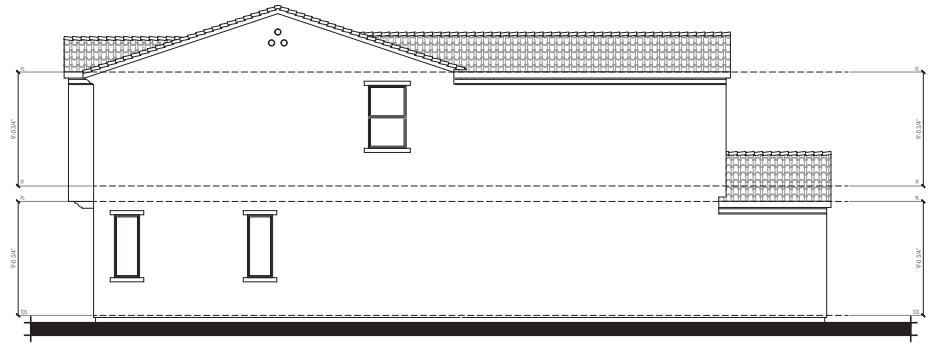
1A - FRONT (SPANISH)



1A - RIGHT (SPANISH)



1A - REAR (SPANISH)



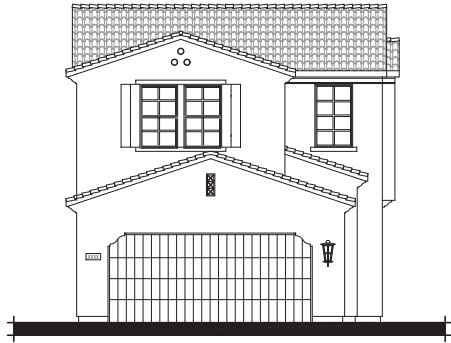
1A - LEFT (SPANISH)

PLAN 1
SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit



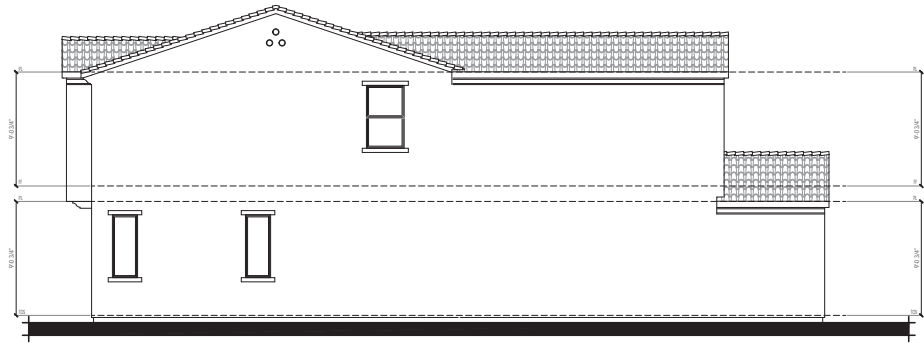
1A - FRONT (SPANISH)



1A - RIGHT ENHANCED (SPANISH)
AT END CONDITIONS ONLY



1A - REAR (SPANISH)



1A - LEFT (SPANISH)

PLAN 1
SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

April 17, 2020



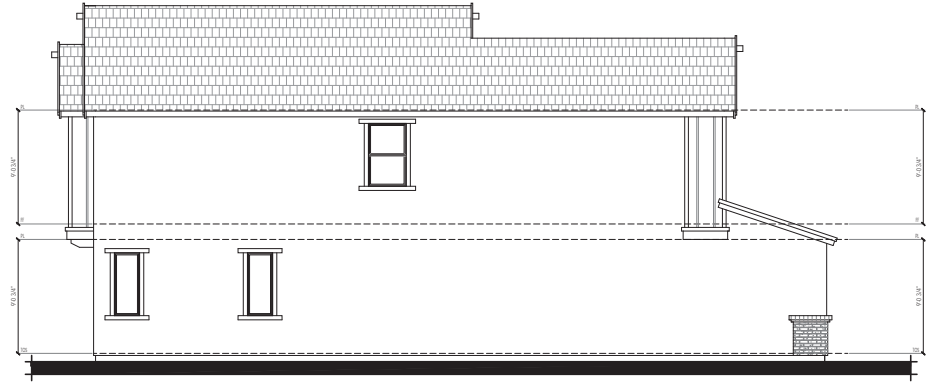
1B - FRONT (FARMHOUSE)



1B - RIGHT (FARMHOUSE)



1B - REAR (FARMHOUSE)



1B - LEFT (FARMHOUSE)

PLAN 1

SCALE: 1/4"=1'-0"

IRIS PARK

April 17, 2020

DESIGN DEVELOPMENT ELEVATIONS

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit





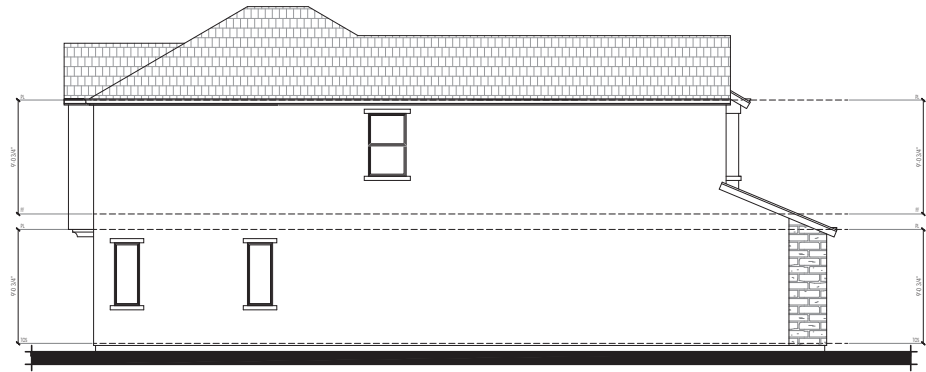
1C - FRONT (FRENCH)



1C - RIGHT (FRENCH)



1C - REAR (FRENCH)



1C - LEFT (FRENCH)

PLAN 1

SCALE: 1/4"=1'-0"

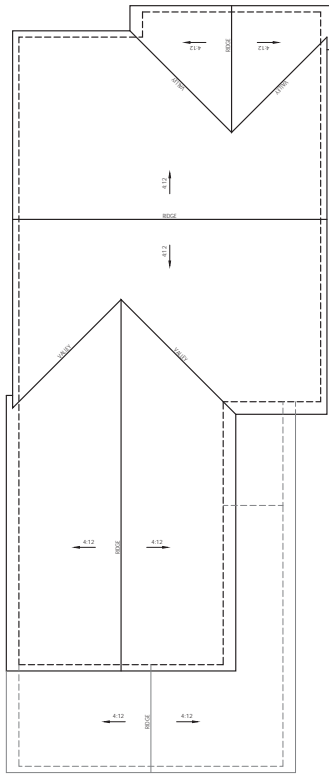
IRIS PARK

April 17, 2020

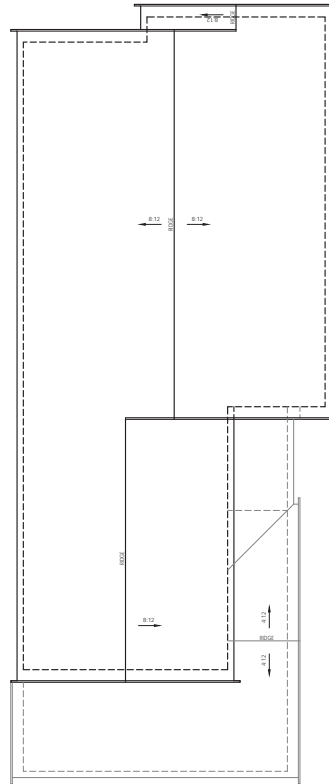
DESIGN DEVELOPMENT ELEVATIONS

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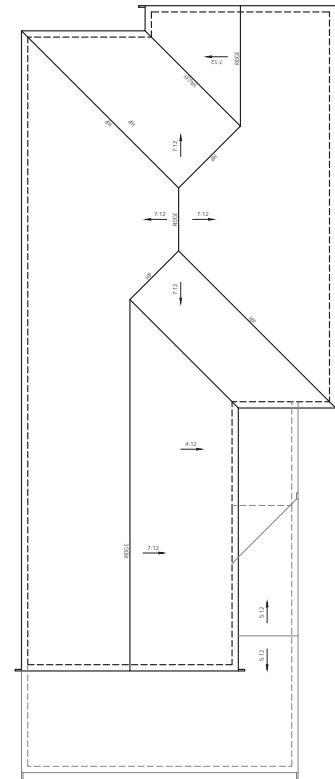




