PLANNING COMMISSION
Regular Meeting

Agenda

Thursday, January 14, 2021 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

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Public Comments May be Made Via Zoom

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

ALTERNATIVE

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Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, in compliance with the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to the 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 l 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.

1. Planning Commission Minutes – Regular Meeting – November 12, 2020 7:00 PM
2. Planning Commission Minutes – Regular Meeting – December 10, 2020 7:00 PM

NON-PUBLIC HEARING ITEMS

No items for discussion.

PUBLIC HEARING ITEMS

1. Case: PEN20-0139 General Plan Amendment
PEN20-0138 Specific Plan Amendment
PEN20-0137 Plot Plan

Applicant: LCG 10MV, LLC

Property Owner SCNDSC, LLC

Representative Ryan Martin

	Location:	Southeast corner of Heacock Street and Ironwood Avenue APN's 481-020-013, 029, 030, 034, 035 & 038
	Case Planner:	Julia Descoteaux
	Council District:	1
	Proposal	The Applicant is requesting approval of the following entitlements for a 9.96-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 Commercial (C) to Business Park (BP), 2) a Specific Plan Amendment from SP205 Retail Commercial to SP205 Mixed Use; and 3) a Plot Plan for an approximately 220,390 square foot light industrial building.
2.	Case:	PEN20-0194 Conditional Use Permit
	Applicant:	Rafael Shahid
	Property Owner	Butterfield Valley Partners
	Representative	Samuel Meleika
	Location:	25045 Sunnymead Boulevard, east side of Perris Boulevard Assessor's Parcel Number 479-040-027
	Case Planner:	Claudia Manrique
	Council District:	3
	Proposal	Conditional Use Permit for a 1032 square foot Liquor Store named "Duke's Liquor".

OTHER COMMISSION BUSINESS

No items for discussion.

STAFF COMMENTS

PLANNING COMMISSIONER COMMENTS

ADJOURNMENT

Planning Commission Regular Meeting, January 28, 2021 at 7:00 P.M., City of Moreno Valley, City Hall Council Chamber, 14177 Frederick Street, Moreno Valley, CA 92553.

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

REGULAR MEETING – 7:00 PM
November 12, 2020

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

There Will Not Be a Physical Location for Attending the Meeting

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Minutes Acceptance: Minutes of Nov 12, 2020 7:00 PM (CONSENT CALENDAR)

CALL TO ORDER

This Regular meeting of the Planning Commission of the City of Moreno Valley was called to order at 7:09 p.m., by Chairperson Korzec in the Council Chambers located at 14177 Frederick Street, Moreno Valley, California.

ROLL CALL

Planning Commission:	Patricia Korzec	Chairperson	Present
	Ray L. Baker	Vice Chairperson	Present
	Robert Harris	Commissioner	Present
	JoAnn Stephan	Commissioner	Present
	Rafael Brugueras	Commissioner	Present
	Jeffrey Sims	Commissioner	Present
	Alvin DeJohnette	Commissioner	Present

PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Vice Chairperson Baker.

APPROVAL OF AGENDA

Motion to approve the agenda was made by Commissioner DeJohnette and seconded by Vice Chairperson Baker.

Vote: 7-0
Ayes: Commissioner DeJohnette, Vice Chairperson Baker, Commissioner Brugueras, Stephan, Harris, Sims and Chairperson Korzec
Action: **Approved**

PUBLIC COMMENTS PROCEDURE

PUBLIC COMMENTS

No public comments.

CONSENT CALENDAR

1. Planning Commission - Regular Meeting - October 22, 2020 7:00 PM

   Motion to approve the minutes was made by Commissioner Brugueras and seconded by Vice Chairperson Baker.

   Vote: 7-0
   Ayes: Commissioner Brugueras, Vice Chairperson Baker, Commissioner Stephan, Harris, DeJohnette, Sims and Chairperson Korzec
   Action: **Approved**

NON-PUBLIC HEARING ITEMS

No items for discussion.

PUBLIC HEARING ITEMS

1. 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 an 81-unit Singly Family Subdivision. (Report of: Planning Commission)

   Public Hearing Opened: 7:15 pm

   No public speakers.

   Public Hearing Closed: 7:17 pm

   Motion to continue to the December 10, 2020 regular meeting of the Planning Commission was made by Commissioner Brugueras and seconded by Commissioner Stephan.

   Vote: 7-0
   Ayes: Commissioner Brugueras, Stephan, Harris, DeJohnette, Sims, Vice Chairperson Baker and Chairperson Korzec
   Action: **Approved**

2. Amended Tentative Tract Map (TTM No. 33436) to reduce the number of lots from 105 to 104 and modify project grading and a Variance Application to increase the height of a combined retaining wall from 8 feet to 21 feet. (Report of: Planning Commission)

   1. APPROVE Resolution No. 2020-42, and thereby:

      a. RECOGNIZE that Amended Tentative Tract Map 33436 PEN19-0244 has been evaluated pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines Sections 15162 and 15164 and it has been determined that preparation of a subsequent Negative Declaration or an Addendum is not required since the proposed changes to the project were determined to be minor and that the project is consistent with the findings of the original Negative Declaration for this project that was approved by the Planning Commission March 23, 2006; and

      b. APPROVE Amended Tentative Tract Map 33436 PEN19-0244 subject to the attached Conditions of Approval included as Exhibit A.

   2. APPROVE Resolution No. 2020-43, and thereby:

a. RECOGNIZE that Variance PEN19-0244 has been evaluated against criteria set forth in the California Environmental Quality Act (CEQA) and CEQA Guidelines Sections 15162 and 15164 and it has been determined that preparation of a subsequent Negative Declaration or an Addendum was not required since the proposed changes to the project were determined to be minor and that the project is consistent with the findings of the original Negative Declaration for this project that was certified by the March 23, 2006; and

b. APPROVE Variance PEN19-0245.

Public Hearing Opened: 7:36 pm

Speakers
Morgan Curry
John Stelzner

Public Hearing Closed: 7:48 pm

Motion to approve Resolution Number 2020-43 was made by Commissioner Sims and seconded by Vice Chairperson Baker.

Vote: 7-0
Ayes: Commissioner Sims, Vice Chairperson Baker, Commissioner Brugueras, Stephan, Harris, DeJohnette, and Chairperson Korzec
Action: **Approved**

3. 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 Conditional Use Permits for a drive through restaurant with outdoor seating and a fueling station and convenience store with alcohol sales. (Report of: Planning Commission)

1. That the Planning Commission APPROVE Resolution No. 2020-44, attached hereto, RECOMMENDING that the City Council:

a. APPROVE the Initial Study/Mitigated Negative Declaration prepared for General Plan Amendment PEN19-0206, Zone Change PEN19-0207, and Conditional Use Permits PEN19-0204 and PEN19-0205 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

b. ADOPT the Mitigation Monitoring and Reporting Program prepared for the proposed Project which includes, General Plan Amendment PEN19-0206, Zone Change PEN19-0207, and Conditional Use Permits PEN19-0204 and PEN19-0205 pursuant to CEQA and the CEQA Guidelines.

2. That the Planning Commission APPROVE Resolution No. 2020-45, attached hereto, RECOMMENDING that the City Council:

   a. APPROVE General Plan Amendment PEN19-0206 based on the Recitals, Evidence contained in the Administrative Record and Findings as set forth in Resolution No. 2020-45.

3. That the Planning Commission APPROVE Resolution No. 2020-46, attached hereto, RECOMMENDING that the City Council:

   a. APPROVE Change of Zone PEN19-0207 based on the Recitals, Evidence contained in the Administrative Records and Findings as set forth in Resolution No. 2020-46.

4. That the Planning Commission APPROVE Resolution No. 2020-47, attached hereto, RECOMMENDING that the City Council:

   a. APPROVE Conditional Use Permits PEN19-0204 and PEN19-0205, based on the Recitals, Evidence contained in the Administrative Record and Findings as set forth in Resolution No. 2020-47.

Public Hearing Opened: 8:27 pm

No public speakers

Public Hearing Closed: 8:30 pm

Motion to approve Resolution Numbers 2020-44, 2020-45, 2020-46 and 2020-47 was made by Commissioner Sims and seconded by Vice Chairperson Baker.

Vote: 7-0
Ayes: Commissioner Sims, Vice Chairperson Baker, Commissioner Brugueras, Stephan, Harris, DeJohnette, and Chairperson Korzec
Action: **Approved**

At 8:54 pm Chairperson Korzec called for a five-minute recess.

At 9:00 pm Chairperson Korzec reconvened the meeting.

4. A Municipal Code Amendments amending various sections within Title 9 Planning and Zoning; Chapter 9.02; Permits and Approvals, Chapter 9.09; Specific Use Development Standards, Chapter 9.11; Parking, Pedestrian and Loading Requirements, and Chapter; 9.12 Sign Regulations. (Report of: Planning Commission)

    1. That the Planning Commission APPROVE Resolution No. 2020-48 and thereby RECOMMEND the City Council;

        a. Approve Municipal Code Amendment PEN20-0189 based on the findings contained in this Resolution and Adopt the attached Ordinance.

        Motion to approve Resolution Number 2020-48 with the subject deletion of sections 9.02.020 and 9.02.090 was made by Commissioner Sims and seconded by Chairperson Korzec.

        Vote: 7-0
        Ayes: Commissioner Sims, Chairperson Korzec, Commissioner Brugueras, Stephan, Harris, DeJohnette and Vice Chairperson Baker
        Action: **Approved**

OTHER COMMISSION BUSINESS

No items for discussion.

STAFF COMMENTS

No staff comments.

PLANNING COMMISSIONER COMMENTS

All Commissioners wished everyone a Happy Thanksgiving.

Commissioner Sims let everyone know that the new Sketchers building is going on and construction on the roundabout has started.

Commissioner Harris addressed the gas station near the Kaiser Hospital at Iris Avenue and Oliver Street. He stated how City Council reversed the decision and asked if the other Commissioner had heard about it. He also asked that when something like this happens is there a way for them to be notified.

Vice Chairperson Baker asked about the Dunkin Donuts near Cottonwood Avenue.

Patty Nevins, Planning Official, advised Mr. Baker that we will give him an update at the next scheduled meeting.

ADJOURNMENT

There being no further business to come before the Planning Commission, Chairperson Korzec adjourned the meeting at 10:02 PM.

Submitted by:

_____
Ashley Aparicio
Planning Commission Secretary

Approved by:

_____
Patricia Korzec
Chairperson

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

REGULAR MEETING – 7:00 PM
December 10, 2020

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:

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ALTERNATIVE

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Minutes Acceptance: Minutes of Dec 10, 2020 7:00 PM (CONSENT CALENDAR)

CALL TO ORDER

This Regular meeting of the Planning Commission of the City of Moreno Valley was called to order at 7:00 p.m., by Chairperson Korzec in the Council Chambers located at 14177 Frederick Street, Moreno Valley, California

ROLL CALL

Planning Commission:	Patricia Korzec	Chairperson	Present
	Robert Harris	Commissioner	Present
	JoAnn Stephan	Commissioner	Present
	Rafael Brugueras	Commissioner	Present
	Jeffrey Sims	Commissioner	Present
	Ray L. Baker	Vice Chairperson	Present
	Alvin DeJohnette	Commissioner	Present

PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Commissioner Harris.

APPROVAL OF AGENDA

Motion to approve the agenda was made by Vice Chairperson Baker and seconded by Commissioner Stephan.

Vote: 7-0
Ayes: Vice Chairperson Baker, Commissioner Stephan, Brugueras, Harris, DeJohnette, Sims, and Chairperson Korzec
Action: **Approved**

PUBLIC COMMENTS PROCEDURE

PUBLIC COMMENTS

No public comments.

CONSENT CALENDAR

No items for discussion.

NON-PUBLIC HEARING ITEMS

No items for discussion.

PUBLIC HEARING ITEMS

1. 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 meeting. (Report of: Planning Commission)

   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.

   Public Hearing Opened: 8:00 pm

   No public speakers

   Public Hearing Closed: 8:15 pm

   Motion to approve Resolution Numbers 2020-49, 2020-50, 2020-51, 2020-52, and 2020-53 was made by Commissioner Sims and seconded by Vice Chairperson Baker.

   Vote: 7-0
   Ayes: Commissioner Sims, Vice Chairperson Baker, Commissioner Brugueras, Stephan, Harris, DeJohnette and Chairperson Korzec
   Action: **Approved**

OTHER COMMISSION BUSINESS

No items for discussion.

STAFF COMMENTS

No staff comments.

PLANNING COMMISSIONER COMMENTS

All Commissioners wished everyone Happy Holidays and thanked everyone for their hard work.

ADJOURNMENT

There being no further business to come before the Planning Commission, Chairperson Korzec adjourned the meeting at 8:37 pm.

Submitted by:

Approved by:

_____

Ashley Aparicio
Planning Commission Secretary

_____

Patricia Korzec
Chairperson

PLANNING COMMISSION

STAFF REPORT

Meeting Date: January 14, 2021

PROPOSED GENERAL PLAN AMENDMENT AMENDING FIGURE 2-2 “LAND USE MAP” OF THE MORENO VALLEY GENERAL PLAN, A SPECIFIC PLAN AMENDMENT AMENDING THE LAND USE DESIGNATIONS WITHIN SPECIFIC PLAN 205, AND PROPOSED PLOT PLAN FOR AN APPROXIMATELY 220,390 SQUARE FOOT LIGHT INDUSTRIAL BUILDING, AND NECESSARY AND CORRESPONDING AMENDMENT TO THE CITY’S ZONING ATLAS TO REFLECT THE PROPOSED CHANGES IN THE ZONING CLASSIFICATION AND/OR REDISTRICTING ASSOCIATED WITH THE ABOVE.

Case:	PEN20-0139 General Plan Amendment PEN20-0138 Specific Plan Amendment PEN20-0137 Plot Plan
Applicant:	LCG 10MV, LLC
Property Owner	SCNDSC, LLC
Representative	Ryan Martin
Location:	Southeast corner of Heacock Street and Ironwood Avenue APN’s 481-020-013, 029, 030, 034, 035 & 038
Case Planner:	Julia Descoteaux
Council District:	1
Proposal	The Applicant is requesting approval of the following entitlements for a 9.96-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 Commercial (C) to Business Park (BP), 2) a Specific Plan Amendment from

SP205 Retail Commercial to SP205 Mixed Use; and 3) a Plot Plan for an approximately 220,390 square foot light industrial building.

SUMMARY

The applicant, LCG 10MV, LLC, is requesting approval of the following: a General Plan Amendment (PEN20-0139) to amend the General Plan land use designation from Commercial (C) to Business Park (BP); a Specific Plan Amendment (PEN20-0138) to amend the Specific Plan 205 land use designation from Retail Commercial (R/C) to Mixed Uses (MU); and a Plot Plan for an approximately 220,390 light industrial building, for property located at the southeast corner of Ironwood Avenue and Heacock Street.

PROJECT DESCRIPTION

General Plan Amendment

The City of Moreno Valley General Plan land use map designates the Project site as Commercial (C) and the proposal would change this to a Business Park (BP) land use designation.

The primary purpose of areas designated Commercial (C) is to provide property for business purposes, including, but not limited to, retail stores, restaurants, banks, hotels, professional offices, personal services and repair services. The Primary purpose of the Business Park (BP) is to provide for manufacturing, research and development, warehousing and distribution, as well as office and support commercial activities.

The Applicant is proposing a General Plan Amendment to amend the project site General Plan land use designation boundaries as described under the Summary above. The proposed General Plan Amendment will be consistent with the adjacent parcels to the south and east, and would result in a total increase of approximately 9.96-acres of Business Park (BP) designated land and a corresponding reduction of approximately 9.96-acres of Commercial (C) designated land.

Specific Plan Amendment

The project site is located within Specific plan 205 and currently has a land use designation of Commercial/Retail (C/R). The applicant is proposing a Specific Plan Amendment to change the Specific Plan land use designation of the project site to Mixed Uses (MU) consistent with the adjacent parcels to the south and east. The Mixed-Uses (MU) designation allow for a wider range of uses than the Commercial Retail (C/R) designation. The permitted uses include a variety of business park, office, retail and other commercial uses as well as light industrial uses.

Plot Plan

The Applicant is proposing the construction of a light industrial building of approximately 220,390 square feet in size with associated parking and landscape improvements. The

proposed project will be located at the southeast corner of Heacock Street and Ironwood Avenue.

Zoning Atlas Amendment

Both the General Plan Amendment and Specific Plan Amendment will require the necessary and corresponding amendment to the City's Zoning Atlas to reflect the proposed changes in the zoning classification and/or redistricting associated with each Amendment.

Site/Surrounding Area

The approximately 9.96-acre site is located on the southeast corner of Heacock Street and Ironwood Avenue.

The surrounding area includes existing single family homes and an electrical substation to the north across Ironwood Avenue on property zoned Residential 5 (R5) District; light industrial buildings currently under construction on properties located within Specific Plan 205 to the south and east; and a mix of existing single family homes, offices, and commercial businesses to the west within the Neighborhood Commercial (NC) District and the Office Commercial (OC) District.

Access/Parking

Access to the Project site will be from two driveways on Heacock Street, one for trucks and one for automobiles, with an additional access driveway on Ironwood Avenue for both automobiles and trucks.

Parking for both automobiles and trucks meet the Municipal Code requirements. Ninety-eight (98) automobile stalls are provided that include the required ADA, E.V., and vehicle charging stations. Thirty-six (36) truck parking stalls are provided in the truck court.

Design/Landscaping

The proposed project light industrial type building has been designed to incorporate a contemporary architectural design that includes a combination of materials including concrete, metal, and glass. The building will be painted white with grey and blue accents.

The building has been designed to incorporate an architectural focal point near the intersection of Heacock Street and Ironwood Avenue through the use of vision and spandrel glass, metal canopies, and enhanced landscaping. These materials are further utilized along both street frontages to enhance the project aesthetics and to upgrade the use of tilt-up concrete panels traditionally associated with light industrial buildings.

The layout of the building on the site places the loading docks and truck parking to the southeast corner of the site adjacent to the other light industrial buildings that are currently under construction within the Specific Plan area.

The Project has been designed to meet and exceed the required design and landscape standards and objectives set forth in the Municipal Code. The landscape elements of the Project include the landscape setback areas along Heacock Street and Ironwood Avenue with enhanced landscaping along the frontage of both streets and adjacent to the building that will include street trees, on-site trees and plants.

ENVIRONMENTAL

An Initial Study was prepared by Blodgett Baylosis Environmental Planning in compliance with the California Environmental Quality Act (CEQA) Guidelines. The Initial Study examined the potential of the proposed Project impacts on the environment. The Initial Study/Mitigation 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 Worksheets, Utility Worksheets, Biological Assessment, Basin Constraints Analysis, Jurisdictional Wetlands and Waters Assessment, and Traffic Impact Analysis. The electronic files for the IS/MND with appendices are attached to this staff report. Anyone wishing to view the documents can also do so at City Hall.

Mitigation measures are recommended for the proposed Project in the following areas: Biological Resources, Cultural/Tribal Resources, Greenhouse Gas Emissions, Noise, and Transportation, all of which are incorporated into 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 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 any significant impacts or environmental damage.

The public comment period for the Notice of Availability for the Initial Study/Mitigated Negative Declaration began on December 23, 2020 and ends on January 11, 2021, 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 August 2020. The Project has been considered by all appropriate trustee and responsible 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 trustee and responsible agencies where applicable, in accordance with the standard review process for development applications.

STAFF RECOMMENDATION

Staff recommends that the Planning Commission take the following actions:

A. That the Planning Commission **ADOPT** Resolution No. 2021-01, attached hereto, **RECOMMENDING** that the City Council:

   1. **APPROVE** the Initial Study/Mitigated Negative Declaration prepared for General Plan Amendment PEN20-0139, Specific Plan Amendment PEN20-0138 and Plot Plan PEN20-0137 on file with the Community Development Department, incorporated herein by this reference, and any necessary and corresponding amendment to the City's Zoning Atlas to reflect the proposed changes in the zoning classification and/or redistricting associated with the General Plan Amendment and Specific Plan Amendment, 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 PEN20-0139, Specific Plan Amendment PEN20-0138, Plot Plan PEN20-0137 and any necessary and corresponding amendment to the City's Zoning Atlas to reflect the proposed changes in the zoning classification and/or redistricting associated with the General Plan Amendment and Specific Plan Amendment pursuant to CEQA and the CEQA Guidelines.

B. That the Planning Commission **ADOPT** Resolution No. 2021-02, attached hereto, **RECOMMENDING** that the City Council:

   1. **APPROVE** PEN20-0139 General Plan Amendment based on the Recitals, Evidence contained in the Administrative Record and Findings as set forth in Resolution No. 2021-02 and any necessary and corresponding

amendment to the City's Zoning Atlas to reflect the proposed changes in the zoning classification and/or redistricting associated with the General Plan Amendment.

C. That the Planning Commission **ADOPT** Resolution No. 2021-03, attached hereto, **RECOMMENDING** that the City Council:

1. **APPROVE** PEN20-0138 Specific Plan Amendment based on the Recitals, Evidence contained in the Administrative Record and Findings as set forth in Resolution No. 2021-03. and any necessary and corresponding amendment to the City's Zoning Atlas to reflect the proposed changes in the zoning classification and/or redistricting associated with the Specific Plan Amendment

D. That the Planning Commission **ADOPT** Resolution No. 2021-04, attached hereto, **RECOMMENDING** that the City Council:

1. **APPROVE** PEN20-0137 Plot Plan based on the Recitals, Evidence contained in the Administrative Record and Findings as set forth in Resolution No. 2021-04.

Prepared by:
Julia Descoteaux
Associate Planner

Approved by:
Patty Nevins
Planning Official

ATTACHMENTS

1. Resolution No. 2021-01 Initial Study MND
2. Exhibit A to Resolution No. 2021-01 Initial Study MND
3. Appendix A to Initial Study Air Quality Worksheets
4. Appendix B to Initial Study Utility Worksheets
5. Appendix C to Initial Study General Biological Assessment
6. Appendix D to Initial Study Jurisdictional Delineation
7. Appendix E to Initial Study Basin Constriants Analysis
8. Appendix F to Initial Study Traffic Impact Analysis
9. Exhibit B to Resolution No. 2021-01 Initial Study MND
10. Exhibit C to Resolution No. 2021-01 Initial Study MND
11. Resolution No. 2021-02 General Plan Amendment
12. Exhibit A to Resolution No. 2021-02 General Plan Amendment
13. Resolution No. 2021-03 Specific Plan Amendment
14. Exhibit A to Resolution No. 2021-03 Specific Plan Amendment
15. Resolution No. 2021-04 Plot Plan
16. Exhibit A to Resolution No. 2021-04 Conditions of Approval Plot Plan

17. Aerial Map
18. Project Plans
19. Color Elevations
20. Elevation corner view
21. Color Landscape plan
22. 600 Foot Mailing Notice
23. 600 Foot Radius Map

RESOLUTION NUMBER 2021-01

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 THE MORENO VALLEY BUSINESS PARK PROJECT LOCATED AT THE SOUTHEAST CORNER OF HEACOCK STREET AND IRONWOOD AVENUE (APN'S 481-020-013, 029, 030, 034, 035, 038)

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 (CEQA[1]) and CEQA Guidelines[2]; and

WHEREAS, LCG 10MV, LLC., ("Developer") is seeking approval for the development of the Moreno Valley Business Park, an approximately 200,000 square foot light industrial building on a 9.96-acre site that includes: 1) a General Plan Amendment (GPA) (PEN20-0139) amending Figure 2-2 "Land Use Map" of the Moreno Valley General Plan to change the land use designation of the Project site from Commercial to Business Park; 2) a Specific Plan Amendment to change the land use designation of the site from SP205 Retail Commercial to SP205 Mixed Use and other minor modifications the Specific Plan; 3) a Plot Plan for an approximately 200,000 square foot light industrial building with associated public improvements located at the southeast corner of Heacock Street and Ironwood Avenue (APN'S 481-020-013, 029, 030, 034, 035, 038); and

WHEREAS, the proposed "Project" shall include not only the General Plan Amendment (GPA) (PEN20-0139), Specific Plan Amendment, and Plot Plan, but also a corresponding amendment to the City's Zoning Atlas to reflect the proposed changes in the zoning classification and/or redistricting associated with the General Plan Amendment and Specific Plan Amendment; 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 December 23, 2020, through January 11, 2021; and

[1] Public Resources Code §§ 21000-21177
[2] 14 California Code of Regulations §§15000-15387

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 noticed with the Mitigated Negative Declaration; and

WHEREAS, on January 14, 2021 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 _____, 2021.

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

Exhibit A

INITIAL STUDY

Exhibit B

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

Exhibit C

MITIGATION MONITORING PLAN

INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

MORENO VALLEY BUSINESS PARK AMENDMENT NO. 2 MORENO VALLEY FESTIVAL SPECIFIC PLAN (SP-205) MORENO VALLEY, CALIFORNIA

LEAD AGENCY:

CITY OF MORENO VALLEY PLANNING DIVISION
14177 FREDERICK STREET
MORENO VALLEY, CALIFORNIA 92553

REPORT PREPARED BY:

BLODGETT BAYLOSIS ENVIRONMENTAL PLANNING
2211 S. HACIENDA BOULEVARD, SUITE 107
HACIENDA HEIGHTS, CALIFORNIA 91745

DECEMBER 16, 2020

MORV 007

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MITIGATED NEGATIVE DECLARATION

PROJECT NAME: Moreno Valley Business Park

PROJECT APPLICANT: The Applicant for the proposed project is Mr. Ryan Martin, LCG 10MV, LLC, 670 Ledo Way, Los Angeles, CA 90049.

PROJECT LOCATION: The geographic area that is the subject of the proposed amendment (Amendment Number 2) includes a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. The affected Assessor Parcel Numbers (APMs) include 481-020-13, 29, 30, 34, 35, 38 and 39.

CITY AND COUNTY: City of Moreno Valley, Riverside County.

PROJECT: The Specific Plan Amendment that is the focus of this Initial Study and Mitigated Negative Declaration (IS/MND) is the *Second Amendment* to the adopted *Moreno Valley Festival Specific Plan (SP-205)*. The original Specific Plan was adopted, and the Environmental Impact Report (EIR) was certified, by the City Council of Moreno Valley on October 27, 1987. *Amendment Number 1* was adopted in 2018 as a means to promote a wider range of land uses and development so as to take advantage of more recent development trends that were occurring since the original Specific Plan was adopted.[1] This IS/MND for Amendment No. 2 also tiers off of the Final EIR that was certified for the *Moreno Valley Festival Specific Plan/EIR (SP-205)*. This current proposed amendment (Amendment Number 2) that is the subject of this IS/MND, expands the geographic area of the Specific Plan's Planning Area 1 to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This Specific Plan Amendment Number 2 is contemplating a new light industrial building totaling 220,390 square feet of floor area.

FINDINGS: The environmental analysis provided in the attached Initial Study indicates that the proposed project will not result in any significant adverse unmitigable impacts. For this reason, the City of Moreno Valley determined that a *Mitigated Negative Declaration* is the appropriate CEQA document for the proposed project. The following findings may be made based on the analysis contained in the attached Initial Study:

- The proposed project *will not* 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.

- The proposed project *will not* have impacts that are individually limited, but cumulatively considerable.

[1] The expanded range of allowable uses will include a Mix of Uses Development (MU), Commercial/Retail Development (CR), Retail Mix of Uses (RMU) and Open Space (OS) designation. The plan amendment will also facilitate the extension of Davis Street in a northerly direction to ultimately re-connect with the segment of Davis Street that extends north of Ironwood Avenue. The overall placement, design, and phasing of future development will be responsive to the employment and community service needs while mitigating the potential impacts on sensitive development that will be located both within and in close proximity to the Planning Area.

- The proposed project *will not* have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The environmental analysis is provided in the attached Initial Study prepared for the proposed project. The project is also described in greater detail in the attached Initial Study.

Signature _____ Date 12/14/2020

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SECTION 1 INTRODUCTION

1.1 PURPOSE OF INITIAL STUDY

The Specific Plan Amendment that is the focus of this Initial Study and Mitigated Negative Declaration (IS/MND) is the *second amendment* to the adopted *Moreno Valley Festival Specific Plan/EIR (SP-205)*. The original Specific Plan was adopted, and the Environmental Impact Report (EIR) was certified, by the City Council of Moreno Valley on October 27, 1987. *Amendment Number 1* was adopted in 2018 as a means to promote a wider range of land uses and development so as to take advantage of more recent development trends that were occurring since the original Specific Plan was adopted.[2] This current proposed amendment (Amendment Number 2) that is the subject of this IS/MND, expands the geographic area of the Specific Plan's Planning Area 1 to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This IS/MND for Amendment No. 2 also tiers off of the Final EIR that was certified for the *Moreno Valley Festival Specific Plan/EIR (SP-205)*. This Specific Plan Amendment Number 2 is contemplating a new light industrial building totaling 220,390 square feet of floor area. The original SP-205 designated the area as *Regional Commercial* in the geographic area that is now included in the expanded Planning Area 1. This Second Amendment is now designating this area as *Mixed Uses*.

During the preparation of the original adopted Moreno Valley Festival Specific Plan (SP 205), consideration was given to all public utility and infrastructure needed to serve the future development contemplated as part of the adopted Specific Plan's implementation. The majority of the needed infrastructure has been installed pursuant to the requirements of the adopted Plan. All future public utility and infrastructure shall be installed according to Title 9 (Land Use and Planning) of the City of Moreno Valley Municipal Code and the requirements of this Plan Amendment. The installation of new infrastructure will be phased as part of the area-wide master planned facilities. The implementation of roadways and infrastructure to service the Planning Area will occur according to development needs.

The adopted Moreno Valley Festival Specific Plan was prepared pursuant to Government Code Section 65450, which grants authority to cities to adopt specific plans for purposes of implementing the goals and policies of their general plans. The Government Code sets forth the minimum requirements and review procedures for specific plans including the provision of a land use plan, infrastructure and public services plan, criteria and standards for development, and implementation measures. The Specific Plan Amendment complies with the City of Moreno Valley's Municipal Code (Chapter 9.13) governing amendments of the specific plans content and procedures for their adoption and enforcement.[3] The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan Amendment Number 2 is considered to be a project under the California Environmental Quality Act (CEQA).[4] The City of Moreno Valley is the designated *Lead Agency* for the proposed "project" and the City will be responsible for the project's environmental review. The project Applicant is LCG 10MV, LLC, 670 Ledo Way, Los Angeles, California 90049.

[2] The expanded range of allowable uses will include a Mix of Uses Development (MU), Commercial/Retail Development (CR), Retail Mix of Uses (RMU) and Open Space (OS) designation. The plan amendment will also facilitate the extension of Davis Street in a northerly direction to ultimately re-connect with the segment of Davis Street that extends north of Ironwood Avenue. The overall placement, design, and phasing of future development will be responsive to the employment and community service needs while mitigating the potential impacts on sensitive development that will be located both within and in close proximity to the Planning Area.

[3] National Engineering Consultants. *Amendment to Specific Plan 205*. Draft dated December 29th, 2015.

[4] California, State of. *Title 14. California Code of Regulations. Chapter 3. Guidelines for the Implementation of the California Environmental Quality Act*. as Amended 1998 (CEQA Guidelines). § 15060 (b).

As part of the proposed project's environmental review, the City of Moreno Valley authorized the preparation of this Initial Study.[5] The primary purpose of CEQA is to ensure that decision-makers and the public understand the environmental implications of a specific action or project. The purpose of this Initial Study is to ascertain whether the proposed project will have the potential for significant adverse impacts on the environment. Pursuant to the CEQA Guidelines, additional purposes of this Initial Study include the following:

- To provide the City of Moreno Valley with information to use as the basis for deciding whether to prepare an environmental impact report (EIR), mitigated negative declaration, or negative declaration for the Plan Amendment;
- To facilitate the project's environmental assessment early in the preparation of this Plan Amendment;
- To eliminate unnecessary EIRs; and,
- To determine the nature and extent of any impacts associated the Plan Amendment.

Although this Initial Study was prepared with consultant support, the analysis, conclusions, and findings made as part of its preparation, fully represent the independent judgment and position of the City of Moreno Valley, in its capacity as the lead agency. The City also determined, as part of this Initial Study's preparation, that a Mitigated Negative Declaration is the appropriate environmental document for the project's environmental review pursuant to CEQA. This Initial Study and the *Notice of Intent to Adopt a Mitigated Negative Declaration* will be forwarded to responsible agencies, trustee agencies, and the public for review and comment. A 30-day public review period will be provided to allow these entities and other interested parties to comment on the proposed project and the findings of this initial study.[6] Questions and/or comments should be submitted to the following contact person:

Julia Descoteaux, Associate Planner
City of Moreno Valley Community Development Department
14177 Frederick Street
Moreno Valley, California 92553

1.2 INITIAL STUDY'S ORGANIZATION

The following annotated outline summarizes the scope and content of this Initial Study:

- S*ection 1 Introduction,* provides the procedural context surrounding this Initial Study's preparation and insight into its composition.
- *Section 2 Project Description,* provides an overview of the existing environment as it relates to the Planning Area and describes the proposed project's physical and operational characteristics.

[5] California, State of. *Title 14. California Code of Regulations. Chapter 3. Guidelines for the Implementation of the California Environmental Quality Act*. as Amended 1998 (CEQA Guidelines).

[6] California, State of. *California Public Resources Code. Division 13, Chapter 2.5. Definitions*. as Amended 200. *Chapter 2.6, Section 2109(b).* 2000.

- *Section 3 Environmental Analysis* includes an analysis of potential impacts associated with the proposed project's construction and the subsequent occupancy.

- *Section 4 Findings* indicates the conclusions of the environmental analysis and the mandatory findings of significance.

- *Section 5 References* identifies the sources used in the preparation of this Initial Study.

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SECTION 2 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The proposed "project" is an amendment (Amendment Number 2) that expands the geographic area of the Specific Plan's Planning Area 1 to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This Specific Plan Amendment Number 2 is also contemplating a new light industrial building totaling 220,390 square feet of floor area with the expanded Planning Area Number 1. The original SP-205 designated the expanded Planning Area 1 as *Regional Commercial*. This Second Amendment is now designating this area as *Mixed of Uses*.

2.2 PROJECT LOCATION

The geographic area that is subject to the Moreno Valley Festival Specific Plan is located within the corporate boundaries of the City of Moreno Valley in the northwestern portion of the City. The City of Moreno Valley is located approximately 54 miles east of downtown Los Angeles and 80 miles north of San Diego.[7] The City is bounded by unincorporated portions of Riverside County to the north and east; the City of Riverside and unincorporated Riverside County to the west; and the City of Perris to the south.[8]

The location of Moreno Valley in a regional context is shown in Exhibit 2-1. A citywide map is provided in Exhibit 2-2. The larger Planning Area is bounded by Heacock Street to the west; Ironwood Avenue to the north; and the Moreno Valley Freeway (SR-60) to the south. The existing Planning Area is illustrated in Exhibit 2-3. For planning purposes, the original Specific Plan 205 was divided into eight sub-areas that include the following:

- *Existing Planning Area 1* consists of 7.36 acres and is located in the northernmost portion of the larger Specific Plan area. This planning area occupies frontage along the south side of Ironwood Avenue and is located west of the proposed David Street extension. This proposed Amendment Number 2 that is the subject of this IS/MND expands the geographic boundaries of Planning Area Number 1.

- *Existing Planning Area 2* consists of 3.84 acres and is located in the northeastern corner of the larger Specific Plan area. Planning Area 2 occupies frontage along the south side of Ironwood Avenue and is located east of the proposed David Street extension.

- *Existing Planning Area 3* consists of 9.81 acres and is located in the western portion of the larger Specific Plan area.

- *Existing Planning Area 4* consists of 13.92 acres and is located in the central portion of the larger Specific Plan area and is bounded on the north by Planning Area 5; on the west by Davis Street; on the east by single-family residential; and on the south by Hemlock Avenue and Planning Area 7.

[7] Google Earth. Website Accessed August 9, 2017.

[8] Quantum GIS and the Southern California Association of Governments.

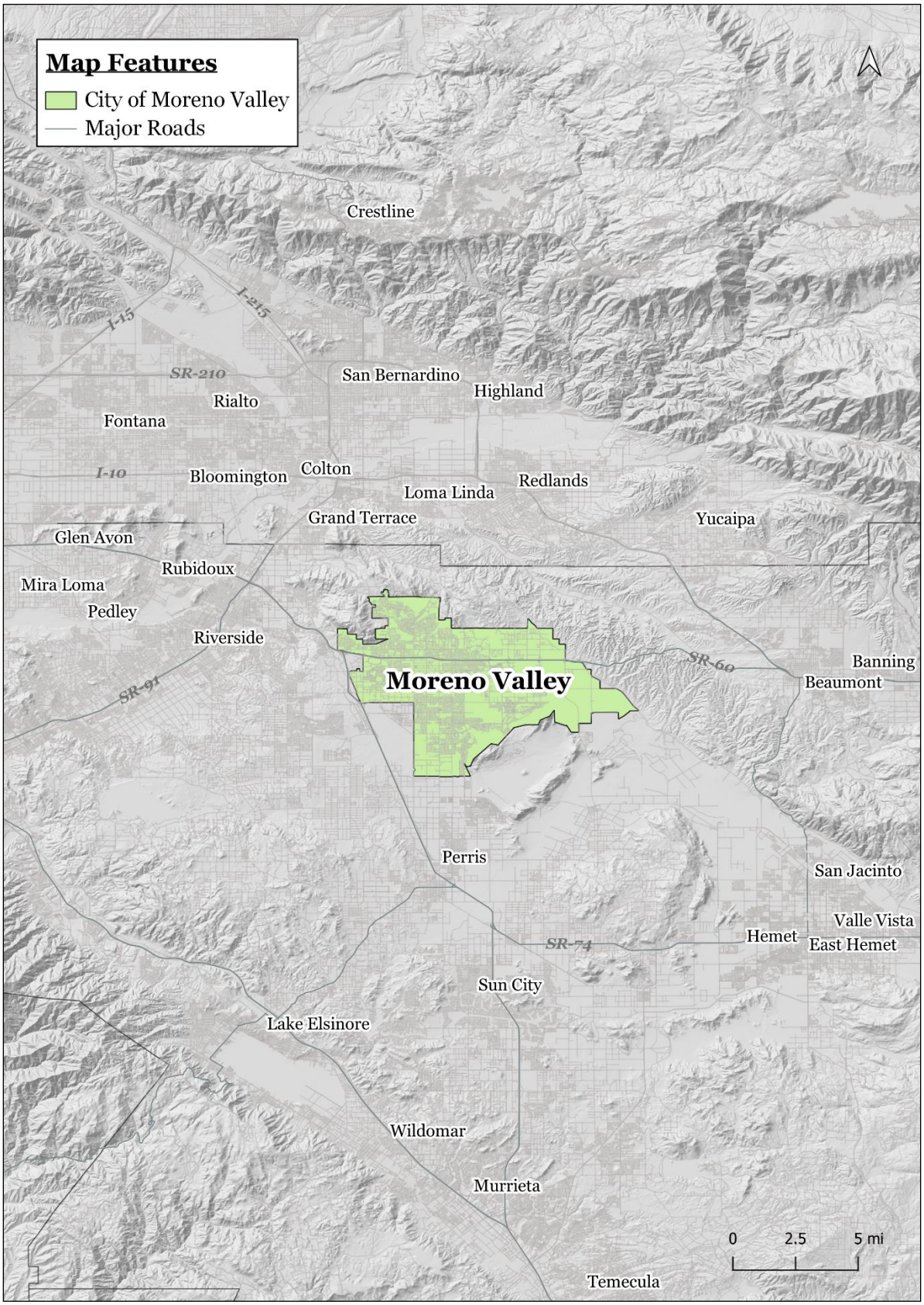

EXHIBIT 2-1
REGIONAL LOCATION

Source: Blodgett Baylosis Environmental Planning

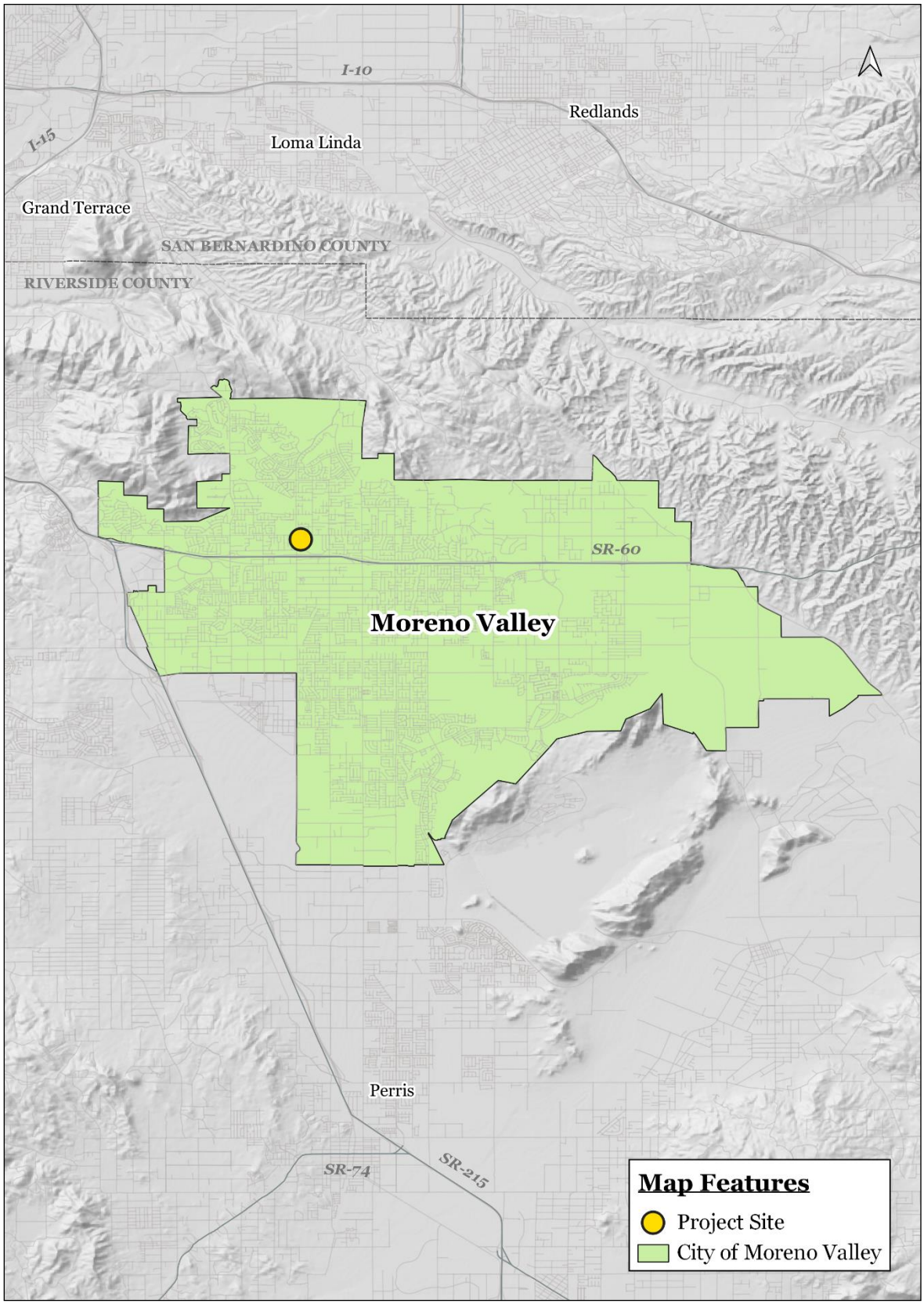

EXHIBIT 2-2
CITYWIDE MAP

Source: Blodgett Baylosis Environmental Planning

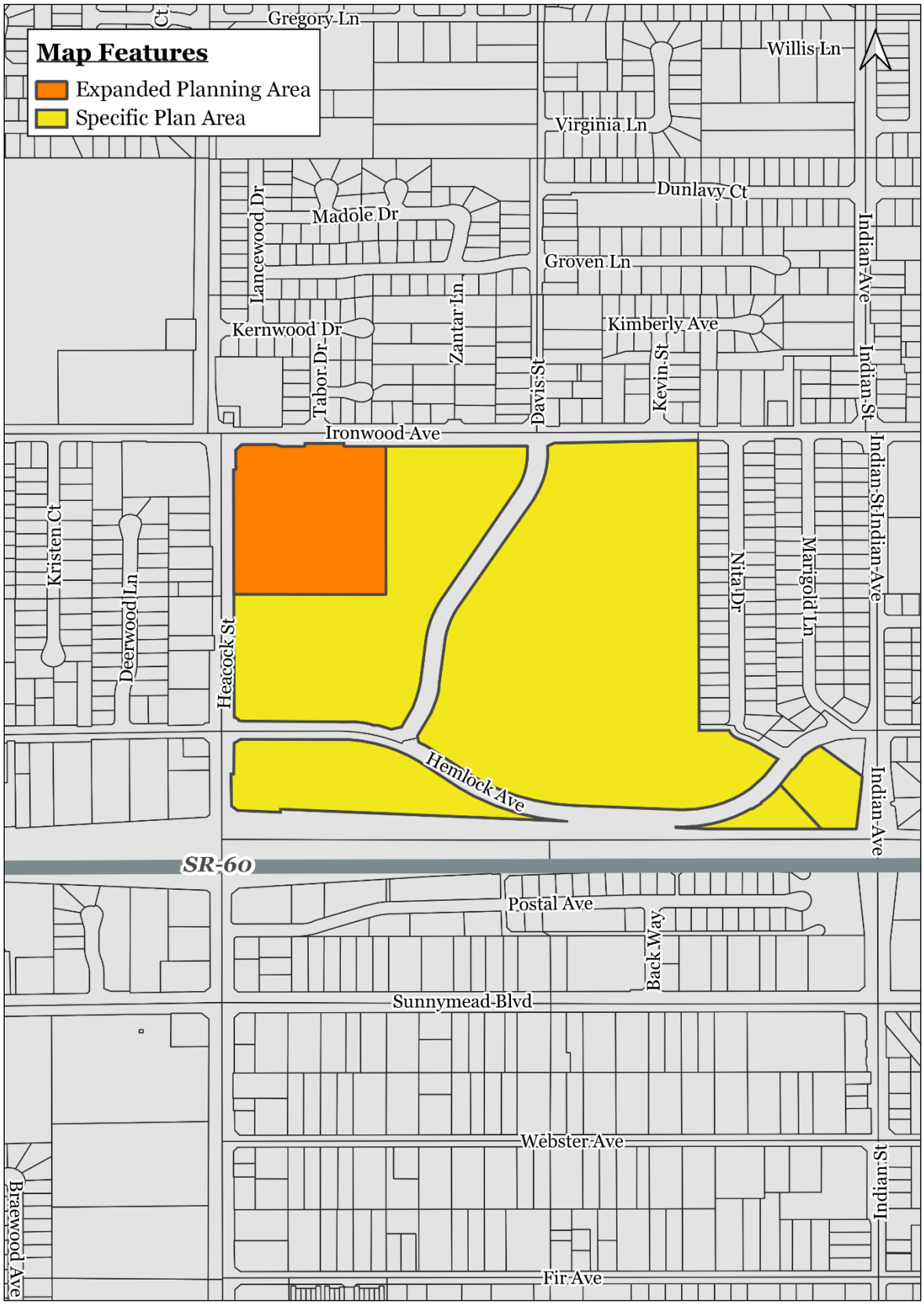

EXHIBIT 2-3
LOCAL MAP

Source: Blodgett Baylosis Environmental Planning

- *Existing Planning Area 5* consists of 12.90 acres and is located in the eastern portion of the larger Specific Plan area and is bounded on the north by Planning Area 2; on the west by the proposed Davis Street extension; on the east by single-family residential; and on the south by Planning Area 4. Planning Area 5 is owned by the City of Moreno Valley and is used for storm water retention.

- *Existing Planning Area 6* consists of 6.08 acres and is located in the southwestern portion of the larger Specific Plan area and is bounded on the north by Hemlock Avenue; on the west by Heacock Street; on the east by undeveloped land; and on the south by the Moreno Valley Freeway.

- *Existing Planning Area 7* consists of 6.44 acres and is located in the eastern portion of the larger Specific Plan area and is bounded on the north by Planning Area 4; on the west by Planning Area 4 and Hemlock Avenue; on the east by Nita Drive and Hemlock Avenue; and on the south by Hemlock Avenue.

- *Existing Planning Area 8* consists of 3.44 acres and is located in the southeastern most portion of the larger Specific Plan area. Planning Area 8 is bounded on the north by Hemlock Avenue; on the west by undeveloped land and Hemlock Avenue; on the east by Indian Street; and on the south by the Moreno Valley Freeway.

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be incorporated into the existing *Planning Area 1*. The affected Assessor Parcel Numbers (APMs) within the expanded Planning Area 1 include 481-020-13, 29, 30, 34, 35, 38 and 39. Once the amendment is approved, the revisions will be reflected in the adopted Festival Specific Plan by reference. A map of the entire Moreno Valley Festival Specific Plan is provided in Exhibit 2-4.

2.3 ENVIRONMENTAL SETTING

Newer light industrial development is occurring in those areas located to the south and east of the new expanded Planning Area 1. The larger Festival Specific Planning Area is located in the midst of an urbanized area and is surrounding on all sides by urban development. The land uses and development that surround the Festival Specific Plan Planning Area are outlined below.

- *North of the Plan Amendment Area*. Ironwood Avenue extends along the north side of the Planning Area. Single-family residential units are located further north, along the north side of Ironwood Avenue.[9]

- *South of the Plan Amendment Area*. The Moreno Valley Freeway (SR-60) extends along the south side of the Planning Area. Commercial and residential uses are located further south, along the south side of the aforementioned Freeway.[10]

- *East of the Plan Amendment Area*. Single-family residential units extend along the Planning Area's east side.[11]

[9] Blodgett Baylosis Environmental Planning. *Site survey*. Survey was conducted on August 9, 2017.

[10] Ibid.

[11] Ibid

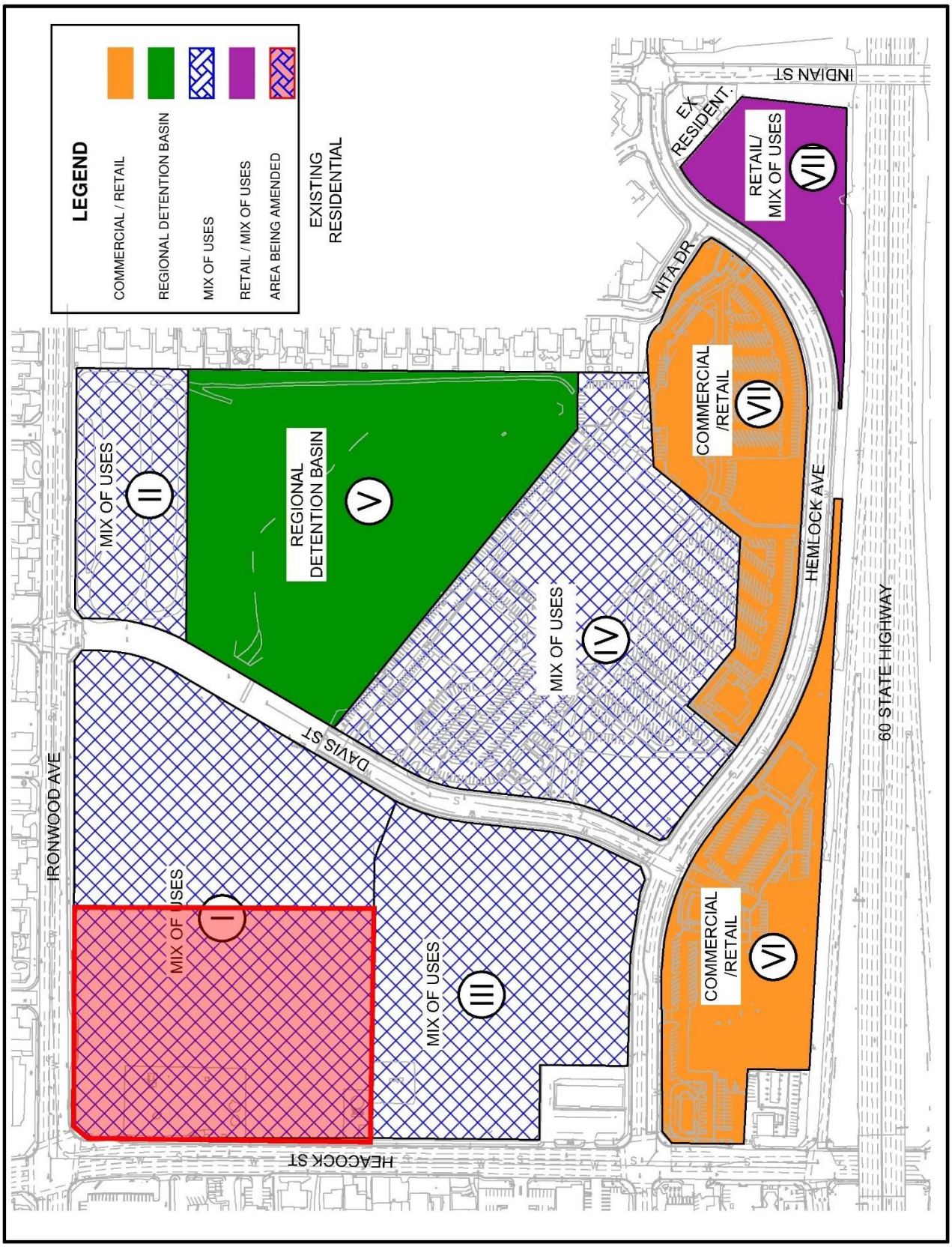

EXHIBIT 2-4
FESTIVAL SPECIFIC PLAN PLANNING AREAS
Source: National Engineering Consultants

EXHIBIT 2-5
AERIAL PHOTOGRAPH OF THE PLANNING AREA
Source: Blodgett Baylosis Environmental Planning

- *West of the Plan Amendment Area*. Heacock Street abuts the Planning Area to the west. Various uses, including a State Farm Insurance office, a Rite Aid, and single-family residential are located further west, along the west side of Heacock Street.[12]

This Second Amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. Once the amendment is approved for Planning Area 1, the property will be incorporated into the larger Festival Specific Plan. Photographs of the Planning Area are provided in Exhibits 2-6 and 2-7.

2.4 PROJECT DESCRIPTION

The proposed project involves the adoption and subsequent implementation to the Moreno Valley Festival Specific Plan. This current amendment expands the Planning Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This property, referred to as *Planning Area 1*, is located in the northwest corner of the Specific Plan area. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building.

The Plan Amendment's adoption, by itself, will not lead to any physical changes to the environment. However, the Plan Amendment's adoption will establish regulations that will govern the use of the land as well as establishing development standards and regulations. The purpose of the Specific Plan Amendment is to provide a comprehensive planning framework to guide future high quality multi-use development that will include a range of land uses that can prosper in the current economic environment. At the same time, the Specific Plan Amendment will ensure that future land uses are compatible with both existing development in the surrounding area and future development that will occur within the Planning Area itself. The Specific Plan Amendment 2 and land use plan for expanded Planning Area 1 provides for the following land use designations described below:

- *Community Commercial (CC Zone)*. 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.

- *Office Commercial (OC Zone)*. The primary purpose of the office commercial (OC) district is to provide for the establishment of business, corporate and administrative office, as well as commercial services which are supportive to major business developments. Retail facilities which support the office developments are permitted, subject to limitations specified in this section.

- *Office (O Zone)*. The primary purpose of the office (O) district is to provide areas for the establishment of park-like, office-based working environments for general business, corporate, professional, and administrative offices. It is the further intent of this district to provide setbacks, landscaping and architectural treatments that ensure the location of such uses is relatively compatible with residential development in the vicinity.

[12] Blodgett Baylosis Environmental Planning. *Site survey*. Survey was conducted on August 9, 2017.

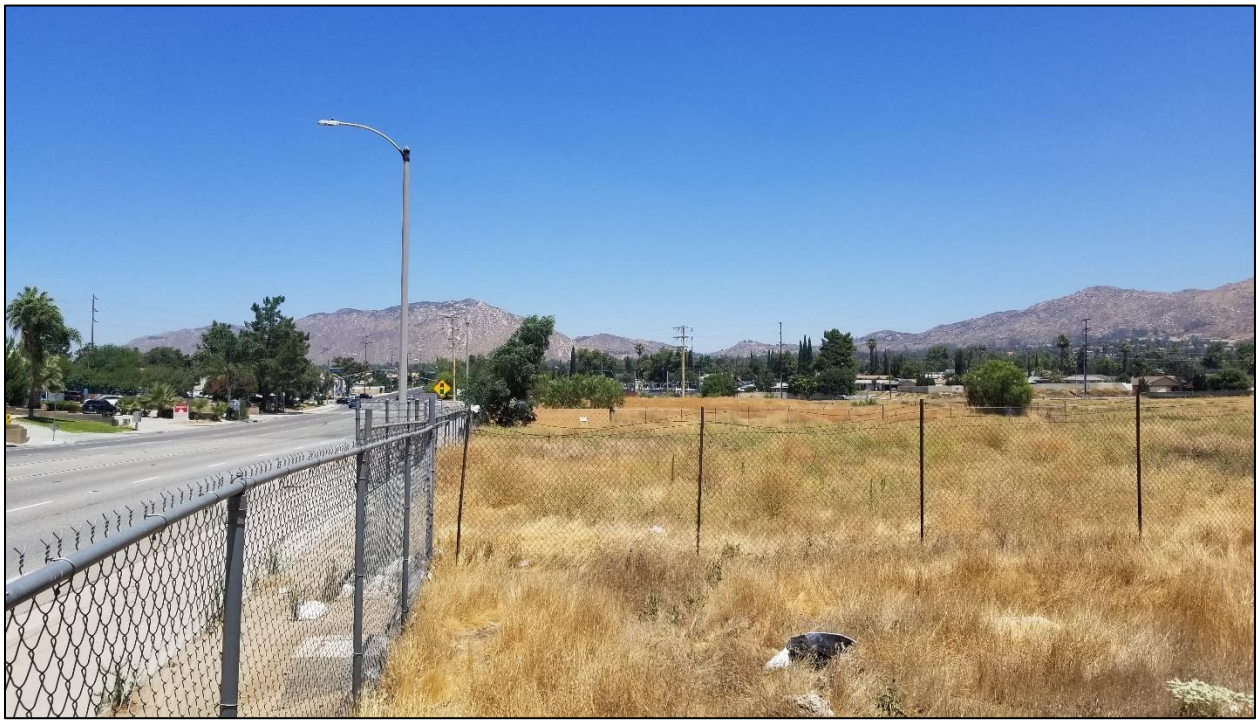

EXHIBIT 2-6
PHOTOGRAPHS OF THE PLANNING AREA
Source: Blodgett Baylosis Environmental Planning

EXHIBIT 2-7
PHOTOGRAPHS OF THE PLANNING AREA
Source: Blodgett Baylosis Environmental Planning

- *Light Industrial (LI Zone).* The primary purpose of the light industrial (LI) district is to provide for light manufacturing, light industrial, research and development, warehousing and distribution and multitenant industrial uses, as well as certain supporting administrative and professional offices and commercial uses on a limited basis. This district is intended as an area for light industrial uses that can meet high performance standards.

- *Business Park (BP Zone).* The primary purpose of the business park (BP) district is to provide for light industrial, research and development, office-based firms and limited supportive commercial in an attractive and pleasant working environment and a prestigious location.

- Open Space (OS). The primary purposes of the open space (OS) district are to provide for low intensity, outdoor-oriented recreational facilities, preserve unique natural and environmentally sensitive areas, and protect and preserve the public health, safety, and welfare.[13]

Table 2-2 indicates the various types of uses that are permitted in the expanded Planning Area 1.

Table 2-2
Land Use Matrix - List of Permitted and Conditionally Permitted Uses

Development Types Corresponding Zone District	Expanded Planning Area 1
Auto-Related Uses	
Automobile Sales, New and Used *(CC Zone)*	**Conditionally Permitted Use**
Automobile Service Stations *(CC Zone)*	**Conditionally Permitted Use**
Auto Repair, Minor Service *(CC Zone)*	**Permitted Use**
Auto Repair, Paint and Major Service *(CC Zone)*	**Conditionally Permitted Use**
Auto Rentals *(CC Zone)*	**Permitted Use**
Auto Related, Accessory Uses *(CC Zone)*	**Conditionally Permitted Use**
Auto Supply Stores *(CC Zone)*	**Permitted Use**
Car Wash *(CC Zone)*	**Permitted Use**
Parking Lot & Parking Structure *(CC Zone)*	**Permitted Use**
Indoor, Entertainment, Fitness, & Sports Facilities	
Athletic Clubs, Gymnasiums, and Spas *(CC Zone)*	**Permitted Use**
Recreational Facilities, Commercial Indoor/Outdoor *(CC Zone)*	**Permitted Use**
Business Park	
Research & Development *(BP-Zone)*	**Permitted Use**
Wholesale & Limited Distribution *(LI Zone)*	**Permitted Use**
Nursery, Wholesale and Distribution *(LI Zone)*	**Permitted Use**
Parcel Delivery Terminals (*LI Zone and BP-Zone*)	**Permitted Use**
Transfer, Moving, & Storage *(LI Zone)*	**Permitted Use**
Office, Business Services, & Professional	
Banks, including ATMs & drive-thru *(CC, O, and OC Zones)*	**Permitted Use**
Retail, Commercial, & Food Related (*CC- Community Commercial)*	
Business Offices *(CC, O, and OC Zones)*	**Permitted Use**
Business & Office Equipment Sales and Supply Stores *(CC Zone)*	**Permitted Use**

[13] National Engineering Consultants. *Amendment to Specific Plan 205*. Draft dated December 29th, 2015.

Table 2-2
Land Use Matrix - List of Permitted and Conditionally Permitted Uses (cont.)

Development Types Corresponding Zone District	Expanded Planning Area 1
Computer Sales and Repairs *(CC and OC Zones)*	**Permitted Use**
Copy Shops *(CC, O, and OC Zones)*	**Permitted Use**
Day Care Centers *(CC, O, and OC Zones)*	**Permitted Use**
Finance, Insurance, and Real Estate *(CC, O, and OC Zones)*	**Permitted Use**
Laboratories, Medical, & Dental *(CC, O, and OC Zones)*	**Permitted Use**
Medical Offices *(CC, O, and OC Zones)*	**Permitted Use**
Medical Clinics/Medical Care *(CC, O, and OC Zones)*	**Permitted Use**
Medical Equipment *(CC and OC Zones)*	**Permitted Use**
Personal Grooming *(CC and OC Zones)*	**Permitted Use**
Personal Services *(CC and OC Zones)*	**Permitted Use**
Public Buildings *(CC, O, and OC Zones)*	**Permitted Use**
Veterinary Office *(CC)*	**Permitted Use**
Bakeries *(CC Zone)*	**Permitted Use**
Building Material Sales, incl. Outdoor Storage *(CC Zone)*	**Permitted Use**
Fast Food/Fast Casual Restaurant *(CC Zone)*	**Permitted Use**
Fast Food/Fast Casual Restaurant with Drive-thru *(CC Zone)*	**Permitted Use**
Floor Covering Stores *(CC Zone)*	**Permitted Use**
Fast Food/Fast Casual Restaurant (CC Zone)	**Permitted Use**
Fast Food/Fast Casual Restaurant with Drive-thru *(CC Zone)*	**Permitted Use**
Floor Covering Stores *(CC Zone)*	**Permitted Use**
Food Delicatessen *(CC Zone)*	**Permitted Use**
General Commercial *(CC Zone)*	**Permitted Use**
Hardware & Home Furnishings *(CC Zone)*	**Permitted Use**
Heavy Equipment Sales & Rentals *(CC Zone)*	**Permitted Use**
Hospital *(CC Zone)*	**Permitted Use**
Ice Cream & Yogurt *(CC Zone)*	**Permitted Use**
Indoor Storage, Mini Warehouses *(CC Zone)*	**Permitted Use**
Jewelry Stores *(CC Zone)*	**Permitted Use**
Medical Equipment Sales & Supplies *(CC Zone)*	**Permitted Use**
Offices, Administrative & Professional *(CC Zone)*	**Permitted Use**
Personal Services, Nail Salons/Spas/Barbers/Beauty *(CC Zone)*	**Permitted Use**
Pharmacies, with and without Drive-Thru *(CC Zone)*	**Permitted Use**
Postal Services *(CC Zone)*	**Permitted Use**
Recreational Facilities, Commercial *(CC Zone)*	**Permitted Use**
Rental Services, Furniture, Office, Home *(CC Zone)*	**Permitted Use**
Sit-down Restaurants *(CC Zone)*	**Permitted Use**
Skating Rinks *(CC Zone)*	**Permitted Use**
Specialty Retail *(CC Zone)*	**Permitted Use**
Stationary Stores *(CC Zone)*	**Permitted Use**
Supermarkets *(CC Zone)*	**Permitted Use**
Tire Stores & Tire Repair *(CC Zone)*	**Permitted Use**
Trade & Vocational Schools *(CC Zone)*	**Permitted Use**
Weight Reduction Centers *(CC Zone)*	**Permitted Use**

Details of specific development projects will be determined by subdivisions and site development plans. In the event of a conflict between the Specific Plan and the City of Moreno Valley Municipal Code, the Specific Plan shall prevail. If the Specific Plan is silent on a particular subject, the Municipal Code shall apply. For purposes of the environmental analysis, certain assumptions were made to provide a maximum potential build-out scenario. This amendment to expand Planning Area No. 1 would allow for the development of a 220,390 square foot light industrial building.

Circulation Plan

The Specific Plan Amendment also includes a comprehensive circulation plan that indicates the location and extent of roadways, pedestrian routes, and other facilities needed to accommodate the future development. The circulation plan outlines a hierarchy of roadways and other facilities that will serve the homes, business, and the employment related uses contemplated as part of the Specific Plan's implementation. The majority of the "backbone" circulation system has been constructed though the extension of Davis Street to Ironwood Avenue will need to be completed.

Infrastructure Plan

The Specific Plan Amendment will also ensure that sufficient facilities are provided to accommodate the development envisioned under the Specific Plan's implementation. The Specific Plan Area contains existing water, sewer, and stormwater infrastructure. These storm drains, water, and sewer lines are located within the streets that comprise the Planning Area's circulation network. Additional storm drains, water, and sewer lines are located within the undeveloped portion of Davis Street.

2.5 DISCRETIONARY ACTIONS

A discretionary action is a decision taken by a government agency (for this project, the government agency is the City of Moreno Valley) that calls for an exercise of judgment in deciding whether to approve a project. As part of the proposed project's implementation, the City will consider the following approvals:

- The approval of the Mitigated Negative Declaration (MND);
- The adoption of the Mitigation Monitoring and Reporting Program (MMRP);
- The adoption of a General Plan Amendment (GPA) to the City of Moreno Valley General Plan;
- The adoption of a Zone Change to the City of Moreno Valley Zoning Ordinance; and,
- The adoption of the Moreno Valley Festival Specific Plan Amendment.

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SECTION 3 ENVIRONMENTAL ANALYSIS

This section of the Initial Study analyzes the potential environmental impacts that may result from the proposed project's implementation. The issue areas evaluated in this Initial Study include the following:

Aesthetics (Section 3.1);
Agricultural & Forestry Resources (Section 3.2);
Air Quality (Section 3.3);
Biological Resources (Section 3.4);
Cultural Resources (Section 3.5);
Energy (Section 3.6)
Geology & Soils (Section 3.7);
Greenhouse Gas Emissions; (Section 3.8);
Hazards & Hazardous Materials (Section 3.9);
Hydrology & Water Quality (Section 3.10);
Land Use & Planning (Section 3.11);
Mineral Resources (Section 3.12);
Noise (Section 3.13);
Population & Housing (Section 3.14);
Public Services (Section 3.15);
Recreation (Section 3.16);
Transportation (Section 3.17);
Tribal Cultural Resources (Section 3.18);
Utilities (Section 3.19);
Wildfire (Section 3.20); and,
Mandatory Findings of Significance (Section 3.21).

The environmental analysis included in this section reflects the Initial Study Checklist format used by the City of Moreno Valley in its environmental review process. Under each issue area, an analysis of impacts is provided in the form of questions followed by corresponding detailed responses. For the evaluation of potential impacts, questions are stated and an answer is provided according to the analysis undertaken as part of this Initial Study's preparation. To each question, there are four possible responses:

- *No Impact*. The proposed project *will not* have any measurable environmental impact on the environment.

- *Less Than Significant Impact*. The proposed project *may have* the potential for affecting the environment, although these impacts will be below levels or thresholds that the City of Moreno Valley or other responsible agencies consider to be significant.

- *Less Than Significant Impact with Mitigation*. The proposed project *may have* the potential to generate impacts that will have a significant impact on the environment. However, the level of impact may be reduced to levels that are less than significant with the implementation of mitigation measures.

- *Potentially Significant Impact*. The proposed project may result in environmental impacts that are significant.

This Initial Study will assist the City of Moreno Valley in determining as to whether there is a potential for significant adverse impacts on the environment associated with the implementation of the proposed project.

3.1 AESTHETICS

Threshold	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
A. Would the project have a substantial adverse effect on a scenic vista?				✕
B. Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?				✕
C. In non-urbanized areas, would the project 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 a 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?				✕
D. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✕	

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. Would the project have a substantial adverse effect on a scenic vista? ● No Impact.

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This expanded Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building.

The continued implementation of the Specific Plan Amendment will rely on the various goals, policies, and design standards included in the Specific Plan that will enhance the visual appearance of the existing and future land uses and development within the larger Planning Area. In addition, the Specific Plan includes guidance regarding the design of new development. Section 4.0 of the Specific Plan is concerned with *off-site* design standards while Section 5.0 focuses on *on-site* design standards.[14] The off-street design standards address a number of design criteria that includes landscaping around the edges of the planning area, streetscape design amenities, entryway treatments, and signage. The following off-site design requirements included in the Specific Plan Amendment will be effective in addressing potential aesthetic impacts:

- *General Landscaping Design Guidelines*. The Project Design Guidelines section of the Specific Plan Amendment offers more detailed information for individual project developers (also refer to Title 9 of the City Municipal Code).

[14] National Engineering Consultants. *The Moreno Valley Festival, (Draft) Amendment to Specific Plan 205, Section 4.2.4.* October 10, 2017.

- *General Landscaping Design Guidelines*. All landscape designs shall adhere to the concept depicted in the Landscape (Plan) Figure 4-3 (included in the Specific Plan Amendment).

- *Streetscape Landscaping*. Landscaping along public streets is designed to provide a unified appearance along street frontages, to reinforce the street hierarchy, and to establish identities of place, particularly at intersections within the Planning Area.

- *Streetscape Landscaping*. Implementation of the street landscaping will be executed by the developer during the initial stages of development.

- *Streetscape Landscaping*. Trees will be planted along all existing streets within the Specific Plan Amendment boundaries, where they do not currently exist. In addition, landscape guidelines have been provided for those streets adjacent to the project's boundaries that will require improvements associated with the development.

- *Streetscape Landscaping*. Low growing plant materials will be added to provide year-round color and textural interest. Mounded turf and landscaped berms will be used where appropriate to screen undesirable views, such as parking lots.[15]

- *Parkway Landscaping*. Trees are required along all street frontages. Trees shall be planted in a single row at spacing of 40 feet between each tree (Municipal Code Ordinance. 786 § 2, 2009).

- *Parkway Landscaping*. All street trees within street right of way, unless otherwise noted, are to be 24" box size, with a minimum of eight feet of brown trunk measured from finish grade. Trees in other areas shall be 15 gallon minimum in size but 25% shall be minimum 24" box.

- *Parkway Landscaping*. Landscaping berms along street frontages may be utilized. Maximum slopes may not exceed 2:1. City maintained areas shall not exceed 3:1.

- *Parkway Landscaping*. Shrubs along street frontages are to be utilized where possible (Minimum size at installation is 1 gallon.)

- *Edge Treatments*. There are six discrete edge treatment plans in and around the project. The areas that will be subject to the edge treatment plans include Hemlock Avenue, Heacock Street, Indian Avenue, Ironwood Avenue, Eastern Edge, and SR 60 Freeway.[16]

- *Screening Criteria for Internal Roadways*. All interior roadways shall be lined with sidewalks, landscaping and setbacks from the street as prescribed by the City of Moreno Valley planning standards and elaborated in this Specific Plan.[17]

[15]National Engineering Consultants. *The Moreno Valley Festival, (Draft) Amendment to Specific Plan 205, Section 4.2.4.* October 10, 2017.

[16] Ibid.

[17] Ibid.

- *Entry Themes*. Entrances to Plan Amendment Area shall be enhanced with landscaping, project monument signage and hardscape features.[18]

- *Entry Themes*. The landscape concept for the project shall be introduced through the entry treatments. Medium accent trees combined with low evergreen and flowering accent shrubs will be used consistently throughout the project entries. The foreground will feature a combination of ground cover and annual color.[19]

- *Entry Themes*. The entry signage and elements shall be visually clear to vehicular and pedestrian users, and shall allow the use of digital signage subject that it meets the City of Moreno's requirements.[20]

- *Buffer Treatments*. Landscape buffers are required along the eastern, southern, and northern boundaries of the project site. The master developer will be responsible for implementing the buffer system.

- *Buffer Treatments*. When development is located adjacent to existing residential uses, landscape buffers and water quality management plan (WQMP) basins are recommended to be used as functional buffers for potentially incompatible uses. Refer to sample cross section exhibits below for guidelines.[21]

The Specific Plan Amendment Number 2 will use the *Project Design Guidelines* that were previously adopted for the original Specific Plan (SP-205). The objective of these guidelines was to create projects that contribute to the overall design continuity of the development while maintaining their own sense of individuality. The following general guidelines which address site, architectural, and landscape design apply to all future development within the Planning Area:[22]

- Vehicular and pedestrian entries to the project should be clearly identifiable to visitors through the use of signage, and landscaping.

- Circulation within sites shall be designed to minimize conflicts between service vehicles, automobiles, and pedestrians.

- Neighboring lots should share entry drives wherever possible to create a greater uninterrupted expanse of landscaping.

- Visibility of parking areas along roadways shall be minimized through the use of landscaped berms and screen shrubs wherever possible.

[18] National Engineering Consultants. *The Moreno Valley Festival, (Draft) Amendment to Specific Plan 205, Section 4.2.4.* October 10, 2017..

[19] Ibid.

[20] Ibid.

[21] Ibid.

[22] Ibid.

- Service zones (trash enclosures, loading and outdoor storage areas) shall be located in areas that are least visible to the public. An appropriate screening method shall be used if service zone is exposed to public view.

- All buildings and walkways shall be accessible to the handicapped according to requirements in Title 24 of the California Administrative Code.

- A secondary sidewalk shall be provided within individual sites and connect with the master circulation system, creating a continuous and pleasant link between projects.

- Consideration should be given to ensure safe pedestrian access through parking areas, and from the public street walkways to building entrances.

- Security measures shall be considered in the project's site design, particularly in pedestrian areas. The use of tall, dense shrubbery should be avoided along walkways and adequate lighting should be provided.

Exhibit 3-1 shows the various project design features that mitigate light trespass and alleviate size and massing. The Specific Plan Amendment states that architectural design should express the character of a mixed use, commercial, and retail development center in a manner that is progressive and enduring. Individual creativity and identity are encouraged, but care must be taken to maintain design integrity and compatibility among all projects in order to establish a clear, unified image throughout the Planning Area. General building design guidelines for the various uses are as follows:

- Distinctive architectural design shall be encouraged to create individual building identity. However, buildings must be compatible with adjacent development projects to achieve a sense of architectural continuity.

- Detailing may vary but all materials are to be durable, aesthetically pleasing, and low maintenance.[23]

- The building's scale should be a major determining factor in the architectural design and detailing.

- Long expanses of building walls may be ameliorated by employing a system of overlapping forms and heights.

- The architectural concept must be consistent throughout the individual project with consideration given to all sides.

- Distinctive hardscape and colorful landscaping should be used to identify and accentuate building entries.

All properties within the expanded Planning Area 1 will be required to be developed in conformance with the Specific Plan Amendment. All development will be consistent with the Specific Plan objectives and design guidelines. Details of specific development projects will be determined by subdivisions and site

[23] National Engineering Consultants. *The Moreno Valley Festival, (Draft) Amendment to Specific Plan 205, Section 5.3.1.* October 10, 2017.

development plans. In the event of a conflict between the Specific Plan and the City of Moreno Valley Municipal Code, the Specific Plan will prevail. If the Specific Plan is silent on a particular subject, the Municipal Code will apply. The implementation of the Specific Plan will facilitate development that will not negatively impact any scenic vistas. The most prominent scenic vistas located within the Planning Area include the Box Springs Mountains, located between two to three miles north of the Planning Area, and the San Bernardino Mountains, located 15 miles to the north. The development that is permitted under the Specific Plan will not obstruct views of the aforementioned vistas. The setback and building height standards will prohibit the clustering and placement of new buildings within a certain distance from the public right-of-way, while the maximum height standards will restrict the height of the buildings that will be erected within the Planning Area. As a result, no visual impacts will result from the implementation of the Specific Plan.

B. *Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway? ● No Impact.*

According to the California Department of Transportation (Caltrans), neither the SR-60 nor the arterial roadways within the Moreno Valley Festival Specific Plan are designated scenic highways.[24] However, this Freeway is identified as a scenic corridor in the Moreno Valley General Plan. The expanded Planning Area 1 is visually separated from the aforementioned Freeway by the development that is located elsewhere in the Specific Plan area. In addition, the vegetation present within the Planning Area is not considered to be a "scenic resource." The expanded Planning Area 1 does not contain any scenic rock outcroppings.[25] Lastly, the Specific Plan's implementation will not involve the removal of any buildings listed in the State or National Registrar (refer to Section 3.5). As a result, no impacts will occur.

C. *In non-urbanized areas, would the project 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 a 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? ● No Impact.*

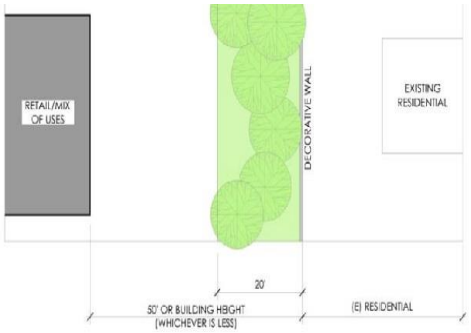
The implementation of the Specific Plan Amendment Number 2 will facilitate modern development within an area that underutilized. The Specific Plan Amendment will ensure that all new development adheres to the Specific Plan's design requirements relative to architecture, signage, and landscaping and Zoning requirements governing scenic quality. Therefore, the implementation of the Specific Plan will not degrade the site and surrounding area and no impacts are likely to occur.

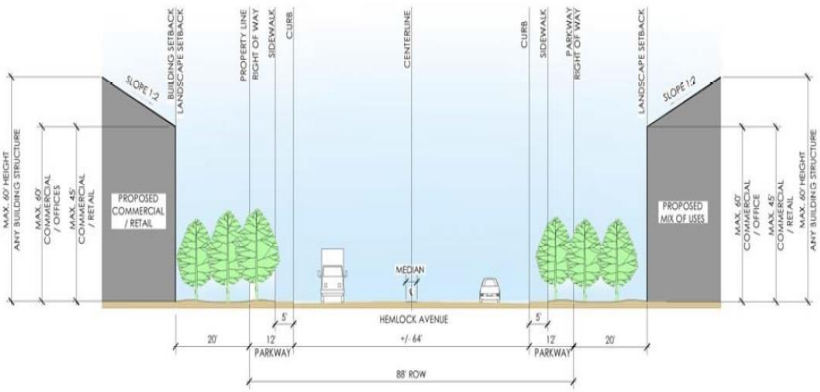
D. *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ● Less than Significant Impact.*

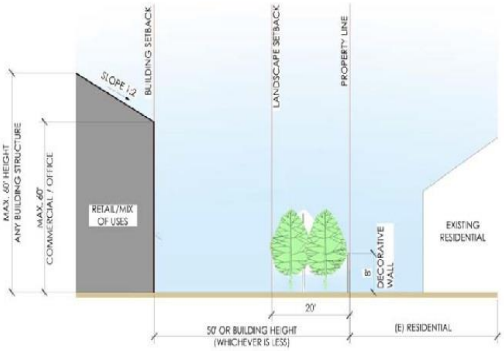
Sensitive receptors refer to land uses and/or activities that are especially sensitive to light and typically include homes, schools, playgrounds, hospitals, convalescent homes, and other similar facilities where children or the elderly may congregate. The nearest sensitive receptors to the expanded Planning Area are the single-family residential units located along the west side of Heacock Street and north side Ironwood Avenue. Additional light sensitive receptors are shown in Exhibit 3-2.

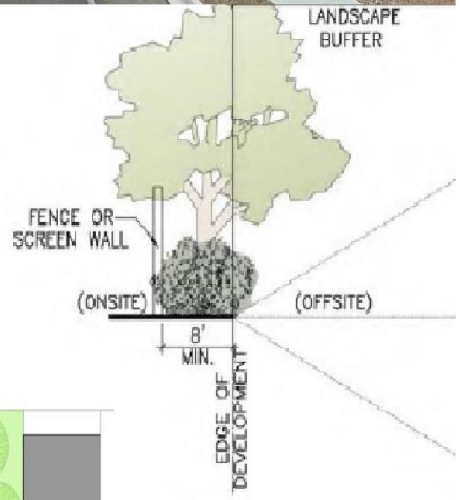
[24] California Department of Transportation. *Official Designated Scenic Highways*. www.dot.ca.gov

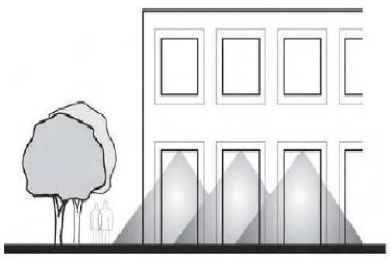
[25] Blodgett Baylosis Environmental Planning. *Site survey*. Survey was conducted on August 9, 2017.











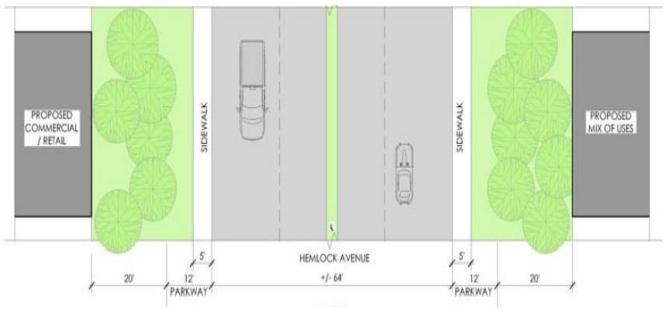


EXHIBIT 3-1
PROJECT DESIGN FEATURES THAT SERVE AS MITIGATION
Source: Amendment to Specific Plan 205

The adoption of the Specific Plan will not directly result in any light spillover or glare impacts. However, the Specific Plan will facilitate new development and the revitalization of the Festival at Moreno Valley shopping center. According to the Specific Plan, exterior lighting is to be provided to enhance the safety and security of motorists, pedestrians, and cyclists. To reinforce identity and unity, all exterior lighting is to be consistent in height, spacing, color, and type of fixture throughout the building site and compatible throughout the Moreno Valley Festival.[26] This new exterior lighting will be installed in accordance with all applicable regulations outlined in Section 9.08.100 of the City's Municipal Code. In addition, the Specific Plan includes the following objectives that should be considered in the installation of new lighting within the Planning Area.[27]

- Exterior lighting is to be provided as a means to enhance the safety and security of motorists, pedestrians, and cyclists.
- Lighting is intended to create a night time character that reinforces the image of the "MVF" as a quality business location.
- The developer will be responsible for installation of light fixtures during the project's initial development phase.
- Street lights per City standards will be installed on all public roads according to the City's recommendations.

With adherence to the above requirements, the potential impacts will be less than significant.

MITIGATION MEASURES

The analysis of aesthetics indicated that no impacts on these resources would occur as part of the proposed Specific Plan's implementation. As a result, no mitigation is required.

[26] National Engineering Consultants. *Amendment to Specific Plan 205, Section 4.3.* October 10, 2017.

[27] Ibid.

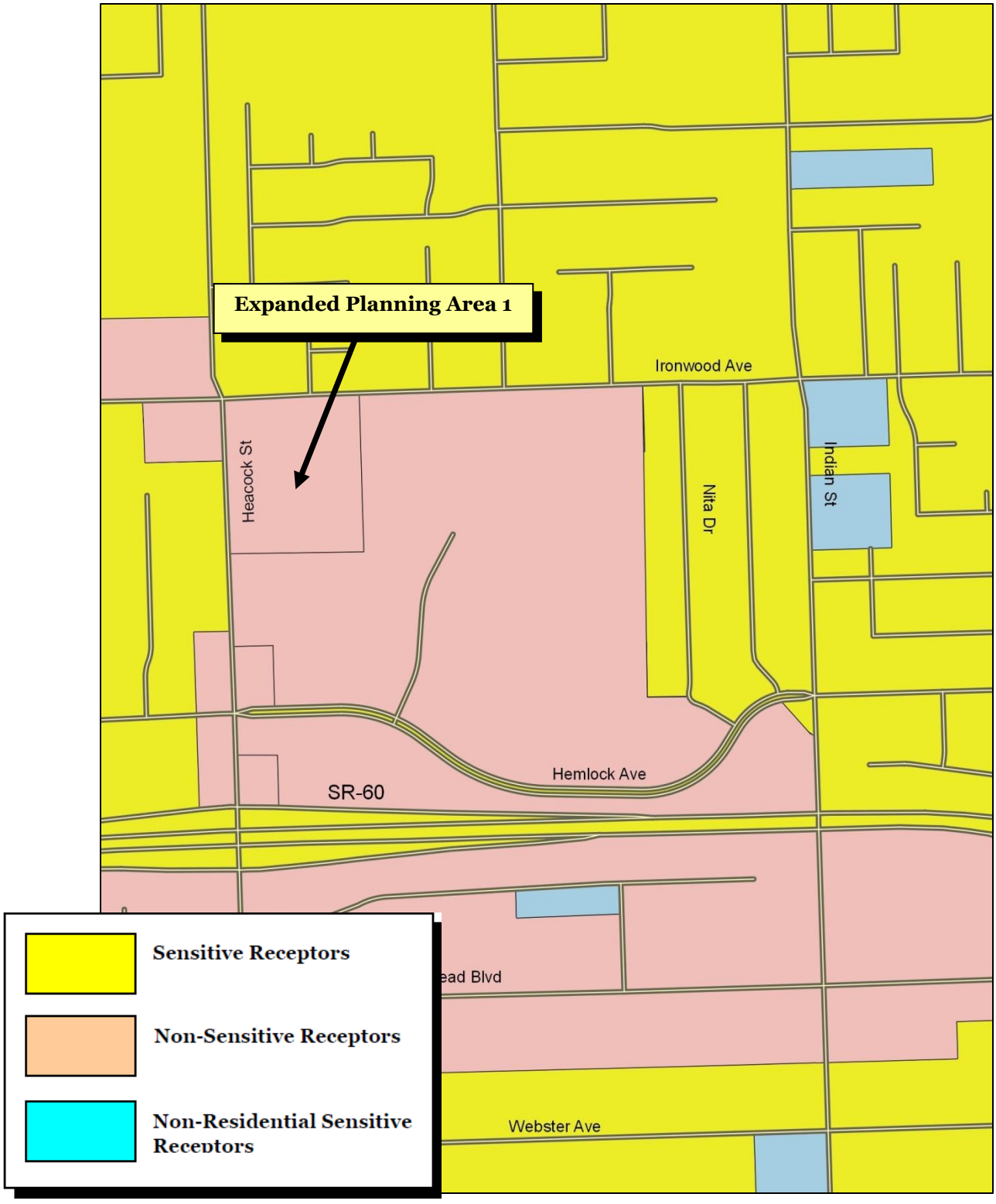


EXHIBIT 3-2
LIGHT SENSITIVE USES

Source: Quantum GIS

3.2 AGRICULTURE & FORESTRY RESOURCES

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project 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 uses?				✖
B. Would the project conflict with existing zoning for agricultural uses, or a Williamson Act Contract?				✖
C. Would the project 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))?				✖
D. Would the project result in the loss of forest land or conversion of forest land to a non-forest use?				✖
E. Would the project 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 a non-forest use?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?* ● *No Impact.*

This current amendment would expand the Panning Area 1 within the larger Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This portion of Planning Area Number 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. There are no areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located within the Planning Area. Furthermore, there are no agricultural uses or activities located within the Planning Area. The City's General Plan Environmental Impact Report indicates that a majority of the important farmlands are concentrated within the underdeveloped eastern portion of the City.[28] As a result, no impacts will occur.

[28] P and D Consultants. *Final Environmental Impact Report - City of Moreno Valley General Plan SCH# 200091075*. Report dated July 2006.

B. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract? ● No Impact.

The adopted Festival Specific Plan (SP 205) does not contemplate agricultural uses nor are there such uses within the Specific Plan Area. The implementation of the Specific Plan will not conflict with existing agricultural operations since there are no agricultural uses located within the expanded Planning Area 1. In addition, none of the properties within the Planning Area are subject to a Williamson Act Contract.[29] As a result, the adoption and subsequent implementation of the Moreno Valley Festival Specific Plan nor the proposed Amendment will not result in any impacts on existing Williamson Act contracts.

C. Would the project 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))? ● No Impact.

The area governed by the Moreno Valley Festival Specific Plan is located in the midst of a larger urban area and no forest lands are located within the City or within this portion of Riverside County. As a result, no impacts on forest land or timber resources will result from the proposed project's implementation.

D. Would the project result in the loss of forest land or the conversion of forest land to a non-forest use? ● No Impact.

There are no forest lands present within the larger Specific Plan Planning Area. This conclusion is supported by the field survey that was undertaken for the proposed project. As a result, the adoption and subsequent implementation of the Moreno Valley Festival Specific Plan nor the proposed Amendment will not result in any impacts related to the loss or conversion of existing forest lands. Therefore, no impacts will result from the project's implementation.

E. Would the project 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 a non-forest use?● No Impact.

No agricultural activities, farmland uses, or forest uses are located in the geographic area governed by the Moreno Valley Festival Specific Plan.[30] As a result, the adoption and subsequent implementation of the Moreno Valley Festival Specific Plan will not involve the conversion of any existing farmland area to urban uses or the conversion of forest land to non-forest uses. As a result, no impacts are anticipated.

MITIGATION MEASURES

The analysis of agricultural and forestry resources indicated that no impacts on these resources would occur as part of the proposed Specific Plan's implementation.

[29] California Department of Conservation. *State of California Williamson Act Contract Land*. ftp://ftp.consrv.ca.gov/pub/dlrp/WA/2012%20Statewide%20Map/WA_2012_8x11.pdf

[30] Blodgett Baylosis Environmental Planning. *Site survey*. Survey was conducted on August 9, 2017.

3.3 AIR QUALITY

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project conflict with or obstruct implementation of the applicable air quality plan?				✖
B. Would the project 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?			✖	
C. Would the project expose sensitive receptors to substantial pollutant concentrations?			✖	
D. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. *Would the project conflict with or obstruct implementation of the applicable air quality plan? ● No Impact.*

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. The South Coast Air Quality Management District (SCAQMD) has established quantitative thresholds for criteria pollutants that include the following:

- *Ozone (O_3)* is a nearly colorless gas that irritates the lungs and damages materials and vegetation. O_3 is formed by photochemical reaction. Los Angeles and the surrounding South Coast Air Basin (SCAB) are designated by the Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) as an extreme ozone *non-attainment area*. [31]

- *Carbon Monoxide (CO)* is a colorless, odorless toxic gas that interferes with the transfer of oxygen to the brain that is produced by the incomplete combustion of carbon-containing fuels emitted as vehicle exhaust. The SCAB is designated as an attainment area for carbon monoxide by the EPA.

- *Nitrogen dioxide (NO_2)* is a yellowish-brown gas that, at high levels, can cause breathing difficulties. NO_2 is formed when nitric oxide (a pollutant from burning processes) combines with oxygen. Although NO_2 concentrations have not exceeded National standards since 1991, NO_2 emissions remain a concern because of their contribution to the formation of O_3 and particulate matter. The SCAB is designated as an attainment area for NO_2 by the EPA.

[31] A non-attainment area refers to a geographic area where the Environmental Protection Agency (EPA) and/or the California Air Resources Board (CARB) have determined that the air quality standards for the criteria pollutants are not being met.

- *Sulfur dioxide* (SO_2) is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children. Though SO_2 concentrations have been reduced to levels that are well below State and Federal standards, further reductions in SO_2 emissions are desirable since SO_2 is a precursor to sulfate and PM_{10}. The SCAB is designated as an attainment area for SO_2.

- *PM_{10}* refers to particulate matter less than ten microns in diameter. PM_{10} particulates cause a greater health risk than larger-sized particles since fine particles can more easily cause respiratory irritation. The Federal standards for PM_{10} have been met in most areas within the SCAB.

- *$PM_{2.5}$* refers to particulate matter less than 2.5 microns in diameter. $PM_{2.5}$ also represents a significant health risk because particulate matter of this size may be more easily inhaled, causing respiratory irritation. The annual average concentrations of $PM_{2.5}$ exceeded Federal standards in some areas of the SCAB. As a result, $PM_{2.5}$ continues to be designated non-attainment.

Projects in the South Coast Air Basin (SCAB) generating construction-related emissions that exceed any of the following emissions thresholds are considered to be significant under CEQA: 75 pounds per day or 2.50 tons per quarter of reactive organic compounds; 100 pounds per day or 2.50 tons per quarter of nitrogen dioxide; 550 pounds per day or 24.75 tons per quarter of carbon monoxide; 150 pounds per day or 6.75 tons per quarter of PM_{10}; 55 pounds per day or 2.43 tons per quarter of $PM_{2.5}$; or, 150 pounds per day or 6.75 tons per quarter of sulfur oxides. A project would have a significant effect on air quality if any of the following operational emissions thresholds for criteria pollutants are exceeded: 55 pounds per day of reactive organic compounds; 55 pounds per day of nitrogen dioxide; 550 pounds per day of carbon monoxide; 150 pounds per day of PM_{10}; 55 pounds per day of $PM_{2.5}$; or, 150 pounds per day of sulfur oxides.

The Planning Area located within the SCAB which covers a 6,600-square-mile area within Orange County, the non-desert portions of Riverside County, and San Bernardino County. The SCAB is subject to the Final 2016 Air Quality Management Plan (AQMP), which was jointly prepared with the California Air Resources Board (CARB) and the Southern California Association of Governments (SCAG).[32] The Air Quality Handbook refers to the following criteria as a means to determine a project's conformity with the AQMP:[33]

- *Consistency Criteria 1* refers to a proposed project's potential for resulting in an increase in the frequency or severity of an existing air quality violation or its potential for contributing to the continuation of an existing air quality violation.

- *Consistency Criteria 2* refers to a proposed project's potential for exceeding the assumptions included in the AQMP or other regional growth projections relevant to the AQMP's implementation.

The Plan's potential build out includes up to 220,390 square feet of light industrial or business park mix of uses. As indicated in Tables 3-1 and 3-2, the project's construction and operational emissions are anticipated to be below the thresholds of significance established by the SCAQMD. Therefore, the approval of the Specific Plan Amendment will not violate *Consistency Criteria 1*. In terms of *Consistency Criteria 2*, the potential build-out under the Specific Plan Amendment is within the three alternative build-out

[32] South Coast Air Quality Management District, *Final 2016 Air Quality Plan*, Adopted March 2017.

[33] South Coast Air Quality Management District. *CEQA Air Quality Handbook*. 2016.

projections established for the General Plan. As a result, no impacts related to the implementation of the AQMP are anticipated.

B. Would the project 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? ● Less than Significant Impact.

The proposed development is conceptual in nature and the timeline for development is not yet known. Individual projects may be proposed upon approval of the Specific Plan amendment, or they may be proposed several years in the future. Therefore, construction timeline of twelve months was used. This construction timeline would include all of the development proposed within the expanded Planning Area 1. For purposes of this IS/MND's air quality analysis, future development within the expanded Planning Area 1 was assumed to be a 220,390 square foot light industrial building. The analysis of daily construction and operational emissions was prepared utilizing the California Emissions Estimator Model (CalEEMod V.2016.3.2). The Specific Plan amendment's potential construction emissions are shown in Table 3-1.

Table 3-1
Estimated Daily Construction Emissions

Construction Phase	ROG	NO_2	CO	SO_2	PM_{10}	$PM_{2.5}$
Site Preparation (on-site)	4.56	48.19	22.47	0.03	20.64	12.30
Site Preparation (off-site)	0.10	0.06	0.89	--	0.20	0.05
Total Site Preparation	**4.66**	**48.25**	**23.36**	**0.03**	**20.86**	**12.35**
Grading (on-site)	4.73	54.52	33.37	0.06	9.32	5.60
Grading (off-site)	0.11	0.06	0.88	--	0.22	0.06
Total Grading	**4.84**	**54.58**	**34.25**	**0.06**	**9.54**	**5.66**
Building Construction (on-site)	2.36	21.07	17.16	0.02	1.28	1.21
Building Construction (off-site)	1.70	13.12	13.18	0.05	3.54	1.03
Total Building Construction	**4.06**	**34.19**	**30.34**	**0.07**	**4.82**	**2.24**
Building Construction (on-site)	2.11	19.18	16.84	0.02	1.11	1.05
Building Construction (off-site)	1.54	11.84	11.91	0.05	3.50	1.00
Total Building Construction	**3.65**	**31.02**	**28.65**	**0.07**	**4.61**	**2.05**
Building Construction (on-site)	1.90	17.43	16.57	0.02	0.95	0.90
Building Construction (off-site)	1.41	10.65	10.84	0.05	3.46	0.95
Total Building Construction	**3.31**	**28.08**	**27.41**	**0.07**	**4.41**	**1.85**
Building Construction (on-site)	1.70	15.61	16.36	0.02	0.80	0.76
Building Construction (off-site)	1.32	10.02	10.01	0.05	3.46	0.95
Total Building Construction	**3.02**	**25.63**	**26.37**	**0.07**	**4.26**	**1.71**
Paving (on-site)	1.10	11.12	14.58	0.02	0.56	0.52
Paving (off-site)	0.06	0.03	0.51	--	0.16	0.04
Total Paving	**1.16**	**11.15**	**15.09**	**0.02**	**0.72**	**0.56**
Architectural Coatings (on-site)	40.58	1.30	1.81	--	0.07	0.07
Architectural Coatings (off-site)	0.20	0.10	1.54	--	0.55	0.14
Total Architectural Coatings	**40.78**	**1.40**	**3.35**	**--**	**0.62**	**0.21**
Maximum Daily Emissions	**40.79**	**54.58**	**34.26**	**0.08**	**20.84**	**12.35**
Daily Thresholds	**75**	**100**	**550**	**150**	**150**	**55**

Source: CalEEMod V.2016.3.2. (the worksheet are included herein in Appendix A)

As indicated previously, the construction emissions presented in Table 3-1 assumed a twelve month construction timeline. In addition, these emissions also assumed the simultaneous development of the entire expanded Planning Area Number 1 as opposed to any incremental construction phasing.

The entire Specific Plan Area is located in a non-attainment area for ozone and particulates. All construction undertaken in the Specific Plan area will be required to adhere to all SCAQMD regulations related to fugitive dust generation and other construction-related emissions. According to SCAQMD Regulation 403, all unpaved demolition and construction areas shall be regularly watered up to three times per day during excavation, grading, and construction as required (depending on temperature, soil moisture, wind, etc.). Watering could reduce fugitive dust by as much as 55 percent. Rule 403 also requires that temporary dust covers be used on any piles of excavated or imported earth to reduce wind-blown dust. In addition, all clearing, earthmoving, or excavation activities must be discontinued during periods of high winds (i.e. greater than 15 mph), so as to prevent excessive amounts of fugitive dust. Finally, the contractors must comply with other SCAQMD regulations governing equipment idling and emissions controls. The aforementioned SCAQMD regulations are standard conditions required for every construction project undertaken in the City as well as in the Cities and Counties governed by the SCAQMD. As shown in Table 3-1, daily construction emissions are not anticipated to exceed the SCAQMD's significance thresholds.

The long-term air quality impacts associated with the proposed project include mobile emissions from vehicular traffic; on-site stationary emissions related to the operation of machinery; and off-site stationary emissions associated with the off-site generation and consumption of energy (natural gas). The analysis of long-term operational impacts summarized in Table 3-2, also used the CalEEMod computer model developed for the SCAQMD. The maximum case build-out of 220,390 square feet of light industrial uses was used to determine the Specific Plan amendment's operational emissions.

Table 3-2
Estimated Operational Emissions in lbs/day

Emission Source	ROG	NO_2	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	15.04	--	0.06	--	--	--
Energy	0.05	0.52	0.43	--	0.03	0.03
Mobile	12.42	53.21	93.68	0.28	83.54	23.08
Total (lbs/day)	**27.52**	**53.73**	**94.19**	**0.28**	**83.58**	**23.12**
Daily Thresholds	**55**	**55**	**550**	**150**	**150**	**55**

Source: CalEEMod V.2016.3.2 (the worksheet are included herein in Appendix A)

As indicated in Table 3-2, the projected long-term emissions are anticipated to be below the thresholds of significance established by the SCAQMD. The operational emissions take into account the number of trips provided in the traffic report. In addition, the uses permitted under the specific plan will serve the local market. Adherence to the mitigation provided in Section 3.7.B will further reduce operational emissions. As a result, the potential impacts are considered to be less than significant.

C. Would the project expose sensitive receptors to substantial pollutant concentrations? ● Less than Significant Impact.

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics and CO are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest sensitive receptors are located along the west side of Heacock Street and along the north side of Ironwood Avenue. Additional sensitive receptors are depicted in Exhibit 3-3.

Most vehicles generate carbon monoxide (CO) as part of the tail-pipe emissions and high concentrations of CO along busy roadways and congested intersections are a concern. The areas surrounding the most congested intersections are often found to contain high levels of CO that exceed applicable standards. Typically, a hot-spot may occur near an intersection that is experiencing severe congestion (a LOS E or LOS F). The SCAQMD stated in its CEQA Handbook that a CO hot-spot would not likely develop at an intersection operating at LOS C or better. Since the Handbook was written, there have been new CO emissions controls added to vehicles and reformulated fuels are now sold in the SCAB. These new automobile emissions controls, along with the reformulated fuels, have resulted in a lowering of both ambient CO concentrations and vehicle emissions. In addition, the total number of vehicle trips that would be generated by the potential new development within the expanded Planning Area 1 would potentially result in 88 morning (AM) peak hour trips and 93 evening (PM) peak hour trips. This net increase in traffic would not be great enough to result in the creation of a carbon monoxide hotspot. As a result, the impacts related to the adoption and subsequent implementation of the Plan Amendment will be less than significant.

D. Would the project create objectionable odors affecting a substantial number of people? ● No Impact.

The SCAQMD has identified those land uses that are typically associated with odor complaints. These uses include activities involving livestock, rendering facilities, food processing plants, chemical plants, composting activities, refineries, landfills, and businesses involved in fiberglass molding.[34] For purposes of analysis, this IS/MND assumes the future development within the expanded Planning Area 1 will consist of light industrial development. The future tenant is not known at this time. However, should any of the future tenants be involved in any odor generating use, the future tenant must be in compliance with all applicable SCAQMD regulations. Furthermore, no odors were observed coming from the uses located within the Planning Area based on the field survey that was undertaken. As a result, no impacts will result.

MITIGATION MEASURES

The analysis presented above indicated that the project's potential air quality impacts are considered to be less than significant. These emissions are further reduced with the implementation of the mitigation presented in Section 3.8.

[34] South Coast Air Quality Management District. *CEQA Air Quality Handbook*. April 1993.