1A - SPANISH



1B - FARMHOUSE



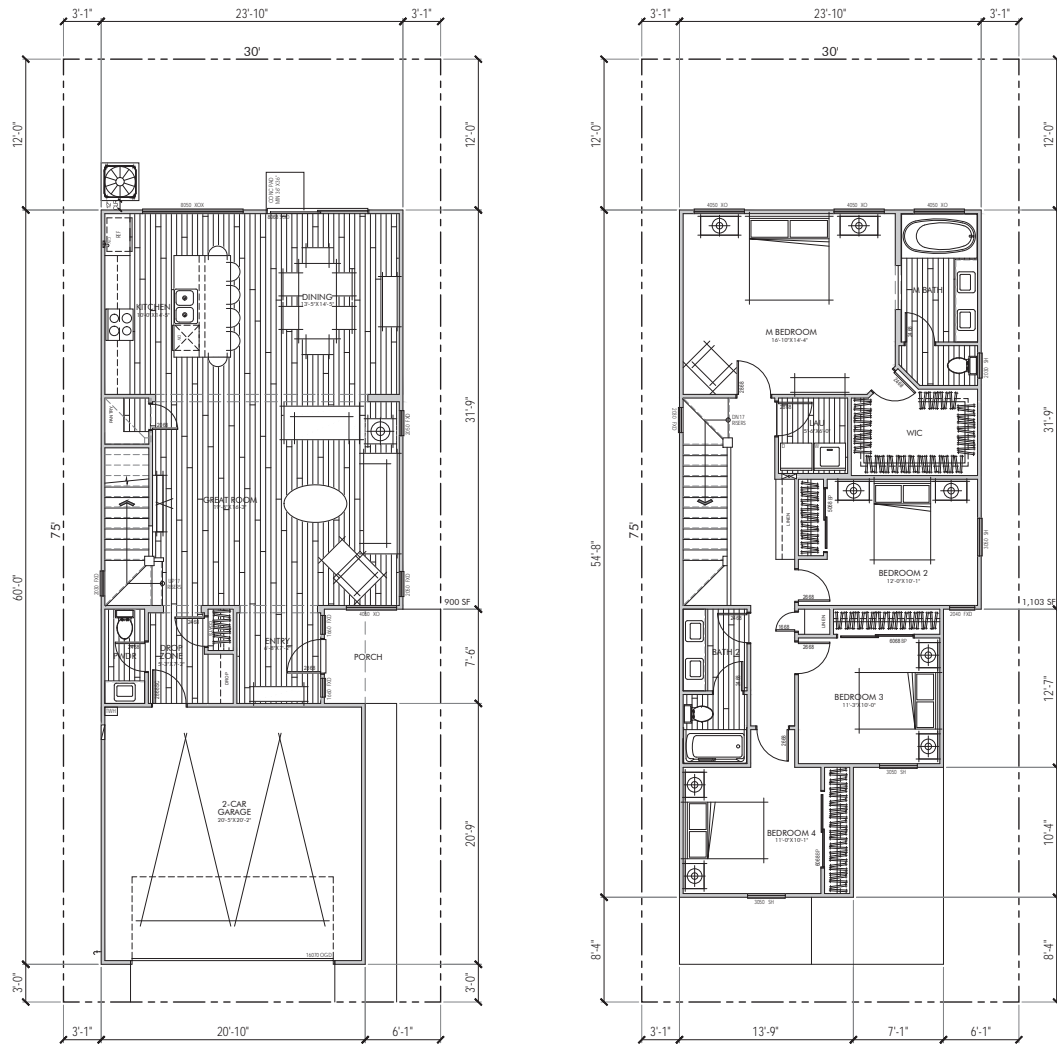
1C - FRENCH

PLAN 1
SCALE: 1/4" = 1'-0"

IRIS PARK

DESIGN DEVELOPMENT ROOF PLAN

April 17, 2020



2,003 SQFT
 4 BEDROOM
 2.5 BATH
 2 CAR GARAGE

FIRST AND SECOND LEVEL

PLAN 2

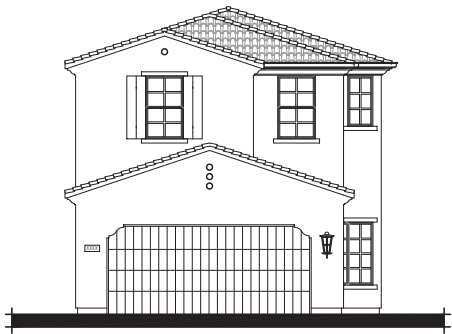
SCALE: 1/4" = 1'-0"

IRIS PARK

DESIGN DEVELOPMENT FLOOR PLAN

APRIL 16, 2020

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit



2A - FRONT (SPANISH)



2B - FRONT (FARMHOUSE)



2C - FRONT (FRENCH)

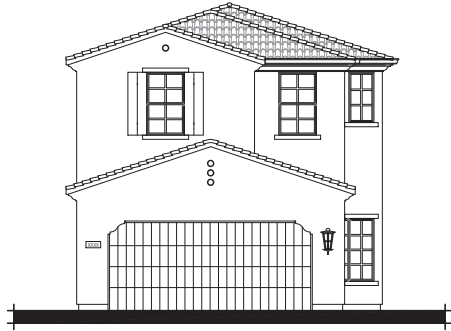
PLAN 2

SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

APRIL 16, 2020



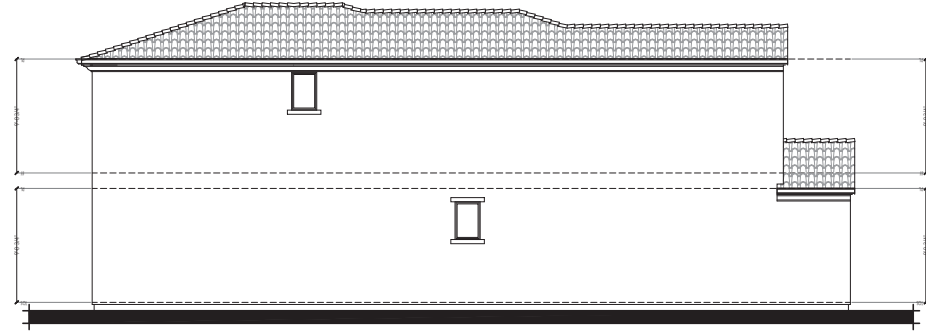
2A - FRONT (SPANISH)



2A - RIGHT (SPANISH)



2A - REAR (SPANISH)



2A - LEFT (SPANISH)

PLAN 2

SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

APRIL 16, 2020

MORENO VALLEY, CA

17848 SKY PARK CIRCLE, SUITE D
IRVINE, CA 92614
714.330.6096



Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit



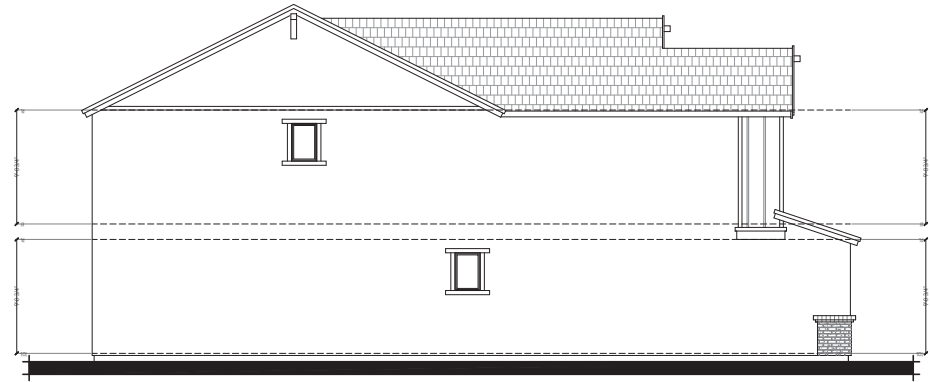
2B - FRONT (FARMHOUSE)



2B - RIGHT (FARMHOUSE)



2B - REAR (FARMHOUSE)



2B - LEFT (FARMHOUSE)

PLAN 2

SCALE: 1/4"=1'-0"

IRIS PARK

APRIL 16, 2020

DESIGN DEVELOPMENT ELEVATIONS

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit



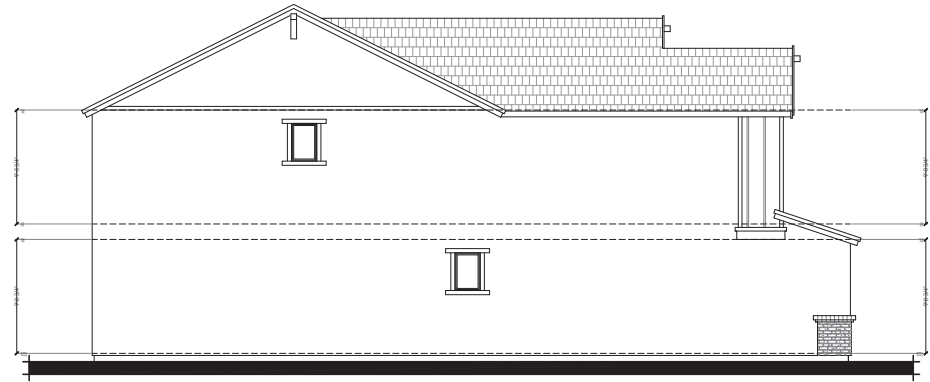
2B - FRONT (FARMHOUSE)



2B - RIGHT ENHANCED (FARMHOUSE)
AT END CONDITIONS ONLY



2B - REAR (FARMHOUSE)



2B - LEFT (FARMHOUSE)

PLAN 2

SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

APRIL 16, 2020

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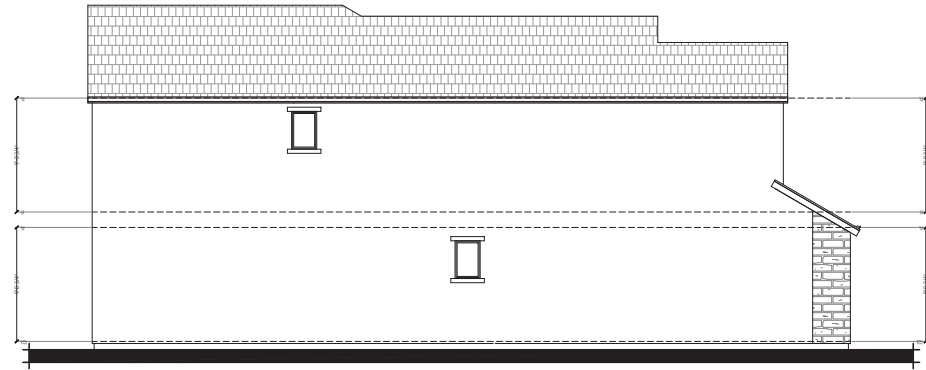
2C - FRONT (FRENCH)



2C - RIGHT (FRENCH)



2C - REAR (FRENCH)



2C - LEFT (FRENCH)

PLAN 2

SCALE: 1/4"=1'-0"

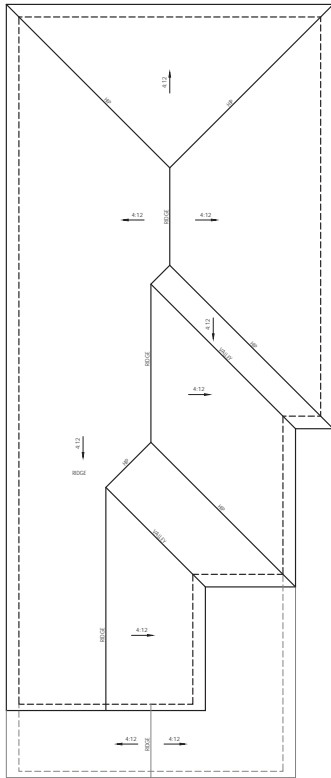
IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

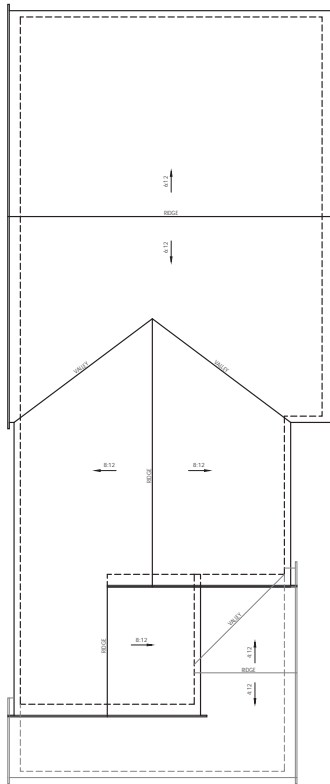
APRIL 16, 2020

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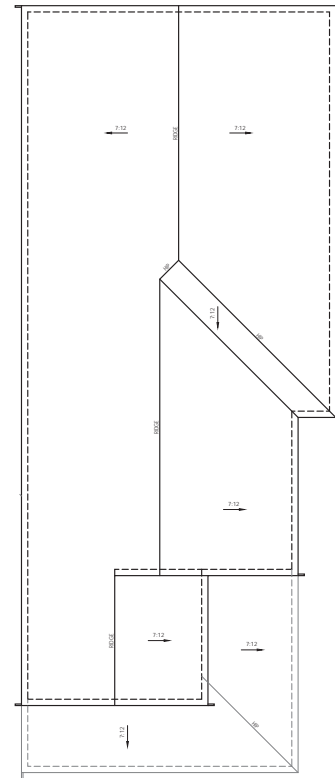




2A - SPANISH



2B - FARMHOUSE



2C - FRENCH

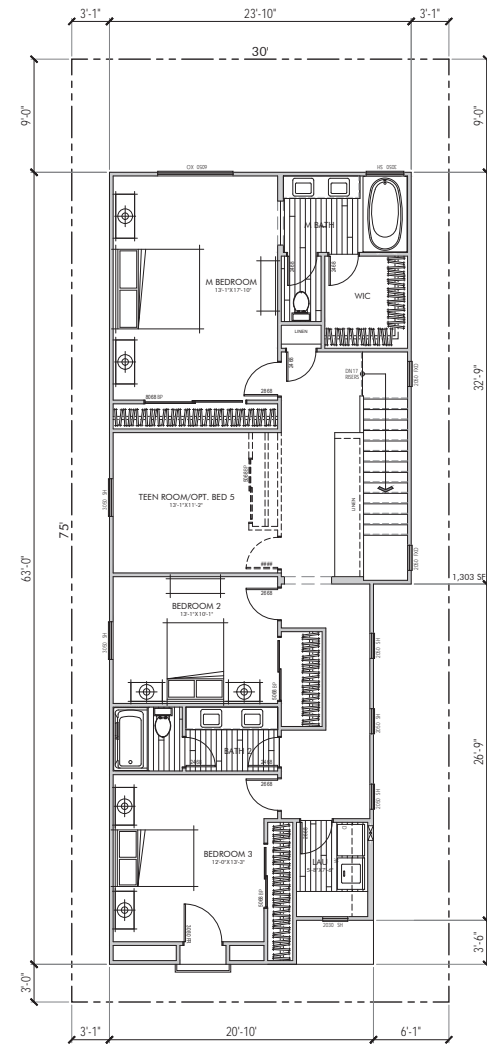
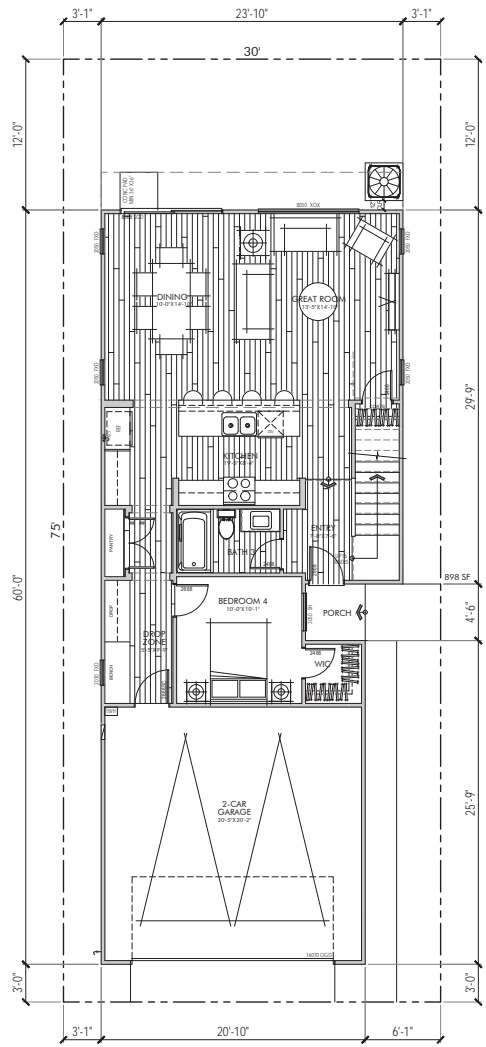
PLAN 2

SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT ROOF PLAN

APRIL 16, 2020



2,201 SQFT
 4 BEDROOM + TEEN ROOM/OPT. BED 5
 3 BATH
 2 CAR GARAGE

FIRST AND SECOND LEVEL

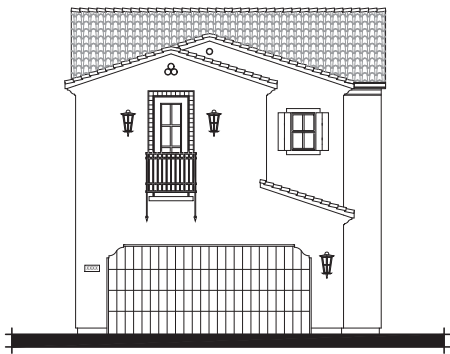
PLAN 3

SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT FLOOR PLAN

APRIL 16, 2020



3A - FRONT (SPANISH)



3B - FRONT (FARMHOUSE)



3C - FRONT (FRENCH)

PLAN 3

SCALE: 1/4"=1'-0"