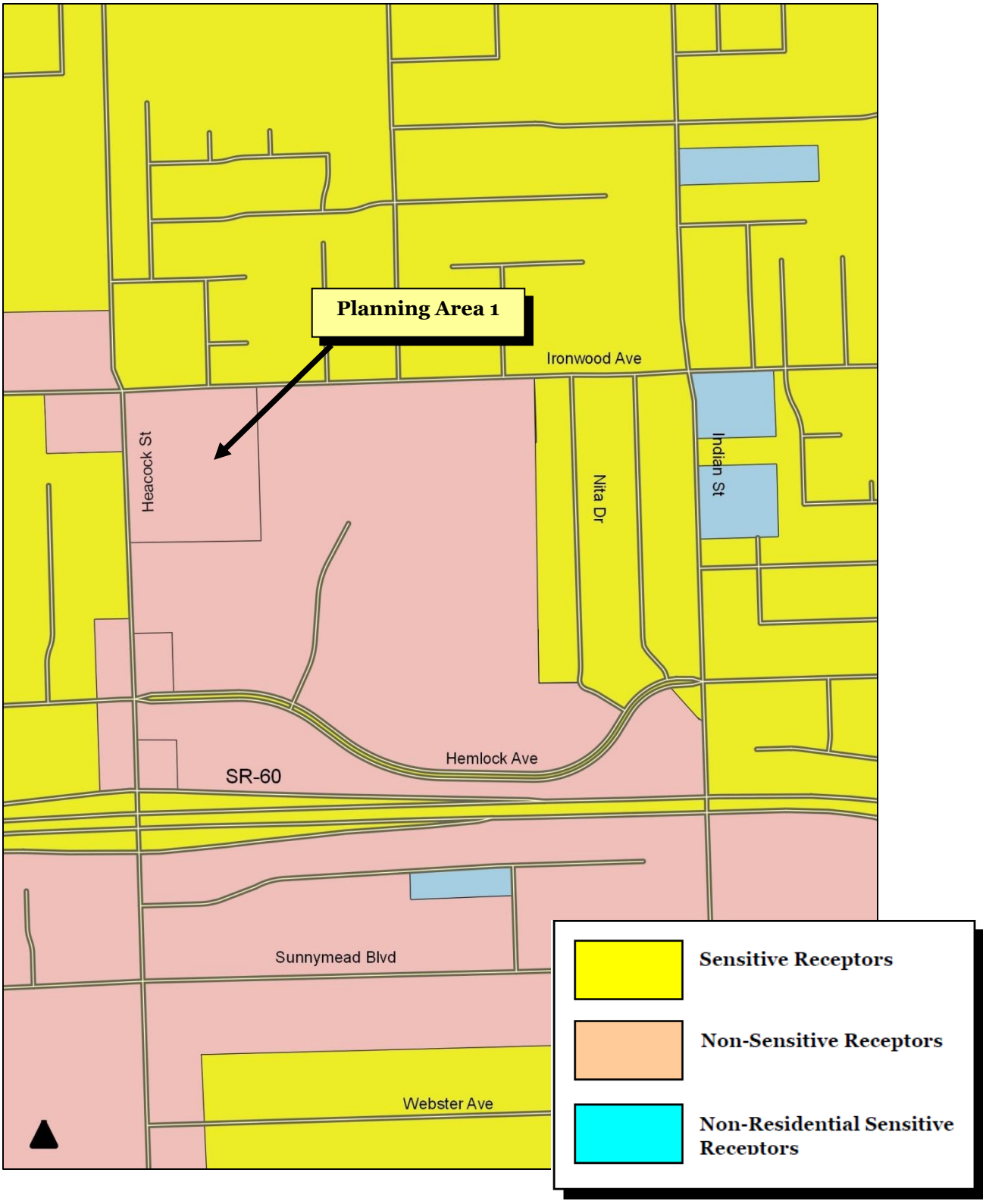


EXHIBIT 3-3
SENSITIVE RECEPTORS
Source: Quantum GIS

3.4 BIOLOGICAL RESOURCES

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project 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. Would the project 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. Would the project 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?				✖
D. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory life corridors, or impede the use of native wildlife nursery sites?		✖		
E. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✖
F. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?				✖

A. *Would the project 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?* ● *Less than Significant Impact with Mitigation.*

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. Hernandez Environmental Services conducted a literature review and reviewed aerial photographs and topographic maps of the larger Specific Plan Area which included the expanded Planning Area 1. This earlier study is still valid given that conditions within Planning Area 1 relative to natural habitats, have not changed since the earlier study was completed. The Sunnymead quadrangle and adjacent surrounding eight quadrangles were reviewed to identify sensitive species in the California Natural Diversity Data Base (CNDDB). Additional resources reviewed during the literature search included the United States Fish and Wildlife (USFWS) Endangered Species Lists, Forest Service List, and the California Native Plant Society's (CNPS) Rare plant lists to obtain species

information for the project area.[35] In addition, Hernandez Environmental Services conducted field survey of the approximate 49-acre project site on July 13, 2015. The ambient temperature at 9:30 a.m. was 72˚Fahrenheit, sunny, with zero to three mile per hour winds from the northeast. The purpose of the field survey was to document the existing habitat conditions, obtain plant and animal species information, view the surrounding uses, assess the potential for state and federal waters, and assess the potential for wildlife movement corridors, sensitive species, and nesting habitat.[36] The report considered 13 species that are listed as state and/or federally threatened, endangered, or candidate species. These 13 species are also identified for special consideration under the Riverside County MSHCP. The 13 species include the following: *Southern Mountain Yellow-Legged Frog*; *Tricolored Blackbird*; *Burrowing Owl*; *Western Yellow-Billed Cuckoo*; *Southwestern Willow Flycatcher; Bald Eagle*; *Coastal California Gnatcatcher*; *Least Bell's Vireo; Santa Ana Sucker*; and, *Quino Checkerspot Butterfly*.

According to the report, none of the species identified above are likely to be encountered within the Planning Area due to the amount of disturbance that has occurred to accommodate the existing landscaping and development. Hernandez Environmental Services also conducted a Burrowing Owl Survey and prepared a report to summarize the findings. According to the Burrowing Owl Survey, there were no signs of Burrowing Owl habitation within the Planning Area.[37] Species exclusively identified in the Western Riverside MSHCP are listed below:

- *Cooper's Hawk*. Cooper's hawk is a CDFW watch list species and International Union for Conservation of Nature (IUCN) species of least concern. The species foraging habitat includes rivers, and woodlands including willows, cottonwoods, and sycamores. Nesting habitat for this species occurs at the project site in the Eucalyptus trees adjacent to the site. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

- *Bell's Sage Sparrow*. Bell's sage sparrow is a CDFW watch list species and USFWS bird of conservation concern. The species nests in coastal sage scrub and chaparral. The project site supports some disturbed coastal sage scrub that may serve as habitat. This species is potentially present, though this species is considered adequately conserved.

- *Orange-throat Whiptail*. Orange-throat whiptail is a CDFW species of special concern and IUCN species of least concern. The species inhabits low elevation coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitat. The project site supports some disturbed coastal sage scrub that may serve as habitat. This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.[38]

- *Coastal Whiptail*. Coastal whiptail is a CDFW species of special concern and IUCN species of least concern. It is found in a variety of ecosystems, primarily in hot and dry open areas with sparse foliage – chaparral, woodland, and riparian areas. The project site supports habitat for this species.

[35] Hernandez Environmental Services. *General Biological Assessment Report, Moreno Valley Festival.* Report dated November 2015.

[36] Hernandez Environmental Services. *General Biological Assessment Report, Moreno Valley Festival.* Report dated November 2015.

[37] Ibid.

[38] Ibid.

This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

- *Red-diamond Rattlesnake*. Red-diamond rattlesnake is a CDFW species of special concern. The species habitat includes coastal sage scrub or chaparral with granite boulders. The project site supports habitat for this species. This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

- *California Horned Lark*. California horned lark is a CDFW watch list species and IUCN species of least concern. The species is found in open areas dominated by sparse low herbaceous vegetation or widely scattered low shrubs. The project site supports habitat for this species. This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

- *Western Yellow Bat*. Western yellow bat is a CDFW species of special concern and IUCN species of least concern. The species occupies a range of habitats of extremely arid areas including savannas, secluded woodlands, regions dominated by pasture or croplands, and residential areas. It is insectivorous and often roosts in trees. The project site supports limited roosting habitat for this species. This species is potentially present.

- *San Diego Black-tailed Jackrabbit*. San Diego black-tailed jackrabbit is a CDFW species of special concern. The species habitat includes chaparral and coastal sage scrub. The project site supports limited habitat for this species. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

- *Coast Horned Lizard*. Coast horned lizard is a CDFW species of special concern and IUCN species of least concern. The species inhabits open areas of sandy soils and low vegetation in valleys, foothills, and semiarid mountains. It is found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. The project site supports limited habitat for this species. This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

- *Lawrence's Goldfinch*. Lawrence's goldfinch is an IUCN species of least concern. The species inhabits open woodlands, chaparral, and weedy fields. The project site supports limited habitat for this species in the basin located adjacent to the eastern project boundary. This species is potentially present.[39]

The implementation of the Specific Plan Amendment for the expanded Planning Area 1 and all subsequent development may have the potential to impact the aforementioned Western Riverside MSHCP species. As a result, the following mitigation is required:

- The proposed project must be consistent with the Western Riverside MSHCP. Payment of the appropriate development mitigation fees will mitigate any impacts to these species.

[39] Hernandez Environmental Services. *General Biological Assessment Report, Moreno Valley Festival.* Report dated November 2015.

- Prior to any land disturbance, a focused pre-construction burrowing owl survey shall be conducted prior to construction in accordance with the Burrowing Owl Survey instructions of the Western Riverside County MSHCP. This survey is to be conducted within 30 days prior to ground disturbance. After the pre-construction burrowing owl survey has been completed, a survey report will be prepared in accordance with the MSHCP 30-day Pre-construction Burrowing Owl Survey Report Format.

Adherence to the above-mentioned mitigation will reduce potential impacts to levels that are less than significant.

B. Would the project 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? ● No Impact.

The property is relatively flat with the exception of an incised gully (previously Bale Creek) that traverses the property from northwest to southeast. The majority of the property is earthen with the exception of a gravel and concrete parking area on the western border and a large storage tank in the southwest corner. The entire property has been previously disturbed and graded. There are a few scattered native trees in the northwest portion of the gully, but the reminder of the property supports non-native vegetation common in previously disturbed habitat surrounded by development. The property is bordered by Ironwood Avenue and developed areas to the north, disturbed habitat to the east and south, and Heacock Street and developed areas to the west. Prior to development the property likely supported an ephemeral channel that drained from northwest to southeast. This is evident from a blue line shown on the United States Geological Survey map of the area and remnants of a channel on site. However, storm drain re-alignment including undergrounding of sewer stormwater Line H in 2009 directed all flow that previously crossed the property into a storm drain that is underground, and north of the property.[40] The underground storm drains collects water from surrounding storm drains and directs it into the Indian Detention Basin that occurs approximately 600 feet to the east.[41]

There are no jurisdictional wetlands or waters features on the property. There are no channel features, or other wetland and water features that hold water on the property. The property was surveyed approximately 3 days after a significant rain event and any surface flow would have been evident. Given the majority of the property has been graded and is generally flat with small tractor tracks rainfall appears to soak into the surface. The property has no channels or storm drains leading onto the property. The property consists of a very small watershed limited to only the water that falls on site. There is not enough surface flow on the property to support even an ephemeral channel. The main gully likely previously supported flow from a storm drain to the northwest. The storm drain has been re-directed and the gully no longer supports a drainage feature.[42] Although there are individual native trees near the western end of the gully (cottonwood and willow) they are not part of a larger riparian system, do not by themselves constitute a wetland community, and are not supported by a wetland community. Rather they are remnants from the channel

[40] Borcher Environmental Management. *Results of the Jurisdictional Wetlands and Waters Assessment for the Heacock/Ironwood Project in Moreno Valley, California*. Letter dated December 27, 2016.

[41] Please refer to Clean Water Act Section 401 Water Quality Certification from the City of Moreno Valley (SARWQCB Project No. 332009-18) for the Ironwood Avenue and Indian Detention Basin Project for more details regarding the storm drain and Indian Detention Basin.

[42] Borcher Environmental Management. *Results of the Jurisdictional Wetlands and Waters Assessment for the Heacock/Ironwood Project in Moreno Valley, California*. Letter dated December 27, 2016.

that likely existed prior to the underground storm drain re-alignment. The new normal condition does not support directed flow or wetland vegetation communities. As a result, no impacts will result.

C. *Would the project 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? ● No Impact.*

According to wetland delineation survey that was completed for the expanded Planning Area 1, there are no jurisdictional wetlands or waters features on the property. Furthermore, there are no channel features, or other wetland and water features that hold water on the property.[43] The property was surveyed approximately three days after a significant rainstorm and any surface flow would have been evident. Given the majority of the property has been graded and is generally flat with small tractor tracks rainfall appears to percolate into the surface. The property has no channels or storm drains leading onto the property. The property consists of a very small watershed limited to only the water that falls on site. There is not enough surface flow on the property to support even an ephemeral channel. The main gully likely previously supported flow from a storm drain to the northwest. The storm drain has been re-directed and the gully no longer supports a drainage feature. This is evident by the lack of ordinary high water marks (OHWM), bed and bank, and the absence of a non-soil component at the bottom of the gully. Meaning the soils in the bottom of the gully are the similar to those on the surface above rather than sand or other sediments found in creek bottoms.

Soils on the property have been disturbed by past grading and earthwork. The soils are mapped by the United States Department of Agriculture as sandy loams, and are generally well drained. The disturbance to the soils also has created many pockets and pores for rainfall to soak into the surface rather than run off into a channel. There are two outfall structures east of the property that transports water flow in the area from the underground storm drain into the Indian Detention Basin. Although there are individual native trees near the western end of the gully (cottonwood and willow) they are not part of a larger riparian system, do not by themselves constitute a wetland community, and are not supported by a wetland community. Rather they are remnants from the channel that likely existed prior to the underground storm drain re-alignment. The new normal condition does not support directed flow or wetland vegetation communities. As a result, the proposed project's implementation will not result in any impacts on this issue.

D. *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory life corridors, or impede the use of native wildlife nursery sites? ● Less than Significant Impact with Mitigation*

According to the General Biological Assessment report, the Planning Area contains vegetation that is suitable for nesting and migrating birds. For future projects located within the Specific Plan area, the following mitigation measures will apply:

- Vegetation removal shall be conducted outside of the nesting season for migratory birds to avoid direct impacts. The migratory bird nesting season is between February 1 and September 15.

[43] Borcher Environmental Management. *Results of the Jurisdictional Wetlands and Waters Assessment for the Heacock/Ironwood Project in Moreno Valley, California.* Letter dated December 27, 2016.

- If active nests are found during nesting bird surveys, they shall be flagged and a 200-foot buffer shall be fenced around the nests.

- If vegetation removal will occur during the migratory bird nesting season, between February 1 and September 15, pre-construction nesting bird surveys must be performed within three days prior to vegetation removal.

Adherence to the mitigation measures identified above will reduce potential impacts to levels that are less than significant.

E. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ● No Impact.

Chapter 9.17, Street Trees, of the City's Municipal Code governs the planting of trees within certain major arterials. According to the Code, street trees are installed a minimum of one foot, and a maximum of two feet, on the private side of the property line (single-family residential lots) or in the public right-of-way for all other projects. Should any trees be planted within the public right-of-way, future Applicants must consult with the City to determine the appropriate species of tree that will be planted. In addition, the Moreno Valley Festival Specific Plan also includes a focus on landscaping and tree planting with the new developments. The project site is not located within a Western Riverside County MSHCP Criteria Area. As such, the proposed Project is not required to set aside conservation lands pursuant to the Western Riverside County MSHCP, and the proposed project is not subject to the MSHCP's Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process, or Joint Project Review (JPR). As a result, the adoption and subsequent implementation of the Moreno Valley Festival Specific Plan will not result in any impacts.

F. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? ● No Impact.

The entire City is located within the Western Riverside MSHCP. However, the Planning Area is not located within a criteria cell of the MSHCP. The City of Moreno Valley Municipal Code contains provisions for the protection of the Stephens' Kangaroo Rat pursuant to the Stephens' Kangaroo Rat HCP (refer to Title 8, Chapter 8.60 of the Municipal Code). The project site is not located within an identified reserve area for the Stephens' Kangaroo Rat and the species has a low to moderate potential to occur on the project site. In addition, the species was not observed during biological surveys of the project site or the off-site improvement area. Accordingly, the project is exempt from the focused survey requirements for the Stephens' Kangaroo Rat established by the City's Municipal Code. The project Applicant is required to contribute a local development impact and mitigation fee, which requires a fee payment to assist the City in implementing the habitat conservation plan for the Stephens' Kangaroo Rat.

The project Applicant is required to contribute a local mitigation fee to assist the Western Riverside County – Regional Conservation Authority in implementing the Western Riverside County MSHCP reserve system (including the acquisition, management, and long-term maintenance of sensitive habitat areas). With mandatory compliance with standard regulatory requirements (i.e., mitigation fee payment), the proposed Project would not conflict with any City policies or ordinances related to the mitigation fee program associated with Western Riverside County MSHCP.

MITIGATION MEASURES

The analysis indicated that the proposed project may result in impacts to protected species and habitat. As a result, the following mitigation is required:

Mitigation Measure No. 1 (Biological Resources Impacts). The proposed project must be consistent with the Western Riverside MSHCP. Payment of the appropriate development mitigation fees will mitigate any impacts to these species.

Mitigation Measure No. 2 (Biological Resources Impacts). Prior to any land disturbance, a focused pre-construction burrowing owl survey shall be conducted prior to construction in accordance with the Burrowing Owl Survey instructions of the Western Riverside County MSHCP. This survey is to be conducted within 30 days prior to ground disturbance. After the pre-construction burrowing owl survey has been completed, a survey report will be prepared in accordance with the MSHCP 30-day Pre-construction Burrowing Owl Survey Report Format.

Mitigation Measure No. 3 (Biological Resources Impacts). Future developers must consult with the California Department of Fish and Wildlife, the U.S. Army Corps of Engineers, and the Santa Ana Regional Water Quality Control Board to determine the need for permits that must be obtained prior to initiation of construction of a proposed project.

Mitigation Measure No. 4 (Biological Resources Impacts). Prior to the start of construction activity, developers must prepare a Multiple Species Habitat Conservation Program (MSHCP) Determination of Biologically Equivalent or Superior Preservation (DBESP) should a future project affect Western Riverside MSHCP riverine resources.

Mitigation Measure No. 5 (Biological Resources Impacts). Vegetation removal shall be conducted outside of the nesting season for migratory birds to avoid direct impacts. The migratory bird nesting season is between February 1 and September 15.

Mitigation Measure No. 6 (Biological Resources Impacts). If active nests are found during nesting bird surveys, they shall be flagged and a 200-foot buffer shall be fenced around the nests.

Mitigation Measure No. 7 (Biological Resources Impacts). If vegetation removal will occur during the migratory bird nesting season, between February 1 and September 15, pre-construction nesting bird surveys must be performed within three days prior to vegetation removal.

3.5 CULTURAL RESOURCES

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5 of the CEQA Guidelines?				✖
B. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?		✖		
C. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*		✖		

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State CEQA Guidelines? ● No Impact.

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. Historic structures and sites are generally defined by local, State, and Federal criteria. A site or structure may be historically significant if it is protected through a local general plan or historic preservation ordinance. The U.S. Department of the Interior has established specific guidelines and criteria that indicate the manner in which a site, structure, or district is to be identified as having historic significance through a determination of eligibility for listing on the National Register of Historic Places. Significance may be determined if the property is associated with events, activities, or developments that were important in the past, with the lives of people who were important in the past, or represents significant architectural, landscape, or engineering elements. The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan Amendment Number 2 will not involve any removal of historically buildings.

Exhibit 3-4 shows locally designated resources. None of the buildings that are located within the Planning Area, including the existing above ground water reservoir tanks located in the southernmost portion of the expanded Planning Area 1, are included on any list of historic resources compiled by the United States Department of the Interior, National Park Service.[44] In addition, the project area is not present on the list of historic resources identified by the State Office of Historic Preservation (SHPO).[45] This existing reservoir tank is not unique nor is it historically significant. In addition, the tank and its ancillary facilities are in a state of disrepair. As a result, no impacts will occur as part of the property's redevelopment.

[44] National Park Service. *National Register of Historic Places*. Website http://npgallery.nps.gov/nrhp/SearchResults/. Website accessed August 21, 2017.

[45] California Department of Parks and Recreation. *California Historical Resources*. Website http:// ohp.parks.ca.gov/ ListedResources. Website accessed in June 13, 2017.

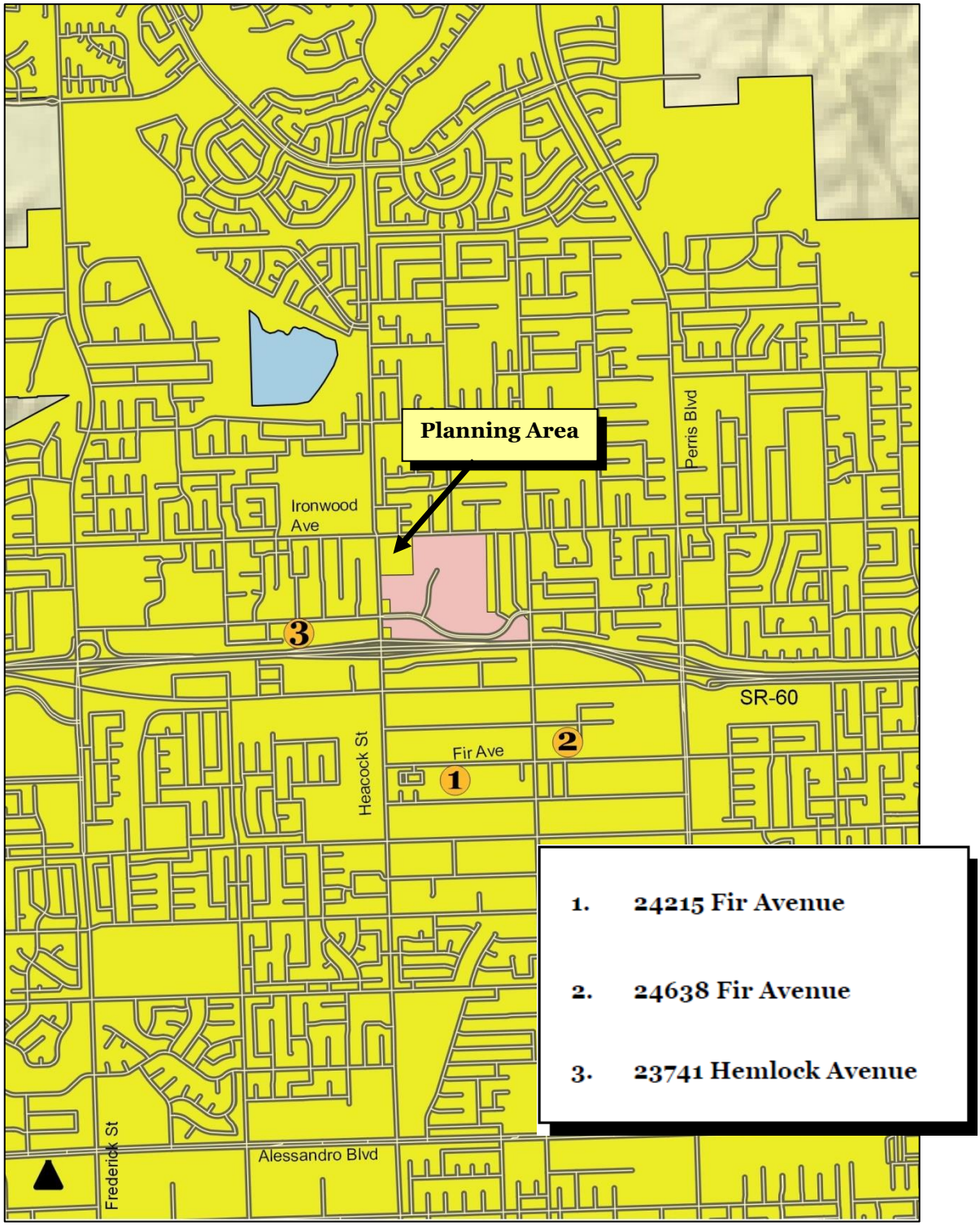


EXHIBIT 3-4
LOCALLY DESIGNATED HISTORICAL RESOURCES
Source: Moreno Valley General Plan

B. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines? ● Less than Significant Impact with Mitigation.

Ancestors of the Luiseno and Cahuilla Indian tribes were the first inhabitants of Moreno Valley. The Late Prehistoric Luiseño and Cahuilla peoples who occupied the region were generally believed to be semi-sedentary, meaning that they wintered in villages, then spread out in family groups during the spring and summer months to harvest seeds and acorns. Thus, smaller occupational locations tend to be associated with areas where plentiful milling stations are found. Milling stations are indicated by the presence of bedrock mortars and slicks. Rock art is also found within several complexes. This consists of "pictographs" or painted images and "petroglyphs" or rock engravings.

AB-52 consultation was completed in 2018 and formal requests for consultation were sent to seven tribal bands identified by the Native American Heritage Commission. Responses were received by the City from five tribes. The Pechanga Tribal Band requested a conference call, and mitigation measures were discussed. The same mitigation requested for Amendment Number 1 were also incorporated herein for Amendment Number 2. The Pechanga Tribal Band and Soboba Tribal Band also concurred with the following mitigation measures would continue to be applicable to the potential Amendment Number 2 development:

- 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 must 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, must develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB-52 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 AB-52 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:

    - Project grading and development scheduling;

    - The project archeologist and the Consulting Tribes(s) as defined in this mitigation must 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;

- 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.

- Prior to the issuance of a grading permit, the developer shall secure agreements with the Pechanga Band of Luiseño Indians, the Soboba Band of Luiseño Indians, and the Morongo Band of Mission 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.

- 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:

  - 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 the initial mitigation. 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 the first mitigation identified in Section 3.5.2.B.

  - 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."

- 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 previously identified mitigation before any further work commences in the affected area.

- 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 five-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).

Adherence to the aforementioned mitigation will reduce potential impacts to levels that are less than significant.

C. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ● Less than Significant Impact with Mitigation.

The Moreno Valley area contains sedimentary rock-units with potential to contain significant nonrenewable paleontological (fossil) resources. These sedimentary units are referred to as the Mt. Eden Formation and the San Timoteo Formation. The Mt. Eden Formation is described as being primarily reddish sandstone and dark green and brown clay with local reddish agglomerate and conglomerate. The age of the fossils contained in the Formation and the dark reddish brown coloration distinguish the Mt. Eden Formation from the younger, green to gray, tan, and red weathering of the San Timoteo Formation. Fossilized fauna include cricetine rodent, horse, and proboscidean (extinct animals related to elephants). The San Timoteo Formation sediments consist of claytons, siltstones, shales, sandstones, gravels, and fanglomerates. Paleontological sites are abundant within the San Timoteo Formation, with vertebrate faunas (animals) and floras (plants) reported. These sites contain a variety of fossilized fauna including horse, peccary, antelope, camel, deer, mastodon, sloth, tortoise, sabertooth cat, bear, and rabbit. The Mt. Eden Formation and the San Timoteo Formation are known to be highly fossiliferous, and have produced abundant and diverse floral and faunal remains ranging in age from as old as 5 million years to 1.3 million years or less.[46] As a result, the following mitigation is required:

- If previously unidentified paleontological resources are unearthed during construction, work shall cease within 50 feet of the find and the project Applicant must retain a qualified paleontologist, approved by the City, to assess the significance of the find. If a find is determined to be significant, the Lead Agency and the paleontologist will determine appropriate avoidance measures or other appropriate mitigation. All significant fossil materials recovered will be, as necessary and at the discretion of the qualified paleontologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.

[46] P and D Consultants. *Final Environmental Impact Report - City of Moreno Valley General Plan SCH# 200091075*. Report dated July 2006.

Adherence to the above-mentioned mitigation will reduce potential impacts to levels that are less than significant.

D. Would the project disturb any human remains, including those interred outside of dedicated cemeteries? ● Less than Significant Impact.

There are no cemeteries located near the Planning Area. The nearest cemetery to the Planning Area is Riverside National Cemetery, located more than four miles to the southwest.[47] In the unlikely event that a human burial is encountered, all construction activities shall be halted and Moreno Valley Police Department will be contacted (the department will then contact the County Coroner). In the event of an accidental discovery, Title 14; Chapter 3; Article 5; Section 15064.5 of CEQA will apply in terms of the identification of significant archaeological resources and their salvage. As a result, the potential impacts are considered to be less than significant.

MITIGATION MEASURES

The following mitigation will be effective in minimizing potential impacts to possible cultural resources:

Mitigation Measure No. 8 (Cultural Resources Impacts). 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 must 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, must develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB-52 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 AB-52 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 AB-52. Details in the Plan shall include:

- Project grading and development scheduling;

- The project archeologist and the Consulting Tribes(s) as defined in this mitigation must 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;

[47] Google Earth. Site accessed August 21, 2017.

- 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.

Mitigation Measure No. 9 (Cultural Resources Impacts). Prior to the issuance of a grading permit, the developer shall secure agreements with the Pechanga Band of Luiseño Indians, the Soboba Band of Luiseño Indians, and the Morongo Band of Mission 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.

Mitigation Measure No. 10 (Cultural Resources Impacts). 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:

- 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 the initial mitigation. 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 the first mitigation identified in Section 3.5.2.B.

- 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."

Mitigation Measure No. 11 (Cultural Resources Impacts). 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 previously identified mitigation before any further work commences in the affected area.

Mitigation Measure No. 12 (Cultural Resources Impacts). 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 five-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).

Mitigation Measure No. 13 (Cultural Resources Impacts). If previously unidentified paleontological resources are unearthed during construction, work shall cease within 50 feet of the find and the project Applicant must retain a qualified paleontologist, approved by the City, to assess the significance of the find. If a find is determined to be significant, the Lead Agency and the paleontologist will determine appropriate avoidance measures or other appropriate mitigation. All significant fossil materials recovered will be, as necessary and at the discretion of the qualified paleontologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.

3.6 ENERGY

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?			✖	
B. Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?			✖	

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. *Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation? ● Less than Significant Impact.*

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. The proposed project is projected to consume 3,035 kWh of electricity and 2,935 cubic feet of natural gas on a daily basis. The project Applicant will be required to closely work with the local electrical utility company to identify existing and future strategies that will be effective in reducing energy consumption. As a result, the impact will be less than significant.

B. *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? ● Less Than Significant Impact.*

On January 12, 2010, the State Building Standards Commission adopted updates to the California Green Building Standards Code (Code) which became effective on January 1, 2011. The California Code of Regulations (CCR) Title 24, Part 11: California Green Building Standards (Title 24) became effective to aid efforts to reduce GHG emissions associated with energy consumption. Title 24 now requires that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. The proposed project will be required to conform to all pertinent energy conservation requirements. As a result, the potential impacts will be less than significant.

MITIGATION MEASURES

The analysis determined that the proposed project will not result in significant impacts related to energy and mitigation measures are not required.

3.7 GEOLOGY & SOILS

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or, landslides?			✖	
B. Would the project result in substantial soil erosion or the loss of topsoil?			✖	
C. Would the project 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?			✖	
D. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (2012), creating substantial direct or indirect risks to life or property?			✖	
E. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or, landslides? ● Less than Significant Impact.*

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. The City of Moreno Valley is located in a seismically active region. Earthquakes from several active and potentially active faults in the Southern California region could affect the Planning Area. In 1972, the Alquist-Priolo Earthquake Zoning Act was passed in response to the damage sustained in the 1971 San Fernando Earthquake.[48] The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults.[49] The City of Moreno Valley is located within an Alquist-

[48] California Department of Conservation. *What is the Alquist-Priolo Act* http://www.conservation.ca.gov /cgs/rghm/ap/ Pages/main.aspx

[49] Ibid.

Priolo Special Studies Zone.[50] The nearest Alquist-Priolo fault is the Claremont Fault located five miles to the east.[51] This fault trace is part of the larger San Jacinto Fault Zone.[52] This fault trace is shown in Exhibit 3-5. The potential impacts in regards to ground shaking and fault rupture are less than significant since the risk is no greater in and around the Planning Area than for the rest of the City.

In addition, conformance with the most recent 2016 Building Code standards will ensure all future development can properly withstand ground shaking and fault rupture. As illustrated in Figure 4-1.1 of the Moreno Valley Hazard Mitigation, the Planning Area is not susceptible to liquefaction.[53] According to the United States Geological Survey, liquefaction is the process by which water-saturated sediment temporarily loses strength and acts as a fluid. Essentially, liquefaction is the process by which the ground soil loses strength due to an increase in water pressure following seismic activity. Lastly, the Planning Area is not at risk for landslides and is at no greater risk for ground shaking and fault rupture than the rest of the City. Therefore, the impacts are expected to be less than significant.

B. Would the project expose people or structures to potential substantial adverse effects, including substantial soil erosion or the loss of topsoil? ● Less than Significant Impact.

A review of the United States Department of Agriculture Web Soil Survey was conducted to determine the type of soils that underlie the Planning Area. According to the results of the Web Soil Survey, the Planning Area contains the following soils associations: Greenfield Sandy Loam; Hanford Coarse Sandy Loam; Monserate Sandy Loam; Ramona Sandy Loam; and Tujunga Loamy Sand. The varying soils within the planning area are shown in Exhibit 3-6.

All of the aforementioned soils possess some level of an erosion risk, ranging from slight to moderate. However, construction activities and the placement of "permanent vegetative cover" will reduce the soil's erosion risk.[54] Deep rooting plants will secure loose topsoil as will the pavement of barren earth. In addition, prior to the approval of all project-specific development proposals, detailed geotechnical investigation, and analysis will be prepared and submitted to the City for review. The results of those studies will be incorporated into the detailed plans for each project. As a result, the potential impacts are considered to be less than significant.

[50] California Department of Conservation. Table 4, Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of January 2010.

[51] GIS data provided by the California Department of Conservation

[52] Ibid.

[53] City of Moreno Valley. *Local Hazard Mitigation Plan*. Document updated December 2016.

[54] United States Department of Agriculture. *Soil Survey, West Riverside Area, California*. Report dated November 1971.

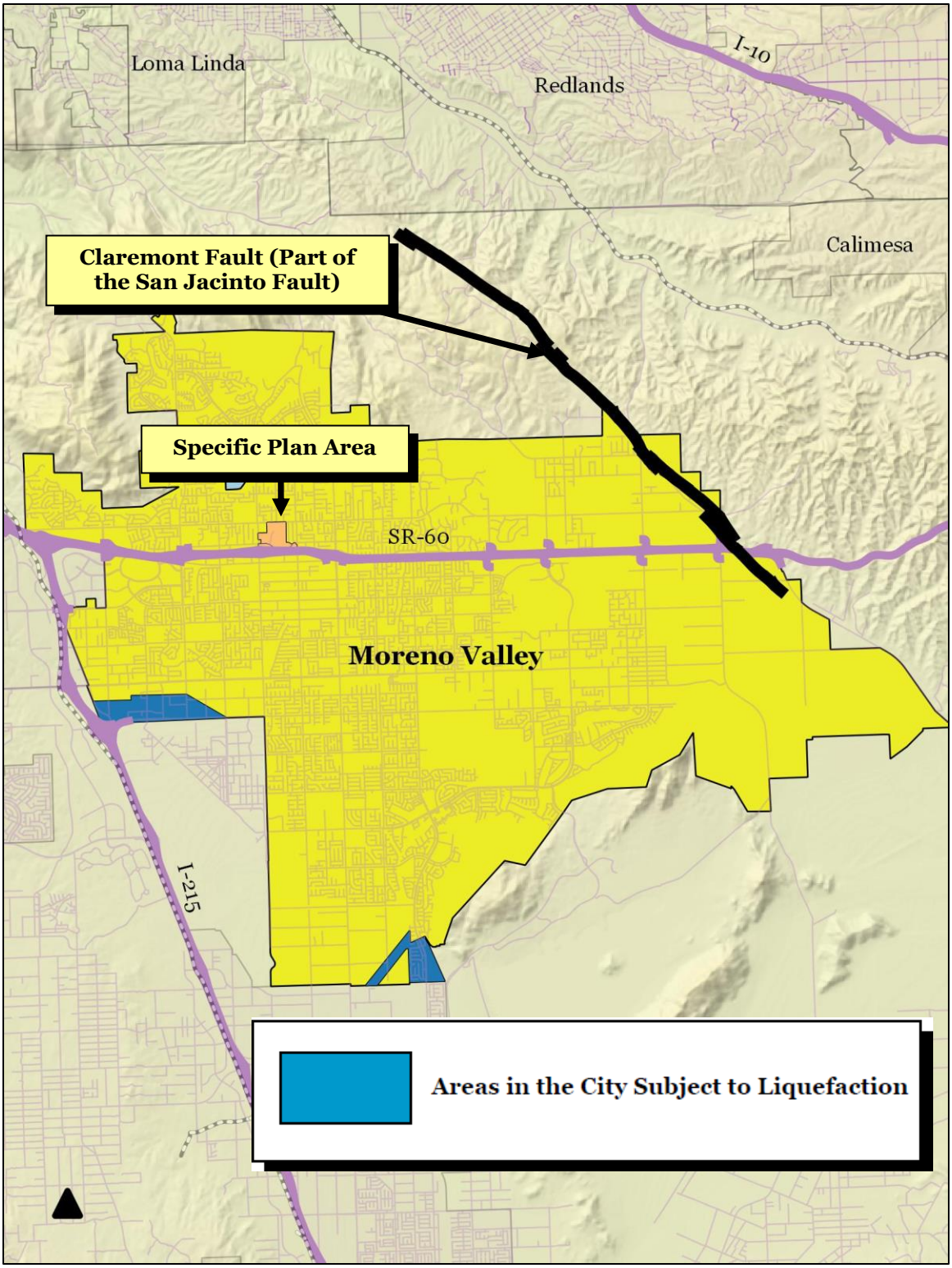
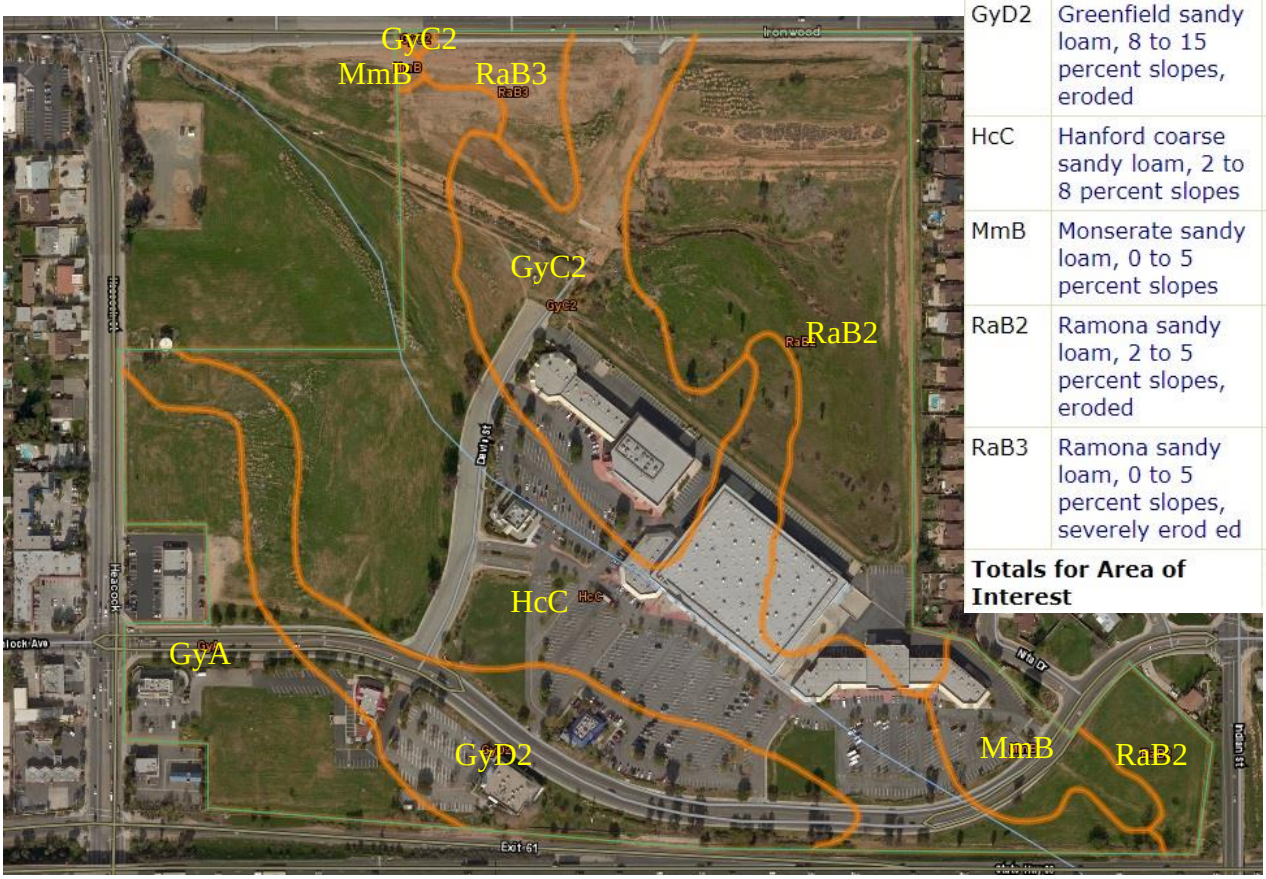


EXHIBIT 3-5
SEISMIC HAZARDS IN THE CITY
Source: California Department of Conservation



Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GyA	Greenfield sandy loam, 0 to 2 percent slopes	7.3	10.0%
GyC2	Greenfield sandy loam, 2 to 8 percent slopes, eroded	10.2	13.9%
GyD2	Greenfield sandy loam, 8 to 15 percent slopes, eroded	10.8	14.8%
HcC	Hanford coarse sandy loam, 2 to 8 percent slopes	22.5	30.8%
MmB	Monserate sandy loam, 0 to 5 percent slopes	2.9	3.9%
RaB2	Ramona sandy loam, 2 to 5 percent slopes, eroded	17.6	24.1%
RaB3	Ramona sandy loam, 0 to 5 percent slopes, severely erod ed	1.8	2.5%
Totals for Area of Interest		**73.1**	**100.0%**

EXHIBIT 3-6
SOILS WITHIN THE PLANNING AREA
Source: Web Soil Survey

C. Would the project expose people or structures to potential substantial adverse effects, including location on a geologic unit or a 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? ● Less than Significant Impact.

The only soils identified within the Planning Area that are prone to shrinking and swelling are the Monserate soils.[55] Soils that are prone to shrinking and swelling become sticky when wet and expand according to the moisture content present at the time. Monserate soils are located in two specific areas within the Planning Area. These soils become sticky when wet and expand according to the moisture content present at the time. An influx of groundwater may be absorbed by the soils and could lead to lateral spreading, though the impacts are considered to be less than significant since the building will be constructed with the strict adherence to the most pertinent State and City building codes. As indicated above, there are two areas located within the Planning Area that contain soils that are prone to shrinking and swelling. These two areas are also prone to subsidence. Subsidence occurs via soil shrinkage and is triggered by a significant reduction in an underlying groundwater table, thus causing the earth on top to sink.[56] Prior to the approval of all project-specific development proposals, detailed geotechnical investigation and analysis will be prepared and submitted to the City for review.

Grading and other construction activities are not expected to reach the depths required to encounter an underlying groundwater aquifer. In addition, any future development undertaken within the Planning Area will be required to be connected to the City's water lines; therefore, future development will not directly affect underlying groundwater resources. As a result, the potential impacts are anticipated to be less than significant.

D. Would the project result in or expose people to potential impacts, including location on expansive soil, as defined in Uniform Building Code (2010), creating substantial risks to life or property? ● Less than Significant Impact.

The only soils identified within the Planning Area that are prone to shrinking and swelling are the Monserate soils.[57] Shrinking and swelling is influenced by the amount of clay present in the underlying soils.[58] According to the United States Department of Agriculture, clay is present in the composition of Monserate soils.[59] Prior to the approval of all project-specific development proposals, detailed geotechnical investigation, and analysis will be prepared and submitted to the City for review. As a result, the potential impacts are considered to be less than significant.

[55] States Department of Agriculture. *Soil Survey, West Riverside Area, California*. Report dated November 1971.

[56] Subsidence Support. *What Causes House Subsidence?* http://www.subsidencesupport.co.uk/what-causes-subsidence.htm

[57] United States Department of Agriculture. *Soil Survey, West Riverside Area, California*. Report dated November 1971.

[58] Natural Resources Conservation Service Arizona. *Soil Properties Shrink/Swell Potential.* *http://www.nrcs.usda.gov/wps/portal/nrcs /detailfull/az/soils/?cid=nrcs144p2_065083*

[59] United States Department of Agriculture Soil Conservation Service. *Report and General Soil Map Riverside County, California*. Revised 1969.

E. Would the project result in or expose people to potential impacts, including soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? ● No Impact.

No septic tanks will be used as part of any future development. As a result, no impacts associated with the use of septic tanks will occur as part of the proposed project's implementation.

MITIGATION MEASURES

The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan will not lead to any impacts not already identified in the certified EIR that was prepared for the City of Moreno Valley General Plan. As a result, no additional mitigation beyond that which may be required for individual development projects is required.

3.8 GREENHOUSE GAS EMISSIONS

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✖	
B. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✖	

ENVIRONMENTAL ANALYSIS

A. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ● Less than Significant Impact.

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. The State of California requires CEQA documents to include an evaluation of greenhouse gas (GHG) emissions or gases that trap heat in the atmosphere. GHG are emitted by both natural processes and human activities. Examples of GHG that are produced both by natural processes and human activities include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). The accumulation of GHG in the atmosphere regulates the earth's temperature. Without these natural GHG, the Earth's surface would be about 61°F cooler. However, emissions from fossil fuel combustion have elevated the concentrations of GHG in the atmosphere to above natural levels. These man-made GHG will have the effect of warming atmospheric temperatures with the attendant impacts of changes in the global climate, increased sea levels, and changes to the worldwide biome. They major GHG that influence global warming are described below.

- *Water Vapor*. Water vapor is the most abundant GHG present in the atmosphere. While water vapor is not considered a pollutant, while it remains in the atmosphere it maintains a climate necessary for life. Changes in the atmospheric concentration of water vapor is directly related to the warming of the atmosphere rather than a direct result of industrialization. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to "hold" more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. When water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation. This will allow less energy to reach the Earth's surface thereby affecting surface temperatures.

- *Carbon Dioxide (CO2).* The natural production and absorption of CO2 is achieved through the terrestrial biosphere and the ocean. Manmade sources of CO2 include the burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700's, these activities have increased the atmospheric concentrations of CO2. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC Fifth Assessment Report, 2014) Emissions of CO2 from fossil fuel combustion and industrial processes contributed about 78% of the total GHG emissions increase from 1970 to 2010, with a similar percentage contribution for the increase during the period 2000 to 2010.

- *Methane (CH4).* CH4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO2. Methane's lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO2, N2O, and Chlorofluorocarbons (CFCs). CH4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other human-related sources of methane production include fossil-fuel combustion and biomass burning.

- *Nitrous Oxide (N2O).* Concentrations of N2O also began to increase at the beginning of the industrial revolution. In 1998, the global concentration of this GHG was documented at 314 parts per billion (ppb). N2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is also commonly used as an aerosol spray propellant.

- *Chlorofluorocarbons (CFC).* CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C2H6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

- *Hydrofluorocarbons (HFC).* HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF3), HFC-134a (CF3CH2F), and HFC-152a (CH3CHF2). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade and used for applications such as automobile air conditioners and refrigerants.

- *Perfluorocarbons (PFC).* PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF4) and hexafluoroethane (C2F6). Concentrations of CF4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

- *Sulfur Hexafluoride (SF6).* SF6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF6 has the highest global warming potential of any gas evaluated; 23,900 times that of CO2. Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

The SCAQMD has established a threshold of significance of 10,000 metric tons of CO_2E ($MTCO_2E$) per year for new development. Table 3-3 summarizes annual greenhouse gas emissions from build-out of the proposed project. As indicated in Table 3-3, the CO_2E total for the project is 29,636 pounds per day or 13 $MTCO_2E$ per day. This translates into a generation of approximately 4,745 $MTCO_2E$ per year, which is below the single established threshold of 10,000 $MTCO_2E$ for new development. The project's operational GHG emissions were calculated using the CalEEMod V.2016.3.2. The GHG emissions estimates reflect what the land uses that have been identified previously of the same location and description would generate once fully operational. The type of activities that may be undertaken once the project is operational have been predicted and accounted for in the model for the selected land use type.

Table 3-3
Greenhouse Gas Emissions Inventory

Source	GHG Emissions (Lbs/Day)			
	CO_2	CH_4	N_2O	CO_2E
Area	0.14	--	--	0.15
Energy	625.06	0.01	0.01	628.78
Mobile	28,964.17	1.74	--	29,007.90
Long-Term - Total	**29,589.38**	**1.76**	**0.01**	**29,636.84**

Source: CalEEMod.V.2016.3.2

Once operational, the development contemplated under the Specific Plan amendment is projected to fall below the 10,000 MTCO2E per year threshold established for GHG emissions by the SCAQMD. The project's true emissions may be lower if future development that is proposed is smaller than the maximum case build-out. The Moreno Valley Festival Specific will promote in-fill development that will reduce overall VMT. In addition, mitigation measures are provided in the following subsection which will further reduce GHG emissions. Therefore, the potential impacts in regards to GHG emissions are considered to be less than significant.

B. Would the project conflict an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases? ● Less than Significant Impact.

AB 32 requires the reduction of GHG emissions to 1990 levels, which would require a minimum 28 percent reduction in "business as usual" GHG emissions for the entire State. Additionally, Governor Edmund G. Brown signed into law Executive Order (E.O.) B-30-15 on April 29, 2015, the Country's most ambitious policy for reducing Greenhouse Gas Emissions. Executive Order B-30-15 calls for a 40 percent reduction in

greenhouse gas emissions below 1990 levels by 2030.[60] On October 9, 2012, the Moreno Valley City Council approved the Energy Efficiency and Climate Action Strategy and the related Greenhouse Gas Analysis. The Strategy and Analysis documents and identifies potential programs and policies to reduce overall City energy consumption and increase the use of renewable energy. The Strategy also prioritizes implementation of programs, policies, and projects based upon energy efficiency, cost efficiency, and potential resources. The Greenhouse Gas Analysis provides a more scientific approach and recommends a target to reducing community-wide GHG emissions consistent with the State reduction goals in Assembly Bill (AB) 32, the legislation that provides the basis of the State's climate action initiatives. The Energy Efficiency and Climate Action Strategy contain 124 different strategies that would reduce the City's carbon footprint. In addition, the General Plan includes the following:

- *Chapter 5, Transportation Demand Management 5.3.5*. Transportation Demand Management (TDM) strategies reduce dependence on the single occupant vehicle, and increase the ability of the existing transportation system to carry more people. The goal of TDM is to reduce single occupant vehicle trips during peak hours and modify the vehicular demand for travel. A reduction in peak hour trips and a decrease in non-attainment pollutants can be achieved through the implementation of TDM strategies. Examples of the strategies include: carpooling, telecommuting, flexible work hours, and electronic commerce that enables people to work and shop from home.

- *Policy 6.7.6*. Require building construction to comply with the energy conservation requirements of Title 24 of the California Administrative Code.

- *Policy 7-3*. Maintain a close working relationship with EMWD to ensure that EMWD plans for and is aware of opportunities to use reclaimed water in the City.

- *Policy 7.3.1*. Require water conserving landscape and irrigation systems through development review. Minimize the use of lawn within private developments, and within parkway areas. The use of mulch and native and drought tolerant landscaping shall be encouraged.

- *Policy 7.3.2*. Encourage the use of reclaimed wastewater, stored rainwater, or other legally acceptable non-potable water supply for irrigation.

- *Policy 7-4*. Provide guidelines for preferred planting schemes and specific species to encourage aesthetically pleasing landscape statements that minimize water use.

- *Policy 7.5.1*. Encourage building, site design, and landscaping techniques that provide passive heating and cooling to reduce energy demand.

- *Policy 7.5.2*. Encourage energy efficient modes of transportation and fixed facilities, including transit, bicycle, equestrian, and pedestrian transportation. Emphasize fuel efficiency in the acquisition and use of City-owned vehicles.

- *Policy 7.5.3*. Locate areas planned for commercial, industrial, and multiple family density residential development within areas of high transit potential and access.

[60] Office of Governor Edmund G. Brown Jr. *New California Goal Aims to Reduce Emissions 40 Percent Below 1990 Levels by 2030.* http://gov.ca.gov/news.php?id=18938

- *Policy 7.5.4*. Encourage efficient energy usage in all city public buildings.

- *Policy 7.5.5*. Encourage the use of solar power and other renewable energy systems.

- *Chapter 7 Issues and Opportunities 7.6.2*. The amount of energy consumed in automobile travel can be reduced if commercial and recreational opportunities are located near residential uses. Commuter travel can be minimized if there is a reasonable balance between jobs and housing within the area. Placing high intensity uses along transit corridors can also reduce automobile travel. Reducing residential street width can affect microclimates and reduce the summer cooling needs of adjacent homes. The orientation of buildings can be arranged to affect the amount of heat gain. Shade trees can also cool microclimates and aid in energy conservation. Building construction options are available to reduce energy consumption. Building construction methods include, but are not limited to, insulation of walls and ceilings, insulated windows and solar water heating systems. Many building energy conservation measures have been incorporated into Title 24 of the California Administrative Code and are required of all residential structures.

- *Policy 7.8.1*. Encourage recycling projects by individuals, non-profit organizations, corporations and local businesses, as well as programs sponsored through government agencies.

According to the Specific Plan, construction of the Moreno Valley Festival will be in conformance with California's "Cal-Green" building regulations, the most stringent, environmentally-friendly building code in the United States. Cal-Green is a comprehensive, far-reaching set of regulations which mandate environmentally-advanced building practices and regulations designed to conserve natural resources and reduce greenhouse gas emissions, energy consumption, and water use. The project will incorporate sustainable design features to further reduce its environmental footprint, including but not limited to:

- Reduced water use for landscape irrigation;
- Accommodate the use of alternative means of transportation;
- Use recycled building materials to the extent feasible;
- Use local sources of building materials to the extent feasible; and,
- Minimize the use of impervious paved surfaces throughout the project.[61]

In order to further ensure the project's conformance with the General Plan and the Energy Efficiency and Climate Action Strategy, the following mitigation measures are required:

- The Applicant must install ENERGY STAR appliances wherever appliances are installed.

- The Applicant shall install ENERGY STAR rated light emitting diodes (LEDs) for traffic, street, and outdoor lighting.

- The Applicant must install ENERGY STAR rated Compact Florescent Lights (CFLs) in all indoor areas that require continuous lighting. CFLs should not be used in rooms or areas that are subject to frequent on/off cycling, as the lifespan of CFLs diminishes when there are frequently turned off.

- The Applicant must install light colored "cool" roofs.

[61] National Engineering Consultants. *Amendment to Specific Plan 205*. Draft dated December 29th, 2015.

- The Applicant must install "cool" (lighter colored) pavement throughout the parking areas.
- All landscape planted on-site must be watered by water dispensed through drip irrigation.
- The building contractors shall install bicycle racks consistent with the City's Municipal Code adjacent to each building.
- The building contractors shall install electric vehicle charging stations in the parking areas. Preferential parking spaces for electric vehicles must be provided.

These mitigation measures shall be required for individual projects proposed within the Planning Area. As a result, the potential impacts are considered to be less than significant.

MITIGATION MEASURES

The following mitigation is required to further reduce future projects greenhouse gas emissions impacts:

Mitigation Measure No. 14 (Greenhouse Gases Emissions Impacts). The Applicant must install ENERGY STAR appliances wherever appliances are installed.

Mitigation Measure No. 15 (Greenhouse Gases Emissions Impacts). The Applicant shall install ENERGY STAR rated light emitting diodes (LEDs) for traffic, street, and outdoor lighting.

Mitigation Measure No. 16 (Greenhouse Gases Emissions Impacts). The Applicant must install ENERGY STAR rated Compact Florescent Lights (CFLs) in all indoor areas that require continuous lighting. CFLs should not be used in rooms or areas that are subject to frequent on/off cycling, as the lifespan of CFLs diminishes when there are frequently turned off.

Mitigation Measure No. 17 (Greenhouse Gases Emissions Impacts). The Applicant must install light colored "cool" roofs.

Mitigation Measure No. 18 (Greenhouse Gases Emissions Impacts). The Applicant must install "cool" pavement (lighter colored) throughout the parking areas.

Mitigation Measure No. 19 (Greenhouse Gases Emissions Impacts). All landscape planted on-site must be watered by water dispensed through drip irrigation.

Mitigation Measure No. 20 (Greenhouse Gases Emissions Impacts). The building contractors shall install bicycle racks consistent with the City's Municipal Code adjacent to each building.

Mitigation Measure No. 21 (Greenhouse Gases Emissions Impacts). The building contractors shall install electric vehicle charging stations in the parking areas. Preferential parking spaces for electric vehicles must be provided.

3.9 HAZARDS & HAZARDOUS MATERIALS

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✖	
B. Would the project 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?			✖	
C. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			✖	
D. Would the project 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?				✖
E. Would the project 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?				✖
F. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✖
G. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ● Less than Significant Impact.*

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. The project area is not listed on the California Department of Toxic Substances Control's Hazardous Waste and Substances Site database.[62] Furthermore, none of the properties located within the Planning Area are identified on the California Department of Toxic Substances Control's EnviroStor database.[63] In addition, the Planning Area is not identified on any Leaking Underground Storage Tank database (LUST). The United States Environmental

[62] CalEPA. *Cortese List Data Resources*. http://www.calepa.ca.gov/sitecleanup/corteselist/

[63] CalEPA. *EnviroStor Database*. http://www.envirostor.dtsc.ca.gov/public/mapfull.asp?global_id=&x=-119&y=37&zl=18&ms=640,480&mt=m&findaddress=True&city=south%20gate&zip=&county=&federal_superfund=true&state_response=true&voluntary_cleanup=true&school_cleanup=true&ca_site=true&tiered_permit=true&evaluation=true&military_evaluation=true&school_investigation=true&operating=true&post_closure=true&non_operating=true

Protection Agency's multi-system search was consulted to determine whether the Planning Area is identified on any Federal Brownfield list; Federal Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) List; Federal Resource Conservation and Recovery Act (RCRA) Treatment, Storage, and Disposal (TSD) Facilities List; and/or Federal RCRA Generators List. There is one use located within the Planning Area that is identified in the database. This use is located at 24318 Hemlock Avenue Suite G3 and is identified as M and M Cleaners, a former dry cleaning service.[64] M and M Cleaners is listed as a small quantity generator which is typical for dry cleaning services. These uses are required to report to the EPA due to their use, storage, and disposal of hazardous materials such as the solvents used to clean clothing. While no contamination is known to exist onsite, in the event any unknown contamination is encountered during the demolition, grading, and/or site preparation activities, this contamination must also be removed and disposed of in accordance with applicable laws before the City issues any building permit. The mandatory cleanup of potential contamination is considered beneficial since removal of contaminated soils and or the control of possible vapor release is required prior to the start of construction activities. As a result, the potential impacts related to the project's construction are considered to be less than significant.

Once operational, the use of hazardous materials for the new development promoted by the Specific Plan Amendment will largely consist of those commonly found in a commercial setting used in routine maintenance and cleaning. All future tenants will need to comply with all Federal and State regulations regarding hazardous materials. Therefore, the potential construction and operational impacts are considered to be less than significant.

B. *Would the project create a significant hazard to the public or the environment, or result in reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ● Less than Significant Impact.*

The proposed Specific Plan Amendment will permit a variety of retail, retail/mix of uses, and mix of uses. Many of these uses, including the business park, are still speculative. In the event that a future tenant is involved in the transport, use, storage, and disposal of hazardous materials, the tenant will be required to comply with Federal and State regulations regarding hazardous materials. The tenant would also be required to comply with the EPA's Hazardous Materials Transportation Act, Title 42, Section 11022 of the United States Code and Chapter 6.95 of the California Health and Safety Code which requires the reporting of hazardous materials when used or stored in certain quantities. Furthermore, the future tenant will be required to file a Hazardous Materials Disclosure Plan and a Business Emergency Plan to ensure the safety of the employees and citizens of Moreno Valley. Any contamination encountered during the demolition, grading, and/or site preparation activities must also be removed and disposed of in accordance with applicable laws before the City issues any building permit. As a result, the potential impacts are anticipated to be less than significant.

C. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ● Less than Significant Impact.*

[64] United States Environmental Protection Agency. *Environfacts Search Results*. https://oaspub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110006482573

The Planning Area is not located within a quarter mile of an existing school. The nearest school is Honey Hollow Elementary School, which is located 0.72 miles to the northwest.[65] In the event that a future tenant is involved in the transport, use, storage, and disposal of hazardous materials, the tenant will be required to comply with Federal and State regulations regarding hazardous materials. The tenant would also be required to comply with the EPA's Hazardous Materials Transportation Act, Title 42, Section 11022 of the United States Code and Chapter 6.95 of the California Health and Safety Code which requires the reporting of hazardous materials when used or stored in certain quantities. Furthermore, future tenants will be required to file a Hazardous Materials Disclosure Plan and a Business Emergency Plan to ensure the safety of the employees and citizens of Moreno Valley. Therefore, adherence to all pertinent regulations governing the handling of hazardous materials will reduce potential impacts to levels that are less than significant.

D. Would the project be located on a site, which is included on a list of hazardous material 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? ● No Impact.

The *Cortese List*, also referred to as the Hazardous Waste and Substances Sites List or the California Superfund List, is a planning document used by the State and other local agencies to comply with CEQA requirements that require the provision of information regarding the location of hazardous materials release sites. California Government Code section 65962.5 requires the California Environmental Protection Agency to develop and update the Cortese List on an annual basis. The list is maintained as part of the DTSC's Brownfields and Environmental Restoration Program referred to as EnviroStor. The database currently contains 575 sites, including the Federal Superfund sites. The database was consulted in August of 2017. A search of the Envirostor Hazardous Waste and Substances Site List website was completed to identify whether the Planning Area is listed in the database as a Cortese site.[66] The Planning Area is not included on a hazardous sites list compiled pursuant to California Government Code Section 65962.5.[67] As a result, no impacts will result.

E. Would the project be located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the Planning Area? ● No Impact.

The Planning Area is not located within two miles of an operational public airport. The March Air Reserve Base is the closest airport to the Planning Area. This airport is located 2.90 miles southwest of the Planning Area. In addition, the Riverside Municipal Airport is located in the City of Riverside approximately 12 miles to the west of the Planning Area. The Planning Area is not located within the Runway Protection Zone (RPZ) for the March Air Reserve Base, and the development envisioned under the Specific Plan will not penetrate the airport's slope. Essentially, the adoption and implementation of the Specific Plan will not introduce a building that will interfere with the approach and take off of airplanes utilizing the aforementioned airport. According to the Land Use Compatibility Plan that was prepared for the March Air

[65] Google Earth. Website accessed August 23, 2017.

[66] California, State of. California Department of Toxic Substances Control Envirostor Hazardous Waste and Substances Site List. http://www.envirostor.dtsc.ca.gov/public/search.asp (Website accessed August 22, 2017).

[67] California, State of, Department of Toxic Substances Control, *DTSC's Hazardous Waste and Substances Site List - Site Cleanup (Cortese List),* 2009.

Reserve Base, the planning area is not located within the RPZ or FAR Part 77 height restriction zone and no impacts will occur.[68]

F. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ● No Impact.

Future development proposals will be reviewed by the City to identify specific provisions for the regulation of construction vehicle ingress and egress to the site during construction as a means to provide continued through-access. As a result, no impacts are associated with the proposed project's implementation.

G. Would the project expose people or structures to a significant risk of loss, injury, or death involving wild lands fire, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands? ● No Impact.

The City of Moreno Valley is subject to both wild lands and urban fires. The natural vegetation in the area is highly prone to fire. The vegetation and geographical landscape consists of rolling hills covered in annual grasses with sage brush with no tree top canopy. The vegetation typically comes on an annual basis from annual rains which occur between the months of January and March.[69] Within the City of Moreno Valley, wildfire poses a threat to the northern and eastern portions of the city, as those areas are within the high fire hazard area. Also, the southeast area contains the largest potential for state land threat, Lake Perris, which is a California State Park that falls under the direct protection of the City of Moreno Valley for structure and wildland protection. Other areas of concern include Box Springs (northwest area), San Timoteo Canyon (north), and Reche Canyon (northeast area). The Planning Area is located outside of a wild lands fire risk zone. Therefore, no impacts will result.

MITIGATION MEASURES

The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan will not lead to any potentially significant impacts in regards to hazards or hazardous materials. Any future industrial tenant will be required to adhere to all pertinent Federal and State regulations governing the handling and use of hazardous materials. As a result, no additional mitigation beyond that which may be required for individual development projects is required.

[68] Riverside County Airport Land Use Commission. *Riverside Municipal Airport Land Use Compatibility Plan*. Adopted March 2005.

[69] City of Moreno Valley. *Local Hazard Mitigation Plan*. Document updated December 2016.

3.10 HYDROLOGY & WATER QUALITY

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?			✖	
B. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✖
C. Would the project 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 result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner in which would result in flooding on- or off-site; 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; or, impede or redirect flood flows?				✖
D. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?				✖
E. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			✖	

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. Would the project violate any water quality standards or waste discharge requirements? ● Less than Significant Impact.

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. Most developments are required to implement a Water Quality Management Plan (WQMP) in accordance with the NPDES Permit Board Order R8-2010-0033. The WQMP for the Santa Ana Region of Riverside County was approved by the Santa Ana Region Water Quality Control Board on October 22, 2012. Projects identified as a 'Priority Development project' are required to prepare a Project-Specific WQMP. The MS4 Permit mandates a Low Impact Development (LID) approach to storm water treatment and management of runoff discharges. The project site should be designed to minimize imperviousness, detain runoff, and infiltrate, reuse or evapotranspirate runoff where feasible. LID Best Management Practices (BMPs) should be used to infiltrate, evapotranspirate, harvest, and use, or treat runoff from impervious surfaces, in accordance with the Design Handbook for Low Impact Development Practices. The project should also ensure that runoff does not create a hydrologic condition of concern. Site design BMPs are intended to create a functional project

design that attempts to mimic the natural hydrologic regime. Methods of accomplishing the site design concepts include:

- Maximize the permeable area;
- Incorporate landscape buffer areas between sidewalks and streets;
- Use natural drainage systems;
- Where soil and conditions are suitable, use perforated pipe or gravel filtration pits for low flow infiltration;
- Construct ponding areas or detention facilities to increase opportunities for infiltration consistent with vector control objectives;
- Sites must be designed to contain and infiltrate roof runoff, or direct roof runoff to vegetative swales or buffer areas, where feasible;
- Where landscaping is proposed, drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping;
- Increase the use of vegetated drainage swales in lieu of underground piping or imperviously lined swales;
- Parking areas may be paved with a permeable surface, or designed to drain into landscaping prior to discharging to the MS4; and,
- Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design.

Source control BMPs would also be required to be implemented as part of the Final WQMP. Source control BMPs are those measures which can be taken to eliminate the presence of pollutants through prevention. Such measures can be both non-structural and structural. Non-structural source control BMPs include: education for property owners, operators, tenants, occupants, or employees; activity restrictions; irrigation system and landscape maintenance; common area litter control; street sweeping private streets and parking lots; and drainage facility inspection and maintenance. Structural source control BMPs include: stenciling and signage; landscape and irrigation system design; protection of slopes and channels; and properly designing fueling areas, trash storage areas, loading docks, and outdoor material storage areas.

The treatment control BMP strategy for the project is to select Low Impact Development (LID) BMPs that promote infiltration and evapo-transpiration, including infiltration basins, bio detention facilities, and extended detention basins. Generally infiltration BMPs have advantages over other types of BMPs, including reduction of the volume and rate of runoff, as well as full treatment of all potential pollutants potentially contained in the storm water runoff. It is recognized however that infiltration may not be feasible on sites with low infiltration rates, or located on compacted engineered fill. Therefore, prior to final design, infiltration tests shall be performed within the boundaries of the proposed infiltration BMP to confirm the suitability of infiltration. In situations where infiltration BMPs are not appropriate, bio

detention and/or bio treatment BMPs (including extended detention basins, bio swales, and constructed wetlands) that provide opportunity for evapotranspiration and incidental infiltration will be considered. Harvest and use BMPs will also be considered as a Treatment Control BMP to store runoff for later non-potable uses. Ponds may be used to collect storm water runoff for harvest and use. A description of the aforementioned treatment control BMPs is provided below:

- *Infiltration Basins*. An infiltration basin is a flat earthen basin designed to capture the design capture volume. The storm water infiltrates through the bottom of the basin into the underlying soil over a 72-hour drawdown period. Flows exceeding the design capture volume must discharge to a downstream conveyance system. Infiltration basins are highly effective in removing all targeted pollutants from storm water runoff. The use of infiltration basins may be restricted by concerns over groundwater contamination, soil permeability, and clogging at the site. Where this BMP is being used, the soil beneath the basin must be thoroughly evaluated in a geotechnical report since the underlying soils are critical to the basin's long term performance. To protect the basin from erosion, the sides and bottom of the basin must be vegetated, preferably with native or low water use plant species.

- *Bio detention Facility*. Bio detention facilities are shallow, vegetated basins underlain by an engineered soil media. In most cases, the bottom of a bio detention facility is unlined, which also provides an opportunity for infiltration to the extent that the underlying onsite soil can accommodate it. When the infiltration rate of the underlying soil is exceeded, fully bio treated flows are discharged via underdrains. Bio detention facilities therefore will inherently achieve the maximum feasible level of infiltration and evapotranspiration and achieve the minimum feasible (but highly bio treated) discharge to the storm drain system.

- *Extended Detention Basin*. The extended detention basin is designed to detain the design volume of storm water and maximize opportunities for volume losses through infiltration, evaporation, evapotranspiration, and surface wetting. Additional pollutant removal is provided through sedimentation, in which pollutants can attach to sediment accumulated in the basin through the process of settling. Storm water enters the basin through a forebay where any trash, debris, and sediment accumulate for easy removal. Flows from the forebay enter the top stage of the basin which is vegetated with native grasses and interspersed with gravel-filled trenches which together enhance evapotranspiration and infiltration. Water that does not get infiltrated or evapotranspired is conveyed to the bottom stage of the basin. At the bottom stage of the basin, low or incidental dry weather flows will be treated through a media filter and collected in a sub drain structure. Any additional flows will be detained in the basin for an extended period by incorporating an outlet structure that is more restrictive than a traditional detention basin outlet. The restrictive outlet extends the drawdown time of the basin which further allows particles and associated pollutants to settle out before exiting the basin, while maximizing opportunities for additional incidental value losses.

Adherence to the site design concepts, source control BMP, and treatment control BMP recommendations outlined above will reduce potential impacts to levels that are less than significant.

B. Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge in such a way that would cause a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of a pre-existing nearby well would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? ● No Impact.

The majority of the City is situated within the Perris North Groundwater Basin, while the easternmost portion of the City is located within the San Jacinto Groundwater Basin. Groundwater depth ranges from approximately 100 feet to 150 feet below ground surface. The California State Department of Water Resources (DWR) has estimated the groundwater basins in the vicinity of the City to have capacity for approximately one million acre-feet of water. The adoption and subsequent implementation of the Specific Plan will not introduce any development that will affect underlying groundwater supplies. As indicated previously, groundwater depth ranges from 100 to 150 feet below ground surface. Grading and other construction related activities will not extend to depths where groundwater may be encountered. In addition, any new development will be connected to the City's water lines and is not anticipated to deplete groundwater supplies through the direct consumption of the water. The Specific Plan calls for the installation of xeriscape landscaping and water efficient appliances to reduce the burden placed on the City's water resources. Future water consumption will be limited to that used for landscaping, restroom use, and routine maintenance and cleaning. Adherence to the required BMPs identified in the Specific Plan will restrict the discharge of contaminated runoff into the local groundwater aquifers. As a result, no impacts are anticipated.

C. Would the project 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 result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner in which would result in flooding on- or off-site; 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; or, impede or redirect flood flows? ● No Impact.

The larger Specific Plan Planning Area contains a 12.9-acre detention basin. This detention basin is located north of Planning Area 4 and south of Planning Area 2. The basin would fall under the jurisdiction of the California Department of Fish and Wildlife, United States Army Corps of Engineers (USACE), and the Regional Water Quality Control Board (RWQCB). The basin contains approximately 11.22 acres of CDFW jurisdiction and approximately 9.77 acres of waters of the United States.[70] The development of this detention basin will be prohibited. As stated previously, future projects must integrate BMPs identified in the mandatory WQMP plans. These BMPs will allow stormwater runoff to either percolate into the ground or discharge into the local storm drains. Stormwater runoff will not be discharged into the detention basin. Furthermore, stormwater will not discharge off-site and there will be no impacts regarding off-site erosion or siltation due to off-site stormwater discharge.

[70] Hernandez Environmental Services. *Basin Constraints Analysis*. Report dated February 22, 2016.

D. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation? ● No Impact.

According to maps obtained at the Federal Emergency Management System Map Service Center, a majority of the Planning Area is not located within a 100-year flood plain.[71] The entire Planning Area, with the exception of the detention basin, is located within Zone X.[72] This flood zone has an annual probability of flooding of less than 0.2 percent and represents areas outside the 500-year flood plain. Thus, properties located in Zone X are not located within a 100-year flood plain.[73] Although the detention basin is located within Zone A, a high risk area with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage, no impacts will occur since the development of the detention basin will be prohibited. As a result, no impacts related to flood flows are associated with the proposed project's implementation.

According to the General Plan, the potential for dam inundation is considered to be remote. There are two locations of concern situated within the City: the Poorman Reservoir (Pigeon Pass Reservoir) and Lake Perris. Failure of the dam at Poorman Reservoir could result in extensive flooding along the downstream watercourse.[74] Flood waters will be conveyed though an existing channel where they will ultimately flow through the detention basin. The risk of flooding due to dam failure is limited to the period during and immediately after major storms. The reservoir does not retain water throughout the year. Therefore, the likelihood of dam inundation is considered to be less than significant.

Failure of the dam at Lake Perris would only affect a very small area south of Nandina Avenue along the Perris Valley Storm Drain and the Mystic Lake area in the southeast corner of the City.[75] Although the Planning Area is located within the path of potential flood waters, this water will be conveyed through a system of existing channels and detention basins. As a result, the potential impacts are considered to be less than significant. The Planning Area is located between 42 to 70 miles north of the Pacific Ocean and the Planning Area would not be exposed to the effects of a tsunami.[76] A seiche in the Poorman Reservoir is not likely to happen due to the volume of water present. Lastly, the Planning Area will not be subject to mudslides because the Planning Area and surrounding areas are generally level. As a result, no impacts are likely to occur.

E. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?? ● Less than Significant Impact.

As indicated previously, future development proposals must include a WQMP. The WQMP shall include measures designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through

[71] FEMA. *FEMA's National Flood Hazard Layer (official).* http://fema.maps.arcgis.com/home/webmap/viewer.html?webmap=cbe088e7c8704464aa0fc34eb99e7f30&extent=-117.29161196434968,33.93176642411599,-117.20852785790449,33.95526379253687

[72] Ibid.

[73] FEMA. *Flood Zones, Definition/Description.* http://www.fema.gov/floodplain-management/flood-zones

[74] City of Moreno Valley General Plan. *Chapter 6 Safety Element, 6.8 Flood Hazards, 6.8.1 Background.* Plan dated July 11, 2006.

[75] Ibid.

[76] Google Earth. Site accessed September 22, 2017.

infiltration, evapo-transpiration, bioretention, and/or rainfall harvest and use. The project applicant shall prepare a WQMP plan which implements set LID standards and practices for stormwater pollution mitigation and provides documentation to demonstrate compliance with the municipal NPDES permit on the plans and permit application submitted to the city. In addition, the proposed project will not create excess runoff that will exceed the capacity of the existing storm water drainage system. All future development will be required to implement operational BMPs identified in the Specific Plan. These operational BMPs will reduce the amount of stormwater runoff discharged into the streets. Implementation of the previously mentioned BMPs will reduce potential impacts to levels that are less than significant.

MITIGATION MEASURES

The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan will not lead to any impacts not already identified in the certified EIR that was prepared for the City of Moreno Valley General Plan. As a result, no additional mitigation beyond that which may be required for individual development projects is required.

3.11 LAND USE & PLANNING

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project physically divide an established community?				✖
B. Would the project 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?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. Would the project physically divide an established community? ● No Impact.

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. For purposes of analysis, the expanded Planning Area's potential development has been assumed to be a 220,390 square foot light industrial building. The expanded Planning Area 1 is located in the midst of an urbanized area and is surrounding on all sides by urban development. The land uses and development that surround the larger Specific Plan Planning Area are outlined below:

- *North of the Plan Amendment Area 1.* Ironwood Avenue extends along the north side of the expanded Planning Area 1. Single-family residential units are located further north, along the north side of Ironwood Avenue opposite the Planning Area.[77]

- *South of the Plan Amendment Area 1.* A recently constructed concrete tilt-up building occupies Planning Area 3 located to the south of the expanded Planning Area 1.[78]

- *East of the Plan Amendment Area 1.* A recently constructed concrete tilt-up building occupies the easterly portion of the larger Planning Area 1..[79]

- *West of the Plan Amendment Area 1.* Heacock Street abuts the expanded Planning Area 1 to the west.[80]

The development contemplated under the Moreno Valley Festival Specific Plan Amendment Number 2 will not divide or disrupt an established community since all of the development envisioned under the Specific Plan will be contained within the Planning Area. In addition, the adoption and subsequent implementation of the Specific Plan will not result in incompatible land uses. The Specific Plan contains provisions for

[77] Blodgett Baylosis Environmental Planning. *Site survey*. Survey was conducted on August 9, 2017.

[78] Ibid.

[79] Ibid.

[80] Ibid.

buffers between industrial warehousing/business park type uses and the adjacent single-family units. These buffers will also provide separation between potential residential units and potential industrial uses. Landscaping (also serving as on-site BMPs), block walls, and adequate setbacks are examples of buffers that will maintain stability between the various existing uses and those that are proposed under the Specific Plan. As a result, no impacts will result.

B. *Would the project conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? ● No Impact.*

The original SP-205 designated the expanded Planning Area 1 as *Regional Commercial*. This Second Amendment is now designating this area as *Mix of Uses*. The types of uses permitted, conditionally permitted, and prohibited under the Specific Plan are summarized herein in Table 2-2, included in Section 2. The proposed Plan Amendment Number 2's implementation will require the following land use-related discretionary actions:

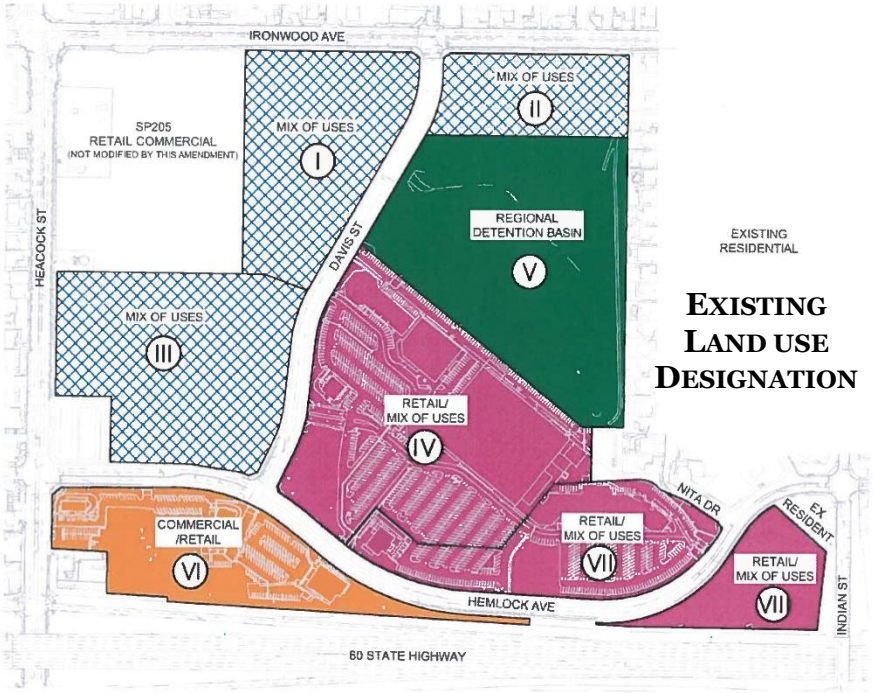
- The adoption of a General Plan Amendment (GPA) to the City of Moreno Valley General Plan to change the land use designation from *Commercial* to *Business Park;*
- The adoption of a Zone Change to the City of Moreno Valley Zoning Ordinance to change the land use designation from SP205 *Regional Commercial* to SP205 *Mix of Uses*; and,
- The adoption of the Moreno Valley Festival Specific Plan Amendment Number 2 to change the land use designation from *Regional Commercial* to *Mix of Uses*.

As indicated above, the current SP-205 land use applicable for the expanded Planning Area 1 is *Regional Commercial*. The proposed Amendment Number 2 would change the land use designation to *Mix of Uses* which allows for a wide range of land uses indicated in Table 2-2. The existing and proposed land use designations for the expanded Planning Area No. 1 is illustrated in Exhibit 3-7. The Moreno Valley Festival Specific Plan Amendment Number 2 would be adopted pursuant to Government Code Section 65450 which grants authority to cities to adopt or amend specific plans for purposes of implementing the goals and policies of their General Plans. The Government Code sets forth the minimum requirements and review procedures for specific plans including the provision of a land use plan, infrastructure and public services plan, criteria and standards for development, and implementation measures.[81] The proposed Specific Plan Amendment Number 2 would permit a comparable range in land uses and development types compared to that previously anticipated under the original SP-205. As a result, no impacts will result from the Plan Amendment's adoption and implementation.

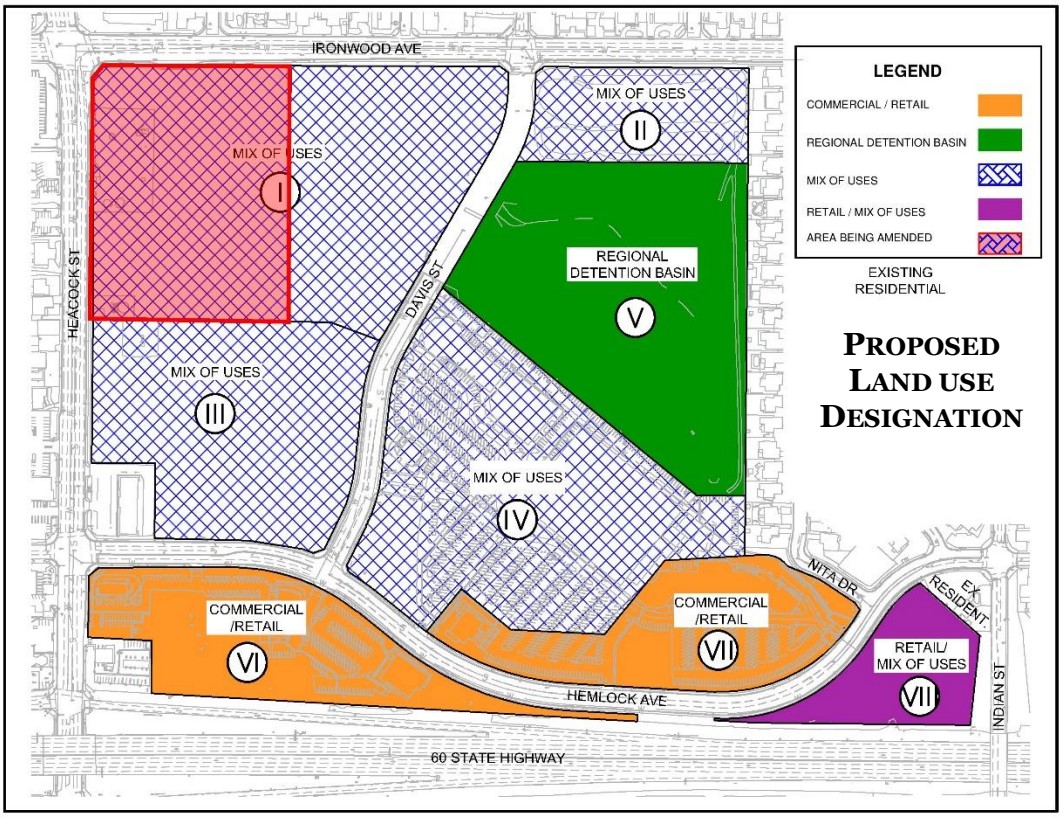
MITIGATION MEASURES

The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan will not lead to any impacts not already identified in the original certified EIR that was prepared for the City of Moreno Valley General Plan. As a result, no additional mitigation beyond that which may be required for individual projects is required.

[81] Blodgett Baylosis Environmental Planning. *Site survey*. Survey was conducted on August 9, 2017.



EXISTING LAND USE DESIGNATION



PROPOSED LAND USE DESIGNATION

EXHIBIT 3-7
EXISTING AND PROPOSED LAND USE DESIGNATIONS

Source: Blodgett Baylosis Environmental Planning

3.12 MINERAL RESOURCES

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project 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?				✖
B. Would the project 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?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents or the state? ● No Impact.

The expanded Planning Area 1 is not located in a Significant Mineral Aggregate Resource Area (SMARA) nor is it located in an area with active mineral extraction activities. In addition, according to the SMARA study area maps prepared by the California Geological Survey, the City of Moreno Valley is located within the larger San Bernardino SMARA.[82] However, as indicated in the San Bernardino P-C region map, the Planning Area is not located in an area where there are significant aggregate resources present.[83] A review of California Division of Oil, Gas, and Geothermal Resources (DOGGR) well finder indicates that there are no wells located within the Planning Area.[84] The nearest well is located approximately five miles to the northeast along the northeast side of Highland Boulevard in the City of Moreno Valley.[85] This well is presently plugged and abandoned.[86] Since there are no active oil or mineral resource extraction operations present within the Planning Area, no impacts to these resources will occur.

B. Would the project 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? ● No Impact.

A review of the San Bernardino P-C region map indicated that the Planning Area is not located in a location that contains aggregate extraction operations.[87] Therefore, the project's implementation will not contribute to a loss of availability to locally important mineral resources. Furthermore, the resources and materials

[82] California Department of Conservation. *Southern San Bernardino Production-Consumption (P-C) Region, San Bernardino and Riverside Counties, California.* http://www.conservation.ca.gov/smgb/Misc/Documents/SanBernPlates.pdf (NOTE: The Planning Area is located within the Sunnymead Quadrangle).

[83] Ibid.

[84] California, State of. Department of Conservation. *California Oil, Gas, and Geothermal Resources Well Finder. https://maps.conservation.ca.gov/doggr/wellfinder/#close*

[85] Google Earth. Site accessed August 24, 2017. The coordinates for the well were identified on the DOGGR website.

[86] California, State of. Department of Conservation. *Well Details.* https://secure.conservation.ca.gov/WellSearch/Details?api=06500122

[87] Ibid.

that will be utilized for the construction of the proposed project will not include any materials that are considered rare or unique. Thus, no impacts will result with the implementation of the Specific Plan.

MITIGATION MEASURES

The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan Amendment No. 2 will not lead to any impacts not already identified in the certified EIR that was prepared for the City of Moreno Valley General Plan. As a result, no additional mitigation beyond that which may be required for individual development projects is required.

3.13 NOISE

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project 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?			✖	
B. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?			✖	
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?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. Would the project 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? ● Less than Significant Impact.

Noise levels may be described using a number of methods designed to evaluate the "loudness" of a particular noise. The most commonly used unit for measuring the level of sound is the decibel (dB). Zero on the decibel scale represents the lowest limit of sound that can be heard by humans. The eardrum may rupture at 140 dB. In general, an increase of between 3.0 dB and 5.0 dB is the ambient noise level that is considered to represent the threshold for human sensitivity. In other words, increases in ambient noise levels of 3.0 dB or less are not generally perceptible to persons with average hearing abilities.

The current noise environment within the area surrounding the Planning Area is dominated by traffic noise emanating from Ironwood Avenue, Heacock Street, Hemlock Avenue, and the Moreno Valley Freeway. A *Sper Scientific* Digital Sound Meter was used to conduct the noise measurements. A series of 100 discrete noise measurements were recorded and the results of the survey are summarized in Table 3-4. Three measurement locations were utilized (refer to Exhibit 3-8). These measurements were taken on a Monday morning at 10:15. Table 3-4 indicates the variation in noise levels over time during the measurement period.[88] As indicated previously, the L_{50} noise level represents the noise level that is exceeded 50% of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. The average noise levels during the measurement periods were 57.3 dBA for location 1, 47.7 dBA location 2, and 60.7 dBA for location 3.

[88] Bugliarello, et. al., *The Impact of Noise Pollution,* Chapter 127, 1975.

Table 3-4
Noise Measurement Results

Noise Metric	Noise Level (dBA) Davis Street Terminus – Location 1	Noise Level (dBA) Nita Drive – Location 2	Noise Level (dBA) Heacock Street – Location 3
L_{50} (Noise levels <50% of time)	57.3 dBA	45.9 dBA	61.3 dBA
L_{75} (Noise levels <75% of time)	58.2 dBA	51.7 dBA	67.4 dBA
L_{90} (Noise levels <90% of time)	59.0 dBA	55.1 dBA	71.3 dBA
L_{99} (Noise levels <99% of time)	61.5 dBA	59.1 dBA	76.4 dBA
L_{min} (Minimum Noise Level)	54.3 dBA	40.8 dBA	48.6 dBA
L_{max} (Maximum Noise Level)	62.4 dBA	62.0 dBA	77.7 dBA
Average Noise Level	57.3 dBA	47.7 dBA	60.7 dBA

Source: Blodgett Baylosis Environmental Planning.

Title 11, Chapter 11.80 Noise Regulation, Table 11.80.030-2 illustrates the maximum permitted noise levels established for commercial and residential uses. According to the Table, the maximum permitted noise levels for commercial uses are 65 dBA during the day-time and 60 dBA during the evening hours. For residential, the maximum permitted noise levels are 60 dBA for day-time hours and 55 dBA for evening hours. As indicated previously, the areas adjacent to the surrounding roadways are subject to the highest noise levels, with an average noise reading of 60.7 dBA. Noise sensitive land uses consisting of single-family residential is located north of the Planning Area along the north side of Ironwood Avenue and west of the Planning Area along the west side of Heacock Street.

The types of industrial uses permitted under the Specific Plan consist of business park and warehouse type uses. These uses generally produce noise from roll-up doors, back up alarms, forklift equipment, etc. Operational noise will be sufficiently mitigated by the inclusion of block walls, adequate setbacks, and landscaping. If buildings are situated in a manner that directs operational noise away from sensitive receptors, this noise will be attenuated by the building itself.

As indicated in the previous section, a change in traffic noise levels of between 3.0 dBA and 5.0 dBA is generally considered to be the limit where the change in the ambient noise levels may be perceived by persons with normal hearing. It typically requires a doubling of traffic volumes to register a perceptible change (increase) in traffic noise). The proposed project is anticipated to generate approximately 88 AM peak hour trips, and 93 PM peak hour trips. The proposed project's traffic generation will not result in a doubling of traffic volumes. Finally, the loading docks and activity areas will be located away from the residential uses located on the north side of Ironwood Avenue. In addition, the proposed uses will be required to comply with the City of Moreno Valley Noise Control Ordinance. All of the activities will be enclosed within the new building. In addition, new landscaping will attenuate noise from the parking area. As a result, the potential impacts are considered to be less than significant.

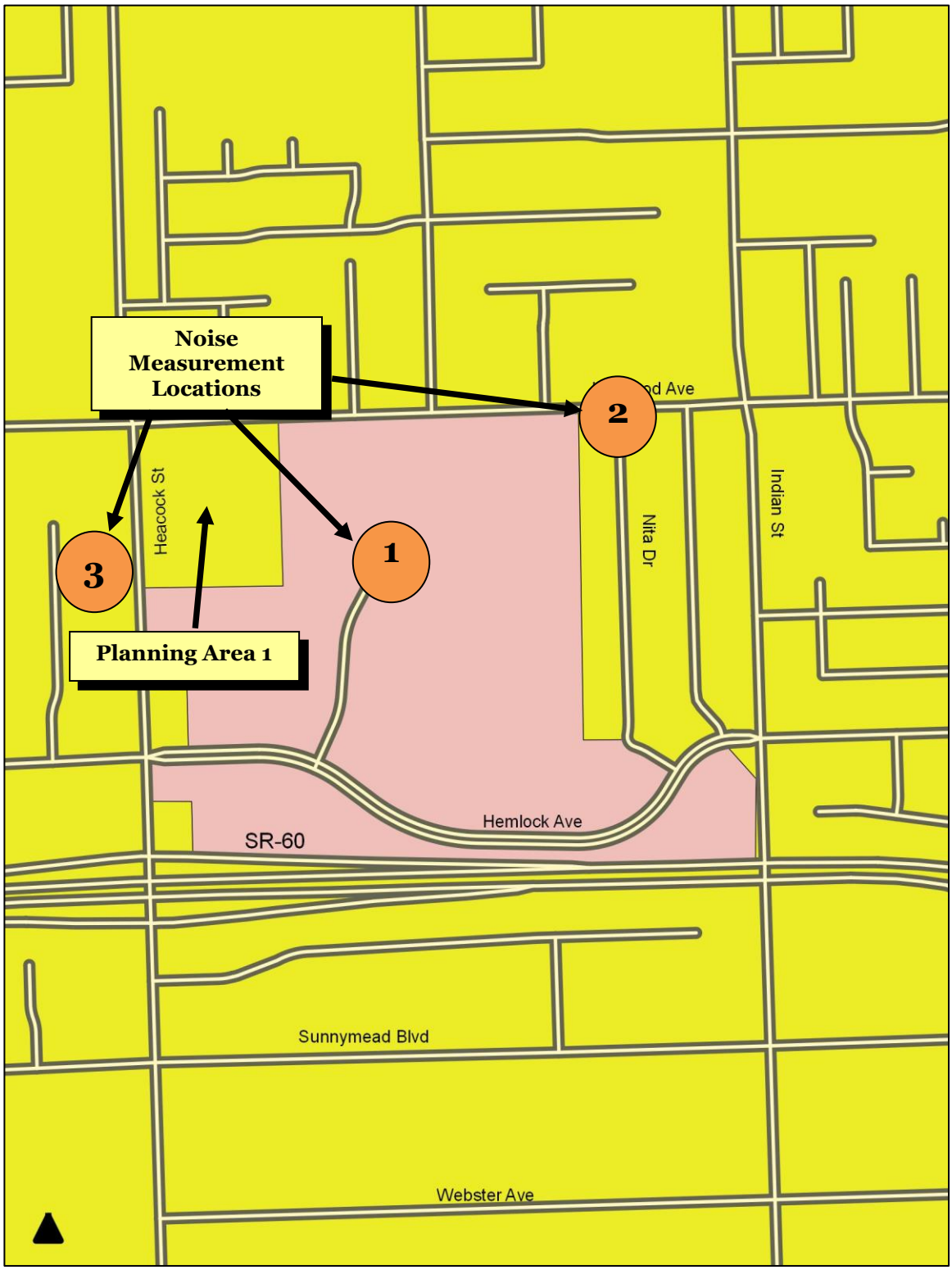


EXHIBIT 3-8
NOISE MEASUREMENT LOCATIONS
Source: Quantum GIS

B. Would the project result in exposure of people to or generation of excessive ground-borne noise levels?
● Less than Significant Impact with Mitigation.

The current noise environment within the Planning Area is dominated by traffic noise emanating from the SR-60 freeway, nearby arterial roadways, and the adjacent uses. Any future development will be required to adhere to the City's noise control requirements. Once operational, future development permitted under the Specific Plan will not generate excessive ground-borne noise because the individual projects will not require the use of equipment capable of creating ground-borne noise (the types of industrial uses that are preferred include warehousing and business park). Future sources of noise will include roadway noise as well as operational noise from the future use. Roadway noise is estimated in the previous subsection. The inclusion of landscape buffers, decorative concrete walls, setbacks, and mitigation including the use of silent alarms will be effective in further reducing potential noise impacts. As a result, the potential impacts are considered to be less than significant.

A change in traffic noise levels of between 3.0 dBA and 5.0 dBA is generally considered to be the limit where the change in the ambient noise levels may be perceived by persons with normal hearing. This requires a doubling of traffic volumes along the adjacent roadways. The implementation of the Planning Area 1 amendment would result in approximately 2,740 net daily trips with 88 net trips in the PM peak hour and 93 net trips during the PM peak hour. The streetscape plan, building design, and other development standards will be effective in attenuating any increased traffic noise. In addition, the future land uses and development will be required to comply with the City's noise control requirements as well as with the mitigation identified in the previous subsection. Adherence to all applicable City noise control requirements will reduce potential impacts to levels that are less than significant.

Composite construction noise is best characterized by Bolt, Beranek, and Newman.[89] In this study, the noisiest phases of construction for non-residential development is presented as 89 dBA as measured at a distance of 50 feet from the construction effort. In later phases during building erection, noise levels are typically reduced from these values and the physical structures further break up line-of-sight noise. However, as a worst-case scenario the 89 dBA value was used as an average noise level for the construction effort. The construction noise levels will decline as one moves away from the noise source. This effect is known as *spreading loss*. In general, the noise level adjustment that takes the spreading loss into account calls for a 6.0 dBA reduction for every doubling of the distance beginning with the initial 50-foot distance.

As indicated previously, there are noise sensitive land uses (single-family residential) located north of the Planning Area along the north side of Ironwood Avenue and west of the Planning Area along the west side of Heacock Street. Due to the presence of the aforementioned sensitive receptors, the following mitigation will be required for all future construction undertaken within the Planning Area:

- The Applicant shall ensure that the contractors conduct demolition and construction activities between the hours of 7:00 AM and 6:00 PM on weekdays and 9:00 AM to 12:00 PM on Saturdays, with no construction permitted on Sundays or Federal holidays.

- The Applicant shall ensure that the contractors use construction equipment that includes working mufflers and other sound suppression equipment as a means to reduce machinery noise.

[89] USEPA, Protective Noise Levels. 1971

- Signs must be installed around the perimeter of the Planning Area that display the name and phone number of the local contact person residents may call to complain about noise. Upon receipt of a complaint, the contractor must respond immediately by reducing noise to meet Code requirements. In addition, copies of all complaints and subsequent communication between the affected residents and contractors must be forwarded to the City's Community Development Department.

- Construction vehicles will be prohibited from traveling along Ironwood Avenue. This mitigation is designed to minimize the number of residential units that may be exposed to noise and vibration.

- The use of any such equipment which is capable of causing ground shaking is not permitted without prior written approval from the Public Works Director, or designee. If ground shaking vibratory equipment is requested and approved, the Contractor is responsible for making any repairs or replacements to facilities damaged due to nearby soils settling or other impacts of vibrating. The Contractor must install vibratory monitoring equipment to monitor for any settlement/damage caused.

- Construction staging must occur over 200 feet from the nearest residential use. The location of staging and queuing areas will be subject to the approval of the Community Development Department prior to the issuance of any building or grading permit.

Adherence to the aforementioned mitigation will reduce potential impacts to levels that are 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? ● No Impact.*

The Planning Area is not located within two miles of an operational public airport. The March Air Reserve Base is the closest airport to the Planning Area. This airport is located 2.90 miles southwest of the Planning Area. In addition, the Riverside Municipal Airport is located in the City of Riverside approximately 12 miles to the west of the Planning Area. According to the Land Use Compatibility Plan that was prepared for the March Air Reserve Base, the planning area is not located within the 65, 60, or 55 CNEL boundaries and no impacts will occur.[90] Therefore, the development envisioned under the Specific Plan will not be exposed to noise generated by the approach and take-off of aircraft utilizing the aforementioned airports. As a result, no impacts are anticipated.

MITIGATION MEASURES

The following mitigation will be effective in reducing potential impacts in regards to construction noise:

Mitigation Measure No. 22 (Noise Impacts). The Applicant shall ensure that the contractors conduct demolition and construction activities between the hours of 7:00 AM and 6:00 PM on weekdays and 9:00 AM to 12:00 PM on Saturdays, with no construction permitted on Sundays or Federal holidays.

[90] Riverside County Airport Land Use Commission. *Riverside Municipal Airport Land Use Compatibility Plan*. Adopted March 2005.

Mitigation Measure No. 23 (Noise Impacts). The Applicant shall ensure that the contractors use construction equipment that includes working mufflers and other sound suppression equipment as a means to reduce machinery noise.

Mitigation Measure No. 24 (Noise Impacts). Signs must be installed around the perimeter of the Planning Area that display the name and phone number of the local contact person residents may call to complain about noise. Upon receipt of a complaint, the contractor must respond immediately by reducing noise to meet Code requirements. In addition, copies of all complaints and subsequent communication between the affected residents and contractors must be forwarded to the City's Community Development Department.

Mitigation Measure No. 25 (Noise Impacts). The use of any such equipment which is capable of causing ground shaking is not permitted without prior written approval from the Public Works Director, or designee. If ground shaking vibratory equipment is requested and approved, the Contractor is responsible for making any repairs or replacements to facilities damaged due to nearby soils settling or other impacts of vibrating. The Contractor must install vibratory monitoring equipment to monitor for any settlement/damage caused.

Mitigation Measure No. 26 (Noise Impacts). Construction staging must occur over 200 feet from the nearest residential use. The location of staging and queuing areas will be subject to the approval of the Community Development Department prior to the issuance of any building or grading permit.

3.14 POPULATION & HOUSING

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project 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 roads or other infrastructure)?				✖
B. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. Would the project induce substantial population growth in an area, either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)? ● No Impact.

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. The Planning Area is located in the midst of an urbanized area and is surrounded on all sides urban development. The adoption and subsequent implementation of the proposed amendment to the expanded Planning Area 1 will not lead to any impacts not already identified in the certified EIR that was prepared for the City of Moreno Valley General Plan.[91] The Specific Plan Amendment does not envision any residential at this time. As a result, no additional mitigation beyond that which may be required for individual development projects is required and no impacts will result.

B. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? ● No Impact.

There are no housing units located within the Planning Area. Much of the Planning Area is now undergoing development as non-residential land uses. As a result, no impacts will occur.

MITIGATION MEASURES

The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan will not lead to any impacts not already identified in the certified EIR that was prepared for the City of Moreno Valley General Plan. As a result, no additional mitigation beyond that which may be required for individual development projects is required.

[91] P and D Consultants. *Final Environmental Impact Report - City of Moreno Valley General Plan SCH# 200091075*. Report dated July 2006.

3.15 PUBLIC SERVICES

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for: fire protection; police protection; schools; parks; or other public facilities?			✖	

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for: fire protection; police protection; schools; parks; or other public facilities?● Less than Significant Impact.*

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building.

Fire Protection Services

Moreno Valley contracts with the Riverside County Fire Department for fire protection and emergency services. Fire Operations is the largest division within the Moreno Valley Fire Department, consisting of 72 sworn staff and two non-sworn staff as of December 2011. The City of Moreno Valley has seven fire stations. The closest first response station to the Planning Area is the Sunnymead Station located 0.43 mile to the east at 24935 Hemlock Avenue. This station as well as other public facilities including schools, parks, and the City's Police Station are shown in Exhibit 3-9.

The retail, retail/mix of uses, and mix of uses once occupied, will be periodically inspected by the Moreno Valley Fire Department. In addition, the Fire Department will review the development plans to ascertain the nature and extent of any additional measures that may be required to meet any Fire Code requirements. The Fire Department currently reviews all new development plans, and future development will be required to conform to all fire protection and prevention requirements, including, but not limited to, building setbacks, emergency access, fire hydrants, interior sprinklers, et cetera. As individual projects are proposed, the Applicants will be responsible for paying all pertinent Fire Department fees and impact fees. As a result, the potential impacts are considered to be less than significant.