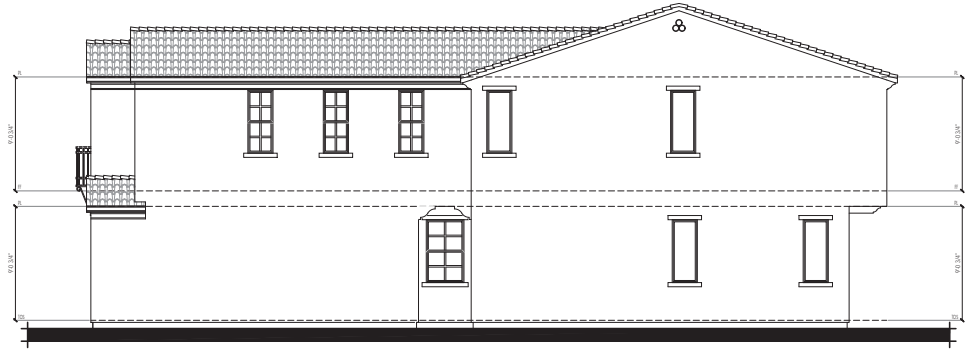
IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

APRIL 16, 2020



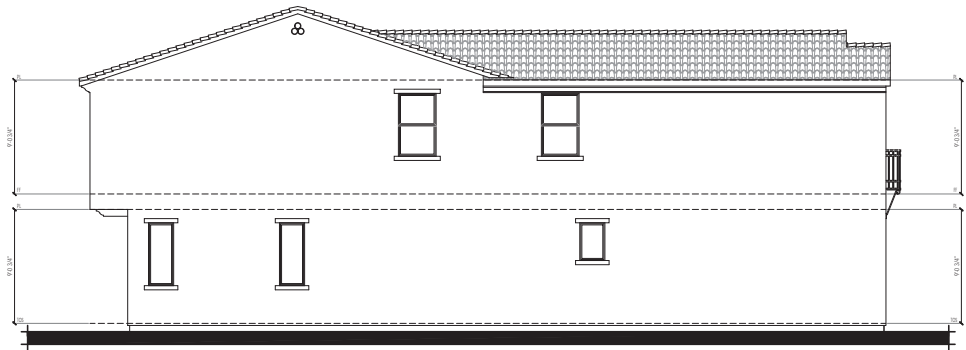
3A - FRONT (SPANISH)



3A - RIGHT (SPANISH)



3A - REAR (SPANISH)



3A - LEFT (SPANISH)

PLAN 3

SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

APRIL 16, 2020

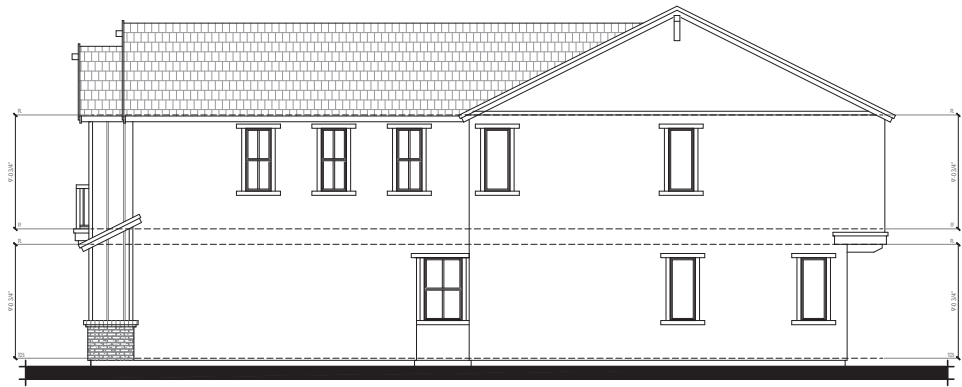
Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit



MORENO VALLEY, CA
17848 SKY PARK CIRCLE, SUITE D
IRVINE, CA 92614
714.330.6096



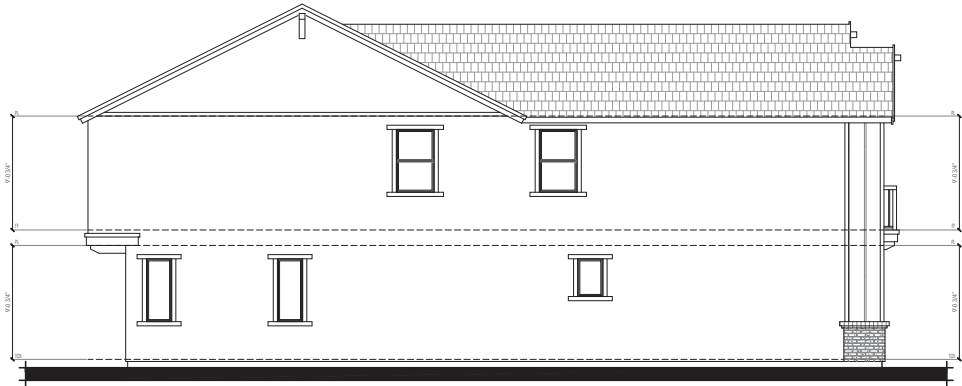
3B - FRONT (FARMHOUSE)



3B - RIGHT (FARMHOUSE)



3B - REAR (FARMHOUSE)



3B - LEFT (FARMHOUSE)

PLAN 3

SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

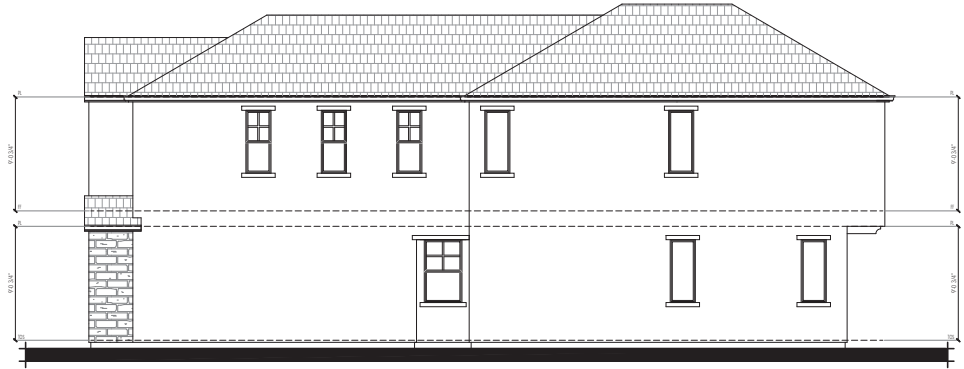
APRIL 16, 2020

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit





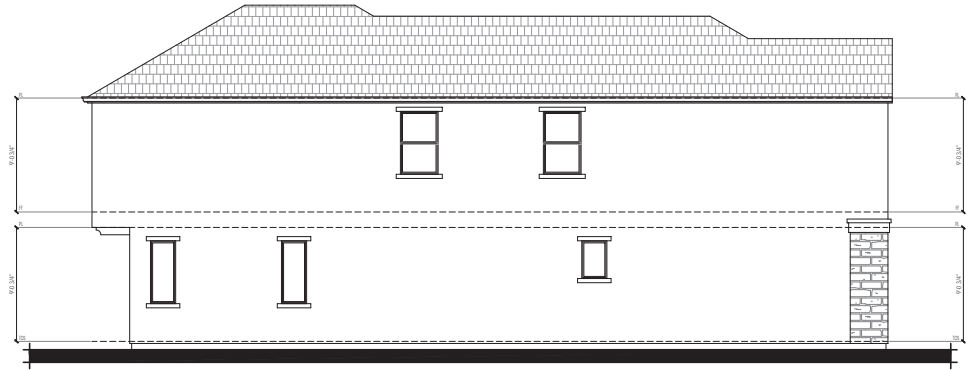
3C - FRONT (FRENCH)



3C - RIGHT (FRENCH)



3C - REAR (FRENCH)



3C - LEFT (FRENCH)

PLAN 3

SCALE: 1/4"=1'-0"

IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

APRIL 16, 2020

Attachment: Project Plans [Revision 1] (4197 : Tentative Tract Map 37909 with a Conditional Use Permit





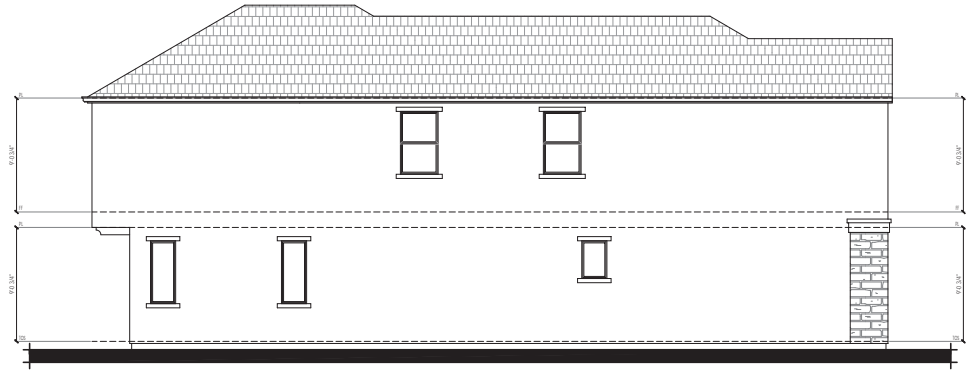
3C - FRONT (FRENCH)



3C - RIGHT ENHANCED (FRENCH)
AT END CONDITIONS ONLY



3C - REAR (FRENCH)

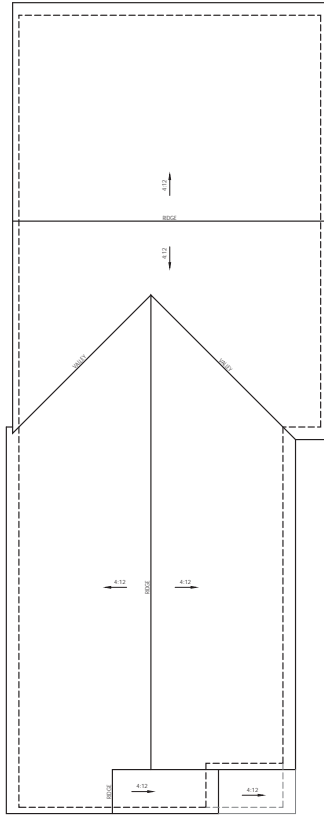


3C - LEFT (FRENCH)

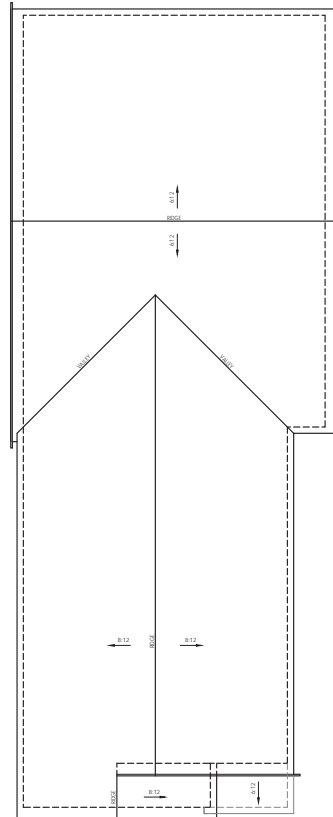
PLAN 3
SCALE: 1/4"=1'-0"
IRIS PARK

DESIGN DEVELOPMENT ELEVATIONS

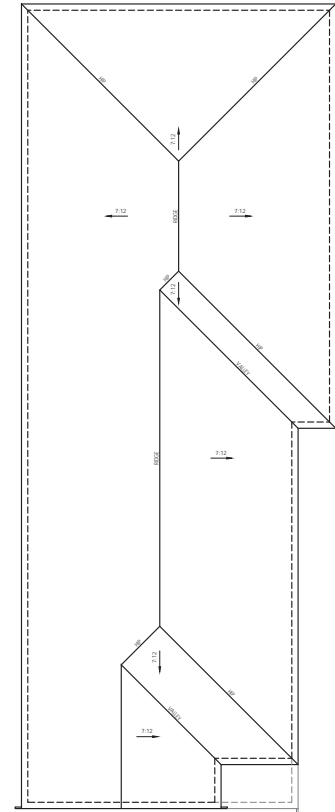
APRIL 16, 2020



3A - SPANISH



3B - FARMHOUSE



3C - FRENCH

PLAN 3

SCALE: 1/4"=1'-0"

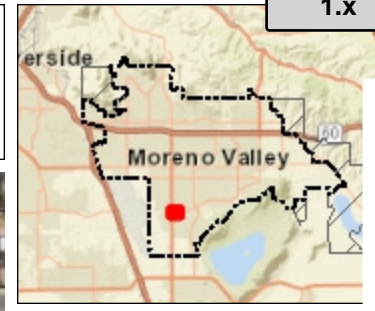
IRIS PARK

DESIGN DEVELOPMENT ROOF PLAN

APRIL 16, 2020

PEN20-0063 - 0065 Site Map

1.x



Legend

- Master Plan of Trails
 - Bridge
 - Improved
 - Multiuse
 - Proposed
 - Regional
 - State
- Road Labels
- Parcels
- ⬡ City Boundary
- ⊠ Sphere of Influence

Image Source: Nearmap

Notes:

APN(s): 312020025

631.0 0 315.48 631.0 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere

Print Date: 10/26/2020

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.

Attachment: Aerial Map (4197 : Tentative Tract Map 37909 with a Conditional Use Permit for a Planned



City of Moreno Valley
Community Development Department
Planning Division
City Hall Council Chamber
14177 Frederick Street
Moreno Valley, CA 92553

NOTICE OF PUBLIC HEARING (VIA TELECONFERENCE ONLY)

PURSUANT TO COVID-19 GOVERNOR EXECUTIVE ORDER N-29-20



Notice of Teleconferenced Public Hearing before the Planning Commission of the City of Moreno Valley:

DATE & TIME: November 12, 2020 at 7:00 P.M. **VIA TELECONFERENCE ONLY**

COVID-19 TELECONFERENCE INSTRUCTIONS:

For Teleconference Meeting public participation instructions please see agenda at <http://morenovalleyca.iqm2.com/Citizens/default.aspx>

PROJECT LOCATION: South side of Iris Avenue east of Perris Boulevard (312-025)

CASE NUMBER(s):

PEN20-0063 and PEN20-0065-0066

CASE PLANNER: Julia Descoteaux, Associate Planner (951) 413 3209
juliad@moval.org

- <APN>
- <Property Owner>
- <Street Address>
- <City, State, Zip>

Attachment: 600 Foot Mailing Notice (4197 : Tentative Tract

NOTICE OF PUBLIC HEARING

1.y

PROPOSAL: The applicant proposes to develop an approximately 10.82-acre site for a Tentative Tract Map 37909 for an 81-lc+ subdivision including a Conditional Use Permit for a Planned Unit Development. The site is zoned Residential 5 (R5) with a General Plan designation of Residential 5 (R5). Applications for a General Plan Amendment and Change of Zone are included to change the General Plan designation to Residential 10 (R10) and the Zoning designation to Residential Single-Family 10 (RS10), which would allow the proposed development.

ENVIRONMENTAL DETERMINATION: The City of Moreno Valley has reviewed the above project and has prepared an Initial Study in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15070. The Mitigated Negative Declaration represents the City's independent judgement and analysis. The proposed project will not have a significant effect on the environment with the implementation of mitigation measures.

PUBLIC HEARING: All interested parties will be provided an opportunity to submit oral testimony during the teleconferenced Public Hearing and/or provide written testimony during or prior to the teleconferenced Public Hearing. The application file and related environmental documents may be inspected by appointment at the Community Development Department at 14177 Frederick Street, Moreno Valley, California by calling (951) 413-3206 during normal business hours (7:30 a.m. to 5:30 p.m., Monday through Thursday).

COVID-19 – IMPORTANT NOTICES: Please note that due to the COVID-19 pandemic situation, staff will attempt to make reasonable arrangements to ensure accessibility to inspect the aforementioned records. **In addition, special instructions on how to effectively participate in the teleconferenced Public Hearing, as approved by Governor Executive Order N-25-20, will be posted at <http://morenovalleyca.igm2.com/Citizens/default.aspx> and will be described in the Planning Commission agenda.**