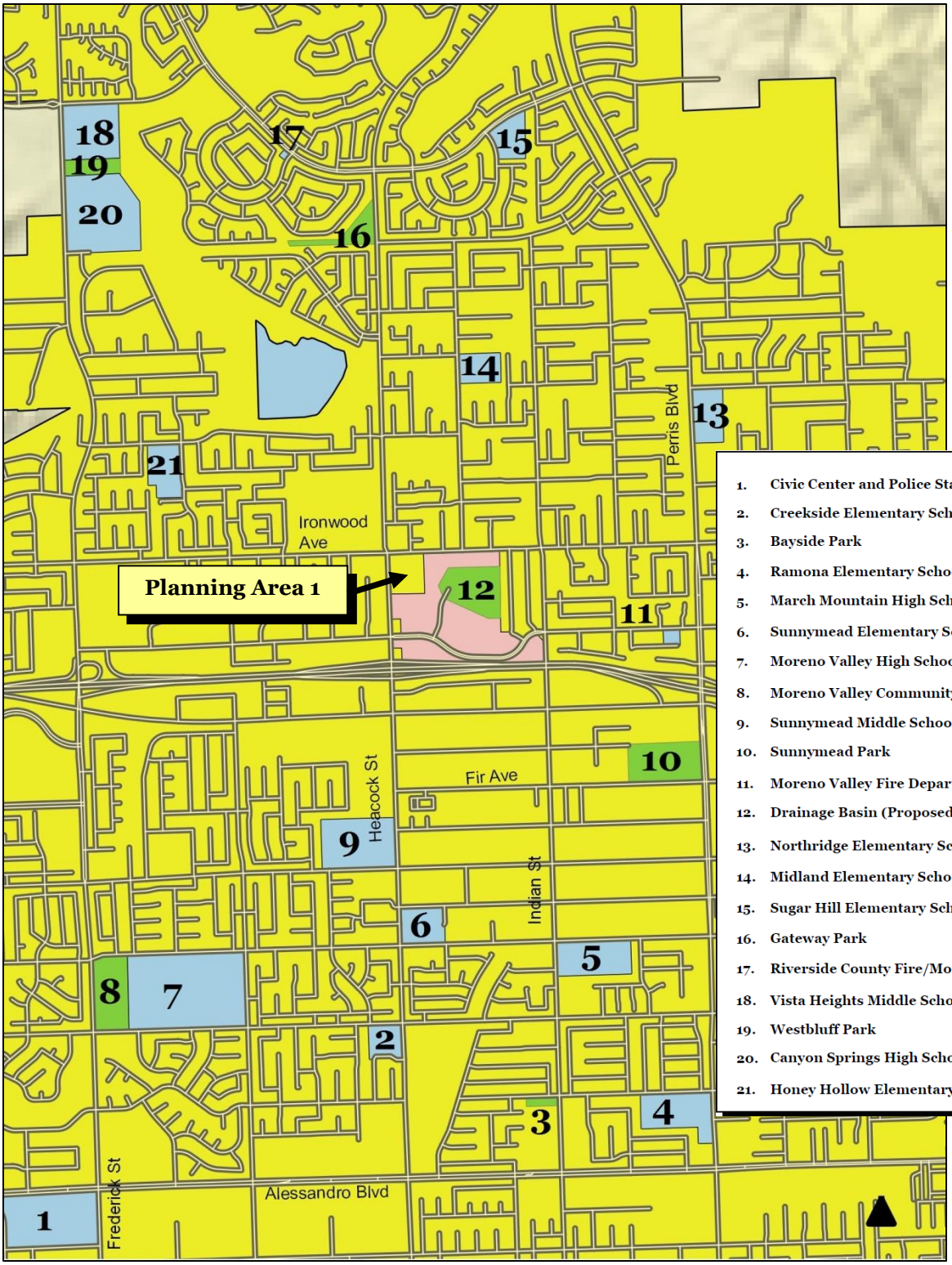


EXHIBIT 3-9
PUBLIC FACILITIES MAP
Source: City of Moreno Valley

Law Enforcement Services

Law enforcement services in Moreno Valley are provided by the Moreno Valley Police Department, a local branch of the Riverside County Sherriff's Department. The Moreno Valley Police Station is located 2.27 miles to the southwest at 22850 Calle San Juan De Dos Lagos. The Moreno Valley Police Department (MVPD) has 162 sworn officers who provide field services in the City. The current officer to population ratio for MVPD is 0.9 officers per 1,000 residents. The average total response time for the period of January 01 to December 31, 2004, was over seven minutes for Priority 1 or emergency calls. As individual development is proposed, the Moreno Valley Police Department will review all development applications to ensure conformity with department requirements. The Moreno Valley General Plan calls for the need to establish defensible space. Defensible space permits the identification of suspicious occurrences or persons, in part by increasing visibility and recognition by neighbors. Where a space is defensible, it is evident to a potential criminal that a crime could be observed and the criminal easily apprehended. Good lighting is a key ingredient of defensible space. The Specific Plan identifies several key policies designed to promote maximum visibility at all hours of the day. These policies are consistent with the General Plan's goal of reducing property crime through the inclusion of defensible space. The following policies outlined in the Specific Plan will be effective in promoting exterior visibility:

- Onsite lighting includes lighting for parking areas, vehicular and pedestrian circulation, building exteriors, service areas, landscaping, security, and special effects.
- Wall-mounted utility lights that cause off-site glare are not permitted. "Shoebox" lights are preferred.
- Parking lot light fixtures shall comply with guidelines provided by owner assigned design review agent.
- Small scale walkway or building entry lighting is encouraged for safety and aesthetic purposes.[92]

The Specific Plan also mandates the inclusion of security cameras. According to the Specific Plan, the location, appearance, and installation of exterior security cameras must be integrated with the architecture. Cameras should be mounted in the following locations:

- Cameras mounted on poles in parking lot (preferred)
- Cameras suspended from soffits (second choice)
- Cameras mounted on building walls with the top of the camera below the top of the parapet (third choice).[93]

Adherence to the policies dictated in the Specific Plan and the recommendations made by the Moreno Valley Police Department will reduce impacts to levels that are less than significant.

[92] National Engineering Consultants. *Amendment to Specific Plan 205*. Draft dated December 29th, 2015.

[93] Ibid.

School Services.

The Planning Area is located within the service boundaries of the Moreno Valley Unified School District and is served by the following schools:

- Midland Elementary School, located 0.52 miles north of the site at 11440 Davis Street;
- Pal Middle School, located 1.41 miles east of the site at 11900 Slawson Avenue; and,
- Canyon Springs High School, located 1.40 miles northwest of the site at 23100 Cougar Canyon Road.

Any additional students indirectly associated with the future development will be accommodated by the aforementioned school district. In order to maintain acceptable student-teacher ratios and class sizes, developers must pay the following developer impact school fees: 60 cents per square foot.[94] As individual projects are proposed, the developers will be required to pay the above-mentioned development impact fees. These fees will generate revenue needed to expand and construct new facilities as well as hire additional staff members. As a result, the following impacts are considered to be less than significant.

Other Governmental Services.

The development envisioned under the Plan is consistent with the growth projections developed for the City by the Southern California Association Governments (SCAG). In addition, any impacts to other governmental services such as libraries, parks, and recreation may be partially offset by the increase in the taxes and an increase in the assessed valuation of the property. As a result, no additional mitigation beyond that which may be required for individual development projects is required. Therefore, the potential impacts are considered to be less than significant.

MITIGATION MEASURES

The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan will not lead to any impacts not already identified in the certified EIR that was prepared for the City of Moreno Valley General Plan. As a result, no additional mitigation beyond that which may be required for individual development projects is required.

[94] Moreno Valley Unified School District. *Developer Impact School Fees*. https://www.mvusd.net/apps/pages/index.jsp?uREC_ID=786774&type=d&pREC_ID=1181763

3.16 RECREATION

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
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?			✖	
B. Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			✖	

ANALYSIS OF ENVIRONMENTAL IMPACTS

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? ● Less than Significant Impact.*

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. The City of Moreno Valley Parks and Community Services Department operates 40 parks and/or joint-use facilities (531.66 maintained acres) and includes a 9-hole executive golf course, 23 multi-use sports fields, 11 tennis courts, nine basketball courts, 28 play apparatus, and three recreation centers. The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan may lead to an incremental increase in the use of City park and recreational facilities. As individual development is proposed, the future Applicants will be required to pay all pertinent impact fees pursuant to Section 3.40.010 of the City's Municipal Code. The payment of in-lieu fees will ease the burden placed onto the City's park facilities. As a result, the potential impacts are expected to be less than significant.

B. *Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?● Less than Significant Impact.*

There are no existing recreational facilities located within the Planning Area. The closest park to the Planning Area is Sunnymead Park, located 0.44 miles to the southeast along the north side of Fir Avenue.[95] The development envisioned under the Specific Plan and within the expanded Planning Area 1 will not affect any recreational facilities directly. As stated previously, future project Applicants will be required to pay all pertinent impact fees. Thus, the potential impacts are considered to be less than significant.

[95] Google Maps. Site accessed August 28, 2017.

MITIGATION MEASURES

The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan will not lead to any impacts not already identified in the certified EIR that was prepared for the City of Moreno Valley General Plan. As a result, no additional mitigation beyond that which may be required for individual development projects is required.

3.17 TRANSPORTATION

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
A. Would the project conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?		✖		
B. Conflict or be inconsistent with CEQA Guidelines §15064.3 subdivision (b)?			✖	
C. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			✖	
D. Would the project result in inadequate emergency access?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. Would the project conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? ● Less than Significant Impact with Mitigation.

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. Weekday daily, AM and PM peak hour trip generation estimates for the proposed project were developed using trip rates provided in the *Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition, 2017*. Summaries of the trip generation rates and resulting vehicle trips for the proposed project are presented in Table 3-5.

Table 3-5
Proposed Project Trip Generation

	LU	Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates									
Business Park	Code 770	TSF	12.44	0.24	0.16	0.40	0.19	0.23	0.42
Project Trip Generation									
Planning Area 1									
Business Park	220.239	TSF	2,740	53	35	88	42	51	93

Note: TSF = Thousand Square Feet

As indicated in Table 3-5, the new development envisioned for the expanded Planning Area 1 will potentially result in 2,740 daily trips, 88 morning (AM) peak hour trips, and 93 evening (PM) peak hour trips.

The proposed project land use was screened to determine the need for a VMT analysis based on the procedure in the *City of Moreno Valley Traffic Impact Analysis Guidelines*, June 2020 (TIA Guidelines). The project is not located in a transit priority area (TPA) or low VMT area. The project type screening analysis shows:

- *Retail Use* – The proposed project provides local serving retail. The increase in retail use as a result of the proposed project is 48,021 square-feet. The TIA Guidelines state that local serving retail less than 50,000 square-feet would have a less than significant VMT impact.

- *Hotel Use* – The proposed project provides a local serving hotel. The TIA Guidelines state that local serving hotels would have a less than significant VMT impact.

The proposed project industrial land use would not meet the screening criteria; therefore, a VMT assessment for non-screened industrial development was conducted. The TIA Guidelines have the following CEQA VMT impact thresholds:

- An industrial project would have a significant VMT impact if, in the Existing Plus Project scenario, its net VMT per employee exceeds the City's VMT per employee.

- If a project is consistent with the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), then the cumulative impacts shall be considered less than significant.

A specific plan was completed for the proposed project and is considered consistent with the RTP/SCS; therefore, the cumulative VMT impacts are considered less than significant. The VMT assessment for the industrial park land use was based on the RIVTAM/RIVCOM model used to complete the January 2018 TIA for the proposed project. The model was last updated on December 12, 2017 and runs on *TransCAD 5.0 r2 Build 1640*. Table 3-6 provides a summary of the model inputs and outputs as well as the resulting VMT.

Table 3-6
Comparison of Proposed Project and City of Moreno Valley Employees and VMT

	Employees	VMT	VMT per Employee
Proposed Project (Industrial Park)	620[1]	19,282	31.1
City of Moreno Valley	29,064	4,494,865	154.7

1. Employees were estimated using the ratio of trips per square-feet and trips per employees from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition.

Table 3-6 shows that the proposed project 31.1 VMT per employee is less than the City's 154.7 VMT per employee. The VMT analysis presents shows that the proposed project would have a less than significant VMT impact. No additional mitigation would be required beyond those proposed as part of the January 2018 TIA.

B. Conflict or be inconsistent with CEQA Guidelines §15064.3 subdivision (b)? ● Less than Significant Impact.

The Congestion Management Program (CMP) was first established in 1990 under Proposition 111. Proposition 111 established a process for each metropolitan county in California to designate a Congestion Management Agency (CMA) that would be responsible for development and implementation of the CMP within county boundaries. The Riverside County Transportation Commission (RCTC) was designated as the CMA in 1990, and therefore, prepares the CMP updates in consultation with the Technical Advisory Committee (TAC), which consists of local agencies, the County of Riverside, transit agencies, and sub regional agencies.

The intent of the CMP is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality. Counties within California have developed CMPs with varying methods and strategies to meet the intent of the CMP legislation. The Riverside County CMP was significantly modified in 1997 to focus on federal Congestion Management System (CMS) requirements as well as incorporate elements of the State CMP requirements. The 1997 CMP also focused on development of an Enhanced Traffic Monitoring System in which real-time traffic count data can be accessed by RCTC to evaluate the condition of the CMS, as well as meet other monitoring requirements at the state and federal levels. This monitoring effort was completed in 2004, which consisted of installing Smart Call Boxes (traffic counters in Call Box equipment) and traffic counters at Caltrans' Traffic Management Center (TMC) sites along the state highway system. Monitoring of the CMP system on local arterials will continue to occur through the Coachella Valley Association of Governments' (CVAG) monitoring program and through local agency monitoring efforts in Western Riverside County. RCTC's adopted minimum Level of Service (LOS) threshold is LOS "E". Therefore, when a CMP street or highway segment falls to "F", a deficiency plan must be required. Preparation of a deficiency plan will be the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency will also be required to coordinate with the development of the plan. The plan must contain mitigation measures, including consideration of Transportation Demand Management (TDM) strategies and transit alternatives, and a schedule for mitigating the deficiency.[96] A list of CMP arterials and highways is presented in Table 2-1 of the 2011 Riverside County Congestion Management Program.[97] According to the Traffic Study that was prepared for the entire Specific Plan project, the future development would not affect any CMP monitored arterial or highway to the extent that would require the completion of a deficiency plan.[98] As a result, the potential impacts will be less than significant.

C. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?● No Impact.

The development contemplated under the Moreno Valley Festival Specific Plan for the expanded Planning Area 1 will not result in a change or disturbance the traffic geometrics of the surrounding roadways. The mitigation provided for the original Specific Plan will improve intersection performance and safety. This mitigation will also improve site access. Trucks travelling to and from the project site will not travel down

[96] Riverside County Transportation Commission. *2011 Riverside County Congestion Management Program*. Report dated December 14, 2011.

[97] Ibid.

[98] Transpogroup. *Draft Traffic Impact Analysis – Festival at Moreno Valley*. Report dated December 2017.

local residential streets. All trucks will be required to use existing truck routes. The Specific Plan Amendment contains minimum distance requirements for street trees and landscaping. These distance requirements will ensure that no trees obstruct the line-of-sight between a driveway and the adjacent roadways. Trees will be planted on each side of the street within the 12 foot parkway. Examples of the requirements include the following:

- All trees shall be planted at least 10 feet from sidewalks and driveways; and,

- A minimum of 25 feet shall be allowed from any street intersection or street lighting standard, and shall defer to line of sight requirements for distance from intersection per Public Works Standard No. 125 and 126). (Ord. 786 § 2, 2009).

Adherence to the design guidelines contained in the Specific Plan Amendment will reduce potential impacts to levels that are less than significant.

D. Would the project result in inadequate emergency access? ● No Impact.

The future development supported by the Moreno Valley Festival Specific Plan would comply with applicable regulations established by the Riverside County Fire Department and the Moreno Valley Division of Building and Safety, in addition to the standard design requirements of the Uniform Building Code. The Fire Department will review any development plan including all buildings, fences, drive gates, or other features that might affect Fire Department access. This review process, along with the proponent's compliance with the applicable regulations and standards, would ensure that adequate emergency access would be provided. Therefore, no impacts will occur.

MITIGATION MEASURES

The traffic report prepared for the original Specific Plan indicated that the following mitigation measures will be required:

- For the Heacock Street and Westbound SR-60 ramps, the Applicant must optimize the cycle length (90 second cycle length), splits, and offsets and restripe the defacto right-turn lane to a southbound right-turn lane with 50-foot storage and a southbound through lane. This mitigation will improve the LOS to C;

- The Applicant must optimize the cycle length (60 second cycle length), splits, and offsets for the intersection of Davis Street and Ironwood Avenue. This mitigation will yield a LOS B;

- The Applicant must optimize the cycle length (60 second cycle length), splits, and offsets for the intersection of Indian Street and Sunnymead Boulevard. This mitigation will yield a LOS C.

- For the Heacock Street/Ironwood Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 150 feet of storage to accommodate 95th percentile queues;

- For the Heacock Street/Ironwood Avenue intersection, the Applicant must restripe the westbound left turn lanes to provide 190 feet of storage to accommodate 95th percentile queues;

- For the Heacock Street/Ironwood Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 210 feet of storage to accommodate 95th percentile queues;
- For the Heacock Street/Hemlock Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 105 feet of storage to accommodate 95th percentile queues;
- For the Heacock Street/Hemlock Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 170 feet of storage to accommodate 95th percentile queues;
- For the Heacock Street/Hemlock Avenue intersection, the Applicant must restripe the southbound left turn lanes to provide 150 feet of storage to accommodate 95th percentile queues;
- For the Heacock Street/State Route (SR 60) eastbound ramps, the Applicant must restripe 50 feet of the two-way left turn lane north of the Heacock/ SR-60 westbound ramps intersection as a "Freeway Only" lane;
- For the Davis Street/Ironwood Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 220 feet of storage to accommodate 95th percentile queues;
- For the Davis Street/Ironwood Avenue intersection, the Applicant must restripe the southbound left turn lanes to provide 145 of feet storage to accommodate 95th percentile queues;
- For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 145 feet of storage to accommodate 95th percentile queues;
- For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the westbound left turn lanes to provide 140 feet of storage to accommodate 95th percentile queues;
- For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 165 feet of storage to accommodate 95th percentile queues;
- For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the southbound left turn lanes to provide 155 feet of storage to accommodate 95th percentile queues;
- For the Indian Street/Hemlock Avenue intersection, the Applicant must restripe the westbound left turn lanes to provide 110 feet of storage to accommodate 95th percentile queues;
- For the Indian Street/Hemlock Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 180 feet of storage to accommodate 95th percentile queues;
- For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the eastbound left turn lanes to provide 140 feet of storage to accommodate 95th percentile queues. This might require replacing the concrete island with stripping;
- For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the westbound left turn lanes to provide 115 feet of storage to accommodate 95th percentile queues;

- For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the northbound left turn lanes to provide 200 feet of storage to accommodate 95th percentile queues; and,

- For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the southbound left turn lanes to provide 125 feet of storage to accommodate 95th percentile queues.

3.18 TRIBAL CULTURAL RESOURCES

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project 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: 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 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 Resource Code Section 5024.1 In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe5020.1(k)?			✖	

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. *Would the project 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: 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 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 Resource Code Section 5024.1 In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe5020.1(k)?● Less than Significant Impact.*

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. A Tribal Resource is defined in Public Resources Code section 21074 and includes the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following: included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

- 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 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.

- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "non-unique 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).

The mitigation provided in Subsection 3.5.2.B was drafted by the City of Moreno Valley in coordination with the Pechanga and the Soboba. This mitigation was ultimately selected because it is comprehensive and calls for an archaeologist to monitor all mass grading and trenching activities. Adherence to the aforementioned mitigation will minimize the potential impacts to levels that are less than significant.

Two of the responses to the AB-52 consultation, Morongo Band of Mission Indians and the Rincon Band of Luiseño Indians requested that a copy of the Cultural Resources Report that included the results of a records search at the Riverside County Archaeological Information Center (AIC) at the University of California, Riverside. A comprehensive survey of the entire City was undertaken as part of the Citywide General Plan Update which included the preparation of an Environmental Impact Report and Master Environmental Assessment. The General Plan EIR included a citywide inventory of both historic and archaeological resources. The proposed project site was not identified as being either historically or culturally significant and the California Historic Resources Inventory Search (CHRIS) for the City. The citywide inventory is included in Appendix E. The mitigation identified in Section 3.5.2.B will mitigate any potentially significant impacts related to the disturbance of soils and the potential impact on cultural resources.

As part of the AB-52 consultation with the tribal representatives, review of the project was completed. AB-52 consultation was mailed out to seven individuals identified by the NAHC. The project team has received five responses from various tribes including the San Manuel Band of Mission Indians; the Morongo Band of Mission Indians; the Soboba Band of Luiseno Indians; the Pechanga Band of Luiseno Indians; and the Rincon Band of Luiseño Indians. The tribes each requested consultation and separate mitigation measures. The mitigation provided in Subsection 3.5.2.B was drafted by the City of Moreno Valley in coordination with the Pechanga and the Soboba. This mitigation was ultimately selected because it is comprehensive and calls for an archaeologist to monitor all mass grading and trenching activities. A summary of the AB-52 responses is provided in Appendix E. Adherence to the aforementioned mitigation will minimize the potential impacts to levels that are less than significant.

MITIGATION MEASURES

According to the City's General Plan EIR, at least 190 prehistoric archaeological locations have been reported within the City of Moreno Valley. There is a possibility that mass grading and trenching operations could unearth previously unidentified tribal resources. The possibility of encountering tribal resources was taken into account during the consultation with the Pechanga and the Soboba. As a result, mitigation was provided in Subsection 3.5 to minimize the risk of disturbance to tribal cultural resources.

3.19 UTILITIES

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			✖	
B. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			✖	
C. Would the project 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?			✖	
D. Would the project 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?			✖	
E. Would the project comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? ● Less than Significant Impact.

This current amendment would expand the Specific Plan Area to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This added area will be referred to as the expanded *Planning Area 1*. This Planning Area 1 is currently undeveloped though it has been rough graded and disked for maintenance and fire mitigation. The Specific Plan is being amended to allow for the development of a 220,390 square foot light industrial building. The Moreno Valley Festival Specific Plan area is within the Middle and Lower San Jacinto River watershed which is part of the larger Santa Ana River watershed. The stormwater runoff within the Sunnymead Drainage Area generally flows in a southeasterly direction and the subarea boundary ends at the Perris Valley Storm Drain. The Riverside County Flood Control and Water Conservation District (RCFCWCD) is the responsible agency for the project area's regional flood control system. The Planning Area flanks an existing City-owned detention basin located in the eastern portion of the Planning Area. An earthen channel extends southeast which collects stormwater runoff north of Ironwood Avenue and conveys this water through the corner of Ironwood Avenue and Heacock Boulevard before ultimately discharging to the aforementioned detention basin. There are two 102 inch Storm Drain Lines that extend along Ironwood Avenue and south along Davis Street which also discharge to the detention basin. The detention basin outlet is conveyed by a 12 foot by 4.5 foot Reinforced Concrete Box which connects to Perris Storm Drain and discharges into Canyon Lake. The watershed

drainage continues southwest to Lake Elsinore downstream and eventually flows northwest to the Santa Ana River.[99]

The implementation of the Specific Plan will result in an increase in the amount of impervious surfaces within the Planning Area. In the absence of mitigation, the impervious surfaces (internal driveways, parking areas, etc.) that would be constructed as part of the site's development could lead to the presence of debris, leaves, soils, oil/grease, and other pollutants within the vicinity. Thus, future development proposals must include Water Quality Management Plan (WQMP). The WQMP shall include measures designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention, and/or rainfall harvest and use. The project applicant shall prepare a WQMP which implements set standards and practices for stormwater pollution mitigation and provides documentation to demonstrate compliance with the municipal NPDES permit on the plans and permit application submitted to the City. Additional storm drain improvements will need to be added for the project. A system of underground drainage lines and detention basins will convey the storm water runoff and manage the increased flow due to the proposed development. Site specific projects shall be consistent with this concept plan. The construction of new storm drains and stormwater BMPs would not cause any adverse impacts to the environment that have not already been analyzed in this document. Since the inclusion of site specific BMPs is mandatory, these BMPs are included in the overall analysis of future development. As a result, the potential impacts are considered to be less than significant.

B. *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? ● Less than Significant Impact.*

Eastern Municipal Water District (EMWD) provides water service to the Moreno Valley Festival, receiving its water from Metropolitan Water District (MWD) and local groundwater wells. Future development undertaken within the Planning Area will have adequate water supply from Eastern Municipal Water District. There is an existing 16 inch water main along Hemlock Avenue, a 16 inch water main along Davis Street, and a 12 inch water main passes through current Festival Development.[100] The implementation of the Specific Plan and any subsequent development that may result will not require the construction of new water treatment facilities or the expansion of existing facilities. The amount of water that will be consumed by the development envisioned under the Specific Plan will be adequately handled by the EMWD. Furthermore, there is adequate treatment capacity available at the Moreno Valley Regional Water Reclamation Facility (MVRWRF).

The MVRWRF presently handles 10.6 million gallons per day. The Facility has a current capacity of 16 million gallons per day though with programmed upgrades it will have an ultimate capacity of 41 million gallons per day.[101] This MVRWRF also has the ability to divert about two million gallons per day to the Perris facility. Therefore, the implementation of the Specific Plan and the development of the land uses

[99] National Engineering Consultants. *Amendment to Specific Plan 205.* Draft dated December 29th, 2015.

[100] Ibid.

[101] Eastern Municipal Water District. *Moreno Valley Regional Water Reclamation Facility*. https://www.emwd.org/home/showdocument?id=1423

envisioned under the Specific Plan will not require the construction of new wastewater treatment facilities or the expansion of existing facilities.

As indicated previously, the EMWD provides potable water, recycled water, and wastewater services to an area of approximately 555 square miles in western Riverside County. EMWD is both a retail and wholesale agency, serving a retail population of 546,146 people and a wholesale population of 215,075 people. The majority of EMWD's supplies are imported water purchased through MWD from the State Water Project (SWP) and the Colorado River Aqueduct (CRA). Imported water is delivered to EMWD either as potable water treated by MWD, or as raw water that EMWD can either treat at one of its two local filtration plants or deliver as raw water for non-potable uses.[102]

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 desalination plants that convert brackish groundwater from the West San Jacinto Basin into potable water.[103] Table 3-7, shows the projected water demand for the future development envisioned under the Specific Plan. According to the Table, future development for the expanded Planning Area 1 is anticipated to consume approximately 30,841 gallons of water on a daily basis.

Table 3-7
Water Consumption (gals/day)

Use	Unit	Factor	Generation
Business Park	220,290 sq.ft.	0.14 gal/day/sq.ft	30,841 gals/day
Total			**30,841 gals/day**

Source: Blodgett Baylosis Environmental Planning.

According to the EMWD's 2015 Urban Water Management Plan which is the most recent, demand for water will reach 197,901 acre-feet per year by the year 2020. The EMWD is estimated to have a projected supply of 197,901 acre-feet per year of water. The projected supply of water will be just enough to meet the projected demand. As a result, all future development proposals must include water efficient appliances and fixtures, drought tolerant landscaping, and the use of drip irrigation. These methods of water conservation were reiterated as mitigation in Section 3.7. Thus, the potential impacts are considered to be less than significant.

C. *Would the project 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? ● Less than Significant Impact.*

Wastewater service in Moreno Valley is provided by the Eastern Municipal Water District (EMWD), which serves most of the City and surrounding areas, and the Edgemont Community Services District, which provides service to a small area in southwestern Moreno Valley. The EMWD operates over 356 miles of sewer mains (12 inches and above) and six sewage lift stations to provide wastewater collection services within the City. All wastewater is collected and conveyed to the Moreno Valley Regional Water Reclamation Facility (MVRWRF) located in the southwestern portion of the City. The MVRWRF presently handles 10.6

[102] RMC Water and Environment. *Eastern Municipal Water District 2015 Urban Water Management Plan*. Plan dated June 2016.

[103] Ibid.

million gallons per day. The Facility has a current capacity of 16 million gallons per day though with programmed upgrades it will have an ultimate capacity of 41 million gallons per day.[104] This MVRWRF also has the ability to divert about two million gallons per day to the Perris facility. The primary trunk sewer line serving the Moreno Valley Festival area is located in Heacock Street. This trunk sewer line continues in a southerly direction in Heacock Street and the east along Mariposa Avenue conveying wastewater to the MVRWRF. As individual projects are proposed, review of the local sewer lines' capacity will be undertaken. A preliminary analysis of the amount of sewage that will be generated by the development envisioned under the Specific Plan is included in Table 3-8. According to the Table, future development is anticipated to result in the generation of 24,232 gallons of wastewater per day.

Table 3-8
Wastewater (Effluent) Generation (gals/day)

Use	Unit	Factor	Generation
Business Park	220,290 sq.ft.	0.11 gal/day/sq.ft	24,232 gals/day
Total			**24,232 gals/day**

Source: Blodgett Baylosis Environmental Planning.

As indicated previously, a review of the local sewer lines will be completed as individual projects are proposed. As indicated previously, the project will result in a generation of 24,232 gallons of wastewater per day. The proposed development will connect with an existing sewer line in Davis Street and Hemlock Avenue. The future wastewater generation will be within the treatment capacity of the Moreno Valley Regional Water Reclamation Facility. In addition, this projected effluent generation does not take into account the water conserving plumbing fixtures that will be installed. No new treatment facilities or expanded entitlements will be required. As a result, the impacts are anticipated to be less than significant.

D. Would the project 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? ● Less than Significant Impact.

According to the City's General Plan, solid waste generated within the planning area is primarily deposited in the Riverside County Waste Management Department's (RCWMD) Badlands Landfill, located approximately 6.43 miles northeast of the Planning Area. However, the City's trash hauler can also use other County landfills in the area such as the Lamb Canyon Landfill and El Sobrante Landfill. Waste Management of Inland Empire currently provides waste pickup in Moreno Valley. The Badlands Landfill presently accepts up to 4,800 tons per day of solid waste. This landfill has a remaining capacity of 15,749,799 cubic yards of waste.[105] The El Sobrante Landfill is a Class-III landfill that currently accepts up to 70,000 tons per week. This landfill has a remaining capacity of 209 million cubic yards.[106] Table 3-9 shows the solid waste generation anticipated under the Specific Plan Amendment for the expanded Planning Area 1.

[104] Eastern Municipal Water District. *Moreno Valley Regional Water Reclamation Facility*. https://www.emwd.org/home/showdocument?id=1423

[105] CalRecycle. *Facility/Site Summary Details: Bandlands Sanitary Landfill*. http://www.calrecycle.ca.gov/SWFacilities/Directory/33-AA-0006/Detail/

[106] Waste Management. *El Sobrante Landfill*. https://www.wmsolutions.com/pdf/factsheet/El_Sobrante_Landfill.pdf

Table 3-9
Solid Waste Generation (gals/day)

Use	Unit	Factor	Generation
Business Park	220,290 sq.ft.	6 lbs/day/sq.ft	1,322 lbs./day
Total			**1,322 Lbs./day**

Source: Blodgett Baylosis Environmental Planning.

As indicated in the Table, future development envisioned under the Plan is anticipated to result in the generation of approximately 1,322 pounds of solid waste per day. The potential impacts are anticipated to be less than significant since the goals, policies, and implementation programs contained within the Plan will also further mitigate the potential impacts from future development within the Planning Area.

E. Would the project comply with Federal, State, and local statutes and regulations related to solid waste? ● No Impact.

The future development supported by the Moreno Valley Festival Specific Plan, like all other development in Moreno Valley, will be required to adhere to city and county ordinances with respect to waste reduction and recycling. As a result, no impacts related to State and local statutes governing solid waste are anticipated.

MITIGATION MEASURES

The adoption and subsequent implementation of the Moreno Valley Festival Specific Plan Amendment for the expanded Planning Area 1 will not lead to any impacts not already identified in the certified EIR that was prepared for the City of Moreno Valley General Plan. In addition, the goals, policies, and implementation programs contained within the Specific Plan will also further mitigate the potential impacts from new development contemplated as part of the implementation of the General Plan and the Moreno Valley Festival Specific Plan.[107] As a result, no additional mitigation beyond that which may be required for individual development projects is required.

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[107] P and D Consultants. *Final Environmental Impact Report - City of Moreno Valley General Plan SCH# 200091075*. Report dated July 2006.

3.20 WILDFIRE

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
A. If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?				✖
B. If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project 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?				✖
C. If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project 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?				✖
D. If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project 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?				✖

ANALYSIS OF ENVIRONMENTAL IMPACTS

A. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan? ● No Impact.*

The project site is located in the midst of an urbanizing area. Both improved and unimproved streets serve the project site and the surrounding area. Furthermore, the proposed project would not involve the closure or alteration of any existing evacuation routes that would be important in the event of a wildfire. As a result, no impacts will occur. At no time during construction will adjacent streets be completely closed to traffic. All construction staging must occur on-site. Furthermore, the proposed project would not involve the closure or alteration of any existing evacuation routes that would be used in the event of a wildfire. As a result, no impacts will occur.

B. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones would the project 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? ● No Impact.*

The proposed project site may be exposed to particulate emissions generated by wildland fires in the mountains (the site located approximately 20 miles north of the San Gabriel and San Bernardino Mountains). However, the potential impacts would not be exclusive to the project site since criteria pollutant emissions from wildland fires may affect the entire City as well as the surrounding cities and

unincorporated county areas. As a result, no impacts will occur.

C. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project 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? ● No Impact.*

The project will include the extension of new utility lines such as gas lines, water lines, etc. on to the site only. These utilities lines will be located below ground surface. As a result, no impacts will occur.

D. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project 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? ● No Impact.*

There is no risk from wildfire within the project site or the surrounding area given the project site's distance from any area that may be subject to a wildfire event. Therefore, the project will not expose future employees or guests to flooding or landslides facilitated by runoff flowing down barren and charred slopes and no impacts will occur.

MITIGATION MEASURES

The analysis of wildfires impacts indicated that less than significant impacts would result from the proposed project's approval and subsequent implementation. As a result, no mitigation is required.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

Environmental Issue Areas Examined	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
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?				✖
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 projects, and the effects of probable future projects)?				✖
C. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				✖

The following findings can be made regarding the Mandatory Findings of Significance set forth in Section 15065 of the CEQA Guidelines based on the results of this environmental assessment:

- The proposed project *will not* 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. As indicated in Section 3.1 through 3.20, the proposed project will not result in any significant unmitigable environmental impacts.

- The proposed project *will not* have impacts that are individually limited, but cumulatively considerable. The proposed project is relatively small and the attendant environmental impacts will not lead to a cumulatively significant impact on any of the issues analyzed herein.

- The proposed project *will not* have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. As indicated in Section 3.1 through 3.20, the proposed project will not result in any significant unmitigable environmental impacts.

SECTION 4 CONCLUSIONS

4.1 FINDINGS

The Initial Study determined that the proposed project is not expected to have significant adverse environmental impacts. The following findings can be made regarding the Mandatory Findings of Significance set forth in Section 15065 of the CEQA Guidelines based on the results of this Initial Study:

- The proposed project *will not* 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 an endangered, rare or threatened species or eliminate important examples of the major periods of California history or prehistory.
- The proposed project *will not* have impacts that are individually limited, but cumulatively considerable.
- The proposed project *will not* have environmental effects which will cause substantially adverse effects on human beings, either directly or indirectly.

4.2 MITIGATION MONITORING

In addition, pursuant to Section 21081(a) of the Public Resources Code, findings must be adopted by the decision-maker coincidental to the approval of a Negative Declaration. These findings shall be incorporated as part of the decision-maker's findings of fact, in response to AB-3180 and in compliance with the requirements of the Public Resources Code. In accordance with the requirements of Section 21081(a) and 21081.6 of the Public Resources Code, the City of Moreno Valley can make the following additional findings: a mitigation monitoring and reporting program will be required.

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SECTION 5 REFERENCES

5.1 PREPARERS

Blodgett Baylosis Environmental Planning
16388 Colima Road, Suite 206J
Hacienda Heights, CA 91745
(626) 336-0033

Marc Blodgett, Project Principal
Jessica Golden, Project Manager

5.2 REFERENCES

Bugliarello, et. al., *The Impact of Noise Pollution,* Chapter 127, 1976.

California Department of Conservation, Division of Land Resource Protection, Farmland Mapping, and Monitoring Program. *California Important Farmland Finder*.

California Department of Fish and Wildlife, *Natural Diversity Database*.

California Department of Parks and Recreation, *California Historical Landmarks*.

California Division of Mines and Geology, *Seismic Hazards Mapping Program,* 2012.

California Office of Planning and Research, *California Environmental Quality Act and the CEQA Guidelines*, as amended 2018.

Google Earth.

Moreno Valley, City of, *Municipal Code,* Chapter 17.70, Signs.

Southern California Association of Governments, *Regional Transportation Plan/Sustainable Communities Strategy 2016-2040,* April 2016.

United States Department of Agriculture. *Web Soil Survey*.

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APPENDIX A – AIR QUALITY WORKSHEETS

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Koala Road Greenhouses and Commercial Center

Mojave Desert AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	463.00	1000sqft	10.63	463,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	30
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - N/A

Construction Off-road Equipment Mitigation - N/A

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Koala Road Greenhouses and Commercial Center - Mojave Desert AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstructionPhase	NumDays	20.00	13.00
tblConstructionPhase	NumDays	300.00	88.00
tblConstructionPhase	NumDays	30.00	21.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	PhaseEndDate	7/14/2022	8/5/2021
tblConstructionPhase	PhaseEndDate	5/19/2022	7/3/2021
tblConstructionPhase	PhaseEndDate	3/25/2021	3/2/2021
tblConstructionPhase	PhaseEndDate	6/16/2022	7/19/2021
tblConstructionPhase	PhaseEndDate	2/11/2021	2/1/2021
tblConstructionPhase	PhaseStartDate	6/17/2022	7/20/2021
tblConstructionPhase	PhaseStartDate	3/26/2021	3/3/2021
tblConstructionPhase	PhaseStartDate	2/12/2021	2/2/2021
tblConstructionPhase	PhaseStartDate	5/20/2022	7/4/2021
tblConstructionPhase	PhaseStartDate	1/29/2021	1/1/2021
tblGrading	AcresOfGrading	52.50	75.00

2.0 Emissions Summary

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	5.5900	2.1234	1.7153	4.0500e-003	0.3990	0.0908	0.4898	0.1746	0.0845	0.2591	0.0000	362.1755	362.1755	0.0686	0.0000	363.8915
Maximum	**5.5900**	**2.1234**	**1.7153**	**4.0500e-003**	**0.3990**	**0.0908**	**0.4898**	**0.1746**	**0.0845**	**0.2591**	**0.0000**	**362.1755**	**362.1755**	**0.0686**	**0.0000**	**363.8915**

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	5.5900	2.1234	1.7153	4.0500e-003	0.2330	0.0908	0.3238	0.0931	0.0845	0.1775	0.0000	362.1753	362.1753	0.0686	0.0000	363.8912
Maximum	**5.5900**	**2.1234**	**1.7153**	**4.0500e-003**	**0.2330**	**0.0908**	**0.3238**	**0.0931**	**0.0845**	**0.1775**	**0.0000**	**362.1753**	**362.1753**	**0.0686**	**0.0000**	**363.8912**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	41.60	0.00	33.88	46.70	0.00	31.48	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	1-1-2021	3-31-2021	1.3236	1.3236
2	4-1-2021	6-30-2021	0.9133	0.9133
3	7-1-2021	9-30-2021	5.1353	5.1353
		Highest	5.1353	5.1353

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	2.3451	4.0000e-005	4.2600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.2700e-003	8.2700e-003	2.0000e-005	0.0000	8.8200e-003
Energy	0.0811	0.7374	0.6194	4.4200e-003		0.0560	0.0560		0.0560	0.0560	0.0000	2,300.0903	2,300.0903	0.0772	0.0275	2,310.2174
Mobile	0.4989	4.4854	5.4152	0.0237	1.5661	0.0145	1.5806	0.4198	0.0136	0.4334	0.0000	2,198.7607	2,198.7607	0.1649	0.0000	2,202.8821
Waste						0.0000	0.0000		0.0000	0.0000	116.5412	0.0000	116.5412	6.8874	0.0000	288.7258
Water						0.0000	0.0000		0.0000	0.0000	33.9680	444.2036	478.1716	3.5072	0.0862	591.5306
Total	**2.9251**	**5.2228**	**6.0388**	**0.0281**	**1.5661**	**0.0706**	**1.6367**	**0.4198**	**0.0697**	**0.4894**	**150.5091**	**4,943.0628**	**5,093.5719**	**10.6367**	**0.1137**	**5,393.3647**

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	2.2100	4.0000e-005	4.2600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.2700e-003	8.2700e-003	2.0000e-005	0.0000	8.8200e-003
Energy	0.0811	0.7374	0.6194	4.4200e-003		0.0560	0.0560		0.0560	0.0560	0.0000	2,300.0903	2,300.0903	0.0772	0.0275	2,310.2174
Mobile	0.4989	4.4854	5.4152	0.0237	1.5661	0.0145	1.5806	0.4198	0.0136	0.4334	0.0000	2,198.7607	2,198.7607	0.1649	0.0000	2,202.8821
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	33.9680	444.2036	478.1716	3.5072	0.0862	591.5306
Total	**2.7899**	**5.2228**	**6.0388**	**0.0281**	**1.5661**	**0.0706**	**1.6367**	**0.4198**	**0.0697**	**0.4894**	**33.9680**	**4,943.0628**	**4,977.0308**	**3.7493**	**0.1137**	**5,104.6389**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	4.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.43	0.00	2.29	64.75	0.00	5.35

3.0 Construction Detail

Construction Phase

Koala Road Greenhouses and Commercial Center - Mojave Desert AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	2/1/2021	5	22	
2	Grading	Grading	2/2/2021	3/2/2021	5	21	
3	Building Construction	Building Construction	3/3/2021	7/3/2021	5	88	
4	Paving	Paving	7/4/2021	7/19/2021	5	11	
5	Architectural Coating	Architectural Coating	7/20/2021	8/5/2021	5	13	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 694,500; Non-Residential Outdoor: 231,500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Koala Road Greenhouses and Commercial Center - Mojave Desert AQMD Air District, Annual

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

Trips and VMT

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	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	194.00	76.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	39.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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					0.1987	0.0000	0.1987	0.1092	0.0000	0.1092	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0428	0.4455	0.2327	4.2000e-004		0.0225	0.0225		0.0207	0.0207	0.0000	36.7793	36.7793	0.0119	0.0000	37.0767
Total	**0.0428**	**0.4455**	**0.2327**	**4.2000e-004**	**0.1987**	**0.0225**	**0.2212**	**0.1092**	**0.0207**	**0.1299**	**0.0000**	**36.7793**	**36.7793**	**0.0119**	**0.0000**	**37.0767**

3.2 Site Preparation - 2021

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	7.7000e-004	6.0000e-004	5.5900e-003	1.0000e-005	1.6000e-003	1.0000e-005	1.6100e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3076	1.3076	4.0000e-005	0.0000	1.3086
Total	**7.7000e-004**	**6.0000e-004**	**5.5900e-003**	**1.0000e-005**	**1.6000e-003**	**1.0000e-005**	**1.6100e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3076**	**1.3076**	**4.0000e-005**	**0.0000**	**1.3086**

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					0.0894	0.0000	0.0894	0.0492	0.0000	0.0492	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0428	0.4455	0.2327	4.2000e-004		0.0225	0.0225		0.0207	0.0207	0.0000	36.7792	36.7792	0.0119	0.0000	37.0766
Total	**0.0428**	**0.4455**	**0.2327**	**4.2000e-004**	**0.0894**	**0.0225**	**0.1119**	**0.0492**	**0.0207**	**0.0699**	**0.0000**	**36.7792**	**36.7792**	**0.0119**	**0.0000**	**37.0766**

3.2 Site Preparation - 2021

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	7.7000e-004	6.0000e-004	5.5900e-003	1.0000e-005	1.6000e-003	1.0000e-005	1.6100e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3076	1.3076	4.0000e-005	0.0000	1.3086
Total	**7.7000e-004**	**6.0000e-004**	**5.5900e-003**	**1.0000e-005**	**1.6000e-003**	**1.0000e-005**	**1.6100e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3076**	**1.3076**	**4.0000e-005**	**0.0000**	**1.3086**

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					0.1030	0.0000	0.1030	0.0391	0.0000	0.0391	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0440	0.4872	0.3242	6.5000e-004		0.0209	0.0209		0.0192	0.0192	0.0000	57.2197	57.2197	0.0185	0.0000	57.6824
Total	**0.0440**	**0.4872**	**0.3242**	**6.5000e-004**	**0.1030**	**0.0209**	**0.1239**	**0.0391**	**0.0192**	**0.0582**	**0.0000**	**57.2197**	**57.2197**	**0.0185**	**0.0000**	**57.6824**

3.3 Grading - 2021

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	8.2000e-004	6.4000e-004	5.9300e-003	2.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.3869	1.3869	4.0000e-005	0.0000	1.3880
Total	**8.2000e-004**	**6.4000e-004**	**5.9300e-003**	**2.0000e-005**	**1.6900e-003**	**1.0000e-005**	**1.7000e-003**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**1.3869**	**1.3869**	**4.0000e-005**	**0.0000**	**1.3880**

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					0.0464	0.0000	0.0464	0.0176	0.0000	0.0176	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0440	0.4872	0.3242	6.5000e-004		0.0209	0.0209		0.0192	0.0192	0.0000	57.2197	57.2197	0.0185	0.0000	57.6823
Total	**0.0440**	**0.4872**	**0.3242**	**6.5000e-004**	**0.0464**	**0.0209**	**0.0672**	**0.0176**	**0.0192**	**0.0368**	**0.0000**	**57.2197**	**57.2197**	**0.0185**	**0.0000**	**57.6823**

3.3 Grading - 2021

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	8.2000e-004	6.4000e-004	5.9300e-003	2.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.3869	1.3869	4.0000e-005	0.0000	1.3880
Total	**8.2000e-004**	**6.4000e-004**	**5.9300e-003**	**2.0000e-005**	**1.6900e-003**	**1.0000e-005**	**1.7000e-003**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**1.3869**	**1.3869**	**4.0000e-005**	**0.0000**	**1.3880**

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	0.0836	0.7670	0.7293	1.1800e-003		0.0422	0.0422		0.0397	0.0397	0.0000	101.9204	101.9204	0.0246	0.0000	102.5351
Total	**0.0836**	**0.7670**	**0.7293**	**1.1800e-003**		**0.0422**	**0.0422**		**0.0397**	**0.0397**	**0.0000**	**101.9204**	**101.9204**	**0.0246**	**0.0000**	**102.5351**

3.4 Building Construction - 2021

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	9.9200e-003	0.3145	0.0748	9.7000e-004	0.0224	5.0000e-004	0.0229	6.4500e-003	4.8000e-004	6.9300e-003	0.0000	92.2979	92.2979	8.0300e-003	0.0000	92.4987
Worker	0.0334	0.0260	0.2409	6.2000e-004	0.0689	4.3000e-004	0.0693	0.0183	3.9000e-004	0.0187	0.0000	56.3723	56.3723	1.7800e-003	0.0000	56.4169
Total	**0.0433**	**0.3405**	**0.3157**	**1.5900e-003**	**0.0912**	**9.3000e-004**	**0.0922**	**0.0247**	**8.7000e-004**	**0.0256**	**0.0000**	**148.6701**	**148.6701**	**9.8100e-003**	**0.0000**	**148.9155**

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	0.0836	0.7670	0.7293	1.1800e-003		0.0422	0.0422		0.0397	0.0397	0.0000	101.9203	101.9203	0.0246	0.0000	102.5350
Total	**0.0836**	**0.7670**	**0.7293**	**1.1800e-003**		**0.0422**	**0.0422**		**0.0397**	**0.0397**	**0.0000**	**101.9203**	**101.9203**	**0.0246**	**0.0000**	**102.5350**

3.4 Building Construction - 2021

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	9.9200e-003	0.3145	0.0748	9.7000e-004	0.0224	5.0000e-004	0.0229	6.4500e-003	4.8000e-004	6.9300e-003	0.0000	92.2979	92.2979	8.0300e-003	0.0000	92.4987
Worker	0.0334	0.0260	0.2409	6.2000e-004	0.0689	4.3000e-004	0.0693	0.0183	3.9000e-004	0.0187	0.0000	56.3723	56.3723	1.7800e-003	0.0000	56.4169
Total	**0.0433**	**0.3405**	**0.3157**	**1.5900e-003**	**0.0912**	**9.3000e-004**	**0.0922**	**0.0247**	**8.7000e-004**	**0.0256**	**0.0000**	**148.6701**	**148.6701**	**9.8100e-003**	**0.0000**	**148.9155**

3.5 Paving - 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	6.9100e-003	0.0711	0.0806	1.3000e-004		3.7300e-003	3.7300e-003		3.4300e-003	3.4300e-003	0.0000	11.0129	11.0129	3.5600e-003	0.0000	11.1020
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.9100e-003**	**0.0711**	**0.0806**	**1.3000e-004**		**3.7300e-003**	**3.7300e-003**		**3.4300e-003**	**3.4300e-003**	**0.0000**	**11.0129**	**11.0129**	**3.5600e-003**	**0.0000**	**11.1020**

3.5 Paving - 2021

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	2.5000e-004	2.3300e-003	1.0000e-005	6.7000e-004	0.0000	6.7000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5448	0.5448	2.0000e-005	0.0000	0.5453
Total	**3.2000e-004**	**2.5000e-004**	**2.3300e-003**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**6.7000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5448**	**0.5448**	**2.0000e-005**	**0.0000**	**0.5453**

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	6.9100e-003	0.0711	0.0806	1.3000e-004		3.7300e-003	3.7300e-003		3.4300e-003	3.4300e-003	0.0000	11.0129	11.0129	3.5600e-003	0.0000	11.1020
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.9100e-003**	**0.0711**	**0.0806**	**1.3000e-004**		**3.7300e-003**	**3.7300e-003**		**3.4300e-003**	**3.4300e-003**	**0.0000**	**11.0129**	**11.0129**	**3.5600e-003**	**0.0000**	**11.1020**

3.5 Paving - 2021

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	2.5000e-004	2.3300e-003	1.0000e-005	6.7000e-004	0.0000	6.7000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5448	0.5448	2.0000e-005	0.0000	0.5453
Total	**3.2000e-004**	**2.5000e-004**	**2.3300e-003**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**6.7000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5448**	**0.5448**	**2.0000e-005**	**0.0000**	**0.5453**

3.6 Architectural Coating - 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					
Archit. Coating	5.3650					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4200e-003	9.9200e-003	0.0118	2.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	1.6596	1.6596	1.1000e-004	0.0000	1.6625
Total	**5.3664**	**9.9200e-003**	**0.0118**	**2.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**1.6596**	**1.6596**	**1.1000e-004**	**0.0000**	**1.6625**

3.6 Architectural Coating - 2021

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	9.9000e-004	7.7000e-004	7.1500e-003	2.0000e-005	2.0500e-003	1.0000e-005	2.0600e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.6741	1.6741	5.0000e-005	0.0000	1.6755
Total	**9.9000e-004**	**7.7000e-004**	**7.1500e-003**	**2.0000e-005**	**2.0500e-003**	**1.0000e-005**	**2.0600e-003**	**5.4000e-004**	**1.0000e-005**	**5.5000e-004**	**0.0000**	**1.6741**	**1.6741**	**5.0000e-005**	**0.0000**	**1.6755**

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	5.3650					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4200e-003	9.9200e-003	0.0118	2.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	1.6596	1.6596	1.1000e-004	0.0000	1.6625
Total	**5.3664**	**9.9200e-003**	**0.0118**	**2.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**1.6596**	**1.6596**	**1.1000e-004**	**0.0000**	**1.6625**

3.6 Architectural Coating - 2021

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	9.9000e-004	7.7000e-004	7.1500e-003	2.0000e-005	2.0500e-003	1.0000e-005	2.0600e-003	5.4000e-004	1.0000e-005	5.5000e-004	0.0000	1.6741	1.6741	5.0000e-005	0.0000	1.6755
Total	**9.9000e-004**	**7.7000e-004**	**7.1500e-003**	**2.0000e-005**	**2.0500e-003**	**1.0000e-005**	**2.0600e-003**	**5.4000e-004**	**1.0000e-005**	**5.5000e-004**	**0.0000**	**1.6741**	**1.6741**	**5.0000e-005**	**0.0000**	**1.6755**

4.0 Operational Detail - Mobile

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	0.4989	4.4854	5.4152	0.0237	1.5661	0.0145	1.5806	0.4198	0.0136	0.4334	0.0000	2,198.7607	2,198.7607	0.1649	0.0000	2,202.8821
Unmitigated	0.4989	4.4854	5.4152	0.0237	1.5661	0.0145	1.5806	0.4198	0.0136	0.4334	0.0000	2,198.7607	2,198.7607	0.1649	0.0000	2,202.8821

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	1,768.66	689.87	287.06	4,095,753	4,095,753
Total	1,768.66	689.87	287.06	4,095,753	4,095,753

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	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
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.542047	0.035396	0.174897	0.107230	0.017469	0.005327	0.008901	0.094756	0.001421	0.002157	0.008671	0.000709	0.001020

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	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	1,497.3455	1,497.3455	0.0618	0.0128	1,502.7023
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,497.3455	1,497.3455	0.0618	0.0128	1,502.7023
NaturalGas Mitigated	0.0811	0.7374	0.6194	4.4200e-003		0.0560	0.0560		0.0560	0.0560	0.0000	802.7448	802.7448	0.0154	0.0147	807.5151
NaturalGas Unmitigated	0.0811	0.7374	0.6194	4.4200e-003		0.0560	0.0560		0.0560	0.0560	0.0000	802.7448	802.7448	0.0154	0.0147	807.5151

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					
Manufacturing	1.50429e+007	0.0811	0.7374	0.6194	4.4200e-003		0.0560	0.0560		0.0560	0.0560	0.0000	802.7448	802.7448	0.0154	0.0147	807.5151
Total		**0.0811**	**0.7374**	**0.6194**	**4.4200e-003**		**0.0560**	**0.0560**		**0.0560**	**0.0560**	**0.0000**	**802.7448**	**802.7448**	**0.0154**	**0.0147**	**807.5151**

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					
Manufacturing	1.50429e+007	0.0811	0.7374	0.6194	4.4200e-003		0.0560	0.0560		0.0560	0.0560	0.0000	802.7448	802.7448	0.0154	0.0147	807.5151
Total		**0.0811**	**0.7374**	**0.6194**	**4.4200e-003**		**0.0560**	**0.0560**		**0.0560**	**0.0560**	**0.0000**	**802.7448**	**802.7448**	**0.0154**	**0.0147**	**807.5151**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	4.69945e+006	1,497.3455	0.0618	0.0128	1,502.7023
Total		**1,497.3455**	**0.0618**	**0.0128**	**1,502.7023**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	4.69945e+006	1,497.3455	0.0618	0.0128	1,502.7023
Total		**1,497.3455**	**0.0618**	**0.0128**	**1,502.7023**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	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	2.2100	4.0000e-005	4.2600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.2700e-003	8.2700e-003	2.0000e-005	0.0000	8.8200e-003
Unmitigated	2.3451	4.0000e-005	4.2600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.2700e-003	8.2700e-003	2.0000e-005	0.0000	8.8200e-003

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	0.5365					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.8083					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-004	4.0000e-005	4.2600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.2700e-003	8.2700e-003	2.0000e-005	0.0000	8.8200e-003
Total	**2.3452**	**4.0000e-005**	**4.2600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.2700e-003**	**8.2700e-003**	**2.0000e-005**	**0.0000**	**8.8200e-003**

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	0.5365					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6731					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-004	4.0000e-005	4.2600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.2700e-003	8.2700e-003	2.0000e-005	0.0000	8.8200e-003
Total	**2.2100**	**4.0000e-005**	**4.2600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.2700e-003**	**8.2700e-003**	**2.0000e-005**	**0.0000**	**8.8200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	478.1716	3.5072	0.0862	591.5306
Unmitigated	478.1716	3.5072	0.0862	591.5306

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	107.089 / 0	478.1716	3.5072	0.0862	591.5306
Total		**478.1716**	**3.5072**	**0.0862**	**591.5306**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	107.089 / 0	478.1716	3.5072	0.0862	591.5306
Total		**478.1716**	**3.5072**	**0.0862**	**591.5306**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	116.5412	6.8874	0.0000	288.7258

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	574.12	116.5412	6.8874	0.0000	288.7258
Total		**116.5412**	**6.8874**	**0.0000**	**288.7258**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing		0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

INTRODUCTION TO UTILITY SCREENING TABLES

The following worksheets are used to evaluated the potential impacts of a project.

Table 1 Definition of Project

This Table is used to establish the proposed development parameters that are used the calculation of utilities usage. The independent variable to be entered is identified by shading. For residential development, the number of housing units should be entered in the shaded area. For non-residential development, the total floor area of development should be entered in the shaded area.

Tables 2 Summary of Project Impacts

Consumption/Generation Rates. This table indicates the development's projected electrical consumption, natural gas consumption, water consumption, effluent generation, and solid waste generation. No modifications should be made to this table.

Tables 3 through 7 Calculation of Project Impacts

Tables 3 through 7 indicate the results of the analysis.

Table 3 Electrical Consumption - This Table calculates the projected electrical consumption for new development. Default generation rates provided in the shaded areas may be changed.

Table 4 Natural Gas Consumption - This Table calculates the projected natural gas useagefor new development. Default generation rates provided in the shaded areas may be changed.

Table 5 Water Consumption - This Table calculates the projected water consumption ratesfor new development. Default generation rates provided in the shaded areas may be changed.

Table 6 Sewage Generation - This Table calculates the projected effluent generation rates for new development. Default generation rates provided in the shaded areas may be changed.

Table 7 Solid Waste Generation - This Table calculates the projected waste generation for new development. Default generation rates provided in the shaded areas may be changed.

Table 1 Project Name: Moreno Valley Business Park (Expanded Planning Area No.1)

Definition of Project Parameters - Enter independent variable (no. of units or floor area) in the shaded area. The independent variable to be entered is the number of units (for residential development) or the gross floor area (for non-residential development).

Land Use	Independent	Factor
Residential Uses	**Variable**	**Total Units**
Single-Family Residential	No. of Units	0
Medium Density Residential	No. of Units	0
Multiple-Family Residential	No. of Units	0
Mobile Home	No. of Units	0
Office Uses	**Variable**	**Total Floor Area**
Office	Sq. Ft.	0
Medical Office Building	Sq. Ft.	0
Office Park	Sq. Ft.	0
Bank/Financial Services	Sq. Ft.	0
Commercial Uses	**Variable**	**Floor Area/Rooms**
Specialty Retail Commercial	Sq. Ft.	0
Convenience Store	Sq. Ft.	0
Movie Theater	Sq. Ft.	0
Shopping Center	Sq. Ft.	0
Sit-Down Restaurant	Sq. Ft.	0
Fast-Food Restaurant	Sq. Ft.	0
Hotel	Rooms	0
Manufacturing Uses	**Variable**	**Total Floor Area**
Business Park	Sq. Ft.	220,290
Manufacturing	Sq. Ft.	0
General Light Industry	Sq. Ft.	0
Warehouse	Sq. Ft.	0
Public/Institutional	**Variable**	**Total Floor Area**
Public/Institutional	Sq. Ft.	0
Open Space	Sq. Ft.	0

Table 2: Projected Utility Consumption and Generation

Summary of Project Impacts **- Results of analysis identified below. No modifications should be made to this Table.**

Utilities Consumption and Generation	Factor	Rates
Electrical Consumption	kWh/day	2,897
Natural Gas Consumption	cubic feet/day	2,837
Water Consumption	gallons/day	30,841
Sewage Generation	gallons/day	24,232
Solid Waste Generation	pounds/day	1,322

Table 3: Electrical Consumption

Project Component	Units of Measure	Consumption Factor		Projected Consumption
Residential Uses	**No. of Units**	**kWh**	**Variable**	**kWh/Unit/Day**
Single-Family Residential	0	5,625.00	kWh/Unit/Year	0.0
Medium Density Residential	0	5,625.00	kWh/Unit/Year	0.0
Multiple-Family Residential	0	5,625.00	kWh/Unit/Year	0.0
Mobile Home	0	4,644.00	kWh/Unit/Year	0.0
Office Uses	**Sq. Ft.**	**kWh**	**Variable**	**kWh/Sq. Ft./Day**
Office	0	20.80	kWh/Sq. Ft./Year	0.0
Medical Office Building	0	14.20	kWh/Sq. Ft./Year	0.0
Office Park	0	20.80	kWh/Sq. Ft./Year	0.0
Bank/Financial Services	0	20.80	kWh/Sq. Ft./Year	0.0
Commercial Uses	**Sq. Ft./Rooms**	**kWh**	**Variable**	**kWh/Sq. Ft./Day**
Specialty Retail Commercial	0	16.00	kWh/Sq. Ft./Year	0.0
Convenience Store	0	16.00	kWh/Sq. Ft./Year	0.0
Movie Theater	0	16.00	kWh/Sq. Ft./Year	0.0
Shopping Center	0	35.90	kWh/Sq. Ft./Year	0
Sit-Down Restaurant	0	49.10	kWh/Sq. Ft./Year	0.0
Fast-Food Restaurant	0	49.10	kWh/Sq. Ft./Year	0.0
Hotel	0	8,955.00	kWh/Sq. Ft./Year	0.0
Manufacturing Uses	**Sq. Ft.**	**kWh**	**Variable**	**kWh/Sq. Ft./Day**
Business Park	220,290	4.80	kWh/Sq. Ft./Year	2,897.0
Manufacturing	0	4.80	kWh/Sq. Ft./Year	0.0
General Light Industry	0	4.80	kWh/Sq. Ft./Year	0.0
Warehouse	0	4.80	kWh/Sq. Ft./Year	0.0
Public/Institutional	**Sq. Ft.**	**kWh**	**Variable**	**kWh/Sq. Ft./Day**
Public/Institutional	0	4.80	kWh/Sq. Ft./Year	0.0
Open Space	0	0.00	kWh/Sq. Ft./Year	0.0

Total Daily Electrical Consumption (kWh/day)	2,897.0

Sources:
Residential rates were derived from the SCAQMD's CEQA Air Quality Handbook (April 1993).
All other rates are from Common Forecasting Methodology VII Demand Forms, 1989

Table 4: Natural Gas Consumption

Project Component	Units of Measure	Consumption Factor		Projected Consumption
Residential Uses	**No. of Units**	**Cu. Ft. of Nat. Gas**	**Variable**	**Cu. Ft,/Day**
Single-Family Residential	0	6,665.00	Cu. Ft./Mo./Unit	0.0
Medium Density Residential	0	4,011.50	Cu. Ft./Mo./Unit	0.0
Multiple-Family Residential	0	4,011.50	Cu. Ft./Mo./Unit	0.0
Mobile Home	0	4,011.50	Cu. Ft./Mo./Unit	0.0
Office Uses	**Sq. Ft.**	**Cu. Ft. of Nat. Gas**	**Variable**	**Cu. Ft,/Day**
Office	0	2.00	Cu. Ft./Mo./Sq. Ft.	0.0
Medical Office Building	0	2.00	Cu. Ft./Mo./Sq. Ft.	0.0
Office Park	0	2.00	Cu. Ft./Mo./Sq. Ft.	0.0
Bank/Financial Services	0	2.00	Cu. Ft./Mo./Sq. Ft.	0.0
Commercial Uses	**Sq. Ft./Rooms**	**Cu. Ft. of Nat. Gas**	**Variable**	**Cu. Ft,/Day**
Specialty Retail Commercial	0	2.90	Cu. Ft./Mo./Sq. Ft.	0.0
Convenience Store	0	2.90	Cu. Ft./Mo./Sq. Ft.	0.0
Movie Theater	0	2.90	Cu. Ft./Mo./Sq. Ft.	0.0
Shopping Center	0	2.90	Cu. Ft./Mo./Sq. Ft.	0.0
Sit-Down Restaurant	0	2.90	Cu. Ft./Mo./Sq. Ft.	0.0
Fast-Food Restaurant	0	2.90	Cu. Ft./Mo./Sq. Ft.	0.0
Hotel	0	2.90	Cu. Ft./Mo./Room	0.0
Manufacturing Uses	**Sq. Ft.**	**Cu. Ft. of Nat. Gas**	**Variable**	**Cu. Ft,/Day**
Business Park	220,290	4.70	Cu. Ft./Mo./Sq. Ft.	2,836.6
Manufacturing	0	4.70	Cu. Ft./Mo./Sq. Ft.	0.0
General Light Industry	0	4.70	Cu. Ft./Mo./Sq. Ft.	0.0
Warehouse	0	4.70	Cu. Ft./Mo./Sq. Ft.	0.0
Public/Institutional Use	**Sq. Ft.**	**Cu. Ft. of Nat. Gas**	**Variable**	**Cu. Ft,/Day**
Public/Institutional	0	2.90	Cu. Ft./Mo./Sq. Ft.	0.0
Open Space	0	2.90	Cu. Ft./Mo./Sq. Ft.	0.0

Total Daily Natural Gas Consumption (cubic feet/day)	2,836.6

Sources:
South Coast Air Quality Management District, CEQA Air Quality Handbook. April 1993

Table 5: Water Consumption

Project Component	Units of Measure	Consumption Factor		Projected Consumption
Residential Uses	**No. of Units**	**Gals. of Water**	**Variable**	**Gals./Day**
Single-Family Residential	0	390.00	Gals./Day/Unit	0.0
Medium Density Residential	0	300.00	Gals./Day/Unit	0.0
Multiple-Family Residential	0	234.00	Gals./Day/Unit	0.0
Mobile Home	0	234.00	Gals./Day/Unit	0.0
Office Uses	**Sq. Ft.**	**Gals. of Water**	**Variable**	**Gals./Day**
Office	0	0.30	Gals./Day/Sq. Ft.	0.0
Medical Office Building	0	0.30	Gals./Day/Sq. Ft.	0.0
Office Park	0	0.30	Gals./Day/Sq. Ft.	0.0
Bank/Financial Services	0	0.15	Gals./Day/Sq. Ft.	0.0
Commercial Uses	**Sq. Ft./Room**	**Gals. of Water**	**Variable**	**Gals./Day**
Specialty Retail Commercial	0	0.15	Gals./Day/Sq. Ft.	0.0
Convenience Store	0	0.15	Gals./Day/Sq. Ft.	0.0
Movie Theater	0	0.20	Gals./Day/Sq. Ft.	0.0
Shopping Center	0	0.50	Gals./Day/Sq. Ft.	0.0
Sit-Down Restaurant	0	1.50	Gals./Day/Sq. Ft.	0.0
Fast-Food Restaurant	0	0.12	Gals./Day/Sq. Ft.	0.0
Hotel	0	187.50	Gals./Day/Room.	0.0
Manufacturing Uses	**Sq. Ft.**	**Gals. of Water**	**Variable**	**Gals./Day**
Business Park	220,290	0.14	Gals./Day/Sq. Ft.	30,840.6
Manufacturing	0	0.30	Gals./Day/Sq. Ft.	0.0
General Light Industry	0	0.30	Gals./Day/Sq. Ft.	0.0
Warehouse	0	0.05	Gals./Day/Sq. Ft.	0.0
Public/Institutional Use	**Sq. Ft.**	**Gals. of Water**	**Variable**	**Gals./Day**
Public/Institutional	0	0.12	Gals./Day/Sq. Ft.	0.0
Open Space	0	0.12	Gals./Day/Sq. Ft.	0.0
Total Daily Water Consumption (gallons/day)				**30,840.6**

Sources:

Source: Derived from Los Angeles County Sanitation District rates (150% of effluent generation).

Table 6: Sewage Generation

Project Component	Units of Measure	Generation Factor		Projected Consumption
Residential Uses	**No. of Units**	**Gals. of Effluent**	**Variable**	**Gals./Day**
Single-Family Residential	0	260.00	Gals./Day/Unit	0.0
Medium Density Residential	0	200.00	Gals./Day/Unit	0.0
Multiple-Family Residential	0	156.00	Gals./Day/Unit	0.0
Mobile Home	0	156.00	Gals./Day/Unit	0.0
Office Uses	**Sq. Ft.**	**Gals. of Effluent**	**Variable**	**Gals./Day**
Office	0	0.20	Gals./Day/Sq. Ft.	0.0
Medical Office Building	0	0.20	Gals./Day/Sq. Ft.	0.0
Office Park	0	0.20	Gals./Day/Sq. Ft.	0.0
Bank/Financial Services	0	0.10	Gals./Day/Sq. Ft.	0.0
Commercial Uses	**Sq. Ft./Rooms**	**Gals. of Effluent**	**Variable**	**Gals./Day**
Specialty Retail Commercial	0	0.10	Gals./Day/Sq. Ft.	0.0
Convenience Store	0	0.10	Gals./Day/Sq. Ft.	0.0
Movie Theater	0	0.13	Gals./Day/Sq. Ft.	0.0
Shopping Center	0	0.33	Gals./Day/Sq. Ft.	0.0
Sit-Down Restaurant	0	1.00	Gals./Day/Sq. Ft.	0.0
Fast-Food Restaurant	0	0.08	Gals./Day/Sq. Ft.	0.0
Hotel	0	125	Gals./Day/Room.	0.0
Manufacturing Uses	**Sq. Ft.**	**Gals. of Effluent**	**Variable**	**Gals./Day**
Business Park	220,290	0.11	Gals./Day/Sq. Ft.	24,231.9
Manufacturing	0	0.20	Gals./Day/Sq. Ft.	0.0
General Light Industry	0	0.20	Gals./Day/Sq. Ft.	0.0
Warehouse	0	0.03	Gals./Day/Sq. Ft.	0.0
Public/Institutional Use	**Sq. Ft.**	**Gals. of Effluent**	**Variable**	**Gals./Day**
Public/Institutional	0	0.10	Gals./Day/Sq. Ft.	0.0
Open Space	0	0.10	Gals./Day/Sq. Ft.	0.0
Total Daily Sewage Generation (gallons/day)				**24,231.9**

Source: Los Angeles County Sanitation Districts.

Table 7: Solid Waste Generation

Project Component	Units of Measure	Generation Factor		Projected Generation
Residential Uses	**No. of Units**	**Lbs.of Waste**	**Variable**	**Lbs./Day**
Single-Family Residential	0	12.23	Lbs./Day/Unit	0.0
Medium Density Residential	0	12.23	Lbs./Day/Unit	0.0
Multiple-Family Residential	0	12.23	Lbs./Day/Unit	0.0
Mobile Home	0	12.23	Lbs./Day/Unit	0.0
Office Uses	**Sq. Ft.**	**Lbs.of Waste**	**Variable**	**Lbs./Day**
Office	0	6.00	Lbs./Day/1,000 Sq. Ft.	0.0
Medical Office Building	0	6.00	Lbs./Day/1,000 Sq. Ft.	0.0
Office Park	0	6.00	Lbs./Day/1,000 Sq. Ft.	0.0
Bank/Financial Services	0	6.00	Lbs./Day/1,000 Sq. Ft.	0.0
Commercial Uses	**Sq. Ft./Rooms**	**Lbs.of Waste**	**Variable**	**Lbs./Day**
Specialty Retail Commercial	0	42.00	Lbs./Day/1,000 Sq. Ft.	0.0
Convenience Store	0	42.00	Lbs./Day/1,000 Sq. Ft.	0.0
Movie Theater	0	6.00	Lbs./Day/1,000 Sq. Ft.	0.0
Shopping Center	0	6.00	Lbs./Day/1,000 Sq. Ft.	0.0
Sit-Down Restaurant	0	6.00	Lbs./Day/1,000 Sq. Ft.	0.0
Fast-Food Restaurant	0	42.00	Lbs./Day/1,000 Sq. Ft.	0.0
Hotel	0		Lbs./Day/Room	0.0
Manufacturing Uses	**Sq. Ft.**	**Lbs.of Waste**	**Variable**	**Lbs./Day**
Business Park	220,290	6.00	Lbs./Day/1,000 Sq. Ft.	1,321.7
Manufacturing	0	8.93	Lbs./Day/1,000 Sq. Ft.	0.0
General Light Industry	0	8.93	Lbs./Day/1,000 Sq. Ft.	0.0
Warehouse	0	8.93	Lbs./Day/1,000 Sq. Ft.	0.0
Public/Institutional Use	**Sq. Ft.**	**Lbs.of Waste**	**Variable**	**Lbs./Day**
Public/Institutional	0	4.00	Lbs./Day/1,000 Sq. Ft.	0.0
Open Space	0	3.00	Lbs./Day/1,000 Sq. Ft.	0.0
Total Daily Solid Waste Generation				**1,321.7**

Source: City of Los Angeles CEQA Thresholds Guide, 2006, and
City of Los Angeles Average Solid Waste Generation Rates, April 1981

GENERAL BIOLOGICAL ASSESSMENT REPORT
MORENO VALLEY FESTIVAL
CITY OF MORENO VALLEY, CALIFORNIA

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Summary

Hernandez Environmental Services (HES) was contracted by Moreno Valley Festival to prepare a General Biological Assessment (GBA) and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for a 49-acre proposed project site. The proposed project consists of a commercial/retail and mixed use development. The project site consists of Assessor Parcel Numbers (APNs) 481-020-017, 481-020-019, 481-020-022, 481-020-023, 481-020-028, 481-020-028, 481-090-009, 481-090-018, 481-090-020, 481-090-021, 481-090-022, 481-090-029, 481-090-032, and 481-090-033.

On July 13, 2015, Juan Hernandez, Principal Biologist for HES, conducted a field survey of the approximate 49-acre project site. The project site contains seven habitat types: 23.4 acres of developed habitat, 20.2 acres of disturbed non-native vegetation habitat, 3.20 acres of disturbed non-native grasses habitat, 1.15 acres of disturbed coastal sage scrub, 0.87 acres of ornamental vegetation habitat, 0.16 acres of streambed, and 0.07 acres of mulefat habitat. The project site also contains approximately 0.16 acres of streambed, and 0.07 acres of mulefat habitat for a total of 0.23 acre of riparian habitat. No wildlife movement corridors were found to be present on the project site. The 20.2 acres of disturbed non-native vegetation habitat, and the 3.20 acres of disturbed non-native grasses habitat, is suitable for burrowing owl. Focused surveys were performed in compliance with TLMA requirements. No burrowing owl were found.

The proposed project is expected to impact 23.4 acres of developed habitat, 20.2 acres of disturbed non-native vegetation habitat, 3.20 acres of disturbed non-native grasses habitat, 1.15 acres of disturbed coastal sage scrub, 0.87 acres of ornamental vegetation habitat, 0.16 acres of streambed, and 0.07 acres of mulefat habitat.

The project site was found to have the potential for San Bernardino aster to occur. This species is not covered under the Western Riverside MSHCP but through participation in the plan, and the land acquisition and preservation by the plan, this species would be adequately covered. Cooper's Hawk, Bell's Sage Sparrow, Coastal horned lizard, Orange-throat Whiptail, Coastal Whiptail, Red-diamond Rattlesnake, California Horned Lark, San Diego Black-tailed Jackrabbit are fully covered species under the Western Riverside MSHCP. The proposed project must be consistent with the Western Riverside MSHCP. Payment of the appropriate development mitigation fees will mitigate any impacts to these species. Further, it is recommended that three days prior to any ground disturbing activities or vegetation removal, a qualified biological monitor should conduct a preconstruction survey to identify any sensitive biological resources to flag for avoidance. Any reptile species that may be present within the project area shall be relocated outside of the impact areas.

Due to the presence of suitable nesting bird habitat on the project site, it is recommended that vegetation removal be conducted during the non-nesting season for migratory birds to avoid direct impacts. The migratory bird nesting season is between February 1 and September 15. If vegetation removal will occur during the migratory bird nesting season, between February 1 and September 15, it is recommended that pre-construction nesting bird surveys be performed within three days prior to vegetation removal.

Impacts to approximately 0.16 acres of streambed, and 0.07 acres of mulefat habitat for a total of 0.23 acre of riparian habitat will require consultation with the California Department of Fish and Wildlife, the U.S. Army Corps of Engineers, and the Santa Ana Regional Water Quality Control Board to determine the need for permits that must be obtained prior to initiation of construction of the proposed project. In addition, the loss of Western

Riverside MSHCP riverine resources will require preparation of an MSHCP Determination of Biologically Equivalent or Superior Preservation (DBESP).

1.0 Introduction

Hernandez Environmental Services (HES) was contracted by Moreno Valley Festival to prepare a General Biological Assessment (GBA) and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for a 49-acre proposed project site, which is comprised of Assessor's Parcel Numbers (APNs) 481-020-017, 481-020-019, 481-020-022, 481-020-023, 481-020-028, 481-020-028, 481-090-009, 481-090-018, 481-090-020, 481-090-021, 481-090-022, 481-090-029, 481-090-032, and 481-090-033. The proposed project consists of a commercial/retail and mixed use development.

1.1 Project Site Location

The project site is located in the City of Moreno Valley in Riverside County at the southeast intersection of Heacock Street and Ironwood Avenue (Figure 1). The southern boundary is defined by the Moreno Valley Freeway (CA-60). The project site consists of 15 parcels totaling approximately 49.0 acres. Approximately 27.21 acres are developed with the existing Festival Shopping Center and commercial development south of Hemlock Avenue; the remaining 22.39 acres are undeveloped and vacant (Figure 2). The site is located within the United States Geological Survey (USGS) 7.5-Minute Topographic Map Sunnymead Quadrangle. The approximate center point is 33°56'28"N, 117°14'33"W.

1.2 Project Description

The proposed project is the development of the Moreno Valley Festival (Figure 3). The plan area includes approximately 49.0 acres; a portion of the site is currently developed with the Festival Shopping Center on the north side of Hemlock Street and with a fast food establishment and miscellaneous commercial development on the south side of Hemlock Street.

The purpose of this GBA and Western Riverside County MSHCP Consistency Analysis is to identify any potential biological resources that may be present on or adjacent to the project site.

2.0 Methodology

2.1 Literature Review

HES conducted a literature review and reviewed aerial photographs and topographic maps of the project site and surrounding areas. The Sunnymead quad and adjacent surrounding eight quads were used to identify sensitive species in the California Natural Diversity Data Base (CNDDB). Additional resources reviewed during the literature search included the United States Fish and Wildlife (USFWS) Endangered Species Lists, Forest Service List, and the California Native Plant Society's (CNPS) Rare plant lists to obtain species information for the project area.

2.2 Field Survey

On July 13, 2015, Juan Hernandez, Principal Biologist for HES, conducted a field survey of the approximate 49-acre project site. The ambient temperature at 9:30 a.m. was 72˚ Fahrenheit, sunny, with zero to three mile per hour winds from the northeast. The purpose of the field survey was to document the existing habitat conditions, obtain plant and animal species information, view the surrounding uses, assess the potential for state and federal waters, and assess the potential for wildlife movement corridors, sensitive species, and nesting habitat.

The entire project site was surveyed. Linear transects spaced approximately 50 feet apart were walked for 100 percent coverage. All species observed were recorded and are listed in Appendix A. Global Positioning System (GPS) waypoints were taken to delineate specific habitat types, species locations, and any other information that would be useful for the assessment of the property.

3.0 Existing Conditions and Results

3.1 Environmental Setting

The project site is located in a heavily urbanized area in the City of Moreno Valley. The project site has residential homes to the north, residential homes to the east, residential homes to the west, and CA-60 and commercial properties to the south. The project site has been heavily disturbed and no quality native habitat remains onsite. Portions of the property have already been developed with commercial/retail buildings. Other portions of the property consist of vacant, disked lots. The elevation of the project site varies from 1,674 feet above sea level (ASL) to 1,641feeet ASL. There is a small, disturbed, non-meandering ephemeral drainage located in the northwest portion of the property. The drainage crosses the project site from west to east and empties into Indian Basin.

3.2 Soils

The Natural Resources Conservation Service Web Soil Survey identified eight (8) soil types within the GBA 62.50-acre study area. The following soil types are identified in the Soil Survey: Greenfield sandy loam(GyA), 0 to 2 percent slope; Greenfield sandy loam (GyC2), 2 to 8 percent slopes eroded,; Greenfield sandy loam (GyD2), 8 to 15 percent slopes, eroded; Hanford coarse sandy loam (HcC), 2 to 8 percent slopes; Monserate sandy loam, 0 to 5 percent slopes; Ramona sandy loam(RaB2), 2 to 5 percent slopes, eroded; Ramona sandy loam(RaB3), 0 to 5 percent slopes, severely eroded; Tujunga loamy sand (TvC), channeled, 0 to 8 percent slopes. Tujunga Loamy Sand (TvC), channeled 0 to 8 percent slope, is the only hydric soil in the study area. Refer to Appendix D.

3.3 Plant and Habitat Communities

The project site contains seven habitat types: 23.4 acres of developed habitat, 20.2 acres of disturbed non-native vegetation habitat, 3.20 acres of disturbed non-native grasses habitat, 1.15 acres of disturbed coastal sage scrub, 0.87 acres of ornamental vegetation habitat, 0.16 acres of streambed, and 0.07 acres of mulefat habitat (Figure 4).

Table 1
Onsite Habitat

Developed Habitat	Disturbed Non-native Vegetation Habitat	Disturbed Non-native Grasses Habitat	Disturbed Coastal Sage Scrub	Ornamental Vegetation Habitat	Streambed Habitat	Mulefat Habitat
23.4 Acres	20.2 Acres	3.20 Acres	1.15 Acres	0.87 Acres	0.16 Acres	0.07 Acres

The following is a description of each habitat type:

3.3.1 Developed Habitat

Approximately 23.4 acres of developed habitat exists on the project site. The developed habitat contains existing commercial and retail buildings and the majority of the buildings are currently being utilized. This habitat also included parking lot areas, and contain no native habitat and wildlife value.

3.3.2 Disturbed Non-native Vegetation Habitat

The project site contains approximately 20.2 acres of disturbed non-native vegetation habitat. This habitat type has been disturbed and native vegetation has been removed by disking or other anthropomorphic activities. Dominant plant species found in this habitat type consist of black mustard (*Brassia nigra*), mustard (*Brassica tournefortii*), tacalote (*Centaurea melitensis*), bullthistle (*Cirsium vulgare*), field bindweed (*Convolvulus arvensis*), heron's bill (*Erodium cicutarium*), horehound (*Marrubium vulgare*), tree tabacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), and Russian thistle (*Salsola tragus*).

3.3.3 Disturbed Non-native Grasses Habitat

The project site contains approximately 3.20 acres of disturbed non-native grasses habitat. This habitat type has been disturbed and native vegetation has been removed by disking or other anthropomorphic activities. Dominant plant species found in this habitat type consist of slim oats (*Avena barbata*), ripgut

brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), foxtail (*Bromus madritensis*), foxtail barley (*Hordeum murinum*), and common barley (*Hordeum vulgare*).

3.3.4 Disturbed Coastal Sage Scrub Habitat

The project site contains approximately 1.15 acres of disturbed coastal sage scrub habitat. This habitat type has shrubs commonly associated with coastal sage scrub, but shows evidence of having been disturbed in the past. The coastal sage scrub does not look very well developed, and has sections were it has obviously been disturbed by anthropomorphic activities. Dominant vegetation in this habitat type include: brittlebush (*Encelia farinosa*), California buckwheat (*Eriogonum fasciculatum*), lotus (*Acmispon strigosus*), gord (*Cucurbita foetidissima*), tarweed (*Deinandra fasciculata*), black sage (*Salvia mellifera*) and telegraph weed (*Heterotheca grandifolia*).

3.3.5 Ornamental Vegetation Habitat

The project site contains approximately 0.87 acres of ornamental vegetation habitat. This habitat type has been created and is composed entirely of non-native trees and shrubs. Common species associated with this habitat type are eucalyptus (*Eucalyptus* sp.), oleander (*Nerium oleander*), and Peruvian pepper tree (*Schinus molle*).

3.3.6 Streambed Habitat

The project site contains approximately 0.16 acres of streambed habitat. This habitat is characterized by sandy streambed with small amounts of native and non-native vegetation. Vegetation species associated with this habitat include: Mexican fan palm (Washingtonia robusta), tree tabacco, horseweed (*Erigeron canadensis*), heliotrope (Heliotropium curassavicum), sunflower (Helianthus annus), and tamarisk (*Tamarix sp*.).

3.3.6 Mulefat Habitat

The project site contains approximately 0.07 acres of mulefat habitat. The ephemeral drainage contains small patches of areas dominated by mulefat (Baccharis salicifolia).

4.0 Sensitive Biological Resources

4.1 Threatened and Endangered Species

A total of 51 sensitive species of plants and 54 sensitive species of animals have the potential to occur on or within the vicinity of the GBA study area. These include those species listed or candidates for listing by the U. S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW) and California Native Plant Society (CNPS). All habitats with the potential to be used by

sensitive species was evaluated during the site visit and a determination has been made for the presence or probability of presence within this report. This section will address those species listed as Candidate, Rare, Threatened, or Endangered under the state and federal endangered species laws or directed to be evaluated under the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). Sensitive species which have a potential to occur will also be discussed in this section. All other special status species are addressed within Appendix B.

4.1.1 Threatened and Endangered Plants

A total of 11 plant species were identified as state and/or federally listed as Threatened, Endangered, or Candidate. All species have a rank of 1B.1 or 1B.2 in the CNPS Rare Plan Inventory. The GBA survey area is not located within the Western Riverside MSHCP narrow endemic plant overlay and a habitat assessment for narrow endemic plants was not required; however, several of the species identified below are covered species under the MSHCP.

Munz's Onion

Munz's onion (*Allim munzii*) is federally listed as Endangered and State listed as Threatened; the species rank is 1B.1 in the CNPS rare plant inventory. The species is found in grassy openings in coastal-sage scrub vegetation at elevations ranging from 300-900m. Its blooming period is from April to May. The project site has been disked and there is no suitable habitat for this species. **This species is not present.**

San Diego Ambrosia

San Diego Ambrosia (*Ambrosia pumila*) is a federally listed Endangered species and is a rank 1B.1 species in the CNPS rare plant inventory. The species is found in disturbed sites at elevations ranging from 50 – 600 m. Its blooming period is from April to July. The project site has been disked and the disturbed habitat may be suitable for this species. **This species is not present.**

Marsh Sandworth

Marsh sandworth (*Arenaria paludicola*) is federally and State listed as Endangered and is ranked as 1B.1 in the CNPS rare plant inventory. The species is found in wet meadows and marshes at elevations less than 300 meters. The species blooms from late spring into summer. The project site has been disked and the disturbed is not suitable for this species. The basin area on the east side of the property is regularly maintained and does not support suitable habitat for marsh sandworth. **This species is not present.**

San Jacinto Valley Crownscale

San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*) is a federally listed Endangered species and is ranked as 1B.1 in the CNPS rare plant inventory. The species is found in alkaline flats at elevations ranging from 400-500 meters. Its blooming period is April to August. The project site has been disked and the disturbed habitat is not suitable for this species. **This species is not present.**

Nevin's Barberry

Nevin's barberry (*Berberis nevinii*) is a federally and State listed endangered species and is a rank 1B.1 species in the CNPS rare plant inventory. The species is found in sandy to gravelly soils, washes, and chaparral habitats at elevations less than 650 meters. It blooms from March to May. The project site has been disked and the disturbed habitat is not suitable for this species. **This species is not present.**

Thread-leaved Brodiaea

Tread-leaved brodiaea (*Brodiaea filifolia*) is a federally listed Threatened and State listed Endangered species. The species is ranked 1B.1 in the CNPS rare plant inventory. This species occurs in grassland habitats and vernal pools at elevations ranging from 25 to 860 meters. Its blooming period is from March to June. The project site has been disked and the disturbed habitat is not suitable for this species. The basin area on the east side of the property is regularly maintained and does not support suitable habitat for thread-leaved brodiaea. **This species is not present.**

Salt Marsh Bird's-Beak

Salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*) is a federally and State listed Endangered species and is ranked 1B.2 in the CNPS rare plant inventory. This species occurs in coastal salt marsh habitat at elevations less than 10 meters. Its blooming period is from May to October. The project site has been disked and the disturbed habitat is not suitable for this species. **This species is not present.**

Slender-Horned Spineflower

Slender-horned spineflower (*Dodecahema leptoceras*) is a federally and State listed Endangered species and is ranked 1B.1 in the CNPS rare plant inventory. This species occurs in sand or gravel soils at elevations ranging from 200 to 700 meters. Its flowering period is from May to June. The project site does not support suitable habitat for this species. **This species is not present.**

Santa Ana River Woollystar

Santa Ana River Woollystar (*Eriastrum densifolium* ssp. *sanctorum*) is a federally and state listed Endangered species and is ranked 1B.1 in the CNPS rare plant inventory. This species occurs in washes, floodplains, and dry riverbeds at elevations less than 500 meters. Its blooming period is from May to September. The project site does not support suitable habitat for this species. **This species is not present.**

Gambel's Water Cress

Gambel's water cress (*Nasturtium gambelii*) is a federally listed Endangered and State listed Threatened species; it is ranked 1B.1 in the CNPS rare plant inventory. This species occurs in marshes, streambanks, and lake margins at elevations less than 350 meters. Its blooming period is from May to August. The project site does not support suitable habitat for this species. **This species is not present.**

Spreading Navarretia

Spreading navarretia (*Navarretia fossalis*) is a federally listed Threatened species and is ranked 1B.1 in the CNPS rare plant inventory. This species is found in vernal pools and ditches at elevations ranging from 30 to 1300 meters. Its blooming period is from April to June. The project site does not support habitat suitable for this species. **This species is not present.**

4.1.2 Threatened and Endangered Animals

A total of 13 animal species listed as state and/or federally Threatened, Endangered, or Candidate or for special consideration under the Riverside County MSHCP will be reviewed in this section. Sensitive species which have a potential to occur will also be discussed in this section. All sensitive species identified within CNDDB were evaluated; a complete list of species is included in Appendix B.

Southern Mountain Yellow-Legged Frog

Southern mountain yellow-legged frog (*Rana muscosa*) is a federally and state listed endangered species. Additionally the species is listed as a CDFW Species of Special Concern. Populations of the species is southern California occupy a wide elevational range from 1,200 feet to 7,500 feet. Habitat includes rocky, shaded streams with cool waters originating from springs and snowmelt. The project site does not support suitable habitat for this species. **This species is not present.**

Tricolored Blackbird

Tricolored bird (*Agelaius tricolor*) is State listed as endangered and listed by the CDFW as a Species of Special Concern. The species occupies freshwater marshes with canopies of willows (*Salix* spp.) and other riparian trees and require open accessible water and suitable foraging space. The project site does not support suitable nesting habitat for the species. **This species is not present.**

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a CDFW Species of Special Concern and a MSHCP covered species. The species lives in dry open areas with no trees and short grass. Focused surveys for the species were completed and returned negative. **This species is not present.**

Western Yellow-Billed Cuckoo

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is federally listed as threatened and state listed as Endangered. It is found in riparian habitat with vegetation such as willow and willow-cottonwood thickets with heavy underbrush. The species is restricted to cottonwood-dominated forests. The project site does not support suitable habitat for this species. **This species is not present.**

Southwestern Willow Flycatcher

Southwestern willow flycatcher (*Empidonax trailii extimus*) is federally and state listed as endangered. The species breeds in dense riparian habitats along rivers, streams, or other wetlands. Vegetation can be dominated by dense growths of willows, seepwillow (*Baccharis* sp.), tamarisk (*Tamarix* sp.) or other large trees. The project site does not support nesting habitat for this species. **This species is not present.**

Bald Eagle

Bald eagle (*Halieaeetus leucocephalus*) is State listed as endangered and is a delisted federal species. The species is fully protected under the regulations of the CDFW. It is found around wetlands, open water areas with an abundance of fish. It nests and roosts in large trees. The project site does not support suitable habitat for this species. **The species is not present.**

Coastal California Gnatcatcher

Coastal Californiagnatcatcher (*Polioptila californica californica*) is a federally listed threatened species and CDFW species of Special Concern. The species range is limited to the California coast and is found only in coastal sage scrub. The project site does not support suitable habitat for this species. **This species is not present.**

Least Bell's Vireo

Least Bell's vireo (*Vireo belii pusillus*) is a federally and State listed endangered species. It is found in riparian forests, riparian scrub, and riparian woodlands. The project site does not support suitable habitat for this species. **This species is not present.**

Santa Ana Sucker

Santa Ana sucker (*Catostomus santaanae*) is a federally listed threatened species and CDFW species of special concern. The species is restricted to southern California rivers. The project site does not support suitable habitat for this species. **This species is not present.**

Quino Checkerspot Butterfly

Quino checkerspot butterfly (*Euphydryas editha quino*) is a federally listed endangered species. Vegetation types that support the Quino checkerspot butterfly include coastal sage scrub, open chaparral, juniper woodland, and native grassland. Suitability of habitat is affected by soil and climatic conditions, as well as other ecological and physical factors. The species range is limited to Riverside and San Diego Counties. The project site does not support suitable habitat for this species. **This species is not present.**

Delhi Sands Flower-Loving Fly

Delhi sands flower-loving fly (*Rhaphimidas terminatus abdominalis*) is a federally listed endangered species. Its habitat is limited to dunes containing sandy soils of the Delhi series. The project site does not support suitable habitat for this species. **This species is not present.**

Stephens' Kangaroo Rat

Stephens' Kangaroo Rat (*Dipodomys stephensi*) is a federally listed endangered species and state listed threatened species. The species is found in coastal sage scrub, and in valley and foothill grasslands. The project site does not support suitable habitat for this species. **This species is not present.**

Lesser Long-Nosed Bat

Lesser long-nosed bat (*Leptonycteris yerbabuenae*) is a federally listed endangered species. This species requires suitable roost sites and extensive populations of columnar cacti and agaves. The project site does not support suitable habitat for this species. **This species is not present.**

4.2 Species with other Special Status Listings

Species which are listed as California Species of Special Concern or are on the CDFW List of Rare plants have all been evaluated and the results can be reviewed within Appendix B. Any of these species that have the potential to be present or are considered present within the project area will have mitigation measures to avoid or minimize impacts in the Recommendations section of this report.

4.3 Critical Habitats

The project site is not located within critical habitat as designated by the USFWS. Critical habitat for the coastal California gnatcatcher occurs approximately three miles to the north and more than four miles to the west of the project site. There is no critical habitat immediately adjacent to the project site.

4.4 Nesting Birds

The project site does have shrubs and trees that can support nesting song birds or raptors. The 23.4 acres of developed habitat, 20.2 acres of disturbed non-native vegetation habitat, 3.20 acres of disturbed non-native grasses habitat, 1.15 acres of disturbed coastal sage scrub, 0.87 acres of ornamental vegetation habitat, 0.16 acres of streambed, and 0.07 acres of mulefat habitat are considered habitat that can be utilized by nesting birds and raptors during the nesting bird season of February 1 through September 15.

4.5 Wildlife Movement Corridors

The project site is too isolated by residential and commercial structures to function as a wildlife movement corridor. There are no major riparian areas or canyons that can function as a corridor for wildlife. The project site also has a high amount of anthropomorphic disturbances to adequately function as a wildlife movement corridor.

4.6 Western Riverside Multiple Species Habitat Conservation Plan

4.6.1 Section 6.1.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

The project site contains approximately 0.16 acres of streambed, and 0.07 acres of mulefat habitat for a total of 0.23 acre of riparian habitat. This habitat is also regulated under Section 1602 of the California Department of Fish and Game Code for the protection of lake or streams and under Section 404 and 401 of the Clean Water Act. This habitat is also considered riparian/riverine areas as defined in Section 6.1.2 of the Western Riverside MSHCP. Any project impacts to this habitat will need to be in compliance with Section 6.1.2 of the Western Riverside MSHCP. No vernal pools were observed within the project boundaries.

4.6.2 Section 6.1.3 Protection of Narrow Endemic Plant Species

The project site is not located within the narrow endemic plants overlay of the MSHCP and there are no habitat assessment requirements for narrow endemic plant species as identified in the MSHCP

4.6.3 Section 6.1.4 Guidelines Pertaining to the Urban/Wildlands Interface

The project site is not located within a Western Riverside MSHCP linkage or criteria cell. Therefore, the project is not subject to Section 6.1.4 pertaining to urban/wildlands interface.

4.6.4 Section 6.3.2 Guidelines Additional Survey Needs and Procedures

Riverside County Transportation and Land Management (TLMA) requires a habitat assessment for burrowing owl. If habitat is present than focused burrowing owl surveys as described in the Western Riverside MSHCP *Burrowing Owl Survey Instructions*. The 20.2 acres of disturbed non-native vegetation habitat, and the 3.20 acres of disturbed non-native grasses habitat, is suitable for burrowing owl. Focused surveys were performed in compliance with TLMA requirements. No burrowing owl were found.

4.7 Other City, County, Regional, State, or Federal Conservation Plans

The project site is located within an independent cell group of the Reche Canyon/Badlands area plan of the Western Riverside MSHCP.

4.8 State and Federal Jurisdictional Drainages

The project site contains approximately 0.16 acres of streambed, and 0.07 acres of mulefat habitat for a total of 0.23 acre of riparian habitat. This habitat is regulated under Section 1602 of the California Department of Fish and Game Code for the protection of lake or streams and under Section 404 and 401 of the Clean Water Act. No vernal pools were observed within the project boundaries.

4.9 Oak Trees

The project site does not contain oak trees.

5.0 Project Impacts

5.1 Impacts to Existing Habitats

The proposed project is expected to impact 23.4 acres of developed habitat, 20.2 acres of disturbed non-native vegetation habitat, 3.20 acres of disturbed non-native grasses habitat, 1.15 acres of disturbed coastal sage scrub, 0.87 acres of ornamental vegetation habitat, 0.16 acres of streambed, and 0.07 acres of mulefat habitat (Figure 5).

5.2 Impacts to Sensitive Species

One species was identified to the potential to occur on site. Project activities were evaluated to determine the potential for impacts to these species.

<u>San Bernardino Aster</u>
The San Bernardino Aster (*Symphyotrichum defoliatum*) is a CNPS 1B.2 listed plant that is found in grasslands or disturbed habitats. It blooms between the months of July and November. The project site contains habitat for this species.

<u>Cooper's Hawk</u>
Cooper's hawk (*Accipiter cooperii hawk*) is a CDFW watch list species and International Union for Conservation of Nature (IUCN) species of least concern. The species foraging habitat includes rivers, and woodlands including willows, cottonwoods, and sycamores. Nesting habitat for this species occurs at the project site in the Eucalyptus trees adjacent to the site. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

<u>Bell's Sage Sparrow</u>
Bell's sage sparrow (*Artemisiospiza belli belli*) is a CDFW watch list species and USFWS bird of conservation concern. The species nests in coastal sage scrub and chaparral. The project site supports

some disturbed coastal sage scrub that may serve as habitat. This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

Orange-throat Whiptail

Orange-throat whiptail (*Aspidoscelis typerythra*) is a CDFW species of special concern and IUCN species of least concern. The species inhabits low elevation coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitat. The project site supports some disturbed coastal sage scrub that may serve as habitat. This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

Coastal Whiptail

Coastal whiptail (*Aspidoscelis hyperythra*) is a CDFW species of special concern and IUCN species of least concern. It is found in a variety of ecosystems, primarily in hot and dry open areas with sparse foliage – chaparral, woodland, and riparian areas. The project site supports habitat for this species. This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

Red-diamond Rattlesnake

Red-diamond rattlesnake (*Crotalus ruber*) is a CDFW species of special concern. The species habitat includes coastal sage scrub or chaparral with granite boulders. The project site supports habitat for this species. This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

California Horned Lark

California horned lark (*Eremophila alpestris actia*) is a CDFW watch list species and IUCN species of least concern. The species is found in open areas dominated by sparse low herbaceous vegetation or widely scattered low shrubs. The project site supports habitat for this species. This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

Western Yellow Bat

Western yellow bat (*Lasiurus xanthinus*) is a CDFW species of special concern and IUCN species of least concern. The species occupies a range of habitats of extremely arid areas including savannas, secluded woodlands, regions dominated by pasture or croplands, and residential areas. It is insectivorous and often roosts in trees. The project site supports limited roosting habitat for this species. This species is potentially present.

San Diego Black-tailed Jackrabbit

San Diego black-tailed jackrabbit is a CDFW species of special concern. The species habitat includes chaparral and coastal sage scrub. The project site supports limited habitat for this species. This species

is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

Coast Horned Lizard

Coast horned lizard (*Phrynosoma blainvillii*) is a CDFW species of special concern and IUCN species of least concern. The species inhabits open areas of sandy soils and low vegetation in valleys, foothills and semiarid mountains. It is found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. The project site supports limited habitat for this species. This species is potentially present. This species is covered by the Western Riverside MSHCP and is considered adequately conserved.

Lawrence's Goldfinch

Lawrence's goldfinch (*Spinus lawrencei*) is an IUCN species of least concern. The species inhabits open woodlands, chaparral, and weedy fields. The project site supports limited habitat for this species in the basin located adjacent to the eastern project boundary. This species is potentially present.

5.3 Nesting Birds

The project site does have shrubs and trees that can support nesting song birds or raptors. The 23.4 acres of developed habitat, 20.2 acres of disturbed non-native vegetation habitat, 3.20 acres of disturbed non-native grasses habitat, 1.15 acres of disturbed coastal sage scrub, 0.87 acres of ornamental vegetation habitat, 0.16 acres of streambed, and 0.07 acres of mulefat habitat are considered habitat that can be utilized by nesting birds and raptors during the nesting bird season. Potential impacts to nesting birds may occur if ground disturbing activities or vegetation removal occur during the bird nesting season of February 1 through September 15.

5.4 Impacts to Critical Habitat

The project is not located within designated federal critical habitat. No impact to critical habitat would occur.

5.5 Impacts to Wildlife Movement Corridors

No impacts to wildlife movement corridors is expected.

5.6 Conflict with Local Policies or Ordinances Protecting Biological Resources

Project is expecting removal of trees and will have to comply with City of Moreno Valley Landscape Ordinance Municipal Code § 9.17.030.

5.7 Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan

The project is within the Western Riverside MSHCP. If Western Riverside MSHCP guidelines and requirements are followed, no conflicts are expected.

5.8 State and Federal Drainages

The project site will impact approximately 0.16 acres of streambed, and 0.07 acres of mulefat habitat for a total of 0.23 acre of riparian habitat. This habitat is regulated under Section 1602 of the California Department of Fish and Game Code for the protection of lake or streams and under Section 404 and 401 of the Clean Water Act. No impacts to vernal pools are expected.

5.9 Impacts to Section 6.1.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

The project site is expected to impact approximately 0.16 acres of streambed, and 0.07 acres of mulefat habitat for a total of 0.23 acre of riparian habitat. This habitat is also regulated under Section 1602 of the California Department of Fish and Game Code for the protection of lake or streams and under Section 404 and 401 of the Clean Water Act. This habitat is also considered riparian/riverine areas as defined in Section 6.1.2 of the Western Riverside MSHCP. Any project impacts to this habitat will need to be in compliance with Section 6.1.2 of the Western Riverside MSHCP. No vernal pools were observed within the project boundaries.

5.10 Impacts to Section 6.1.3 Protection of Narrow Endemic Plant Species

The project site is not located within the narrow endemic plant overlay of the MSHCP; therefore, no impacts to narrow endemic plants are expected.

5.11 Impacts to Section 6.1.4 Guidelines Pertaining to the Urban/Wildlands Interface

The project site is not located within a Western Riverside MSHCP linkage or criteria cell. Therefore, the project is not subject to Section 6.1.4 pertaining to urban/wildlands interface.

5.12 Impacts to Section 6.3.2 Guidelines Additional Survey Needs and Procedures

Riverside County Transportation and Land Management (TLMA) requires a habitat assessment for burrowing owl. If habitat is present than focused burrowing owl surveys as described in the Western Riverside MSHCP *Burrowing Owl Survey Instructions*. The 20.2 acres of disturbed non-native vegetation habitat, and the 3.20 acres of disturbed non-native grasses habitat, is suitable for burrowing owl and focused surveys were performed in compliance with TLMA requirements. Focused burrowing

owl surveys were conducted in the months of June, July, and August and no burrowing owl were found. No impacts are expected.

5.11 Impacts to Oak Trees

No impacts to oak trees will occur.

6.0 Recommendations

In order to mitigate any potential impacts from project activities, the project should incorporate the following recommendations.

6.1 San Bernardino Aster

This species is not covered under the Western Riverside MSHCP but through participation in the plan, and the land acquisition and preservation by the plan, this species would be adequately covered.