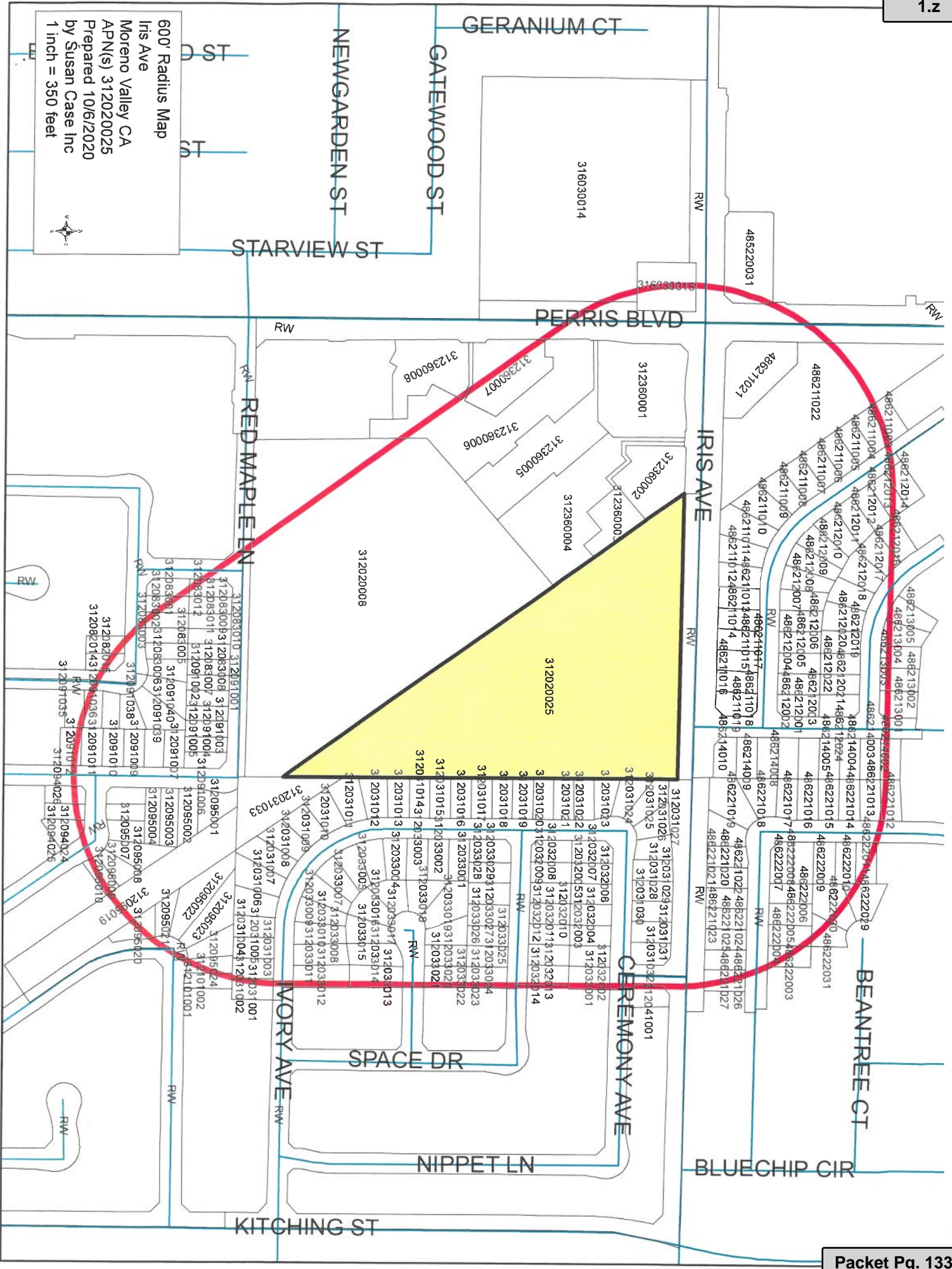
PLEASE NOTE: The Planning Commission may consider and approve changes to the proposed items under consideration during the teleconferenced Public Hearing.

GOVERNMENT CODE § 65009 NOTICE: If you challenge any of the proposed actions taken by the Planning Commission in court, you may be limited to raising only those issues you or someone else raised during the teleconferenced Public Hearing described in this notice, or in written correspondence delivered to the Planning Division of the City of Moreno Valley during or prior to, the teleconferenced Public 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.

Packet Pg. 1332

Attachment: 600 Foot Mailing Notice (4197) : Tentative Tract



600' Radius Map
 Iris Ave
 Moreno Valley CA
 APN(s) 312020025
 Prepared 10/6/2020
 by Susan Case Inc
 1 inch = 350 feet

Ashley Aparicio

From: Oscar Graham <oscar@pacificainvest.com>
Sent: Wednesday, November 4, 2020 5:29 PM
To: Julia Descoteaux
Cc: Patty Nevins; Manuel A. Mancha; Michael Lloyd, P.E.; Michael L. Wolfe, P.E.; Hoang Nguyen; Sean P. Kelleher; Scott Allen; Robert Beers; Rafik Albert; Jeremy Krout
Subject: Iris Park Community PEN20-0063, 0065-0067

Warning: External Email – Watch for Email Red Flags!

Hi Julia,

Thanks for your email. We appreciate everything you guys are doing to help us move the project forward. We'll go with your suggestion and we are formally requesting that our Planning Commission hearing be rescheduled to Dec.10th. Thank you and look forward to continuing working with you.

Oscar Graham
 Pacifica Investments
oscar@pacificainvest.com
 333 City Boulevard West, Suite 1700, Orange, CA 92868
 Ph. 714.609.7257
www.pacificainvest.com



Tentative Tract Map No. 37909

LEGAL DESCRIPTION:

THE LAND IS SITUATED IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

THE NORTHWEST QUARTER OF THE NORTHWESTQUARTER OF SECTION 29, TOWNSHIP 3 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT CONVEYED TO THE CITY OF MORENO VALLEY BY DEED RECORDED AUGUST 28, 1989 AS INSTRUMENT NO. 89-292505, OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM ALL OIL, WATER, GAS, HYDROCARBONS, PRECIOUS METALS AND MINERALS OF ANY KIND WHETHER DESCRIBED OR NOT, BELOW A DEPTH OF 500 FEET WITHOUT ANY RIGHT OF SURFACE ENTRY AS RESERVED IN A DEED RECORDED JUNE 13, 1991 AS INSTRUMENT NO. 91-199908 OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION SAID LAND CONVEYED TO VAL VERDE UNIFIED SCHOOL DISTRICT BY DEED RECORDED OCTOBER 10, 2002 AS INSTRUMENT NO. 02-566961 OFFICIAL RECORDS

ALSO EXCEPTING THEREFROM, LOT 1, LETTERED LOTS A THROUGH C OF TRACT MAP NO. 29857-1, AS SHOWN ON FILE IN BOOK 422 PAGES 23 AND 24 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

APN 312-020-025

GENERAL PLAN/ZONING/LANDUSE

EXISTING GENERAL PLAN DESIGNATION:
PROPOSED GENERAL PLAN DESIGNATION:
EXISTING ZONING: R5 - SUBURBAN RESIDENTIAL
PROPOSED ZONING: R10
EXISTING LANDUSE: Vacant
PROPOSED LANDUSE: DETACHED SFR

PROJECT NOTES

TOTAL GROSS PROJECT SIZE: 471,228 SF (10.82 Ac.)
DENSITY: 7.58 DU/ACRE
NUMBER OF RESIDENTIAL LOTS: 81
MINIMUM LOT AREA: As Shown on map
MINIMUM LOT DEPTH: 73'
MINIMUM LOT WIDTH: 30'
LOT SIZE: AS SHOWN ON MAP
GUEST PARKING 0.50 SPACES PER UNIT REQUIRED = 41
GUEST PARKING PROVIDED = 55
ALL ONSITE STREETS ARE PRIVATE
TOPOGRAPHY SOURCE: Aerial Topographic Mapping
PROJECT IS GATED - Gate At Weepow Dr. shall be 60' minimum from Iris Ave ROW

DEVELOPER

Passco Pacifica LLC
333 City Boulevard West, 17th Floor
Orange, CA 92866
ATT: Oscar Graham
714-609-7257

OWNER

Maple Lane Group, LLC
A California Limited Liability Company

LEGEND

T.C. TOP OF CURB
F.L. FLOWLINE
F.S. FINISHED SURFACE
P.E. PAD ELEVATION
C.B. CATCH BASIN
H.P. HIGH POINT
E.L. EXIST. LAND USAGE
Z. EXIST. ZONING

UTILITY PURVEYORS

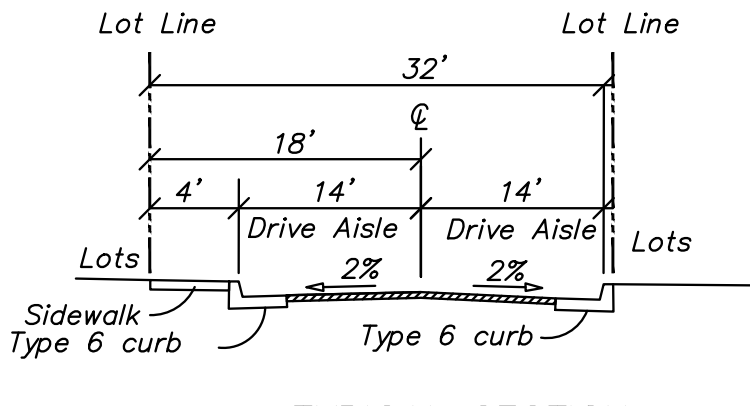
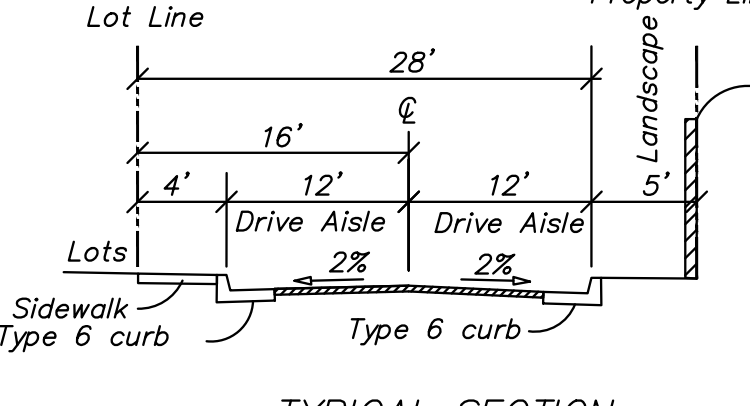
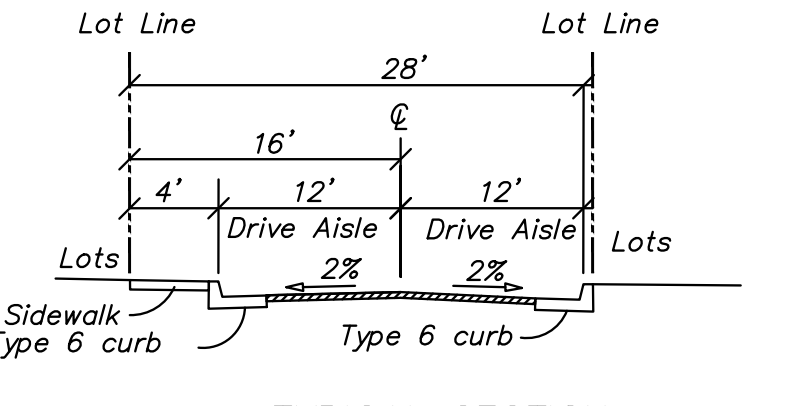
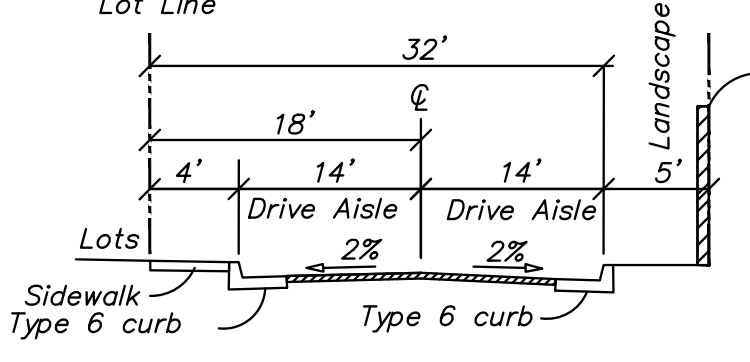
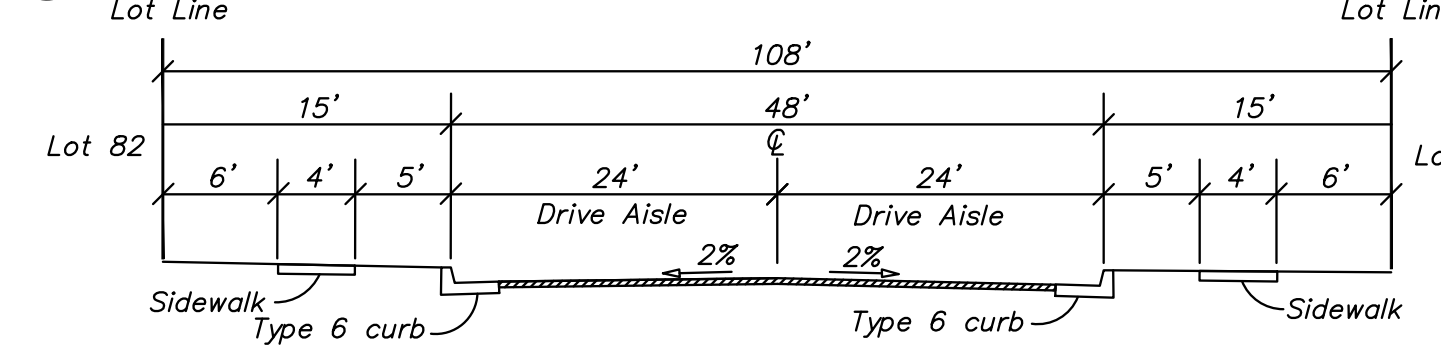
WATER: EASTERN MUNICIPAL WATER DISTRICT
SEWER: EASTERN MUNICIPAL WATER DISTRICT
GAS: SOUTHERN CALIFORNIA GAS COMPANY
ELECTRICITY: SOUTHERN CALIFORNIA EDISON
TELEPHONE: AT&T
SCHOOL: MORENO VALLEY UNIFIED SCHOOL DISTRICT
CATV: SPECTRUM

SOILS ENGINEER

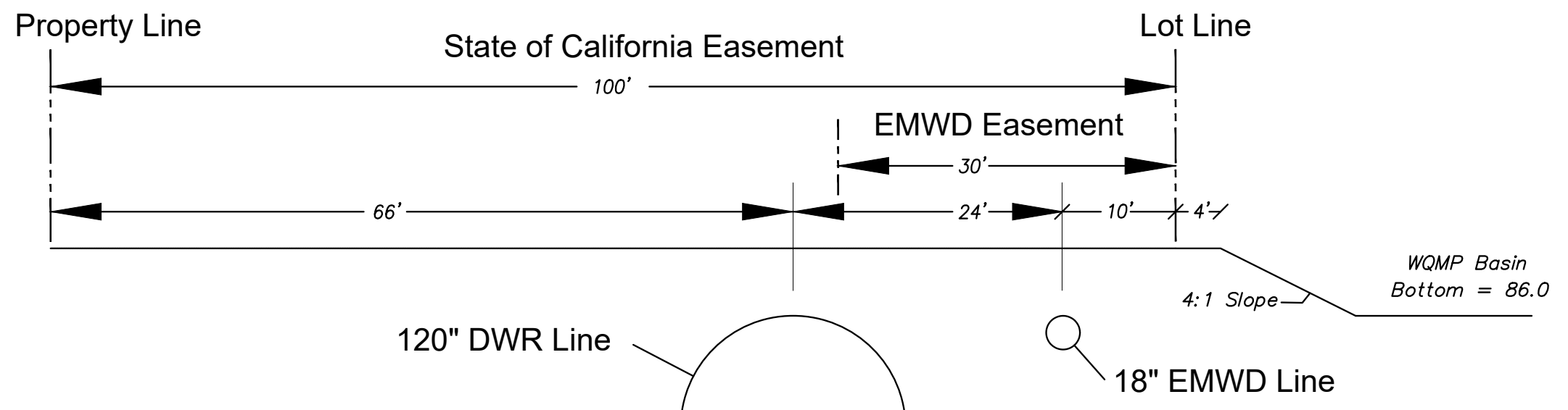
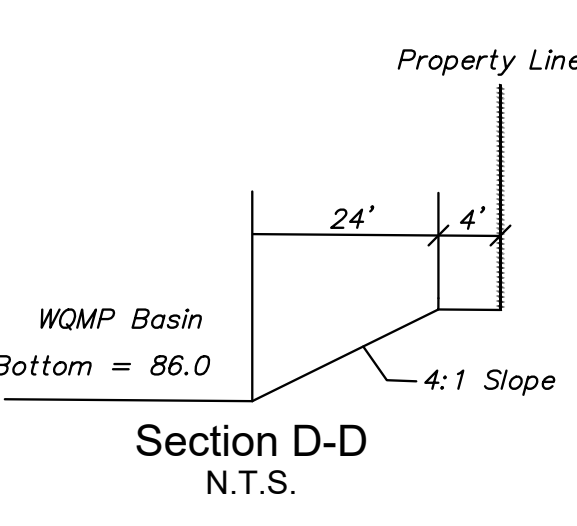
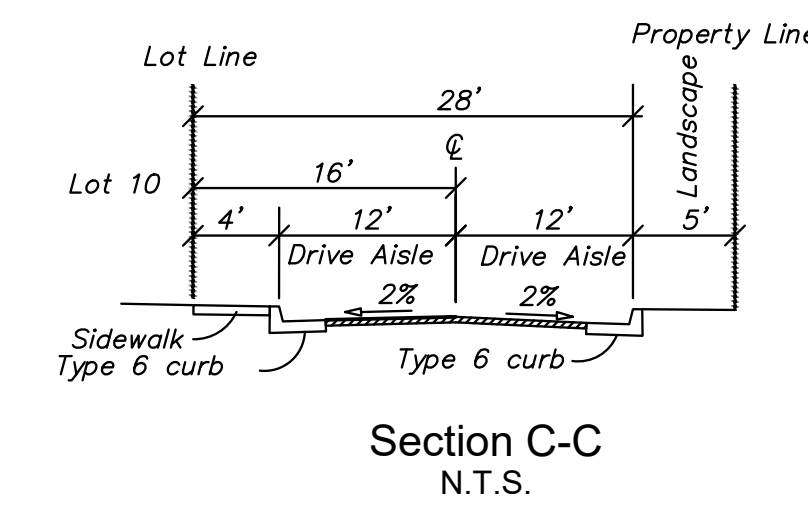
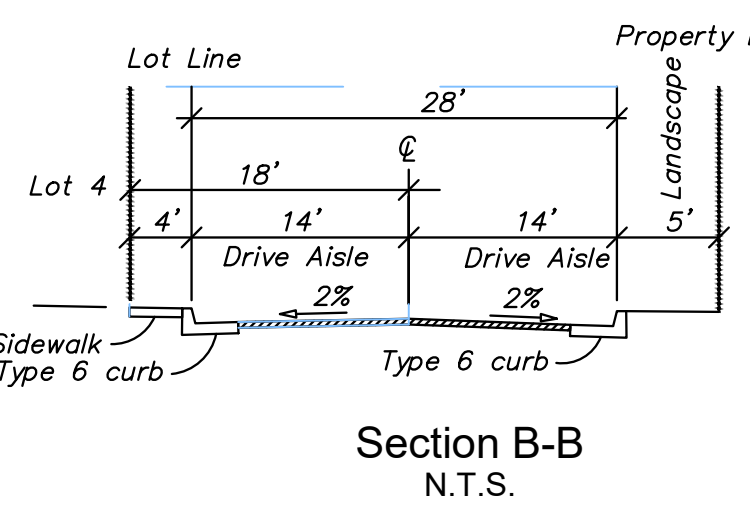
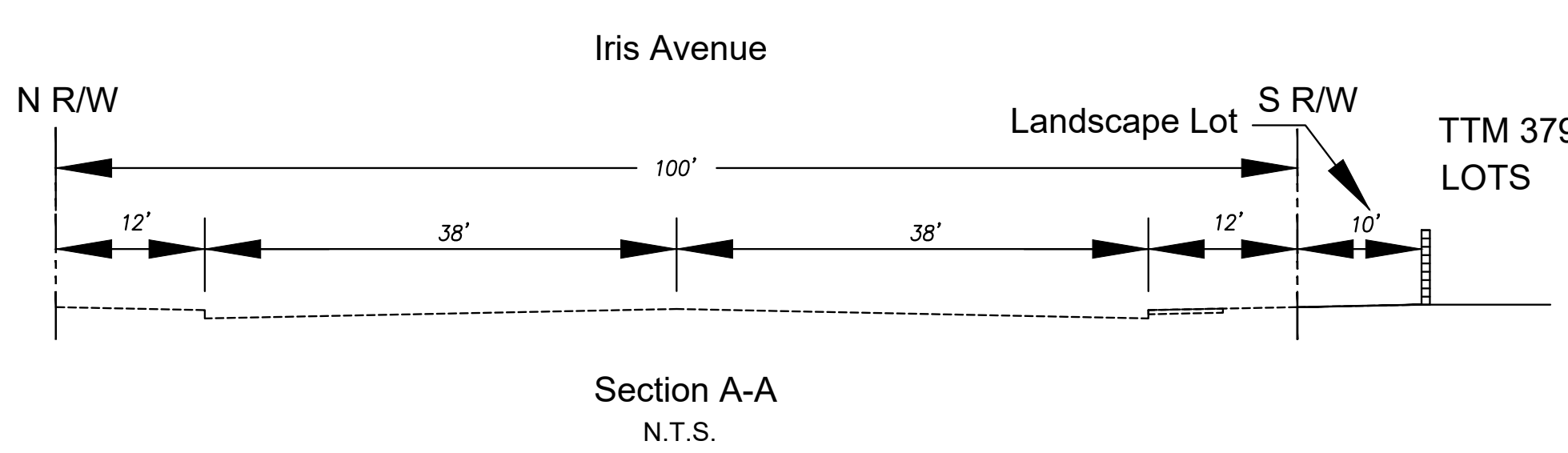
LOR GEOTECHNICAL GROUP, INC.
6121 Quail Valley Court
Riverside, CA 92507
(951) 533-1760
Project No. 33591.1
Dated: November 25, 2019