6.2 Western Riverside MSHCP Covered Species

- Cooper's Hawk, Bell's Sage Sparrow, Coastal horned lizard, Orange-throat Whiptail, Coastal Whiptail, Red-diamond Rattlesnake, California Horned Lark, San Diego Black-tailed Jackrabbit are fully covered species under the Western Riverside MSHCP. The proposed project must be consistent with the Western Riverside MSHCP. Payment of the appropriate development mitigation fees will mitigate any impacts to these species. A fee schedule can be found in the Local Development Mitigation Fee Schedule for Fiscal Year 2015.

- Three days prior to any ground disturbing activities or vegetation removal, a qualified biological monitor should conduct a preconstruction survey to identify any sensitive biological resources to flag for avoidance. Any reptile species that may be present within the project area shall be relocated outside of the impact areas.

6.3 Nesting birds

- It is recommended that vegetation removal be conducted outside of the nesting season for migratory birds to avoid direct impacts. The migratory bird nesting season is between February 1 and September 15.

- If vegetation removal will occur during the migratory bird nesting season, between February 1 and September 15, it is recommended that pre-construction nesting bird surveys be performed within three days prior to vegetation removal.

- If active nests are found during nesting bird surveys, they shall be flagged and a 200-foot buffer shall be fenced around the nests.

- A biological monitor shall visit the site once a week during ground disturbing activities to ensure all fencing is in place and no sensitive species are being impacted.

6.4 State and Federal Drainages

- The project proponent shall consult with the California Department of Fish and Wildlife, the U.S. Army Corps of Engineers, and the Santa Ana Regional Water Quality Control Board to determine the need for permits that must be obtained prior to initiation of construction of the proposed project.
- The loss of Western Riverside MSHCP riverine resources will require preparation of an MSHCP Determination of Biologically Equivalent or Superior Preservation (DBESP).

7.0 Certification

*"**CERTIFICATION**: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief."*

Signed 

PROJECT MANAGER

Fieldwork Performed By:

Juan Hernandez

PRINCIPAL BIOLOGIST

Hernandez Environmental Services
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909.772.9009

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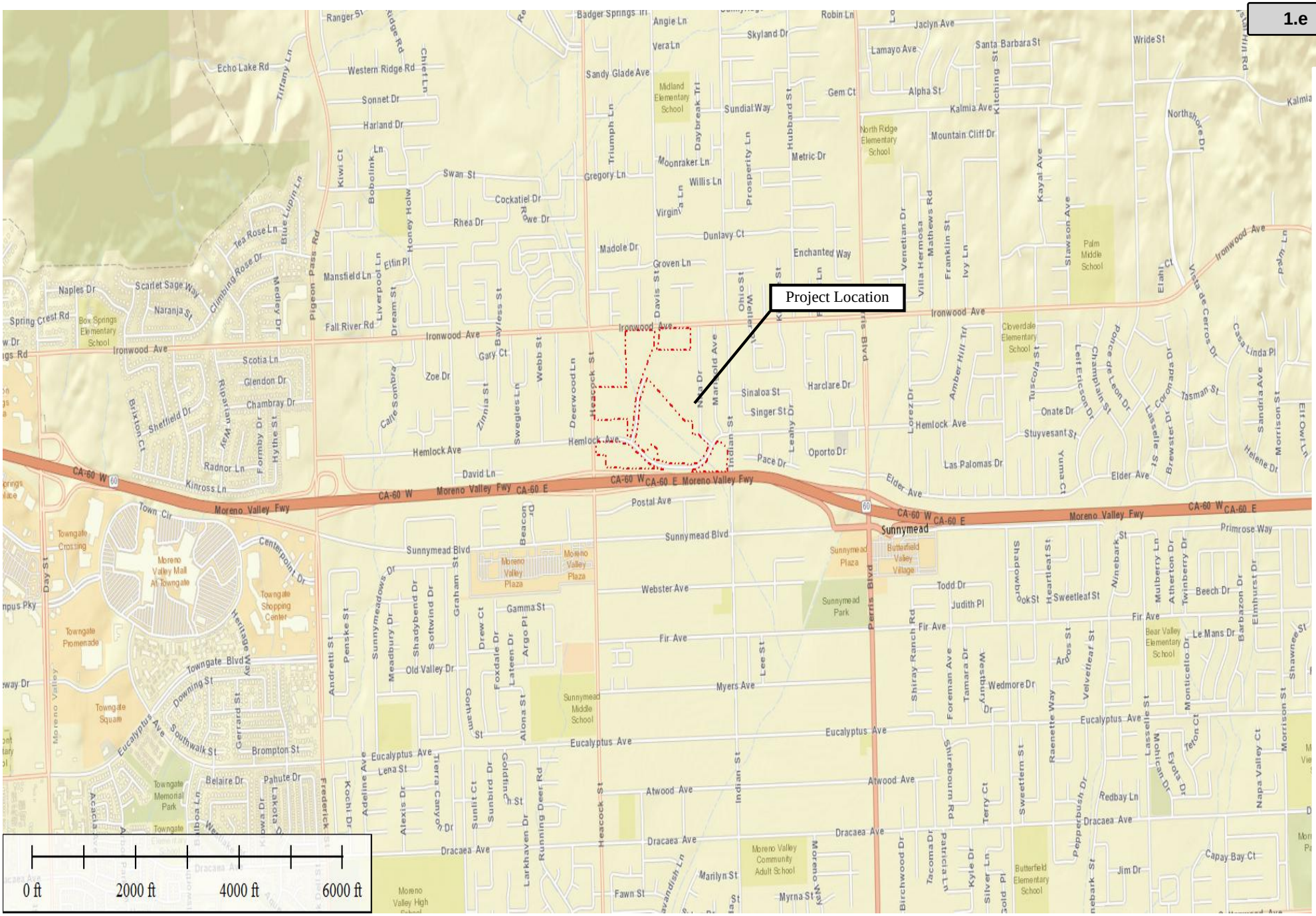
FIGURES



Legend

Property Boundary

N

Hernandez Environmen Services

Figure 1

Location Map
Moreno Valley Festival
City of Moreno Valley, Riverside County, CA

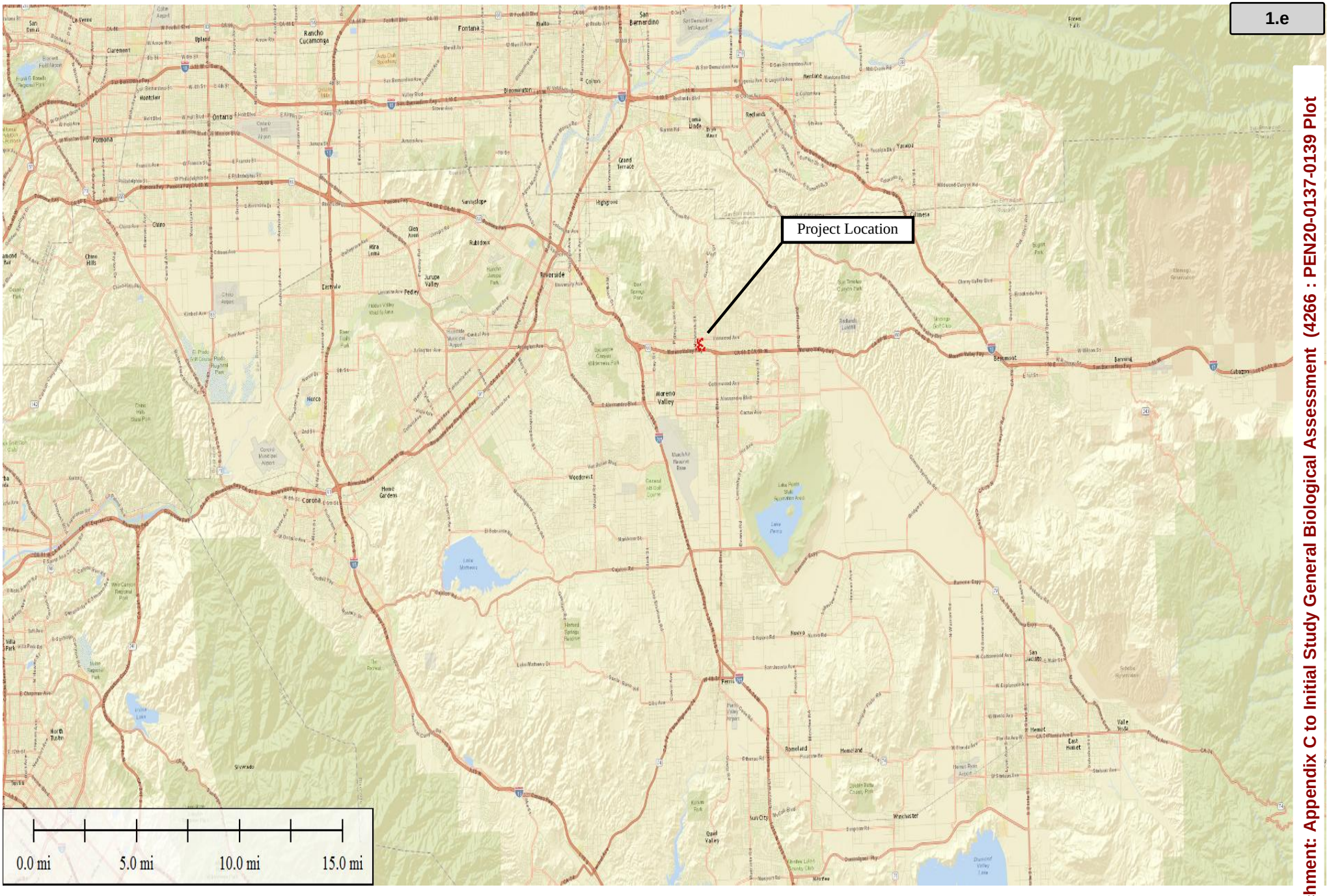


Figure 2

Vicinity Map
Moreno Valley Festival
City of Moreno Valley, Riverside County, CA

Legend

Property Boundary

N

Hernandez Environmen Services

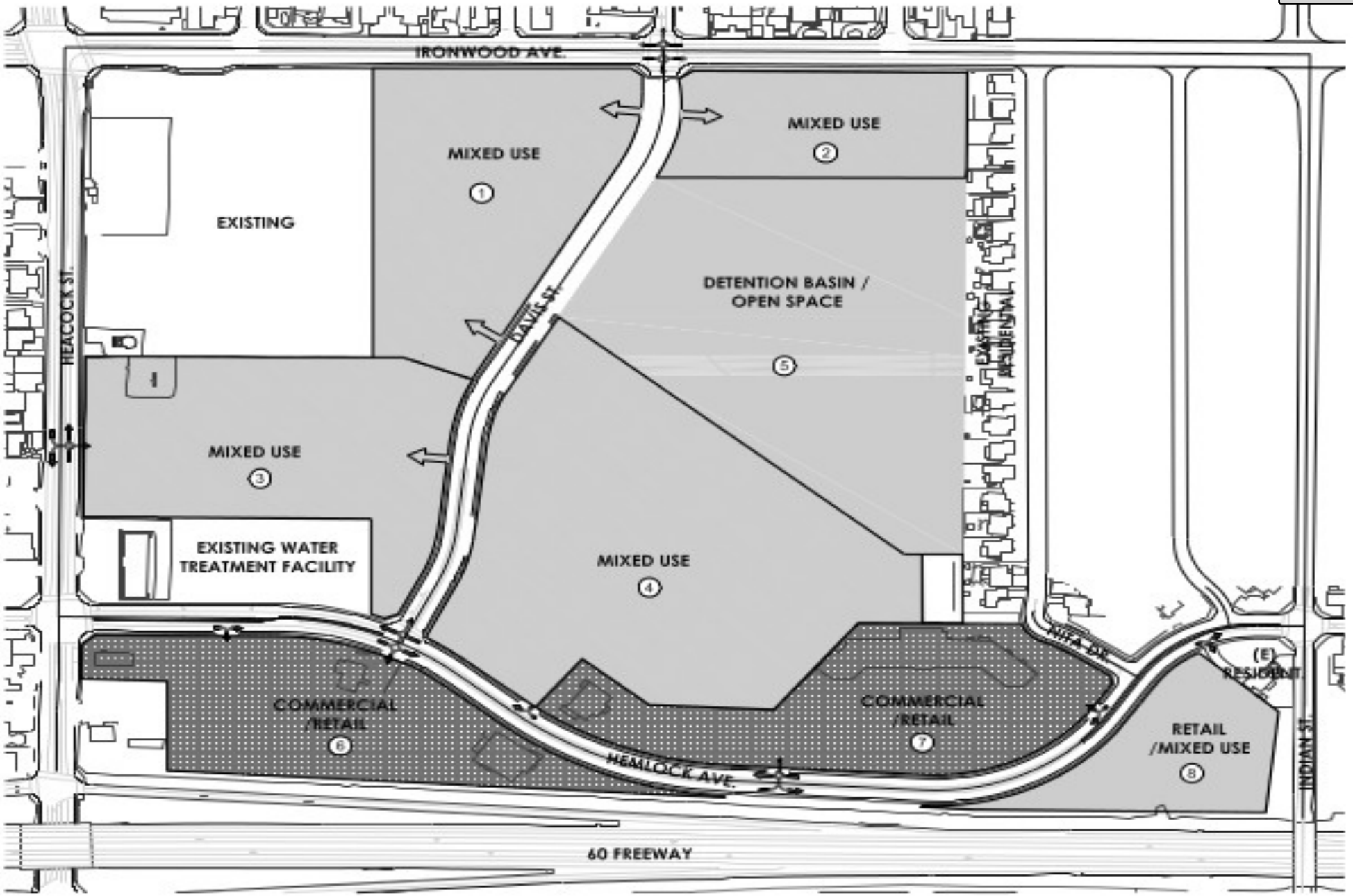


Figure 3

Project Plans
Moreno Valley Festival
City of Moreno Valley, Riverside County, CA

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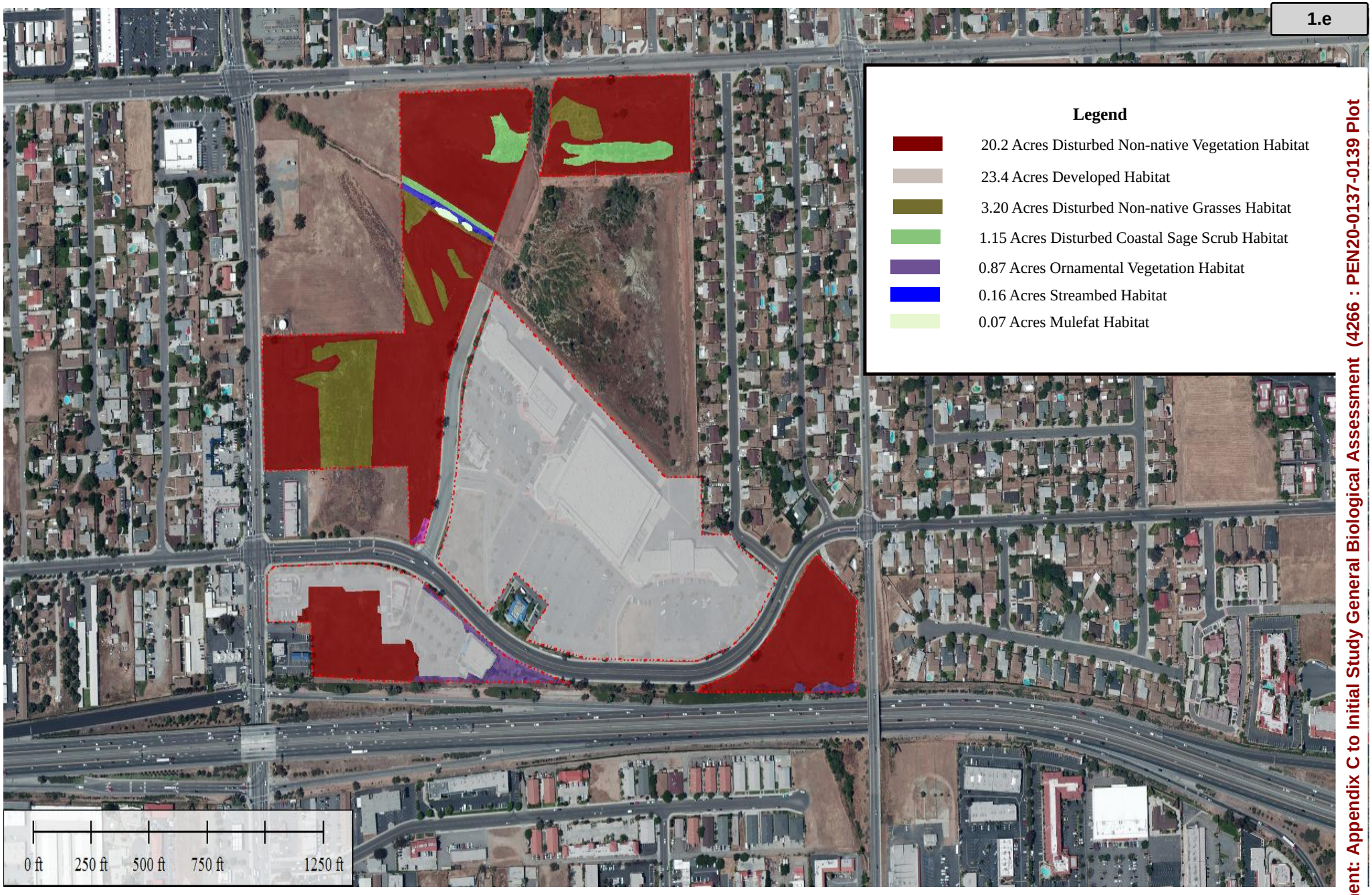


Figure 4

Habitat Map
Moreno Valley Festival
City of Moreno Valley, Riverside County, CA

Hernandez Environmen Services

Appendix A Species List

Plant List

Acmispon strigosus	Lotus
Amaranthus sp.	Pigweed
Ambrosia psilostachya	Western ragweed
Avena barbata	Oats
Baccharis salicifolia	Mulefat
Brassica nigra	Black mustard
Brassica tournefortii	Common mustard
Bromus diandrus	Ripgut brome
Bromus hordeaceus	soft chess
Bromus madritensis	Foxtail
Chamaesyce prostata	Prostate spurge
Centaurea melitensis	Tacalote
Cirsium vulgare	Bull thistle
Convolvulus arvensis	Field bindweed
Cucurbita foetidissima	Gord
Datura stramonium	Jimson weed
Deinandra fasciculata	Tarweed
Encelia farinosa	Brittlebush
Erigeron canadensis	Horseweed
Eriogonum fasciculatum	California buckwheat
Erodium cicutarium	Filaree
Eucalyptus sp.	Eucalyptus
Helianthus petiolaris	Sunflower
Hirschfeldia incana	Mustard

Hordeum murinum	Foxtail barley
Hordeum vulgare	Barley
Isocoma menziesii	Goldenbush
Malva parviflora	Cheeseweed
Marrubium vulgare	Horehound
Nerium oleander	Oleander
Nicotina glauca	Tree tabacco
Ricinus communis	Castor bean
Rumex crispus	Curly dock
Salix laevigata	Red Willow
Salix lasiolepsis	Arroyo Willow
Salsola tragus	Russian Thistle
Salvia apiana	White sage
Salvia mellifera	Black sage
Sambucus mexicana	Mexican elderberry
Schinus molle	Peruvian pepper tree
Tribulus terrestris	Puncture vine
Trichostema lanceolatum	Vinegar weed
Washingtonia robusta	Mexican Fan palm

Animal List

Aphelocoma californiaca	Western scrub jay
Buteo jamaicensis	Red-tailed Hawk
Calypte anna	Anna's hummingbird
Canis latrans	Coyote
Corvus corax	Raven
Corvus brachyrhynchos	Crow
Hirundo rustica	Barn swallow
Mimus polyglottos	Mocking bird

Passer domesticus	House Sparrow
Sayornis nigricans	Black phoebe
Sceloporus occidentalis	Western fence lizard
Streptopelia decaocto	Euroasian collard dove
Sylvilagus audubonii	Desert cottontail
Thomomys bottae	Botha's pocket gopher
Tyrannus verticalis	Western kingbird
Zenaida macroura	Mourning dove

Appendix A Species List

Plant List

Acmispon strigosus	Lotus
Amaranthus sp.	Pigweed
Ambrosia psilostachya	Western ragweed
Avena barbata	Oats
Baccharis salicifolia	Mulefat
Brassica nigra	Black mustard
Brassica tournefortii	Common mustard
Bromus diandrus	Ripgut brome
Bromus hordeaceus	soft chess
Bromus madritensis	Foxtail
Chamaesyce prostata	Prostate spurge
Centaurea melitensis	Tacalote
Cirsium vulgare	Bull thistle
Convolvulus arvensis	Field bindweed
Cucurbita foetidissima	Gord
Datura stramonium	Jimson weed
Deinandra fasciculata	Tarweed
Encelia farinosa	Brittlebush
Erigeron canadensis	Horseweed
Eriogonum fasciculatum	California buckwheat
Erodium cicutarium	Filaree
Eucalyptus sp.	Eucalyptus
Helianthus petiolaris	Sunflower
Hirschfeldia incana	Mustard

Hordeum murinum	Foxtail barley
Hordeum vulgare	Barley
Isocoma menziesii	Goldenbush
Malva parviflora	Cheeseweed
Marrubium vulgare	Horehound
Nerium oleander	Oleander
Nicotina glauca	Tree tabacco
Ricinus communis	Castor bean
Rumex crispus	Curly dock
Salix laevigata	Red Willow
Salix lasiolepsis	Arroyo Willow
Salsola tragus	Russian Thistle
Salvia apiana	White sage
Salvia mellifera	Black sage
Sambucus mexicana	Mexican elderberry
Schinus molle	Peruvian pepper tree
Tribulus terrestris	Puncture vine
Trichostema lanceolatum	Vinegar weed
Washingtonia robusta	Mexican Fan palm

Animal List

Aphelocoma californiaca	Western scrub jay
Buteo jamaicensis	Red-tailed Hawk
Calypte anna	Anna's hummingbird
Canis latrans	Coyote
Corvus corax	Raven
Corvus brachyrhynchos	Crow
Hirundo rustica	Barn swallow
Mimus polyglottos	Mocking bird

Passer domesticus	House Sparrow
Sayornis nigricans	Black phoebe
Sceloporus occidentalis	Western fence lizard
Streptopelia decaocto	Euroasian collard dove
Sylvilagus audubonii	Desert cottontail
Thomomys bottae	Botha's pocket gopher
Tyrannus verticalis	Western kingbird
Zenaida macroura	Mourning dove

APPENDIX B

Plants

Scientific Name	Common Name	Federal Listing	State Listing	CNPS Listing	Other Status	Habitat	Potential for Presence
Abronia villosa var. aurita	chaparral sand-verbena	None	None	1B.1	BLM_S-Sensitive | USFS_S-Sensitive	Sandy places in coastal-sage scrub, chaparral; Elevation: < 1600 m. Flowering Time: Mar--Aug	**Habitat too disturbed, disked, and no sandy areas. Not present.**
Allium munzii	Munz's onion	Endangered	Threatened	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Grassy openings in coastal-sage scrub; Elevation: 300--900 m. Flowering Time: Apr--May	**Habitat too disturbed and disked. Not present.**
Ambrosia pumila	San Diego ambrosia	Endangered	None	1B.1		Disturbed sites; Elevation: 50--600 m. Flowering Time:Apr--Jul	**Not inside narrow endemic plant survey area. Not present.**
Arenaria paludicola	marsh sandwort	Endangered	Endangered	1B.1	SB_SBBG-Santa Barbara Botanic Garden	Wet meadows, marshes; Elevation: < 300 m. Flowering Time: Late spring—summertime	**Project area too disturbed. Basin is maintained. Not present.**
Astragalus hornii var. hornii	Horn's milk-vetch	None	None	1B.1	BLM_S-Sensitive	Salty flats, lake shores; Elevation: 60--300 m. Flowering Time: May--Sep	**No habitat present. Not present.**
Astragalus pachypus var. jaegeri	Jaeger's milk-vetch	None	None	1B.1	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Rocky or sandy areas; Elevation: 450--1200 m. Flowering Time: Dec--Jun	**Habitat too disturbed and disked Not present.**
Atriplex coronata var. notatior	San Jacinto Valley crownscale	Endangered	None	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Alkaline flats; Elevation: 400--500 m. Flowering Time: Apr--Aug	**No habitat present. Not present.**

Plants

Atriplex parishii	Parish's brittlescale	None	None	1B.1	USFS_S-Sensitive	Alkaline or clay soils; Elevation: < 470 m. Flowering Time: Jun--Oct	**No habitat present. Not present.**
Atriplex serenana var. davidsonii	Davidson's saltscale	None	None	1B.2		Bluffs; Elevation: < 200 m. Flowering Time: Apr--Oct	**No habitat present. Not present.**
Berberis nevinii	Nevin's barberry	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Sandy to gravelly soils, washes, chaparral; Elevation: < 650 m. Flowering Time: Mar--May	**No habitat present. Not present.**
Brodiaea filifolia	thread-leaved brodiaea	Threatened	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Grassland, vernal pools; Elevation: 25--860 m. Flowering Time: Mar--Jun	**Project area too disturbed. Basin is maintained. Not present.**
California macrophylla	round-leaved filaree	None	None	1B.1	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Open sites, grassland, scrub; Elevation: < 1200 m. Flowering Time: Mar--Jul	**Habitat too disturbed and disked Not present.**
Calochortus plummerae	Plummer's mariposa-lily	None	None	4.2	SB_RSABG-Rancho Santa Ana Botanic Garden	Dry, rocky chaparral, yellow-pine forest; Elevation: < 1700 m. Flowering Time: May--Jul	**No habitat present. Not present.**

Plants

Canyon Live Oak Ravine Forest	Canyon Live Oak Ravine Forest	None	None				**Not Present.**
Carex comosa	bristly sedge	None	None	2B.1		Wet places; Elevation: < 400 m. Flowering Time: Jul--Sep	**No habitat present. Not present.**
Caulanthus simulans	Payson's jewelflower	None	None	4.2	USFS_S-Sensitive	Chaparral, scrub, pinyon/juniper woodland; Elevation: 400--2200 m. Flowering Time: Mar--Jun	**Habitat too disturbed and disked Not present.**
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	Endangered	Endangered	1B.2	SB_RSABG-Rancho Santa Ana Botanic Garden	Coastal salt marsh; Elevation: < 10 m. Flowering Time: May--Oct	**No habitat present. Not present.**
Chorizanthe parryi var. parryi	Parry's spineflower	None	None	1B.1	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Sand; Elevation: 90--800 m. Flowering Time: May--Jun	**No habitat present. Not present.**
Chorizanthe polygonoides var. longispina	long-spined spineflower	None	None	1B.2	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden	Sand; Elevation: 30--1500 m. Flowering Time: Apr--Jun	**No habitat present. Not present.**
Chorizanthe xanti var. leucotheca	white-bracted spineflower	None	None	1B.2	BLM_S-Sensitive | USFS_S-Sensitive	Sand or gravel; Elevation: 400--1300 m. Flowering Time: Apr--Jun	**No habitat present. Not present.**

Plants

Cuscuta obtusiflora var. glandulosa	Peruvian dodder	None	None	2B.2		On herbs including Alternanthera, Dalea, Lythrum, Polygonum, Xanthium; Elevation: +- < 500 m. Time: Jul--Oct	**No habitat present. Not present.**
Dodecahema leptoceras	slender-horned spineflower	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Sand or gravel; Elevation: 200--700 m. Flowering Time: May--Jun	**No habitat present. Not present.**
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Endangered	Endangered	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Washes, floodplains, dry riverbeds; Elevation: < 500 m. Flowering Time: May--Sep	**No habitat present. Not present.**
Galium californicum ssp. primum	Alvin Meadow bedstraw	None	None	1B.2	BLM_S-Sensitive | USFS_S-Sensitive	Shade, lower elevations in Jeffrey-, Coulter-pine forests; Elevation: 1350--1700 m. Flowering Time: Mar--Jul	**No habitat present. Not present.**
Harpagonella palmeri	Palmer's grapplinghook	None	None	4.2	SB_RSABG-Rancho Santa Ana Botanic Garden	Dry, semi-barren sites in chaparral, coastal scrub, grassland; Elevation: < 1000m. Bioregional . Flowering Time: Mar--Apr	**Habitat too disturbed and disked Not present.**
Helianthus nuttallii ssp. parishii	Los Angeles sunflower	None	None	1A		Marshes; Elevation: < 500 m. Flowering Time: Aug--Oct	**No habitat present. Not present.**
Horkelia cuneata var. puberula	mesa horkelia	None	None	1B.1	USFS_S-Sensitive	Dry, sandy, coastal chaparral; Elevation: 70--870 m. Flowering Time: Mar--Jul	**Habitat too disturbed and disked Not present.**
Imperata brevifolia	California satintail	None	None	2B.1	SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Wet springs, meadows, streambanks, floodplains; Elevation: < 500 m. Bioregional Distribution: Flowering Time: Sep--May	**Site is too high in elevation for this species. Not present.**

Plants

Lasthenia glabrata ssp. coulteri	Coulter's goldfields	None	None	1B.1	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden	Saline places, vernal pools; Elevation: < 1000 m.Flowering Time: Apr--May	**No habitat present. Not present.**
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	None	None	4.3		Chaparral, coastal sage scrub, bollms Jan-July.	**Habitat too disturbed and disked Not present.**
Lycium parishii	Parish's desert-thorn	None	None	2B.3		Sandy to rocky slopes, canyons; Elevation: < 1000 m. Flowering Time: Mar--Apr	**No habitat present. Not present.**
Monardella macrantha ssp. hallii	Dicots	None	None	1B.3	SB_RSABG-Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral, woodland; Elevation: 600--2000 m. Flowering Time: May--Aug	**No habitat present. Not present.**
Myosurus minimus ssp. apus	Dicots	None	None	3.1		Vernal pools, flowers May-June.	**No habitat present. Not present.**
Nama stenocarpum	mud nama	None	None	2B.2		Intermittently wet areas; Elevation: < 810 m. Flowering Time: Mar--Oct	**No habitat present. Not present.**
Nasturtium gambelii	Gambel's water cress	Endangered	Threatened	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Marshes, streambanks, lake margins; Elevation: < 350 m. Flowering Time: May--Aug	**No habitat present. Not present.**

Navarretia fossalis	spreading navarretia	Threatened	None	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Vernal pools, ditches; Elevation: 30--1300 m. Flowering Time: Apr--Jun	**No habitat present. Not present.**
Ribes divaricatum var. parishii	Parish's gooseberry	None	None	1A		Moist woodland; Elevation: 60--310 m. Flowering Time: Mar--Apr Note: Possibly extinct.	**No habitat present. Not present.**
Riversidian Alluvial Fan Sage Scrub	Riversidian Alluvial Fan Sage Scrub	None	None				**Not Present.**
Sidalcea hickmanii ssp. parishii	Parish's checkerbloom	None	Rare	1B.2	BLM_S-Sensitive | SB_RSABG-Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Chaparral, woodland, open conifer forest; Elevation: 1000--2200 m. Flowering Time: Jun--Aug	**No habitat present. Not present.**
Sidalcea neomexicana	Salt Spring checkerbloom	None	None	2B.2	USFS_S-Sensitive	Alkaline springs, marshes; Elevation: generally < 1500 m. Flowering Time: Apr--Jun	**No habitat present. Not present.**
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	None	None				**Not Present.**
Southern Cottonwood Willow Riparian Forest	Southern Cottonwood Willow Riparian Forest	None	None				**Not Present.**

Plants

Southern Riparian Forest	Southern Riparian Forest	None	None				**Not Present.**
Southern Riparian Scrub	Southern Riparian Scrub	None	None				**Not Present.**
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	None	None				**Not Present.**
Southern Willow Scrub	Southern Willow Scrub	None	None				**Not Present.**
Sphenopholis obtusata	prairie wedge grass	None	None	2B.2		Wet meadows, streambanks, ponds; Elevation: 240--2870 m. Flowering Time: Apr--Jun	**No habitat present. Not present.**
Streptanthus campestris	southern jewelflower	None	None	1B.3	BLM_S-Sensitive | USFS_S-Sensitive	Open, rocky conifer forest, chaparral, woodland; Elevation: 900--2300 m. Flowering Time: May--Jun	**No habitat present. Not present.**
Symphyotrichum defoliatum	San Bernardino aster	None	None	1B.2	BLM_S-Sensitive | USFS_S-Sensitive	Grassland, disturbed places; Elevation: < 2050 m. Flowering Time: Jul--Nov	**Potentially present.**
Tortula californica	California screw moss	None	None	1B.2	BLM_S-Sensitive	sandy, soil, chenopod scrub, and valley foothill grasslands.	**No habitat present. Not present.**
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	None	None	2B.1		Moist places, drying riverbeds; Elevation: < 500 m. Flowering Time: May--Sep	**Site is too high in elevation for this species. Not present.**

Animals

Scientific Name	Common Name	Federal Listing	State Listing	Other Status	Habitat	Potential for Presence
Accipiter cooperii	Cooper's hawk	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern	Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	Nesting habitat present in Eucalyptus trees on and adjacent to project area.
Agelaius tricolor	tricolored blackbird	None	Endangered	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	Nests in freshwater marsh habitat wit Typha sp. And willows being dominant.	**No habitat for this species. Not present.**
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	None	None	CDFW_WL-Watch List	on steep, dry, rocky hillsides with plenty of grasses and a scattering of shrubs and small trees, such as sagebrush or scrub oaks. Recently burned areas can provide good, open habitat. The birds tend to avoid areas of dense shrubs.	**No habitat for this species. Not present.**

Anniella pulchra pulchra	silvery legless lizard	None	None	CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Occurs in moist warm loose soil with plant cover. Moisture is essential. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather often indicate suitable habitat. Often can be found under surface objects such as rocks, boards, driftwood, and logs.	**No habitat for this species. Not present.**
Antrozous pallidus	pallid bat	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority	The pallid bat is usually found in rocky, mountainous areas and near water. They are also found over more open, sparsely vegetated grasslands, and they seem to prefer to forage in the open.	**No habitat for this species. Not present.**

Aquila chrysaetos	golden eagle	None	None	BLM_S-Sensitive | CDF_S-Sensitive | CDFW_FP-Fully Protected | CDFW_WL-Watch List | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Golden Eagles live in open and semiopen country featuring native vegetation across most of the Northern Hemisphere. They avoid developed areas and uninterrupted stretches of forest. They are found primarily in mountains up to 12,000 feet, canyonlands, rimrock terrain, and riverside cliffs and bluffs. Golden Eagles nest on cliffs and steep escarpments in grassland, chapparal, shrubland, forest, and other vegetated areas.	**No habitat for this species. Not present.**
Artemisiospiza belli belli	Bell's sage sparrow	None	None	CDFW_WL-Watch List | USFWS_BCC-Birds of Conservation Concern	Nests in coastal sage scrub and chaparral.	**Some very disturbed coastal sage scrub is present. Potentially present.**
Asio otus	long-eared owl	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	require a combination of grassland or other open country for foraging, and dense tall shrubs or trees for nesting and roosting. Pine stands and windbreaks or shelterbelts are favored winter roost habitat.	**No habitat for this species. Not present.**

Animals

Aspidoscelis hyperythra	orangethroat whiptail	None	None	CDFW_SSC -Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	This species inhabits low-elevation coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitat	**Some very disturbed coastal sage scrub is present. Potentially present.**
Aspidoscelis tigris stejnegeri	coastal whiptail	None	None		Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas.	**Some habitat may be present. Potentially present.**
Athene cunicularia	burrowing owl	None	None	BLM_S-Sensitive | CDFW_SSC -Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Lives in dry, open areas with no trees and short grass.	**Surveys for this species were conducted on no burrowing owl were found. Not present.**
Buteo regalis	ferruginous hawk	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Open country, primarily prairies, plain and badlands, breeding in trees near streams or on steep slopes, sometimes on mounds in open desert.	**No nesting habitat for this species. Not present.**

Buteo swainsoni	Swainson's hawk	None	Threatened	BLM_S-Sensitive | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Swainson's Hawks favor open habitats for foraging.	**No nesting habitat for this species. Not present.**
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	None	None	CDFW_SSC-Species of Special Concern | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Coastal sage scrub with thickets of Opuntia sp.	**No nesting habitat for this species. Not present.**
Catostomus santaanae	Santa Ana sucker	Threatened	None	AFS_TH-Threatened | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable	Flowing perennial or intermittent southern California streams.	**No habitat for this species. Not present.**
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None	None	CDFW_SSC-Species of Special Concern	shrublands that vary from sparse desert shrublands to dense coastal scrub. Tends to be more abundant where rocks or shrubs provide cover. Lives in a variety of habitats: desert slopes, agave, rocky areas, coastal sage scrub, etc.	**No habitat for this species. Not present.**

Charina trivirgata	rosy boa	None	None	IUCN_LC-Least Concern | USFS_S-Sensitive	dry shrublands, desert, and near-desert areas. They are found among scattered rocks and boulders or on talus slopes. Preferred habitat is often on south-facing hillsides at elevations from sea level to over 2,000 meters. Rosy boas are rarely found far from rock cover. They seem to prefer habitats near free water, such as canyon or desert streams, but are not restricted to such areas.	**No habitat for this species. Not present.**
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threatened	Endangered	BLM_S-Sensitive | NABCI_RWL-Red Watch List | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Breeding habitat primarily consists of large blocks, or contiguous areas, of riparian habitat, particularly cottonwood–willow riparian woodlands.	**No habitat for this species. Not present.**
Crotalus ruber	red-diamond rattlesnake	None	None	CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Coastal sage scrub or chaparral with granite boulders.	**Some habitat may be present. Potentially present.**
Diadophis punctatus modestus	San Bernardino ringneck snake	None	None	USFS_S-Sensitive	Prefers moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, woodlands.	**No habitat for this species. Not present.**

Animals

Dipodomys stephensi	Stephens' kangaroo rat	Endangered	Threatened	IUCN_EN-Endangered	Typical habitat includes sparsely vegetated areas (perennial cover less than 30%) with loose, friable, well-drained soil (generally at least 0.5 m deep) and flat or gently rolling terrain.	**No habitat for this species. Not present.**
Elanus leucurus	white-tailed kite	None	None	BLM_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern	Commonly found in savanna, open woodlands, marshes, desert grassland, partially cleared lands, and cultivated fields.	**No nesting habitat for this species. Not present.**
Empidonax traillii extimus	southwestern willow flycatcher	Endangered	Endangered	NABCI_RWL-Red Watch List	Riparian forests.	**No nesting habitat for this species. Not present.**
Emys marmorata	western pond turtle	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive	Found in ponds, lakes, streams, large rivers, slow-moving sloughs, and quiet waters. The turtles prefer aquatic habitats with exposed areas for basking, with aquatic vegetation, such as algae and other water plants, but they also live in clear waters, especially where there is cover such as boulders or fallen trees in the waterThe western pond turtle also spends significant amounts of time in upland terrestrial habitats and has been found more than one kilometre from water.	**No nesting habitat for this species. Not present.**

Animals

Eremophila alpestris actia	California horned lark	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern	Open areas dominated by sparse low herbaceous vegetation or widely scattered low shrubs. Nests in hollow on ground often next to grass tuft or clod of earth or manure.	**Habitat for this species is present. Potentially present.**
Eumops perotis californicus	western mastiff bat	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | WBWG_H-High Priority	present only where there are significant rock features offering suitable roosting habitat. It is found in a variety of habitats, from desert scrub to chaparral to oak woodland and into the ponderosa pine belt.	**No habitat for this species. Not present.**
Euphydryas editha quino	quino checkerspot butterfly	Endangered	None	XERCES_CI-Critically Imperiled	The larvae may use either Plantago erecta or Castilleja exserta, both of which may be common in meadows and upland sage scrub/chapparal habitat.	**No habitat for this species. Not present.**
Gila orcuttii	arroyo chub	None	None	AFS_VU-Vulnerable | CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	southern California coastal drainages.	**No habitat for this species. Not present.**

Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	BLM_S-Sensitive | CDF_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	generally found close to water	**No habitat for this species. Not present.**
Icteria virens	yellow-breasted chat	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Riparian forests.	**No habitat for this species. Not present.**
Lampropeltis zonata (parvirubra)	California mountain kingsnake (San Bernardino population)	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Found in diverse habitats including coniferous forest, oak-pine woodlands, riparian woodland, chaparral, manzanita, and coastal sage scrub. Wooded areas near a stream with rock outcrops, talus or rotting logs that are exposed to the sun are good places to find this snake.	**No habitat for this species. Not present.**

Animals

Lanius ludovicianus	loggerhead shrike	None	None	CDFW_SSC -Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Open country with scattered shrubs and trees is the typical habitat of Loggerhead Shrike, but the species can also be found in more heavily wooded habitats with large openings and in very short habitats with few or no trees.	**No habitat for this species. Not present.**
Lasiurus xanthinus	western yellow bat	None	None	CDFW_SSC -Species of Special Concern | IUCN_LC-Least Concern | WBWG_H-High Priority	This species occupies a range of habitats of extremely arid areas to dry areas. It inhabits savannas, secluded woodlands, regions dominated by pasture or croplands, and even tolerates residential areas. It is insectivorous. It often roosts in trees.	**Very limited roosting habitat for this species. Potentially present.**
Leptonycteris yerbabuenae	lesser long-nosed bat	Endangered	None	IUCN_VU-Vulnerable | WBWG_H-High Priority	This bat roosts in caves and mines, often in colonies of several thousand.	**No habitat for this species. Not present.**
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None	None	CDFW_SSC -Species of Special Concern	Chaparral and coastal sage scrub.	**Very limited habitat for this species. Potentially present.**
Neotoma lepida intermedia	San Diego desert woodrat	None	None	CDFW_SSC -Species of Special Concern	Chaparral and coastal sage scrub.	**No habitat for this species. Not present.**

Nyctinomops femorosaccus	pocketed free-tailed bat	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | WBWG_M-Medium Priority	Roosts in caves, rock crevices in cliff faces, and man-made structures.	**No habitat for this species. Not present.**
Onychomys torridus ramona	southern grasshopper mouse	None	None	CDFW_SSC-Species of Special Concern	Believed to inhabit flat, sandy, valley floor habitats	**No habitat for this species. Not present.**
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None	None	CDFW_SSC-Species of Special Concern	includes lower elevation grassland, alluvial sage scrub, and coastal sage scrub.	**No habitat for this species. Not present.**
Phrynosoma blainvillii	coast horned lizard	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills.	**Very limited habitat for this species. Potentially present.**
Plegadis chihi	white-faced ibis	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern	Found in marsh habitat.	**No habitat for this species. Not present.**

Polioptila californica californica	coastal California gnatcatcher	Threatened	None	CDFW_SSC -Species of Special Concern | NABCI_YWL-Yellow Watch List	Coastal sage scrub.	**No habitat for this species. Not present.**
Rana muscosa	southern mountain yellow-legged frog	Endangered	Endangered	CDFW_SSC -Species of Special Concern | IUCN_EN-Endangered | USFS_S-Sensitive	Rocky stream courses in southern California perennial or intermittent streams.	**No habitat for this species. Not present.**
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	Endangered	None		Habitat consists of Delhi sands.	**No habitat for this species. Not present.**
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	None	None	AFS_TH-Threatened | CDFW_SSC -Species of Special Concern | USFS_S-Sensitive	Cobble and rock southern California intermittent and perennial streams.	**No habitat for this species. Not present.**
Setophaga petechia	yellow warbler	None	None	CDFW_SSC -Species of Special Concern | USFWS_BCC-Birds of Conservation Concern	Riparian scrub and thickets.	**No habitat for this species. Not present.**

Spea hammondii	western spadefoot	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	Upland coastal sage scrub and needs vernal or seasonal pools to breed.	**No habitat for this species. Not present.**
Spinus lawrencei	Lawrence's goldfinch	None	None	IUCN_LC-Least Concern | NABCI_YWL-Yellow Watch List | USFWS_BCC-Birds of Conservation Concern	Open woodlands, chaparral, and weedy fields.	**Very limited habitat for this species in the basin. Potentially present.**
Streptocephalus woottoni	Riverside fairy shrimp	Endangered	None	IUCN_EN-Endangered	Vernal pool habitat.	**No habitat for this species. Not present.**
Taxidea taxus	American badger	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Coastal sage scrub, chaparral, mountain woodlands, desert habitat.	**No habitat for this species. Not present.**

Animals

Thamnophis hammondii	two-striped garter snake	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Generally found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest.	**No habitat for this species. Not present.**
Vireo bellii pusillus	least Bell's vireo	Endangered	Endangered	IUCN_NT-Near Threatened | NABCI_YWL-Yellow Watch List	Riparian areas dominated by mulefat and willows.	**No habitat for this species. Not present.**

APPENDIX C

Moreno Valley Trails
Site Photographs

Hernandez Environmental Services

Disturbed non-native vegetation habitat.

Disturbed non-native grass habitat.

Moreno Valley Trails
Site Photographs

Hernandez Environmental Services

Disturbed coastal sage scrub habitat.

Stream habitat with nmulefat habitat to the center right.

Moreno Valley Trails
Site Photographs

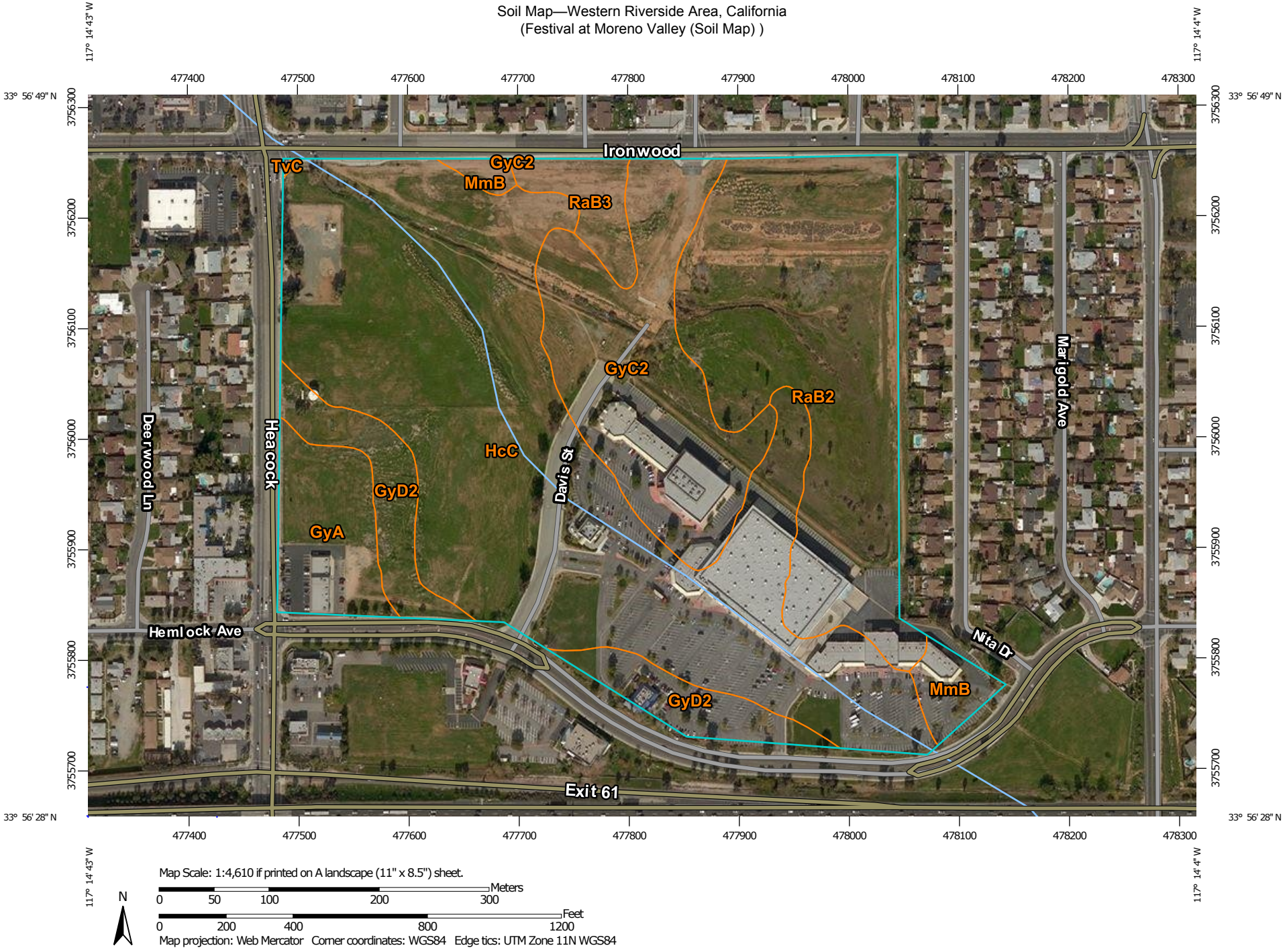
Hernandez Environmental Services

Ornamental habitat

Disturbed non-native vegetation habitat with euclyptus tree and developed portions of property.

APPENDIX D

Soil Map—Western Riverside Area, California
(Festival at Moreno Valley (Soil Map))



Map Scale: 1:4,610 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 7, Sep 17, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 14, 2015—Jan 21, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Western Riverside Area, California (CA679)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
GyA	Greenfield sandy loam, 0 to 2 percent slopes	3.5	5.2%
GyC2	Greenfield sandy loam, 2 to 8 percent slopes, eroded	9.9	14.7%
GyD2	Greenfield sandy loam, 8 to 15 percent slopes, eroded	4.6	6.9%
HcC	Hanford coarse sandy loam, 2 to 8 percent slopes	30.8	45.7%
MmB	Monserate sandy loam, 0 to 5 percent slopes	1.4	2.1%
RaB2	Ramona sandy loam, 2 to 5 percent slopes, eroded	15.6	23.1%
RaB3	Ramona sandy loam, 0 to 5 percent slopes, severely eroded	1.6	2.4%
TvC	Tujunga loamy sand, channeled, 0 to 8 percent slopes	0.0	0.0%
Totals for Area of Interest		**67.4**	**100.0%**

JURISDICTIONAL DELINEATION REPORT FOR THE MORENO VALLEY FESTIVAL CITY OF MORENO VALLEY, CALIFORNIA

Prepared By:

Juan Hernandez
Hernandez Environmental Services
29376 North Lake Drive
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Prepared for:

Moreno Valley Festival, LTD
1072 Bristol Street, Suite 100
Costa Mesa, CA 92626

November 2015

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1.0 INTRODUCTION

1.1 Project Location

The project site is located in the City of Moreno Valley in Riverside County at the southeast intersection of Heacock Street and Ironwood Avenue (Figure 1). The southern boundary is defined by the Moreno Valley Freeway (CA-60). The project site consists of 15 parcels totaling approximately 49.0 acres. Approximately 27.21 acres are developed with the existing Festival Shopping Center and commercial development south of Hemlock Avenue; the remaining 22.39 acres are undeveloped and vacant (Figure 2). The site is located within the United States Geological Survey (USGS) 7.5-Minute Topographic Map Sunnymead Quadrangle. The approximate center point is 33°56'28"N, 117°14'33"W.

1.2 Project Description

The Moreno Valley Festival project consists of a commercial/retail and mixed use development (Figure 3). The plan area includes approximately 49.0 acres; a portion of the site is currently developed with the Festival Shopping Center on the north side of Hemlock Street and with a fast food establishment and miscellaneous commercial development on the south side of Hemlock Street.

1.3 Environmental Setting

The project site is located in a heavily urbanized area in the City of Moreno Valley. The project site has residential homes to the north, residential homes to the east, residential homes to the west, and CA-60 and commercial properties to the south. The project site has been heavily disturbed and no quality native habitat remains onsite. Portions of the property have already been developed with commercial/retail buildings. Other portions of the property consist of vacant, disked lots. The elevation of the project site varies from 1,674 feet above sea level (ASL) to 1,641feeet ASL. There is a small, disturbed, non-meandering ephemeral drainage located in the northwest portion of the property. The drainage crosses the project site from west to east and empties into Indian Basin.

1.4 Purpose of Jurisdictional Delineation

The purpose of this jurisdictional delineation is to:

- Determine if any state or federal jurisdictional waters are present within the project site boundaries;
- Quantify any impacts to jurisdictional waters due to the proposed project, if possible;
- Determine if the project will require state or federal permits for impacts to

jurisdictional waters; and

- Recommend mitigation measures to offset impacts to state or federal jurisdictional waters.

2.0 REGULATORY BACKGROUND

2.1 California Department of Fish and Wildlife Section 1602 of the California Fish and Game Code

The California Department of Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the California Fish and Game Code (F&GC) requires that the CDFW be consulted if a proposed development project has the potential to detrimentally affect a stream, and thereby, wildlife resources that depend upon a stream for continued viability (F&GC Division 2, Chapter 5, Section 1600- 1616). A Section 1602 Lake or Streambed Alteration Agreement is required should the CDFW determine that the proposed project may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit debris, waste, or other materials that could pass into any river, stream, or lake.

For the purposes of clarification, a stream is defined by the CDFW as "a body of water that flows perennially or episodically and that is defined by the area in which water currently flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical or biological indicators." The historic hydrologic regime is defined as circa 1800 to the present (CDFW 2010).

2.2 Regional Water Quality Control Board Clean Water Act Section 401/Porter Cologne Act

The Regional Water Quality Control Board (RWQCB) regulates activities pursuant to Section 401(a)(1) of the federal Clean Water Act, as well as the Porter Cologne Act (Water Code Section 13260). Section 401 of the Clean Water Act specifies that certification from the State is required for any project requesting a federal license or permit to conduct any activities including, but not limited to, the construction or operation of facilities that may result in any discharge into navigable waters. The certification shall originate from the State in which the discharge

originates from, or will originate from, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable water at the point where the discharge originates or will originate. Any such discharges will comply with the applicable provisions of sections 301, 302, 303, 306, and 307 of the Clean Water Act. The Porter Cologne Water Quality Control Act requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge." Discharge of fill material into "waters" of the State, which does not fall under the jurisdiction of the United States Army Corps of Engineers (USACE) pursuant to Section 401 of the Clean Water Act, may require authorization through application of waste discharge requirements or through waiver of waste discharge requirements.

2.2.1 Santa Ana Region Basin Plan

The Santa Ana Region Basin Plan (Basin Plan) reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act, by establishing water quality standards for groundwater and surface waters of the region. The Basin Plan recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems. The Basin Plan includes an implementation plan design the actions by the Regional Board and others that are necessary to achieve and maintain the water quality standards.

The term "water quality standards," as used in the federal Clean Water Act, includes both the beneficial uses of specific waterbodies and the levels of quality which must be met and maintained to protect those uses.

The project site is located within Hydrologic Unit 802.11 and within the Perris North groundwater management zone of the Santa Ana Regional Water Quality Control Board Basin Plan. The following Beneficial Uses are identified to occcur in the Perris North groundwater management zone:

MUN	**Municipal and Domestic Supply** waters are used for community, military, municipal or individual water supply systems. These uses may include, but are not limited to, drinking water supply.
AGR	**Agricultural Supply** waters are used for farming, horticulture or ranching. These uses may include but are not limited to, irrigation, stock watering, and support of vegetation for range grazing.
IND	**Industrial Service Supply** waters are used for industrial activities that do not depend primarily on water quality. These uses may include but are not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection and oil well repressurization.
PROC	**Industrial Process Supply** waters are used for industrial activities that depend primarily on water quality. These uses may include, but are not limited to, process water supply and all uses of water related to product manufacture or food preparation.

2.3 United States Army Corps of Engineers Clean Water Act Section 404

The USACE regulates "discharge of dredged or fill material" into wetlands and "waters of the United States" (WUS).

2.3.1 Waters of the United States

The term WUS is defined as:

- All waters currently used, or used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation, or destruction of which could affect foreign commerce including any such waters, (1) which could be used by interstate or foreign travelers for recreational or other purposes; or (2) from which fish or shellfish are, or could be, taken and sold in interstate or foreign commerce; or (3) which are used or could be used for industries in interstate commerce.
- All other impoundments of waters otherwise defined as WUS under the definition;

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- Tributaries of waters identified above;
- The territorial seas; and
- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in the paragraphs above (33 Code of Federal Regulations [CFR] Part 328.3(a)).

2.3.2 Wetlands

According to the USACE manual (USACE 1987), wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions."

Wetlands are delineated using three parameters: hydrophytic vegetation, wetland hydrology, and hydric soils. According to the USACE, indicators for all three parameters must be present to qualify a wetland. The definition of a wetland includes the phrase "under normal circumstances," because there are situations in which the vegetation of a wetland has been removed or altered as a result of a recent natural event or human activities (USACE 1987).

Atypical situations and problem areas may lack one or more of the three criteria and still be considered wetlands. Background information on the previous condition of the area and/or field observations may indicate that the site meets the wetland criteria prior to disturbance. Additional delineation procedures would be employed if normal circumstances did not occur on a site. For the project survey area, atypical situations or problem areas do not occur, as normal circumstances are present.

2.3.3 Vernal Pools

On November 25, 1997, the USACE issued Regional General Condition #1: Vernal Pool Notification, to address discharge of dredged or fill material into any vernal pool. In that special public notice, the USACE defines vernal pools as:

> Wetlands that seasonally pond in small depressions as a result of a shallow, relatively impermeable layer that restricts downward percolation of water. The dominant water source for vernal pools is precipitation with pools typically filling after fall and winter rains and evaporating during spring and summer. These seasonal ponds are fragile, easily disturbed ecosystems that provide habitat for indigenous specialized assemblages of flora and fauna, including several species,

which are either proposed or already federally listed as threatened or endangered. (USACE 1997)

The USACE included a list of vernal pool "indicator species" in the 1997 notice. The presence of any one of the indicators could be used to bypass the normal hydric soil, wetland hydrology, and hydrophytic vegetation requirements to identify a jurisdictional vernal pool.

2.3.4 Regulatory Definition

In accordance with Section 404 of the Clean Water Act, the term "fill" is defined as material placed in WUS where the material has the effect of:

- Replacing any portion of a WUS with dry land; or
- Changing the bottom elevation of any portion of a WUS.

Examples of such fill material include, but are not limited to: rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the WUS. The term fill material does not include trash or garbage.

The definition of "discharge of dredged material" is defined as any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the WUS. The term includes, but is not limited to, the following:

- The addition of dredged material to a specified discharge site located in WUS;
- The runoff or overflow, associated with a dredging operation, from a contained land or water disposal area; and
- Any addition, including redeposit other than incidental fallback, of dredged material, including excavated material, into WUS which is incidental to any activity, including mechanized land clearing, ditching, channelization, or other excavation.

The term discharge of dredged material does not include the following:

- Discharges of pollutants into WUS resulting from the onshore subsequent processing of dredged material that is extracted for any commercial use (other than fill). These discharges are subject to section 402 of the Clean Water Act even though the extraction and deposit of such material may require a permit from the Corps or applicable State.

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- Activities that involve only the cutting or removing of vegetation above the ground (e.g., mowing, rotary cutting, and chain-sawing) where the activity neither substantially disturbs the root system nor involves mechanized pushing, dragging, or other similar activities that redeposit excavated soil material.
- Incidental fallback.

3.0 METHODOLOGY

3.1 Literature Review

Prior to the site visit, a literature review was conducted to aid in determining the potential for permanent, intermittent, or ephemeral drainages, wetlands, and riparian vegetation. Project background documents, topographic maps, satellite imaging, soils maps, and land use maps were examined to establish an accurate project area location, project description, potential for on-site drainages and wetlands, records of on-site vegetation, watershed, soils, and surrounding land uses.

3.2 Field Survey

On August 26, 2015, Hernandez Environmental Services conducted a field survey of the project areas in order to delineate jurisdictional drainages and wetland resources associated with jurisdictional drainages.

Jurisdictional drainages were identified by looking for features such as a bed, bank, or channel. Where riparian vegetation was present, the drip line of the outer edge of the vegetation was used as the measuring criteria. Furthermore, the presence of an ordinary high water mark (OHWM) was recorded. The OHWM is defined as:

> On non-tidal rivers, the line on the shore established by the fluctuations of water and indicated by the physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding area.

Where the presence of an OHWM was evident, a measurement was taken for the width of the OHWM and recorded. Areas measured were also recorded using a hand-held GPS for accurate location reference.

Where changes in plant community composition were apparent, the area was examined for the possibility of wetlands. Whether or not adjacent to WUS, the potential wetland area was evaluated for the presence of the three wetland indicators: hydrology, hydric soils, and hydrophytic vegetation. The guidelines followed are those established in the 1987 USACE Manual.

4.0 RESULTS

A description of the soil types, the local hydrology, and the major vegetation types observed in each of the project areas are presented below.

4.1 Soils

The Natural Resources Conservation Service Web Soil Survey identified eight (8) soil types within the GBA 62.50-acre study area. The following soil types are identified in the Soil Survey: Greenfield sandy loam(GyA), 0 to 2 percent slope; Greenfield sandy loam (GyC2), 2 to 8 percent slopes eroded,; Greenfield sandy loam (GyD2), 8 to 15 percent slopes, eroded; Hanford coarse sandy loam (HcC), 2 to 8 percent slopes; Monserate sandy loam, 0 to 5 percent slopes; Ramona sandy loam(RaB2), 2 to 5 percent slopes, eroded; Ramona sandy loam(RaB3), 0 to 5 percent slopes, severely eroded; Tujunga loamy sand (TvC), channeled, 0 to 8 percent slopes. Tujunga Loamy Sand (TvC), channeled 0 to 8 percent slope, is the only hydric soil in the study area. Refer to Appendix A.

4.2 Hydrology

Under existing conditions a culvert outlets under Ironwood Avenue to the project site's northwest corner. Ephemeral drainage flows from this culvert outlet diagonally across the project site to a 12.9-acre detention basin (Indian Detention Basin) located immediately adjacent to the project site on the north of the existing Festival Shopping Center parking lot. Flows from Indian Detention Basin continue beyond the basin and enters the Perris Valley Storm Drain. The Perris Valley Storm Drain enters the San Jacinto River Which enters Canyon Lake and Lake Elsinore. Eventually flow from the project site enters the Santa Ana River and the Pacific Ocean.

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4.3 Jurisdictional Areas

Jurisdiction has been delineated for the following agencies:

4.3.1 California Department of Fish and Wildlife

The project site contains approximately 0.23 acres of ephemeral drainage. Approximately 0.16 acre of the drainage is characterized by sandy streambed with small amounts of native and non-native vegetation. Vegetation species associated with this habitat include: Mexican fan palm (Washingtonia robusta), tree tabacco, horseweed (*Erigeron canadensis*), heliotrope (Heliotropium curassavicum), sunflower (Helianthus annus), and tamarisk (*Tamarix sp.*). Approximately 0.07 acres of the ephemeral drainage is characterized by riparian habitat dominated by mulefat (Baccharis salicifolia). The entire 0.23 acre ephemeral drainage would be under the jurisdiction of Section 1602 of the California Department of Fish and Game Code Lake and Streambed Alteration Agreement Program.

4.3.2 United States Army Corps of Engineers

The ephemeral drainage was determined to be a non-relatively permanent water that has no adjacent wetlands and flows directly or indirectly into a traditional navigable water. Approximately 0.20 acres of the ephemeral drainage are considered waters of the United States, which would be regulated under the Section 404 of the Clean Water Act and the United States Army Corps of Engineers. These waters were determined by identifying the ordinary high water mark within the banks of the ephemeral drainage. These waters eventually flow into the Pacific Ocean, but prior flow into Canyon Lake and Lake Elsinore.

4.3.3 Santa Ana Regional Water Quality Control Board

The ephemeral drainage was determined to be a non-relatively permanent water that has no adjacent wetlands and flows directly or indirectly into a traditional navigable water. Approximately 0.20 acres of the ephemeral drainage are considered waters of the United States, which would be regulated under Section 401 of the Clean Water Act and the Santa Ana Regional Water Quality Control Board. Any 404 permit issued for these waters would also require a 401 certification.

Table 1
Jurisdictional Areas

	CDFW	USACE	RWQCB
Jurisdictional Areas (Acres)	0.23	0.20	0.20

5.0 IMPACTS

Direct impacts to jurisdictional waters and wetlands are summarized in Table 2 and shown in Figures 4 and 5.

Table 2
Project Impacts to Jurisdictional Areas

	CDFW	USACE	RWQCB
Jurisdictional Area Impacts (Acres)	0.23	0.20	0.20

5.1 Impacts to California Department of Fish and Game Jurisdictional Areas

Development of the Moreno Valley Festival would result in direct impacts to 0.23 acres of state jurisdictional waters.

5.2 Jurisdictional Impacts to Waters of the United States Regulated Under Section 404 of the Clean Water Act

Development of the Moreno Valley Festival would result in direct impacts to 0.20 acres of waters of the United States, which were determined to be a non-relatively permanent water that has no adjacent wetlands and flows directly or indirectly into a traditional navigable water. These waters were determined by identifying the ordinary high water mark within the banks of the ephemeral drainage. These waters eventually flow into the Pacific Ocean, but prior flow into Canyon Lake and Lake Elsinore.

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5.3 Jurisdictional Impacts to Waters of the United States Regulated Under Section 401 of the Clean Water Act

Development of the Moreno Valley Festival would result in direct impacts to 0.20 acres of waters of the United States, which were determined to be a non-relatively permanent water that has no adjacent wetlands and flows directly or indirectly into a traditional navigable water. These waters were determined by identifying the ordinary high water mark within the banks of the ephemeral drainage. These waters eventually flow into the Pacific Ocean, but prior flow into Canyon Lake and Lake Elsinore. A 401 Clean Water Act Certification from the Santa Ana Regional Water Quality Control Board would be required prior to the issuance of a 404 permit.

6.0 MITIGATION RECOMENDATIONS

USACE, CDFW, and RWQCB jurisdictional waters are regulated by federal, state, and local governments under a no-net-loss policy, and all impacts are considered significant and should be avoided to the greatest extent possible. Unavoidable and authorized impacts would require mitigation through habitat creation, enhancement, or preservation as determined by a qualified restoration biologist in consultation with the regulatory agencies during the permitting process. Any impacts to USACE, CDFW, and RWQCB jurisdictional waters would require a Section 404 permit authorization from the USACE, a 1600 Streambed Alteration Agreement from the CDFW, and a 401 State Water Quality Certification from the RWQCB. Mitigation for impacts, if any, to jurisdictional resources will be addressed in a mitigation plan to be submitted for approval with the permit application packages.

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7.0 REFERENCES

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FIGURES

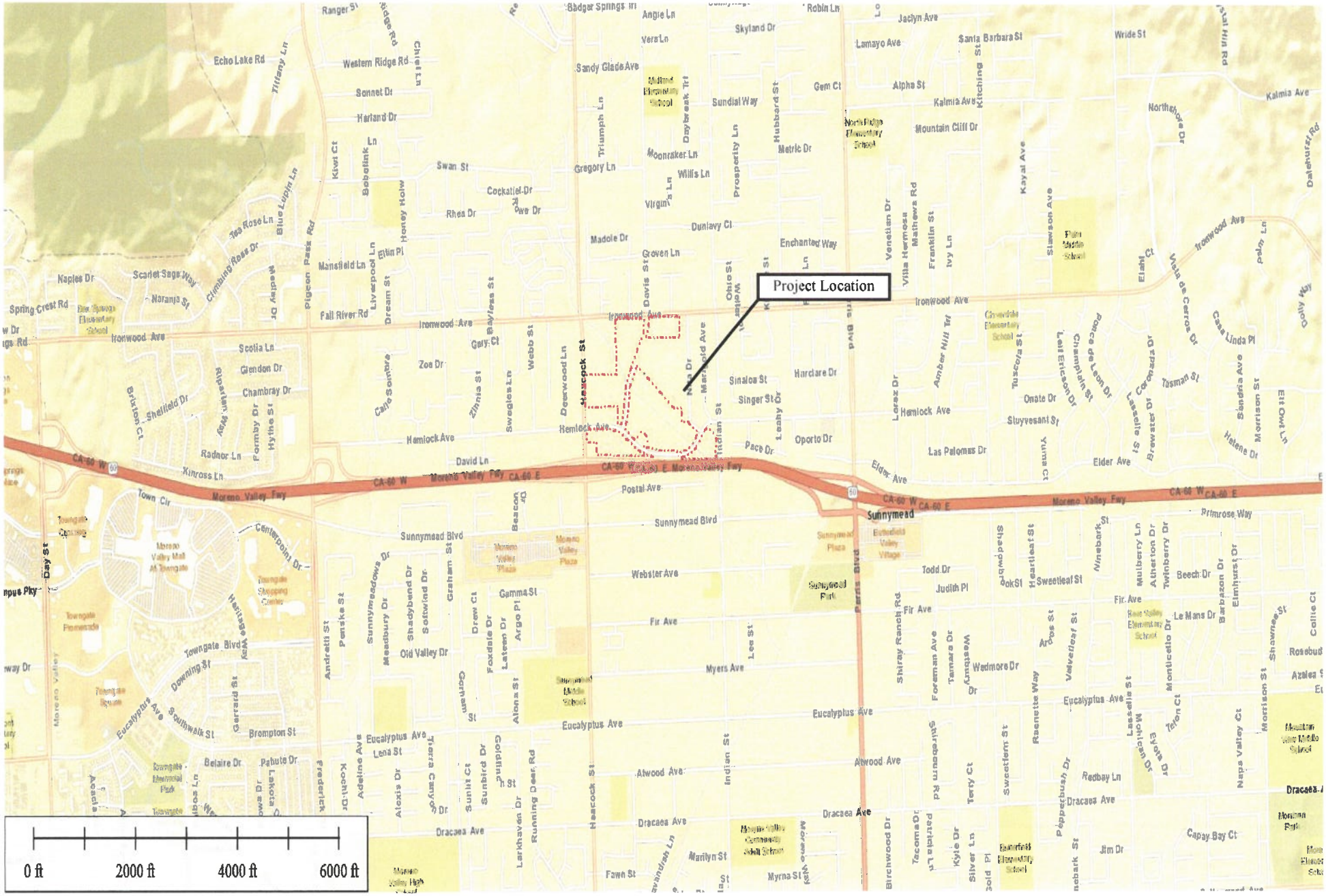
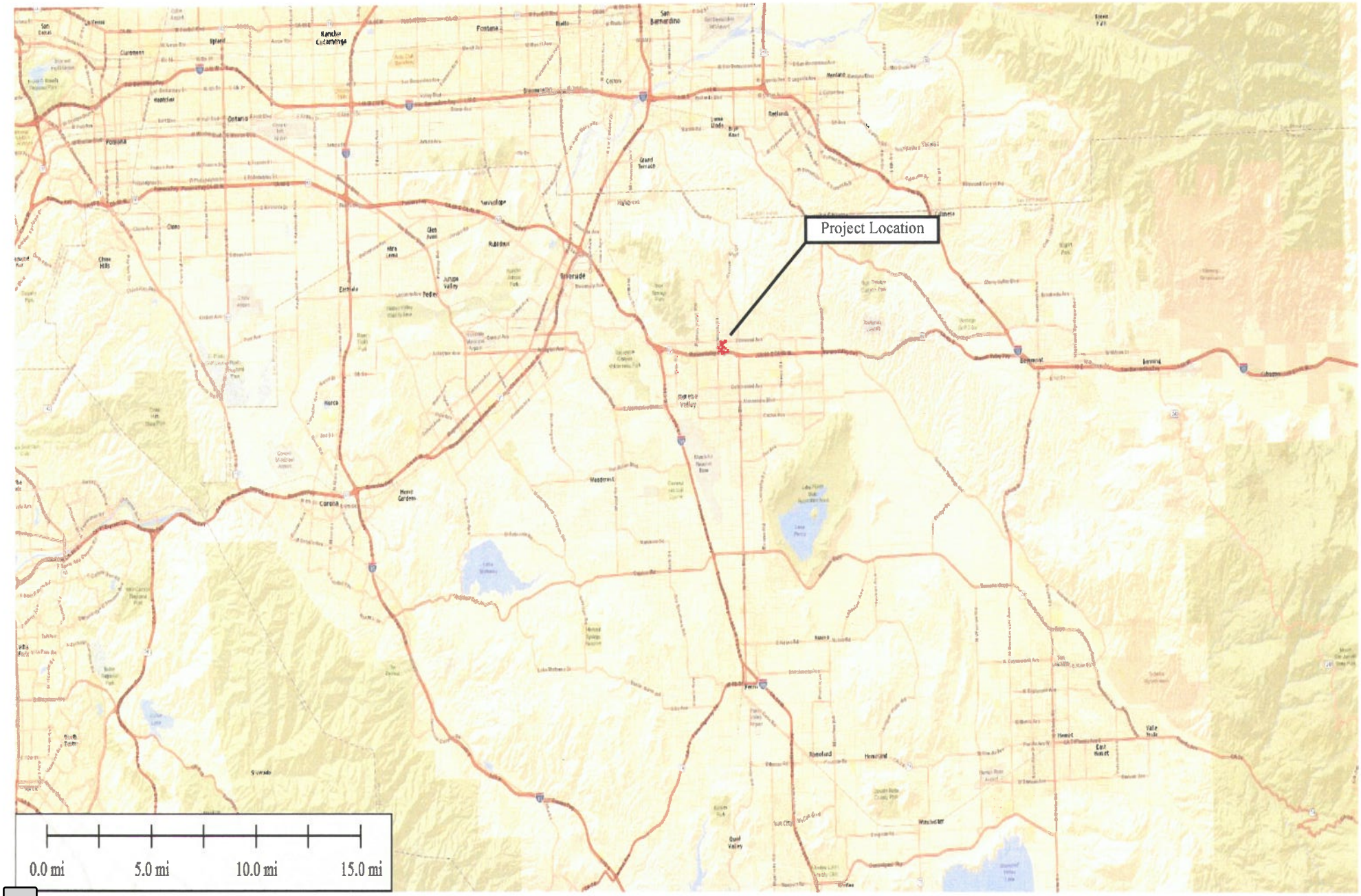


Figure 1

Location Map
Moreno Valley Festival
City of Moreno Valley, Riverside County, CA



igure 2

icinity Map
oreno Valley Festival
ty of Moreno Valley, Riverside County, CA

Legend

Property Boundary

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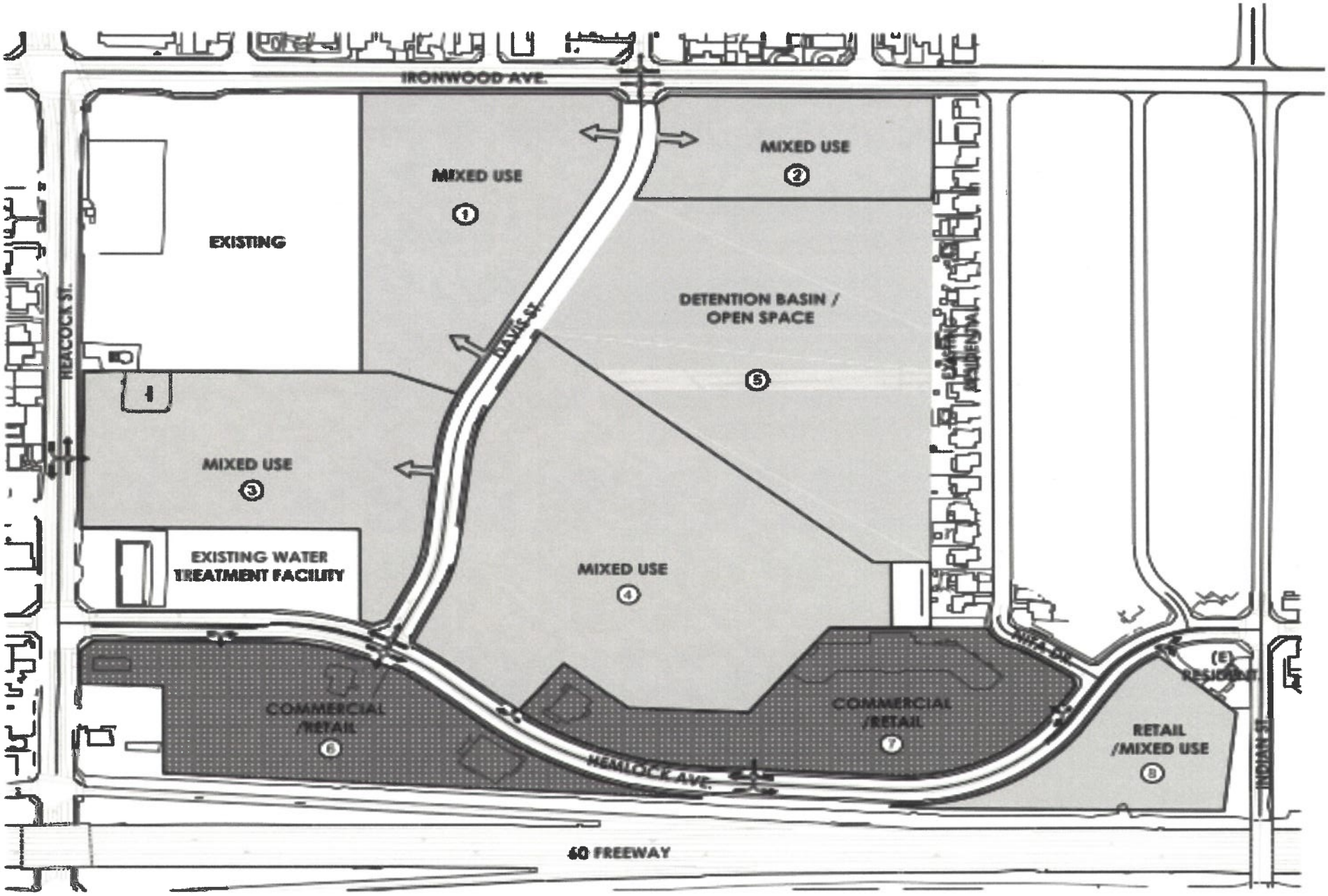

Figure 3

Project Plans
Moreno Valley Festival
City of Moreno Valley, Riverside County, CA

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gure 4

FW Jurisdictional Areas Map
reno Valley Festival
y of Moreno Valley, Riverside County, CA

Legend

0.20 Acres Waters of the United States

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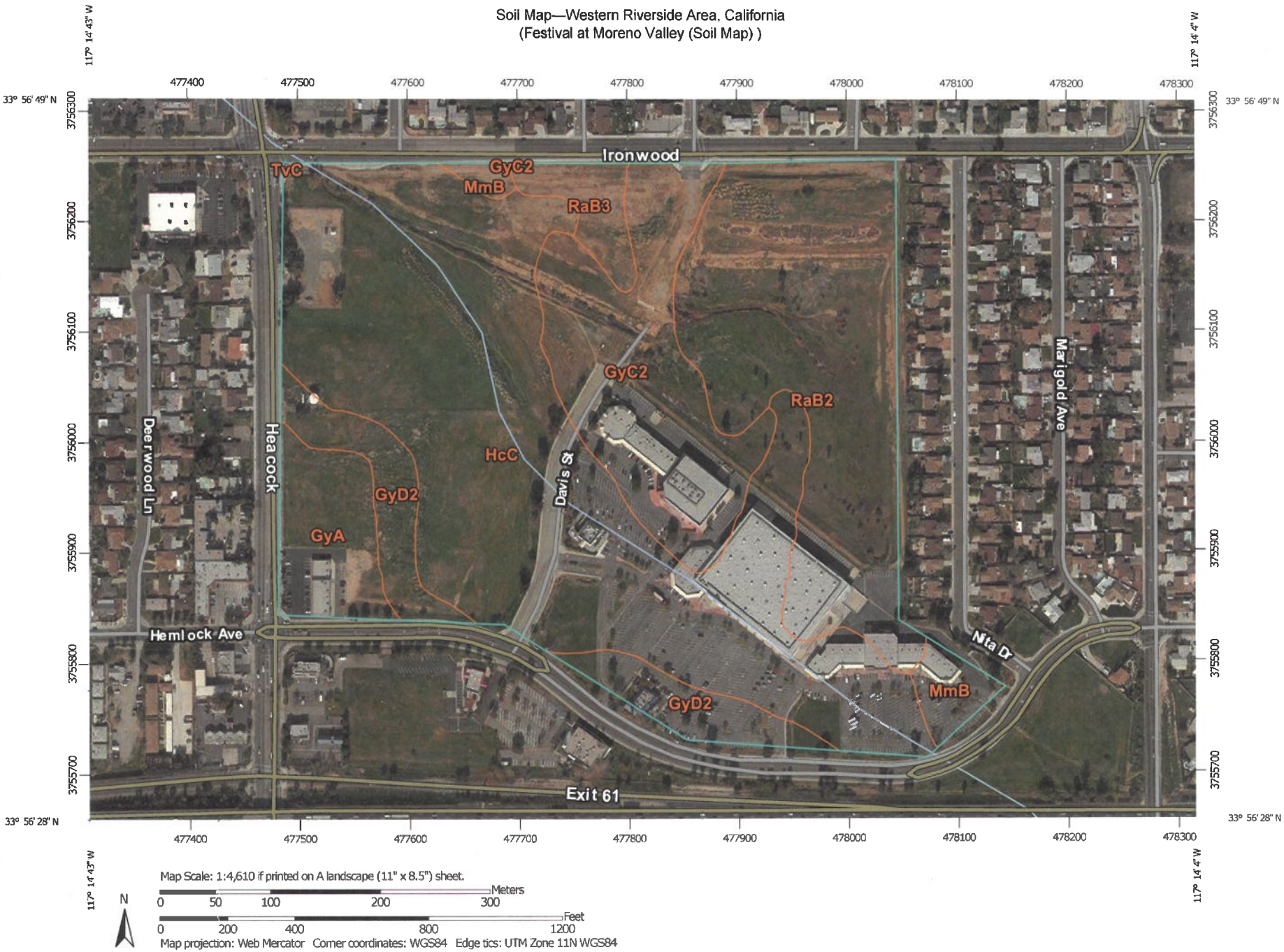
Figure 5

Waters of the United States Map
Moreno Valley Festival
City of Moreno Valley, Riverside County, CA

APPENDIX A

Soil Map—Western Riverside Area, California
(Festival at Moreno Valley (Soil Map))



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 7, Sep 17, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 14, 2015—Jan 21, 2015

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MmB	Monserate sandy loam, 0 to 5 percent slopes	1.4	2.1%
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TvC	Tujunga loamy sand, channeled, 0 to 8 percent slopes	0.0	0.0%
Totals for Area of Interest		**67.4**	**100.0%**

APPENDIX B

Moreno Valley Trails
JD Photographs

Hernandez Environmental Services

Ephemeral Drainage facing west.

Ephemeral drainage facing east.

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Memorandum

Date: February 22, 2016

To: Moreno Valley Festival, LTD

From: Juan J Hernandez, Principal Biologist

Subject: Constraints Analysis for Indian Basin, City of Moreno Valley, Riverside County, California

This memorandum provides the methods and results of a constraints analysis performed for the Indian Basin, located in the City of Moreno Valley. This analysis will describe the potential presence of listed federal and/or state listed species and their habitat, federal and/or state jurisdictional streams, lakes, or wetlands, compliance with the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) and recommendations for future actions that may be necessary to identify or mitigate potential impacts.

Location

The project site is located south of Ironwood Avenue and northeast of Davis Street within the City of Moreno Valley, Riverside County, California (Figure 1). Indian Basin consists of approximately 13.1 acres surrounded by vacant lands to the north and west, residential development to the east, and commercial/retail development to the south (Figure 2). The surrounding lands are proposed to be developed with the commercial/retail and mixed use Moreno Valley Festival. The site is located within the United States Geological Survey (USGS) 7.5-Minute Topographic Map *Sunnymead* Quadrangle. The approximate center point is 33°56'41.29"N, 117°14'15.99"W.

Literature Review

Hernandez Environmental Services (HES) conducted a literature review and reviewed aerial photographs and topographic maps of the project site and surrounding areas. The *Sunnymead* quadrangle and adjacent surrounding eight quadrangles were used to identify sensitive species in the California Natural Diversity Data Base (CNDDB). Additional resources reviewed during the literature search included the United States Fish and Wildlife (USFWS) Endangered Species Lists, Forest Service List, and the California Native Plant Society's (CNPS) Rare plant lists to obtain species information for the project area.

Literature Review

On July 13, 2015, Juan Hernandez, Principal Biologist for HES, conducted a field survey of the approximate 13.1-acre basin site. The ambient temperature at 9:30 a.m. was 72˚ Fahrenheit, sunny, with zero to three mile per hour winds from the northeast. The purpose of the field survey was to document the existing habitat conditions, obtain plant and animal species information, view the surrounding uses, assess the potential for state and federal waters, and assess the potential for wildlife movement corridors, sensitive species, and nesting habitat.

The entire project site was surveyed, including the basin. Linear transects spaced approximately 50 feet apart were walked for 100 percent coverage. All species observed were recorded and are listed in Appendix A. Global Positioning System (GPS) waypoints were taken to delineate specific habitat types, species locations, and any other information that would be useful for the assessment of the property.

Results

Habitat

Indian Basin contains approximately 7.14 acres of yerba mansa (*Anemopsis californica*), 2.09 acres of mixed willow (*Salix* sp.) habitat, 3.05 acres of disturbed non-native vegetation habitat, 0.65 acres of *Tamarix* sp. Habitat, and 0.17 acres of cattail (*Typha* sp.) habitat.

Plants

The following two sensitive plant species and two sensitive habitats have a potential to exist or are present withing the Indian Basin:

- Bristly sage (*Carex comosa*), a CNPS 2B.1 plant;
- Mud nama (*Nama stenocarpum*), a CNPS 2B.2 plant; and,
- Southern willow scrub is present/southern riparian scrub is present.

Animals

The following sensitive animal species have a potential to exist or are present withing the Indian Basin:

- Cooper's hawk (*Accipiter cooperii*), is a California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC);
- Tricolored blackbird (*Agelaius tricolor*), is a state endangered bird species;
- Burrowing owl (*Athene cunicularia*), is a CDFW SSC;
- Western pond turtle (Emys marmorata), is a CDFW SSC;

- Yellow-breasted chat (*Icteria virens*), is a CDFW SSC;
- Yellow warbler (*Setophaga petechia*), is a CDFW SSC;
- Western spadefoot toad (*Spea hammondii*), is a CDFW SSC;
- Lawrence's goldfinch (*Spinus lawrencei*), is a CDFW SSC;
- Least Bell's vireo (*Vireo bellii pusillus*), is a state and federal endangered species.

Nesting Bird Habitats

Indian basin contains nesting habitat for migratory song birds and raptors. Nesting bird surveys would need to be conducted if project related impacts will occur between February 1 through September 15.

Jurisdictional Waters

Indian Basin would fall under the jurisdiction of the CDFW, United States Army Corps of Engineers (USACE), and the Regional Water Quality Control Board (RWQCB). **The basin contains approximately 11.22 acres of CDFW jurisdiction and approximately 9.77 acres of waters of the United States.** A wetland delineation was performed and no hydric soils were found. Therefore, the basin would not be considered a federal wetland.

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

The Indian Basin falls within the Reche Canyon/Badlands Area Plan of the Western Riverside County MSHCP. Participation in the MSHCP would serve as a Habitat Conservation Plan pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 (FESA), as well as a Natural Communities Conservation Plan (NCCP) under the NCCP Act of 2001. The United States Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) (hereafter, "Wildlife Agencies") have authority to regulate the “Take” of Threatened, Endangered, and rare Species. Under the Western Riverside County 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 Western Riverside County MSHCP Conservation Area in exchange for the assembly and management of a coordinated MSHCP Conservation Area.

Under Sections 6.1.2 Protection of Species Associates with Riparian/Riverine Areas and Vernal Pools, Indian Basin would be excluded as a Riparian/Riverine resource because the basin is a result of human actions to create open waters, or a result of the alteration of natural stream courses. Areas demonstrating characteristics as described above which are artificially created are not included in the definition of a Riparian/Riverine resource. However, Indian Basin does contain habitat that could be suitable for least Bell's vireo, a state and federally endangered bird species. Participation in the plan would grant take authorization; however, focused surveys for this species would have to be performed. If the species is present, a Determination of Biologically Equivalent or Superior Preservation (DBESP) would be required.

Section 6.3.2 Additional Survey Needs and Procedures

Indian Basin is within a portion of the Western Riverside County MSHCP Plan Area that requires additional surveys for burrowing owl. Burrowing owl surveys were performed for the surrounding Moreno Valley Festival proposed project areas. No owl were found during surveys.

Recommendations

If impacts to Indian Basin are unavoidable, the following is recommended:

- Participation in the Riverside County MSHCP;
- Conduct focused surveys for least Bell's vireo;
- Any impacts to the basin would require a CDFW Section 1602 Streambed Alteration Agreement;
- Any impacts to the waters of the United States located within the basin would require a Section 404 of the Clean Water Act Permit administered by the USACE;
- Any impacts to waters of the United States would require a Clean Water Act 401 Water Quality Certification from the RWQCB;
- Impacts to 11.22 acres of CDFW jurisdictional resources may require approximately 33.7 acres of compensatory mitigation;
- Impacts to 9.77 acres of waters of the United States may require approximately 29.3 acres of compensatory mitigation;
- If least Bell's vireo are found, a DBESP would be required; and,
- Focused burrowing owl surveys would need to be performed for the basin.

Certification

I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: February 22, 2016

Signed: _____

Juan J. Hernandez
Principal Biologist

Enclosures:

Figure 1: Project Location Map
Figure 2: Project Vicinity Map

Hernandez Environmental Services
29376 North Lake Drive
Lake Elsinore, California 92530
909.772.9009

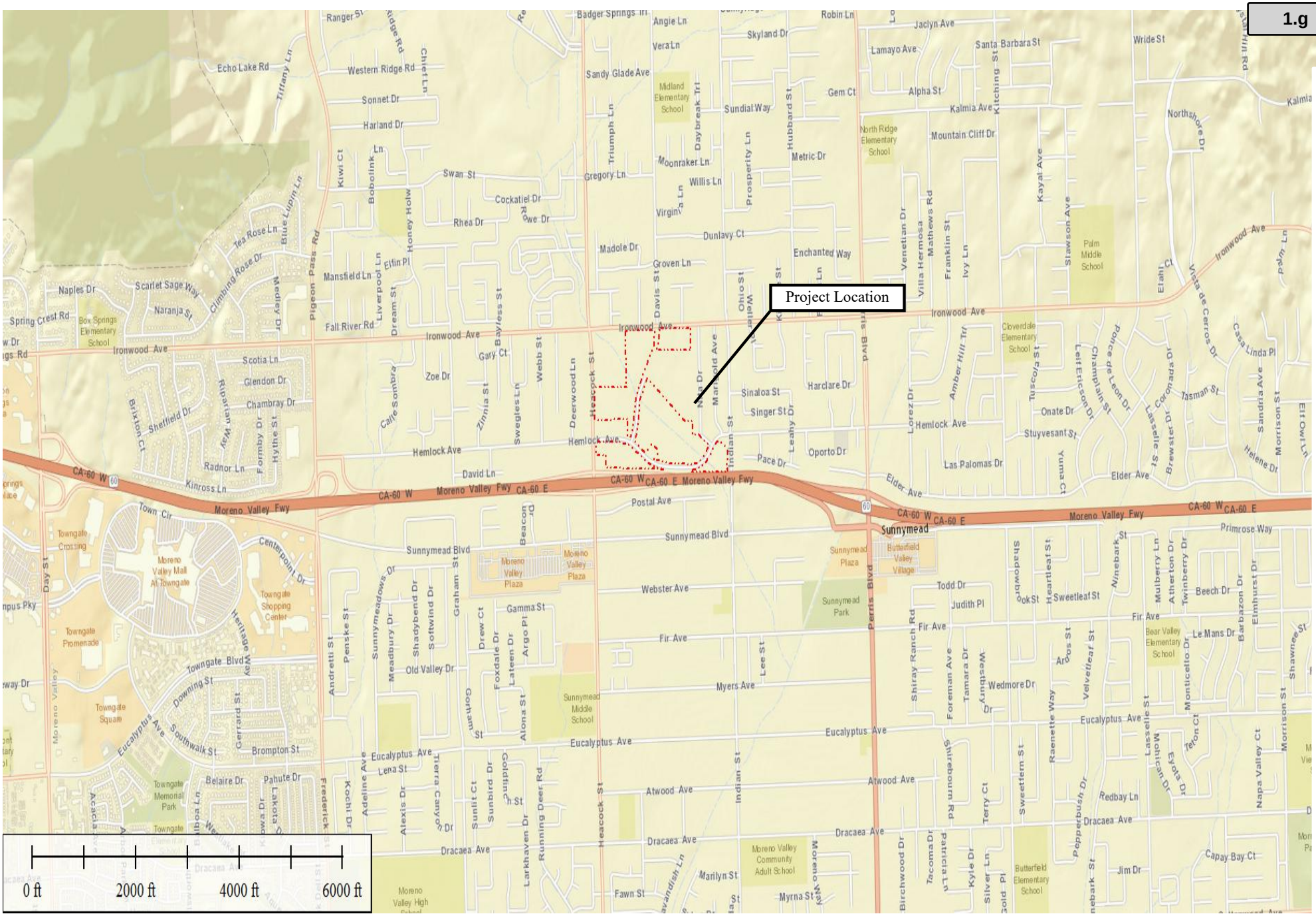

Figure 1

Location Map
Moreno Valley Festival
City of Moreno Valley, Riverside County, CA

Legend

Property Boundary

N

Hernandez Environmen Services

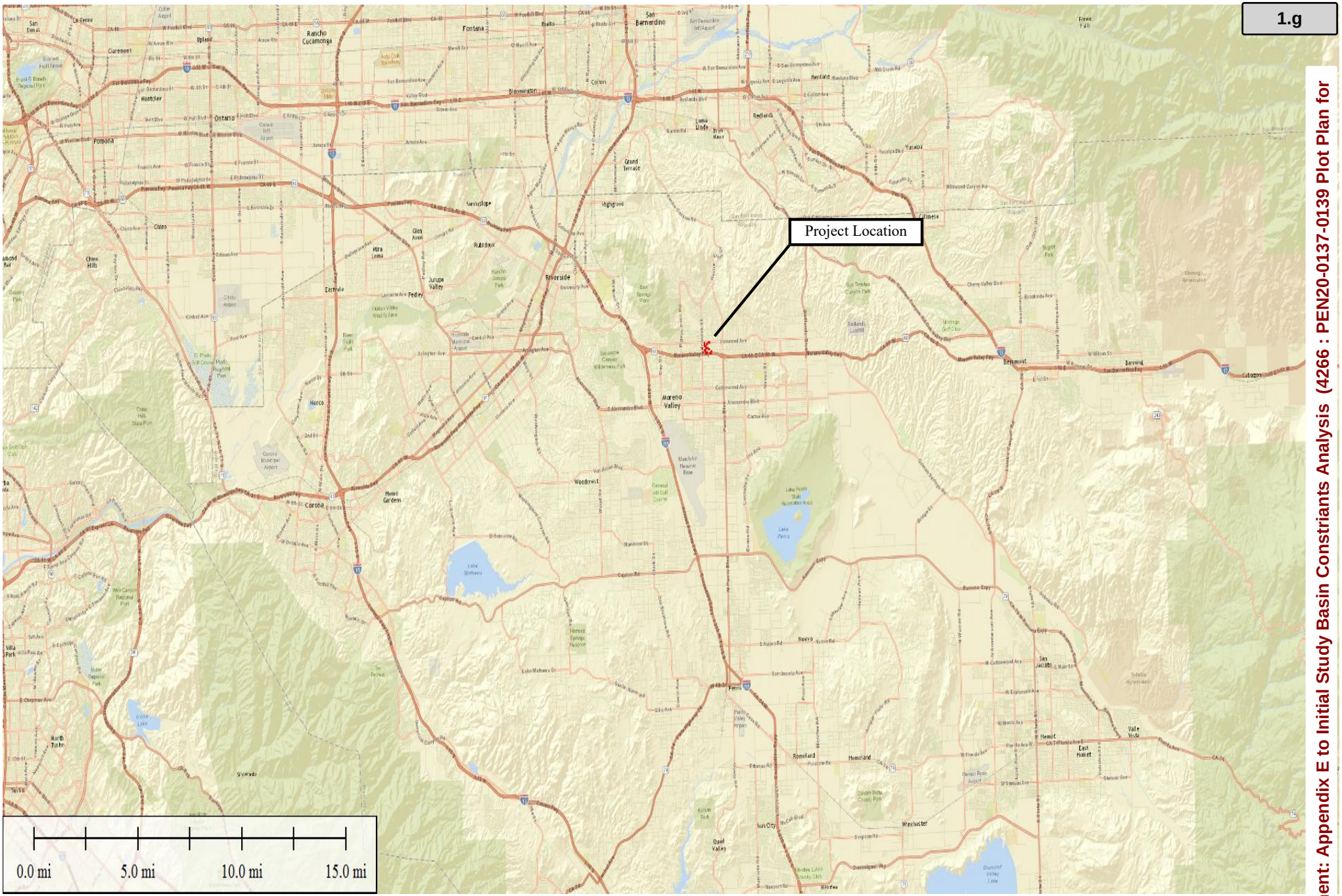

Figure 2

Vicinity Map
Moreno Valley Festival
City of Moreno Valley, Riverside County, CA

Legend

Property Boundary

N

Hernandez Environmen Services

Traffic Impact Analysis

FESTIVAL AT MORENO VALLEY

Prepared for:
BlackRidge Real Estate Group, LLC

January 2018

Prepared by:

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Phone: 949-656-7910

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TG Project Number: 17261

Moreno Valley Case Number: PEN16-0015

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Tables

Appendices

I. Introduction

The purpose of this Traffic Impact Analysis (TIA) is to identify potential traffic-related impacts associated with the Festival at Moreno Valley proposed Specific Plan (project) located in the City of Moreno Valley (City). The project proposes to modify the existing 180,000 square feet of retail land use to a business park and retail uses.

The project is bounded by the SR 60 Freeway to the South, Ironwood Avenue to the North, Heacock Street to the West, and Nita Drive to the East. Currently, some of the parcels are vacant while others have some retail uses. In the City's latest adopted land use plan, the area designations include commercial, open space, and office uses.

This TIA has been prepared consistent with the City's *Traffic Impact Analysis Preparation Guide* (August 2007). A *Scoping Agreement for Traffic Analysis Study* has been prepared by Transpo and was approved by the City in November 2017. The Scoping Agreement is provided in Appendix A. The Lead Agency of the proposed project is the City of Moreno Valley.

Purpose and Objectives of the Traffic Study

The purpose of this traffic study is to evaluate the traffic and circulation impacts of the proposed project. The objectives of this traffic study include:

- Documentation of existing traffic conditions and future traffic conditions corresponding to the "Existing plus Project" scenario (consisting of existing year 2017 plus project conditions), "Near-Term Year 2022" (five-year horizon consisting of existing plus ambient growth plus cumulative projects) With and Without Project conditions, and a "Buildout Year 2040" (consisting of the General Plan Buildout Year) With and Without Project conditions.
- Determination of additional circulation system features and system management actions needed to achieve the City's levels of service requirements with implementation of the proposed project.

Site Location and Study Area

Figure 1 illustrates the project site location, while Figure 2 illustrates the project study area and traffic control. Regional access to the project site is provided by State Route 60 (SR 60) via its interchange with Heacock Street. Local access is provided by Heacock Street, Hemlock Avenue, and Ironwood Avenue. Per Scoping Agreement, the study area intersections and roadway segments are as follows:

Study Area Intersections

1. Heacock Street (NS) at Ironwood Avenue (EW)
2. Heacock Street (NS) at Project Access (EW)
3. Heacock Street (NS) at Hemlock Avenue (EW)
4. Heacock Street (NS) at SR 60 Freeway WB Ramps (EW)
5. Heacock Street (NS) at SR 60 Freeway EB Ramps (EW)
6. Project Access (NS) at Hemlock Avenue (EW)
7. Davis Street (NS) at Hemlock Avenue (EW)
8. Project Access (NS) at Hemlock Avenue (EW)
9. Project Access (NS) at Hemlock Avenue (EW)
10. Project Access (NS) at Hemlock Avenue (EW)
11. Nita Drive (NS) at Hemlock Avenue (EW)
12. Davis Street (NS) at Ironwood Avenue (EW)
13. Indian Street (NS) at Ironwood Avenue (EW)
14. Indian Street (NS) at Hemlock Avenue(EW)
15. Indian Street (NS) at Sunnymead Boulevard (EW)

Study Area Roadway Segments

1. Heacock Street – Ironwood Avenue to Hemlock Avenue
2. Heacock Street – Hemlock Avenue to SR 60 Freeway WB Ramps
3. Indian Street – Ironwood Avenue to Hemlock Avenue
4. Indian Street south of Hemlock Avenue
5. Ironwood Avenue west of Heacock Street
6. Ironwood Avenue – Heacock Street to Indian Street
7. Ironwood Avenue east of Indian Street
8. Hemlock Avenue west of Heacock Street
9. Hemlock Avenue – Heacock Street to Indian Street
10. Hemlock Avenue east of Indian Street

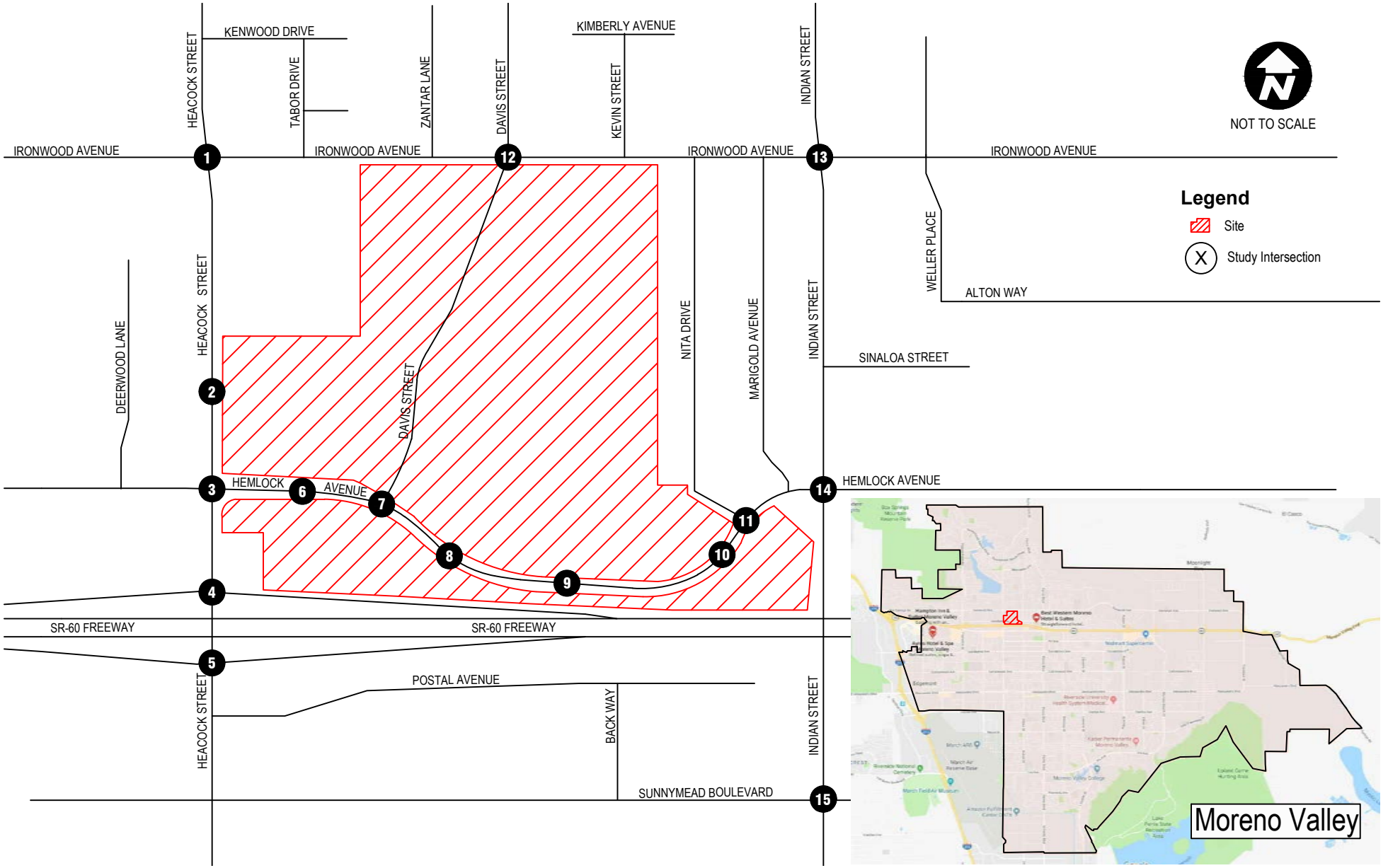
All study area intersections and roadway segments are within the jurisdiction of the City.

Project Description

The proposed project will include the development of 348,000 square feet of business park and 365,000 square feet of retail over eight planning areas as illustrated in the site plan Figure 3. Existing uses on the site include shopping centers, restaurants, and an auto service shop. Per the City's Adopted Land Use Map the area is zoned as mostly as Commercial and Open Space with an Office zoning to the southeast corner of Ironwood Avenue and Davis Street. The open space is shown in Planning Area 5 (refer to Figure 3) and is retained as such under proposed project conditions.
Existing and proposed land uses are shown in Table 1. The proposed project opening year is 2022 and no project phasing is assumed.

Table 1. Existing and Proposed Land Uses

Planning Area	Existing Uses		Proposed Uses	
	Type of Use	Size	Type of Use	Size
1			Business Park	135,000 sf
2			Business Park	35,000 sf
3			Business Park	178,000 sf
			Retail	15,000 sf
4	Shopping (Retail) Center	162,250 sf	Retail	255,000 sf
	Fast Food Restaurant with Drive Through (Yoshinoya)	3,900 sf		
5	Open Space		Open Space	
6	Fast Food Restaurant with Drive Through (Arby's)	2,700 sf	Retail	35,000 sf
	Fast Food Restaurant without Drive Through (KFC)	2,700 sf		
	Auto Service (Jiffy Lube)	3 Service Positions		
	High-Turnover Sit-down Restaurant (Centanario)	8,800 sf		
7	Shopping (Retail) Center	33,675 sf	Retail	40,000 sf
8			Retail	20,000 sf



Source: Google Maps, 09/2017.

Project Site Location and Study Area

FIGURE 1

Festival at Moreno Valley

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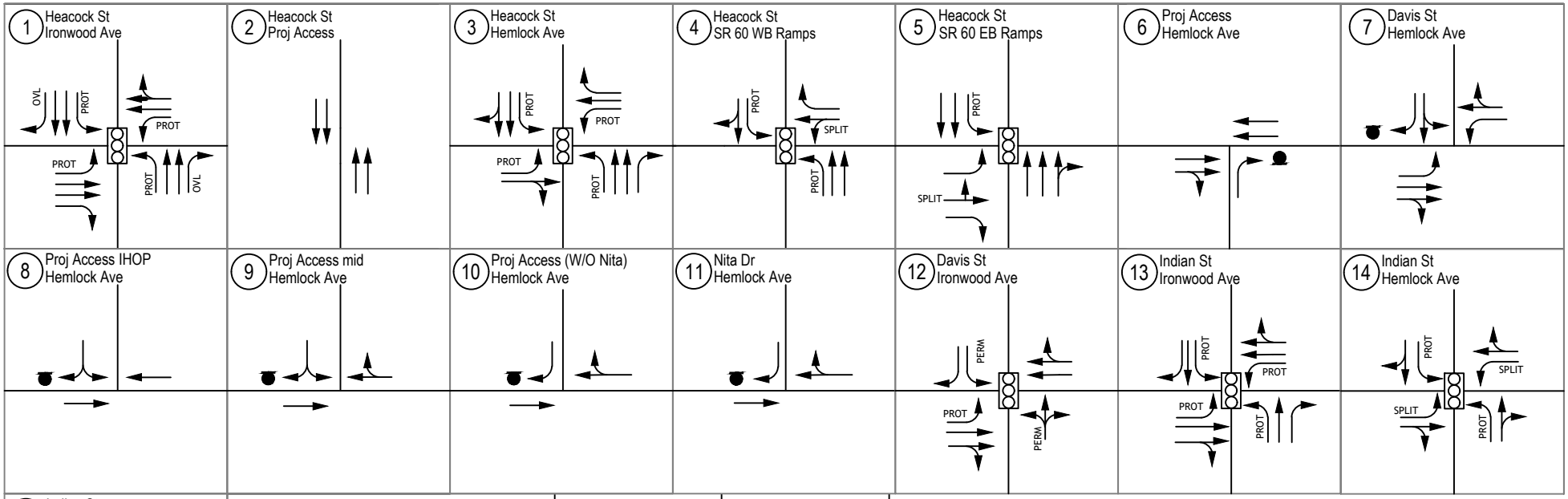

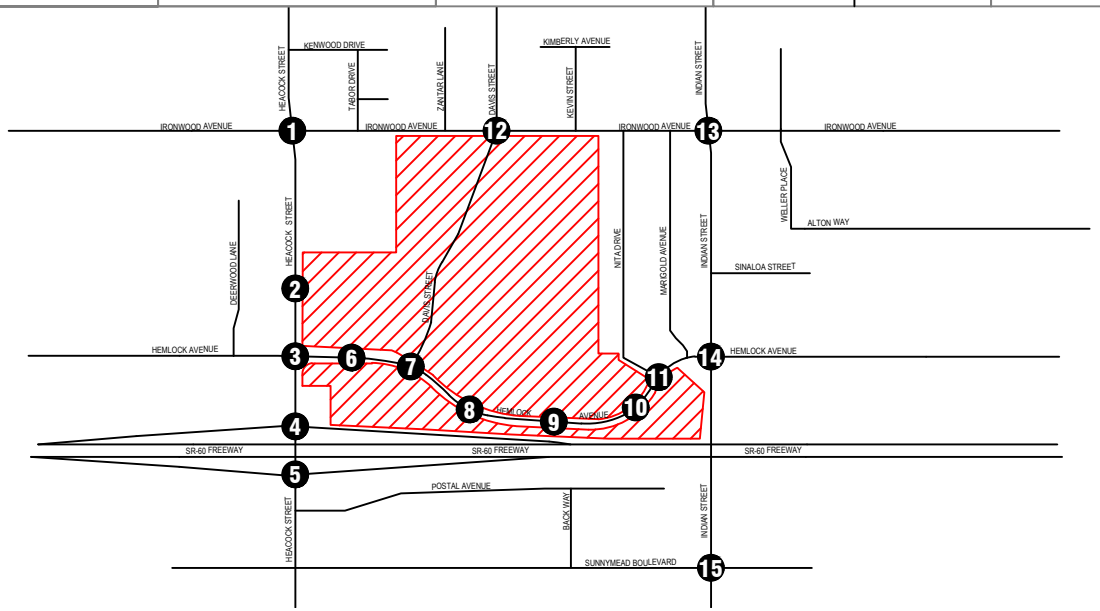

NOT TO SCALE

Legend

- Site
- X Study Intersection
- Lane Geometrics
- Traffic Signal
- Stop Sign

PROT	Protected Left Turn Phasing
PERM	Permitted Left Turn Phasing
SPLIT	Split Phasing
DEFACTO	Defacto Right Turn Lane
OVL	Overlapping Right Turn Phasing
FREE	Free Movement
XD	Number of lanes (divided roadway)
XU	Number of lanes (undivided roadway)

Study Area Intersection and Roadway Geometrics and Traffic Control

FIGURE 2

Festival at Moreno Valley

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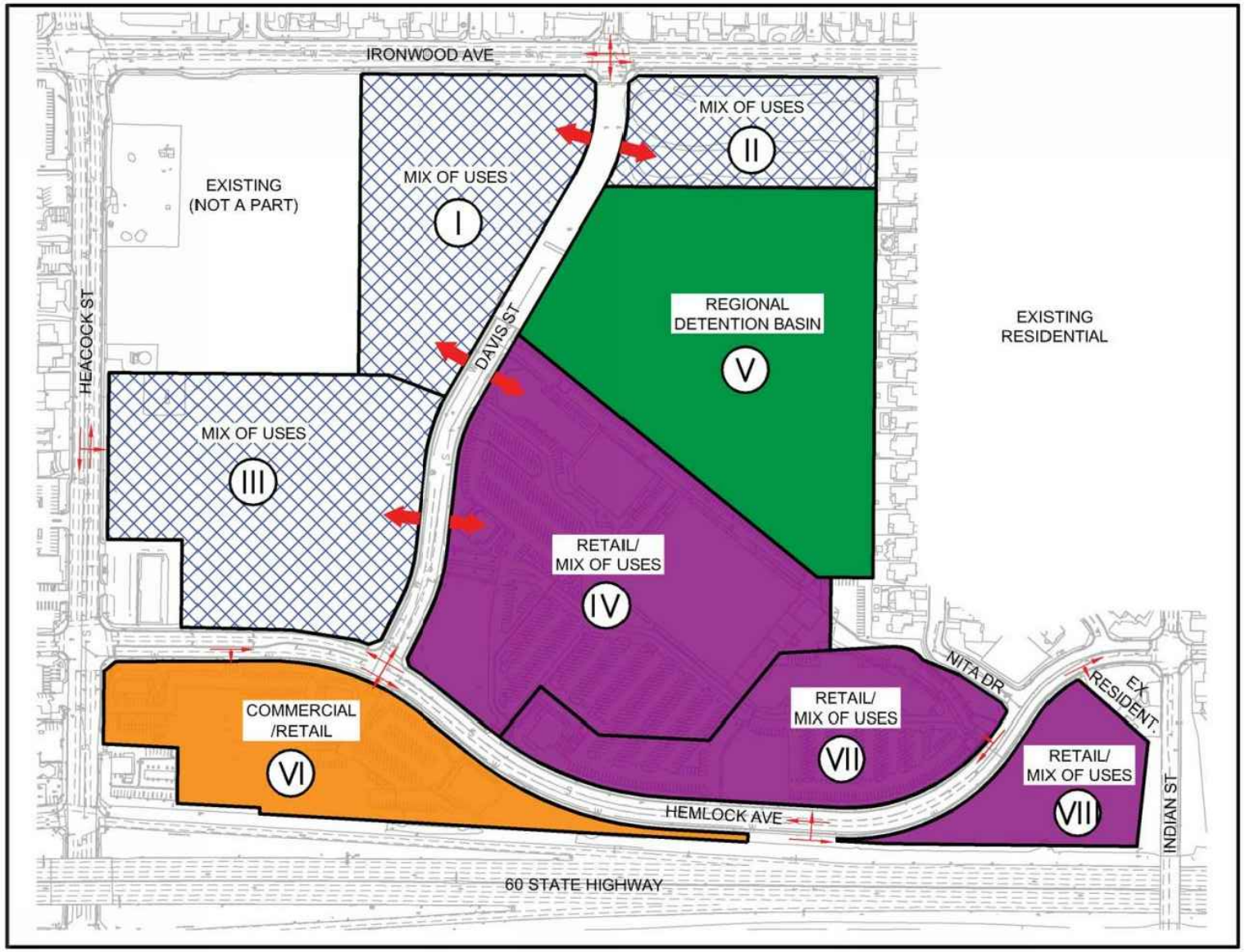

NOT TO SCALE

Project Site Plan

Festival at Moreno Valley

FIGURE 3

transpogroup
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Methodology

Intersections

Per City TIA guidelines, the study area intersections were analyzed under the latest version of the *Highway Capacity Manual* (HCM) "Operations" methodology using the *Synchro* level of service (LOS) software program which is consistent with the HCM 2010 methodology. The HCM 2010 methodology determines the control delay a driver may experience at the intersection. If an intersection could not be analyzed using the HCM 2010 methodology because of a particular intersection configuration (e.g., U-turn movements), the HCM 2000 methodology was used.

The degree of congestion at an intersection is described by the level of service, which ranges from LOS A to LOS F, with LOS A representing free-flow conditions with little delay and LOS F representing over-saturated traffic flow throughout the peak hour. A complete description of the meaning of level of service can be found in the Highway Research Board Special Report 209, *Highway Capacity Manual* (HCM 2000). Brief descriptions of the six levels of service for signalized and unsignalized intersections based on the HCM methodology are shown in Table 2.

Table 2. Level of Service Definitions for Intersections

Level of Service	Control Delay in Seconds (signalized)	Control Delay in Seconds (unsignalized)
A	0.0 – 10.0 seconds	0.0 – 10.0 seconds
B	10.1 – 20.0 seconds	10.1 – 15.0 seconds
C	20.1 – 35.0 seconds	15.1 – 25.0 seconds
D	35.1 – 55.0 seconds	25.1 – 35.0 seconds
E	55.1 – 80.0 seconds	35.1 – 50.0 seconds
F	80.1 seconds or greater	50.1 seconds or greater

Table 3 below provides detailed descriptions of each level of service

Table 3. Level of Service (LOS) Descriptions

LOS	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

Source: *Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.*

Roadway Segments

Per City TIA guidelines, Table 4 provides the LOS criteria for roadway segments based on daily traffic volumes.

Table 4. Level of Service Definitions for Roadway Segments

Roadway	A	B	C	D	E
6-lane Divided Arterial	33,900	39,400	45,000	50,600	56,300
4-lane Divided Arterial	22,500	26,300	30,000	33,800	37,500
4-lane Undivided Arterial	15,000	17,500	20,000	22,500	25,000
2-lane Industrial Collector	7,500	8,800	10,000	11,300	12,500
2-lane Undivided Residential	n/a	n/a	n/a	n/a	2,000

Significance Criteria

The City's significance threshold is based on the *City of Moreno Valley General Plan* (July 2006) which states:

- *LOS D is applicable to intersections and roadway segments that are adjacent to freeway on/off ramps, and/or adjacent land uses. LOS C is applicable to all other intersections and roadway segments. Boundary intersections are assumed to be LOS D.*

Therefore, if the project causes an intersection to operate below the minimum standard, the project would cause a significant project-specific impact at that intersection, and specific mitigation measures must be developed to improve the intersection's LOS back to pre-project levels.

Traffic Analysis Scenarios

This traffic study analyzed the following traffic scenarios:

Existing Condition

Existing traffic volumes were collected at the study intersections and roadway segments in August 2017 during a typical weekday. The existing traffic scenario constitutes the environmental setting in accordance with the *California Environmental Quality Act* (CEQA) analysis at the time that the hearing body reviews the proposed project.

Existing with-Project Condition

The Existing with-Project Condition traffic was developed by adding the proposed project traffic to the Existing Condition traffic volumes. This scenario was the basis for determining project-specific impacts and mitigation measures under existing conditions.

Near Term Year 2022 Baseline Condition

Per City requirements, the Near Term year of analysis would be 2022, a five-year horizon from the existing traffic condition. The proposed project is anticipated to be built and occupied by year 2022. Near-Term year traffic in this scenario was forecast for 2022 by applying an annual ambient growth rate (2% per year per the City's Scoping Agreement) to the existing traffic volumes. In addition to the ambient growth rate, traffic from approved and pending projects (i.e. cumulative projects) in the project's vicinity was added.

Near Term Year 2022 with-Project Condition

The Near Term Year 2022 with-Project Condition traffic was developed by adding the proposed project traffic to the Near-Term Year Baseline Condition. This scenario was also the basis for determining project-specific impacts and mitigation measures for the Near Term Year.

General Plan Buildout Baseline Condition

General Plan Buildout (2040) without Project traffic conditions were derived from the Moreno Valley Transportation Analysis Model which in turn is based-upon the Riverside Transportation Analysis Model (RivTAM) refined to represent General Plan Buildout conditions for the City of Moreno Valley. Traffic volumes for street segments in the study area were obtained from the 2007 and 2035 TransCAD model data sets to establish annual growth rates for each approach leg of the study intersection. Separate growth rates were developed for AM and PM peak period model data volumes. These annual growth rates were applied to the 2017 turning movement counts to forecast traffic growth to 2040 conditions. Consistent with all travel demand model post-processing methods, the forecasts were checked for reasonableness and adjusted if necessary. For example, model adjustments were made to better balance forecasted volume growth between adjacent study intersections.

General Plan Buildout with-Project Condition

The General Plan Buildout with-Project traffic forecasts were determined by adding the project traffic to the General Plan Buildout Baseline (without project) traffic forecasts from the Transportation Analysis Model. The General Plan Buildout traffic forecasts used in the traffic analysis were refined with existing peak hour traffic count data collected at intersection analysis locations.

II. Area Conditions

The following section describes the existing traffic conditions in the project study area. Existing traffic volumes were collected at the study intersections and roadway segments in August 2017 during a typical weekday.

Street System

As mentioned earlier regional access to the project site is provided by State Route 60 (SR 60) via its interchange with Heacock Street. In the project vicinity, the SR 60 consists of two general purpose lanes and one carpool lane per direction. Local access is provided by Heacock Street, Hemlock Avenue, and Ironwood Avenue.

Characteristics of the existing street system in the proposed project vicinity are summarized in Table 5. The roadway classifications are as per the City of Moreno Valley General Plan Circulation Element. Cross-sections described are those in the vicinity of the project and they might vary at intersections to accommodate turning lanes.

Heacock Street is a muti-modal corridor with pedestrian, bicycle, auto, and transit uses. It is also designated as a truck route while at the same time having Class 2 bicycle lanes on both sides between Ironwood Ave and the SR 60 ramps.

Table 5. Street Characteristics

	Heacock St	Ironwood Ave	Indian St	Hemlock Ave	Davis St
Classification	Arterial	Minor Arterial	Minor Arterial	-	-
Traffic Cross-section	4 lanes + TWLT	4 lanes + TWLT	2 lanes	Varies[3]	2 lanes + TWLT[4]
Posted Speed Limit	35	40	35	30	-
Truck Route	Yes	Yes[5]	No	No	No
Transit	RTA 11	RTA 11	-	RTA 11	-
Bicycle Lanes	Class 2	Class 3	Class 3	-	-
Sidewalks	Both Sides	Both Sides	SB Only	Both Sides	Both Sides

1. TWLT: Two Way Left Turn
2. ADT: Average Daily Traffic
3. The cross-section of Hemlock in 4 lanes divided west of Davis St and two lanes with a TWLT east of Davis St. West of Indian St the TWLT is converted to a median
4. Davis St is not paved to the north of the existing development
5. Ironwood Ave is a truck route between Perris Blvd and Pigeon Pass Rd

Transit

Riverside Transit Agency (RTA) Route 11 buses run in the immediate vicinity of the project site. Buses serving this route run in either of two loops, clockwise or counterclockwise, starting from and terminating at the Moreno Valley Mall.

The major destinations served by this route include in addition to the Mall, Festival at Moreno Valley, the Post Office, Kaiser Medical Offices, Riverside County Superior Court, City Hall, and Moreno Valley High School.

In the immediate vicinity of the project Route 11 runs on Heacock St south of Hemlock Ave, on Hemlock Ave, and on Ironwood Ave. Bus stops are in the vicinity of the Hemlock/Davis, Hemlock/Indian, Indian/Ironwood and Ironwood/Heacock intersections.

Service frequencies are about one bus every hour on both weekdays and weekends. Weekday operations are between 5 AM and 10 PM and weekend operations are between 8.30 AM and 8.30 PM.

Pedestrian and Bicycle Systems

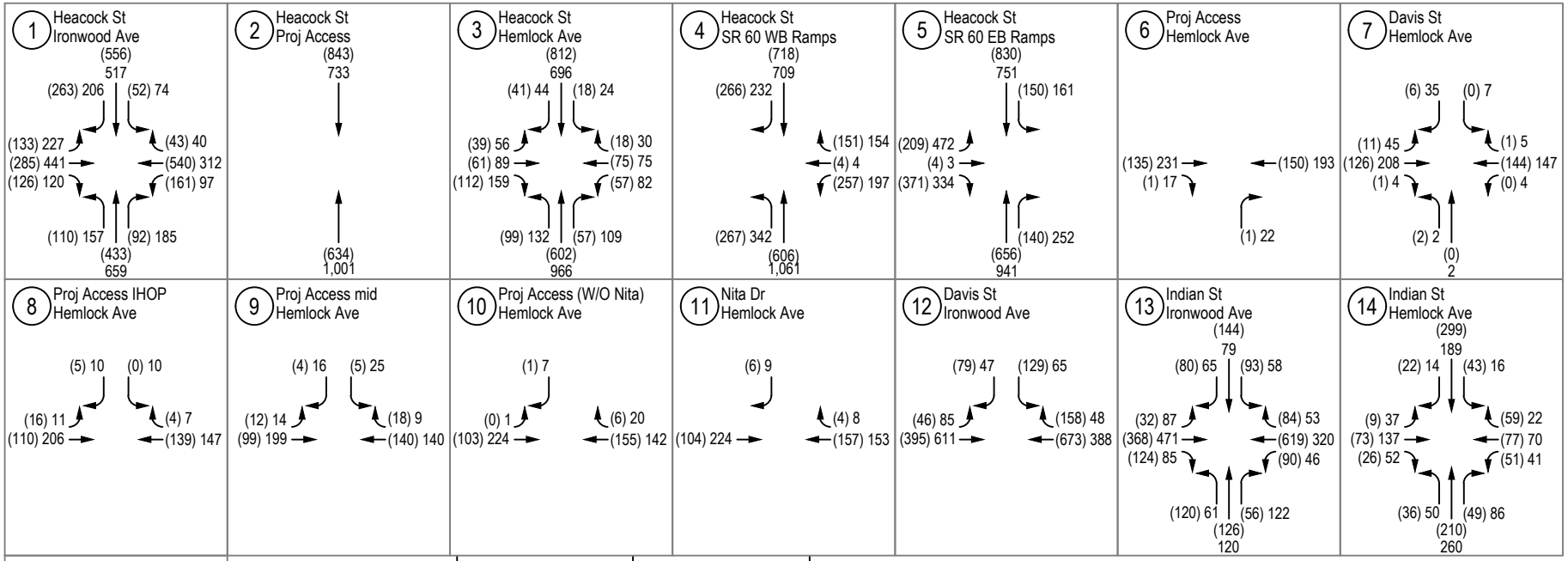
As presented in Table 5, sidewalks exist on both side of most streets in the immediate vicinity of the project with the exception of Indian Street where sidewalks are only available in the southbound direction.
Davis St currently does not connect to Ironwood Avenue and until the connection is established as part of this project, pedestrian accessibility will be served mainly by Heacock St and Nira Dr.
Standard pedestrian crosswalks (consisting of two solid parallel lines) are available at all the study area signalized intersections where pedestrian crossings are permitted.

Bicycle lanes described in Table 5 are as per the City's Bicycle Master Plan. Class 2 bike lanes are on-street paths that are located along the edge of a street with a striped lane denoting this bike path. Class 3 bike routes also are located along a street edge, but are not striped. These paths are identified by street signs only.
In the immediate project vicinity Heacock St is the only Class 2 facility while Ironwood Ave and Indian St are designated as Class 3 facilities. The Bicycle Master Plan recommends the following in the project vicinity:

- Class 2 bike lane along Hemlock between Indian St and Heacock St
- Class 2 bike lane along Heacock St (south of Hemlock Ave)
- Class 2 bike lane along Ironwood Ave
- Class 3 bike route along Davis St

Traffic Volumes

Existing traffic volumes were collected at the study intersections and roadway segments in August 2017.
Figure 4 shows the existing AM and PM peak hour traffic volumes at the study intersections, while Figure 5 shows the existing daily traffic volumes on the study area roadway segments. The raw traffic volume count sheets are provided in Appendix B.



Existing AM and PM Peak Hour Traffic Volumes

FIGURE 4

Festival at Moreno Valley

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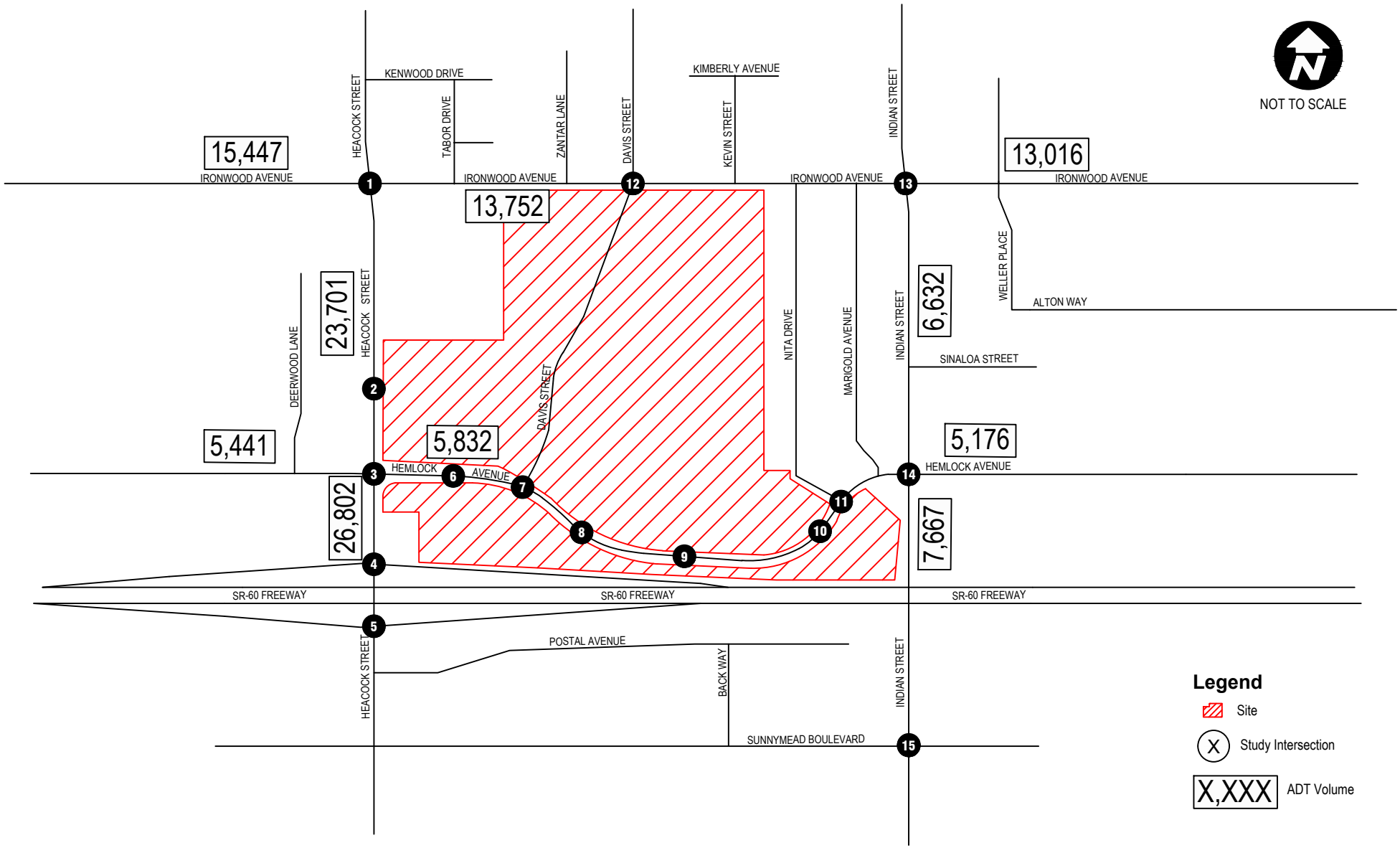

Existing Daily Traffic Volumes

Festival at Moreno Valley

FIGURE 5

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Levels of Service

Intersection Operations

Level of Service Analysis

Based on the analysis methodology described in Section I, the existing AM and PM peak hour traffic volumes were input into the *Synchro* LOS software to determine the existing intersection delay and LOS values. Table 6 presents the results of the existing intersection LOS analysis, while the LOS calculation sheets are provided in Appendix C.

Table 6. Existing Without-Project Weekday Peak Hour Intersection LOS

Intersection	Traffic Control	City's LOS Standard	AM Peak		PM Peak	
			LOS[1]	Delay[2]	LOS[1]	Delay[2]
1. Heacock Street/Ironwood Avenue	Signal	LOS D	C	26.9	C	28.0
2. Heacock Street/(new) Project Access	OWSC	LOS D	-	-	-	-
3. Heacock Street/Hemlock Avenue	Signal	LOS D	B	18.9	C	22.3
4. Heacock Street/State Route (SR 60) WB Ramps	Signal	LOS D	C	21.8	B	19.6
5. Heacock Street/State Route (SR 60) EB Ramps	Signal	LOS D	C	21.9	C	21.8
6. Project Access/Hemlock Avenue	OWSC	LOS C	A	8.7	A	9.9
7. Davis Street/Hemlock Avenue	TWSC	LOS C	B	11.1	B	13.5
8. Project Access IHOP/Hemlock Avenue	OWSC	LOS C	A	9.1	B	10.0
9. Project Access (middle dwy)/Hemlock Avenue	OWSC	LOS C	A	9.7	B	10.3
10. Project Access (w/o Nita Dr)/Hemlock Avenue	OWSC	LOS C	A	9.2	A	9.1
11. Nita Drive/Hemlock Avenue	OWSC	LOS C	A	9.2	A	9.2
12. Davis Street/Ironwood Avenue	Signal	LOS C	C	25.8	C	33.0
13. Indian Street/Ironwood Avenue	Signal	LOS D	C	32.1	C	25.9
14. Indian Street/Hemlock Avenue	Signal	LOS D	C	22.3	C	22.1
15. Indian Street/Sunnymead Boulevard	Signal	LOS D	C	21.2	C	27.3

1. Level of Service
2. Delay measured in seconds/vehicle
3. Delay and LOS are based on Highway Capacity Manual 2010
4. Signal = Traffic Signal (evaluated using the HCM Methodology)
5. TWSC = Two Way Stop Controlled (evaluated using the HCM Methodology)
6. OWSC = One Way Stop Controlled (evaluated using the HCM Methodology)

Based on the existing LOS analysis, all study area intersections are currently operating with a satisfactory LOS as per City's standards during both peak hours.

Queuing Analysis

A queuing analysis was conducted at the study area intersections to determine if the left turn pocket (storage) lengths are able to accommodate queues. The 95th percentile queue calculations were calculated using Synchro for the weekday AM and weekday PM peak hours and results summary is presented in Table 7 with detailed calculation in Appendix C.
Table 7 shows that the existing 95th percentile queue lengths exceed storage space. It should be noted that the 95th percentile queue is not necessarily ever observed, it is simply based on statistical calculations. In other words, if traffic was observed for 100 cycles, the 95th percentile queue would be the queue experienced with the 95th busiest cycle (or 5% of the time). It is however used by many jurisdictions as the basis for calculating storage lengths.

As shown in Table 7, the queue lengths of various intersection approaches exceed the existing pocket length under existing conditions. Mitigation measures are presented in Section V.

Table 7. Existing Without-Project Weekday Peak Hour Queuing Analysis

Intersection	Movement	Existing Pocket Length (ft)	95th Percentile Queue[1]		Exceeds Existing Pocket Length	
			AM	PM	AM	PM
1. Heacock Street/Ironwood Avenue	EBL	90	149	**126**	**Yes**	**Yes**
	WBL	135	**178**	108	**Yes**	No
	NBL	140	127	**175**	No	**Yes**
	SBL	100	70	88	No	No
2. Heacock Street/(new) Project Access	No pocket Lanes and/or No Queues					
3. Heacock Street/Hemlock Avenue	EBL	70	50	70	No	No
	WBL	360	66	92	No	No
	NBL	100	98	136	No	**Yes**
	SBL	95	31	39	No	No
4. Heacock Street/State Route (SR 60) WB Ramps	NBL	200	**239**	**256**	**Yes**	**Yes**
5. Heacock Street/State Route (SR 60) EB Ramps	EBL	0	101	213	**Yes**	**Yes**
	SBL	190	150	160	No	No
6. Project Access/Hemlock Avenue	No pocket Lanes and/or No Queues					
7. Davis Street/Hemlock Avenue	EBL	180	0	3	No	No
8. Project Access IHOP/Hemlock Avenue	No pocket Lanes and/or No Queues					
9. Project Access (middle dwy)/Hemlock Avenue	No pocket Lanes and/or No Queues					
10. Project Access (w/o Nita Dr)/Hemlock Avenue	No pocket Lanes and/or No Queues					
11. Nita Drive/Hemlock Avenue	No pocket Lanes and/or No Queues					
12. Davis Street/Ironwood Avenue	EBL	150	**88**	**162**	No	**Yes**
	SBL	40	111	61	**Yes**	**Yes**
13. Indian Street/Ironwood Avenue	EBL	95	51	103	No	**Yes**
	WBL	100	109	64	**Yes**	No
	NBL	110	139	78	**Yes**	No
	SBL	80	112	75	**Yes**	No
14. Indian Street/Hemlock Avenue	EBL	150	19	46	No	No
	WBL	80	56	49	No	No
	NBL	145	50	63	No	No
	SBL	100	54	28	No	No
15. Indian Street/Sunnymead Boulevard	EBL	90	62	**136**	No	**Yes**
	WBL	100	33	61	No	No
	NBL	145	89	104	No	No
	SBL	90	68	77	No	No

1. Calculated using Synchro – bold numbers indicate where Synchro yielded "95th percentile volume exceeds capacity, queue maybe longer." The queues were evaluated in Simtraffic at these locations.

Signal Warrant Analysis

The signal warrant analysis as per the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), was used for all study area intersections. No unsignalized intersection was found to meet the warrants for signalization. Detailed worksheets are provided in Appendix C.

Roadway Segments

Based on the analysis methodology described in Section I, the existing daily traffic volumes at the study area roadway segments were compared to the City's roadway segment LOS values presented in Table 4 above. Table 8 presents the results of the existing roadway segment LOS analysis.
Based on the existing roadway segment analysis, all study area roadway segments currently operate with LOS D or better.

Table 8. Existing Condition Roadway Segment LOS Summary

Roadway Segment	Existing Classification	Number of Lanes	Divided/ Undivided	ADT[1]	LOS Standard[2]	Maximum Capacity ADT[3]	V/C	LOS	Exceeds Threshold ?
1. Heacock Street - Ironwood Avenue to Hemlock Avenue	Arterial	4	Divided	23,701	LOS D	37,500	0.632	B	No
2. Heacock Street - Hemlock Avenue to SR 60 WB Ramps	Arterial	4	Divided	26,802	LOS D	37,500	0.715	C	No
3. Indian Street - Ironwood Avenue to Hemlock Avenue	Minor Arterial	2	Undivided	6,632	LOS D	12,500	0.531	A	No
4. Indian Street - South of Hemlock Avenue	Minor Arterial	2	Undivided	7,667	LOS D	12,500	0.613	B	No
5. Ironwood Avenue - West of Heacock Street	Minor Arterial	4	Divided	15,447	LOS C	37,500	0.412	A	No
6. Ironwood Avenue - Heacock Street to Davis Street	Minor Arterial	4	Divided	13,752	LOS C	37,500	0.367	A	No
7. Ironwood Avenue - East of Indian Street	Minor Arterial	4	Divided	13,016	LOS C	37,500	0.347	A	No
8. Hemlock Avenue - West of Heacock Street[4]	Minor Arterial	2	Undivided	5,441	LOS C	12,500	0.435	A	No
9. Hemlock Avenue - Heacock Street to Davis Street[4]	Minor Arterial	4	Divided	5,832	LOS C	37,500	0.156	A	No
10. Hemlock Avenue - East of Indian Street[4]	Minor Arterial	2	Undivided	5,176	LOS C	12,500	0.414	A	No

1. ADT: Average Daily Traffic
2. LOS based on City of Moreno Valley Roadway Segment LOS Values (Table 4)
3. Based on City of Moreno Valley Guidelines daily service volume standards table (LOS E). Four Lane Divided Arterial and Two Lane Industrial Collector used as classifications.
4. Roadway classification and LOS standard not listed in City Guidelines, assumed to be Minor Arterial, Two Lane Industrial Collector, with LOS Standard C.

III. Project Future Traffic

This section describes the project trip generation, distribution, and assignment. These have been agreed upon with the City prior to embarking on the TIA and documented in the scoping agreement included in Appendix A.

Trip Generation

Weekday daily, AM and PM peak hour trip generation estimates for the proposed project were developed using trip rates provided in the *Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition, 2017*. Summaries of the trip generation rates and resulting vehicle trips for the proposed project are presented in Table 9.

Comparison to Specific Plan 205

The total trip generation of the project (before accounting for internal capture, pass-by or existing uses) was found to be 18,108 daily trips with 482 trips in the AM Peak (298 inbound and 185 outbound) and 1,537 trips in the PM Peak (735 inbound and 802 outbound). These trip generation numbers are compared to the approved Festival at Moreno Valley Specific Plan 205 trip generation numbers (Greiner Engineering Study 1986) and the results are illustrated in Table 10. As shown in Table 9, the current proposed specific plan generates less trips than the Specific Plan 205 to the order of 214 trips Daily and 900 trips in the PM Peak (note that AM Peak period was not assessed in the Greiner Engineering Study).

Internal Trip Capture and Pass-by

Internal capture was calculated using methodology from NCHRP 684 Mixed Use Spreadsheet which yields an internal trip capture of 7% in the AM peak and 4% in PM Peak and Daily.
Pass-by trip rates for the retail component of the project were estimated at 34% during PM peak hour and 17% during the AM peak hour and Daily based on the *Institute of Transportation Engineers (ITE), Trip Generation, 10th Edition, 2017*. These calculation sheets were submitted with the scoping agreement and approved by the City.

Net New Trips

The existing land uses were provided by the Client and the net new trips of the project are calculated by accounting for the existing uses as shown in Table 11. The net new trips generated by the project are calculated to be 7,612 daily trips with 527 trips in the PM Peak (231 inbound and 295 outbound). During the AM peak the project would produce less trips than existing conditions whereby the project is forecasted to remove 78 trips from the street system (21 inbound and 56 outbound).

Table 9. Proposed Project Trip Generation

				AM Peak Hour			PM Peak Hour		
	LU	Units	Daily	IN	OUT	TOTAL	IN	OUT	TOTAL
Trip Rates									
Shopping Center[1]	Code 820	TSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81
Business Park[2]	Code 770	TSF	12.44	0.24	0.16	0.40	0.19	0.23	0.42
Project Trip Generation									
Planning Area 1									
Business Park	135.000	TSF	1,679	33	21	54	26	31	57
Subtotal			*1,679*	*33*	*21*	*54*	*26*	*31*	*57*
Planning Area 2									
Business Park	35.000	TSF	435	9	5	14	7	8	15
Subtotal			*435*	*9*	*5*	*14*	*7*	*8*	*15*
Planning Area 3									
Business Park	178.000	TSF	2,214	43	28	71	34	40	75
Retail	15.000	TSF	566	9	5	14	27	30	57
Subtotal			*2,781*	*52*	*33*	*85*	*62*	*70*	*132*
Planning Area 4									
Retail	255.000	TSF	9,626	149	91	240	466	505	972
Subtotal			*9,626*	*149*	*91*	*240*	*466*	*505*	*972*
Planning Area 6									
Retail	35.000	TSF	1,321	20	13	33	64	69	133
Subtotal			*1,321*	*20*	*13*	*33*	*64*	*69*	*133*
Planning Area 7									
Retail	40.000	TSF	1,510	23	14	38	73	79	152
Subtotal			*1,510*	*23*	*14*	*38*	*73*	*79*	*152*
Planning Area 8									
Retail	20.000	TSF	755	12	7	19	37	40	76
Subtotal			*755*	*12*	*7*	*19*	*37*	*40*	*76*
Total Trip Generation			*18,108*	*298*	*185*	*482*	*735*	*802*	*1,537*
Internal Trip Capture[3]			-724	-21	-13	-34	-29	-32	-61
Pass-By Trips[4]			-2,342	-29	-29	-58	-236	-237	-473
Net Trip Generation With Internal Trip Capture and Pass By			**15,041**	**248**	**142**	**390**	**469**	**533**	**1,003**
Existing Land Uses (includes Internal Trip Capture and Pass-By Reductions)[5]			7,429	269	199	468	238	238	476
Net New Trips (Project – Existing)			**7,612**	**-21**	**-56**	**-78**	**231**	**295**	**527**

Note: TSF = Thousand Square Feet

1. Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 820 - Shopping Center.
2. rip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 770 - Business Park.
3. Internal capture calculated using methodology from NCHRP 684 Mixed Use Spreadsheet (AM = 7%, PM/Daily = 4%)
4. Pass-by trip rate for Retail Uses (34% during PM peak hour, 17% during the AM peak hour and Daily based on weekend mid-day) from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 820 - Shopping Center.
5. Refer to Table 10 for details
6. Note that Planning Area 5 is Open Space and as such is not included above

Table 10. Proposed Project Trip Generation Versus Greiner Engineering (SP 205)

	LU	Units	Daily	AM Peak Hour			PM Peak Hour		
				IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project Total Traffic (No Internal Trip Capture or Pass-by Reductions)			18,108	298	185	482	735	802	1,537
Greiner Engineering Study (Table 3) (No Internal Trip Capture or Pass-by Reductions)			18,322	--	--	--	1,081	1,356	2,437
Trip Generation With Internal Trip Capture and Pass By			**-214**	**--**	**--**	**--**	**-346**	**-554**	**-900**

1. Greiner Engineering – Specific Plan 205 Site Specific Analysis – December 1986
2. Greiner Engineering Study did not evaluate the AM Peak Hour as PM is the more peak with highest number of trips

Table 11. Existing Project Site Trip Generation

	LU	Units	Daily	AM Peak Hour IN	AM Peak Hour OUT	AM Peak Hour TOTAL	PM Peak Hour IN	PM Peak Hour OUT	PM Peak Hour TOTAL
Trip Rates[1]									
Shopping Center	820	TSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81
Fast Food Restaurant With Drive Through	934	TSF	470.95	20.50	19.69	40.19	16.99	15.68	32.67
Fast Food Restaurant Without Drive Through	933	TSF	346.23	15.06	10.04	25.10	14.17	14.17	28.34
High-Turnover Sit-down Restaurant	932	TSF	112.18	5.47	4.47	9.94	6.06	3.71	9.77
Automobile Service	941	SP	40.00	2.01	0.99	3.00	2.72	2.13	4.85
Project Trip Generation									
Planning Area 1	Vacant								
Planning Area 2	Vacant								
Planning Area 3	Vacant								
Planning Area 4									
Shopping Center (Retail Center)	162.250	TSF	6,125	95	58	153	297	321	618
Fast Food Restaurant With Drive Through (Yoshinoya)	3.900	TSF	1,837	80	77	157	66	61	127
Subtotal			*7,962*	*174*	*135*	*309*	*363*	*383*	*746*
Planning Area 6									
Fast Food Restaurant With Drive Through (Arby's)	2.700	TSF	1,272	55	53	109	46	42	88
Fast Food Restaurant Without Drive Through (KFC)	2.700	TSF	935	41	27	68	38	38	77
Auto Service (Jiffy Lube)	3	SP	120	6	3	9	8	6	15
High-Turnover Sit-down Restaurant (Centanario)	8.800	TSF	987	48	39	87	53	33	86
Subtotal			*3,314*	*150*	*123*	*273*	*146*	*120*	*265*
Planning Area 7									
Shopping Center (Retail Center)	33.675	TSF	1,271	20	12	32	62	67	128
Subtotal			*1,271*	*20*	*12*	*32*	*62*	*67*	*128*
Planning Area 8	*Vacant*								
Total Trip Generation			*12,546*	*344*	*269*	*614*	*570*	*569*	*1,139*
Internal Trip Capture[2]			-2,886	-17	-13	-31	-131	-131	-262
Pass-By Trips For Shopping Center[3]			-1,257	-16	-15	-31	-131	-130	-261
Pass-By Trips For Fast Food With Drive Through[4]			-777	-33	-33	-66	-53	-53	-106
Pass-By Trips For High-Turnover Sit-down Restaurant[5]			-197	-9	-8	-17	-17	-17	-34
Total Pass-by Trips			*-2,232*	*-58*	*-57*	*-115*	*-201*	*-200*	*-401*
Net Trip Generation With Internal Trip Capture and Pass By			**7,429**	**269**	**199**	**468**	**238**	**238**	**476**

Note: TSF = Thousand Square Feet

1. Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 820 - Shopping Center, Land Use Code 934 - Fast-Food Restaurant With Drive-Through Window, Land Use Code 933 - Fast-Food Restaurant Without Drive-Through Window, Land Use Code 932 - High-Turnover (Sit-Down) Restaurant, Land Use Code 941 - Quick Lubrication Vehicle Shop.
2. Internal capture calculated using methodology from NCHRP 684 Mixed Use Spreadsheet
3. Pass-by trip rates (35% during PM peak hour, 17% for AM peak hour and Daily) from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 820 - Shopping Center.
4. Pass-by trip rates (49% during PM peak hour, 25% for AM peak hour and Daily) from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 934 - Fast Food Restaurant with Drive Through.
5. Pass-by trip rates (40% during PM peak hour, 20% for AM peak hour and Daily) from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 932 - High Turnover Sit-down Restaurant.

Trip Distribution and Assignment

Regional and local trip distribution percentages for the proposed project were based on logical peak hour commute patterns and approved in the City's Scoping Agreement. Figure 6 and Figure 7 illustrate the Retail outbound and inbound trip distribution percentages respectively, while Figure 8 and Figure 9 illustrate the outbound and inbound trip distribution percentages for the Business Park component of the project respectively. The trip distribution percentages at each intersection were applied to the proposed project's weekday AM and PM peak hour trip generation estimates to calculate the project trip assignment. The resulting weekday AM, and PM peak hour trip assignments are also shown on Figure 10.

Background Cumulative Traffic

Ambient Growth Rate

Traffic Conditions prior to the time that the proposed development is completed will be estimated by increasing the existing traffic counts by a growth rate of 2% per year. The ambient growth rate will be applied from 2017 till 2022.

Cumulative Projects

The cumulative project list includes reasonably foreseeable development projects which are either approved or being processed concurrently in the study. A list of these projects was compiled in collaboration with the City's Planning Department (Economic Development) and location of each cumulative project is shown in Figure 11, while the trip generation of each cumulative project is shown in Table 12.
The cumulative project trips where then distributed and assigned on the study area intersections as shown in Figure 12.

Near Term and General Plan Traffic Forecasts

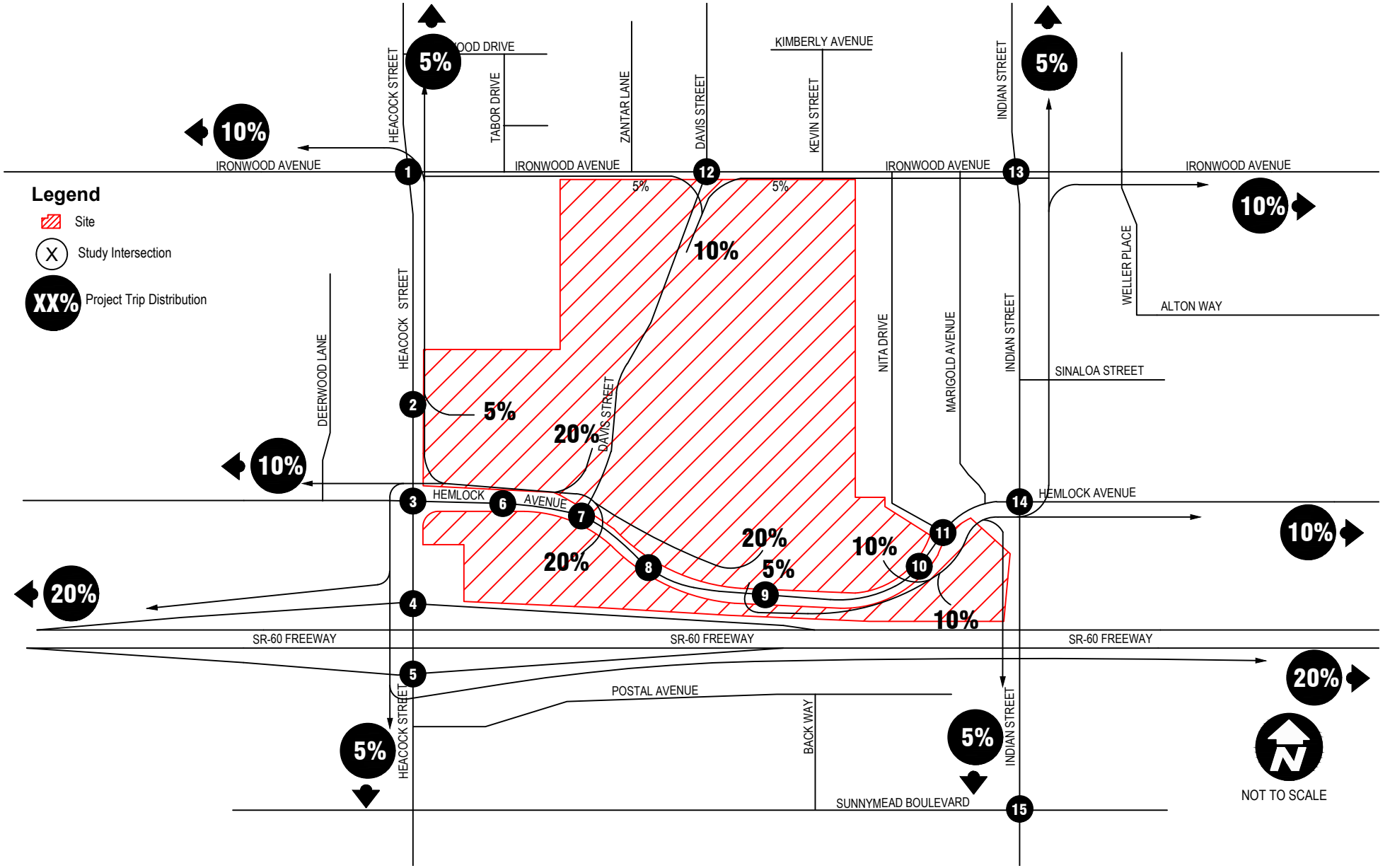
A "buildup" and "buildout" analysis were carried out. The "buildup" scenario corresponds to Near Term Year 2022 and was used to approximate the Opening Year Cumulative traffic forecasts. The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast the Near Term Year 2022 background traffic conditions. The Opening Year Cumulative traffic forecasts include background traffic, traffic generated by other cumulative development projects within the study area, and the traffic generated by the proposed Project. The 2022 roadway network is similar to the existing conditions roadway network with the exception of future roadways and intersections proposed to be developed by the Project.
The "buildout" approach is used to forecast the General Plan Buildout Without and With Project conditions of the study area. The Moreno Valley Transportation Analysis Model (based on RivTam) was used for this analysis.

Table 12. Cumulative Projects Trip Generation

	LU	Units	Daily	AM Peak Hour IN	AM Peak Hour OUT	AM Peak Hour TOTAL	PM Peak Hour IN	PM Peak Hour OUT	PM Peak Hour TOTAL
Trip Rates[1]									
Shopping Center	820	TSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81
Office	710	TSF	9.74	1.00	0.16	1.16	0.18	0.97	1.15
Hotel	310	RM	8.36	0.28	0.19	0.47	0.31	0.29	0.60
Single Family Residential	210	DU	9.44	0.19	0.56	0.74	0.62	0.37	0.99
Multi-Family Housing	220	DU	7.32	0.11	0.35	0.46	0.35	0.21	0.56
Project Trip Generation									
1. Moreno Valley Plaza (Shopping Center)	341.000	TSF	12,873	199	122	321	624	676	1,299
Minus Pass-By Trips[2]			-1,287	-20	-12	-32	-118	-128	-247
Subtotal Moreno Valley Plaza (Shopping Center)			*11,585*	*179*	*110*	*288*	*505*	*547*	*1,052*
2. Olivewood Plaza (Office)	22.758	TSF	222	23	4	26	4	22	26
3. Riverside County Office Building (Office)	52.000	TSF	506	52	8	60	10	50	60
4. Sleep Inn & Suites (Hotel)	66	RM	552	18	13	31	20	19	40
5. Econo Lodge (Hotel)	51	RM	426	14	10	24	16	15	31
6. Holiday Inn Express (Hotel)	153	RM	1,279	42	29	72	47	45	92
7. Best Western Hotel and Suites (Hotel)	59	RM	493	16	11	28	18	17	35
8. Tract 32710 (Single Family Residential)	6	DU	57	1	3	4	4	2	6
9. Tract 32126 (Single Family Residential)	35	DU	330	6	19	26	22	13	35
10. Tract 36761 (Single Family Residential)	7	DU	66	1	4	5	4	3	7
11. Tract 31621 (Single Family Residential)	12	DU	113	2	7	9	7	4	12
12. Tract 35956 (Single Family Residential)	2	DU	19	0	1	1	1	1	2
13. PA15-0042 (Multi-Family Apartments)	39	DU	285	4	14	18	14	8	22
14. Tract 31814 (Multi-Family Condos)	60	DU	439	6	21	28	21	12	34
15. Tract 33771 (Multi-Family Condos)	12	DU	88	1	4	6	4	2	7
16. PEN 16-0066 (Multi-Family Apartments)	12	DU	88	1	4	6	4	2	7
17. Tract 35663 (Multi-Family Condos)	12	DU	88	1	4	6	4	2	7
18. Tract 35769 (Multi-Family Condos)	16	DU	117	2	6	7	6	3	9
19. PA09-0006 (Multi-Family Apartments)	15	DU	110	2	5	7	5	3	8
Total Trip Generation			**7,429**	**269**	**199**	**468**	**238**	**238**	**476**

Note: TSF = Thousand Square Feet, DU = Dwelling Unit, RM = Room Vehicle

1. Trip rates from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 820 - Shopping Center, Land Use Code 710 – Office, Land Use Code 310 – Hotel, Land Use Code 210 - Single Family Residential, Land Use Code 220- Multi-Family Housing (Low-Rise).
2. Pass-by trip rates (19% during PM peak hour, 10% for AM peak hour and Daily) from the Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 820 - Shopping Center



Source: Google Maps, 09/2017.

Retail Distribution Outbound

Festival at Moreno Valley

FIGURE 6

transpogroup
WHAT TRANSPORTATION CAN BE.

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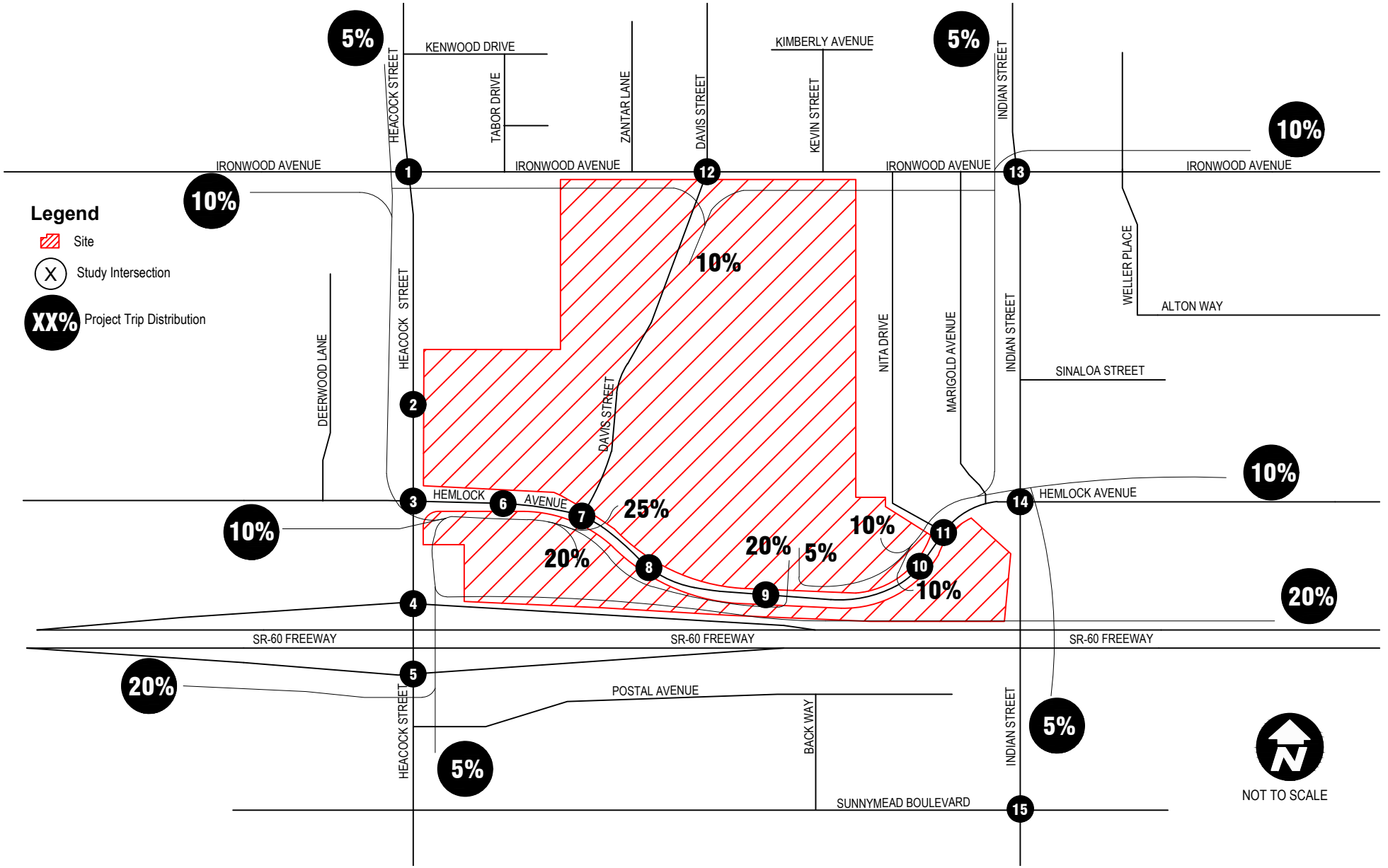


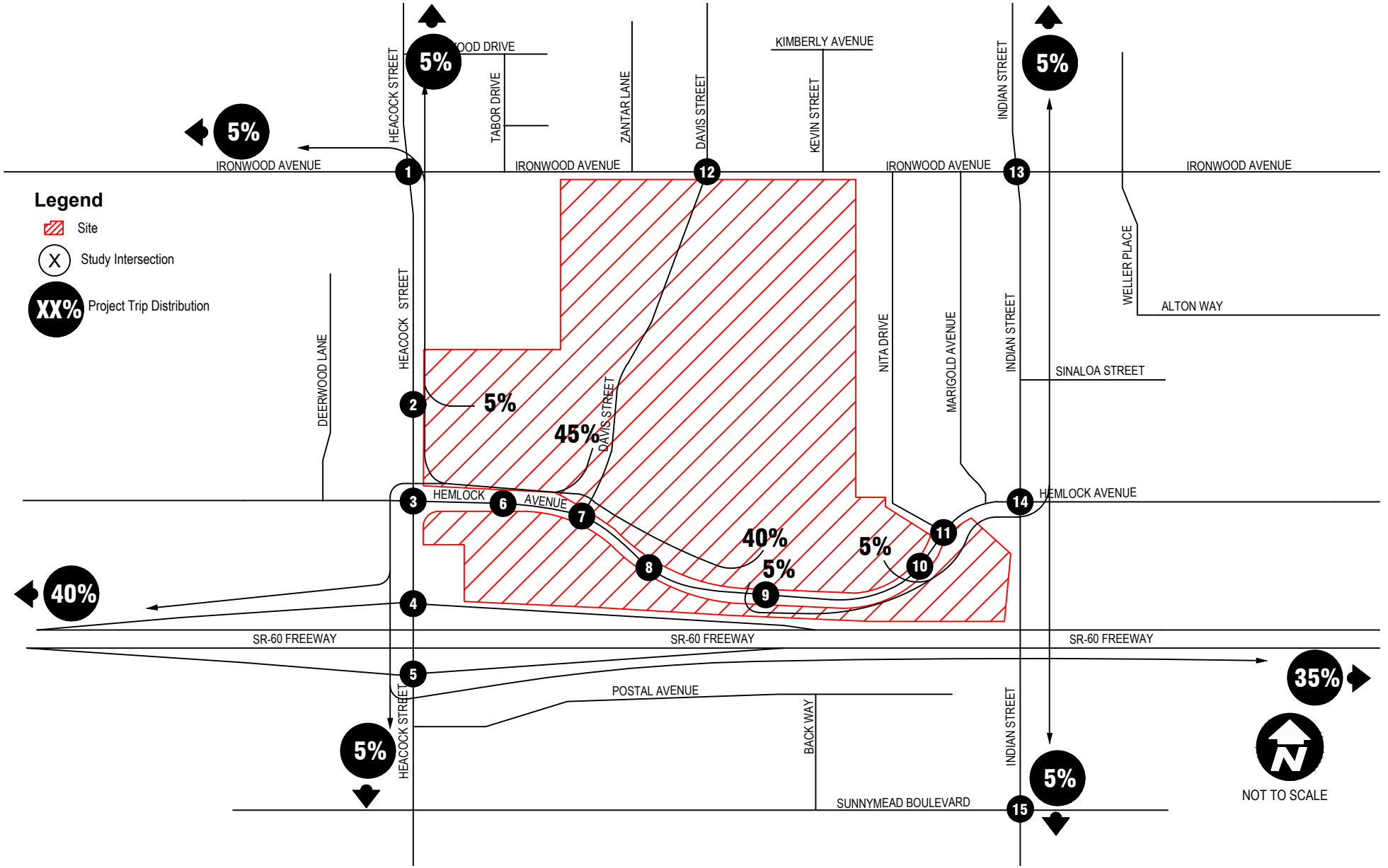
Source: Google Maps, 09/2017.

Retail Distribution Inbound

Festival at Moreno Valley

FIGURE 7

transpogroup
WHAT TRANSPORTATION CAN BE.



Source: Google Maps, 09/2017.

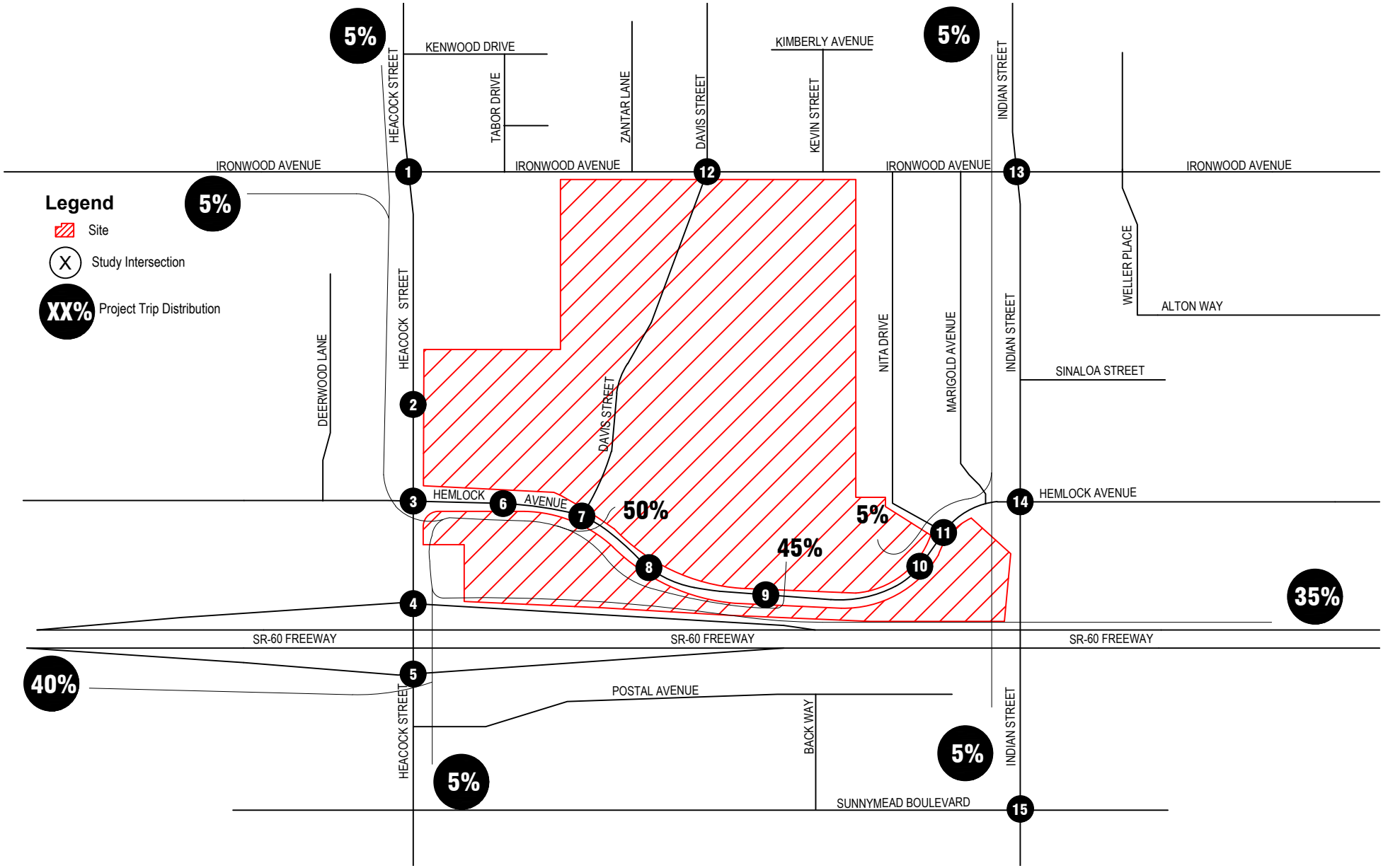
Business Park Distribution Outbound

FIGURE 8

Festival at Moreno Valley

transpogroup
WHAT TRANSPORTATION CAN BE.

Dec 04, 2017 - 4:25pm emilyc C:\Users\emilyc\Dropbox (Transpo CA)\Transpo CA Team Folder\Projects\2017\17261.PR - Festival at Moreno Valley\Graphics\Festival at Moreno Valley.dwg Layout: fig8-Business Park Distribution Outbound



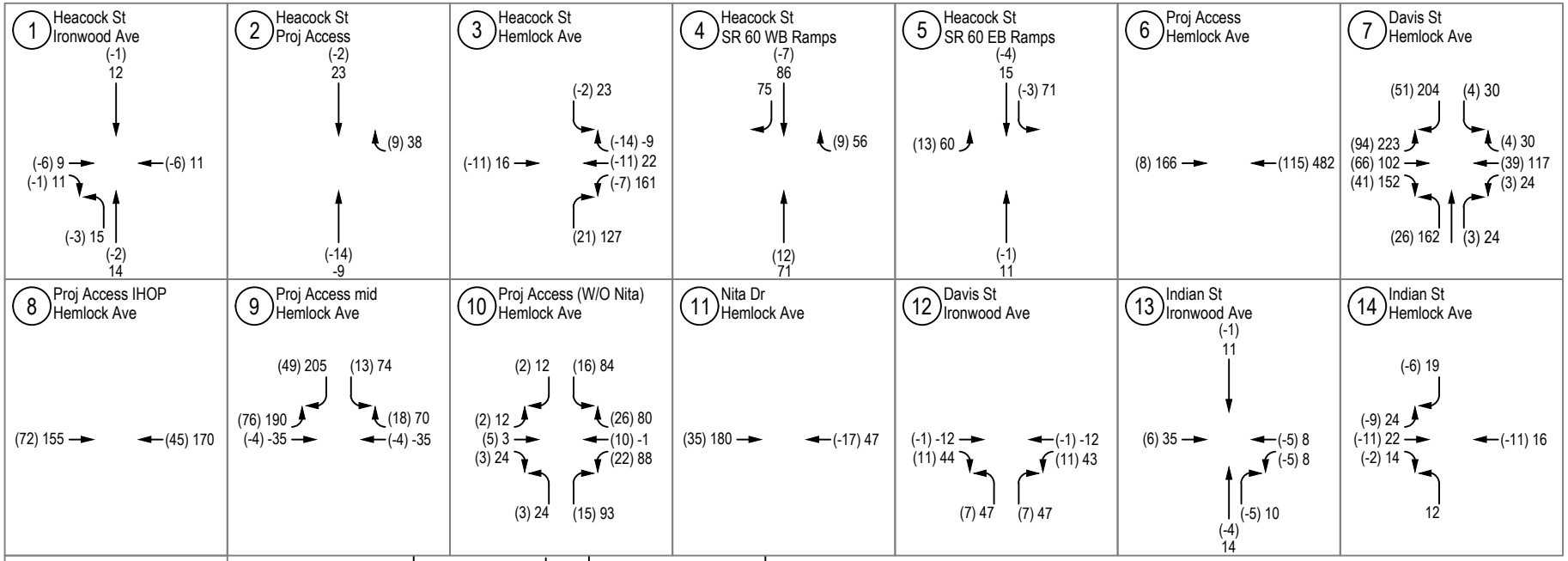
Source: Google Maps, 09/2017.

Business Park Distribution Inbound

Festival at Moreno Valley

FIGURE 9

transpogroup
WHAT TRANSPORTATION CAN BE.

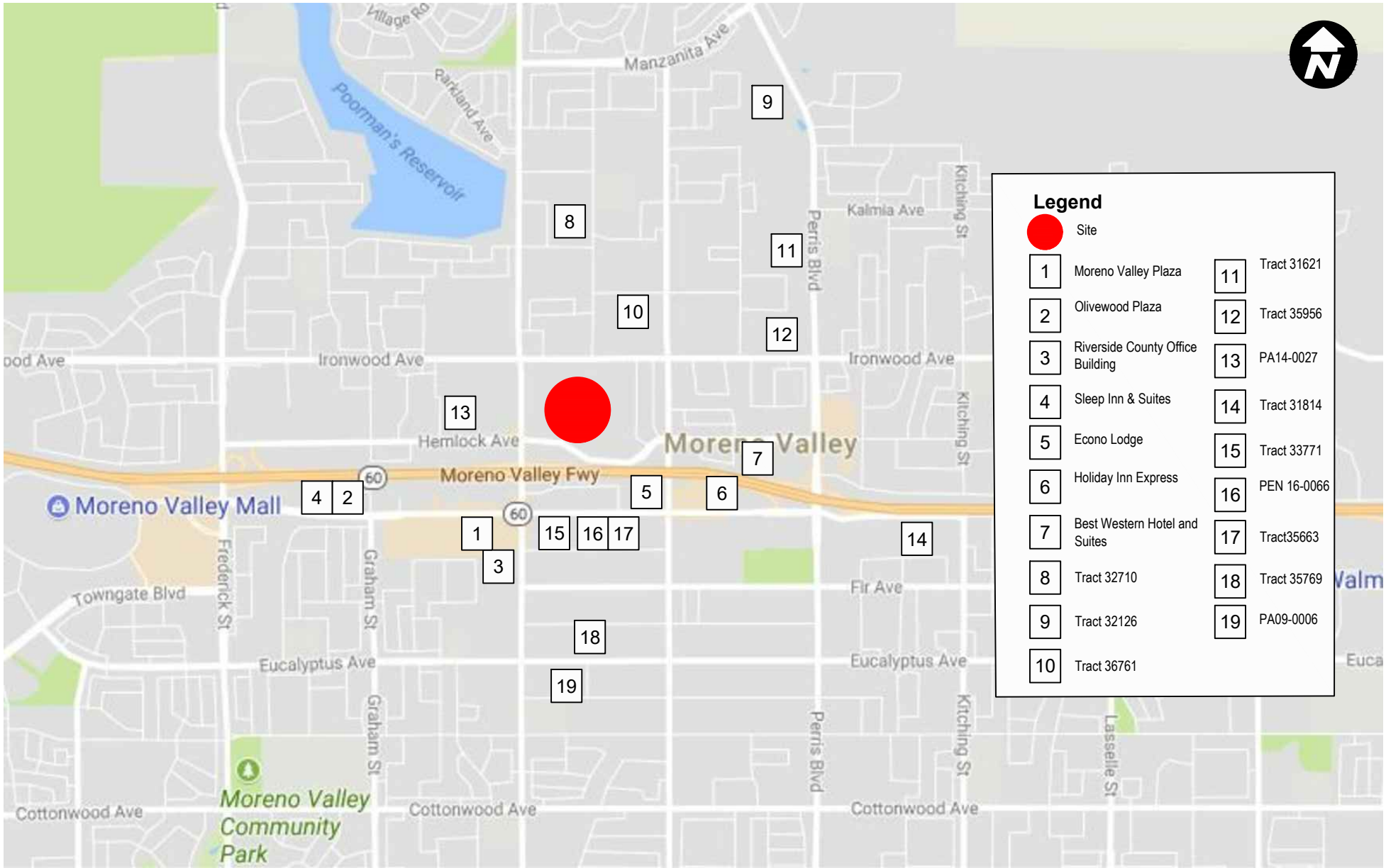


Project Trip Distribution and Assignment

Festival at Moreno Valley

FIGURE 10

transpogroup
WHAT TRANSPORTATION CAN BE.



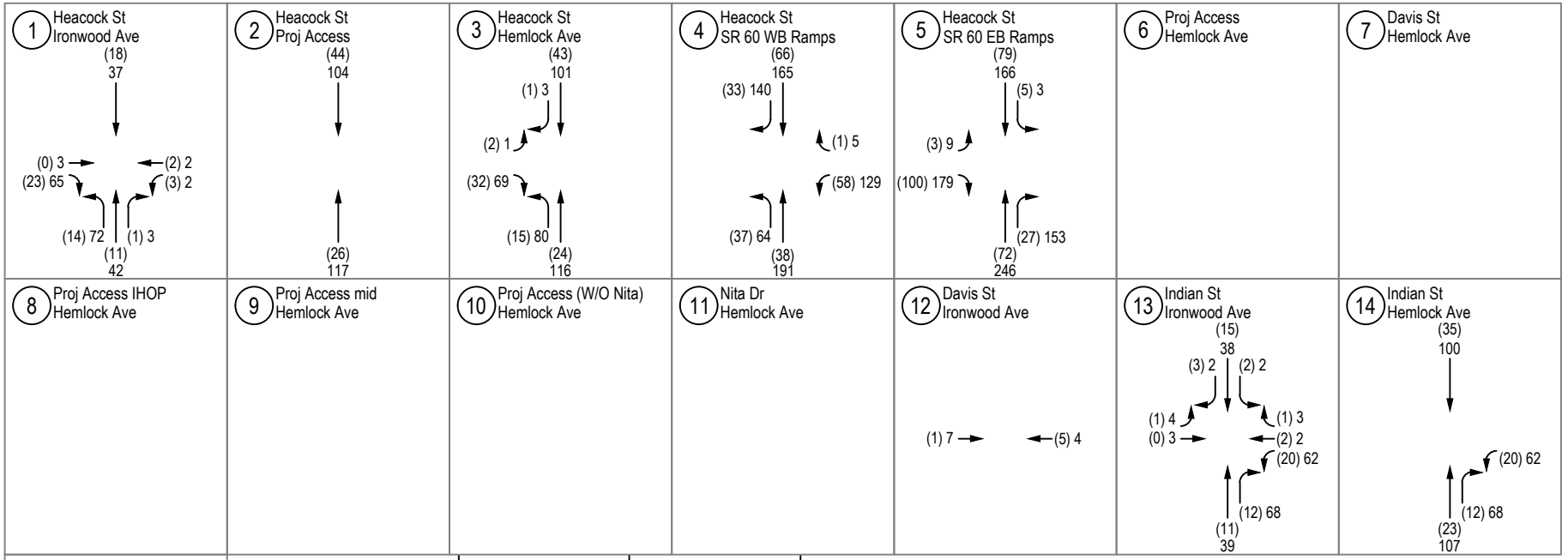
Source: City of Moreno Valley, November 2017.

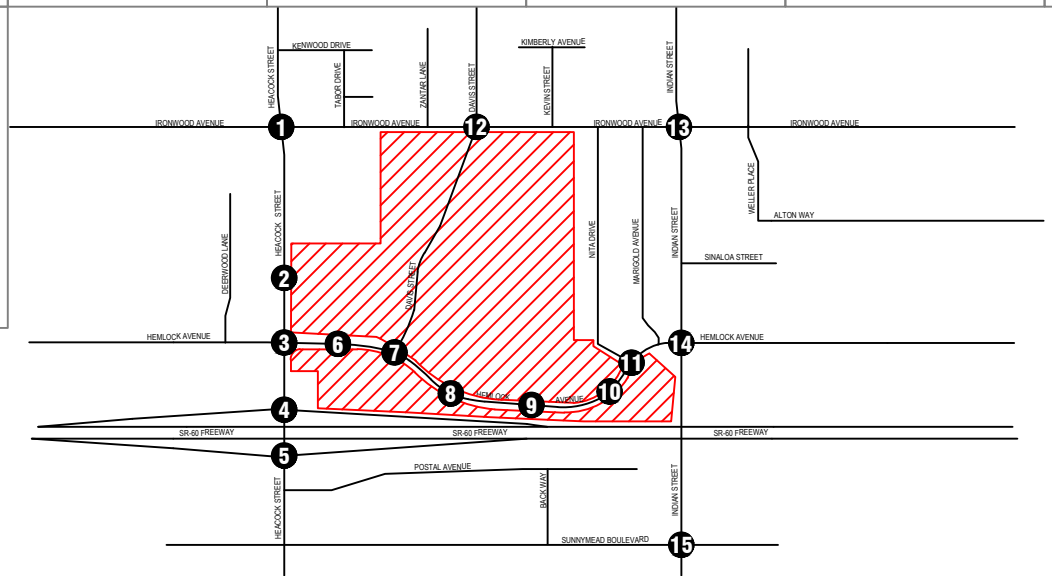
Locations of Cumulative Projects

FIGURE 11

Festival at Moreno Valley

transpogroup
WHAT TRANSPORTATION CAN BE.





NOT TO SCALE

Legend

- Site
- X Weekday PM Peak Hour Traffic Volumes
- (X) Weekday AM Peak Hour Traffic Volumes
- (X) Study Intersection

Cumulative Projects Trip Assignment

Festival at Moreno Valley

FIGURE 12

transpogroup
WHAT TRANSPORTATION CAN BE.

IV. Traffic Analysis

This section describes analysis results for existing with-project, Near Term Year (2022) baseline, Near Term Year (2022) with-project conditions and the General Plan build-out (2040) without and with project conditions. Operations for existing conditions were illustrated earlier in Section II and also are summarized in this section as part of the comparison to existing plus project conditions.
Operations for both intersections and roadway segments are described along with signal warrant analysis. Mitigation measures are discussed in Section V.

Existing With-Project

Intersection Operations

Level of Service Analysis

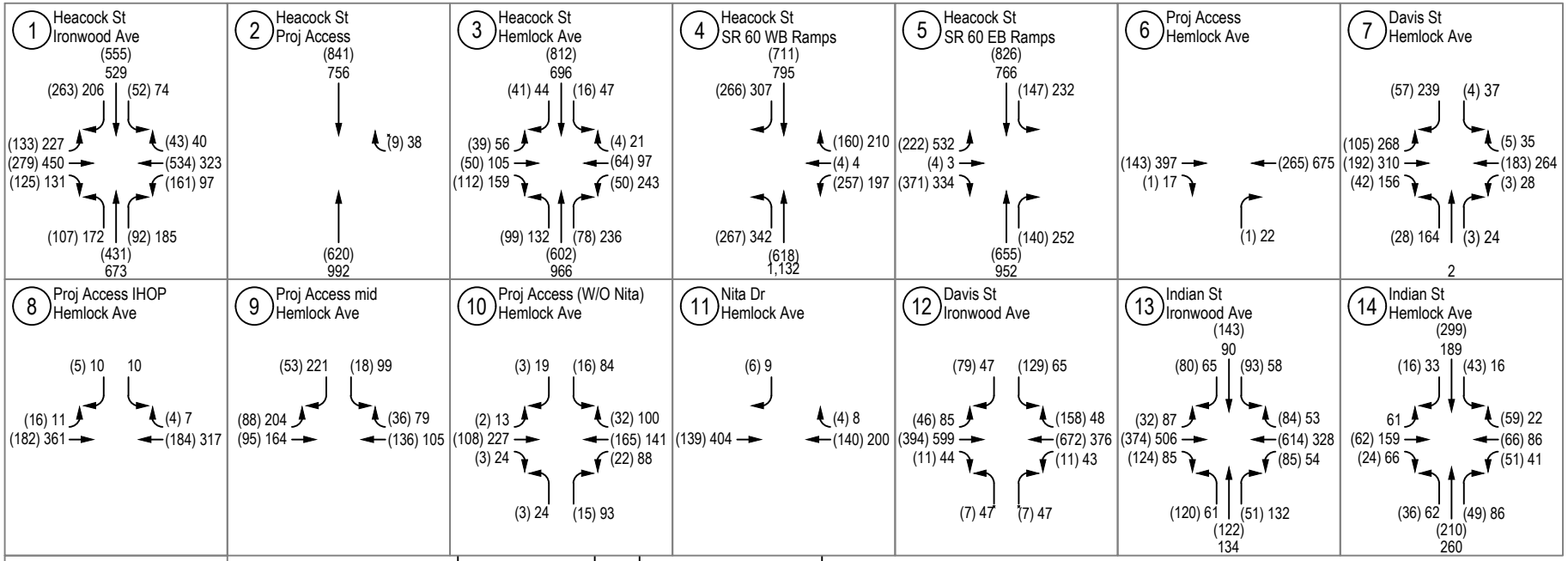
Intersection with-project traffic volumes were obtained by adding the project trip assignments (shown in Figure 10) during the AM and PM peak hours to the existing volumes at the intersection. Figure 13 illustrates the existing with-project traffic volumes at the study area intersections. An intersection operations analysis was conducted for the study area to evaluate the Existing with-Project weekday AM and PM peak hour conditions with the project. Intersection operations were calculated using the LOS methodology described previously. Table 13 provides a comparison between the Existing without and with-project conditions for the weekday AM and PM peak hours. Detailed LOS worksheets are included in Appendix C.

As shown in the Table 13, the Davis Street/Hemlock Avenue intersection is forecast to operate at LOS F during the PM peak hour with the project. The addition of project traffic is expected to increase the delay at the intersection leading to a LOS F under Existing with-Project PM peak hour conditions. This increase is considered a significant impact per the City's unsignalized intersection significance criteria (LOS C). Mitigation measures are discussed in the following section.

Queuing Analysis

A queuing analysis was conducted at the study area intersections to determine if the left turn pocket (storage) lengths are able to accommodate queues. The 95th percentile queue calculations were calculated using Synchro for the weekday AM and weekday PM peak hours and results summary is presented in Table 14 with detailed calculation in Appendix C.

Table 13 shows that the existing 95th percentile queue lengths that exceed storage space under Existing with-Project conditions. As mentioned earlier, the 95th percentile queue is not necessarily ever observed, it is simply based on statistical calculations. It is however used by many jurisdictions as the basis for calculating storage lengths. When Synchro yielded "95th percentile volume exceeds capacity, queue maybe longer", the queues were evaluated in Simtraffic. Mitigation measures are illustrated in Section V.



Existing Plus Project AM and PM Peak Hour Traffic Volumes

Festival at Moreno Valley

FIGURE 13

transpogroup
WHAT TRANSPORTATION CAN BE.

Dec 04, 2017 - 4:36pm emilyc C:\Users\emilyc\Dropbox (Transpo CA)\Transpo CA Team Folder\Projects\2017\17261.PR - Festival at Moreno Valley\Graphics\Festival at Moreno Valley.dwg Layout: fig13-exwp traffic volumes

Table 13. Existing and Existing with-Project Peak Hour Intersection LOS

Intersection	Traffic Control	City LOS Standard	Existing				Existing with-Project				Delay Change		Impact?	
			AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
			LOS[1]	Delay[2]	LOS[1]	Delay[2]	LOS[1]	Delay[2]	LOS[1]	Delay[2]				
1. Heacock Street/Ironwood Avenue	Signal	LOS D	C	26.9	C	28	C	26.7	C	28.9	-0.2	0.9	NO	NO
2. Heacock Street/(new) Project Access	OWSC	LOS D	A	0	A	0	B	10.5	B	12.6	10.5	12.6	NO	NO
3. Heacock Street/Hemlock Avenue	Signal	LOS D	B	18.9	C	22.3	B	18.0	C	31.5	-0.9	9.2	NO	NO
4. Heacock Street/State Route (SR 60) WB Ramps	Signal	LOS D	C	21.8	B	19.6	C	21.7	C	22.6	-0.1	3.0	NO	NO
5. Heacock Street/State Route (SR 60) EB Ramps	Signal	LOS D	C	21.9	C	21.8	C	21.9	C	23.8	0.0	2.0	NO	NO
6. Project Access/Hemlock Avenue	OWSC	LOS C	A	8.7	A	9.9	A	8.7	A	9.7	0.0	-0.2	NO	NO
7. Davis Street/Hemlock Avenue	TWSC	LOS C	B	11.1	B	13.5	C	18.4	**F**	**1371.9**	7.3	1358.4	NO	**YES**
8. Project Access IHOP/Hemlock Avenue	OWSC	LOS C	A	9.1	B	10	A	9.4	B	11.7	0.3	1.7	NO	NO
9. Project Access (middle dwy)/Hemlock Avenue	OWSC	LOS C	A	9.7	B	10.3	B	10.2	C	18.1	0.5	7.8	NO	NO
10. Project Access (w/o Nita Dr)/Hemlock Avenue	OWSC	LOS C	A	9.2	A	9.1	B	11.6	C	22.8	2.4	13.7	NO	NO
11. Nita Drive/Hemlock Avenue	OWSC	LOS C	A	9.2	A	9.2	A	9.1	A	9.4	-0.1	0.2	NO	NO
12. Davis Street/Ironwood Avenue	Signal	LOS C	C	25.8	C	33	C	25.9	C	28.4	0.1	-4.6	NO	NO
13. Indian Street/Ironwood Avenue	Signal	LOS D	C	32.1	C	25.9	C	32.0	C	26.3	-0.1	0.4	NO	NO
14. Indian Street/Hemlock Avenue	Signal	LOS D	C	22.3	C	22.1	C	21.4	C	23.6	-0.9	1.5	NO	NO
15. Indian Street/Sunnymead Boulevard	Signal	LOS D	C	21.2	C	27.3	C	21.2	C	27.2	0.0	-0.1	NO	NO

1. Level of Service
2. Delay measured in seconds/vehicle
3. Delay and LOS are based on Highway Capacity Manual 2010
4. Signal = Traffic Signal (evaluated using the HCM Methodology)
5. TWSC = Two Way Stop Controlled (evaluated using the HCM Methodology)
6. OWSC = One Way Stop Controlled (evaluated using the HCM Methodology)
7. The decrease (in delay per vehicle) with project is not unusual when trips are added to the minor approach

Table 14. Existing With-Project Weekday Peak Hour Queuing Analysis

Intersection	Movement	Existing Pocket Length (ft)	Existing 95th Percentile Queue[1]		Existing With-Project 95th Percentile Queue[1]		Exceeds Existing Pocket Length?	
			AM	PM	AM	PM	AM	PM
1. Heacock Street/Ironwood Avenue	EBL	90	149	287	149	**128**	**Yes**	**Yes**
	WBL	135	198	107	**180**	108	**Yes**	No
	NBL	140	127	172	124	**188**	No	**Yes**
	SBL	100	70	87	70	88	No	No
2. Heacock Street/(new) Project Access	No pocket Lanes and/or No Queues							
3. Heacock Street/Hemlock Avenue	EBL	70	50	70	49	71	No	**Yes**
	WBL	360	66	92	59	**337**	No	No
	NBL	100	98	136	95	138	No	**Yes**
	SBL	95	31	39	27	62	No	No
4. Heacock Street/State Route (SR 60) WB Ramps	NBL	200	239	329	**230**	**262**	**Yes**	**Yes**
5. Heacock Street/State Route (SR 60) EB Ramps	EBL	0	101	213	106	243	**Yes**	**Yes**
	SBL	190	150	160	147	212	No	**Yes**
6. Project Access/Hemlock Avenue	No pocket Lanes and/or No Queues							
7. Davis Street/Hemlock Avenue	EBL	180	0	3	0	0	No	No
8. Project Access IHOP/Hemlock Avenue	No pocket Lanes and/or No Queues							
9. Project Access (middle dwy)/Hemlock Avenue	No pocket Lanes and/or No Queues							
10. Project Access (w/o Nita Dr)/Hemlock	No pocket Lanes and/or No Queues							
11. Nita Drive/Hemlock Avenue	No pocket Lanes and/or No Queues							
12. Davis Street/Ironwood Avenue	EBL	150	93	182	**82**	**146**	No	**Yes**
	SBL	40	109	61	112	46	**Yes**	**Yes**
13. Indian Street/Ironwood Avenue	EBL	95	51	102	51	104	No	**Yes**
	WBL	100	109	64	104	72	**Yes**	No
	NBL	110	139	78	140	78	**Yes**	No
	SBL	80	112	75	113	76	**Yes**	No
14. Indian Street/Hemlock Avenue	EBL	150	19	46	0	68	No	No
	WBL	80	56	50	57	50	No	No
	NBL	145	50	62	50	76	No	No
	SBL	100	54	28	53	29	No	No
15. Indian Street/Sunnymead Boulevard	EBL	90	62	172	62	**138**	No	**Yes**
	WBL	100	33	61	33	61	No	No
	NBL	145	89	104	89	104	No	No
	SBL	90	68	77	68	77	No	No

1. Calculated using Synchro – bold numbers indicate where Synchro yielded "95th percentile volume exceeds capacity, queue maybe longer." The queues were evaluated in Simtraffic at these locations.

Signal Warrant Analysis

The signal warrant analysis as per the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), was used for all study area intersections. It was found that the Hemlock Ave / Davis St intersection meets the 8-Hour, 4-Hour, and Peak-Hour signal warrants and as such signalization is recommended. The detailed worksheets are provided in Appendix C.

Roadway Operations

Based on the analysis methodology described in Section I, the existing with-project traffic daily traffic volumes at the study area roadway segments were compared to the City's roadway segment LOS values (presented in Table 4) and the existing traffic daily volumes LOS values. Table 15 presents the results of the existing with-project roadway segment LOS analysis.

Based on the existing with-project roadway segment analysis, all study area roadway segments currently operate with LOS D or better.

Table 15. Existing Condition Roadway Segment LOS Summary

Roadway Segment	Existing Classification	Maximum Capacity ADT[3]	Existing ADT[1]	Existing V/C Ratio	Existing LOS[2]	Existing with-Project ADT[5]	Existing with-Project V/C Ratio	Existing with Project LOS[2]	V/C Ratio Change	Impact
1. Heacock Street - Ironwood Avenue to Hemlock Avenue	Arterial	37,500	23,701	0.632	B	24,768	0.660	B	0.028	No
2. Heacock Street - Hemlock Avenue to SR 60 WB Ramps	Arterial	37,500	26,802	0.715	C	33,124	0.883	D	0.169	No
3. Indian Street - Ironwood Avenue to Hemlock Avenue	Minor Arterial	12,500	6,632	0.531	A	7,483	0.599	A	0.068	No
4. Indian Street - South of Hemlock Avenue	Minor Arterial	12,500	7,667	0.613	B	8,202	0.656	B	0.043	No
5. Ironwood Avenue - West of Heacock Street	Minor Arterial	37,500	15,447	0.412	A	16,299	0.435	A	0.023	No
6. Ironwood Avenue - Heacock Street to Davis Street	Minor Arterial	37,500	13,752	0.367	A	14,070	0.375	A	0.008	No
7. Ironwood Avenue - East of Indian Street	Minor Arterial	37,500	13,016	0.347	A	13,527	0.361	A	0.014	No
8. Hemlock Avenue - West of Heacock Street[4]	Minor Arterial	12,500	5,441	0.435	A	6,077	0.486	A	0.051	No
9. Hemlock Avenue - Heacock Street to Davis Street[4]	Minor Arterial	37,500	5,832	0.156	A	13,715	0.366	A	0.210	No
10. Hemlock Avenue - East of Indian Street[4]	Minor Arterial	12,500	5,176	0.414	A	5,812	0.465	A	0.051	No

1. ADT: Average Daily Traffic
2. LOS based on City of Moreno Valley Roadway Segment LOS Values (Table 4)
3. Based on City of Moreno Valley Guidelines daily service volume standards table (LOS E). Four Lane Divided Arterial and Two Lane Industrial Collector used as classifications.
4. Roadway classification and LOS standard not listed in City Guidelines, assumed to be Minor Arterial, Two Lane Industrial Collector, with LOS Standard C.

Near Term Year (2022) Without-Project

Intersection Operations

Level of Service Analysis

Traffic volumes for the Near Term Year (2022) without-project (baseline) scenario where obtained by adding existing traffic, ambient growth (assuming 2% growth per year) and cumulative traffic volumes. Figure 14 shows the AM and PM Near Term Year (2022) AM and PM traffic volumes at study area intersections and Table 16 illustrates the Peak Hour Level of Service Analysis.

As shown in the table, the Heacock Street/State Route (SR 60) WB Ramps intersection as well as the Indian Street/Sunnymead Boulevard are forecast to operate at LOS E during the PM peak hour without the project. Both intersections are considered to be sub-standard per the City's guidelines.

Table 16. Near Term Year Without-Project Weekday Peak Hour Intersection LOS

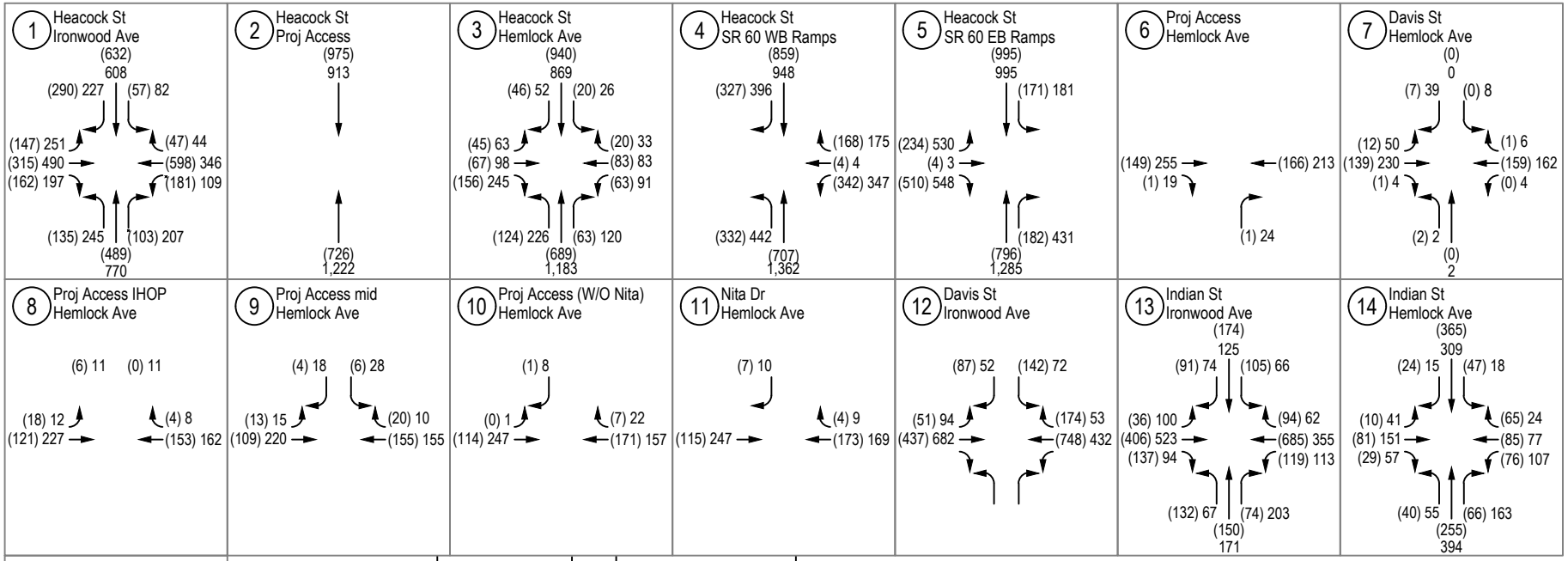
Intersection	Traffic Control	City's LOS Standard	AM Peak		PM Peak	
			LOS[1]	Delay[2]	LOS[1]	Delay[2]
1. Heacock Street/Ironwood Avenue	Signal	LOS D	C	30.3	D	35.1
2. Heacock Street/(new) Project Access	OWSC	LOS D	A	0.0	A	0.0
3. Heacock Street/Hemlock Avenue	Signal	LOS D	C	22.6	C	33.4
4. Heacock Street/State Route (SR 60) WB Ramps	Signal	LOS D	C	34.8	**E**	**58.6**
5. Heacock Street/State Route (SR 60) EB Ramps	Signal	LOS D	C	34.3	D	42.0
6. (new) Project Access/Hemlock Avenue	OWSC	LOS C	A	8.8	B	10.0
7. Davis Street/Hemlock Avenue	TWSC	LOS C	B	11.5	B	14.2
8. Project Access IHOP/Hemlock Avenue	OWSC	LOS C	A	9.2	B	10.2
9. Project Access (middle dwy)/Hemlock Avenue	OWSC	LOS C	A	9.9	B	10.6
10. Project Access (w/o Nita Dr)/Hemlock Avenue	OWSC	LOS C	A	9.3	A	9.2
11. Nita Drive/Hemlock Avenue	OWSC	LOS C	A	9.3	A	9.3
12. Davis Street/Ironwood Avenue	Signal	LOS C	C	27.5	D	36.5
13. Indian Street/Ironwood Avenue	Signal	LOS D	D	36.0	C	28.4
14. Indian Street/Hemlock Avenue	Signal	LOS D	C	23.7	C	24.6
15. Indian Street/Sunnymead Boulevard	Signal	LOS D	C	23.4	**E**	**61.0**

1. Level of Service
2. Delay measured in seconds/vehicle
3. Delay and LOS are based on Highway Capacity Manual 2010
4. Signal = Traffic Signal (evaluated using the HCM Methodology)
5. TWSC = Two Way Stop Controlled (evaluated using the HCM Methodology)
6. OWSC = One Way Stop Controlled (evaluated using the HCM Methodology)

Queuing Analysis

A queuing analysis was conducted at the study area intersections to determine if the left turn pocket (storage) lengths are able to accommodate queues. The 95th percentile queue calculations were calculated using Synchro for the weekday AM and weekday PM peak hours and results summary is presented in Table 17 with detailed calculation in Appendix C.

Table 17 shows that the existing 95th percentile queue lengths exceed storage space under Existing with-Project conditions. Mitigation measures are presented in Section V.



Near-Term 2022 Baseline AM and PM Peak Hour Traffic Volumes

FIGURE 14

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Table 17. Near Term Year Without-Project Weekday Peak Hour Queuing Analysis

Intersection	Movement	Existing Pocket Length (ft)	Near Term Year 95th Percentile Queue[1]		Exceeds Existing Pocket Length?	
			AM	PM	AM	PM
1. Heacock Street/Ironwood Avenue	EBL	90	**128**	**132**	**Yes**	**Yes**
	WBL	135	**187**	122	**Yes**	No
	NBL	140	152	**208**	**Yes**	**Yes**
	SBL	100	76	96	No	No
2. Heacock Street/(new) Project Access	No pocket Lanes and/or No Queues					
3. Heacock Street/Hemlock Avenue	EBL	70	57	79	No	**Yes**
	WBL	360	73	104	No	No
	NBL	100	**124**	**170**	**Yes**	**Yes**
	SBL	95	34	42	No	No
4. Heacock Street/State Route (SR 60) WB Ramps	NBL	200	**254**	**246**	**Yes**	**Yes**
5. Heacock Street/State Route (SR 60) EB Ramps	EBL	0	**111**	**243**	**Yes**	**Yes**
	SBL	190	165	176	No	No
6. Project Access/Hemlock Avenue	No pocket Lanes and/or No Queues					
7. Davis Street/Hemlock Avenue	EBL	180	0	3	No	No
8. Project Access IHOP/Hemlock Avenue	No pocket Lanes and/or No Queues					
9. Project Access (middle dwy)/Hemlock Avenue	No pocket Lanes and/or No Queues					
10. Project Access (w/o Nita Dr)/Hemlock Avenue	No pocket Lanes and/or No Queues					
11. Nita Drive/Hemlock Avenue	No pocket Lanes and/or No Queues					
12. Davis Street/Ironwood Avenue	EBL	150	92	**209**	No	**Yes**
	SBL	40	122	66	**Yes**	**Yes**
13. Indian Street/Ironwood Avenue	EBL	95	56	**119**	No	**Yes**
	WBL	100	**139**	**132**	**Yes**	**Yes**
	NBL	110	**152**	86	**Yes**	No
	SBL	80	**124**	**85**	**Yes**	**Yes**
14. Indian Street/Hemlock Avenue	EBL	150	21	51	No	No
	WBL	80	77	**106**	No	**Yes**
	NBL	145	55	69	No	No
	SBL	100	59	31	No	No
15. Indian Street/Sunnymead Boulevard	EBL	90	**130**	**115**	**Yes**	**Yes**
	WBL	100	38	66	No	No
	NBL	145	110	143	No	No
	SBL	90	77	25	No	No

1. Calculated using Synchro –bold numbers indicate where Synchro yielded "95th percentile volume exceeds capacity, queue maybe longer." The queues were evaluated in Simtraffic at these locations.

Signal Warrant Analysis

The signal warrant analysis as per the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), was used for all study area intersections. No unsignalized intersection was found to meet the warrants for signalization under without-project conditions. The signal warrant analysis sheets are provided in Appendix C.

Roadway Operations

Roadway traffic volumes were calculated by adding existing volumes to ambient growth and cumulative projects daily volumes. Based on the analysis methodology described in Section I, the Near Term Year (2022) without-project traffic daily traffic volumes at the study area roadway segments yield the LOS values illustrated in Table 18.

Based on the Near Term Year (2022) without-project segment analysis, all study area roadway segments currently operate with LOS D or better with the exception of Heacock Street between Hemlock and the SR 60 WB Ramps and Indian Street South of Hemlock Avenue which operate at a LOS E.

Table 18. Near Term Year With-out Project Roadway Segment LOS Summary

Roadway Segment	Existing Classification	Maximum Capacity ADT[3]	LOS Standard[2]	ADT[1]	V/C	LOS	Exceeds Threshold?
1. Heacock Street - Ironwood Avenue to Hemlock Avenue	Arterial	37,500	LOS D	29,320	0.782	C	No
2. Heacock Street - Hemlock Avenue to SR 60 WB Ramps	Arterial	37,500	LOS D	34,101	0.909	**E**	**Yes**
3. Indian Street - Ironwood Avenue to Hemlock Avenue	Minor Arterial	12,500	LOS D	9,206	0.737	C	No
4. Indian Street - South of Hemlock Avenue	Minor Arterial	12,500	LOS D	11,507	0.921	**E**	**Yes**
5. Ironwood Avenue - West of Heacock Street	Minor Arterial	37,500	LOS C	18,329	0.489	A	No
6. Ironwood Avenue - Heacock Street to Davis Street	Minor Arterial	37,500	LOS C	15,284	0.408	A	No
7. Ironwood Avenue - East of Indian Street	Minor Arterial	37,500	LOS C	15,618	0.416	A	No
8. Hemlock Avenue - West of Heacock Street[4]	Minor Arterial	12,500	LOS C	7,450	0.596	A	No
9. Hemlock Avenue - Heacock Street to Davis Street[4]	Minor Arterial	37,500	LOS C	6,439	0.172	A	No
10. Hemlock Avenue - East of Indian Street[4]	Minor Arterial	12,500	LOS C	6,873	0.550	A	No

1. ADT: Average Daily Traffic Calculated by growing existing volumes by 2% per year and adding cumulative projects traffic
2. LOS based on City of Moreno Valley Roadway Segment LOS Values (Table 4)
3. Based on City of Moreno Valley Guidelines daily service volume standards table (LOS E). Four Lane Divided Arterial and Two Lane Industrial Collector used as classifications.
4. Roadway classification and LOS standard not listed in City Guidelines, assumed to be Minor Arterial, Two Lane Industrial Collector, with LOS Standard C.