Cut: 12,001 cy's
Fill: 5,059 cy's
Export: 6,042 cy's

Future Trail and landscape improvements within Lot "I"
Future Trail to be designed and constructed by City
Future landscape improvements to be designed and installed per Conditions of Approval
City to maintain trail and greenbelt landscaping

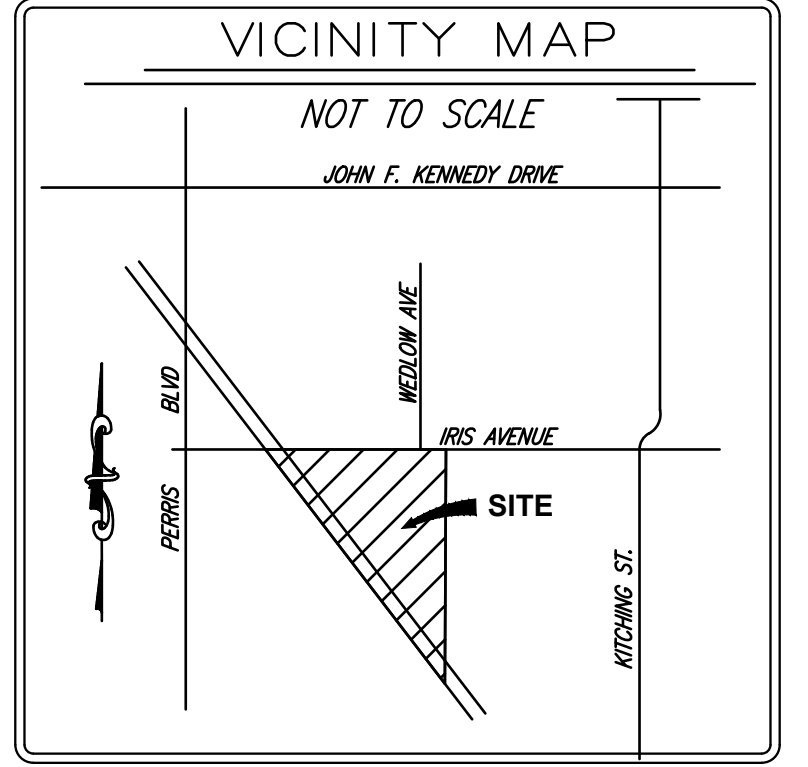


Note: Place "No Parking" Signage along on-site 24' curb to curb street sections per current MUTCD standards
Parking allowed on one side of streets with 28' curb to curb section



EASEMENT NOTES

- A 100 FOOT WIDE EASEMENT IN FAVOR OF THE STATE OF CALIFORNIA FOR THE PIPELINE PURPOSES PER DOCUMENT RECORDED JANUARY 23, 1967 AS INSTRUMENT NO. 5814, OFFICIAL RECORDS.
- A 30 FOOT WIDE EASEMENT IN FAVOR OF THE EASTERN MUNICIPAL WATER DISTRICT FOR ROAD AND UTILITY PURPOSES RECORD FEBRUARY 16, 1984 AS INSTRUMENT NO. 31787, OFFICIAL RECORDS.
- A 10 FOOT WIDE EASEMENT IN FAVOR OF THE CITY OF MORENO VALLEY FOR LANDSCAPE AND INCIDENTAL PURPOSES AS DEDICATED ON TRACT NO. 29857-1, FILED IN BOOK 422, PAGES 23 AND 24 OF MAPS, RECORDS OF RIVERSIDE COUNTY.



ROBERT BEERS
8175 Limonite Avenue, Suite E
Jurupa Valley, CA 92509
Ph. (951) 317-2041 Fax (909) 360-2070

PREPARED FOR:
Passco Pacifica LLC
333 City Boulevard West
17th Floor
Orange, CA 92866
PHONE: (714) 609-7257

TTM 37909
City of Moreno Valley
California

DATE: Oct. 14, 2020
JOB NO.:
DRAWN BY: R.A.H.
CHECKED BY: R.M.B.
SHEET 1-1

Lot Statistics Table

Residential Lots				Lettered Lots			
Lot Number	Width (ft)	Depth (ft)	Area (sf)	Lot Number	Width (ft)	Depth (ft)	Area (sf)
1	34	75	2,550	28	30	75	2,250
2	30	75	2,250	29	30	75	2,250
3	34	75	2,550	30	30	75	2,250
4	34	75	2,550	31	30	75	2,250
5	33	75	2,475	32	30	75	2,250
6	33	75	2,475	33	30	75	2,250
7	34	75	2,550	34	30	75	2,250
8	30	73	2,190	35	30	75	2,250
9	30	73	2,190	36	35	75	2,625
10	30	73	2,190	37	30	75	2,250
11	30	74	2,220	38	30	75	2,250
12	30	74	2,220	39	30	75	2,250
13	30	75	2,250	40	30	75	2,250
14	30	75	2,250	41	30	75	2,250
15	30	76	2,300	42	30	75	2,250
16	30	76	2,300	43	30	75	2,250
17	30	77	2,310	44	30	75	2,250
18	31	107	3,400	45	30	75	2,250
19	31	107	3,400	46	30	75	2,250
20	30	75	2,250	47	30	77	2,285
21	30	75	2,250	48	30	75	2,250
22	30	75	2,250	49	30	75	2,250
23	30	75	2,250	50	30	75	2,250
24	30	75	2,250	51	35	75	2,625
25	30	75	2,250	52	30	75	2,250
26	30	75	2,250	53	30	75	2,250
27	30	75	2,250	54	30	75	2,250
Subtotal Residential Lot Area			69,825	Subtotal Residential Lot Area			69,825
Lettered Lot Area			12,984	Lettered Lot Area			12,984
Total Residential Lot Area			82,809	Total Residential Lot Area			82,809
Average Lot Size			2,382	Average Lot Size			2,382