Near Term Year (2022) With-Project

Intersection Operations

Level of Service Analysis

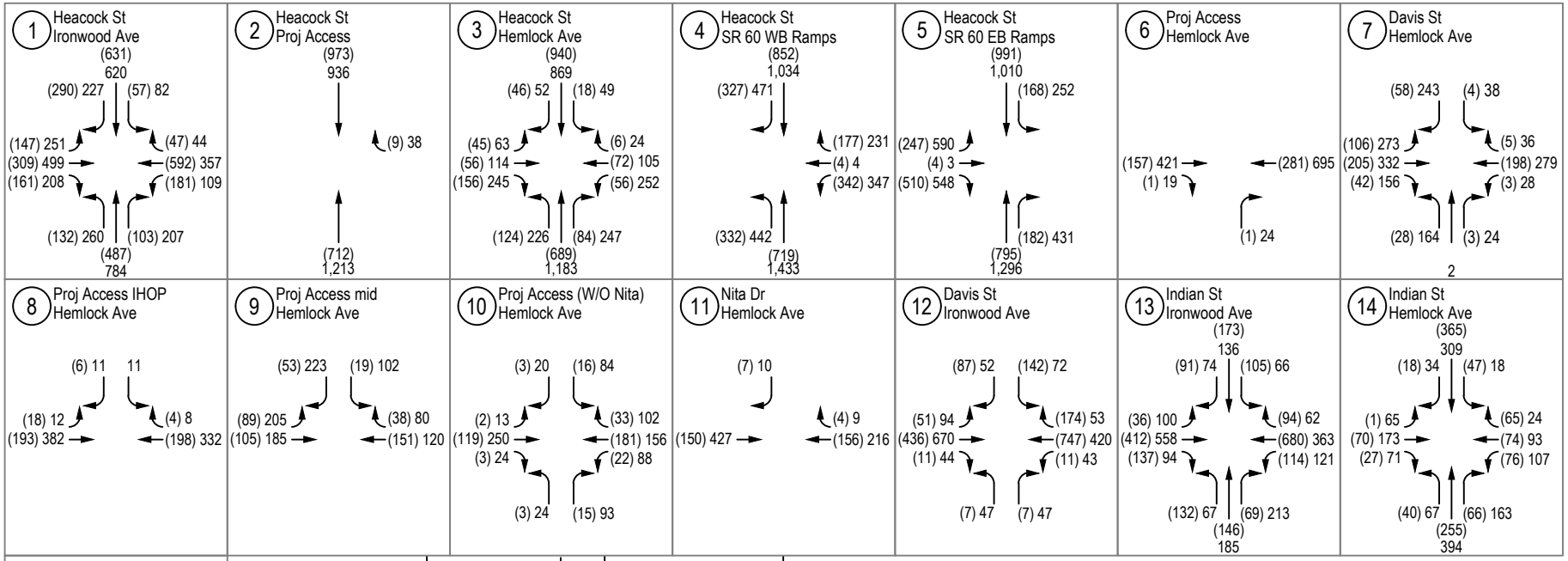
Traffic volumes for the Near Term Year (2022) with-project scenario where obtained by adding project traffic volumes (shown in Figure 10) to the Near Term (2022) without-project volumes. Figure 15 shows the AM and PM Near Term Year (2022) with-project AM and PM traffic volumes at study area intersections and Table 19 illustrates the Peak Hour intersection Level of Service Analysis.

As shown in the table, the Heacock Street/State Route (SR 60) WB Ramps intersection as well as the Davis Street/Hemlock Avenue are forecast to operate at LOS F during the PM peak hour with project. Davis Street/Ironwood Avenue are Indian Street/Sunnymead Boulevard are forecast to operate at LOS D and LOS E respectively during the PM peak hour with project. All these intersections are considered to be sub-standard per the City's guidelines. Mitigation measure will be discussed in the following section.

Queuing Analysis

A queuing analysis was conducted at the study area intersections to determine if the left turn pocket (storage) lengths are able to accommodate queues. The 95th percentile queue calculations were calculated using Synchro for the weekday AM and weekday PM peak hours and results summary is presented in Table 20 with detailed calculation in Appendix C.

Table 20 shows that the existing 95th percentile queue lengths exceed storage space under Near Term with-Project conditions. Mitigations are presented in the following section.



Near-Term 2022 plus Project AM and PM Peak Hour Traffic Volumes

FIGURE 15

Festival at Moreno Valley

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Table 19. Near Term with-Project Peak Hour Intersection LOS

Intersection	Traffic Control	City LOS Standard	Near Term (2022) without-Project				Near Term (2022) with-Project				Delay Change		Impact?	
			AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
			LOS[1]	Delay[2]	LOS[1]	Delay[2]	LOS[1]	Delay[2]	LOS[1]	Delay[2]				
1. Heacock Street/Ironwood Avenue	Signal	LOS D	C	30.3	D	35.1	C	30.0	D	36.7	-0.3	1.6	NO	NO
2. Heacock Street/(new) Project Access	OWSC	LOS D	A	0.0	A	0.0	B	10.9	B	14.2	10.9	14.2	NO	NO
3. Heacock Street/Hemlock Avenue	Signal	LOS D	C	22.6	C	33.4	C	21.7	D	49.5	-0.9	16.1	NO	NO
4. Heacock Street/State Route (SR 60) WB Ramps	Signal	LOS D	C	34.8	**E**	**58.6**	C	34.4	**F**	**81.1**	-0.4	22.5	NO	**YES**
5. Heacock Street/State Route (SR 60) EB Ramps	Signal	LOS D	C	34.3	D	42.0	C	34.2	D	46.1	-0.1	4.1	NO	NO
6. Project Access/Hemlock Avenue	OWSC	LOS C	A	8.8	B	10.0	A	8.8	B	10.7	0.0	0.7	NO	NO
7. Davis Street/Hemlock Avenue	TWSC	LOS C	B	11.5	B	14.2	C	19.4	**F**	**1617.9**	7.9	1603.7	NO	**YES**
8. Project Access IHOP/Hemlock Avenue	OWSC	LOS C	A	9.2	B	10.2	A	9.5	B	11.9	0.3	1.7	NO	NO
9. Project Access (middle dwy)/Hemlock Avenue	OWSC	LOS C	A	9.9	B	10.6	B	10.4	C	19.5	0.5	8.9	NO	NO
10. Project Access (w/o Nita Dr)/Hemlock Avenue	OWSC	LOS C	A	9.3	A	9.2	B	11.9	C	24.7	2.6	15.5	NO	NO
11. Nita Drive/Hemlock Avenue	OWSC	LOS C	A	9.3	A	9.3	A	9.2	A	9.5	-0.1	0.2	NO	NO
12. Davis Street/Ironwood Avenue	Signal	LOS C	C	27.5	D	36.5	C	27.7	**D**	**35.7**	0.2	-0.8	NO	**YES**
13. Indian Street/Ironwood Avenue	Signal	LOS D	D	36.0	C	28.4	D	35.8	C	29.1	-0.2	0.7	NO	NO
14. Indian Street/Hemlock Avenue	Signal	LOS D	C	23.7	C	24.6	C	22.9	C	26.2	-0.8	1.6	NO	NO
15. Indian Street/Sunnymead Boulevard	Signal	LOS D	C	23.4	**E**	**61.0**	C	23.4	**E**	**60.6**	0.0	-0.4	NO	**YES**

1. Level of Service
2. Delay measured in seconds/vehicle
3. Delay and LOS are based on Highway Capacity Manual 2010
4. Signal = Traffic Signal (evaluated using the HCM Methodology)
5. TWSC = Two Way Stop Controlled (evaluated using the HCM Methodology)
6. OWSC = One Way Stop Controlled (evaluated using the HCM Methodology)
7. The decrease (in delay per vehicle) with project is not unusual when trips are added to the minor approach

Table 20. Near Term With-Project Weekday Peak Hour Queuing Analysis

Intersection	Movement	Existing Pocket Length (ft)	Near Term With-out Project 95th Percentile Queue[1]		Near Term With-Project 95th Percentile Queue[1]		Exceeds Existing Pocket Length?	
			AM	PM	AM	PM	AM	PM
1. Heacock Street/Ironwood Avenue	EBL	90	**128**	**132**	**129**	**117**	**Yes**	**Yes**
	WBL	135	**187**	122	**187**	122	**Yes**	No
	NBL	140	152	**208**	148	**194**	**Yes**	**Yes**
	SBL	100	76	96	76	96	No	No
2. Heacock Street/(new) Project Access		No pocket Lanes and/or No Queues						
3. Heacock Street/Hemlock Avenue	EBL	70	57	79	56	79	No	**Yes**
	WBL	360	73	104	65	**327**	No	**Yes**
	NBL	100	**124**	**170**	**120**	**151**	**Yes**	**Yes**
	SBL	95	34	42	31	65	No	No
4. Heacock Street/State Route (SR 60) WB Ramps	NBL	200	**254**	**246**	**260**	**264**	**Yes**	**Yes**
5. Heacock Street/State Route (SR 60) EB Ramps	EBL	0	111	243	116	272	**Yes**	**Yes**
	SBL	190	165	176	162	226	No	**Yes**
6. Project Access/Hemlock Avenue		No pocket Lanes and/or No Queues						
7. Davis Street/Hemlock Avenue	EBL	180	0	3	7.5	25	No	No
8. Project Access IHOP/Hemlock Avenue		No pocket Lanes and/or No Queues						
9. Project Access (middle dwy)/Hemlock		No pocket Lanes and/or No Queues						
10. Project Access (w/o Nita Dr)/Hemlock		No pocket Lanes and/or No Queues						
11. Nita Drive/Hemlock Avenue		No pocket Lanes and/or No Queues						
12. Davis Street/Ironwood Avenue	EBL	150	**92**	**209**	**102**	**210**	No	**Yes**
	SBL	40	122	66	**122**	**66**	**Yes**	**Yes**
13. Indian Street/Ironwood Avenue	EBL	95	56	119	56	119	No	**Yes**
	WBL	100	139	132	**134**	**140**	**Yes**	**Yes**
	NBL	110	152	86	**152**	86	**Yes**	No
	SBL	80	124	85	**124**	**85**	**Yes**	**Yes**
14. Indian Street/Hemlock Avenue	EBL	150	21	51	5	72	No	No
	WBL	80	77	106	77	**109**	No	**Yes**
	NBL	145	55	69	54	85	No	No
	SBL	100	59	31	58	32	No	No
15. Indian Street/Sunnymead Boulevard	EBL	90	130	**115**	**130**	**124**	**Yes**	**Yes**
	WBL	100	38	66	38	66	No	No
	NBL	145	110	143	110	143	No	No
	SBL	90	77	25	21	83	No	No

1. Calculated using Synchro –bold numbers indicate where Synchro yielded "95th percentile volume exceeds capacity, queue maybe longer." The queues were evaluated in Simtraffic at these locations.

Signal Warrant Analysis

The signal warrant analysis as per the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), was used for all study area intersections. It was found that the Hemlock Ave / Davis St intersection meets the 8-Hour, 4-Hour, and Peak-Hour signal warrants and as such signalization is recommended. The signal warrant analysis sheets are provided in Appendix C.

Roadway Operations

Based on the analysis methodology described in Section I, the Near Term Year (2022) with-project traffic daily traffic volumes at the study area roadway segments were compared to the City's roadway segment LOS values and the with-out project traffic daily volumes LOS values. Table 21 presents the results of the Near Term Year (2022) with-project roadway segment LOS analysis.

Table 21 shows that, all study area roadway segments operate with an acceptable LOS except Heacock Street (Hemlock Avenue to SR 60 WB Ramps) and Indian Street (South of Hemlock Avenue). Mitigation measures are illustrated in Section V.

Table 21. Near Term Year Roadway Segment LOS Summary

Roadway Segment	Existing Classification	Maximum Capacity ADT[3]	Near Term With-out Project ADT[1]	Near Term With-out Project V/C Ratio	Near Term With-out Project LOS[2]	Near Term With Project ADT[5]	Near Term with-Project V/C Ratio	Near Term with-Project LOS[2]	V/C Ratio Change	Impact
1. Heacock Street - Ironwood Avenue to Hemlock Avenue	Arterial	37,500	29,320	0.782	C	30,387	0.810	D	0.028	No
2. Heacock Street - Hemlock Avenue to SR 60 WB Ramps	Arterial	37,500	34,101	0.909	E	40,423	1.078	**F**	0.169	**Yes**
3. Indian Street - Ironwood Avenue to Hemlock Avenue	Minor Arterial	12,500	9,206	0.737	C	10,057	0.805	D	0.068	No
4. Indian Street - South of Hemlock Avenue	Minor Arterial	12,500	11,507	0.921	E	12,042	0.963	**E**	0.043	**Yes**
5. Ironwood Avenue - West of Heacock Street	Minor Arterial	37,500	18,329	0.489	A	19,181	0.511	A	0.023	No
6. Ironwood Avenue - Heacock Street to Davis Street	Minor Arterial	37,500	15,284	0.408	A	15,602	0.416	A	0.008	No
7. Ironwood Avenue - East of Indian Street	Minor Arterial	37,500	15,618	0.416	A	16,129	0.430	A	0.014	No
8. Hemlock Avenue - West of Heacock Street[4]	Minor Arterial	12,500	7,450	0.596	A	8,086	0.647	B	0.051	No
9. Hemlock Avenue - Heacock Street to Davis Street[4]	Minor Arterial	37,500	6,439	0.172	A	14,322	0.382	A	0.210	No
10. Hemlock Avenue - East of Indian Street[4]	Minor Arterial	12,500	6,873	0.550	A	7,509	0.601	B	0.051	No

1. ADT: Average Daily Traffic
2. LOS based on City of Moreno Valley Roadway Segment LOS Values (Table 4)
3. Based on City of Moreno Valley Guidelines daily service volume standards table (LOS E). Four Lane Divided Arterial and Two Lane Industrial Collector used as classifications.
4. Roadway classification and LOS standard not listed in City Guidelines, assumed to be Minor Arterial, Two Lane Industrial Collector, with LOS Standard C.

General Plan Buildout Year (2040) Without-Project

Intersection Operations

Traffic volumes for the General Plan Buildout Year (2040) without-project (baseline) scenario where obtained from the Moreno Valley Transportation Analysis Model. The model results were post-processed using the 2007 model data, the existing 2017 traffic counts, and the 2035 model outputs. Figure 16 shows the AM and PM General Plan Buildout Year (2040) without-project AM and PM traffic volumes at study area intersections and Table 22 illustrates the Peak Hour Level of Service Analysis.

As shown in the table, the Indian Street/Ironwood Avenue is forecast to operate at LOS E during the AM peak hour with-out the project (City's LOS Standard is D). Indian Street/Ironwood and Indian Street/Sunnymead Boulevard are forecast to operate at LOS E during the AM and PM peak hour respectively with-out the project (City's LOS Standard is D). Mitigation measures will be discussed in the following section.

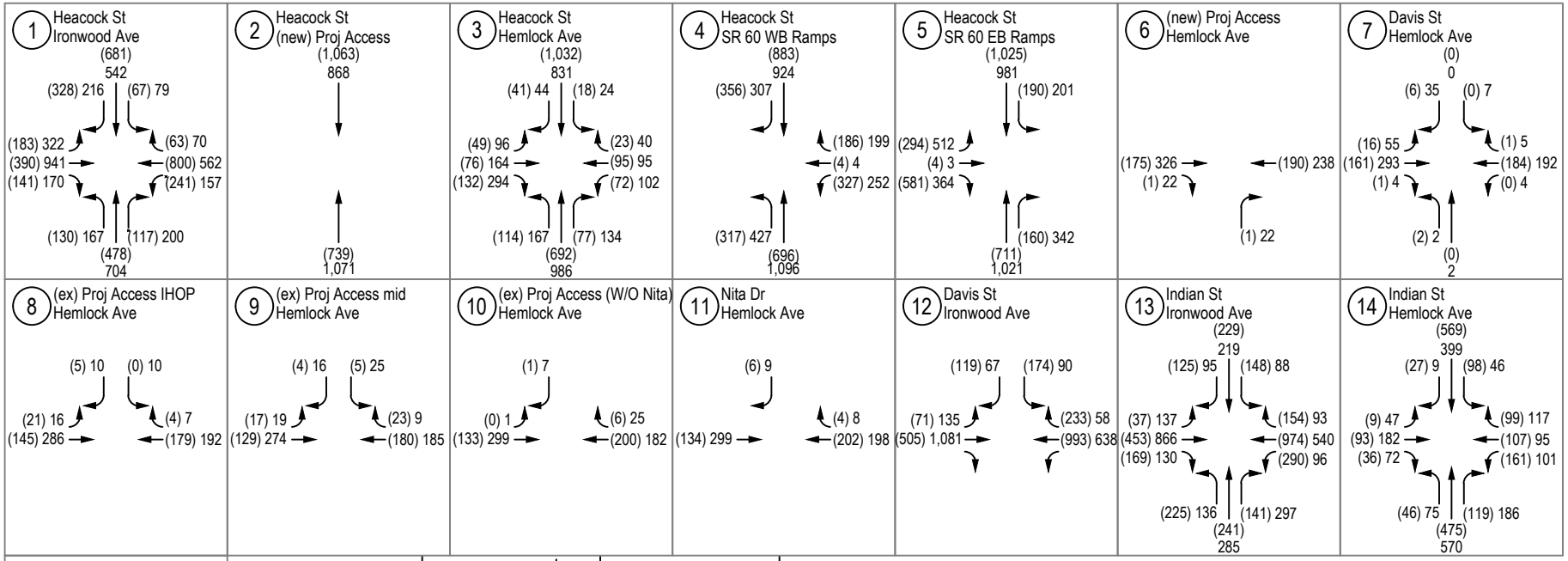
Table 22. General Plan Buildout Year Without-Project Peak Hour Intersection LOS

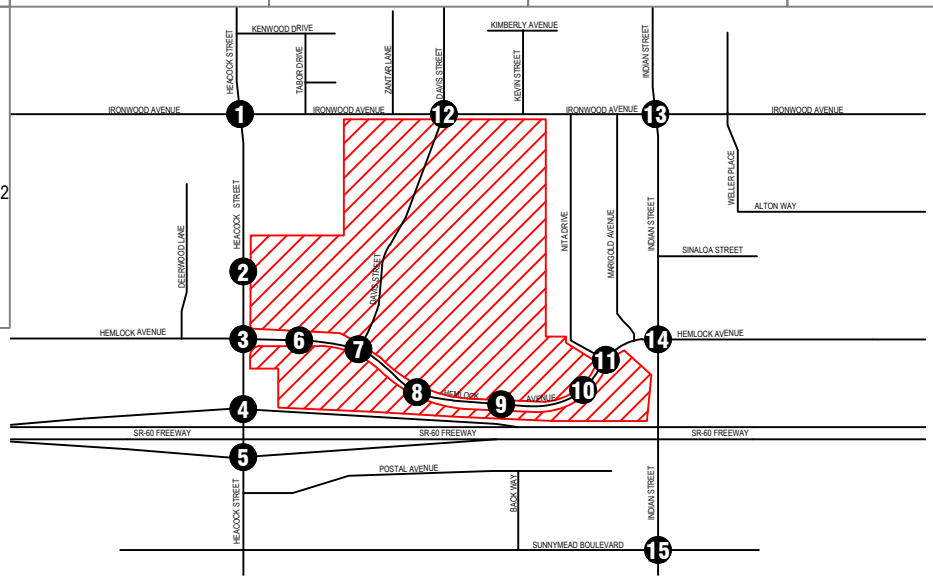
Intersection	Traffic Control	City's LOS Standard	AM Peak		PM Peak	
			LOS[1]	Delay[2]	LOS[1]	Delay[2]
1. Heacock Street/Ironwood Avenue	Signal	LOS D	D	36.7	D	35.7
2. Heacock Street/(new) Project Access	OWSC	LOS D	A	0.0	A	0.0
3. Heacock Street/Hemlock Avenue	Signal	LOS D	C	22.9	D	40.0
4. Heacock Street/State Route (SR 60) WB Ramps	Signal	LOS D	C	34.7	C	33.0
5. Heacock Street/State Route (SR 60) EB Ramps	Signal	LOS D	C	29.0	C	21.3
6. (new) Project Access/Hemlock Avenue	OWSC	LOS C	A	8.8	B	10.3
7. Davis Street/Hemlock Avenue	TWSC	LOS C	A	9.8	C	16.1
8. Project Access IHOP/Hemlock Avenue	OWSC	LOS C	A	9.4	B	10.6
9. Project Access (middle dwy)/Hemlock Avenue	OWSC	LOS C	B	10.1	B	11.0
10. Project Access (w/o Nita Dr)/Hemlock Avenue	OWSC	LOS C	A	9.5	A	9.4
11. Nita Drive/Hemlock Avenue	OWSC	LOS C	A	9.5	A	9.4
12. Davis Street/Ironwood Avenue	Signal	LOS C	C	25.2	B	16.0
13. Indian Street/Ironwood Avenue	Signal	LOS D	**E**	**56.5**	D	36.8
14. Indian Street/Hemlock Avenue	Signal	LOS D	D	38.2	D	40.1
15. Indian Street/Sunnymead Boulevard	Signal	LOS D	D	46.0	**E**	**66.8**

1. Level of Service
2. Delay measured in seconds/vehicle
3. Delay and LOS are based on Highway Capacity Manual 2010
4. Signal = Traffic Signal (evaluated using the HCM Methodology)
5. TWSC = Two Way Stop Controlled (evaluated using the HCM Methodology)
6. OWSC = One Way Stop Controlled (evaluated using the HCM Methodology)

Queuing Analysis

A queuing analysis was conducted at the study area intersections to determine if the left turn pocket (storage) lengths are able to accommodate queues. The 95th percentile queue calculations were calculated using Synchro for the weekday AM and weekday PM peak hours and results summary is presented in Table 23 with detailed calculations in Appendix C.





Legend

- Site
- X Weekday PM Peak Hour Traffic Volumes
- (X) Weekday AM Peak Hour Traffic Volumes
- (X) Study Intersection

NOT TO SCALE

General Plan Build-out (2040) Baseline AM and PM Peak Hour Traffic Volumes

FIGURE 16

Festival at Moreno Valley

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Table 23 shows that the build-out year 95th percentile queue lengths exceed storage space under without-Project conditions. As mentioned earlier, the 95th percentile queue is not necessarily ever observed, it is simply based on statistical calculations. It is however used by many jurisdictions as the basis for calculating storage lengths. Mitigation measures are presented in the following section.

Table 23. General Plan Without-Project Weekday Peak Hour Queuing Analysis

Intersection	Movement	Existing Pocket Length (ft)	Build-out Year 95th Percentile Queue[1]		Exceeds Existing Pocket Length?	
			AM	PM	AM	PM
1. Heacock Street/Ironwood Avenue	EBL	90	**134**	**119**	**Yes**	**Yes**
	WBL	135	**193**	**170**	**Yes**	**Yes**
	NBL	140	**161**	**199**	**Yes**	**Yes**
	SBL	100	75	**124**	No	**Yes**
2. Heacock Street/(new) Project Access	No pocket Lanes and/or No Queues					
3. Heacock Street/Hemlock Avenue	EBL	70	57	**171**	No	**Yes**
	WBL	360	76	135	No	No
	NBL	100	**119**	**149**	**Yes**	**Yes**
	SBL	95	28	74	No	No
4. Heacock Street/State Route (SR 60) WB Ramps	NBL	200	**250**	**248**	**Yes**	**Yes**
5. Heacock Street/State Route (SR 60) EB Ramps	EBL	0	**100**	**183**	**Yes**	**Yes**
	SBL	190	148	136	No	No
6. Project Access/Hemlock Avenue	No pocket Lanes and/or No Queues					
7. Davis Street/Hemlock Avenue	EBL	180	0	3	No	No
8. Project Access IHOP/Hemlock Avenue	No pocket Lanes and/or No Queues					
9. Project Access (middle dwy)/Hemlock Avenue	No pocket Lanes and/or No Queues					
10. Project Access (w/o Nita Dr)/Hemlock Avenue	No pocket Lanes and/or No Queues					
11. Nita Drive/Hemlock Avenue	No pocket Lanes and/or No Queues					
12. Davis Street/Ironwood Avenue	EBL	150	92	100	No	No
	SBL	40	**119**	**59**	**Yes**	**Yes**
13. Indian Street/Ironwood Avenue	EBL	95	54	144	No	**Yes**
	WBL	100	**132**	**125**	**Yes**	**Yes**
	NBL	110	**155**	**154**	**Yes**	**Yes**
	SBL	80	**125**	**115**	**Yes**	**Yes**
14. Indian Street/Hemlock Avenue	EBL	150	23	77	No	No
	WBL	80	**196**	**143**	**Yes**	**Yes**
	NBL	145	76	118	No	No
	SBL	100	**126**	80	**Yes**	No
15. Indian Street/Sunnymead Boulevard	EBL	90	**138**	**119**	**Yes**	**Yes**
	WBL	100	62	**153**	No	**Yes**
	NBL	145	**205**	**192**	**Yes**	**Yes**
	SBL	90	**136**	**140**	**Yes**	**Yes**

1. Calculated using Synchro –bold numbers indicate where Synchro yielded "95th percentile volume exceeds capacity, queue maybe longer." The queues were evaluated in Simtraffic at these locations.

Signal Warrant Analysis

The signal warrant analysis as per the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), was used for all study area intersections. No unsignalized intersection was found to meet the warrants for signalization. The signal warrant analysis sheets are provided in Appendix C.

Roadway Operations

Roadway traffic volumes were also obtained from the Moreno Valley Transportation Analysis Model. The model plots are presented in Appendix D. Based on the analysis methodology described in Section I, the General Plan Buildout Year (2040) without-project traffic daily traffic volumes at the study area roadway segments yield the LOS values illustrated in Table 24.

Table 24 shows that, all study area roadway segments operate with an acceptable LOS except for Indian Street between Ironwood and Hemlock and south of Hemlock.

Table 24. General Plan With-out Project Roadway Segment LOS Summary

Roadway Segment	Existing Classification	Maximum Capacity ADT[3]	LOS Standard[2]	ADT[1]	V/C	LOS	Exceeds Threshold?
1. Heacock Street - Ironwood Avenue to Hemlock Avenue	Arterial	37,500	LOS D	26,600	0.709	B	No
2. Heacock Street - Hemlock Avenue to SR 60 WB Ramps	Arterial	37,500	LOS D	32,700	0.872	D	No
3. Indian Street - Ironwood Avenue to Hemlock Avenue	Minor Arterial	12,500	LOS D	18,400	1.472	F	**Yes**
4. Indian Street - South of Hemlock Avenue	Minor Arterial	12,500	LOS D	20,600	1.648	F	**Yes**
5. Ironwood Avenue - West of Heacock Street	Minor Arterial	37,500	LOS C	24,900	0.664	B	No
6. Ironwood Avenue - Heacock Street to Davis Street	Minor Arterial	37,500	LOS C	21,200	0.565	A	No
7. Ironwood Avenue - East of Indian Street	Minor Arterial	37,500	LOS C	23,400	0.624	B	No
8. Hemlock Avenue - West of Heacock Street[4]	Minor Arterial	12,500	LOS C	4,900	0.392	A	No
9. Hemlock Avenue - Heacock Street to Davis Street[4]	Minor Arterial	37,500	LOS C	20,900	0.557	A	No
10. Hemlock Avenue - East of Indian Street[4]	Minor Arterial	12,500	LOS C	5,800	0.464	A	No

1. ADT: Average Daily Traffic calculated by growing the 2017 volumes using the model growth rates derived from 2007 and 2035 model volumes
2. LOS based on City of Moreno Valley Roadway Segment LOS Values (Table 4)
3. Based on City of Moreno Valley Guidelines daily service volume standards table (LOS E). Four Lane Divided Arterial and Two Lane Industrial Collector used as classifications.
4. Roadway classification and LOS standard not listed in City Guidelines, assumed to be Minor Arterial, Two Lane Industrial Collector, with LOS Standard C.

General Plan Buildout Year (2040) With-Project

Intersection Operations

Traffic volumes for the General Plan Buildout Year (2040) with-project scenario where obtained by adding project traffic volumes (shown in Figure 10) to the General Plan Buildout Year (2040) without-project volumes. Figure 17 shows the AM and PM General Plan Buildout Year (2040) with-project AM and PM traffic volumes at study area intersections and Table 25 illustrates the Peak Hour intersection Level of Service Analysis.

As shown in the table, the Davis Street/Hemlock Avenue and Indian Street/Sunnymead Blvd intersections are forecast to operate at LOS F during the PM peak hour with project. Heacock Street/Hemlock Avenue, the Project Access (w/o Nita Dr)/Hemlock Avenue and Indian Street/Ironwood Avenue intersections are also forecast to operate at sub-standard levels of services during the peak hour periods with project. Mitigation measures will be discussed in the following section.

Queuing Analysis

A queuing analysis was conducted at the study area intersections to determine if the left turn pocket (storage) lengths are able to accommodate queues. The 95th percentile queue calculations were calculated using Synchro for the weekday AM and weekday PM peak hours and results summary is presented in Table 26 with detailed calculation in Appendix C.

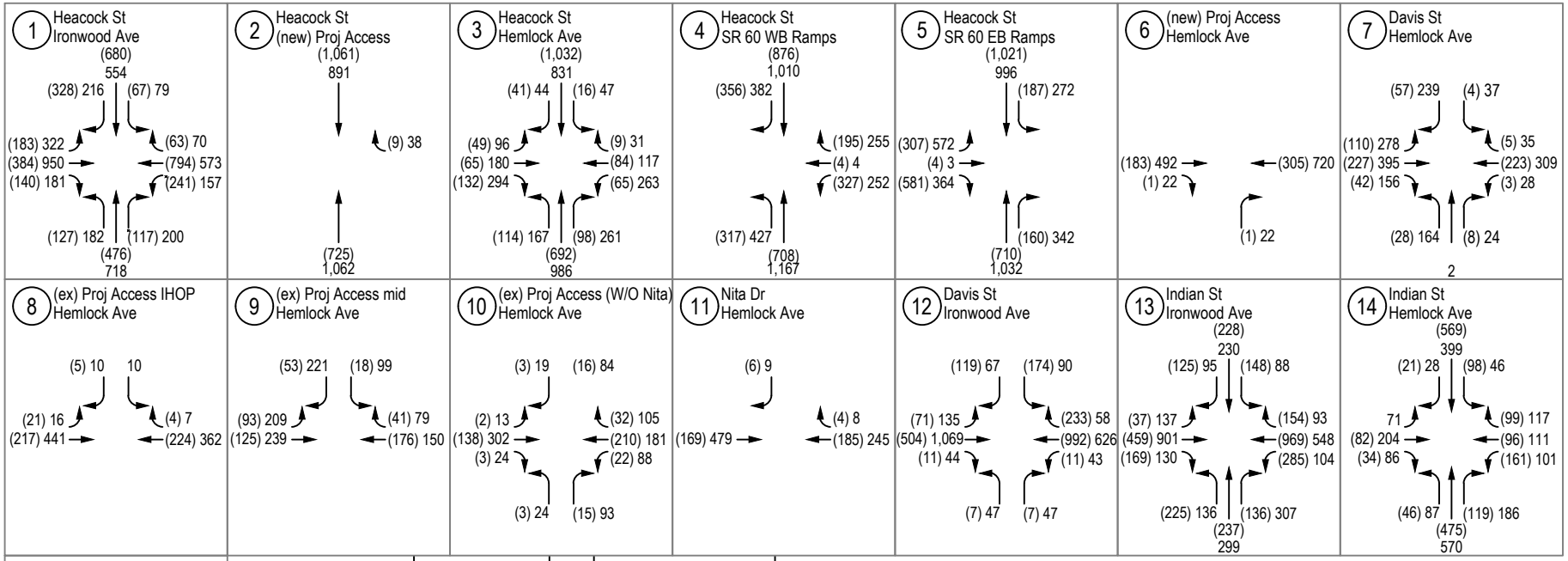
Table 26 shows that the existing 95th percentile queue lengths exceed storage space under the General Plan with-Project conditions.

Signal Warrant Analysis

The signal warrant analysis as per the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), was used for all study area intersections. It was found that the Hemlock Ave / Davis St intersection meets the 8-Hour, 4-Hour, and Peak-Hour signal warrants and as such signalization is recommended. It was also found that the 4-Hour warrants for the Middle Access and Hemlock (Intersection 9) are also met. The signal warrant analysis sheets are provided in Appendix C.

Roadway Operations

Based on the analysis methodology described in Section I, the General Plan Buildout Year (2040) with-project traffic daily traffic volumes at the study area roadway segments were compared to the City's roadway segment LOS values in Table 4 and the with-out project traffic daily volumes LOS values. Table 27 presents the results of the General Plan Buildout Year (2040) with-project roadway segment LOS analysis.
Based on the capacity analysis, all study area roadway segments operate with an acceptable LOS except for Indian Street (south and north of Hemlock) as well as Heacock St between Hemlock Ave and SR 60 WB Ramps.



General Plan Build-out (2040) plus Project AM and PM Peak Hour Traffic Volumes

FIGURE 17

Festival at Moreno Valley

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WHAT TRANSPORTATION CAN BE.

Table 25. General Plan Buildout with-Project Peak Hour Intersection LOS

Intersection	Traffic Control	City LOS Standard	General Plan Buildout without-Project				General Plan Buildout with-Project				Delay Change		Impact?	
			AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM
			LOS[1]	Delay[2]	LOS[1]	Delay[2]	LOS[1]	Delay[2]	LOS[1]	Delay[2]				
1. Heacock Street/Ironwood Avenue	Signal	LOS D	D	36.7	D	35.7	D	36.4	D	37.1	-0.3	1.4	NO	NO
2. Heacock Street/(new) Project Access	OWSC	LOS D	A	0.0	A	0.0	B	11.0	B	13.1	11.0	13.1	NO	NO
3. Heacock Street/Hemlock Avenue	Signal	LOS D	C	22.9	D	40.0	C	22.0	**E**	**55.8**	-0.9	15.8	NO	**YES**
4. Heacock Street/State Route (SR 60) WB Ramps	Signal	LOS D	C	34.7	C	33.0	C	34.2	D	44.5	-0.5	11.5	NO	NO
5. Heacock Street/State Route (SR 60) EB Ramps	Signal	LOS D	C	29.0	C	21.3	C	28.9	C	23.9	-0.1	2.6	NO	NO
6. Project Access/Hemlock Avenue	OWSC	LOS C	A	8.8	B	10.3	A	8.9	B	11.1	0.1	0.8	NO	NO
7. Davis Street/Hemlock Avenue	TWSC	LOS C	A	9.8	C	16.1	C	19.8	**F**	**2178.9**	10.0	2162.8	NO	**YES**
8. Project Access IHOP/Hemlock Avenue	OWSC	LOS C	A	9.4	B	10.6	A	9.7	B	12.4	0.3	1.8	NO	NO
9. Project Access (middle dwy)/Hemlock Avenue	OWSC	LOS C	B	10.1	B	11.0	B	10.6	C	21.8	0.5	10.8	NO	NO
10. Project Access (w/o Nita Dr)/Hemlock Avenue	OWSC	LOS C	A	9.5	A	9.4	B	12.5	**D**	**29.9**	3.0	20.5	NO	**YES**
11. Nita Drive/Hemlock Avenue	OWSC	LOS C	A	9.5	A	9.4	A	9.4	A	9.7	-0.1	0.3	NO	NO
12. Davis Street/Ironwood Avenue	Signal	LOS C	C	25.2	B	16.0	C	21.2	B	18.2	-4.0	2.2	NO	NO
13. Indian Street/Ironwood Avenue	Signal	LOS D	**E**	**56.5**	D	36.8	**E**	**56.0**	D	39.0	-0.5	2.2	**YES**	NO
14. Indian Street/Hemlock Avenue	Signal	LOS D	D	38.2	D	40.1	D	36.3	D	42.4	-1.9	2.3	NO	NO
15. Indian Street/Sunnymead Boulevard	Signal	LOS D	D	46.0	**E**	**66.8**	D	41.2	**F**	**120.0**	-4.8	53.2	NO	**YES**

1. Level of Service
2. Delay measured in seconds/vehicle
3. Delay and LOS are based on Highway Capacity Manual 2010
4. Signal = Traffic Signal (evaluated using the HCM Methodology)
5. TWSC = Two Way Stop Controlled (evaluated using the HCM Methodology)
6. OWSC = One Way Stop Controlled (evaluated using the HCM Methodology)
7. The decrease (in delay per vehicle) with project is not unusual when trips are added to the minor approach

Table 26. General Plan Build-out With-Project Weekday Peak Hour Queuing Analysis

Intersection	Movement	Existing Pocket Length (ft)	Build-out Without-Project 95th Percentile Queue[1]		Build-out With-Project 95th Percentile Queue[1]		Exceeds Existing Pocket Length?	
			AM	PM	AM	PM	AM	PM
1. Heacock Street/Ironwood Avenue	EBL	90	**134**	**119**	**137**	**116**	**Yes**	**Yes**
	WBL	135	**193**	**170**	**187**	**188**	**Yes**	**Yes**
	NBL	140	**161**	**199**	**153**	**194**	**Yes**	**Yes**
	SBL	100	75	**124**	75	**131**	No	**Yes**
2. Heacock Street/(new) Project Access	No pocket Lanes and/or No Queues							
3. Heacock Street/Hemlock Avenue	EBL	70	57	**171**	56	**102**	No	**Yes**
	WBL	360	76	135	28	291	No	No
	NBL	100	**119**	**149**	**116**	**154**	**Yes**	**Yes**
	SBL	95	28	74	25	60	No	No
4. Heacock Street/State Route (SR 60) WB Ramps	NBL	200	**250**	**248**	**256**	**242**	**Yes**	**Yes**
5. Heacock Street/State Route (SR 60) EB Ramps	EBL	0	100	183	104	**403**	**Yes**	**Yes**
	SBL	190	148	136	146	183	No	No
6. Project Access/Hemlock Avenue	No pocket Lanes and/or No Queues							
7. Davis Street/Hemlock Avenue	EBL	180	0	3	8	28	No	No
8. Project Access IHOP/Hemlock Avenue	No pocket Lanes and/or No Queues A							
9. Project Access (middle dwy)/Hemlock	No pocket Lanes and/or No Queues A							
10. Project Access (w/o Nita Dr)/Hemlock	No pocket Lanes and/or No Queues A							
11. Nita Drive/Hemlock Avenue	No pocket Lanes and/or No Queues A							
12. Davis Street/Ironwood Avenue	EBL	150	92	100	98	**151**	No	**Yes**
	SBL	40	**119**	**59**	**74**	**59**	**Yes**	**Yes**
13. Indian Street/Ironwood Avenue	EBL	95	54	**144**	54	**148**	**No**	**Yes**
	WBL	100	**132**	**125**	**131**	**128**	**Yes**	**Yes**
	NBL	110	**155**	**154**	**155**	**156**	**Yes**	**Yes**
	SBL	80	**125**	**115**	**126**	**118**	**Yes**	**Yes**
14. Indian Street/Hemlock Avenue	EBL	150	23	77	0	100	No	No
	WBL	80	**196**	**143**	**194**	**133**	**Yes**	**Yes**
	NBL	145	76	118	76	124	No	No
	SBL	100	**126**	80	**126**	74	**Yes**	No
15. Indian Street/Sunnymead Boulevard	EBL	90	**138**	**119**	**141**	**129**	**Yes**	**Yes**
	WBL	100	62	**153**	71	**134**	No	**Yes**
	NBL	145	**205**	**192**	**204**	**187**	**Yes**	**Yes**
	SBL	90	**136**	**140**	**137**	**145**	**Yes**	**Yes**

2. Calculated using Synchro –bold numbers indicate where Synchro yielded "95th percentile volume exceeds capacity, queue maybe longer." The queues were evaluated in Simtraffic at these locations.

Table 27. General Plan Buildout Condition Roadway Segment LOS Summary

Roadway Segment	Existing Classification	Maximum Capacity ADT[3]	Buildout With-out Project ADT[1]	Buildout With-out Project V/C Ratio	Buildout With-out Project LOS[2]	Buildout With Project ADT[5]	Buildout with-Project V/C Ratio	Buildout with-Project LOS[2]	V/C Ratio Change	Impact
1. Heacock Street - Ironwood Avenue to Hemlock Avenue	Arterial	37,500	26,600	0.709	B	27,667	0.738	C	0.028	No
2. Heacock Street - Hemlock Avenue to SR 60 WB Ramps	Arterial	37,500	32,700	0.872	D	**39,022**	**1.041**	**F**	0.169	**Yes**
3. Indian Street - Ironwood Avenue to Hemlock Avenue	Minor Arterial	12,500	**18,400**	**1.472**	**F**	**19,251**	**1.540**	**F**	0.068	**Yes**
4. Indian Street - South of Hemlock Avenue	Minor Arterial	12,500	**20,600**	**1.648**	**F**	**21,135**	**1.691**	**F**	0.043	**Yes**
5. Ironwood Avenue - West of Heacock Street	Minor Arterial	37,500	24,900	0.664	B	25,752	0.687	B	0.023	No
6. Ironwood Avenue - Heacock Street to Davis Street	Minor Arterial	37,500	21,200	0.565	A	21,518	0.574	A	0.008	No
7. Ironwood Avenue - East of Indian Street	Minor Arterial	37,500	23,400	0.624	B	23,911	0.638	A	0.014	No
8. Hemlock Avenue - West of Heacock Street[4]	Minor Arterial	12,500	4,900	0.392	A	5,536	0.443	A	0.051	No
9. Hemlock Avenue - Heacock Street to Davis Street[4]	Minor Arterial	37,500	20,900	0.557	A	28,783	0.768	B	0.210	No
10. Hemlock Avenue - East of Indian Street[4]	Minor Arterial	12,500	5,800	0.464	A	6,436	0.515	A	0.051	No

1. ADT: Average Daily Traffic
2. LOS based on City of Moreno Valley Roadway Segment LOS Values (Table 4)
3. Based on City of Moreno Valley Guidelines daily service volume standards table (LOS E). Four Lane Divided Arterial and Two Lane Industrial Collector used as classifications.
4. Roadway classification and LOS standard not listed in City Guidelines, assumed to be Minor Arterial, Two Lane Industrial Collector, with LOS Standard C.

V. Mitigation Measures

This section provides a summary of recommended mitigation measures necessary to address the cumulative traffic impacts. A summary of the operationally deficient study area intersections and roadway segments and recommended improvements required to achieve acceptable circulation system operational conditions are described below. It is important to note that Cumulative impacts are deficiencies that would not be directly caused by the project. The project would, however, contribute traffic to these deficient facilities along with other cumulative development projects, resulting in a cumulatively considerable impact.

The recommended mitigation measures necessary to reduce project impacts to less-than-significant are discussed below.

Intersections

Level of Service Mitigations

Based on the traffic analysis presented in the earlier sections, the following four intersections were observed to perform at a LOS below the City's standards.

1. Davis Street and Hemlock Avenue under all with-Project scenarios in the PM Peak Hour

A warrant analysis was performed for this intersection and it was found that the 8-hour, 4-hour, and peak-hour warrants are all met. As such it is recommended that this intersection be signalized. Installing a signal improved the LOS at this intersection to LOS B during the PM peak hours for all scenarios (cycle length is assumed at 60 seconds as per the City's guidelines). Signal warrant worksheets and LOS worksheets are attached in Appendix C.

Mitigation: It is recommended to install a traffic signal at the Davis Street / Hemlock Avenue intersection.

2. Heacock Street and SR 60 WB Ramps under Near Term with-Project scenario in the PM Peak Hour

Mitigation: Optimizing the cycle length (90s cycle length), splits, and offsets and restriping the defacto right-turn lane to a SB right-turn lane with 50ft storage and a SB through lane improves the LOS to C

3. Davis Street and Ironwood Avenue under the Near Term PM peak hour scenario can be mitigated by optimizing the cycle length. LOS worksheets are attached in Appendix C.

Mitigation: Optimizing the cycle length (60s cycle length), splits, and offsets yields a LOS B

4. Indian Street and Sunnymead Blvd under the Near Term PM peak and the General Plan PM peak hour scenarios. Under the Near Term Conditions this could be mitigated by optimizing the cycle length (80s cycle length), splits, and offsets and yields a LOS C. Under the General Plan Conditions, restriping of the defacto right-turn lanes in the EB and a WB directions to provide 50ft right turn pocket lanes yield a LOS D. Analysis worksheets are provided in Appendix C.

Mitigation: Optimizing the cycle length (80s cycle length), splits, and offsets yields under Near Term (2022) conditions and restriping to provide a EBR and a WBR turn lanes under General Plan (2040) conditions

5. Heacock St Hemlock Ave under the General Plan Build-out with-project PM peak yields a LOS E. Restriping the defacto right-turn to provide a SBR lane yields a LOS D. Analysis worksheets are provided in Appendix C.

Mitigation: Restripe the defacto SB right-turn lane to provide a right turn pocket lane

6. Project Access (w/o Nita Dr)/Hemlock Avenue (Intersection 10) under the General Plan Build-out with-project PM peak yields a LOS D. Converting to an all-way-stop control brings the LOS back to C. Analysis worksheets are provided in Appendix C.

Mitigation: Convert to an all-way stop control

7. Indian Street/Ironwood Avenue under the General Plan Build-out with-project AM peak yields a LOS E. Increasing the cycle length to 120s (maximum length per Moreno Valley standards) yields a LOS D. Analysis worksheets are provided in Appendix C.

Mitigation: Optimizing the cycle length (120s cycle length), splits, and offsets yields a LOS D

Queuing Mitigations

Based on the queuing analysis, Table 28 presents a set of recommended measures to address storage lengths at the various approaches of the study area intersections. It is important to note that much of the analysis is based on the 95th percentile queue lengths which has a low (5%) probability of occurring.

Table 28. General Plan Build-out With-Project Weekday Peak Hour Queuing Analysis

Intersection	Movement	Existing Pocket Length (ft)	Maximum Queue Length[1] (ft)	Proposed Mitigation to accommodate 95th percentile queues
1. Heacock Street/Ironwood Avenue	EBL	90	149	Restripe left turn lanes to provide 150 ft storage
	WBL	135	193	Restripe left turn lanes to provide 200 ft storage
	NBL	140	208	Restripe left turn lanes to provide 210 ft storage
	SBL	100	131	Restripe left turn lanes to provide 135 ft storage
3. Heacock Street/Hemlock Avenue	EBL	70	171	Restripe left turn lanes to provide 175 ft storage
	NBL	100	170	Restripe left turn lanes to provide 170 ft storage
4. Heacock Street/State Route (SR 60) WB Ramps	NBL	200	264	A storage lane is provided south of the Heacock/ SR 60 EB ramps intersection. No further mitigation is recommended.
5. Heacock Street/State Route (SR 60) EB Ramps	EBL	0	403	Length of the left tun lane is over 600ft. No further mitigation is recommended.
	SBL	190	226	Restripe 50ft of the TWLT lane north of the Heacock/ SR 60 WB ramps intersection as “Freeway Only” lane.
12. Davis Street/Ironwood Avenue	EBL	150	210	Restripe left turn lanes to provide 210 ft storage
	SBL	40	122	Restripe left turn lanes to provide 125 ft storage
13. Indian Street/Ironwood Avenue	EBL	95	148	Restripe left turn lanes to provide 150 ft storage
	WBL	100	140	Restripe left turn lanes to provide 140 ft storage
	NBL	110	156	Restripe left turn lanes to provide 105 ft storage
	SBL	80	126	Restripe left turn lanes to provide 130 ft storage.
14. Indian Street/Hemlock Avenue	WBL	80	100	Restripe left turn lanes to provide 100 ft storage
	NBL	145	196	Restripe left turn lanes to provide 200 ft storage
	SBL	100	126	Restripe left turn lanes to provide 130 ft storage
15. Indian Street/Sunnymead Boulevard	EBL	90	141	Restripe left turn lanes to provide 145 ft storage to accommodate 95th percentile queues. This might require replacing the concrete island with stripping.
	WBL	100	153	Restripe left turn lanes to provide 155 ft storage
	NBL	145	205	Restripe left turn lanes to provide 205 ft storage
	SBL	90	145	Restripe left turn lanes to provide 145 ft storage

1. Maximum for all scenarios

Roadway Operations

The roadway capacity analysis identified three segments that do not meet the City LOS standards. These segments are:

1. Heacock Street from Hemlock Avenue to SR 60 WB Ramps in the Near Term Year with-out and with-Project as well as General Plan with-Project conditions
2. Indian Street from Ironwood Avenue to Hemlock Avenue in the Near Term Year with-Project as well as General Plan with-out and with-Project conditions
3. Indian Street South of Hemlock Avenue in the Near Term Year with-out and with-Project as well as General Plan with-out and with-Project conditions

As noted in both the City of Moreno Valley's traffic study guidelines, these roadway capacities are "rule of thumb" estimates for planning purposes and are affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic. In other words, while using average daily traffic (ADT) for planning purposes is suitable with regards to evaluating potential volume to capacity with future forecasts, it is not suitable for operational analysis because it does not account for the factors listed previously. As such, where the ADT based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis and progression analysis are undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. Therefore, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes.

However, examining the intersections on both ends of these roadway segments shows that the operations of the intersections is within acceptable level of service standards. As such roadway segment widening does not appear necessary to address the deficiencies at the identified roadway segments based on the peak hour intersection operations analysis along these roadway segments.

Traffic Calming Options for Davis Street

It is our understanding that once Davis Street is completed, thereby connecting Hemlock Avenue to Ironwood Avenue, it will provide an alternative for traffic trying to avoid Heacock St which in turn could potentially contribute to increased speeds along Davis St and cut-through traffic.
As such we are recommending traffic calming measures that could be implemented in case the need arises because of excessive speeds or cut-through traffic.
It should be noted that traffic calming has impacts not only on vehicular travel, but can also provide preferential corridors for cyclists and pedestrians. This is especially important for Davis Street which is envisioned in the City's Bicycle Master Plan as a Class 3 bicycle route.

Since the 660 ft section of Davis Street just south of Ironwood is yet to be constructed and knowing that the existing Davis Street has a 54 ft width curb to curb (travel lanes at 20 ft and a 14 ft two-way-left-turn-lane), we offer the following traffic calming options to be considered:

1. Providing parallel parking on both sides of Davis could reduce the street width between intersections (where parking is introduced) from 20 ft per direction to 12 ft per direction which changes both the perception and the function of the street. It is important to note that this option needs to be studied further to address turning movements at access points.
2. As the project develops providing mid-block crossing(s) on Davis Street might be desirable to connect the various uses (business park to commercial/retail/restaurants). These should come with necessary signage, striping and possibly curb bulb-ous where mid-block crossing(s) are needed

3. Speed feedback signs could be installed along Davis St. These signs display the speed at which a vehicle is traveling in contrast with the posted speed limit for the area. These units have been proven to be effective in reducing vehicular speeds in many areas.
4. Other measures such as raised medians, curb extensions, street trees and landscaping could be used for traffic calming. This is especially applicable as the new section is constructed. Speed humps have been used in residential areas but given the anticipated truck traffic in this area they might not provide the best results, however, speed tables could be also used as an option if speeding becomes an issue.

Hemlock Ave and Davis Street Classifications

To ensure that the proposed changes in land use (leading to additional truck traffic) will not significantly impact the structural integrity of the existing street segments within the specific plan area, an analysis of the pavement section on certain segments of Hemlock Avenue and Davis Street should be prepared for future plot plans in Planning Areas 1, 2, and 3 and any needed improvements are recommended to be completed per the Conditions of Approval of those plot plans.

Appendix A:Scoping Agreement

SCOPING AGREEMENT
FOR TRAFFIC ANALYSIS STUDY

Date: October 30, 2017

This letter acknowledges the City of Moreno Valley Transportation Engineering Division requirements for the traffic impact analysis of the following project.

Case No.	PEN16-0015
Project Name:	Moreno Valley Festival
Project Address:	East of Heacock Street between Ironwood Avenue and Hemlock Avenue
Project Description:	348,000 SF of business park and 325,000 SF of commercial retail.
Related Cases:	PA15-0053, PA15-0054, P15-124

	Consultant	Developer
Name:	Transpo Group, Inc.	BlackRidge Real Estate Group, LLC
Address:	603 North Park Center Drive Suite 108 Santa Ana, CA 92705	16901 Millikan Avenue Irvine, CA 92606
Telephone:	949-656-7925	303-419-6780

I. Background

The proposed specific plan will review modifying the existing 180,000 square feet of retail land use to a business park and retail uses.
The project site will have access to Ironwood Avenue from Davis Street, Hemlock Avenue from Davis Street, Heacock Avenue via new project access drive and retail project accesses.

II. Trip Geographic Distribution and Assignment*

N: *% **S:** *% **E:** *% **W:** *%

***Please see attached trip distribution diagram.**

III. Site Trip Generation Forecast

A. ITE Trip Generation Manual (*10th Edition, 2017*)
B. AM Peak: 7:00-9:00 AM (based upon existing 24-hour traffic counts)
C. PM Peak: 4:00-6:00 PM (based upon existing 24-hour traffic counts)
D. Intersection and link acceptable Level of Service "D" for some intersections and links and Level of Service "C" for others based upon the current City policy. (Use Highway Capacity Manual - latest edition - operations procedures; parameters per County of Riverside Traffic Impact Analysis Guidelines.)

Proposed Use Rates*
Land Use (per unit): Daily:** AM:** PM:**

Existing Use Rates*
Land Use (per unit): Daily:** AM:** PM:**

Internal Trip Allowance: Yes __**__ No __ Percentage 7% AM / 4%PM and Daily_____

Pass-by Trip Allowance: Yes __**__ No __Percentage 34%PM /17% AM and Daily____

**** Please see attached trip generation tables.**

IV. Specific Project Issues to be Analyzed

A. The focus of this traffic study will be on addressing the adequacy of site access and identifying specific near-term and future circulation improvements required in the study area to maintain acceptable peak hour and daily Levels of Service (LOS).
B. The traffic study shall address the project traffic impacts at all study intersections listed in Section VI and provide appropriate mitigation measures if applicable. Peak-hour traffic signal warrants shall be evaluated for all intersections that are not currently signalized.

C. The traffic study shall include a section that discusses the difference in trip generation between the previous proposed or existing use and the proposed project.
D. Assess adequacy of non-motorized transportation between project and surrounding area.
E. Provide traffic calming options for Davis Street, between Ironwood Ave and Hemlock Ave.
F. The traffic study shall review the current roadway classifications of Hemlock Avenue and Davis Street within the Specific Plan and recommend the appropriate roadway classifications (per current City standards) for these streets to support commercial truck traffic generated by warehousing and manufacturing facilities.
G. Using Synchro software, the traffic study shall provide a Queuing Analysis section to determine the 95th percentile queues and the minimum requirement of storage length for the left-turn lanes of all studied intersections based on forecasted E+P (V.B), Opening Year + Project (V.D) and GP Buildout (V.E) traffic volumes.

V. Study of Horizon Years

A. Existing
B. Existing + Project
C. Existing + Ambient Growth + Cumulative (Assume growth rate of 2% per year)
D. Existing + Ambient Growth + Cumulative + Project
E. General Plan Build Out (with and without project) – Buildout data will be obtained from City's traffic forecast model

*****Opening year should have five (5) year minimum horizon**

VI. Facilities to be Studied

A. Intersections

1. Heacock Street (NS) at Ironwood Avenue (EW)
2. Heacock Street (NS) at Project Access (EW)
3. Heacock Street (NS) at Hemlock Avenue (EW)
4. Heacock Street (NS) at SR-60 Freeway WB Ramps (EW)
5. Heacock Street (NS) at SR-60 Freeway EB Ramps (EW)
6. Project Access (NS) at Hemlock Avenue (EW)
7. Davis Street (NS) at Hemlock Avenue (EW)
8. Project Access (NS) at Hemlock Avenue (EW)
9. Project Access (NS) at Hemlock Avenue (EW)
10. Project Access (NS) at Hemlock Avenue (EW)
11. Nita Drive (NS) at Hemlock Avenue (EW)
12. Davis Street (NS) at Ironwood Avenue (EW)
13. Indian Street (NS) at Ironwood Avenue (EW)
14. Indian Street (NS) at Hemlock Avenue(EW)
15. Indian Street (NS) at Sunnymead Boulevard (EW)

B. Roadway Segments

1. Heacock Street – Ironwood Avenue to Hemlock Avenue
2. Heacock Street – Hemlock Avenue to SR-60 Freeway WB Ramps
3. Indian Street – Ironwood Avenue to Hemlock Avenue
4. Indian Street south of Hemlock Avenue
5. Ironwood Avenue west of Heacock Street
6. Ironwood Avenue – Heacock Street to Indian Street
7. Ironwood Avenue – east of Indian Street
8. Hemlock Avenue west of Heacock Street
9. Hemlock Avenue – Heacock Street to Indian Street
10. Hemlock Avenue – east of Indian Street

VII. Deliverables

A. Draft traffic impact study (2 copies) and a PDF file (on flash drive)
B. Final traffic impact study (4 copies) and a PDF file (on flash drive)

A signed copy of this Scoping Agreement must be included in the submitted draft and final traffic impact studies. All draft and final traffic impact studies shall be delivered with the appropriate review fee to the Permit Technician, Land Development Division, Moreno Valley City Hall, 14177 Frederick Street, Moreno Valley, CA 92552. Please contact the Land Development Division at 951-413-3110 prior to the delivery of the traffic study.

If you have any questions regarding this *Scoping Agreement*, please contact Eric Lewis at (951) 413-3140.

Recommended By:

Rawad Hani, P.E.
Transpo Group, Inc.

Approved By:

Eric Lewis, P.E., T.E.
City Traffic Engineer

NOTE: This scoping agreement was reviewed and approved based on the information submitted by Transpo Group on 10/30/2017. Transpo Group and the project applicant acknowledge that any changes to the project (zoning, size, type of use, number or location of access points, project phasing, etc.) after 10/30/2017 may require this scoping agreement to be revised and resubmitted for review and approval by the City of Moreno Valley.

Table XX. Proposed Project Trip Generation (Based on Land Use Table 2-3, October 12, 2017)

				AM Peak Hour			PM Peak Hour		
Land Use	**LU Code**	**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Trip Rates									
Shopping Center[1]	820	TSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81
Business Park[2]	770	TSF	12.44	0.24	0.16	0.40	0.19	0.23	0.42

				AM Peak Hour			PM Peak Hour		
Project Trip Generation		**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Planning Area 1									
Business Park	135.000	TSF	1,679	33	21	54	26	31	57
Subtotal			*1,679*	*33*	*21*	*54*	*26*	*31*	*57*
Planning Area 2									
Business Park	35.000	TSF	435	9	5	14	7	8	15
Subtotal			*435*	*9*	*5*	*14*	*7*	*8*	*15*
Planning Area 3									
Business Park	178.000	TSF	2,214	43	28	71	34	40	75
Retail	15.000	TSF	566	9	5	14	27	30	57
Subtotal			*2,781*	*52*	*33*	*85*	*62*	*70*	*132*
Planning Area 4									
Retail	255.000	TSF	9,626	149	91	240	466	505	972
Subtotal			*9,626*	*149*	*91*	*240*	*466*	*505*	*972*
Planning Area 6									
Retail	35.000	TSF	1,321	20	13	33	64	69	133
Subtotal			*1,321*	*20*	*13*	*33*	*64*	*69*	*133*
Planning Area 7									
Retail	40.000	TSF	1,510	23	14	38	73	79	152
Subtotal			*1,510*	*23*	*14*	*38*	*73*	*79*	*152*
Planning Area 8									
Retail	20.000	TSF	755	12	7	19	37	40	76
Subtotal			*755*	*12*	*7*	*19*	*37*	*40*	*76*
Total Trip Generation			**18,108**	**298**	**185**	**482**	**735**	**802**	**1,537**
Internal Trip Capture (AM = 7%, PM/Daily = 4%)[3]			-724	-21	-13	-34	-29	-32	-61
Net Trip Generation With Internal Trip Capture			*17,384*	*277*	*172*	*449*	*705*	*770*	*1,475*
Pass-By Trips For Commercial Retail (AM / Daily = 17%, PM = 34%) [4]			-2,342	-36	-22	-58	-227	-246	-473
Total Pass-by Trips			*-2,342*	*-36*	*-22*	*-58*	*-227*	*-246*	*-473*
Net Trip Generation With Internal Trip Capture and Pass By			**15,041**	**241**	**150**	**390**	**478**	**524**	**1,003**

TSF = Thousand Square Feet

[1] Trip rates from the Institute of Transporation Engineers, *Trip Generation, 10th Edition,* 2017. Land Use Code 820 - Shopping Center.

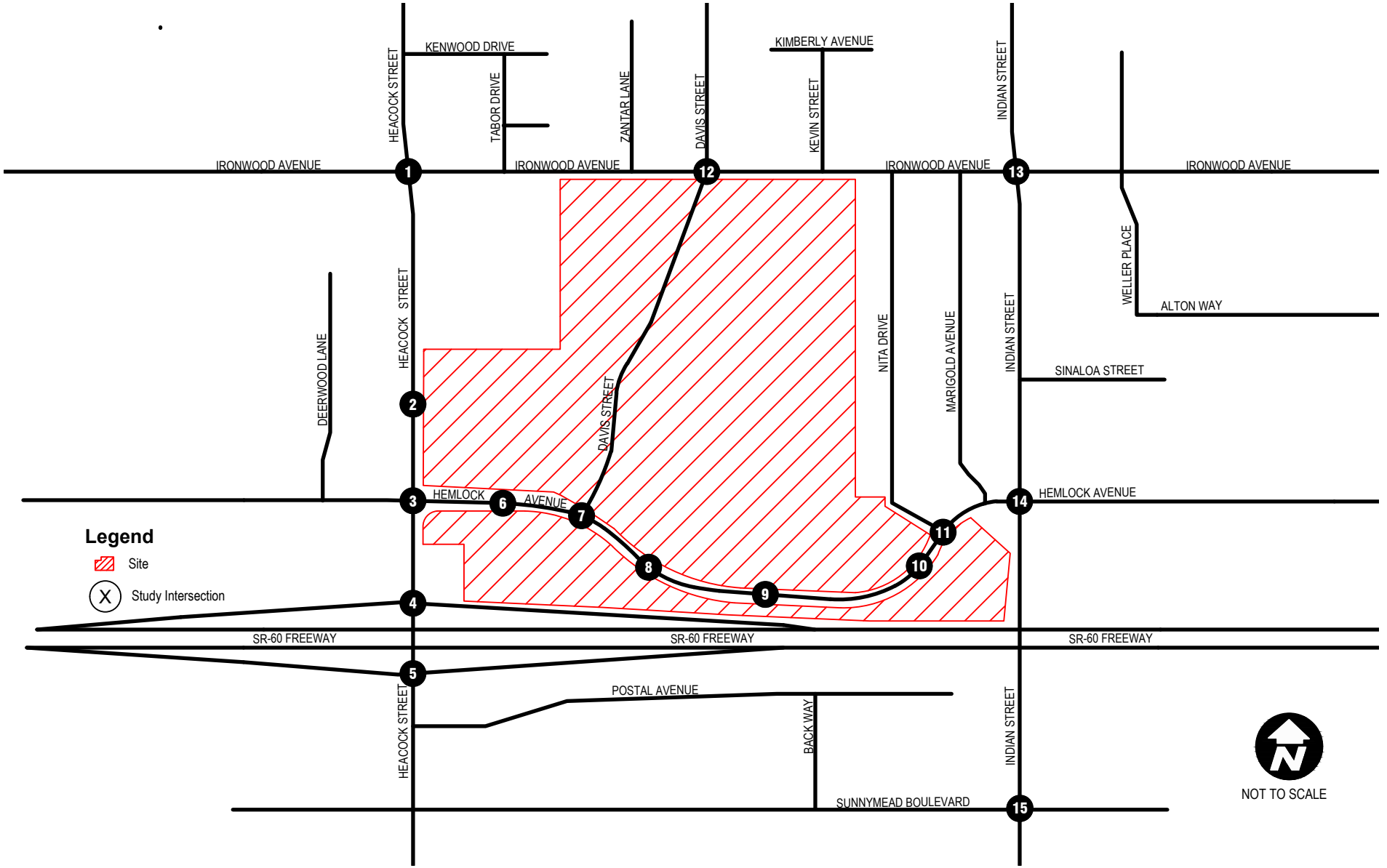
[2] Trip rates from the Institute of Transporation Engineers, *Trip Generation, 10th Edition,* 2017. Land Use Code 770 - Business Park.

[3] Internal capture calculated using methodology from NCHRP 684 Mixed Use Spreadsheet

[4] Pass-by trip rate (34% during PM peak hour, 17% during the AM peak hour and Daily based on weekend mid-day) from the Institute of Transporation Engineers, Trip Generation, 10th Edition, 2017. Land Use Code 820 - Shopping Center.

Table XX. Proposed Project Trip Generation Comparison (Based on Updated Table 2-3, October 12, 2017) -

			AM Peak Hour			PM Peak Hour		
Project Trip Generation Comparison	**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Proposed Project vs. Greiner Engineering Study (Table 3)								
Proposed Project Total Traffic (No Internal Trip Capture or Pass-by Reductions)		18,108	298	185	482	735	802	1,537
Greiner Engineering Study (Table 3) (No Interal Trip Capture or Pass-by Reductions)		18,322	--	--	--	1,081	1,356	2,437
Difference (Proposed Project - Greiner Engineering Study Table 3)		**-214**	**298**	**185**	**482**	**-346**	**-554**	**-900**
Proposed Project minus Existing Land Uses (New Project Trips)								
Proposed Project New Trips (includes Internal Trip Capture and Pass-By Reductions)		15,041	241	150	390	478	524	1,003
Existing Land Uses (includes Internal Trip Capture and Pass-By Reductions)		6,426	310	239	549	231	233	464
New Trips (Proposed Project - Existing Land Uses)		**8,616**	**-70**	**-89**	**-159**	**247**	**292**	**538**



Source: Google Maps, 09/2017.

Project Site Location and Study Area

FIGURE 1

Festival at Moreno Valley

transpogroup
WHAT TRANSPORTATION CAN BE.

Oct 25, 2017 - 5:25pm mladenp C:\Users\mladenp\Dropbox (Transpo CA)\Transpo CA Team Folder\Projects\2017\17261.PR - Festival at Moreno Valley\Graphics\Festival at Moreno Valley.dwg Layout: fig1-site location and study area

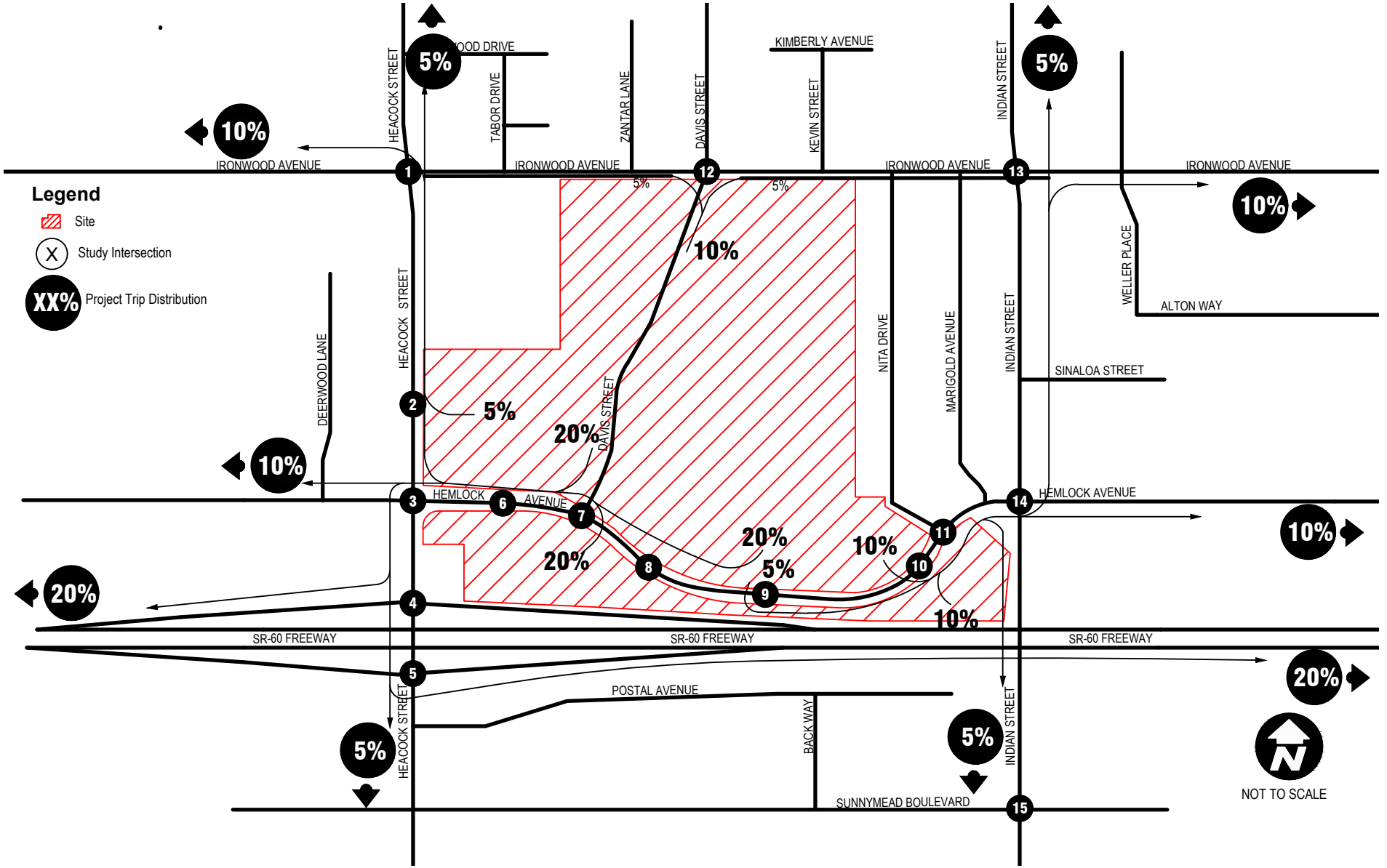
NOT TO SCALE

Project Plan

Festival at Moreno Valley

FIGURE 2

transpogroup
WHAT TRANSPORTATION CAN BE.



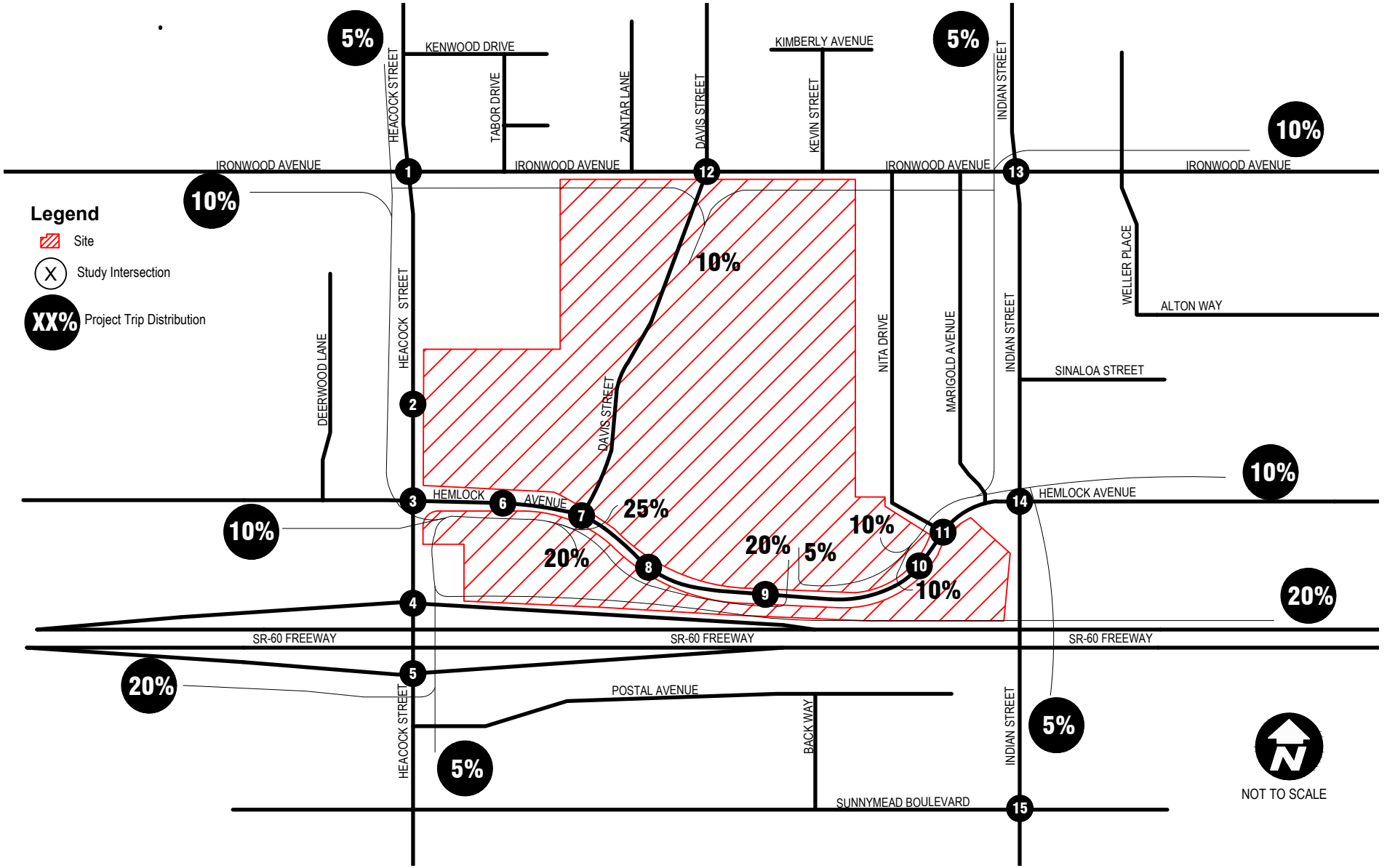
Source: Google Maps, 09/2017.

Retail Distribution Outbound

Festival at Moreno Valley

FIGURE 3

transpogroup
WHAT TRANSPORTATION CAN BE.



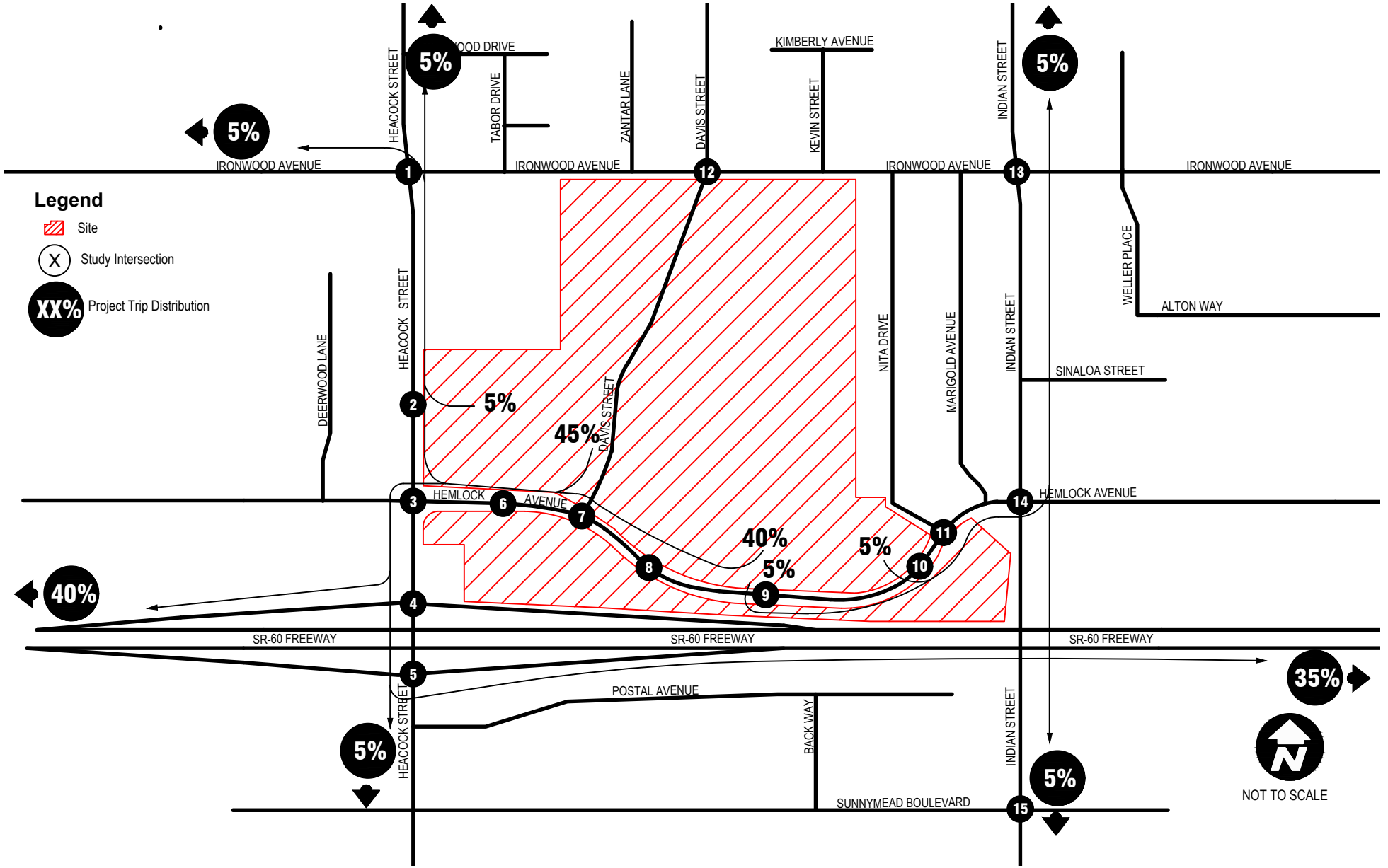
Source: Google Maps, 09/2017.

Retail Distribution Inbound

Festival at Moreno Valley

FIGURE 4

transpogroup
WHAT TRANSPORTATION CAN BE.



Source: Google Maps, 09/2017.

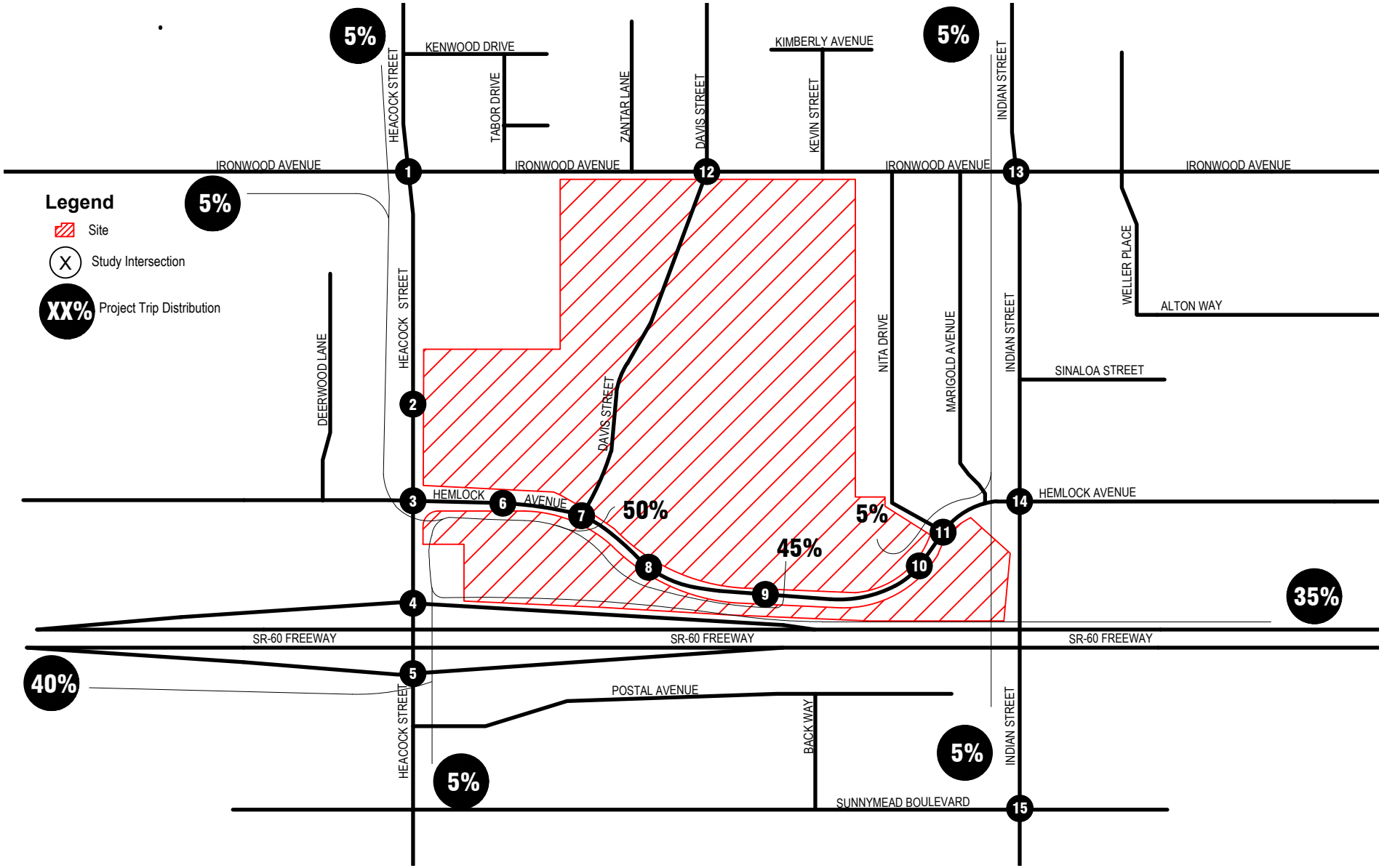
Business Park Distribution Outbound

FIGURE 5

Festival at Moreno Valley

transpogroup
WHAT TRANSPORTATION CAN BE.

Oct 30, 2017 - 4:58pm rudyg C:\Users\rudyg\Dropbox (Transpo CA)\Transpo CA Team Folder\Projects\2017\17261.PR - Festival at Moreno Valley\Graphics\Festival at Moreno Valley.dwg Layout: fig5-Business Park Distribution Outbound



Source: Google Maps, 09/2017.

Business Park Distribution Inbound

Festival at Moreno Valley

FIGURE 6

transpogroup
WHAT TRANSPORTATION CAN BE.

Appendix B:Traffic Counts

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 16, 17

LOCATION: Moreno Valley
NORTH & SOUTH: Heacock
EAST & WEST: Ironwood

PROJECT #: SC1422
LOCATION #: 1
CONTROL: SIGNAL

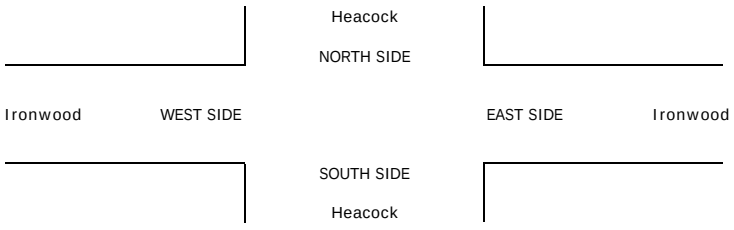
NOTES:

AM PM MD OTHER OTHER

N ▲ ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND Heacock			SOUTHBOUND Heacock			EASTBOUND Ironwood			WESTBOUND Ironwood				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	25	101	21	8	102	50	11	33	22	29	75	5	482	0	0	0	0	0
	7:15 AM	27	94	29	8	123	53	34	64	32	26	133	4	627	0	0	0	0	0
	7:30 AM	25	112	22	16	142	80	33	101	28	41	119	8	727	0	0	0	0	0
	7:45 AM	28	101	17	14	144	67	40	60	26	45	148	17	707	0	0	0	0	0
	8:00 AM	26	110	19	13	137	59	25	52	37	46	120	13	657	0	0	0	0	0
	8:15 AM	31	107	15	9	144	50	25	35	32	28	83	10	569	0	0	0	0	0
	8:30 AM	26	96	19	13	119	36	17	43	44	29	50	6	498	0	0	0	0	0
	8:45 AM	30	70	25	10	106	24	18	39	27	31	54	3	437	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	218	791	167	91	1,017	419	203	427	248	275	782	66	4,704	0	0	0	0	0
	APPROACH %	19%	67%	14%	6%	67%	27%	23%	49%	28%	24%	70%	6%						
	APP/DEPART	1,176	/	1,060	1,527	/	1,540	878	/	685	1,123	/	1,419	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	106	417	87	51	546	259	132	277	123	158	520	42	2,718					
	APPROACH %	17%	68%	14%	6%	64%	30%	25%	52%	23%	22%	72%	6%						
	PEAK HR FACTOR		0.959			0.899			0.821			0.857		0.935					
	APP/DEPART	610	/	591	856	/	827	532	/	415	720	/	885	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	35	145	29	14	123	42	41	66	29	21	70	10	625	0	0	0	0	0
	4:15 PM	39	126	47	12	110	42	46	86	34	29	72	19	662	0	0	0	0	0
	4:30 PM	42	183	31	9	151	49	51	77	29	20	58	8	708	0	1	0	0	1
	4:45 PM	45	138	52	15	130	42	42	83	28	30	73	18	696	0	0	0	0	0
	5:00 PM	42	170	39	14	113	60	54	110	31	24	90	11	758	0	0	0	0	0
	5:15 PM	47	182	35	17	140	49	56	86	25	19	58	8	722	0	0	0	0	0
	5:30 PM	33	157	52	20	108	45	55	131	26	32	86	11	756	0	0	0	0	0
	5:45 PM	33	140	47	22	140	49	61	107	37	18	72	9	735	0	0	0	0	0
	VOLUMES	316	1,241	332	123	1,015	378	406	746	239	193	579	94	5,662	0	1	0	0	1
	APPROACH %	17%	66%	18%	8%	67%	25%	29%	54%	17%	22%	67%	11%						
	APP/DEPART	1,889	/	1,742	1,516	/	1,447	1,391	/	1,200	866	/	1,273	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	155	649	173	73	501	203	226	434	119	93	306	39	2,971					
	APPROACH %	16%	66%	18%	9%	64%	26%	29%	56%	15%	21%	70%	9%						
	PEAK HR FACTOR		0.925			0.921			0.919			0.849		0.980					
	APP/DEPART	977	/	914	777	/	713	779	/	680	438	/	664	0					



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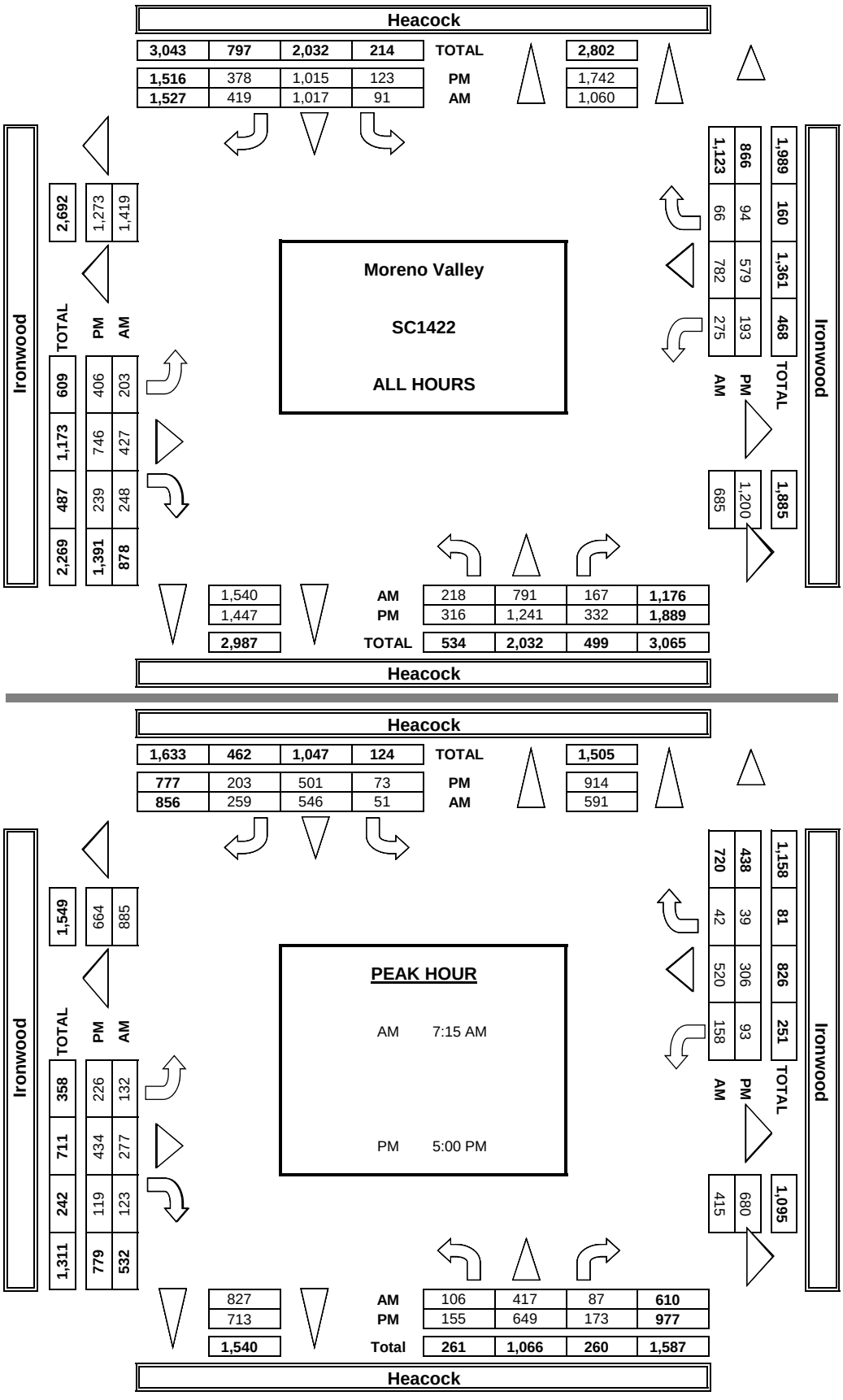
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1422
Wed, Aug 16, 17	NORTH & SOUTH:	West FMV	LOCATION #:	2
	EAST & WEST:	Hemlock	CONTROL:	STOP S

NOTES:

AM PM MD OTHER OTHER — ▲ N ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND West FMV			SOUTHBOUND West FMV			EASTBOUND Hemlock			WESTBOUND Hemlock				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	0	0	0	2	0	0	3	14	0	0	16	1	36	0	0	0	0	0
	7:15 AM	0	0	0	0	0	1	1	15	0	0	18	0	35	0	0	0	0	0
	7:30 AM	0	0	0	1	0	1	3	33	0	0	29	5	72	0	0	1	0	1
	7:45 AM	0	0	0	0	0	0	2	34	0	0	35	4	75	0	0	0	0	0
	8:00 AM	0	0	0	2	0	0	3	16	0	0	31	4	56	0	0	0	0	0
	8:15 AM	0	0	0	2	0	3	4	15	0	0	39	5	68	0	0	0	0	0
	8:30 AM	0	0	0	3	0	0	3	18	0	0	24	1	49	0	0	0	0	0
	8:45 AM	0	0	0	6	0	1	3	22	0	0	25	4	61	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	16	0	6	22	167	0	0	217	24	452	0	0	1	0	1
	APPROACH %	0%	0%	0%	73%	0%	27%	12%	88%	0%	0%	90%	10%						
	APP/DEPART	0	/	45	22	/	0	189	/	183	241	/	224	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	5	0	4	12	98	0	0	134	18	271					
	APPROACH %	0%	0%	0%	56%	0%	44%	11%	89%	0%	0%	88%	12%						
	PEAK HR FACTOR		0.000			0.450			0.764			0.864		0.903					
	APP/DEPART	0	/	29	9	/	0	110	/	103	152	/	139	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	5	0	1	7	44	0	0	27	2	86	0	0	0	0	0
	4:15 PM	0	0	0	4	0	4	4	40	0	0	33	3	88	0	0	0	0	0
	4:30 PM	0	0	0	7	0	2	0	53	0	0	32	3	97	0	0	0	0	0
	4:45 PM	0	0	0	8	0	8	9	47	0	0	35	0	107	0	0	0	0	0
	5:00 PM	0	0	0	5	0	1	1	52	0	0	33	3	95	0	0	0	0	0
	5:15 PM	0	0	0	5	0	1	0	36	0	0	26	4	72	0	0	0	0	0
	5:30 PM	0	0	0	2	0	1	3	52	0	0	29	1	88	0	0	0	0	0
	5:45 PM	0	0	0	12	0	9	1	51	0	0	37	1	111	0	0	0	0	0
	VOLUMES	0	0	0	48	0	27	25	375	0	0	252	17	744	0	0	0	0	0
	APPROACH %	0%	0%	0%	64%	0%	36%	6%	94%	0%	0%	94%	6%						
	APP/DEPART	0	/	42	75	/	0	400	/	423	269	/	279	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	0	0	24	0	15	14	192	0	0	133	9	387					
	APPROACH %	0%	0%	0%	62%	0%	38%	7%	93%	0%	0%	94%	6%						
	PEAK HR FACTOR		0.000			0.609			0.920			0.986		0.904					
	APP/DEPART	0	/	23	39	/	0	206	/	216	142	/	148	0					

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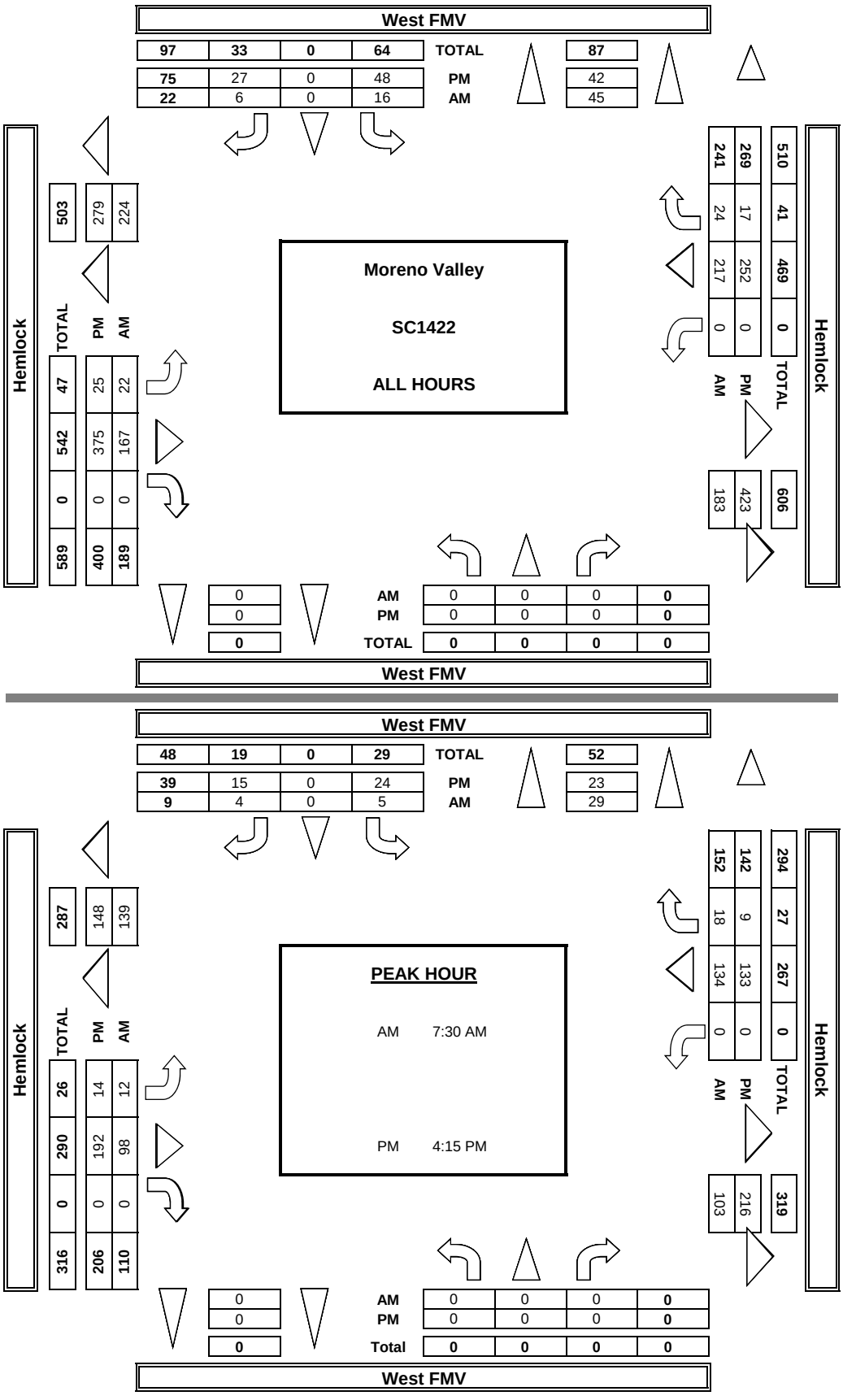
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 16, 17

LOCATION: Moreno Valley
NORTH & SOUTH: Heacock
EAST & WEST: Hemlock

PROJECT #: SC1422
LOCATION #: 3
CONTROL: SIGNAL

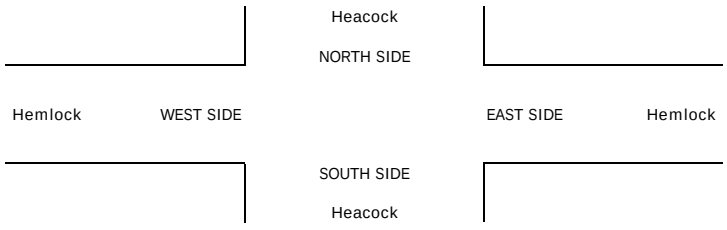
NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

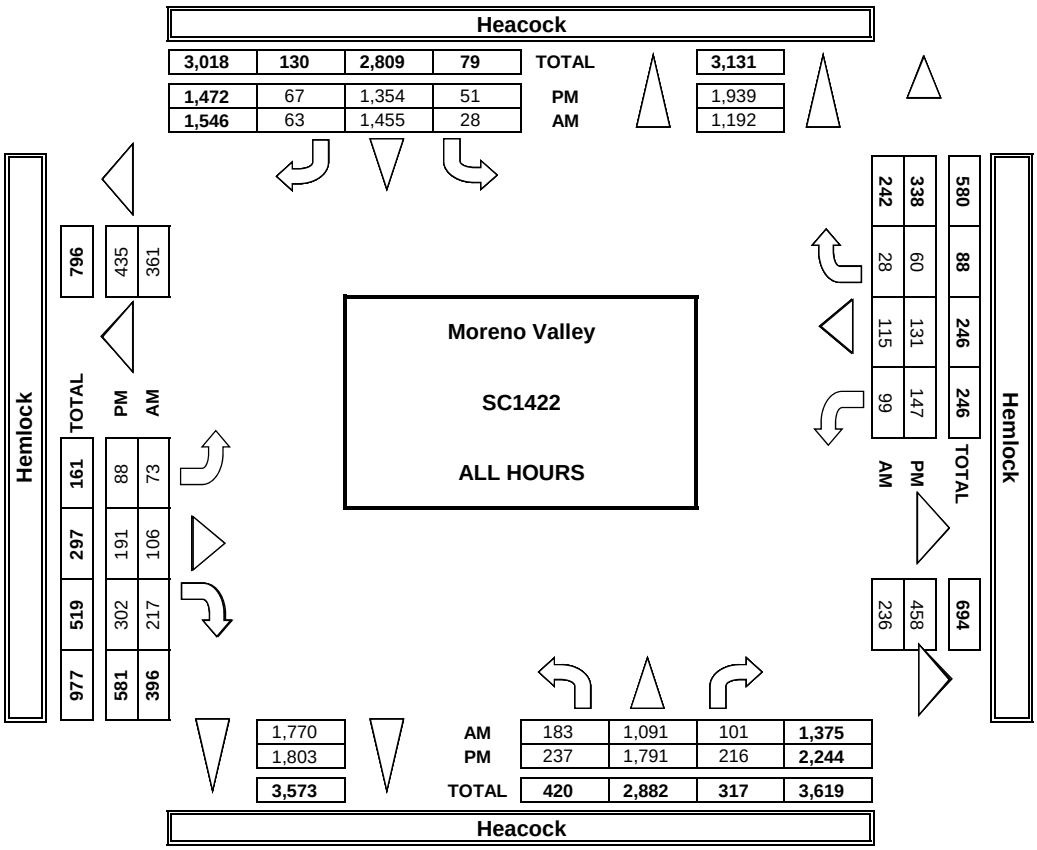
Add U-Turns to Left Turns

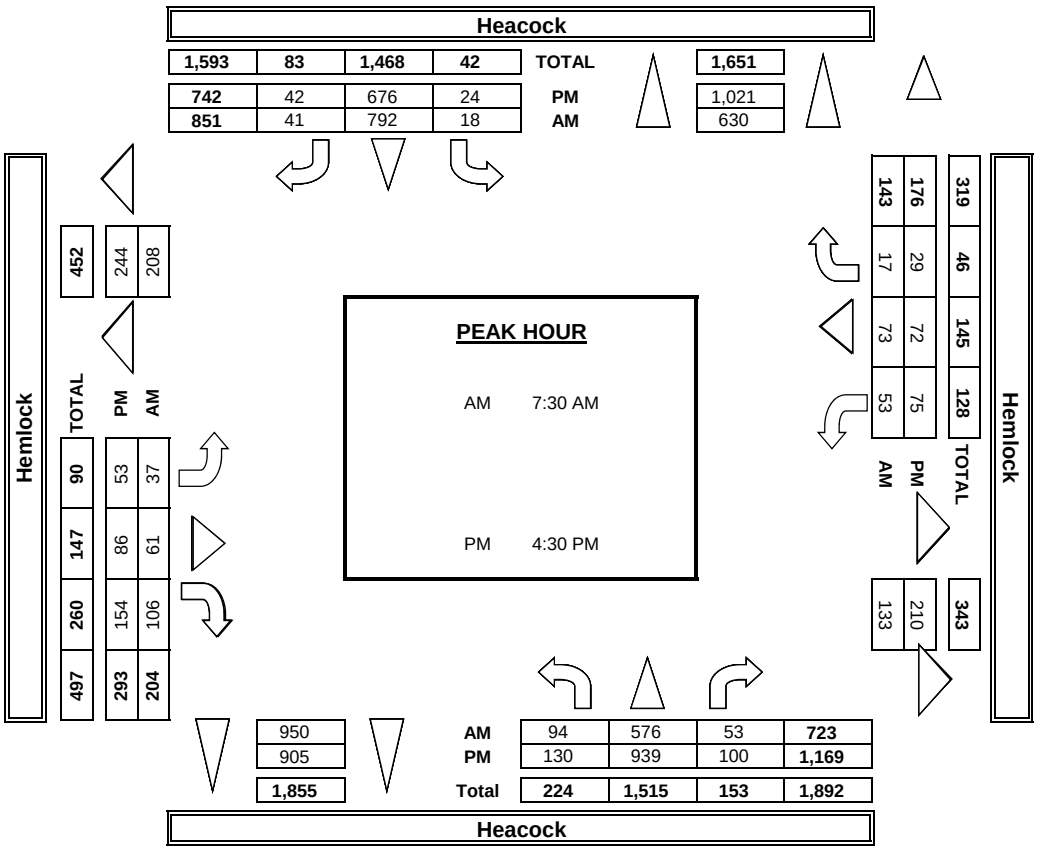
		NORTHBOUND Heacock			SOUTHBOUND Heacock			EASTBOUND Hemlock			WESTBOUND Hemlock				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	18	142	11	0	140	6	8	6	23	5	11	1	371	0	0	0	0	0
	7:15 AM	29	124	4	2	181	3	14	13	29	8	11	1	419	0	0	0	0	0
	7:30 AM	33	159	11	5	184	6	6	27	32	13	16	2	494	0	0	0	0	0
	7:45 AM	16	154	15	3	212	14	11	15	21	7	24	4	496	0	0	0	0	0
	8:00 AM	26	135	16	4	203	11	9	9	26	13	13	5	470	0	0	0	0	0
	8:15 AM	19	128	11	6	193	10	11	10	27	20	20	6	461	0	0	0	1	1
	8:30 AM	22	119	14	5	179	7	10	9	31	23	6	4	429	0	0	0	0	0
	8:45 AM	20	130	19	3	163	6	4	17	28	10	14	5	419	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	183	1,091	101	28	1,455	63	73	106	217	99	115	28	3,559	0	0	0	1	1
	APPROACH %	13%	79%	7%	2%	94%	4%	18%	27%	55%	41%	48%	12%						
	APP/DEPART	1,375	/	1,192	1,546	/	1,770	396	/	236	242	/	361	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	94	576	53	18	792	41	37	61	106	53	73	17	1,921					
	APPROACH %	13%	80%	7%	2%	93%	5%	18%	30%	52%	37%	51%	12%						
	PEAK HR FACTOR		0.890			0.929			0.785			0.777		0.968					
	APP/DEPART	723	/	630	851	/	950	204	/	133	143	/	208	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	27	230	31	6	161	1	5	23	33	20	12	5	554	0	0	0	0	0
	4:15 PM	25	195	28	10	173	6	10	26	37	17	15	9	551	0	0	0	0	0
	4:30 PM	27	239	26	8	174	17	12	21	39	17	18	5	603	0	0	0	0	0
	4:45 PM	34	219	29	6	170	9	5	19	42	23	21	9	586	0	0	0	0	0
	5:00 PM	41	232	29	5	165	7	20	26	38	15	16	11	605	0	0	0	0	0
	5:15 PM	28	249	16	5	167	9	16	20	35	20	17	4	586	0	0	0	0	0
	5:30 PM	24	236	29	8	168	11	11	27	40	14	14	4	586	0	0	0	0	0
	5:45 PM	31	191	28	3	176	7	9	29	38	21	18	13	564	0	0	0	0	0
	VOLUMES	237	1,791	216	51	1,354	67	88	191	302	147	131	60	4,635	0	0	0	0	0
	APPROACH %	11%	80%	10%	3%	92%	5%	15%	33%	52%	43%	39%	18%						
	APP/DEPART	2,244	/	1,939	1,472	/	1,803	581	/	458	338	/	435	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	130	939	100	24	676	42	53	86	154	75	72	29	2,380					
	APPROACH %	11%	80%	9%	3%	91%	6%	18%	29%	53%	43%	41%	16%						
	PEAK HR FACTOR		0.968			0.932			0.872			0.830		0.983					
	APP/DEPART	1,169	/	1,021	742	/	905	293	/	210	176	/	244	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 16, 17

LOCATION: Moreno Valley
NORTH & SOUTH: Heacock
EAST & WEST: SR-60 WB Ramps

PROJECT #: SC1422
LOCATION #: 4
CONTROL: SIGNAL

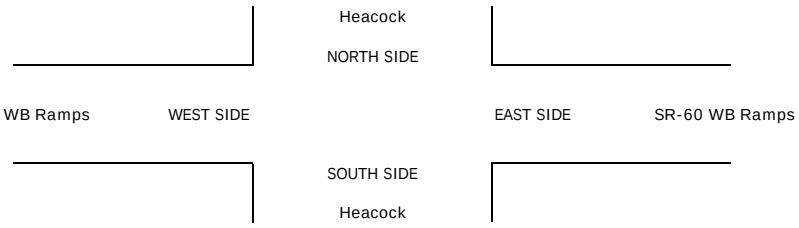
NOTES: AM SB queue. PM NB/SB queue

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

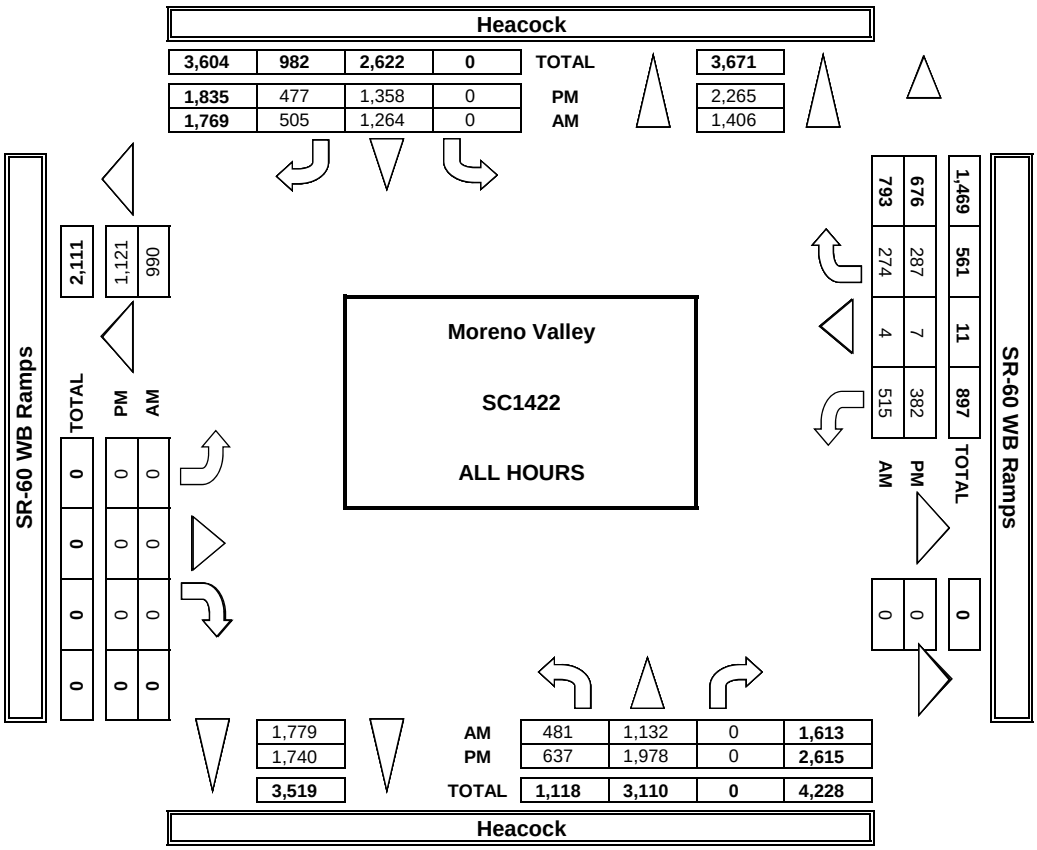
Add U-Turns to Left Turns

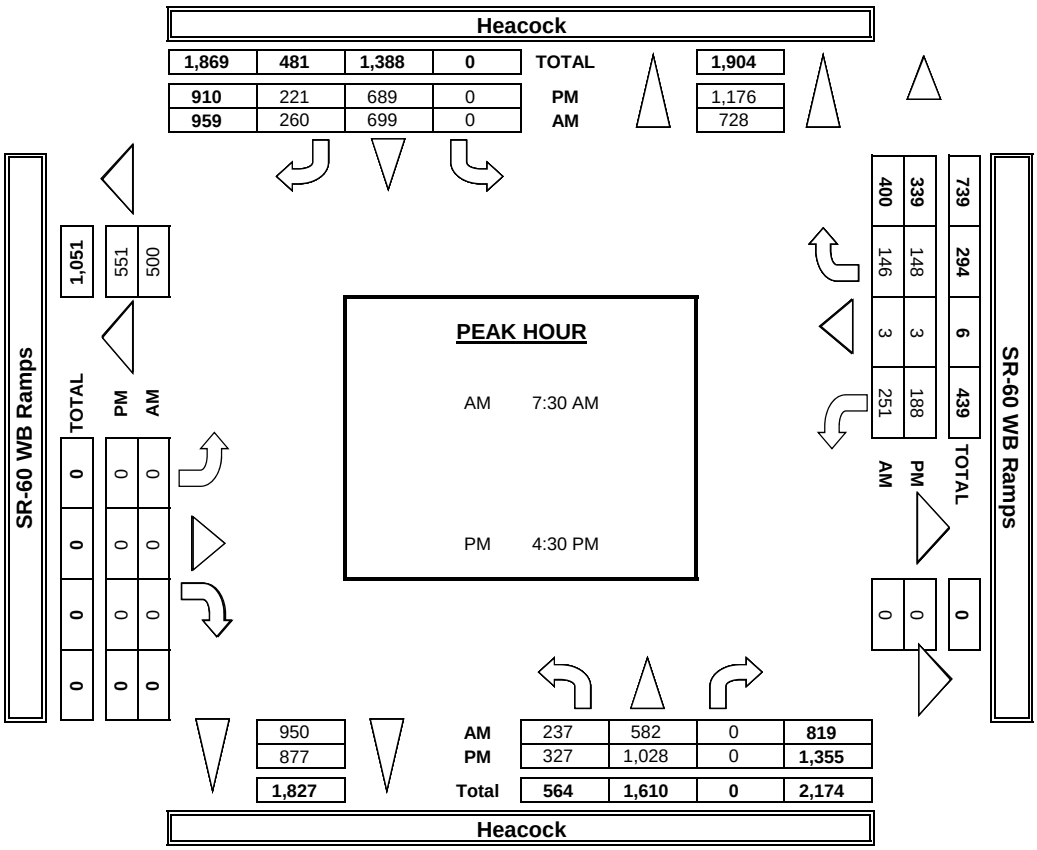
		NORTHBOUND Heacock			SOUTHBOUND Heacock			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 Ramps				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL X	ET X	ER X	WL 1	WT 0	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	56	139	0	0	106	62	0	0	0	59	1	40	463	0	0	0	0	0
	7:15 AM	56	129	0	0	151	62	0	0	0	66	0	37	501	0	0	0	0	0
	7:30 AM	63	148	0	0	172	62	0	0	0	75	0	50	570	0	0	0	0	0
	7:45 AM	49	153	0	0	181	59	0	0	0	70	1	41	554	0	0	0	0	0
	8:00 AM	62	147	0	0	176	71	0	0	0	58	0	26	540	0	0	0	0	0
	8:15 AM	63	134	0	0	170	68	0	0	0	48	2	29	514	0	0	0	0	0
	8:30 AM	67	129	0	0	161	62	0	0	0	85	0	30	534	0	0	0	0	0
	8:45 AM	65	153	0	0	147	59	0	0	0	54	0	21	499	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	481	1,132	0	0	1,264	505	0	0	0	515	4	274	4,175	0	0	0	0	0
	APPROACH %	30%	70%	0%	0%	71%	29%	0%	0%	0%	65%	1%	35%						
	APP/DEPART	1,613	/	1,406	1,769	/	1,779	0	/	0	793	/	990	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	237	582	0	0	699	260	0	0	0	251	3	146	2,178					
	APPROACH %	29%	71%	0%	0%	73%	27%	0%	0%	0%	63%	1%	37%						
	PEAK HR FACTOR		0.970			0.971			0.000			0.800		0.955					
	APP/DEPART	819	/	728	959	/	950	0	/	0	400	/	500	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	83	254	0	0	151	56	0	0	0	57	0	40	641	0	0	0	0	0
	4:15 PM	72	219	0	0	170	76	0	0	0	43	1	33	614	0	0	0	0	0
	4:30 PM	82	257	0	0	173	61	0	0	0	61	0	45	679	0	0	0	0	0
	4:45 PM	66	244	0	0	185	48	0	0	0	47	1	38	629	0	0	0	0	0
	5:00 PM	88	278	0	0	163	52	0	0	0	45	0	27	653	0	0	0	0	0
	5:15 PM	91	249	0	0	168	60	0	0	0	35	2	38	643	0	0	0	0	0
	5:30 PM	77	257	0	0	172	58	0	0	0	45	2	38	649	0	0	0	0	0
	5:45 PM	78	220	0	0	176	66	0	0	0	49	1	28	618	0	0	0	0	0
	VOLUMES	637	1,978	0	0	1,358	477	0	0	0	382	7	287	5,126	0	0	0	0	0
	APPROACH %	24%	76%	0%	0%	74%	26%	0%	0%	0%	57%	1%	42%						
	APP/DEPART	2,615	/	2,265	1,835	/	1,740	0	/	0	676	/	1,121	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	327	1,028	0	0	689	221	0	0	0	188	3	148	2,604					
	APPROACH %	24%	76%	0%	0%	76%	24%	0%	0%	0%	55%	1%	44%						
	PEAK HR FACTOR		0.926			0.972			0.000			0.800		0.959					
	APP/DEPART	1,355	/	1,176	910	/	877	0	/	0	339	/	551	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 16, 17

LOCATION: Moreno Valley
NORTH & SOUTH: Heacock
EAST & WEST: SR-60 EB Ramps

PROJECT #: SC1422
LOCATION #: 5
CONTROL: SIGNAL

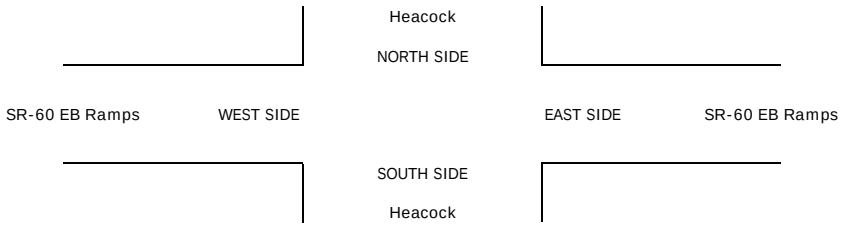
NOTES:
PM NB queue

AM PM MD OTHER OTHER

N ◄ W E ► S

Add U-Turns to Left Turns

		NORTHBOUND Heacock			SOUTHBOUND Heacock			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps				U-TURNS				
	LANES:	NL X	NT 3	NR 0	SL 1	ST 2	SR X	EL 1.5	ET 0.5	ER 1	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	0	143	29	31	134	0	54	0	55	0	0	0	446	0	0	0	0	0
	7:15 AM	0	132	38	47	172	0	52	0	70	0	0	0	511	0	0	0	0	0
	7:30 AM	0	163	24	55	194	0	50	1	71	0	0	0	558	0	0	0	0	0
	7:45 AM	0	167	33	59	194	0	34	1	83	0	0	0	571	0	0	0	0	0
	8:00 AM	0	151	33	27	206	0	60	1	79	0	0	0	557	0	0	0	0	0
	8:15 AM	0	143	28	35	185	0	56	0	96	0	0	0	543	0	0	0	0	0
	8:30 AM	0	149	31	25	220	0	46	2	90	0	0	0	563	0	0	0	0	0
	8:45 AM	0	165	29	27	173	0	55	2	99	0	0	0	550	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1,213	245	306	1,478	0	407	7	643	0	0	0	4,299	0	0	0	0	0
	APPROACH %	0%	83%	17%	17%	83%	0%	39%	1%	61%	0%	0%	0%						
	APP/DEPART	1,458	/	1,620	1,784	/	2,121	1,057	/	558	0	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	610	125	146	805	0	196	4	348	0	0	0	2,234					
	APPROACH %	0%	83%	17%	15%	85%	0%	36%	1%	64%	0%	0%	0%						
	PEAK HR FACTOR		0.919			0.940			0.901			0.000		0.978					
	APP/DEPART	735	/	806	951	/	1,153	548	/	275	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	234	48	23	180	0	105	2	100	0	0	0	692	0	0	0	0	0
	4:15 PM	0	191	58	26	191	0	104	1	82	0	0	0	653	0	0	0	0	0
	4:30 PM	0	215	56	34	204	0	126	2	101	0	0	0	738	0	0	0	0	0
	4:45 PM	0	201	58	36	191	0	112	1	90	0	0	0	689	0	0	0	0	0
	5:00 PM	0	264	68	40	172	0	106	0	64	0	0	0	714	0	0	0	0	0
	5:15 PM	0	233	61	47	159	0	109	0	66	0	0	0	675	0	0	0	0	0
	5:30 PM	0	223	53	26	196	0	115	2	84	0	0	0	699	0	0	0	0	0
	5:45 PM	0	200	58	42	186	0	101	1	64	0	0	0	652	0	0	0	0	0
	VOLUMES	0	1,761	460	274	1,479	0	878	9	651	0	0	0	5,512	0	0	0	0	0
	APPROACH %	0%	79%	21%	16%	84%	0%	57%	1%	42%	0%	0%	0%						
	APP/DEPART	2,221	/	2,639	1,753	/	2,130	1,538	/	743	0	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	913	243	157	726	0	453	3	321	0	0	0	2,816					
	APPROACH %	0%	79%	21%	18%	82%	0%	58%	0%	41%	0%	0%	0%						
	PEAK HR FACTOR		0.870			0.928			0.848			0.000		0.954					
	APP/DEPART	1,156	/	1,366	883	/	1,047	777	/	403	0	/	0	0					



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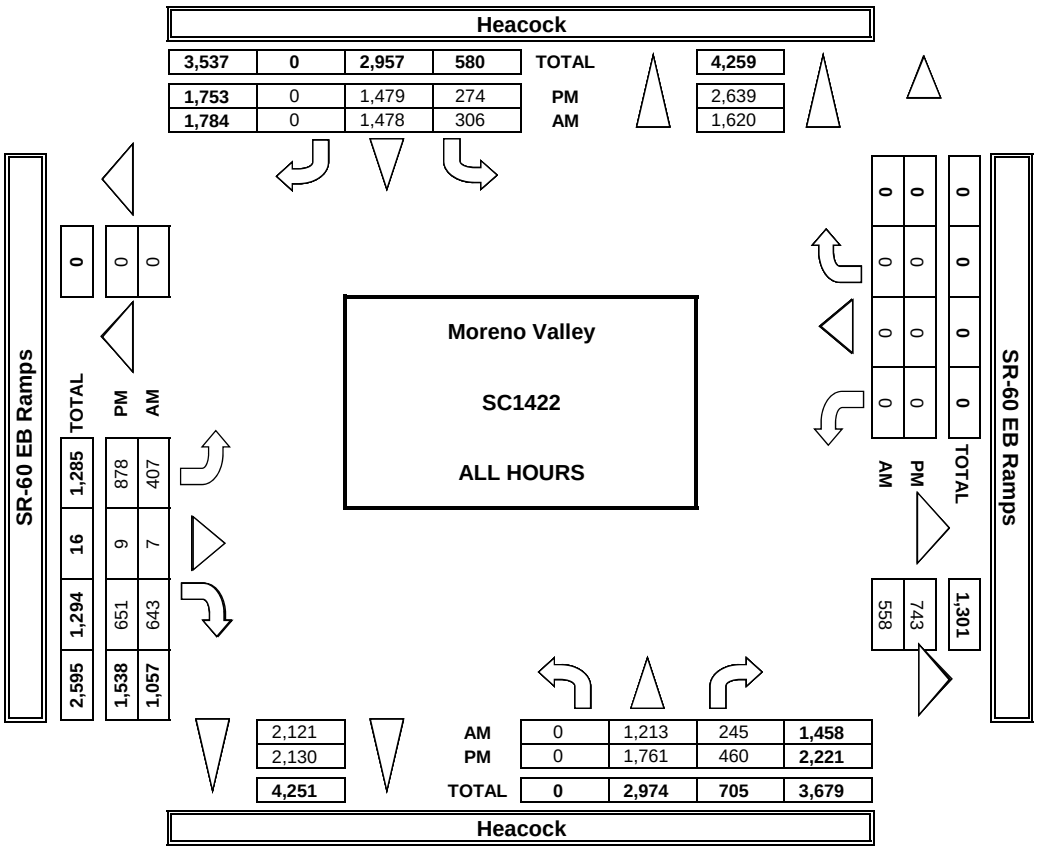
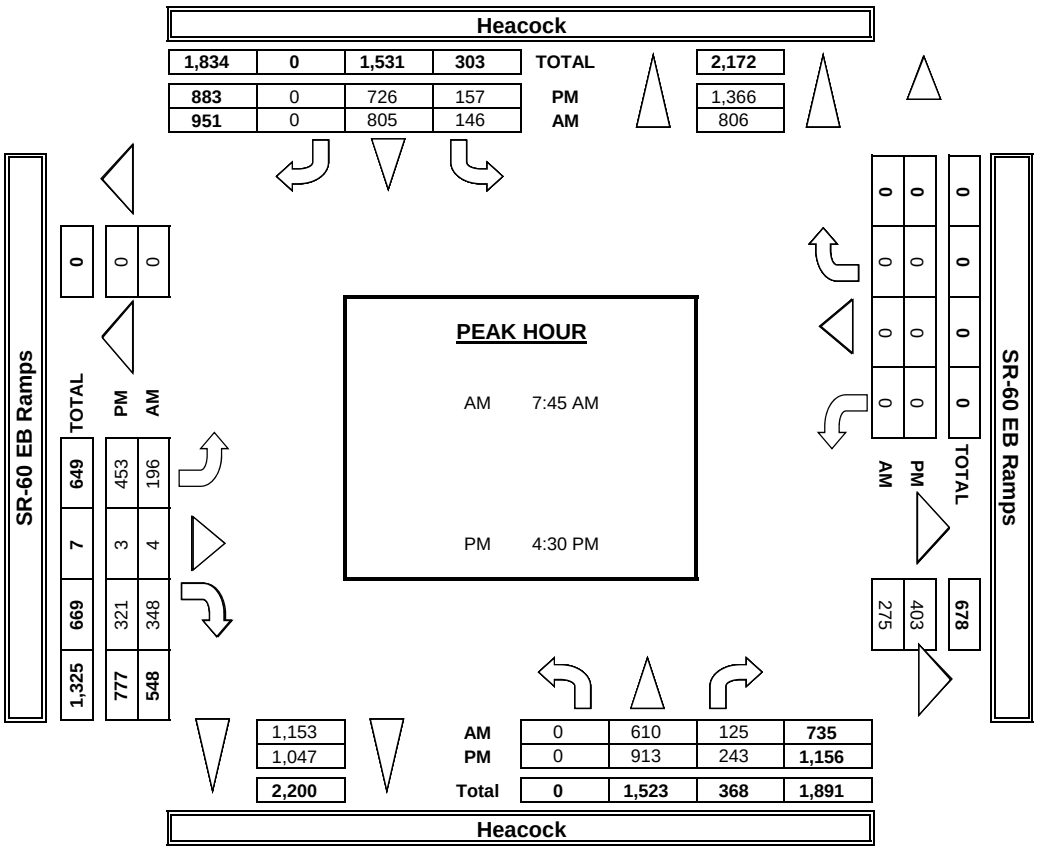
TURNING MOVEMENT COUNTS





Attachment: Appendix F to Initial Study Traffic Impact Analysis (4266 : PEN20-0137-0139 Plot Plan for a Light Industrial Building)

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1422
Wed, Aug 16, 17	NORTH & SOUTH:	East FMV	LOCATION #:	6
	EAST & WEST:	Hemlock	CONTROL:	STOP S

NOTES:

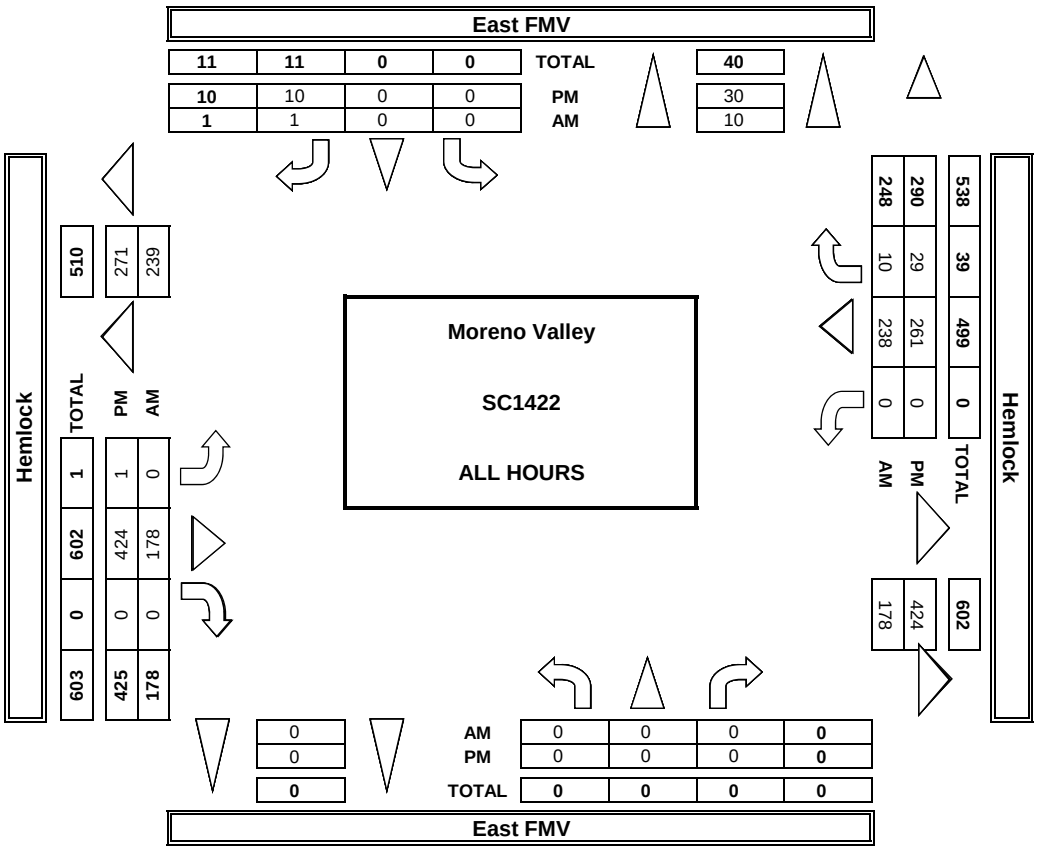
AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

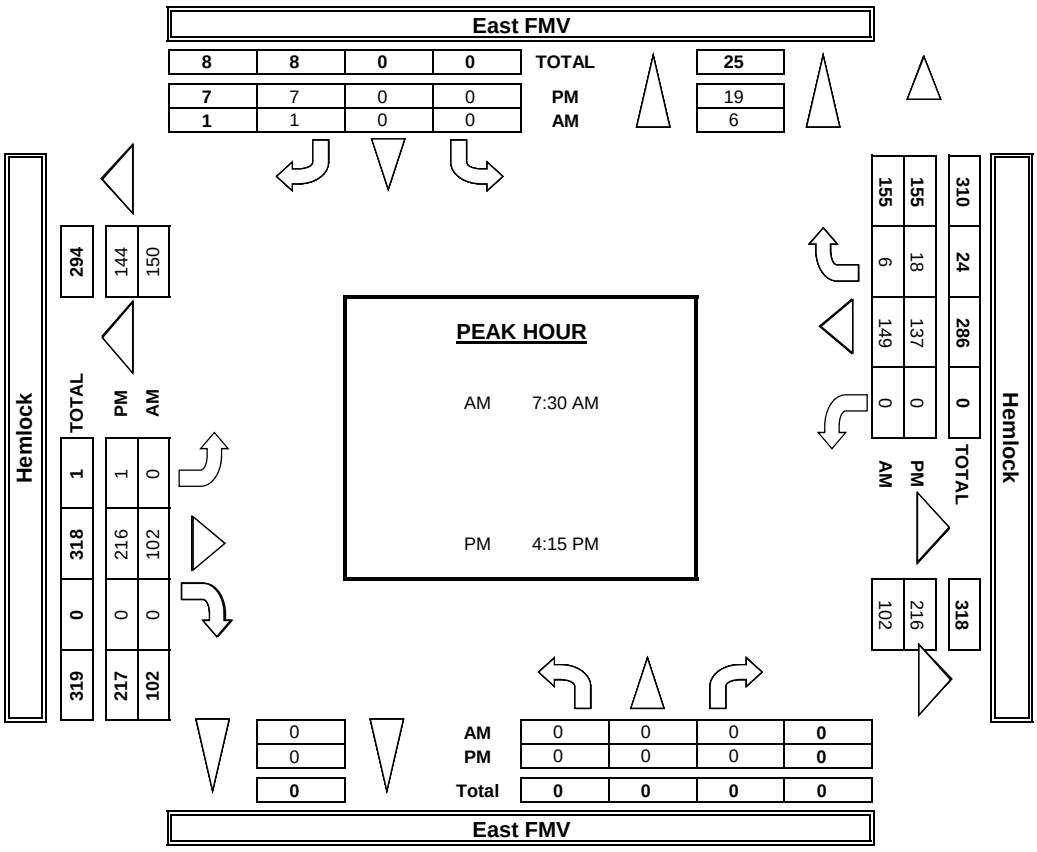
Add U-Turns to Left Turns

		NORTHBOUND East FMV			SOUTHBOUND East FMV			EASTBOUND Hemlock			WESTBOUND Hemlock				U-TURNS				
	LANES:	NL X	NT X	NR X	SL X	ST X	SR 0	EL X	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	0	0	0	0	0	0	0	16	0	0	17	0	33	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	15	0	0	18	0	33	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	33	0	0	34	1	68	0	0	0	0	0
	7:45 AM	0	0	0	0	0	1	0	34	0	0	38	2	75	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	18	0	0	35	1	54	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	17	0	0	42	2	61	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	21	0	0	25	3	49	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	24	0	0	29	1	54	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	1	0	178	0	0	238	10	427	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	96%	4%						
	APP/DEPART	0	/	10	1	/	0	178	/	178	248	/	239	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	0	0	1	0	102	0	0	149	6	258					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	96%	4%						
	PEAK HR FACTOR		0.000			0.250			0.750			0.881		0.860					
	APP/DEPART	0	/	6	1	/	0	102	/	102	155	/	150	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	48	0	0	27	4	79	0	0	0	0	0
	4:15 PM	0	0	0	0	0	1	1	50	0	0	32	2	86	0	0	0	0	0
	4:30 PM	0	0	0	0	0	1	0	55	0	0	36	2	94	0	0	0	0	0
	4:45 PM	0	0	0	0	0	4	0	52	0	0	31	9	96	0	0	0	0	0
	5:00 PM	0	0	0	0	0	1	0	59	0	0	38	5	103	0	0	0	0	0
	5:15 PM	0	0	0	0	0	2	0	44	0	0	28	1	75	0	0	0	0	0
	5:30 PM	0	0	0	0	0	1	0	54	0	0	28	4	87	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	62	0	0	41	2	105	0	0	0	0	0
	VOLUMES	0	0	0	0	0	10	1	424	0	0	261	29	725	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	90%	10%						
	APP/DEPART	0	/	30	10	/	0	425	/	424	290	/	271	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	0	0	0	0	7	1	216	0	0	137	18	379					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	88%	12%						
	PEAK HR FACTOR		0.000			0.438			0.919			0.901		0.920					
	APP/DEPART	0	/	19	7	/	0	217	/	216	155	/	144	0					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 16, 17

LOCATION: Moreno Valley
NORTH & SOUTH: Davis
EAST & WEST: Hemlock

PROJECT #: SC1422
LOCATION #: 7
CONTROL: STOP N/S

NOTES:

AM PM MD OTHER OTHER

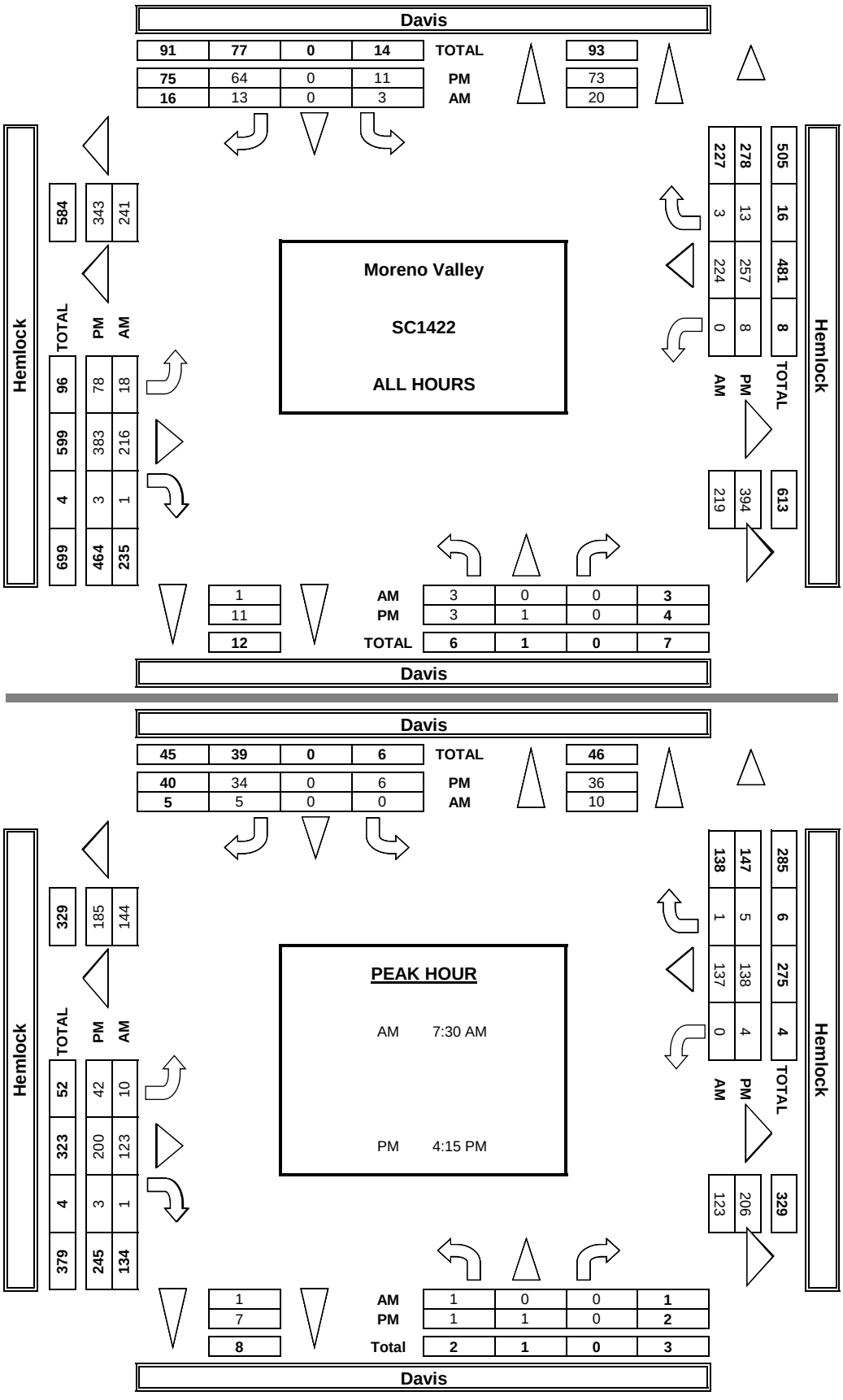
N ▲ ◄ W E ► S ▼

Add U-Turns to Left Turns

		NORTHBOUND Davis			SOUTHBOUND Davis			EASTBOUND Hemlock			WESTBOUND Hemlock				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 1	EL 1	ET 2	ER 0	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	0	0	0	0	0	0	1	18	0	0	16	0	35	0	0	0	0	0
	7:15 AM	1	0	0	1	0	0	1	13	0	0	18	0	34	0	0	0	0	0
	7:30 AM	0	0	0	0	0	2	1	37	0	0	31	0	71	0	0	0	0	0
	7:45 AM	1	0	0	0	0	0	1	42	1	0	36	0	81	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	4	23	0	0	30	0	57	0	0	1	0	1
	8:15 AM	0	0	0	0	0	3	4	21	0	0	40	1	69	0	0	0	0	0
	8:30 AM	1	0	0	1	0	2	3	27	0	0	28	0	62	0	0	0	0	0
	8:45 AM	0	0	0	1	0	6	3	35	0	0	25	2	72	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	3	0	0	3	0	13	18	216	1	0	224	3	481	0	0	1	0	1
	APPROACH %	100%	0%	0%	19%	0%	81%	8%	92%	0%	0%	99%	1%						
	APP/DEPART	3	/	20	16	/	1	235	/	219	227	/	241	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	1	0	0	0	0	5	10	123	1	0	137	1	278					
	APPROACH %	100%	0%	0%	0%	0%	100%	7%	92%	1%	0%	99%	1%						
	PEAK HR FACTOR		0.250			0.417			0.761			0.841		0.858					
	APP/DEPART	1	/	10	5	/	1	134	/	123	138	/	144	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	1	0	10	9	50	0	2	24	1	97	0	0	1	0	1
	4:15 PM	0	0	0	3	0	9	9	49	0	1	34	0	105	0	0	2	0	2
	4:30 PM	0	0	0	1	0	7	6	48	1	1	33	1	98	0	0	2	0	2
	4:45 PM	0	1	0	0	0	10	15	55	0	2	41	1	125	0	0	2	0	2
	5:00 PM	1	0	0	2	0	8	12	48	2	0	30	3	106	0	0	6	0	6
	5:15 PM	2	0	0	2	0	4	7	30	0	0	27	2	74	0	0	5	0	5
	5:30 PM	0	0	0	1	0	6	9	52	0	1	28	2	99	0	0	0	0	0
	5:45 PM	0	0	0	1	0	10	11	51	0	1	40	3	117	0	0	1	0	1
	VOLUMES	3	1	0	11	0	64	78	383	3	8	257	13	821	0	0	19	0	1
	APPROACH %	75%	25%	0%	15%	0%	85%	17%	83%	1%	3%	92%	5%						
	APP/DEPART	4	/	73	75	/	11	464	/	394	278	/	343	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	1	1	0	6	0	34	42	200	3	4	138	5	434					
	APPROACH %	50%	50%	0%	15%	0%	85%	17%	82%	1%	3%	94%	3%						
	PEAK HR FACTOR		0.500			0.833			0.875			0.835		0.868					
	APP/DEPART	2	/	36	40	/	7	245	/	206	147	/	185	0					

AimTD LLC

TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 16, 17

LOCATION: Moreno Valley
NORTH & SOUTH: Driveway
EAST & WEST: Hemlock

PROJECT #: SC1422
LOCATION #: 8
CONTROL: STOP N

NOTES:

AM PM MD OTHER OTHER

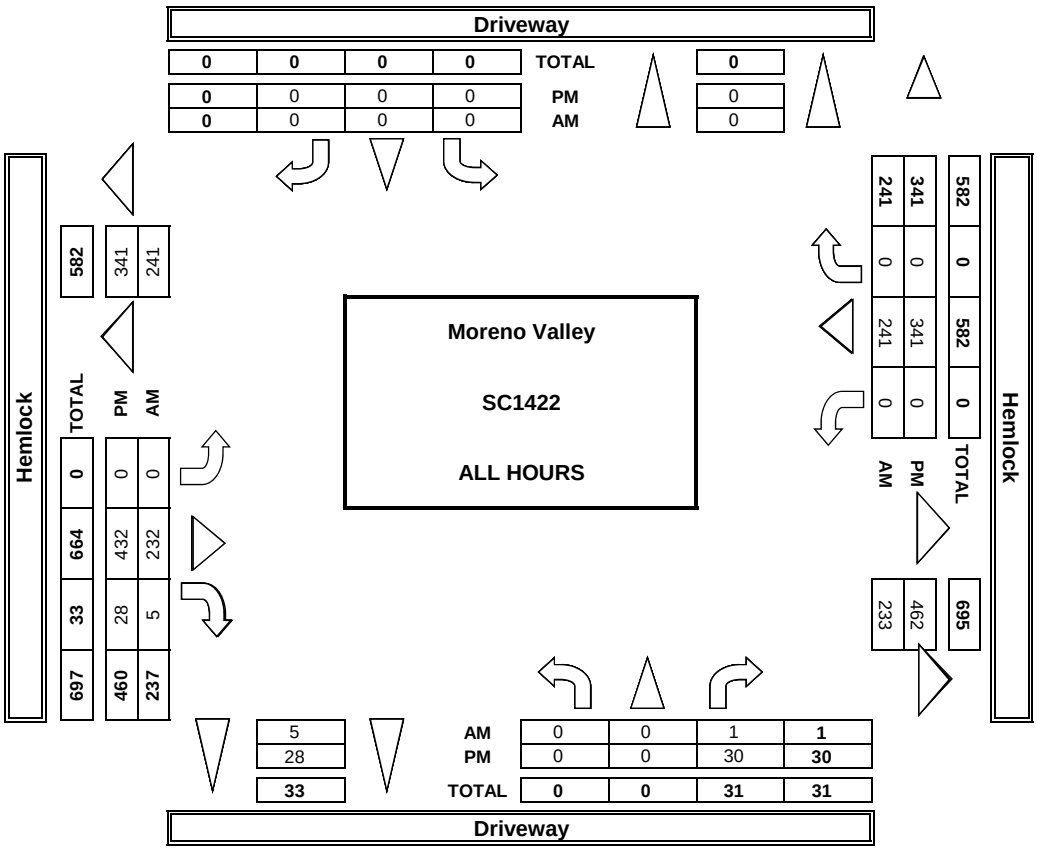
N ▲ ◄ W E ► S ▼

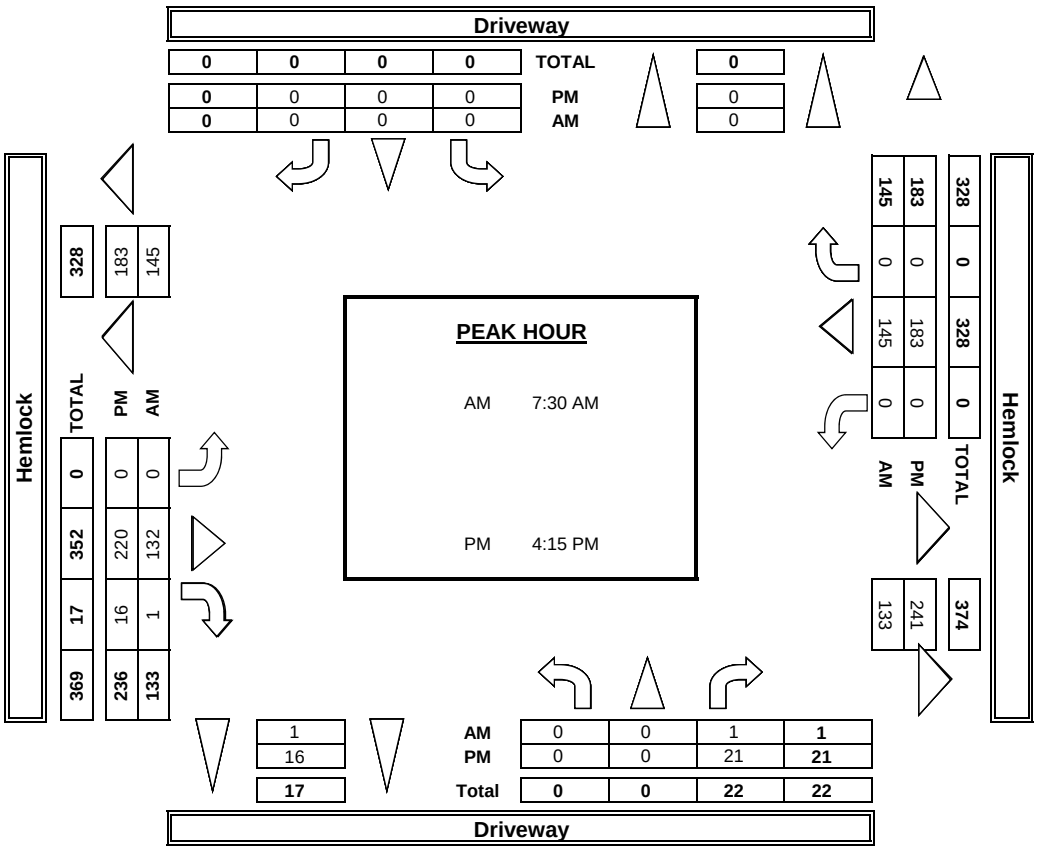
Add U-Turns to Left Turns

		NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND Hemlock			WESTBOUND Hemlock				U-TURNS				
	LANES:	NL X	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL X	WT 3	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	0	0	0	0	0	0	0	15	2	0	19	0	36	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	19	0	0	18	0	37	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	43	0	0	33	0	76	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	38	0	0	39	0	77	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	24	0	0	31	0	55	0	0	0	0	0
	8:15 AM	0	0	1	0	0	0	0	27	1	0	42	0	71	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	29	0	0	32	0	61	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	37	2	0	27	0	66	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	1	0	0	0	0	232	5	0	241	0	479	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	98%	2%	0%	100%	0%						
	APP/DEPART	1	/	0	0	/	5	237	/	233	241	/	241	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	1	0	0	0	0	132	1	0	145	0	279					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	99%	1%	0%	100%	0%						
	PEAK HR FACTOR		0.250			0.000			0.773			0.863		0.906					
	APP/DEPART	1	/	0	0	/	1	133	/	133	145	/	145	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	2	0	0	0	0	55	3	0	35	0	95	0	0	0	0	0
	4:15 PM	0	0	3	0	0	0	0	58	6	0	45	0	112	0	0	0	0	0
	4:30 PM	0	0	3	0	0	0	0	53	4	0	41	0	101	0	0	0	0	0
	4:45 PM	0	0	6	0	0	0	0	53	2	0	50	0	111	0	0	0	0	0
	5:00 PM	0	0	9	0	0	0	0	56	4	0	47	0	116	0	0	0	0	0
	5:15 PM	0	0	4	0	0	0	0	38	4	0	37	0	83	0	0	0	0	0
	5:30 PM	0	0	1	0	0	0	0	59	4	0	32	0	96	0	0	0	0	0
	5:45 PM	0	0	2	0	0	0	0	60	1	0	54	0	117	0	0	0	0	0
	VOLUMES	0	0	30	0	0	0	0	432	28	0	341	0	831	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	94%	6%	0%	100%	0%						
	APP/DEPART	30	/	0	0	/	28	460	/	462	341	/	341	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	0	21	0	0	0	0	220	16	0	183	0	440					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	93%	7%	0%	100%	0%						
	PEAK HR FACTOR		0.583			0.000			0.922			0.915		0.948					
	APP/DEPART	21	/	0	0	/	16	236	/	241	183	/	183	0					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 16, 17

LOCATION: Moreno Valley
NORTH & SOUTH: IHOP
EAST & WEST: Hemlock

PROJECT #: SC1422
LOCATION #: 9
CONTROL: STOP S

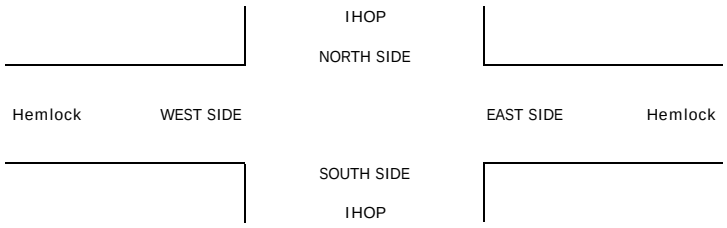
NOTES:

AM PM MD OTHER OTHER

N ◄ W E ► S

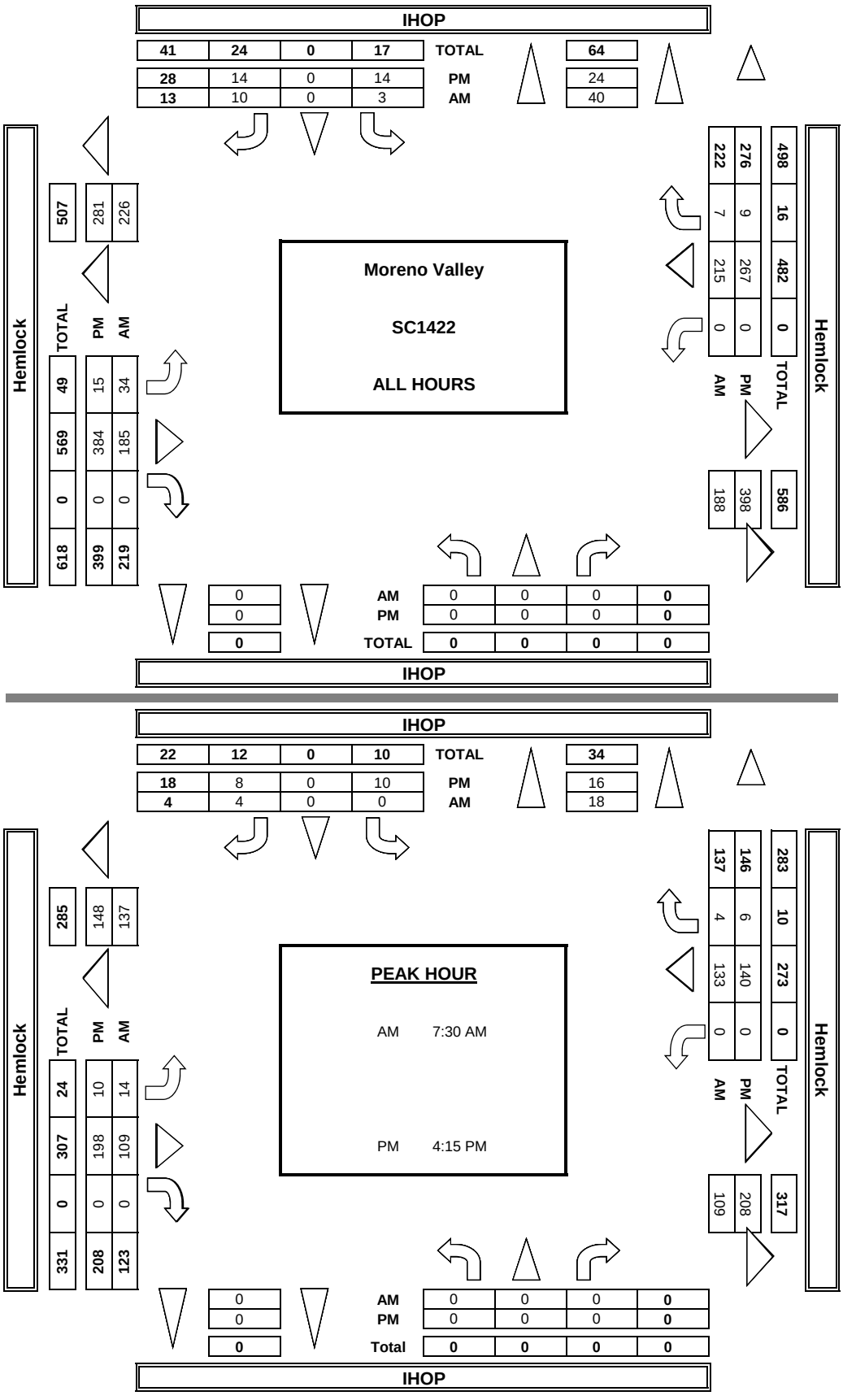
Add U-Turns to Left Turns

		NORTHBOUND IHOP			SOUTHBOUND IHOP			EASTBOUND Hemlock			WESTBOUND Hemlock				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	0	0	0	1	0	1	2	16	0	0	15	1	36	0	0	0	0	0
	7:15 AM	0	0	0	2	0	0	0	14	0	0	18	1	35	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	1	36	0	0	31	0	68	0	0	0	0	0
	7:45 AM	0	0	0	0	0	2	6	36	0	0	34	1	79	0	0	0	0	0
	8:00 AM	0	0	0	0	0	1	5	18	0	0	29	1	54	0	0	0	0	0
	8:15 AM	0	0	0	0	0	1	2	19	0	0	39	2	63	0	0	0	0	0
	8:30 AM	0	0	0	0	0	4	7	21	0	0	24	0	56	0	0	0	0	0
	8:45 AM	0	0	0	0	0	1	11	25	0	0	25	1	63	0	0	1	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	3	0	10	34	185	0	0	215	7	454	0	0	1	0	1
	APPROACH %	0%	0%	0%	23%	0%	77%	16%	84%	0%	0%	97%	3%						
	APP/DEPART	0	/	40	13	/	0	219	/	188	222	/	226	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	0	0	4	14	109	0	0	133	4	264					
	APPROACH %	0%	0%	0%	0%	0%	100%	11%	89%	0%	0%	97%	3%						
	PEAK HR FACTOR		0.000			0.500			0.732			0.835		0.835					
	APP/DEPART	0	/	18	4	/	0	123	/	109	137	/	137	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	1	0	1	1	50	0	0	26	1	80	0	0	0	0	0
	4:15 PM	0	0	0	0	0	2	7	46	0	0	35	2	92	0	0	0	0	0
	4:30 PM	0	0	0	6	0	2	1	48	0	0	32	2	91	0	0	0	0	0
	4:45 PM	0	0	0	3	0	3	2	52	0	0	41	1	102	0	0	0	0	0
	5:00 PM	0	0	0	1	0	1	0	52	0	0	32	1	87	0	0	0	0	0
	5:15 PM	0	0	0	2	0	2	1	35	0	0	26	1	67	0	0	0	0	0
	5:30 PM	0	0	0	0	0	1	0	52	0	0	30	0	83	0	0	0	0	0
	5:45 PM	0	0	0	1	0	2	3	49	0	0	45	1	101	0	0	0	0	0
	VOLUMES	0	0	0	14	0	14	15	384	0	0	267	9	703	0	0	0	0	0
	APPROACH %	0%	0%	0%	50%	0%	50%	4%	96%	0%	0%	97%	3%						
	APP/DEPART	0	/	24	28	/	0	399	/	398	276	/	281	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	0	0	10	0	8	10	198	0	0	140	6	372					
	APPROACH %	0%	0%	0%	56%	0%	44%	5%	95%	0%	0%	96%	4%						
	PEAK HR FACTOR		0.000			0.563			0.963			0.869		0.912					
	APP/DEPART	0	/	16	18	/	0	208	/	208	146	/	148	0					



AimTD LLC

TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 16, 17

LOCATION: Moreno Valley
NORTH & SOUTH: Indian
EAST & WEST: Hemlock

PROJECT #: SC1422
LOCATION #: 13
CONTROL: STOP S

NOTES:

AM
PM
MD
OTHER
OTHER

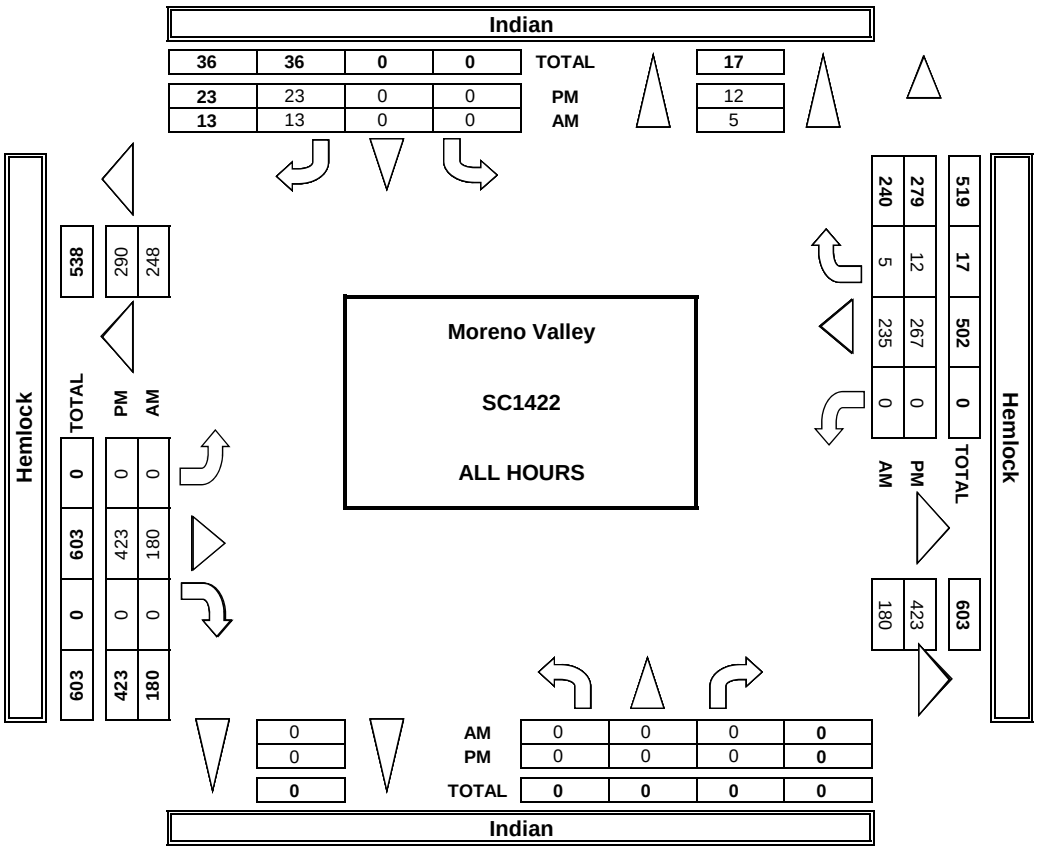
▲ N
◄ W
E ►
S ▼

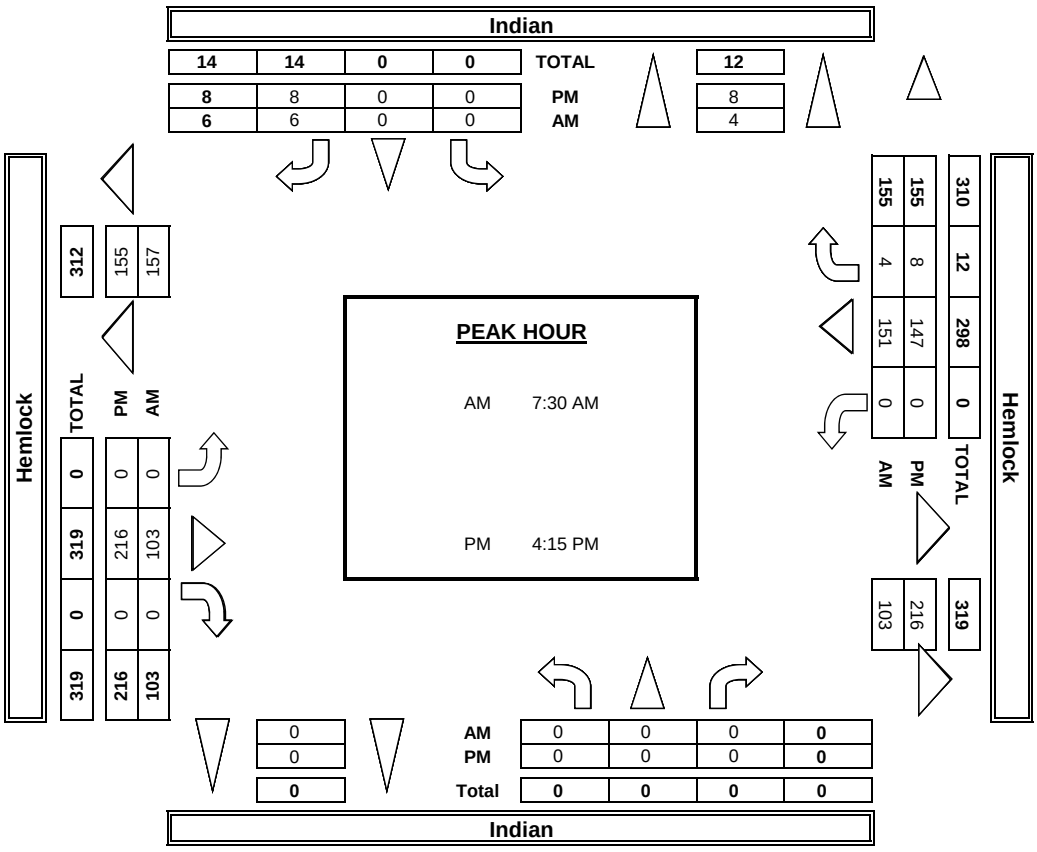
Add U-Turns to Left Turns

		NORTHBOUND Indian			SOUTHBOUND Indian			EASTBOUND Hemlock			WESTBOUND Hemlock				U-TURNS				
	LANES:	NL X	NT X	NR X	SL X	ST X	SR 0	EL X	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	0	0	0	0	0	2	0	16	0	0	15	0	33	0	0	0	0	0
	7:15 AM	0	0	0	0	0	1	0	15	0	0	17	1	34	0	0	0	0	0
	7:30 AM	0	0	0	0	0	4	0	34	0	0	31	1	70	0	0	0	0	0
	7:45 AM	0	0	0	0	0	1	0	34	0	0	39	2	76	0	0	0	0	0
	8:00 AM	0	0	0	0	0	1	0	18	0	0	35	1	55	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	17	0	0	46	0	63	0	0	0	0	0
	8:30 AM	0	0	0	0	0	2	0	21	0	0	26	0	49	0	0	0	0	0
	8:45 AM	0	0	0	0	0	2	0	25	0	0	26	0	53	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	13	0	180	0	0	235	5	433	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	98%	2%						
	APP/DEPART	0	/	5	13	/	0	180	/	180	240	/	248	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	0	0	6	0	103	0	0	151	4	264					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	97%	3%						
	PEAK HR FACTOR		0.000			0.375			0.757			0.842		0.868					
	APP/DEPART	0	/	4	6	/	0	103	/	103	155	/	157	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	1	0	48	0	0	30	1	80	0	0	0	0	0
	4:15 PM	0	0	0	0	0	4	0	50	0	0	30	4	88	0	0	0	0	0
	4:30 PM	0	0	0	0	0	1	0	55	0	0	37	3	96	0	0	0	0	0
	4:45 PM	0	0	0	0	0	3	0	52	0	0	37	1	93	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	59	0	0	43	0	102	0	0	0	0	0
	5:15 PM	0	0	0	0	0	3	0	44	0	0	26	0	73	0	0	0	0	0
	5:30 PM	0	0	0	0	0	4	0	54	0	0	28	2	88	0	0	0	0	0
	5:45 PM	0	0	0	0	0	7	0	61	0	0	36	1	105	0	0	0	0	0
	VOLUMES	0	0	0	0	0	23	0	423	0	0	267	12	725	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	96%	4%						
	APP/DEPART	0	/	12	23	/	0	423	/	423	279	/	290	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	0	0	0	0	8	0	216	0	0	147	8	379					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	95%	5%						
	PEAK HR FACTOR		0.000			0.500			0.915			0.901		0.929					
	APP/DEPART	0	/	8	8	/	0	216	/	216	155	/	155	0					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 16, 17

LOCATION: Moreno Valley
NORTH & SOUTH: Davis
EAST & WEST: Ironwood

PROJECT #: SC1422
LOCATION #: 11
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER

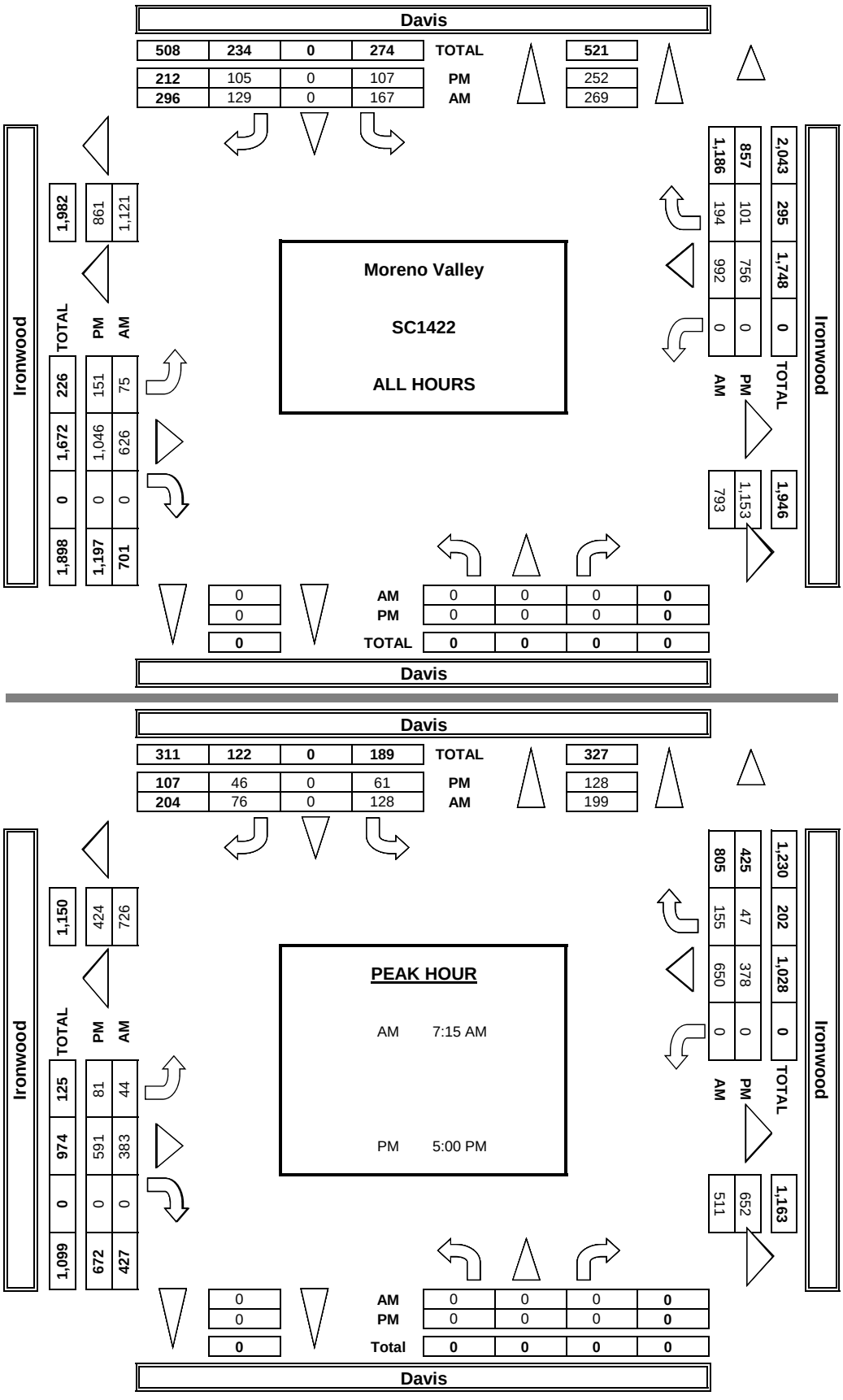
▲ N
◄ W E ►
S ▼

Add U-Turns to Left Turns

		NORTHBOUND Davis			SOUTHBOUND Davis			EASTBOUND Ironwood			WESTBOUND Ironwood				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	0	0	0	15	0	13	15	54	0	0	104	21	222	0	0	0	0	0
	7:15 AM	0	0	0	38	0	18	11	96	0	0	140	31	334	0	0	0	0	0
	7:30 AM	0	0	0	29	0	17	14	116	0	0	155	58	389	0	0	0	0	0
	7:45 AM	0	0	0	34	0	21	9	91	0	0	213	44	412	0	0	0	0	0
	8:00 AM	0	0	0	27	0	20	10	80	0	0	142	22	301	0	0	0	0	0
	8:15 AM	0	0	0	12	0	13	3	51	0	0	96	5	180	0	0	0	0	0
	8:30 AM	0	0	0	6	0	10	4	68	0	0	78	5	171	0	0	0	0	0
	8:45 AM	0	0	0	6	0	17	9	70	0	0	64	8	174	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	167	0	129	75	626	0	0	992	194	2,183	0	0	0	0	0
	APPROACH %	0%	0%	0%	56%	0%	44%	11%	89%	0%	0%	84%	16%						
	APP/DEPART	0	/	269	296	/	0	701	/	793	1,186	/	1,121	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	128	0	76	44	383	0	0	650	155	1,436					
	APPROACH %	0%	0%	0%	63%	0%	37%	10%	90%	0%	0%	81%	19%						
	PEAK HR FACTOR		0.000			0.911			0.821			0.783		0.871					
	APP/DEPART	0	/	199	204	/	0	427	/	511	805	/	726	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	13	0	14	14	111	0	0	91	8	251	0	0	0	0	0
	4:15 PM	0	0	0	10	0	20	16	124	0	0	106	14	290	0	0	0	0	0
	4:30 PM	0	0	0	16	0	13	17	93	0	0	75	15	229	0	0	0	0	0
	4:45 PM	0	0	0	7	0	12	23	127	0	0	106	17	292	0	0	0	0	0
	5:00 PM	0	0	0	10	0	14	14	150	0	0	105	7	300	0	0	0	0	0
	5:15 PM	0	0	0	17	0	10	24	114	0	0	78	13	256	0	0	0	0	0
	5:30 PM	0	0	0	24	0	12	23	163	0	0	110	13	345	0	0	0	0	0
	5:45 PM	0	0	0	10	0	10	20	164	0	0	85	14	303	0	0	0	0	0
	VOLUMES	0	0	0	107	0	105	151	1,046	0	0	756	101	2,266	0	0	0	0	0
	APPROACH %	0%	0%	0%	50%	0%	50%	13%	87%	0%	0%	88%	12%						
	APP/DEPART	0	/	252	212	/	0	1,197	/	1,153	857	/	861	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	61	0	46	81	591	0	0	378	47	1,204					
	APPROACH %	0%	0%	0%	57%	0%	43%	12%	88%	0%	0%	89%	11%						
	PEAK HR FACTOR		0.000			0.743			0.903			0.864		0.872					
	APP/DEPART	0	/	128	107	/	0	672	/	652	425	/	424	0					

AimTD LLC

TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Aug 16, 17

LOCATION: Moreno Valley
NORTH & SOUTH: Indian
EAST & WEST: Ironwood

PROJECT #: SC1422
LOCATION #: 12
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER

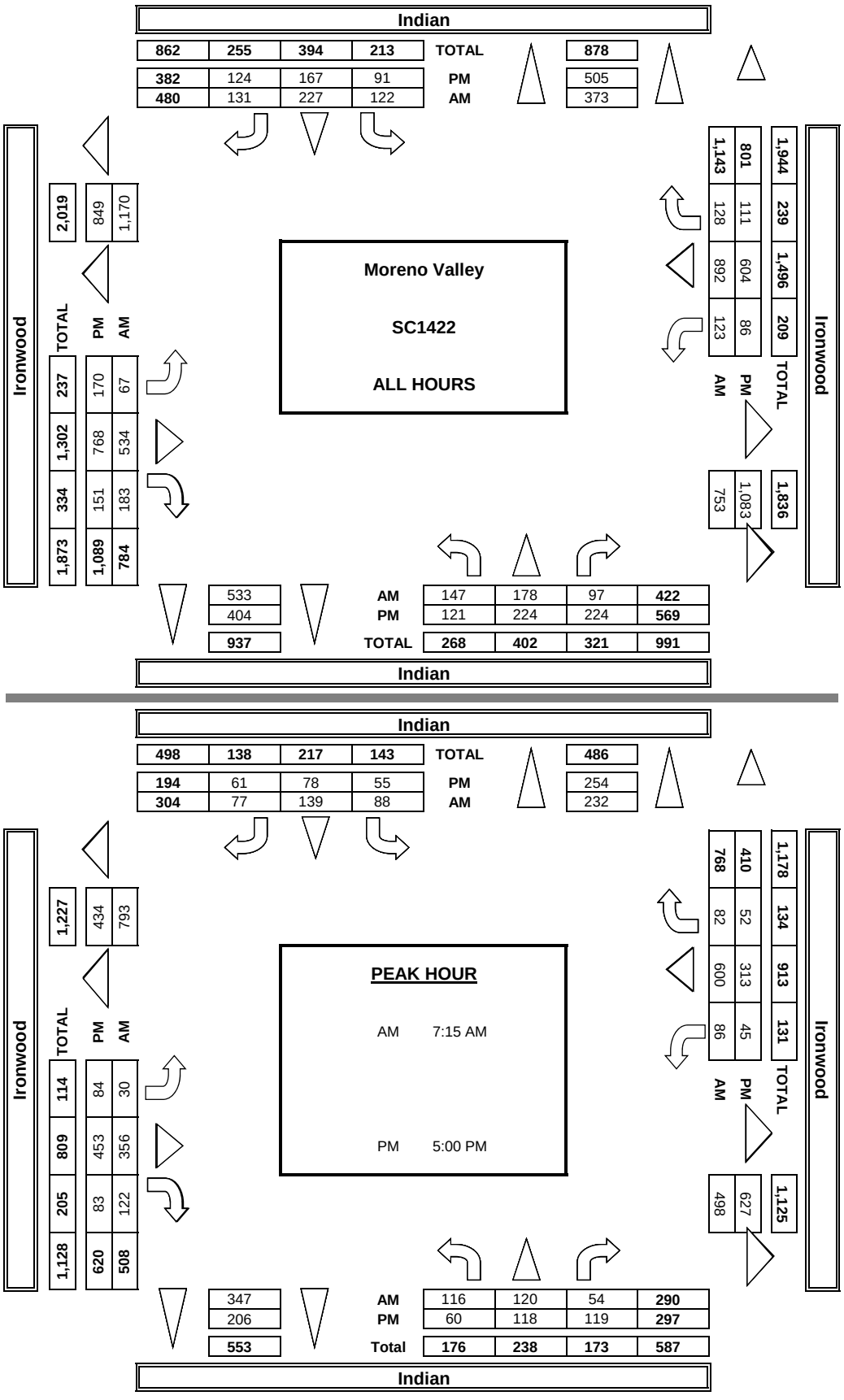
▲ N
◄ W E ►
S ▼

Add U-Turns to Left Turns

		NORTHBOUND Indian			SOUTHBOUND Indian			EASTBOUND Ironwood			WESTBOUND Ironwood				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	9	18	16	9	19	15	3	52	11	9	95	13	269	0	0	0	0	0
	7:15 AM	29	33	13	25	25	23	5	101	20	11	105	12	402	0	0	0	0	0
	7:30 AM	37	21	18	27	49	18	9	105	31	19	151	30	515	0	0	0	0	0
	7:45 AM	28	34	12	23	39	21	3	86	36	43	211	27	563	0	0	0	0	0
	8:00 AM	22	32	11	13	26	15	13	64	35	13	133	13	390	0	0	0	0	0
	8:15 AM	10	13	12	8	30	13	6	43	22	5	78	9	249	0	0	0	0	0
	8:30 AM	6	7	6	8	18	15	8	50	14	6	60	7	205	0	0	0	0	0
	8:45 AM	6	20	9	9	21	11	20	33	14	17	59	17	236	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	147	178	97	122	227	131	67	534	183	123	892	128	2,829	0	0	0	0	0
	APPROACH %	35%	42%	23%	25%	47%	27%	9%	68%	23%	11%	78%	11%						
	APP/DEPART	422	/	373	480	/	533	784	/	753	1,143	/	1,170	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	116	120	54	88	139	77	30	356	122	86	600	82	1,870					
	APPROACH %	40%	41%	19%	29%	46%	25%	6%	70%	24%	11%	78%	11%						
	PEAK HR FACTOR		0.954			0.809			0.876			0.683		0.830					
	APP/DEPART	290	/	232	304	/	347	508	/	498	768	/	793	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	14	31	20	9	22	11	18	73	16	12	68	14	308	0	0	0	0	0
	4:15 PM	20	23	21	10	22	18	21	92	21	8	80	13	349	0	0	0	0	0
	4:30 PM	12	24	27	7	18	14	27	62	16	13	59	12	291	0	0	0	0	0
	4:45 PM	15	28	37	10	27	20	20	88	15	8	84	20	372	0	0	0	0	0
	5:00 PM	19	33	31	19	22	15	20	97	24	12	79	13	384	0	0	0	0	0
	5:15 PM	16	34	34	11	15	14	18	98	17	6	63	17	343	0	0	0	0	0
	5:30 PM	14	23	30	10	21	18	27	128	22	11	95	10	409	0	0	0	0	0
	5:45 PM	11	28	24	15	20	14	19	130	20	16	76	12	385	0	0	0	0	0
	VOLUMES	121	224	224	91	167	124	170	768	151	86	604	111	2,841	0	0	0	0	0
	APPROACH %	21%	39%	39%	24%	44%	32%	16%	71%	14%	11%	75%	14%						
	APP/DEPART	569	/	505	382	/	404	1,089	/	1,083	801	/	849	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	60	118	119	55	78	61	84	453	83	45	313	52	1,521					
	APPROACH %	20%	40%	40%	28%	40%	31%	14%	73%	13%	11%	76%	13%						
	PEAK HR FACTOR		0.884			0.866			0.876			0.884		0.930					
	APP/DEPART	297	/	254	194	/	206	620	/	627	410	/	434	0					

AimTD LLC

TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

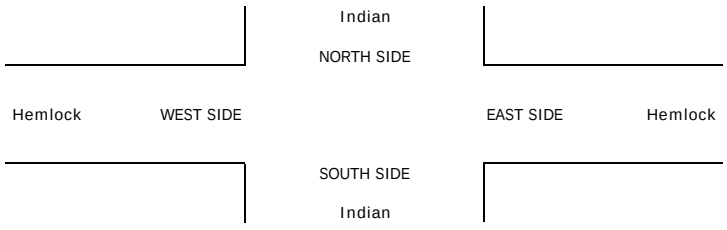
DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1422
Wed, Aug 16, 17	NORTH & SOUTH:	Indian	LOCATION #:	13
	EAST & WEST:	Hemlock	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

		NORTHBOUND Indian			SOUTHBOUND Indian			EASTBOUND Hemlock			WESTBOUND Hemlock				U-TURNS				
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	6	31	9	5	27	2	1	10	6	7	11	14	129	0	0	0	0	0
	7:15 AM	4	43	7	8	53	4	1	13	1	11	8	17	170	0	0	0	0	0
	7:30 AM	13	50	14	2	93	2	4	24	8	8	16	18	252	0	0	0	0	0
	7:45 AM	8	57	13	15	99	5	2	22	10	18	29	10	288	0	0	0	0	0
	8:00 AM	7	51	13	16	46	10	2	10	6	13	22	12	208	0	0	0	0	0
	8:15 AM	9	27	6	11	49	7	4	11	2	10	30	2	168	0	0	0	0	0
	8:30 AM	6	12	5	8	29	2	6	13	4	4	18	2	109	0	0	0	0	0
	8:45 AM	10	27	6	3	47	4	6	12	9	6	12	5	147	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	63	298	73	68	443	36	26	115	46	77	146	80	1,471	0	0	0	0	0
	APPROACH %	15%	69%	17%	12%	81%	7%	14%	61%	25%	25%	48%	26%						
	APP/DEPART	434	/	404	547	/	566	187	/	256	303	/	245	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	32	201	47	41	291	21	9	69	25	50	75	57	918					
	APPROACH %	11%	72%	17%	12%	82%	6%	9%	67%	24%	27%	41%	31%						
	PEAK HR FACTOR		0.897			0.742			0.715			0.798		0.797					
	APP/DEPART	280	/	267	353	/	366	103	/	157	182	/	128	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	8	45	22	6	43	1	12	25	10	7	23	4	206	0	0	0	0	0
	4:15 PM	6	57	17	4	35	9	8	30	6	13	21	7	213	0	0	0	0	0
	4:30 PM	9	43	21	3	40	3	17	29	13	10	23	1	212	0	0	0	0	0
	4:45 PM	11	68	18	3	38	10	15	31	10	11	20	4	239	0	0	0	0	0
	5:00 PM	13	64	17	5	53	5	13	31	12	12	19	2	246	0	0	0	0	0
	5:15 PM	11	77	23	2	34	1	5	27	11	7	16	7	221	0	0	0	0	0
	5:30 PM	12	65	17	6	50	4	7	34	12	7	13	6	233	0	0	0	0	0
	5:45 PM	13	51	27	3	49	4	11	38	15	14	20	6	251	0	0	0	0	0
	VOLUMES	83	470	162	32	342	37	88	245	89	81	155	37	1,821	0	0	0	0	0
	APPROACH %	12%	66%	23%	8%	83%	9%	21%	58%	21%	30%	57%	14%						
	APP/DEPART	715	/	595	411	/	512	422	/	439	273	/	275	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	49	257	84	16	186	14	36	130	50	40	68	21	951					
	APPROACH %	13%	66%	22%	7%	86%	6%	17%	60%	23%	31%	53%	16%						
	PEAK HR FACTOR		0.878			0.857			0.844			0.806		0.947					
	APP/DEPART	390	/	314	216	/	276	216	/	230	129	/	131	0					



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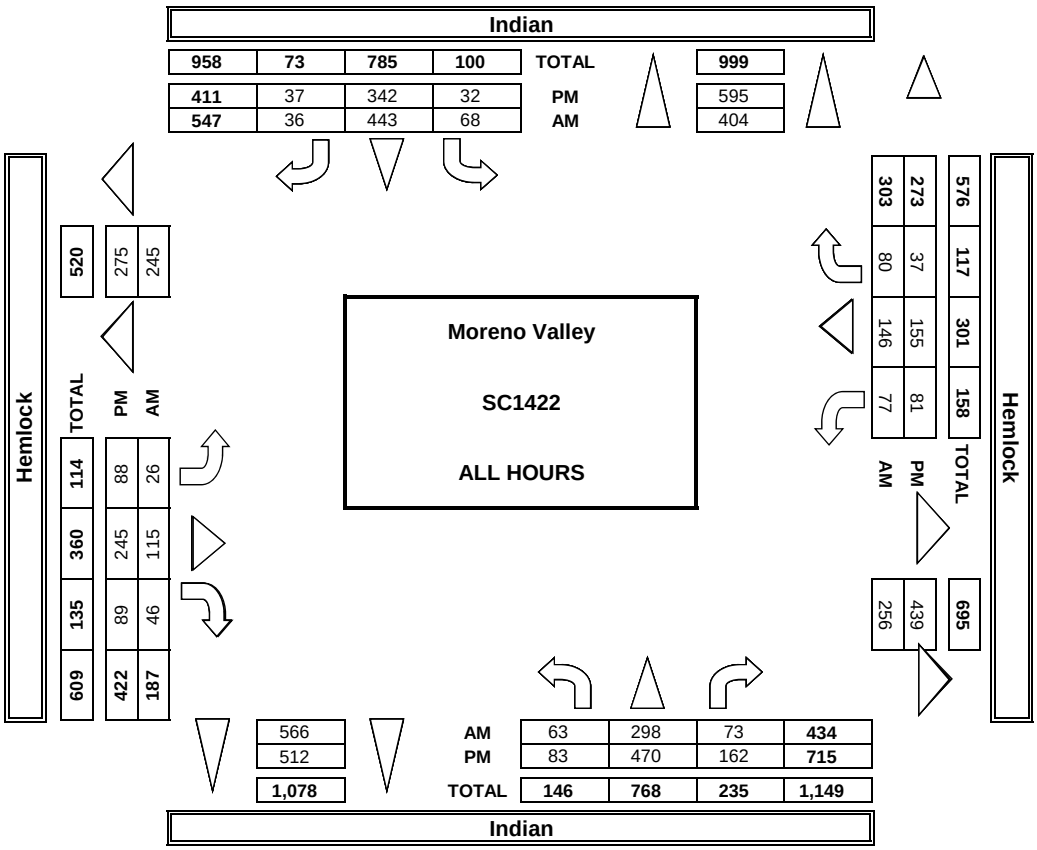
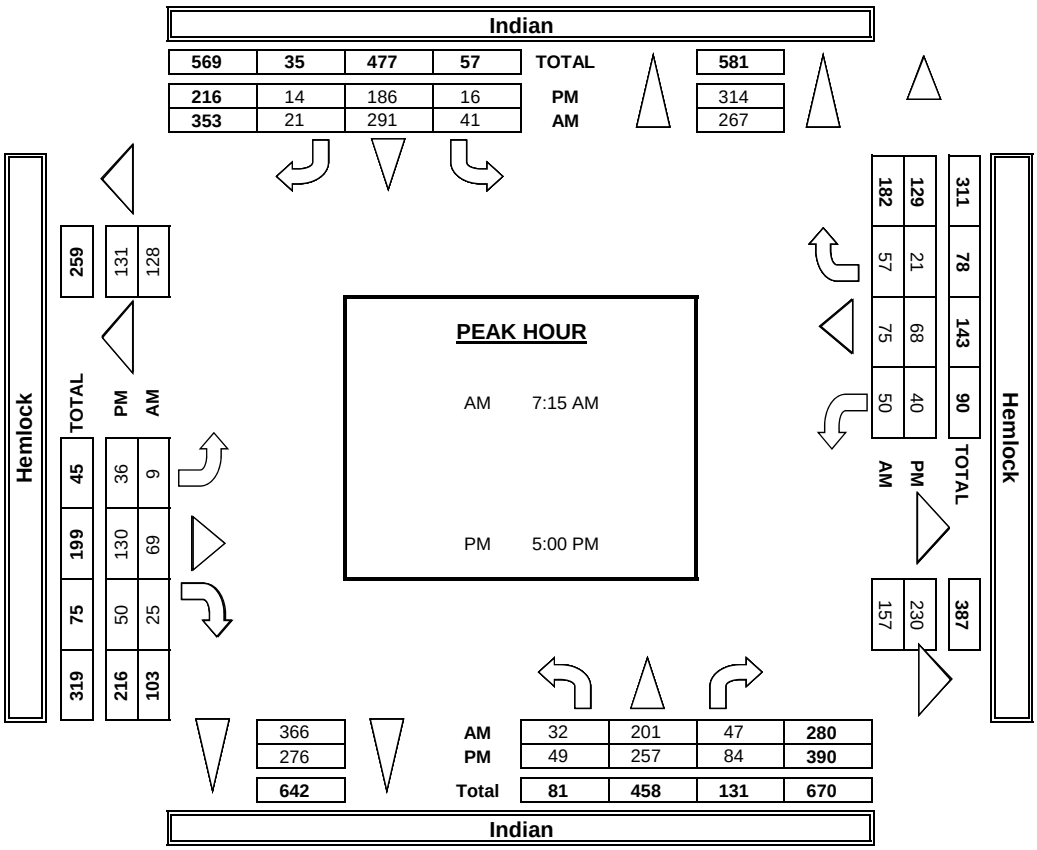
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1422
Wed, Aug 16, 17	NORTH & SOUTH:	Indian	LOCATION #:	14
	EAST & WEST:	Sunnymead	CONTROL:	SIGNAL

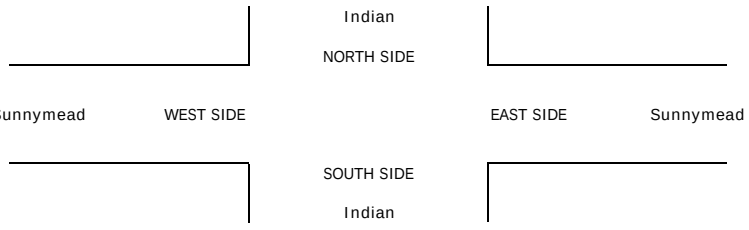
NOTES:

N-leg construction

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

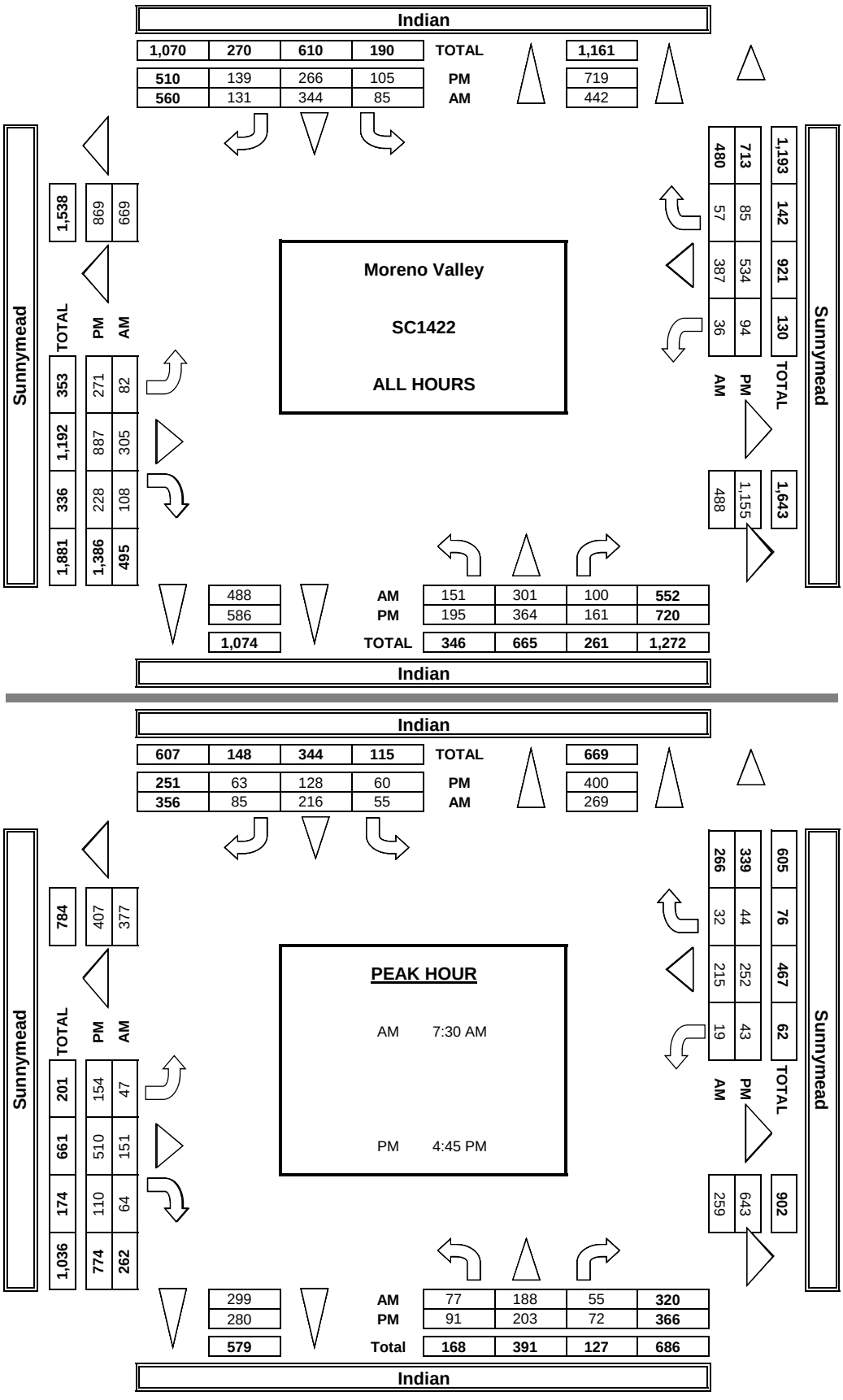
Add U-Turns to Left Turns

		NORTHBOUND Indian			SOUTHBOUND Indian			EASTBOUND Sunnymead			WESTBOUND Sunnymead				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	T
AM	7:00 AM	11	35	5	3	29	7	7	17	8	4	19	7	152	0	0	0	0	0
	7:15 AM	15	43	10	8	45	12	7	24	7	2	32	4	209	0	0	0	0	0
	7:30 AM	18	61	10	23	71	19	10	29	14	3	52	5	315	0	0	0	0	0
	7:45 AM	18	61	14	15	77	30	10	36	15	1	52	10	339	0	0	0	0	0
	8:00 AM	28	48	19	6	37	19	16	46	21	10	54	6	310	0	0	0	0	0
	8:15 AM	13	18	12	11	31	17	11	40	14	5	57	11	240	0	2	0	0	2
	8:30 AM	24	14	18	9	22	6	9	58	18	8	47	6	239	0	0	0	0	0
	8:45 AM	24	21	12	10	32	21	12	55	11	3	74	8	283	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	151	301	100	85	344	131	82	305	108	36	387	57	2,087	0	2	0	0	2
	APPROACH %	27%	55%	18%	15%	61%	23%	17%	62%	22%	8%	81%	12%						
	APP/DEPART	552	/	442	560	/	488	495	/	488	480	/	669	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	77	188	55	55	216	85	47	151	64	19	215	32	1,204					
	APPROACH %	24%	59%	17%	15%	61%	24%	18%	58%	24%	7%	81%	12%						
	PEAK HR FACTOR		0.842			0.730			0.789			0.911		0.888					
	APP/DEPART	320	/	269	356	/	299	262	/	259	266	/	377	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	31	46	18	7	29	23	22	85	22	13	69	9	374	0	0	0	0	0
	4:15 PM	29	40	20	10	29	16	27	95	31	8	66	12	383	0	0	0	0	0
	4:30 PM	24	37	27	8	36	20	28	87	37	16	81	9	410	0	0	0	1	1
	4:45 PM	23	54	21	13	33	11	39	131	22	13	64	11	435	0	0	0	0	0
	5:00 PM	25	48	15	21	40	17	36	142	26	6	59	17	452	0	0	0	0	0
	5:15 PM	21	53	20	12	17	20	35	115	31	14	67	7	412	0	0	0	1	1
	5:30 PM	22	48	16	14	38	15	44	122	31	10	62	9	431	0	0	1	0	1
	5:45 PM	20	38	24	20	44	17	40	110	28	14	66	11	432	0	0	0	0	0
	VOLUMES	195	364	161	105	266	139	271	887	228	94	534	85	3,329	0	0	1	2	3
	APPROACH %	27%	51%	22%	21%	52%	27%	20%	64%	16%	13%	75%	12%						
	APP/DEPART	720	/	719	510	/	586	1,386	/	1,155	713	/	869	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	91	203	72	60	128	63	154	510	110	43	252	44	1,730					
	APPROACH %	25%	55%	20%	24%	51%	25%	20%	66%	14%	13%	74%	13%						
	PEAK HR FACTOR		0.934			0.804			0.949			0.963		0.957					
	APP/DEPART	366	/	400	251	/	280	774	/	643	339	/	407	0					



AimTD LLC

TURNING MOVEMENT COUNTS



A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS1 Heacock between Ironwood and Hemlock

AM	NORTHBOUND														PM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	48	2	0	1	0	0	0	0	0	0	0	0	51	12:00	1	146	21	1	6	3	0	0	0	0	0	0	0	178
0:15	1	35	5	0	0	1	0	0	0	0	0	0	0	42	12:15	1	132	29	1	11	1	1	0	0	0	0	1	0	177
0:30	0	28	1	0	1	0	0	0	0	0	0	0	0	30	12:30	0	142	19	0	8	5	0	0	0	0	0	0	0	174
0:45	0	33	2	0	0	0	0	0	0	0	0	0	0	35	12:45	3	150	25	0	4	0	1	1	0	0	0	0	0	184
1:00	0	30	3	0	1	0	0	0	0	0	0	0	0	34	13:00	4	152	17	0	5	2	1	0	0	0	0	0	0	181
1:15	0	25	3	0	0	0	0	0	0	0	0	0	0	28	13:15	7	124	18	1	7	3	0	0	2	0	0	0	0	162
1:30	0	21	2	0	1	0	0	0	0	0	0	0	0	24	13:30	4	139	26	1	8	5	0	0	0	0	1	0	0	184
1:45	0	24	4	0	0	0	0	0	0	0	0	0	0	28	13:45	1	161	18	0	15	2	1	0	0	0	0	0	0	198
2:00	0	12	2	0	0	0	0	0	0	0	0	0	0	14	14:00	4	152	23	0	8	4	0	0	0	1	1	1	0	194
2:15	0	23	0	0	0	0	0	0	0	0	0	0	0	23	14:15	2	150	24	0	7	5	1	0	1	1	0	0	0	191
2:30	0	14	1	0	0	0	0	0	0	0	0	0	0	15	14:30	2	160	27	0	7	3	1	0	0	0	0	0	0	200
2:45	0	24	2	0	0	0	0	0	0	0	0	0	0	26	14:45	3	149	30	0	5	2	0	0	0	1	0	1	1	192
3:00	0	10	3	0	1	0	0	0	0	0	0	0	0	14	15:00	1	189	33	0	8	4	0	0	1	0	0	1	0	237
3:15	0	13	1	0	1	0	0	0	0	0	0	0	0	15	15:15	1	172	27	0	3	7	1	0	1	0	0	1	0	213
3:30	0	16	4	0	0	0	0	0	0	0	0	0	0	20	15:30	1	173	17	1	10	8	0	0	0	0	0	0	0	210
3:45	0	20	3	0	0	0	0	0	0	0	0	0	0	23	15:45	3	149	28	0	8	4	0	0	0	0	0	0	0	192
4:00	0	19	2	0	2	0	0	0	1	0	0	0	0	24	16:00	3	193	31	0	7	3	0	0	0	0	0	0	0	237
4:15	0	14	6	0	0	0	0	0	0	0	0	0	0	20	16:15	2	175	25	0	11	3	1	0	1	0	0	0	0	218
4:30	0	23	6	0	2	0	0	0	0	0	0	0	0	31	16:30	4	203	28	0	6	3	1	0	0	0	0	0	0	245
4:45	0	25	7	0	1	0	0	0	0	0	0	0	0	33	16:45	4	186	33	0	9	4	1	0	0	1	1	0	0	239
5:00	0	40	2	0	1	0	0	1	0	0	0	0	0	44	17:00	6	210	33	2	9	9	0	0	0	1	0	0	0	270
5:15	0	33	6	0	0	0	0	0	0	0	0	0	0	39	17:15	3	200	31	0	11	2	0	1	1	0	0	0	0	249
5:30	0	30	5	0	2	0	0	0	1	0	0	0	0	38	17:30	6	196	22	0	10	3	1	0	1	0	0	1	1	241
5:45	0	33	5	0	5	1	0	0	0	0	0	0	0	44	17:45	3	189	20	0	5	2	2	0	0	0	0	0	0	221
6:00	0	64	9	0	1	0	0	0	0	0	0	0	0	74	18:00	7	159	23	0	5	4	0	0	0	0	0	1	0	199
6:15	4	63	10	0	4	0	0	0	0	0	0	0	0	81	18:15	7	169	27	0	6	5	0	0	0	0	1	0	0	215
6:30	0	83	13	0	6	1	1	0	0	0	0	0	1	105	18:30	0	148	23	0	3	4	0	0	0	0	0	1	0	179
6:45	2	77	15	0	2	0	1	0	0	0	0	0	0	97	18:45	3	146	18	0	6	10	1	0	0	0	0	1	0	185
7:00	1	109	12	0	3	2	3	0	0	0	0	0	1	131	19:00	3	160	16	0	8	3	1	1	0	0	0	0	0	192
7:15	2	112	17	0	5	5	1	0	0	0	0	0	0	142	19:15	4	147	20	0	5	5	1	0	0	0	1	0	0	183
7:30	1	129	22	0	5	3	0	0	0	0	0	0	0	160	19:30	0	125	12	0	5	3	1	0	0	0	0	0	0	146
7:45	2	123	22	1	4	1	0	0	0	0	0	0	0	153	19:45	1	160	15	0	6	2	0	0	0	0	0	2	0	186
8:00	2	132	19	0	6	1	0	0	0	0	0	1	0	161	20:00	6	128	22	0	4	3	0	0	0	0	0	0	0	163
8:15	2	121	16	0	9	3	0	0	0	0	1	1	0	153	20:15	2	123	16	0	4	1	1	0	0	0	0	0	0	147
8:30	0	117	17	0	6	0	0	0	0	0	0	1	0	141	20:30	2	128	15	0	3	1	0	0	0	0	0	0	0	149
8:45	0	111	17	0	6	3	0	0	0	0	0	0	0	137	20:45	0	128	11	0	5	1	0	1	0	0	0	0	0	146
9:00	0	94	20	0	8	2	1	0	0	0	0	0	0	125	21:00	3	96	13	0	0	4	0	0	0	0	0	0	0	116
9:15	0	93	19	1	4	2	3	0	0	0	0	0	0	122	21:15	1	122	10	0	2	3	0	0	0	0	0	0	0	138
9:30	0	98	18	0	4	1	0	0	0	0	1	0	0	122	21:30	2	99	13	0	3	2	0	0	0	0	0	0	0	119
9:45	3	100	14	0	3	2	0	0	0	0	1	0	0	123	21:45	0	89	7	0	4	1	0	0	0	0	0	0	0	101
10:00	2	119	7	1	2	1	0	0	0	0	0	0	0	132	22:00	1	78	10	0	3	1	0	0	0	0	0	0	0	93
10:15	2	87	18	1	5	3	1	0	0	1	0	0	0	118	22:15	1	82	9	0	0	2	0	0	0	0	0	0	0	94
10:30	2	118	16	1	1	2	1	0	1	0	0	0	0	142	22:30	2	67	12	0	0	1	0	0	0	0	0	0	0	82
10:45	1	91	17	0	4	0	0	0	0	0	0	0	0	113	22:45	1	71	1	0	0	0	0	0	0	0	0	0	0	73
11:00	4	122	23	0	6	2	1	0	1	0	1	0	0	160	23:00	4	66	4	0	3	1	0	0	0	0	0	0	0	78
11:15	1	131	14	0	5	2	0	1	0	0	0	1	0	155	23:15	0	53	1	0	2	1	0	0	0	0	0	0	0	57
11:30	3	139	15	1	6	6	0	0	0	0	0	0	0	170	23:30	0	58	5	0	0	0	0	0	0	0	0	0	0	63
11:45	2	110	21	0	6	3	1	0	1	0	0	0	0	144	23:45	0	47	2	0	0	0	0	0	0	0	0	0	0	49
TOTAL	37	3,136	468	6	130	47	14	2	5	1	4	4	2	3,856	TOTAL	119	6,641	910	7	265	145	18	4	8	5	5	11	2	8,140

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	629

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	1,003

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	156	9,777	1,378	13	395	192	32	6	13	6	9	15	4	11,996
% OF TOTAL	1.3%	81.5%	11.5%	0.1%	3.3%	1.6%	0.3%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	318	19,409	2,696	25	710	366	66	10	35	9	16	32	9	23,701
% OF TOTAL	2.7%	161.8%	22.5%	0.2%	5.9%	3.1%	0.6%	0.1%	0.3%	0.1%	0.1%	0.3%	0.1%	100.0%

Attachment: Appendix F to Initial Study Traffic Impact Analysis (4266 : PEN20-0137-0139 Plot Plan for a

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS1 Heacock between Ironwood and Hemlock

AM	SOUTHBOUND														PM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	24	1	0	0	0	0	0	0	0	0	0	0	25	12:00	3	107	18	1	2	2	0	0	1	0	0	0	0	134
0:15	0	30	2	0	0	0	0	0	0	0	0	0	0	32	12:15	4	152	15	1	13	6	1	0	1	0	0	1	0	194
0:30	0	14	4	0	0	0	0	0	0	0	0	0	0	18	12:30	2	142	14	0	6	3	1	0	0	0	0	0	0	168
0:45	0	19	3	0	1	0	0	0	0	0	0	0	0	23	12:45	1	108	17	0	2	3	2	0	0	0	0	0	0	133
1:00	0	15	0	0	1	0	0	0	0	0	0	0	0	16	13:00	4	152	15	0	5	3	2	0	0	0	0	0	0	181
1:15	0	11	1	0	1	0	0	0	0	0	0	0	0	13	13:15	0	152	22	2	6	2	0	1	0	0	0	2	0	187
1:30	0	15	0	0	0	0	0	0	0	0	0	0	0	15	13:30	0	127	11	0	5	6	4	0	1	1	0	0	1	156
1:45	0	17	0	0	0	0	0	0	0	0	0	0	0	17	13:45	1	132	18	0	12	4	0	0	1	0	0	0	0	168
2:00	0	10	2	0	0	0	0	0	0	0	0	0	0	12	14:00	6	111	23	0	6	4	0	0	0	0	0	0	0	150
2:15	0	17	1	0	0	0	0	0	1	0	0	0	0	19	14:15	3	149	19	0	8	1	2	0	0	0	1	1	0	184
2:30	0	14	2	0	0	0	0	0	0	0	0	0	0	16	14:30	5	137	22	0	5	5	2	0	0	0	0	1	0	177
2:45	0	9	1	0	2	0	0	0	0	0	0	0	0	12	14:45	0	129	19	0	10	2	1	0	0	0	0	1	0	162
3:00	0	32	3	0	0	0	0	0	0	0	0	0	0	35	15:00	1	154	20	0	2	0	0	1	0	0	0	1	0	179
3:15	1	26	4	0	0	1	0	0	0	0	0	0	0	32	15:15	3	147	12	0	7	3	0	0	0	0	0	0	0	172
3:30	0	46	6	0	0	0	0	0	0	0	0	0	0	52	15:30	5	126	19	0	2	4	0	0	0	0	0	2	0	158
3:45	1	50	8	0	2	1	0	0	0	0	0	0	0	62	15:45	2	131	12	0	4	5	0	0	0	0	0	0	1	155
4:00	0	48	16	0	6	0	0	0	0	0	0	0	0	70	16:00	2	148	19	0	5	0	0	0	0	0	1	0	0	175
4:15	0	77	19	0	7	2	0	0	1	0	0	0	0	106	16:15	3	156	19	0	6	1	0	0	0	0	0	0	0	185
4:30	1	89	16	0	4	0	0	0	0	0	0	0	0	110	16:30	2	158	18	0	2	5	2	0	0	1	0	0	0	188
4:45	2	76	28	0	4	0	0	0	0	0	0	0	0	110	16:45	10	151	18	0	7	5	0	0	1	0	0	0	0	192
5:00	0	93	14	0	3	1	0	0	0	0	0	0	0	111	17:00	3	145	20	0	2	3	0	0	0	0	0	0	0	173
5:15	0	97	21	0	3	1	0	0	0	0	0	0	0	122	17:15	3	155	20	0	1	5	1	0	0	0	1	1	0	187
5:30	0	88	31	0	8	1	0	0	0	0	0	0	0	128	17:30	6	149	22	0	3	0	1	0	0	0	0	0	1	182
5:45	0	81	18	0	3	0	0	0	0	0	0	0	0	102	17:45	4	156	9	0	7	3	0	0	0	0	0	1	0	180
6:00	0	89	14	0	2	1	0	0	0	0	0	0	0	106	18:00	5	173	14	0	4	3	0	0	1	0	0	0	0	200
6:15	3	89	17	0	1	0	0	0	1	0	0	1	0	112	18:15	2	147	12	0	1	2	0	0	1	0	0	0	0	165
6:30	0	116	22	0	2	1	0	0	0	0	0	0	0	141	18:30	2	144	25	0	4	0	0	0	0	1	0	0	0	176
6:45	2	112	18	0	5	4	1	0	0	0	0	0	0	142	18:45	3	162	15	0	3	4	0	0	0	0	0	0	0	187
7:00	2	125	22	1	4	1	3	0	1	0	0	0	0	159	19:00	5	132	19	0	1	3	0	0	0	0	0	0	0	160
7:15	6	164	13	0	2	5	1	0	0	0	0	0	0	191	19:15	3	101	21	0	5	2	1	0	1	0	0	0	0	134
7:30	4	170	19	0	2	3	0	0	0	0	0	0	0	198	19:30	1	119	14	0	3	3	0	0	0	0	1	0	0	141
7:45	3	171	21	1	5	4	0	0	0	0	0	2	0	207	19:45	0	106	15	0	1	2	0	0	0	0	0	0	0	124
8:00	3	175	21	0	4	5	3	0	0	0	0	0	1	212	20:00	0	104	15	0	3	1	1	0	0	0	0	0	0	124
8:15	8	161	18	1	7	3	1	0	1	0	0	0	0	200	20:15	0	93	17	0	2	1	0	0	0	0	0	0	0	113
8:30	4	151	24	0	16	5	0	0	0	0	0	0	0	200	20:30	0	100	13	0	2	0	0	0	0	0	0	1	0	116
8:45	2	142	15	1	3	5	1	0	0	0	0	0	0	169	20:45	0	87	5	0	2	0	0	0	0	0	0	1	0	95
9:00	2	105	16	0	4	2	0	0	1	0	1	0	0	131	21:00	1	74	14	0	1	1	1	0	0	0	0	0	0	92
9:15	0	137	17	1	7	0	1	0	0	0	0	0	0	163	21:15	0	85	10	0	1	1	0	0	1	0	0	0	0	98
9:30	0	131	14	0	8	3	0	0	0	0	1	0	0	157	21:30	1	77	10	0	0	2	0	0	1	0	0	0	0	91
9:45	7	130	17	0	3	2	0	0	0	0	0	1	0	160	21:45	0	68	8	0	0	0	0	0	0	0	0	0	0	76
10:00	1	119	16	0	3	5	0	0	0	0	0	0	0	144	22:00	0	60	3	0	1	1	0	0	0	0	0	0	0	65
10:15	3	122	14	0	3	3	0	0	0	0	0	0	0	145	22:15	0	57	6	1	2	1	0	0	0	0	0	0	0	67
10:30	0	133	23	1	3	3	1	2	1	0	0	0	0	167	22:30	0	45	5	0	1	0	0	0	1	0	0	0	0	52
10:45	2	138	21	0	4	0	0	0	0	0	0	0	0	165	22:45	1	49	9	0	1	0	0	0	0	0	0	0	0	60
11:00	3	118	14	0	3	3	0	0	1	0	0	0	0	142	23:00	0	39	3	0	0	1	0	0	0	0	0	0	0	43
11:15	0	119	11	1	4	2	0	0	0	0	1	0	1	139	23:15	0	20	2	0	2	0	0	0	1	0	0	0	0	25
11:30	0	124	23	0	3	2	0	0	0	0	0	0	0	152	23:30	0	28	2	0	1	0	0	0	0	0	0	0	0	31
11:45	5	116	28	0	3	2	0	0	1	0	0	0	0	155	23:45	0	33	1	0	0	0	0	0	1	0	0	0	0	35
TOTAL	65	4,155	639	7	146	71	12	2	9	0	3	4	2	5,115	TOTAL	97	5,477	679	5	169	103	22	2	13	3	4	13	3	6,590

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	819

PM PEAK HOUR	5:15 PM
PM PEAK VOLUME	749

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	162	9,632	1,318	12	315	174	34	4	22	3	7	17	5	11,705
% OF TOTAL	1.4%	82.3%	11.3%	0.1%	2.7%	1.5%	0.3%	0.0%	0.2%	0.0%	0.1%	0.1%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS2 Heacock between Hemlock and SR-60 WB Ramps

AM	NORTHBOUND														PM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	1	50	4	0	2	0	0	0	0	0	0	0	0	57	12:00	15	148	20	1	10	5	0	2	1	0	0	0	1	203
0:15	1	39	3	0	0	0	0	0	0	0	0	0	0	43	12:15	1	138	22	1	8	4	1	0	0	3	1	1	1	181
0:30	0	38	1	0	2	0	0	0	0	0	0	0	0	41	12:30	9	140	14	3	11	8	0	0	1	0	1	2	1	190
0:45	0	40	3	0	0	0	0	0	0	0	0	0	0	43	12:45	4	142	19	0	6	3	3	1	1	0	0	2	2	183
1:00	0	36	1	0	3	0	0	0	0	0	0	0	0	40	13:00	3	151	21	0	6	2	2	0	0	2	0	0	2	189
1:15	0	23	3	0	0	1	1	0	0	0	0	0	0	28	13:15	9	140	21	2	7	5	3	2	1	0	0	1	1	192
1:30	0	25	2	0	1	0	0	0	0	0	0	0	0	28	13:30	5	167	34	0	11	3	0	0	0	2	1	1	0	224
1:45	0	27	4	0	0	0	0	0	0	0	0	0	0	31	13:45	8	163	21	0	9	9	1	0	1	1	1	0	1	215
2:00	0	16	2	0	0	0	0	0	0	0	0	0	0	18	14:00	8	149	21	2	8	5	1	0	1	1	1	1	1	199
2:15	0	24	1	0	0	1	0	0	0	0	0	0	0	26	14:15	8	147	24	0	11	4	1	3	0	0	1	0	2	201
2:30	0	18	2	0	0	0	0	0	0	0	0	0	0	20	14:30	5	165	21	2	7	7	0	1	0	0	0	2	2	212
2:45	0	28	2	0	0	0	0	0	0	0	0	0	0	30	14:45	4	157	26	0	3	5	3	1	1	0	0	1	2	203
3:00	0	14	4	0	2	0	0	0	0	0	0	0	0	20	15:00	2	189	30	1	11	7	2	1	3	0	1	2	1	250
3:15	0	16	1	0	1	0	0	0	0	0	0	0	0	18	15:15	3	200	27	0	7	4	1	0	1	0	0	0	2	245
3:30	0	17	4	0	0	0	0	0	0	0	0	0	0	21	15:30	2	192	27	2	9	2	3	0	0	0	0	2	3	242
3:45	0	25	3	0	1	0	0	0	0	0	0	0	0	29	15:45	10	153	23	0	6	6	0	0	0	0	1	2	0	201
4:00	0	27	4	0	5	0	0	0	1	0	0	0	0	37	16:00	8	206	25	0	4	5	1	0	2	0	1	0	2	254
4:15	0	16	5	0	1	0	0	0	0	0	0	0	0	22	16:15	8	224	24	1	17	0	1	1	2	1	1	0	0	280
4:30	0	31	9	0	1	0	0	0	0	0	0	0	0	41	16:30	5	247	24	1	9	7	1	0	1	0	0	2	1	298
4:45	0	32	5	0	10	1	0	0	0	0	0	0	0	48	16:45	4	228	21	1	7	1	0	1	2	1	1	1	2	270
5:00	0	43	3	0	2	1	0	1	1	0	0	0	0	51	17:00	5	249	26	0	7	6	5	2	1	0	0	3	4	308
5:15	2	35	8	0	1	1	0	0	0	0	0	0	0	47	17:15	6	236	23	0	12	6	0	2	1	0	2	1	4	293
5:30	0	34	2	0	4	0	0	0	2	0	0	0	0	42	17:30	8	246	20	1	13	8	0	2	0	0	2	1	4	305
5:45	0	38	5	0	6	1	0	0	0	0	0	0	0	50	17:45	12	232	19	0	10	3	2	0	0	0	1	0	3	282
6:00	2	56	10	0	2	0	0	0	1	0	0	1	0	72	18:00	0	167	19	0	5	4	0	2	0	0	1	2	2	202
6:15	4	64	14	0	4	1	0	0	0	0	0	0	0	87	18:15	3	170	19	0	5	8	6	0	0	0	2	2	1	216
6:30	1	89	15	1	6	4	0	1	0	0	0	0	1	118	18:30	1	166	17	1	5	2	1	0	0	0	0	1	1	195
6:45	2	80	15	0	5	2	0	0	0	0	0	0	1	105	18:45	3	164	17	0	8	8	1	0	1	0	0	2	1	205
7:00	5	136	12	2	9	6	3	0	0	0	0	0	1	174	19:00	0	192	19	0	8	8	0	0	0	1	0	0	1	229
7:15	4	133	21	0	5	3	1	0	0	0	0	0	0	167	19:15	8	160	22	0	8	6	0	0	0	1	0	1	1	207
7:30	5	154	20	0	5	2	1	0	0	0	0	2	3	192	19:30	6	147	15	1	7	7	1	1	0	0	0	0	0	185
7:45	0	152	22	1	4	2	2	0	0	0	0	0	0	183	19:45	0	153	14	0	7	4	0	0	0	0	0	0	1	179
8:00	2	138	20	0	5	4	2	0	1	0	0	0	0	172	20:00	3	136	21	0	5	5	2	1	1	0	1	1	0	176
8:15	3	136	12	0	8	1	2	0	1	0	0	0	1	164	20:15	1	153	20	0	4	0	0	0	0	0	0	0	0	178
8:30	2	134	15	0	7	6	1	0	0	0	0	0	0	165	20:30	2	138	17	0	5	1	1	0	0	1	0	1	0	166
8:45	1	137	17	0	10	1	2	0	0	1	0	0	0	169	20:45	1	145	18	0	9	6	1	1	0	0	0	0	0	181
9:00	0	132	23	2	10	4	2	0	0	0	0	1	0	174	21:00	2	121	16	0	4	2	0	1	0	0	0	0	0	146
9:15	5	109	19	1	6	3	2	0	1	0	1	0	1	148	21:15	2	148	15	0	3	2	0	0	0	0	0	0	0	170
9:30	6	115	17	1	6	7	0	0	0	2	0	0	0	154	21:30	1	117	12	1	4	1	1	0	0	0	0	1	0	138
9:45	2	132	15	1	7	3	3	1	2	1	0	0	0	167	21:45	3	101	7	0	6	0	1	0	1	1	1	0	0	121
10:00	3	113	11	2	6	5	1	0	0	0	1	2	0	144	22:00	3	92	11	0	2	3	0	0	0	0	0	0	0	111
10:15	10	103	24	1	6	4	1	0	2	0	2	0	0	153	22:15	0	111	12	0	2	0	0	0	0	0	0	0	0	125
10:30	5	107	11	0	3	5	1	0	0	0	0	1	1	134	22:30	3	87	10	0	0	0	1	0	0	0	0	0	0	101
10:45	2	105	22	2	6	4	1	1	1	0	1	0	1	146	22:45	0	105	8	0	1	0	0	0	0	0	0	0	0	114
11:00	6	145	29	1	10	6	2	1	2	0	0	0	0	202	23:00	2	89	2	0	3	1	0	0	0	0	0	0	0	97
11:15	6	131	14	6	8	3	0	1	2	1	0	0	1	173	23:15	0	67	5	0	3	0	0	0	0	0	0	0	0	75
11:30	6	149	15	1	6	9	1	1	0	0	0	1	0	189	23:30	0	80	8	0	1	0	1	0	0	0	0	0	0	90
11:45	3	137	21	1	6	2	3	0	2	0	0	1	1	177	23:45	0	60	5	0	2	0	0	0	0	0	0	0	0	67
TOTAL	89	3,579	495	23	192	93	32	7	19	5	5	9	12	4,560	TOTAL	196	7,478	882	21	316	183	48	25	23	15	21	36	50	9,294

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	741

PM PEAK HOUR	5:00 PM
PM PEAK VOLUME	1,188

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	285	11,057	1,377	44	508	276	80	32	42	20	26	45	62	13,854
% OF TOTAL	2.1%	79.8%	9.9%	0.3%	3.7%	2.0%	0.6%	0.2%	0.3%	0.1%	0.2%	0.3%	0.4%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	596	21,543	2,476	107	849	542	178	79	97	50	55	80	150	26,802
% OF TOTAL	4.3%	155.5%	17.9%	0.8%	6.1%	3.9%	1.3%	0.6%	0.7%	0.4%	0.4%	0.6%	1.1%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS2 Heacock between Hemlock and SR-60 WB Ramps

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	33	1	0	0	0	0	0	0	0	0	0	0	34
0:15	0	34	2	0	0	0	0	0	0	0	0	0	0	36
0:30	2	25	4	0	0	0	0	0	0	0	0	0	0	31
0:45	0	20	3	0	1	0	0	0	0	0	0	0	0	24
1:00	0	19	0	0	1	0	0	0	0	0	0	0	0	20
1:15	0	14	1	0	1	0	0	0	0	0	0	0	0	16
1:30	0	14	0	0	1	0	0	0	0	0	0	0	0	15
1:45	0	21	0	0	0	0	0	0	0	0	0	0	0	21
2:00	1	13	1	0	0	0	0	0	0	0	0	0	0	15
2:15	0	16	2	0	0	0	0	0	1	0	0	0	0	19
2:30	0	21	2	0	1	0	0	0	0	0	0	0	0	24
2:45	0	15	1	0	1	0	0	0	0	0	0	0	0	17
3:00	0	32	5	0	0	2	0	0	0	0	0	0	0	39
3:15	2	35	4	0	1	0	0	0	0	0	0	0	0	42
3:30	0	49	7	0	1	0	0	0	0	0	0	0	0	57
3:45	0	53	11	0	1	1	0	0	0	0	0	0	0	66
4:00	1	59	12	0	6	1	0	0	0	0	0	0	0	79
4:15	0	95	19	0	6	0	0	0	0	0	0	1	0	121
4:30	0	103	17	0	4	2	1	0	0	0	0	0	0	127
4:45	0	92	21	0	3	0	0	0	0	0	0	1	0	117
5:00	0	92	11	0	5	1	1	0	1	1	0	0	0	112
5:15	5	102	20	0	2	2	1	0	0	0	0	0	0	132
5:30	2	110	29	1	7	2	1	0	0	0	0	0	2	154
5:45	3	95	12	0	8	1	1	0	0	0	0	0	0	120
6:00	1	85	14	0	2	3	2	0	0	0	0	0	0	107
6:15	1	98	14	0	4	1	0	0	0	0	0	0	1	119
6:30	0	102	14	1	3	2	1	1	0	0	0	0	0	124
6:45	1	118	17	0	7	1	0	0	0	1	1	0	1	147
7:00	6	177	21	2	4	1	1	0	1	0	0	0	0	213
7:15	10	183	11	0	6	6	0	0	2	0	0	1	2	221
7:30	7	194	15	1	7	4	1	0	0	1	0	1	1	232
7:45	7	196	17	0	7	6	3	0	0	1	1	0	2	240
8:00	7	191	13	1	6	6	1	3	0	1	0	2	0	231
8:15	2	164	7	0	7	9	2	0	2	0	0	1	2	196
8:30	5	182	22	1	6	5	3	1	1	0	1	0	3	230
8:45	6	169	19	0	3	6	0	0	0	0	1	0	0	204
9:00	1	96	12	1	6	7	2	0	0	0	1	0	3	129
9:15	6	130	12	1	9	4	0	2	0	0	0	0	1	165
9:30	12	114	9	0	6	3	2	3	0	3	1	0	2	155
9:45	2	133	12	2	5	4	0	1	2	0	1	0	2	164
10:00	6	138	13	0	1	1	2	0	1	3	0	0	2	167
10:15	5	122	20	0	4	2	0	1	1	0	0	0	2	157
10:30	6	135	19	0	4	1	3	1	0	2	0	3	1	175
10:45	6	85	10	0	1	4	2	0	2	0	0	2	0	112
11:00	8	118	18	0	4	2	0	0	0	1	1	0	0	152
11:15	2	158	14	0	7	3	1	0	0	0	1	1	0	187
11:30	6	136	17	0	2	3	1	0	0	0	1	1	1	168
11:45	9	124	13	2	4	8	2	2	1	0	0	1	1	167
TOTAL	138	4,510	538	13	165	104	34	15	15	14	10	15	29	5,600

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	924

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	6	134	15	0	6	4	1	1	0	0	1	0	0	168
12:15	6	120	13	0	10	6	3	0	1	0	0	1	2	162
12:30	9	140	10	2	6	5	3	1	2	1	3	1	1	184
12:45	2	138	16	0	6	4	2	0	1	0	0	1	2	172
13:00	10	137	12	4	5	3	2	4	2	1	0	1	2	183
13:15	7	133	15	4	7	7	2	2	0	2	2	0	1	182
13:30	6	123	13	4	7	3	5	2	3	2	1	1	3	173
13:45	1	90	6	5	8	3	4	2	1	0	0	0	1	121
14:00	5	112	21	6	4	8	0	0	6	1	1	0	3	167
14:15	5	142	11	2	10	3	2	2	2	0	0	1	4	184
14:30	6	90	8	0	2	5	2	0	0	0	0	0	1	114
14:45	5	135	20	1	9	2	0	1	0	0	0	0	1	174
15:00	5	125	16	0	2	4	4	1	0	2	2	0	4	165
15:15	2	135	16	0	7	7	0	2	1	0	1	1	2	174
15:30	2	144	14	0	6	7	1	2	1	0	0	0	3	180
15:45	0	129	14	3	4	5	1	0	2	0	1	0	0	159
16:00	11	168	10	2	3	4	3	0	2	0	0	1	1	205
16:15	2	193	9	1	8	1	2	0	0	1	0	1	3	221
16:30	4	230	12	1	2	4	2	0	0	1	0	0	0	256
16:45	3	167	18	2	3	3	2	3	1	0	1	0	2	205
17:00	5	198	14	1	8	9	3	0	0	1	1	0	0	240
17:15	3	199	21	1	3	3	1	2	0	1	0	3	1	238
17:30	3	208	25	0	2	2	0	0	0	1	0	2	0	243
17:45	7	200	7	1	8	2	5	0	0	0	0	1	2	233
18:00	6	114	11	3	4	4	3	1	0	2	1	1	4	154
18:15	3	143	12	0	3	2	2	2	2	0	0	0	3	172
18:30	3	128	21	3	5	3	2	1	1	0	2	0	4	173
18:45	7	148	9	1	0	8	0	0	0	0	0	0	2	175
19:00	11	128	16	0	3	5	3	0	0	0	0	0	2	168
19:15	4	122	17	0	3	1	1	1	2	0	0	1	0	152
19:30	5	133	11	0	3	6	0	1	1	0	1	0	0	161
19:45	3	118	14	1	1	5	0	0	0	0	0	0	1	143
20:00	4	111	9	0	5	7	2	0	0	0	0	0	1	139
20:15	2	125	14	0	0	2	0	0	1	0	0	1	0	145
20:30	0	107	14	0	2	2	0	0	1	0	0	0	1	127
20:45	3	105	7	0	2	1	0	0	0	0	0	0	0	118
21:00	4	106	7	1	0	1	0	1	0	0	0	0	0	120
21:15	0	97	8	0	3	1	0	0	1	0	1	0	1	112
21:30	2	101	9	0	2	5	0	0	2	0	0	1	0	122
21:45	0	92	10	0	0	0	0	0	0	0	0	1	0	103
22:00	1	84	4	0	1	1	0	0	0	0	0	0	1	92
22:15	0	82	5	1	0	1	0	0	0	0	0	0	0	89
22:30	0	62	5	0	2	0	0	0	1	0	0	0	0	70
22:45	0	79	10	0	0	1	1	0	0	0	0	0	0	91
23:00	0	61	3	0	0	1	0	0	0	0	0	0	0	65
23:15	0	39	5	0	0	1	0	0	2	0	0	0	0	47
23:30	0	49	2	0	1	0	0	0	0	0	0	0	0	52
23:45	0	52	2	0	0	0	0	0	1	0	0	0	0	55
TOTAL	173	5,976	561	50	176	162	64	32	40	16	19	20	59	7,348

PM PEAK HOUR	5:00 PM
PM PEAK VOLUME	954

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	311	####	1,099	63	341	266	98	47	55	30	29	35	88	12,948
% OF TOTAL	2.4%	81.0%	8.5%	0.5%	2.6%	2.1%	0.8%	0.4%	0.4%	0.2%	0.2%	0.3%	0.7%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS3 Indian between Ironwood and Hemlock

AM	NORTHBOUND														PM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4	12:00	0	30	7	0	1	0	0	0	0	0	0	0	0	38
0:15	0	9	1	0	0	0	0	0	0	0	0	0	0	10	12:15	0	28	3	0	3	0	0	0	0	0	0	0	0	34
0:30	0	6	0	0	0	0	0	0	0	0	0	0	0	6	12:30	0	39	8	0	1	1	0	0	0	0	0	0	0	49
0:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4	12:45	0	37	6	0	3	0	0	0	0	0	0	0	0	46
1:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5	13:00	0	34	7	0	2	0	0	0	0	0	0	0	0	43
1:15	0	0	0	0	1	0	0	0	0	0	0	0	0	1	13:15	0	34	5	0	6	0	0	0	0	0	0	0	0	45
1:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3	13:30	0	43	9	0	5	0	0	0	0	0	0	0	0	57
1:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4	13:45	0	56	8	0	2	1	0	0	0	0	0	0	0	67
2:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2	14:00	1	59	10	0	4	0	0	0	0	0	0	0	0	74
2:15	0	6	0	0	0	0	0	0	0	0	0	0	0	6	14:15	0	55	7	0	4	0	0	0	0	0	0	0	0	66
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:30	0	63	7	0	5	0	0	0	0	0	0	0	0	75
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14:45	0	57	4	0	5	1	0	0	0	0	0	0	0	67
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15:00	0	51	4	0	8	0	0	0	0	0	0	0	0	63
3:15	0	0	1	0	1	0	0	0	0	0	0	0	0	2	15:15	1	52	9	0	7	0	0	0	0	0	0	0	0	69
3:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15:30	1	51	12	0	5	1	0	0	0	0	0	0	0	70
3:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3	15:45	0	54	11	0	4	0	0	0	0	0	0	0	0	69
4:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5	16:00	0	51	15	0	0	0	0	0	0	0	0	0	0	66
4:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4	16:15	1	51	7	0	1	0	0	0	0	0	0	0	0	60
4:30	0	2	1	0	0	0	0	0	0	0	0	0	0	3	16:30	1	55	7	0	5	0	0	0	0	0	0	0	0	68
4:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4	16:45	0	60	13	0	6	0	0	0	0	0	0	0	0	79
5:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9	17:00	1	66	12	0	5	0	0	0	0	0	0	0	0	84
5:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6	17:15	0	63	10	0	7	0	0	0	0	0	0	0	0	80
5:30	0	8	0	0	1	0	0	0	0	0	0	0	0	9	17:30	0	63	3	0	7	0	0	0	0	0	0	0	0	73
5:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1	17:45	0	56	4	0	6	0	0	0	0	0	0	0	0	66
6:00	0	13	5	0	1	0	0	0	0	0	0	0	0	19	18:00	0	69	13	0	4	0	0	0	0	0	0	0	0	86
6:15	0	7	6	0	0	0	0	0	0	0	0	0	0	13	18:15	0	63	3	0	1	0	0	0	0	0	0	0	0	67
6:30	0	13	4	0	3	0	0	0	0	0	0	0	0	20	18:30	0	53	9	0	2	0	0	0	0	0	0	0	0	64
6:45	0	25	2	0	4	0	0	0	0	0	0	0	0	31	18:45	0	56	8	0	5	0	0	0	0	0	0	0	0	69
7:00	0	40	7	0	4	0	0	0	0	0	0	0	0	51	19:00	0	55	13	0	5	0	0	0	0	0	0	0	0	73
7:15	1	55	6	0	6	0	0	0	0	0	0	0	0	68	19:15	0	49	6	0	3	0	0	0	0	0	0	0	0	58
7:30	0	61	7	1	5	0	0	0	0	0	0	0	0	74	19:30	0	46	7	0	3	0	0	0	0	0	0	0	0	56
7:45	0	60	7	0	6	0	0	0	0	0	0	0	0	73	19:45	1	52	4	0	6	0	0	0	0	0	0	0	0	63
8:00	0	50	6	0	5	0	0	0	0	0	0	0	0	61	20:00	0	53	8	0	4	0	0	0	0	0	0	0	0	65
8:15	0	25	2	0	4	0	0	0	0	0	0	0	0	31	20:15	0	27	7	0	3	0	0	0	0	0	0	0	0	37
8:30	0	13	6	0	1	0	0	0	0	0	0	0	0	20	20:30	0	40	3	0	3	0	0	0	0	0	0	0	0	46
8:45	0	29	10	0	1	0	0	0	0	0	0	0	0	40	20:45	0	44	1	0	6	0	0	0	0	0	0	0	0	51
9:00	0	27	7	0	2	0	0	0	0	0	0	0	0	36	21:00	0	32	3	0	1	0	0	0	0	0	0	0	0	36
9:15	1	17	2	0	1	0	0	0	0	0	0	0	0	21	21:15	0	21	6	0	4	0	0	0	0	0	0	0	0	31
9:30	0	18	3	0	2	0	0	0	0	0	0	0	0	23	21:30	0	21	3	0	0	0	0	0	0	0	0	0	0	24
9:45	0	21	4	0	2	0	0	0	0	0	0	0	0	27	21:45	0	24	1	0	1	0	0	0	0	0	0	0	0	26
10:00	0	14	1	0	5	0	0	0	0	0	0	0	0	20	22:00	0	23	1	0	3	0	0	0	0	0	0	0	0	27
10:15	0	20	2	0	2	0	0	0	0	0	0	0	0	24	22:15	0	16	2	0	1	0	0	0	0	0	0	0	0	19
10:30	0	17	3	0	0	0	0	0	0	0	0	0	0	20	22:30	0	18	2	0	2	0	0	0	0	0	0	0	0	22
10:45	0	29	6	0	2	0	0	0	0	0	0	0	0	37	22:45	0	16	1	0	0	0	0	0	0	0	0	0	0	17
11:00	1	26	3	0	3	0	0	0	0	0	0	0	0	33	23:00	0	9	2	0	1	0	0	0	0	0	0	0	0	12
11:15	0	35	5	0	0	0	0	0	0	0	0	0	0	40	23:15	0	14	0	0	2	0	0	0	0	0	0	0	0	16
11:30	0	24	6	0	2	0	0	0	0	0	0	0	0	32	23:30	0	12	0	0	1	0	0	0	0	0	0	0	0	13
11:45	0	28	6	0	4	0	0	0	0	0	0	0	0	38	23:45	0	7	4	0	0	0	0	0	0	0	0	0	0	11
TOTAL	3	750	124	1	68	0	0	0	0	0	0	0	0	946	TOTAL	7	2,028	295	0	163	4	0	0	0	0	0	0	0	2,497
										AM PEAK HOUR				7:15 AM										PM PEAK HOUR				4:45 PM
										AM PEAK VOLUME				276										PM PEAK VOLUME				316

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	10	2,778	419	1	231	4	0	0	0	0	0	0	0	3,443
% OF TOTAL	0.3%	80.7%	12.2%	0.0%	6.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	17	5,418	779	6	401	8	2	0	0	0	1	0	0	6,632
% OF TOTAL	0.5%	157.4%	22.6%	0.2%	11.6%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS3 Indian between Ironwood and Hemlock

AM	SOUTHBOUND														PM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	12:00	0	38	7	1	2	0	0	0	0	0	0	0	0	48
0:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4	12:15	0	32	4	1	3	0	0	0	0	0	0	0	0	40
0:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5	12:30	0	21	6	0	1	0	0	0	0	0	0	0	0	28
0:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1	12:45	0	38	6	0	5	0	0	0	0	0	0	0	0	49
1:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4	13:00	0	47	6	0	1	0	0	0	0	0	0	0	0	54
1:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3	13:15	0	39	5	1	1	0	0	0	0	0	0	0	0	46
1:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2	13:30	0	25	5	0	4	0	0	0	0	0	0	0	0	34
1:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5	13:45	0	42	5	1	2	1	0	0	0	0	0	0	0	51
2:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	14:00	1	43	5	0	2	0	0	0	0	0	0	0	0	51
2:15	0	2	0	0	1	0	0	0	0	0	0	0	0	3	14:15	0	76	11	0	6	1	0	0	0	0	0	0	0	94
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:30	0	49	10	0	3	0	0	0	0	0	0	0	0	62
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14:45	0	49	9	0	5	0	0	0	0	0	0	0	0	63
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15:00	0	45	2	0	4	0	0	0	0	0	0	0	0	51
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:15	0	42	12	0	2	0	0	0	0	0	0	0	0	56
3:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15:30	0	47	5	0	2	0	0	0	0	0	0	0	0	54
3:45	0	3	0	0	2	0	0	0	0	0	0	0	0	5	15:45	0	37	2	0	4	0	0	0	0	0	0	0	0	43
4:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7	16:00	0	34	9	0	4	0	1	0	0	0	0	0	0	48
4:15	0	10	0	0	1	0	0	0	0	0	0	0	0	11	16:15	0	43	6	0	0	1	0	0	0	0	0	0	0	50
4:30	0	10	1	0	0	0	0	0	0	0	0	0	0	11	16:30	0	40	3	0	4	0	0	0	0	0	0	0	0	47
4:45	1	7	1	0	0	0	0	0	0	0	0	0	0	9	16:45	0	46	3	0	2	0	0	0	0	0	0	0	0	51
5:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5	17:00	0	50	5	0	4	0	0	0	0	0	0	0	0	59
5:15	0	10	2	0	0	0	0	0	0	0	0	0	0	12	17:15	0	35	1	0	2	0	0	0	0	0	0	0	0	38
5:30	0	16	4	0	0	0	0	0	0	0	0	0	0	20	17:30	0	49	8	0	1	0	0	0	0	0	0	0	0	58
5:45	0	13	1	0	0	0	0	0	0	0	0	0	0	14	17:45	0	45	7	0	5	0	0	0	0	0	0	0	0	57
6:00	1	15	2	0	2	0	0	0	0	0	0	0	0	20	18:00	0	56	5	0	4	0	0	0	0	0	0	0	0	65
6:15	0	14	3	0	0	0	0	0	0	0	0	0	0	17	18:15	0	41	3	0	0	0	0	0	0	0	0	0	0	44
6:30	0	10	3	0	3	0	0	0	0	0	0	0	0	16	18:30	0	31	10	0	3	0	0	0	0	0	0	0	0	44
6:45	0	33	3	0	6	0	0	0	0	0	0	0	0	42	18:45	0	50	4	0	1	0	0	0	0	0	0	0	0	55
7:00	0	27	4	0	5	0	0	0	0	0	0	0	0	36	19:00	0	43	3	0	1	0	0	0	0	0	0	0	0	47
7:15	0	54	8	0	5	0	0	0	0	0	0	0	0	67	19:15	0	30	4	0	3	0	0	0	0	0	0	0	0	37
7:30	1	80	15	0	2	0	0	0	0	0	0	0	0	98	19:30	0	21	5	0	2	0	0	0	0	0	0	0	0	28
7:45	0	99	7	0	6	0	0	0	0	0	0	0	0	112	19:45	0	34	5	0	2	0	0	0	0	0	0	0	0	41
8:00	0	70	12	0	4	0	0	0	0	0	0	0	0	86	20:00	0	32	7	0	3	0	0	0	0	0	0	0	0	42
8:15	0	46	4	0	6	0	0	0	0	0	0	0	0	56	20:15	0	42	3	0	3	0	0	0	0	0	0	0	0	48
8:30	0	29	5	0	6	0	0	0	0	0	0	0	0	40	20:30	0	33	2	0	2	0	0	0	0	0	0	0	0	37
8:45	1	42	10	0	0	0	0	0	0	0	0	0	0	53	20:45	0	25	2	0	2	0	0	0	0	0	0	0	0	29
9:00	0	37	4	0	1	0	0	0	0	0	0	0	0	42	21:00	0	19	2	0	0	0	0	0	0	0	0	0	0	21
9:15	1	31	5	1	1	0	0	0	0	0	1	0	0	40	21:15	0	31	5	0	1	0	0	0	0	0	0	0	0	37
9:30	0	43	10	0	1	0	1	0	0	0	0	0	0	55	21:30	0	17	2	0	1	0	0	0	0	0	0	0	0	20
9:45	0	28	4	0	2	0	0	0	0	0	0	0	0	34	21:45	0	20	2	0	0	0	0	0	0	0	0	0	0	22
10:00	0	37	4	0	1	0	0	0	0	0	0	0	0	42	22:00	0	15	1	0	0	0	0	0	0	0	0	0	0	16
10:15	0	27	2	0	3	0	0	0	0	0	0	0	0	32	22:15	0	12	2	0	0	0	0	0	0	0	0	0	0	14
10:30	0	38	5	0	4	0	0	0	0	0	0	0	0	47	22:30	0	13	0	0	0	0	0	0	0	0	0	0	0	13
10:45	0	30	8	0	1	0	0	0	0	0	0	0	0	39	22:45	0	10	1	0	1	0	0	0	0	0	0	0	0	12
11:00	0	28	4	0	3	1	0	0	0	0	0	0	0	36	23:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
11:15	0	30	4	0	1	0	0	0	0	0	0	0	0	35	23:15	1	3	0	0	0	0	0	0	0	0	0	0	0	4
11:30	0	36	7	0	4	0	0	0	0	0	0	0	0	47	23:30	0	6	1	0	0	0	0	0	0	0	0	0	0	7
11:45	0	38	5	0	1	0	0	0	0	0	0	0	0	44	23:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
TOTAL	5	1,033	149	1	72	1	1	0	0	0	1	0	0	1,263	TOTAL	2	1,607	211	4	98	3	1	0	0	0	0	0	0	1,926

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	363

PM PEAK HOUR	2:15 PM
PM PEAK VOLUME	270

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	7	2,640	360	5	170	4	2	0	0	0	1	0	0	3,189
% OF TOTAL	0.2%	82.8%	11.3%	0.2%	5.3%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS4 Indian south of Hemlock

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
0:15	0	7	1	0	0	0	0	0	0	0	0	0	0	8
0:30	0	7	0	0	0	0	0	0	0	0	0	0	0	7
0:45	0	12	0	0	0	0	0	0	0	0	0	0	0	12
1:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
1:15	0	1	0	0	1	0	0	0	0	0	0	0	0	2
1:30	0	5	1	0	0	0	0	0	0	0	0	0	0	6
1:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
2:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
2:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:45	0	5	1	0	1	0	0	0	0	0	0	0	0	7
4:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:30	0	6	1	0	0	0	0	0	0	0	0	0	0	7
4:45	0	4	0	0	1	0	0	0	0	0	0	0	0	5
5:00	0	9	1	0	0	0	0	0	0	0	0	0	0	10
5:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:30	0	5	0	0	1	0	0	0	0	0	0	0	0	6
5:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00	1	12	5	0	1	0	0	0	0	0	0	0	0	19
6:15	0	8	3	0	0	0	0	0	0	0	0	0	0	11
6:30	0	16	3	0	2	0	0	0	0	0	0	0	0	21
6:45	0	26	3	0	4	0	0	0	0	0	0	0	0	33
7:00	0	37	8	0	2	0	0	0	0	0	0	0	0	47
7:15	0	44	10	0	2	0	0	0	0	0	0	0	0	56
7:30	0	62	7	1	6	0	0	0	0	0	0	0	0	76
7:45	5	55	11	0	6	0	0	0	0	0	0	0	0	77
8:00	0	61	6	0	4	0	0	0	0	0	0	0	0	71
8:15	0	35	3	0	5	1	0	0	0	0	0	0	0	44
8:30	0	25	6	0	1	0	0	0	0	0	0	0	0	32
8:45	0	27	13	0	1	0	0	0	0	0	0	0	0	41
9:00	0	27	7	0	1	0	0	0	0	0	0	0	0	35
9:15	0	19	5	0	2	0	0	0	0	0	0	0	0	26
9:30	0	24	3	0	1	0	0	0	0	0	0	0	0	28
9:45	0	20	5	0	0	0	0	0	0	0	0	0	0	25
10:00	0	26	4	0	4	0	0	0	0	0	0	0	0	34
10:15	0	20	4	0	1	0	0	0	0	0	0	0	0	25
10:30	1	30	2	0	0	0	0	0	0	0	0	0	0	33
10:45	0	29	1	0	2	0	0	0	0	0	0	0	0	32
11:00	3	30	7	0	1	0	0	0	0	0	0	0	0	41
11:15	0	38	6	0	1	1	0	0	0	0	0	0	0	46
11:30	0	29	7	0	2	0	0	0	0	0	0	0	0	38
11:45	0	36	4	0	3	0	0	0	0	0	0	0	0	43
TOTAL	10	848	142	1	56	2	0	0	0	0	0	0	0	1,059

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	280

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	1	44	6	0	2	0	0	0	0	0	0	0	0	53
12:15	0	27	7	0	3	0	0	0	0	0	0	0	0	37
12:30	0	41	5	0	1	0	0	0	0	0	0	0	0	47
12:45	0	37	6	0	2	0	0	0	0	0	0	0	0	45
13:00	0	50	6	0	1	0	0	0	0	0	0	0	0	57
13:15	0	49	7	0	5	0	0	0	0	0	0	0	0	61
13:30	0	44	10	0	4	0	1	0	0	0	0	0	0	59
13:45	0	52	7	0	3	1	0	0	0	0	0	0	0	63
14:00	0	57	13	0	2	0	0	0	0	0	0	0	0	72
14:15	2	64	4	0	5	0	0	0	0	0	0	0	0	75
14:30	0	70	13	0	2	0	0	0	0	0	0	0	0	85
14:45	1	61	2	0	7	0	0	0	0	0	0	0	0	71
15:00	1	76	8	0	7	0	0	0	0	0	0	0	0	92
15:15	0	70	11	0	7	0	0	0	0	0	0	0	0	88
15:30	1	70	15	0	7	1	0	0	0	0	0	0	0	94
15:45	1	70	13	0	5	0	0	0	0	0	0	0	0	89
16:00	0	67	9	0	1	0	0	0	0	0	0	0	0	77
16:15	0	74	4	0	3	0	0	0	0	0	0	0	0	81
16:30	0	68	7	0	6	0	0	0	0	0	0	0	0	81
16:45	0	74	14	0	6	0	0	0	0	0	0	0	0	94
17:00	1	85	14	0	3	0	0	0	0	0	0	0	0	103
17:15	0	87	14	0	5	0	0	0	0	0	0	0	0	106
17:30	0	81	4	0	7	0	0	0	0	0	0	0	0	92
17:45	0	75	5	0	8	0	0	0	0	0	0	0	0	88
18:00	0	98	13	0	4	1	0	0	0	0	0	0	0	116
18:15	0	68	2	0	3	0	0	0	0	0	0	0	0	73
18:30	0	79	6	0	1	0	0	0	0	0	0	0	0	86
18:45	0	63	9	0	7	0	0	0	0	0	0	0	0	79
19:00	0	73	16	0	4	0	0	0	0	0	0	0	0	93
19:15	0	60	7	0	4	0	0	0	0	0	0	0	0	71
19:30	0	56	7	0	1	0	0	0	0	0	0	0	0	64
19:45	1	58	5	0	4	0	0	0	0	0	0	0	0	68
20:00	0	63	9	0	3	0	0	0	0	0	0	0	0	75
20:15	0	45	8	0	4	0	0	0	0	0	0	0	0	57
20:30	0	46	4	0	2	0	0	0	0	0	0	0	0	52
20:45	0	56	4	0	1	0	0	0	0	0	0	0	0	61
21:00	0	42	3	0	0	0	0	0	0	0	0	0	0	45
21:15	0	36	6	0	4	0	0	0	0	0	0	0	0	46
21:30	0	33	4	0	1	0	0	0	0	0	0	0	0	38
21:45	0	27	5	0	1	0	0	0	0	0	0	0	0	33
22:00	0	23	1	0	2	0	0	0	0	0	0	0	0	26
22:15	0	25	2	0	0	0	0	0	0	0	0	0	0	27
22:30	0	19	3	0	2	0	0	0	0	0	0	0	0	24
22:45	0	16	0	0	1	0	0	0	0	0	0	0	0	17
23:00	0	12	1	0	2	0	0	0	0	0	0	0	0	15
23:15	0	18	1	0	1	0	0	0	0	0	0	0	0	20
23:30	0	17	0	0	1	0	0	0	0	0	0	0	0	18
23:45	0	9	1	0	0	0	0	0	0	0	0	0	0	10
TOTAL	9	2,535	321	0	155	3	1	0	0	0	0	0	0	3,024

PM PEAK HOUR	5:15 PM
PM PEAK VOLUME	402

TOTAL: AM+PM	19	3,383	463	1	211	5	1	0	0	0	0	0	0	4,083
% OF TOTAL	0.5%	82.9%	11.3%	0.0%	5.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	31	6,094	997	8	474	29	26	4	1	0	0	3	0	7,667
% OF TOTAL	0.8%	149.3%	24.4%	0.2%	11.6%	0.7%	0.6%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	100.0%

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS4 Indian south of Hemlock

AM TIME	SOUTHBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
0:15	0	4	1	0	0	0	0	0	0	0	0	0	0	5
0:30	0	7	0	0	0	0	0	0	0	0	0	0	0	7
0:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6
1:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
1:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
1:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
2:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:15	0	6	0	0	1	0	0	0	0	0	0	0	0	7
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
3:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	5	1	0	1	0	0	0	0	0	0	0	0	7
4:15	0	7	1	0	1	0	0	0	0	0	0	0	0	9
4:30	0	10	0	0	3	0	0	0	0	0	0	0	0	13
4:45	1	10	2	0	2	0	0	0	0	0	0	0	0	15
5:00	0	6	2	0	1	0	0	0	0	0	0	0	0	9
5:15	0	6	1	0	0	0	0	0	0	0	0	0	0	7
5:30	0	14	5	0	1	0	0	0	0	0	0	0	0	20
5:45	0	14	3	0	2	0	0	0	0	0	0	0	0	19
6:00	1	11	1	0	2	0	0	0	0	0	0	0	0	15
6:15	0	15	5	0	0	0	0	0	0	0	0	0	0	20
6:30	0	14	4	0	3	0	0	0	0	0	0	0	0	21
6:45	0	34	8	0	3	0	0	0	0	0	0	0	0	45
7:00	0	31	4	0	10	0	0	0	0	0	0	0	0	45
7:15	0	49	10	0	6	0	0	0	0	0	0	0	0	65
7:30	0	85	18	0	5	0	0	0	0	0	0	0	0	108
7:45	0	88	21	0	9	0	0	0	0	0	0	0	0	118
8:00	0	54	10	0	5	0	0	0	0	0	0	0	0	69
8:15	1	42	9	1	6	2	0	0	0	0	0	0	0	61
8:30	0	26	5	0	4	0	1	0	0	0	0	0	0	36
8:45	1	35	13	1	4	2	3	1	0	0	0	0	0	60
9:00	0	36	4	0	2	1	0	0	0	0	0	1	0	44
9:15	0	28	6	1	2	0	0	0	0	0	0	0	0	37
9:30	1	33	8	0	2	0	2	0	0	0	0	0	0	46
9:45	0	35	11	0	2	0	0	0	0	0	0	0	0	48
10:00	0	31	1	0	5	1	1	2	0	0	0	0	0	41
10:15	0	39	6	0	1	1	1	0	0	0	0	0	0	48
10:30	0	42	5	0	4	0	0	0	0	0	0	0	0	51
10:45	1	25	11	0	3	1	2	0	0	0	0	0	0	43
11:00	0	21	7	0	2	0	2	0	0	0	0	1	0	33
11:15	2	29	7	0	3	2	1	0	0	0	0	0	0	44
11:30	1	23	12	0	5	1	2	0	0	0	0	0	0	44
11:45	0	33	2	0	3	0	1	0	1	0	0	0	0	40
TOTAL	9	981	209	3	103	11	16	3	1	0	0	2	0	1,338

PM Time	SOUTHBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	1	37	3	1	7	1	3	0	0	0	0	0	0	53
12:15	0	32	7	1	6	2	1	1	0	0	0	0	0	50
12:30	0	23	4	0	8	2	0	0	0	0	0	0	0	37
12:45	0	23	10	0	3	2	0	0	0	0	0	0	0	38
13:00	0	32	6	0	3	1	0	0	0	0	0	0	0	42
13:15	0	29	8	0	2	2	2	0	0	0	0	0	0	43
13:30	0	24	7	0	7	2	1	0	0	0	0	1	0	42
13:45	1	34	3	0	2	1	0	0	0	0	0	0	0	41
14:00	0	46	14	0	4	0	1	0	0	0	0	0	0	65
14:15	0	53	14	0	6	0	0	0	0	0	0	0	0	73
14:30	0	64	15	0	6	0	0	0	0	0	0	0	0	85
14:45	0	47	16	0	6	0	0	0	0	0	0	0	0	69
15:00	0	48	7	0	3	0	0	0	0	0	0	0	0	58
15:15	0	39	11	1	3	0	0	0	0	0	0	0	0	54
15:30	0	58	11	0	4	0	0	0	0	0	0	0	0	73
15:45	0	41	6	0	6	0	0	0	0	0	0	0	0	53
16:00	0	43	11	0	8	0	1	0	0	0	0	0	0	63
16:15	0	47	6	0	2	0	0	0	0	0	0	0	0	55
16:30	0	50	4	0	8	0	0	0	0	0	0	0	0	62
16:45	0	46	6	1	5	0	0	0	0	0	0	0	0	58
17:00	0	61	8	0	6	0	0	0	0	0	0	0	0	75
17:15	0	43	9	0	0	0	0	0	0	0	0	0	0	52
17:30	0	60	5	0	5	0	0	0	0	0	0	0	0	70
17:45	0	59	11	0	7	0	0	0	0	0	0	0	0	77
18:00	0	64	11	0	4	0	0	0	0	0	0	0	0	79
18:15	0	57	9	0	4	0	0	0	0	0	0	0	0	70
18:30	0	37	8	0	2	0	0	0	0	0	0	0	0	47
18:45	0	64	2	0	1	0	0	0	0	0	0	0	0	67
19:00	0	47	6	0	3	0	0	0	0	0	0	0	0	56
19:15	0	35	11	0	4	0	0	0	0	0	0	0	0	50
19:30	0	31	7	0	3	0	0	0	0	0	0	0	0	41
19:45	0	46	11	0	2	0	0	0	0	0	0	0	0	59
20:00	0	43	5	0	2	0	0	0	0	0	0	0	0	50
20:15	0	31	7	0	5	0	0	0	0	0	0	0	0	43
20:30	0	32	5	0	1	0	0	0	0	0	0	0	0	38
20:45	0	29	3	0	2	0	0	0	0	0	0	0	0	34
21:00	0	23	4	0	1	0	0	0	0	0	0	0	0	28
21:15	0	24	10	0	3	0	0	0	0	0	0	0	0	37
21:30	0	18	5	0	4	0	0	0	0	0	0	0	0	27
21:45	1	20	5	0	0	0	0	0	0	0	0	0	0	26
22:00	0	22	4	0	0	0	0	0	0	0	0	0	0	26
22:15	0	18	2	0	1	0	0	0	0	0	0	0	0	21
22:30	0	13	2	0	0	0	0	0	0	0	0	0	0	15
22:45	0	9	2	0	1	0	0	0	0	0	0	0	0	12
23:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
23:15	0	7	2	0	0	0	0	0	0	0	0	0	0	9
23:30	0	7	1	0	0	0	0	0	0	0	0	0	0	8
23:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6
TOTAL	3	1,730	325	4	160	13	9	1	0	0	0	1	0	2,246

	AM PEAK HOUR	PM PEAK HOUR
	7:15 AM	5:30 PM
	360	296

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	12	2,711	534	7	263	24	25	4	1	0	0	3	0	3,584
% OF TOTAL	0.3%	75.6%	14.9%	0.2%	7.3%	0.7%	0.7%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS5 Ironwood west of Heacock

AM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	15	1	0	1	0	0	0	0	0	0	0	0	17
0:15	0	10	3	0	0	0	0	0	0	0	0	0	0	13
0:30	0	10	2	0	2	0	0	0	0	0	0	0	0	14
0:45	0	9	2	0	1	0	0	0	0	0	0	0	0	12
1:00	0	4	2	0	0	0	0	0	0	0	0	0	0	6
1:15	1	4	1	0	0	0	0	0	0	0	0	0	0	6
1:30	0	7	0	0	0	0	0	0	0	0	0	0	0	7
1:45	0	9	0	0	0	0	0	0	0	0	0	0	0	9
2:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:15	1	8	1	0	1	0	0	0	1	0	0	0	0	12
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6
3:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:15	0	3	2	0	0	0	0	0	0	0	0	0	0	5
3:30	0	4	3	0	0	0	0	0	0	0	0	0	0	7
3:45	0	10	0	0	1	0	0	0	0	0	0	0	0	11
4:00	0	9	0	0	1	0	0	0	0	0	0	0	0	10
4:15	0	6	4	0	2	0	0	0	0	0	0	0	0	12
4:30	0	15	0	0	0	0	0	0	0	0	0	0	0	15
4:45	0	15	1	0	2	1	0	0	0	0	0	0	0	19
5:00	0	11	4	0	0	0	0	0	0	0	0	0	0	15
5:15	0	24	6	1	0	0	0	0	0	0	0	0	0	31
5:30	0	22	1	0	3	0	0	0	0	0	0	0	0	26
5:45	0	18	4	0	1	0	0	0	0	0	0	0	0	23
6:00	1	25	2	0	2	0	0	0	0	0	0	0	0	30
6:15	1	30	1	1	1	0	0	0	0	0	0	0	0	34
6:30	1	51	5	0	3	0	0	0	0	0	0	0	0	60
6:45	2	40	6	0	3	0	0	0	0	0	0	0	0	51
7:00	1	69	7	0	3	1	0	0	0	0	0	0	0	81
7:15	1	90	12	1	6	0	0	0	0	0	0	0	0	110
7:30	0	113	16	0	4	0	0	0	0	0	0	0	0	133
7:45	3	96	16	0	3	0	0	1	0	0	0	0	0	119
8:00	0	94	12	0	4	1	1	0	0	1	0	0	0	113
8:15	1	78	9	0	3	1	0	0	0	0	0	1	0	93
8:30	1	76	15	1	6	0	1	0	0	0	1	0	0	101
8:45	8	51	8	1	6	2	0	0	0	0	0	0	0	76
9:00	4	61	13	0	2	0	0	0	0	0	0	0	0	80
9:15	0	44	6	1	6	0	0	0	0	0	0	0	0	57
9:30	1	58	8	1	10	0	0	0	0	0	0	0	0	78
9:45	0	57	11	0	2	1	0	0	1	0	0	0	0	72
10:00	1	54	6	0	5	0	0	0	0	0	0	0	0	66
10:15	0	56	14	0	5	1	0	0	0	0	0	0	0	76
10:30	2	80	13	1	3	2	0	2	0	0	0	0	0	103
10:45	2	59	12	0	5	3	0	0	0	0	0	0	0	81
11:00	2	57	6	0	5	1	1	0	0	0	0	1	1	74
11:15	3	77	9	0	5	0	0	0	0	0	0	0	0	94
11:30	4	62	13	0	3	2	1	2	1	1	0	0	0	89
11:45	2	63	14	2	8	2	1	0	0	0	0	0	1	93
TOTAL	43	1,767	272	10	118	18	5	5	3	2	1	2	2	2,248

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	475

PM	EASTBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	3	82	8	0	7	3	0	0	0	0	1	0	0	104
12:15	1	71	8	1	9	2	1	0	0	1	0	0	0	94
12:30	2	75	7	0	5	2	1	0	0	0	0	0	0	92
12:45	3	65	9	1	5	1	2	0	0	0	0	1	0	87
13:00	4	102	16	0	3	6	0	0	0	1	0	2	0	134
13:15	1	106	19	1	11	1	1	0	0	0	0	0	0	140
13:30	2	88	24	0	9	0	1	0	0	0	0	0	0	124
13:45	5	96	19	2	17	2	0	0	0	0	0	0	0	141
14:00	6	77	18	1	4	0	0	0	0	0	0	0	0	106
14:15	0	72	21	0	5	3	1	0	0	0	0	0	0	102
14:30	0	89	17	0	6	2	0	0	0	0	0	0	0	114
14:45	2	68	11	0	13	2	1	0	0	0	0	0	0	97
15:00	4	89	12	1	6	2	0	1	0	0	1	0	0	116
15:15	7	82	14	0	12	0	1	0	0	0	0	1	0	117
15:30	4	87	12	0	7	2	0	2	0	0	0	1	0	115
15:45	1	90	12	1	4	0	1	1	0	0	0	0	0	110
16:00	1	123	17	0	13	1	4	0	0	0	0	0	1	160
16:15	5	133	18	0	4	1	0	0	0	0	0	2	0	163
16:30	3	126	16	0	12	3	1	2	0	0	0	1	0	164
16:45	1	134	18	0	13	2	0	0	0	0	0	0	0	168
17:00	2	123	14	0	17	2	1	0	1	0	0	0	0	160
17:15	1	132	26	1	14	0	1	1	1	0	0	0	0	177
17:30	9	141	20	0	10	2	0	0	0	0	0	1	1	184
17:45	6	134	12	0	10	2	1	0	1	0	0	0	2	168
18:00	6	113	22	0	8	3	0	0	0	0	0	1	1	154
18:15	3	107	10	0	13	7	1	0	1	0	0	0	0	142
18:30	3	77	15	0	9	1	1	1	0	0	0	0	0	107
18:45	5	121	14	0	2	1	1	1	0	0	0	1	1	147
19:00	7	104	7	0	2	2	0	1	0	0	0	0	0	123
19:15	2	75	14	0	4	1	0	0	0	0	0	0	0	96
19:30	2	81	12	0	5	1	0	0	0	0	0	0	0	101
19:45	2	85	9	0	4	1	1	0	0	0	0	0	0	102
20:00	1	69	11	0	5	0	0	0	0	0	0	0	0	86
20:15	1	58	8	0	6	0	1	1	1	0	0	0	0	76
20:30	0	51	13	0	5	1	0	0	0	0	0	0	0	70
20:45	0	64	5	0	4	0	0	0	0	0	0	0	0	73
21:00	3	51	2	0	4	1	0	0	0	0	0	0	0	61
21:15	2	71	6	0	4	0	1	0	0	0	0	1	0	85
21:30	8	38	6	0	3	0	0	0	0	0	0	0	0	55
21:45	1	36	5	0	2	0	0	0	0	0	0	0	0	44
22:00	1	40	7	0	1	0	0	0	0	0	0	0	0	49
22:15	0	43	3	1	4	0	1	0	0	0	0	0	0	52
22:30	3	31	1	0	2	0	0	0	0	0	0	0	0	37
22:45	0	26	6	0	0	0	0	0	0	0	0	0	0	32
23:00	0	38	2	0	1	0	0	0	0	0	0	0	0	41
23:15	0	15	1	0	0	0	0	0	0	0	0	0	0	16
23:30	0	16	3	0	3	0	0	0	0	0	0	0	0	22
23:45	0	9	3	0	0	0	0	0	0	0	0	0	0	12
TOTAL	123	3,804	553	10	307	60	25	11	5	2	2	12	6	4,920

PM PEAK HOUR	5:00 PM
PM PEAK VOLUME	689

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	166	5,571	825	20	425	78	30	16	8	4	3	14	8	7,168
% OF TOTAL	2.3%	77.7%	11.5%	0.3%	5.9%	1.1%	0.4%	0.2%	0.1%	0.1%	0.0%	0.2%	0.1%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	222	11,640	2,111	46	1,152	157	42	26	15	4	4	19	9	15,447
% OF TOTAL	3.1%	162.4%	29.5%	0.6%	16.1%	2.2%	0.6%	0.4%	0.2%	0.1%	0.1%	0.3%	0.1%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS5 Ironwood west of Heacock

AM TIME	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	11	2	0	1	0	0	0	0	0	0	0	0	14
0:15	0	13	1	0	1	0	0	0	0	0	0	0	0	15
0:30	0	5	2	0	1	0	0	0	0	0	0	0	0	8
0:45	0	6	1	0	0	0	0	0	0	0	0	0	0	7
1:00	0	7	3	0	0	0	0	0	0	0	0	0	0	10
1:15	0	4	3	0	2	0	0	0	0	0	0	0	0	9
1:30	0	5	1	0	1	0	0	0	0	0	0	0	0	7
1:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00	0	3	2	0	1	0	0	0	0	0	0	0	0	6
2:15	0	7	1	0	1	0	0	0	0	0	0	0	0	9
2:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
3:00	0	2	0	0	2	0	0	0	0	0	0	0	0	4
3:15	0	4	5	0	3	0	0	0	0	0	0	0	0	12
3:30	1	3	0	0	3	0	0	0	0	0	0	0	0	7
3:45	0	13	2	0	1	0	0	0	0	0	0	0	0	16
4:00	0	7	1	0	2	0	0	0	0	0	0	0	0	10
4:15	0	10	2	0	0	0	0	0	0	0	0	0	0	12
4:30	0	15	3	0	2	0	0	0	0	0	0	0	0	20
4:45	0	14	7	0	1	0	0	0	0	0	0	0	0	22
5:00	0	18	5	0	0	1	0	0	0	0	0	0	0	24
5:15	0	20	7	0	0	0	0	0	0	0	0	0	0	27
5:30	0	26	8	0	6	0	0	0	0	0	0	0	0	40
5:45	0	22	9	0	7	1	0	0	0	0	0	0	0	39
6:00	1	37	7	0	6	0	0	0	0	0	0	0	0	51
6:15	1	45	15	0	15	0	0	0	0	0	0	0	0	76
6:30	0	59	14	1	16	0	0	0	0	0	0	0	0	90
6:45	0	83	14	0	17	3	0	0	0	0	0	0	0	117
7:00	0	123	17	0	14	0	0	0	0	0	0	0	0	154
7:15	0	141	29	1	15	2	0	0	0	0	0	0	1	189
7:30	4	135	27	1	20	5	0	0	1	0	0	0	0	193
7:45	2	158	37	1	15	4	1	1	1	0	0	1	0	221
8:00	0	147	31	0	14	4	1	0	0	0	0	0	0	197
8:15	5	128	25	1	12	2	0	0	0	0	0	0	0	173
8:30	0	97	11	0	11	0	0	0	0	0	0	0	0	119
8:45	0	84	18	1	6	0	0	0	0	0	0	0	0	109
9:00	0	63	18	0	7	0	1	0	0	0	0	0	0	89
9:15	1	54	14	0	9	1	0	1	0	0	0	0	0	80
9:30	0	49	10	0	9	1	1	0	0	0	0	0	0	70
9:45	0	55	14	2	6	0	0	0	0	0	0	0	0	77
10:00	0	62	13	0	8	0	0	0	0	0	0	0	0	83
10:15	1	61	19	1	7	0	0	1	0	0	0	1	0	91
10:30	0	58	13	0	11	2	0	0	0	0	0	0	0	84
10:45	1	62	14	1	9	2	0	1	0	0	1	0	0	91
11:00	0	55	12	1	8	0	1	0	0	0	0	1	0	78
11:15	0	58	17	0	7	2	0	0	1	0	0	0	0	85
11:30	0	66	24	0	12	0	0	0	0	0	0	0	0	102
11:45	1	99	25	0	8	0	0	0	0	0	0	0	0	133
TOTAL	18	2,207	503	11	297	30	5	4	3	0	1	3	1	3,083

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	800

PM Time	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	2	62	18	1	14	0	1	0	0	0	0	0	0	98
12:15	0	81	24	0	10	0	0	0	0	0	0	0	0	115
12:30	0	88	22	0	13	2	0	0	0	0	0	0	0	125
12:45	0	85	23	0	11	1	0	0	0	0	0	1	0	121
13:00	0	94	20	1	14	4	1	0	0	0	0	0	0	134
13:15	4	94	20	1	8	1	0	0	0	0	0	0	0	128
13:30	0	91	22	2	15	1	0	1	0	0	0	0	0	132
13:45	2	89	17	0	12	0	0	0	0	0	0	0	0	120
14:00	0	92	24	0	11	3	0	0	0	0	0	0	0	130
14:15	0	102	31	1	15	0	0	0	0	0	0	0	0	149
14:30	0	90	24	0	16	1	0	0	0	0	0	0	0	131
14:45	0	81	19	0	18	1	0	0	0	0	0	0	0	119
15:00	1	98	17	0	13	1	0	0	0	0	0	0	0	130
15:15	2	99	16	0	13	1	0	0	0	0	0	0	0	131
15:30	4	99	16	1	13	3	0	1	0	0	0	0	0	137
15:45	0	86	23	0	8	3	0	0	0	0	0	0	0	120
16:00	1	105	21	0	10	0	0	0	0	0	0	0	0	137
16:15	2	131	18	0	14	1	0	0	0	0	0	0	0	166
16:30	1	111	20	0	10	0	2	0	0	0	0	0	0	144
16:45	1	116	26	1	12	2	0	2	0	0	0	0	0	160
17:00	0	129	17	0	14	4	0	0	0	0	0	0	0	164
17:15	1	105	20	1	16	4	0	0	0	0	0	0	0	147
17:30	0	122	21	0	12	2	1	1	0	0	0	0	0	159
17:45	0	124	25	1	11	1	0	1	0	0	0	0	0	163
18:00	3	92	18	0	9	2	0	0	0	0	0	0	0	124
18:15	3	86	13	0	5	1	0	0	0	0	0	0	0	108
18:30	2	99	19	1	7	3	0	0	0	0	0	0	0	131
18:45	2	94	15	0	10	0	0	0	0	0	0	0	0	121
19:00	0	87	20	0	6	1	0	0	0	0	0	1	0	115
19:15	0	61	22	0	9	1	0	0	0	0	0	0	0	93
19:30	0	57	11	0	6	0	0	0	0	0	0	0	0	74
19:45	4	90	19	1	6	0	0	0	0	0	0	0	0	120
20:00	2	59	16	0	6	0	0	0	0	0	0	0	0	83
20:15	0	62	10	1	6	0	0	0	0	0	0	0	0	79
20:30	1	97	16	0	6	2	0	0	0	0	0	0	0	122
20:45	0	81	12	1	7	0	0	0	0	0	0	0	0	101
21:00	0	79	10	0	2	0	0	0	1	0	0	0	0	92
21:15	0	81	11	0	3	1	1	0	0	0	0	0	0	97
21:30	0	61	20	0	4	0	0	0	1	0	0	0	0	86
21:45	0	66	6	1	11	2	0	0	0	0	0	0	0	86
22:00	0	51	11	0	5	0	0	0	1	0	0	0	0	68
22:15	0	46	6	0	3	0	1	0	0	0	0	0	0	56
22:30	0	33	6	0	3	0	0	0	0	0	0	0	0	42
22:45	0	28	2	0	1	0	0	0	0	0	0	0	0	31
23:00	0	18	7	0	2	0	0	0	0	0	0	0	0	27
23:15	0	23	4	0	5	0	0	0	0	0	0	0	0	32
23:30	0	17	4	0	3	0	0	0	1	0	0	0	0	25
23:45	0	20	1	0	2	0	0	0	0	0	0	0	0	23
TOTAL	38	3,862	783	15	430	49	7	6	4	0	0	2	0	5,196

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	634

TOTAL: AM+PM	56	6,069	1,286	26	727	79	12	10	7	0	1	5	1	8,279
% OF TOTAL	0.7%	73.3%	15.5%	0.3%	8.8%	1.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS6 Ironwood between Heacock and Davis

AM	EASTBOUND														PM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	23	4	0	1	0	0	0	0	0	0	0	0	28	12:00	0	62	16	0	4	0	0	0	0	0	0	0	0	82
0:15	0	16	4	0	3	0	0	0	0	0	0	0	0	23	12:15	1	60	11	1	8	2	0	0	0	0	0	0	0	83
0:30	0	10	2	0	1	0	0	0	0	0	0	0	0	13	12:30	0	45	16	0	9	0	0	0	0	0	0	0	0	70
0:45	0	14	4	0	0	0	0	0	0	0	0	0	0	18	12:45	2	52	10	0	6	0	0	1	0	0	0	0	0	71
1:00	0	8	4	0	0	0	0	0	0	0	0	0	0	12	13:00	2	71	27	1	9	0	0	0	0	0	0	1	0	111
1:15	0	9	2	0	1	0	0	0	0	0	0	0	0	12	13:15	0	69	28	0	14	0	1	0	0	0	0	0	0	112
1:30	0	4	0	0	1	0	0	0	0	0	0	0	0	5	13:30	2	81	23	0	8	1	0	0	0	0	0	0	0	115
1:45	0	11	2	0	0	0	0	0	0	0	0	0	0	13	13:45	4	71	27	2	7	1	0	0	0	0	0	0	0	112
2:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6	14:00	5	69	20	1	19	1	0	0	0	0	0	0	0	115
2:15	0	6	1	0	1	0	0	0	0	0	0	0	0	8	14:15	0	85	22	0	13	0	1	0	0	1	0	0	0	122
2:30	0	2	2	0	0	0	0	0	0	0	0	0	0	4	14:30	1	74	23	0	11	2	0	2	0	0	0	0	0	113
2:45	0	13	1	0	0	0	0	0	0	0	0	0	0	14	14:45	3	54	15	0	15	1	1	0	0	0	0	0	0	89
3:00	0	2	0	0	1	0	0	0	0	0	0	0	0	3	15:00	0	78	12	0	10	0	0	0	0	0	0	0	0	100
3:15	0	3	1	0	2	0	0	0	0	0	0	0	0	6	15:15	0	67	20	0	10	1	0	0	0	0	0	0	0	98
3:30	0	7	0	0	0	0	0	0	0	0	0	0	0	7	15:30	0	67	15	0	12	0	0	0	0	0	0	0	0	94
3:45	0	7	1	0	0	0	0	0	0	0	0	0	0	8	15:45	1	76	15	0	12	1	0	0	1	0	0	0	0	106
4:00	0	7	1	0	1	0	0	0	0	0	0	0	0	9	16:00	0	94	18	0	16	0	0	0	0	0	0	0	0	128
4:15	0	5	1	0	1	0	0	0	0	0	0	0	0	7	16:15	2	96	26	0	16	2	0	0	0	0	0	0	0	142
4:30	0	9	1	0	1	0	0	0	0	0	0	0	0	11	16:30	1	96	16	1	10	2	0	0	0	0	0	0	0	126
4:45	0	13	4	0	4	0	0	0	0	0	0	0	0	21	16:45	0	89	23	0	24	3	0	0	0	0	0	0	0	139
5:00	0	7	2	0	2	0	0	0	0	0	0	0	0	11	17:00	4	112	21	0	18	2	1	0	0	0	0	0	0	158
5:15	0	9	1	1	1	0	0	0	0	0	0	0	0	12	17:15	1	110	12	0	17	2	0	0	0	0	0	0	0	142
5:30	0	7	3	0	0	0	0	0	0	0	0	0	0	10	17:30	3	127	29	0	17	4	0	0	0	0	0	1	0	181
5:45	0	19	1	0	3	0	0	0	0	0	0	0	0	23	17:45	2	133	26	1	18	1	1	0	0	0	0	0	0	182
6:00	0	18	5	0	1	0	0	0	0	0	0	0	0	24	18:00	2	106	23	1	13	3	0	0	0	0	1	0	0	149
6:15	0	15	2	1	4	0	0	0	0	0	0	0	0	22	18:15	4	101	37	0	13	2	0	0	0	0	0	0	0	157
6:30	0	20	5	0	6	0	0	0	0	0	0	0	0	31	18:30	0	70	18	0	10	2	0	0	0	0	0	0	0	100
6:45	0	26	8	0	3	0	1	0	0	0	0	0	0	38	18:45	2	109	20	1	13	1	0	0	0	0	0	0	0	146
7:00	0	53	11	0	5	2	0	0	0	0	0	0	0	71	19:00	0	87	17	0	11	1	0	0	0	0	0	0	0	116
7:15	0	61	25	0	6	5	0	0	0	0	0	0	0	97	19:15	1	62	21	0	7	1	0	0	0	0	0	0	0	92
7:30	0	95	21	0	3	2	0	0	0	0	0	0	0	121	19:30	2	72	17	0	5	1	0	0	0	0	0	0	0	97
7:45	2	67	22	0	8	0	0	0	0	0	0	0	0	99	19:45	0	73	15	1	6	1	1	0	0	0	0	0	0	97
8:00	2	62	13	0	5	1	0	1	0	0	0	0	0	84	20:00	1	63	16	0	7	2	0	0	0	0	0	0	0	89
8:15	0	47	12	0	4	1	0	0	0	0	0	0	0	64	20:15	0	63	12	0	17	1	0	0	0	0	0	0	0	93
8:30	1	49	17	1	9	0	0	0	0	0	0	0	0	77	20:30	2	49	24	0	9	0	0	0	0	0	0	0	0	84
8:45	0	65	7	0	8	0	0	0	0	0	1	0	0	81	20:45	0	58	16	1	10	0	0	0	0	0	0	0	0	85
9:00	1	41	7	0	4	2	0	0	0	0	0	0	0	55	21:00	0	48	11	0	4	0	0	0	0	0	0	0	0	63
9:15	0	33	10	1	13	0	1	1	0	0	0	0	0	59	21:15	1	64	18	0	2	0	0	0	0	0	0	0	0	85
9:30	0	41	10	1	15	0	0	0	0	0	0	0	0	67	21:30	0	49	11	0	4	0	0	0	1	0	0	0	0	65
9:45	0	31	12	0	8	2	0	0	0	0	0	0	0	53	21:45	2	42	9	0	3	0	0	0	0	0	0	0	0	56
10:00	0	39	5	0	6	0	1	0	0	0	0	0	0	51	22:00	2	29	8	0	3	0	0	0	0	0	0	0	0	42
10:15	0	35	15	0	5	1	0	0	0	0	0	0	0	56	22:15	0	35	10	0	2	0	0	0	0	0	0	0	0	47
10:30	0	50	19	1	8	0	1	1	0	0	0	0	0	80	22:30	0	32	6	0	2	0	0	0	0	0	0	0	0	40
10:45	4	40	21	1	7	0	0	1	0	0	0	0	0	74	22:45	0	20	5	0	1	0	0	0	0	0	0	0	0	26
11:00	0	49	11	0	12	0	0	1	0	0	0	0	0	73	23:00	0	33	8	0	2	1	0	0	0	0	0	0	0	44
11:15	0	62	16	0	9	0	0	0	0	0	0	0	0	87	23:15	0	22	2	0	1	0	0	0	0	0	0	0	0	25
11:30	1	64	24	0	8	0	0	0	0	0	0	0	0	97	23:30	0	20	8	0	1	0	0	0	0	0	0	0	0	29
11:45	3	51	22	1	12	0	0	0	0	0	0	0	0	89	23:45	0	15	1	0	0	0	0	0	0	0	0	0	0	16
TOTAL	14	1,330	363	8	193	16	4	5	0	0	1	0	0	1,934	TOTAL	53	3,260	804	11	449	42	6	3	2	1	1	2	0	4,634

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	401

PM PEAK HOUR	5:30 PM
PM PEAK VOLUME	669

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	67	4,590	1,167	19	642	58	10	8	2	1	2	2	0	6,568
% OF TOTAL	1.0%	69.9%	17.8%	0.3%	9.8%	0.9%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	157	9,626	2,429	40	1,309	131	20	21	9	1	4	3	2	13,752
% OF TOTAL	2.4%	146.6%	37.0%	0.6%	19.9%	2.0%	0.3%	0.3%	0.1%	0.0%	0.1%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS6 Ironwood between Heacock and Davis

AM TIME	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	7	1	0	1	0	0	0	0	0	0	0	0	9
0:15	0	13	2	0	1	0	0	0	0	0	0	0	0	16
0:30	0	6	0	0	1	0	0	0	0	0	0	0	0	7
0:45	0	3	2	0	0	0	0	0	0	0	0	0	0	5
1:00	0	9	3	0	0	0	0	0	0	0	0	0	0	12
1:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:30	0	9	3	0	0	0	0	0	0	0	0	0	0	12
1:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6
2:00	0	1	2	0	0	0	0	0	0	0	0	0	0	3
2:15	0	4	0	0	1	0	0	0	0	0	0	0	0	5
2:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:45	0	5	1	0	1	0	0	0	0	0	0	0	0	7
3:00	0	12	1	0	3	0	0	0	0	0	0	0	0	16
3:15	0	9	6	0	2	0	0	0	0	0	0	0	0	17
3:30	1	10	2	0	2	0	0	0	0	0	0	0	0	15
3:45	0	16	4	0	3	0	0	0	0	0	0	0	0	23
4:00	1	13	4	0	7	0	0	0	0	0	0	0	0	25
4:15	0	28	5	0	5	0	0	0	0	0	0	0	0	38
4:30	0	23	9	0	5	1	0	0	0	0	0	0	0	38
4:45	0	34	5	0	10	0	0	0	0	0	0	0	0	49
5:00	0	29	9	0	6	0	0	0	0	0	0	0	0	44
5:15	0	40	9	0	6	0	0	0	0	0	0	0	0	55
5:30	2	40	17	0	15	0	0	0	0	0	0	0	0	74
5:45	0	27	13	0	5	1	0	0	0	0	0	0	0	46
6:00	0	38	10	0	11	1	0	0	0	0	0	0	0	60
6:15	4	39	15	0	10	0	0	0	0	0	0	0	0	68
6:30	0	59	20	1	9	0	0	0	0	0	0	0	0	89
6:45	1	73	14	0	16	2	0	0	0	0	0	0	0	106
7:00	0	84	23	1	11	0	0	0	0	0	0	0	0	119
7:15	0	111	23	0	15	4	0	0	0	0	0	0	0	153
7:30	7	105	25	2	14	3	3	1	0	0	0	0	1	161
7:45	3	147	41	2	12	2	1	1	0	0	0	0	0	209
8:00	2	116	29	0	17	1	0	0	0	0	0	0	0	165
8:15	0	82	25	1	11	1	0	0	0	0	0	0	0	120
8:30	1	64	9	0	14	2	0	0	0	0	0	0	0	90
8:45	3	69	18	2	6	1	0	0	0	0	0	0	0	99
9:00	0	58	19	0	9	1	0	1	0	0	1	0	0	89
9:15	0	65	15	0	9	1	0	1	0	0	0	0	0	91
9:30	0	61	11	0	9	0	0	0	0	0	0	0	0	81
9:45	0	38	19	1	5	1	0	0	0	0	0	0	0	64
10:00	0	56	14	0	9	0	0	0	0	0	0	0	0	79
10:15	2	45	16	0	7	0	0	1	0	0	0	0	0	71
10:30	0	52	19	0	8	1	0	0	1	0	0	0	0	81
10:45	0	48	14	1	12	1	0	0	0	0	0	0	0	76
11:00	2	40	7	1	7	1	0	0	0	0	0	0	0	58
11:15	0	44	12	0	5	0	0	0	0	0	0	0	0	61
11:30	1	70	28	0	9	3	0	0	0	0	0	0	0	111
11:45	2	86	26	1	8	1	0	0	0	0	0	0	0	124
TOTAL	32	2,000	550	13	317	29	4	5	1	0	1	0	1	2,953

PM Time	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	3	46	23	1	11	1	0	0	0	0	0	0	0	85
12:15	0	79	27	0	9	1	0	0	0	0	0	0	0	116
12:30	1	74	13	0	17	1	0	0	0	0	0	0	0	106
12:45	0	73	16	0	15	2	0	0	0	0	0	0	0	106
13:00	0	73	18	0	14	2	0	0	0	0	0	0	0	107
13:15	1	58	16	1	5	2	0	0	0	0	0	0	0	83
13:30	2	66	19	0	6	0	0	1	0	0	0	0	0	94
13:45	0	69	14	0	10	1	0	0	0	0	0	0	0	94
14:00	0	63	19	0	6	1	0	1	0	0	0	0	0	90
14:15	4	72	24	1	9	0	0	0	0	0	0	0	0	110
14:30	2	85	19	0	7	1	1	1	0	0	0	0	1	117
14:45	0	65	18	0	11	2	0	0	0	0	0	0	0	96
15:00	0	70	17	0	8	1	0	0	0	0	0	0	0	96
15:15	1	62	17	0	7	1	0	0	0	0	0	0	0	88
15:30	5	63	19	1	4	4	1	1	0	0	0	0	0	98
15:45	1	73	18	0	10	1	0	0	0	0	0	0	0	103
16:00	3	67	19	0	10	0	0	0	0	0	0	0	0	99
16:15	0	99	13	0	6	0	0	0	0	0	0	0	0	118
16:30	0	73	19	1	7	0	0	0	0	0	0	0	0	100
16:45	5	76	15	0	13	0	0	1	0	0	0	0	0	110
17:00	0	81	27	0	10	0	1	0	0	0	0	0	0	119
17:15	0	65	13	0	8	1	0	0	0	0	0	0	0	87
17:30	3	85	15	0	13	1	1	1	0	0	0	0	0	119
17:45	5	79	19	0	10	0	0	0	0	0	0	0	0	113
18:00	1	88	15	0	5	1	0	0	0	0	0	0	0	110
18:15	0	70	11	0	5	2	1	0	0	0	0	0	0	89
18:30	4	77	10	0	10	1	0	0	0	0	0	0	0	102
18:45	1	75	18	0	6	0	0	1	0	0	0	0	0	101
19:00	1	67	14	0	7	1	0	0	0	0	0	0	0	90
19:15	0	54	21	0	10	1	0	0	0	0	0	0	0	86
19:30	1	54	14	0	3	1	0	0	0	0	0	1	0	74
19:45	0	66	15	1	4	0	0	0	0	0	0	0	0	86
20:00	1	53	11	0	5	1	0	0	0	0	0	0	0	71
20:15	0	59	22	0	12	2	0	1	0	0	0	0	0	96
20:30	0	94	16	0	8	2	0	0	0	0	0	0	0	120
20:45	1	73	12	1	9	1	1	0	0	0	0	0	0	98
21:00	1	76	13	0	3	1	0	0	2	0	0	0	0	96
21:15	2	62	18	0	4	0	0	0	1	0	1	0	0	88
21:30	0	72	20	0	5	3	0	0	1	0	0	0	0	101
21:45	0	57	12	1	9	1	0	0	0	0	0	0	0	80
22:00	5	46	7	0	3	1	0	0	0	0	0	0	0	62
22:15	0	39	5	0	5	0	0	0	0	0	0	0	0	49
22:30	2	27	7	0	1	1	0	0	0	0	0	0	0	38
22:45	2	31	1	0	2	0	0	0	0	0	0	0	0	36
23:00	0	19	3	0	3	0	0	0	0	0	0	0	0	25
23:15	0	22	5	0	1	1	0	0	0	0	0	0	0	29
23:30	0	15	4	0	3	0	0	0	1	0	0	0	0	23
23:45	0	24	1	0	1	0	0	0	1	0	0	0	0	27
TOTAL	58	3,036	712	8	350	44	6	8	6	0	1	1	1	4,231

AM PEAK HOUR	7:15 AM	PM PEAK HOUR	4:15 PM
AM PEAK VOLUME	688	PM PEAK VOLUME	447

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: AM+PM	90	5,036	1,262	21	667	73	10	13	7	0	2	1	2	7,184
% OF TOTAL	1.3%	70.1%	17.6%	0.3%	9.3%	1.0%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS7 Ironwood east of Indian

AM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	17	0	0	0	0	0	0	0	0	0	0	0	17
0:15	0	16	1	0	0	0	0	0	0	0	0	0	0	17
0:30	0	10	1	0	0	0	0	0	0	0	0	0	0	11
0:45	0	10	0	0	0	0	0	0	0	0	0	0	0	10
1:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
1:15	0	8	1	0	0	0	0	0	0	0	0	0	0	9
1:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:45	1	10	0	0	0	0	0	0	0	0	0	0	0	11
2:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
2:15	0	4	1	0	0	0	0	0	0	0	0	0	0	5
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15	0	3	2	0	0	0	0	0	0	0	0	0	0	5
3:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6
4:30	0	9	1	0	0	0	0	0	0	0	0	0	0	10
4:45	0	14	4	0	1	0	0	0	0	0	0	0	0	19
5:00	0	12	3	0	0	0	0	0	0	0	0	0	0	15
5:15	1	13	2	1	0	0	0	0	0	0	0	0	0	17
5:30	0	12	2	0	0	0	0	0	0	0	0	0	0	14
5:45	1	19	1	0	0	0	0	0	0	0	0	0	0	21
6:00	0	14	2	0	0	0	0	0	0	0	0	0	0	16
6:15	0	18	6	0	2	0	0	0	0	0	0	0	0	26
6:30	0	26	4	1	2	0	0	0	0	0	0	0	0	33
6:45	0	46	6	0	1	0	1	0	0	0	0	0	0	54
7:00	0	67	3	0	6	0	0	0	0	1	0	0	0	77
7:15	3	120	14	2	3	3	0	0	0	0	0	0	0	145
7:30	1	125	5	0	3	1	0	0	1	0	1	0	0	137
7:45	1	105	9	0	3	0	1	0	0	0	0	0	0	119
8:00	0	74	6	0	1	2	0	0	0	0	0	0	0	83
8:15	3	55	5	0	0	1	0	0	1	0	1	0	0	66
8:30	0	56	6	1	3	0	0	0	0	0	0	0	0	66
8:45	0	51	1	0	2	1	0	0	0	0	0	0	0	55
9:00	0	44	6	0	2	2	0	0	0	0	0	0	0	54
9:15	0	48	12	0	4	0	1	1	0	0	0	0	0	66
9:30	1	40	11	1	2	0	0	0	0	0	0	0	0	55
9:45	2	42	6	0	1	0	0	0	0	0	0	1	0	52
10:00	0	36	4	0	4	1	0	0	0	0	0	0	0	45
10:15	0	39	4	0	0	2	0	0	0	0	0	0	0	45
10:30	2	54	5	1	1	0	0	0	0	0	0	0	0	63
10:45	0	66	3	1	2	1	0	0	0	1	1	0	0	75
11:00	1	71	13	0	2	3	0	0	0	0	0	0	0	90
11:15	3	97	15	0	2	1	0	0	0	1	0	0	0	119
11:30	0	97	7	0	3	2	0	0	0	0	0	0	0	109
11:45	1	78	15	1	3	1	0	0	0	0	0	0	0	99
TOTAL	21	1,665	188	9	53	21	3	1	2	3	3	1	0	1,970

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	484

PM	EASTBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	2	71	11	1	2	2	0	0	0	0	0	0	0	89
12:15	0	64	6	0	3	1	0	0	1	0	0	0	0	75
12:30	0	55	6	0	3	0	1	0	0	0	0	0	0	65
12:45	0	67	4	0	3	2	0	0	0	0	0	0	0	76
13:00	1	81	9	1	1	1	1	0	0	0	0	0	0	95
13:15	0	83	12	0	7	0	0	0	0	0	0	0	0	102
13:30	4	88	5	0	5	3	0	0	0	0	0	0	0	105
13:45	2	89	8	0	2	0	0	0	1	0	0	0	0	102
14:00	1	81	15	1	3	2	0	0	0	0	0	0	0	103
14:15	2	99	10	0	2	3	0	0	0	0	0	0	0	116
14:30	0	107	9	0	5	1	0	0	0	0	0	0	0	122
14:45	0	67	12	0	2	3	0	0	0	0	0	0	0	84
15:00	0	75	13	0	4	1	0	0	0	0	0	0	0	93
15:15	0	84	5	1	4	1	0	0	0	0	0	0	0	95
15:30	0	83	12	1	1	0	0	1	0	0	0	0	0	98
15:45	2	84	6	0	2	3	1	0	0	0	0	0	1	99
16:00	0	84	16	0	2	0	0	0	0	0	0	1	0	103
16:15	1	113	14	0	1	0	0	0	0	0	0	0	0	129
16:30	2	103	8	1	1	0	0	0	0	0	0	0	0	115
16:45	0	108	19	0	3	2	0	0	0	0	0	0	0	132
17:00	2	118	10	0	7	2	0	0	1	1	0	0	0	141
17:15	0	124	18	0	5	3	0	0	0	0	0	0	0	150
17:30	5	132	11	0	10	4	0	0	0	0	0	0	0	162
17:45	2	133	16	0	4	2	0	0	0	0	0	0	0	157
18:00	3	127	15	0	0	2	0	0	0	0	0	0	0	147
18:15	4	107	14	0	3	4	0	0	0	0	0	0	0	132
18:30	1	97	11	0	2	2	1	0	0	0	1	0	0	115
18:45	0	89	8	1	3	2	0	0	0	0	0	0	1	104
19:00	0	76	9	0	1	2	0	0	0	0	0	1	0	89
19:15	1	77	12	0	1	1	0	0	0	0	0	0	1	93
19:30	2	80	7	0	1	0	0	0	0	0	0	0	0	90
19:45	2	68	10	1	2	2	0	0	0	0	0	0	0	85
20:00	2	66	7	0	4	2	0	0	0	0	0	0	0	81
20:15	0	71	15	0	1	0	0	0	0	0	0	0	0	87
20:30	0	64	8	0	1	0	0	0	0	0	0	0	0	73
20:45	0	61	8	1	1	1	0	0	0	0	0	0	0	72
21:00	0	46	5	0	0	2	0	0	0	0	0	0	0	53
21:15	0	68	5	0	1	0	0	0	0	0	0	0	0	74
21:30	0	59	3	0	1	1	0	0	0	0	0	0	0	64
21:45	0	39	3	0	1	0	0	0	0	0	0	0	0	43
22:00	0	35	2	0	1	0	0	0	0	0	0	0	0	38
22:15	0	36	4	0	0	0	0	0	0	0	0	0	0	40
22:30	0	23	1	0	0	1	0	0	0	0	0	0	0	25
22:45	0	20	0	0	0	0	0	0	0	0	0	0	0	20
23:00	0	25	1	0	1	1	0	0	0	0	0	0	0	28
23:15	0	22	2	0	1	0	0	0	0	0	0	0	0	25
23:30	0	12	1	0	0	0	0	0	0	0	0	0	0	13
23:45	0	12	1	0	0	0	0	0	0	0	0	0	0	13
TOTAL	41	3,573	407	9	108	59	4	1	3	1	1	2	3	4,212

PM PEAK HOUR	5:15 PM
PM PEAK VOLUME	616

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	62	5,238	595	18	161	80	7	2	5	4	4	3	3	6,182
% OF TOTAL	1.0%	84.7%	9.6%	0.3%	2.6%	1.3%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	96	10,700	1,499	36	493	127	23	7	14	6	7	4	4	13,016
% OF TOTAL	1.6%	173.1%	24.2%	0.6%	8.0%	2.1%	0.4%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS7 Ironwood east of Indian

AM TIME	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	8	2	0	0	0	0	0	0	0	0	0	0	10
0:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7
0:30	0	8	0	0	0	0	0	0	0	0	0	0	0	8
0:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00	0	13	0	0	0	0	0	0	0	0	0	0	0	13
1:15	0	6	1	0	0	0	0	0	0	0	0	0	0	7
1:30	0	9	1	0	0	0	0	0	0	0	0	0	0	10
1:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
2:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:15	0	6	0	0	1	0	0	0	0	0	0	0	0	7
2:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00	0	6	2	0	0	0	0	0	0	0	0	0	0	8
3:15	0	7	3	0	0	0	0	0	0	0	0	0	0	10
3:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:45	0	12	6	0	0	1	0	0	0	0	0	0	0	19
4:00	0	12	4	0	2	0	0	0	0	0	0	0	0	18
4:15	0	9	2	0	0	0	0	0	0	0	0	0	0	11
4:30	0	13	2	0	0	1	0	0	0	0	0	0	0	16
4:45	0	15	4	0	1	0	0	0	0	0	0	0	0	20
5:00	0	22	4	0	0	0	0	0	0	0	0	0	0	26
5:15	0	18	7	0	2	0	0	0	0	0	0	0	0	27
5:30	0	31	15	0	3	1	0	0	0	0	0	0	0	50
5:45	0	18	5	0	2	1	0	0	0	0	0	0	0	26
6:00	0	30	5	0	3	0	0	0	0	0	0	0	0	38
6:15	0	34	8	0	3	0	0	0	0	0	0	0	0	45
6:30	0	51	12	1	3	0	0	0	0	0	0	0	0	67
6:45	0	58	10	0	10	0	0	0	0	0	0	0	0	78
7:00	0	106	15	0	9	0	0	0	0	0	0	0	0	130
7:15	2	118	16	0	6	1	0	1	0	0	0	0	0	144
7:30	1	139	23	2	7	2	1	1	0	1	0	0	1	178
7:45	4	192	31	1	13	4	0	1	0	0	0	1	0	247
8:00	0	115	24	0	9	2	3	0	0	0	0	0	0	153
8:15	0	80	10	1	6	0	0	0	0	0	0	0	0	97
8:30	1	65	12	1	6	1	0	0	0	0	0	0	0	86
8:45	0	85	11	0	4	0	0	0	0	0	0	0	0	100
9:00	2	53	11	0	5	0	0	0	0	0	1	0	0	72
9:15	0	56	7	0	5	0	1	0	0	0	0	0	0	69
9:30	0	54	9	0	2	0	1	0	0	0	0	0	0	66
9:45	2	43	14	0	2	0	0	0	0	0	0	0	0	61
10:00	0	63	9	0	2	0	0	0	0	0	0	0	0	74
10:15	0	51	14	0	2	1	0	0	0	0	0	0	0	68
10:30	0	59	10	0	5	2	0	0	0	0	0	0	0	76
10:45	0	62	16	2	2	0	1	0	0	0	0	0	0	83
11:00	0	39	10	0	3	1	0	0	0	0	0	0	0	53
11:15	0	58	5	0	5	0	1	0	0	0	0	0	0	69
11:30	2	114	24	1	9	1	0	0	0	0	0	0	0	151
11:45	1	99	17	0	2	1	1	0	0	0	0	0	0	121
TOTAL	15	2,065	382	9	134	20	9	3	0	1	1	1	1	2,641

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	722

PM Time	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	77	22	1	4	1	0	0	0	0	0	0	0	105
12:15	0	98	18	0	4	1	0	0	0	0	0	0	0	121
12:30	0	79	10	0	5	1	0	0	0	0	0	0	0	95
12:45	0	63	17	0	5	2	0	0	0	0	0	0	0	87
13:00	1	76	12	0	8	0	0	0	0	0	0	0	0	97
13:15	0	79	7	0	7	0	1	0	0	0	0	0	0	94
13:30	0	67	14	0	5	0	0	1	0	0	0	0	0	87
13:45	0	90	13	0	3	0	0	0	0	0	0	0	0	106
14:00	0	62	17	0	6	5	0	0	0	0	0	0	0	90
14:15	0	87	15	1	5	2	0	0	0	0	0	0	0	110
14:30	2	86	16	0	1	1	0	0	0	0	0	0	0	106
14:45	0	79	8	0	10	0	0	1	0	0	0	0	0	98
15:00	0	72	15	0	3	1	0	0	0	0	0	0	0	91
15:15	0	81	13	0	2	0	0	0	0	0	0	0	0	96
15:30	2	80	12	1	7	3	2	0	0	0	0	0	0	107
15:45	0	76	12	0	5	0	0	0	0	0	1	0	0	94
16:00	0	72	13	0	9	0	1	0	0	0	0	0	0	95
16:15	1	79	16	0	5	0	0	0	0	0	0	0	0	101
16:30	2	65	9	1	4	0	0	0	0	0	0	0	0	81
16:45	0	80	21	0	7	0	0	0	0	0	0	0	0	108
17:00	1	79	10	0	6	0	0	0	0	0	0	0	0	96
17:15	1	74	13	0	2	0	0	0	0	0	0	0	0	90
17:30	0	91	18	0	6	0	1	0	0	0	0	0	0	116
17:45	1	78	17	1	6	3	0	0	0	0	0	0	0	106
18:00	0	84	9	0	8	0	1	0	0	0	0	0	0	102
18:15	0	88	9	0	4	0	0	0	0	0	0	0	0	101
18:30	0	80	11	0	4	0	1	0	0	0	0	0	0	96
18:45	0	61	11	1	5	0	0	0	0	0	0	0	0	78
19:00	0	99	13	0	4	0	0	0	0	0	0	0	0	116
19:15	0	72	17	0	6	0	0	0	0	0	0	0	0	95
19:30	0	71	8	0	2	0	0	0	0	0	1	0	0	82
19:45	0	68	7	1	0	1	0	0	0	0	0	0	0	77
20:00	1	73	8	0	7	0	0	0	0	0	0	0	0	89
20:15	0	82	17	0	3	1	0	0	0	0	0	0	0	103
20:30	0	94	9	0	4	0	0	0	0	1	0	0	0	108
20:45	0	94	9	1	3	0	0	0	0	0	0	0	0	107
21:00	2	91	9	0	3	2	0	0	1	0	0	0	0	108
21:15	0	79	9	0	2	0	0	0	2	0	0	0	0	92
21:30	2	78	11	0	3	0	0	0	2	0	0	0	0	96
21:45	1	69	5	1	4	1	0	0	0	0	0	0	0	81
22:00	1	47	4	0	0	1	0	0	1	0	0	0	0	54
22:15	0	50	5	0	4	1	0	0	0	0	0	0	0	60
22:30	0	35	3	0	1	0	0	0	0	0	0	0	0	39
22:45	0	29	5	0	3	0	0	0	0	0	0	0	0	37
23:00	0	19	2	0	1	0	0	0	0	0	0	0	0	22
23:15	1	26	1	0	0	0	0	0	1	0	0	0	0	29
23:30	0	20	1	0	1	0	0	0	1	0	0	0	0	23
23:45	0	18	1	0	1	0	0	0	1	0	0	0	0	21
TOTAL	19	3,397	522	9	198	27	7	2	9	1	2	0	0	4,193

PM PEAK HOUR	8:15 PM
PM PEAK VOLUME	426

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: AM+PM	34	5,462	904	18	332	47	16	5	9	2	3	1	1	6,834
% OF TOTAL	0.5%	79.9%	13.2%	0.3%	4.9%	0.7%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	100.0%

Class 1 2 3 4 5 6 7 8 9 10 11 12 13

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS8 Hemlock west of Heacock

AM	EASTBOUND														PM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	14	0	0	0	0	0	0	0	0	0	0	0	14	12:00	0	9	2	0	0	0	0	0	0	0	0	0	0	11
0:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7	12:15	1	7	1	0	2	0	0	0	0	0	0	0	0	11
0:30	0	11	0	0	0	0	0	0	0	0	0	0	0	11	12:30	7	18	2	0	1	0	0	0	0	0	0	0	0	28
0:45	0	5	1	0	0	0	0	0	0	0	0	0	0	6	12:45	7	11	0	0	1	0	0	0	0	0	0	0	0	19
1:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5	13:00	1	14	2	0	1	0	0	0	0	0	0	0	0	18
1:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2	13:15	11	20	0	0	0	0	0	0	0	0	0	0	0	31
1:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4	13:30	16	21	2	0	2	0	0	0	0	0	0	0	0	41
1:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6	13:45	3	12	3	0	1	0	0	0	0	0	0	0	0	19
2:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4	14:00	4	17	2	0	0	0	0	0	0	0	0	0	0	23
2:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2	14:15	4	5	3	0	0	0	0	0	0	0	0	0	0	12
2:30	0	6	0	0	1	0	0	0	0	0	0	0	0	7	14:30	5	15	2	0	0	0	0	0	0	0	0	0	0	22
2:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5	14:45	1	11	3	0	0	0	0	0	0	0	0	0	0	15
3:00	0	6	2	0	0	0	0	0	0	0	0	0	0	8	15:00	3	13	1	0	0	0	0	0	0	0	0	0	0	17
3:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2	15:15	2	8	1	0	0	0	0	0	0	0	0	0	0	11
3:30	0	7	0	0	0	0	0	0	0	0	0	0	0	7	15:30	8	17	2	0	1	0	0	0	0	0	0	0	0	28
3:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4	15:45	4	12	3	0	0	0	0	0	0	0	0	0	0	19
4:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5	16:00	0	68	1	0	1	0	0	0	0	0	0	0	0	70
4:15	0	9	2	0	0	0	0	0	0	0	0	0	0	11	16:15	4	68	2	0	1	0	0	0	0	0	0	1	0	76
4:30	0	9	0	0	0	0	0	0	0	0	0	0	0	9	16:30	6	74	4	0	2	0	0	0	0	0	0	0	0	86
4:45	0	10	2	0	1	0	0	0	0	0	0	0	0	13	16:45	5	63	3	0	0	0	0	0	0	0	0	0	0	71
5:00	0	12	4	0	1	0	0	0	0	0	0	0	0	17	17:00	3	64	1	0	1	0	0	0	0	0	0	0	0	69
5:15	0	12	0	0	0	0	0	0	0	0	0	0	0	12	17:15	2	65	2	0	0	1	0	0	0	0	0	0	0	70
5:30	0	19	4	0	0	0	0	0	0	0	0	0	0	23	17:30	3	62	4	0	0	0	0	0	0	0	0	0	0	69
5:45	0	14	1	0	0	0	0	0	0	0	0	0	0	15	17:45	2	52	2	0	0	0	0	0	0	0	0	1	0	57
6:00	0	7	6	0	1	0	0	0	0	0	0	0	0	14	18:00	2	16	4	0	0	0	0	0	0	0	0	0	0	22
6:15	0	15	2	0	1	0	0	0	0	0	0	0	0	18	18:15	2	10	4	0	0	0	0	1	0	0	0	0	0	17
6:30	0	15	3	0	1	0	0	0	0	0	0	0	0	19	18:30	3	15	1	0	0	0	0	0	0	0	0	0	0	19
6:45	0	24	2	0	1	0	0	0	0	0	0	0	0	27	18:45	4	12	4	0	1	0	0	0	0	0	0	0	0	21
7:00	0	35	2	0	1	0	0	0	0	0	0	0	0	38	19:00	1	7	1	0	1	0	0	0	0	0	0	0	0	10
7:15	0	40	4	0	5	0	0	0	0	0	0	0	0	49	19:15	1	10	4	0	0	0	0	0	0	0	0	0	0	15
7:30	0	64	3	0	0	1	0	0	0	0	0	0	0	68	19:30	4	12	2	0	1	0	0	0	0	0	0	0	0	19
7:45	0	50	5	0	0	0	0	0	0	0	0	0	0	55	19:45	1	10	1	0	0	1	0	0	0	0	0	0	0	13
8:00	0	37	3	0	1	0	0	0	0	0	0	0	0	41	20:00	2	7	1	0	0	0	0	0	0	0	0	0	0	10
8:15	0	41	6	0	1	0	0	0	0	0	0	0	0	48	20:15	2	14	0	0	0	0	0	0	0	0	0	0	0	16
8:30	0	43	7	0	0	1	0	0	0	0	0	0	0	51	20:30	2	15	2	0	0	0	0	0	0	0	0	0	0	19
8:45	0	44	3	0	2	0	0	0	0	0	0	0	0	49	20:45	1	8	2	0	0	0	0	0	0	0	0	0	0	11
9:00	0	29	5	0	2	1	0	0	0	0	0	0	0	37	21:00	5	13	0	0	0	0	0	0	0	0	0	0	0	18
9:15	0	30	3	0	2	0	0	0	0	0	0	0	0	35	21:15	3	8	1	0	1	0	0	0	0	0	0	0	0	13
9:30	0	31	6	0	1	0	0	0	0	0	0	0	0	38	21:30	4	16	0	0	0	0	0	0	0	0	0	0	0	20
9:45	0	41	1	0	2	0	0	0	0	0	0	0	0	44	21:45	2	7	1	0	0	0	0	0	0	0	0	0	0	10
10:00	0	31	6	0	0	0	0	0	0	0	0	0	0	37	22:00	2	4	0	1	0	0	0	0	0	0	0	0	0	7
10:15	0	26	7	0	1	0	0	0	0	0	0	0	0	34	22:15	1	9	1	0	0	0	0	0	0	0	0	0	0	11
10:30	0	37	3	1	0	0	0	0	0	0	0	0	0	41	22:30	1	2	2	0	0	0	0	0	0	0	0	0	0	5
10:45	0	30	7	0	2	0	0	0	0	0	0	0	0	39	22:45	3	12	0	0	0	0	0	0	0	0	0	0	0	15
11:00	3	19	2	0	0	0	0	0	0	0	0	0	0	24	23:00	1	3	0	0	0	0	0	0	0	0	0	0	0	4
11:15	6	24	2	0	2	0	0	0	0	0	0	0	0	34	23:15	1	11	2	0	0	0	0	0	0	0	0	0	0	14
11:30	3	12	3	0	0	0	0	0	0	0	0	0	0	18	23:30	0	7	1	0	0	0	0	0	0	0	0	0	0	8
11:45	2	5	0	0	1	0	0	0	0	0	0	0	0	8	23:45	1	5	1	0	0	0	0	0	0	0	0	0	0	7
TOTAL	14	910	107	1	30	3	0	0	0	0	0	0	0	1,065	TOTAL	151	959	83	1	18	2	0	1	0	0	0	2	0	1,217

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	213

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	303

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	165	1,869	190	2	48	5	0	1	0	0	0	2	0	2,282
% OF TOTAL	7.2%	81.9%	8.3%	0.1%	2.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	193	4,645	449	4	103	29	12	1	2	0	0	2	1	5,441
% OF TOTAL	8.5%	203.5%	19.7%	0.2%	4.5%	1.3%	0.5%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS8 Hemlock west of Heacock

AM TIME	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
0:15	0	6	0	0	0	0	0	0	0	0	0	0	0	6
0:30	0	10	0	0	1	0	0	0	0	0	0	0	0	11
0:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:00	0	3	0	0	0	1	0	0	0	0	0	0	0	4
1:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:30	0	6	0	0	0	0	0	0	0	0	0	0	0	6
1:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:15	0	8	0	0	0	0	0	0	0	0	0	0	0	8
2:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
3:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00	0	6	1	0	2	0	0	0	0	0	0	0	0	9
4:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:30	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:45	0	8	0	0	2	0	0	0	0	0	0	0	0	10
5:00	0	18	1	0	1	0	0	0	0	0	0	0	0	20
5:15	0	6	2	0	0	0	0	0	0	0	0	0	0	8
5:30	0	8	2	0	0	0	0	0	0	0	0	0	0	10
5:45	0	8	1	0	0	0	0	0	0	0	0	0	0	9
6:00	0	10	2	0	0	0	0	0	0	0	0	0	0	12
6:15	0	14	3	0	2	0	0	0	0	0	0	0	0	19
6:30	0	6	3	0	2	0	0	0	1	0	0	0	0	12
6:45	0	24	1	0	2	0	0	0	0	0	0	0	0	27
7:00	0	29	3	0	1	0	1	0	0	0	0	0	0	34
7:15	0	33	3	0	1	0	0	0	0	0	0	0	1	38
7:30	1	38	6	0	1	1	0	0	0	0	0	0	0	47
7:45	0	53	7	0	0	0	0	0	0	0	0	0	0	60
8:00	1	45	6	0	1	0	0	0	0	0	0	0	0	53
8:15	0	41	4	0	0	0	1	0	0	0	0	0	0	46
8:30	1	32	1	0	0	2	0	0	0	0	0	0	0	36
8:45	0	30	6	0	1	0	0	0	0	0	0	0	0	37
9:00	0	33	1	0	1	1	0	0	0	0	0	0	0	36
9:15	0	29	6	0	2	0	0	0	0	0	0	0	0	37
9:30	0	26	10	0	0	0	0	0	0	0	0	0	0	36
9:45	0	34	4	0	0	2	0	0	0	0	0	0	0	40
10:00	0	30	0	0	2	0	0	0	0	0	0	0	0	32
10:15	1	29	4	0	0	1	0	0	0	0	0	0	0	35
10:30	0	31	6	0	0	0	0	0	0	0	0	0	0	37
10:45	0	34	4	0	2	0	0	0	0	0	0	0	0	40
11:00	0	34	5	0	2	1	0	0	0	0	0	0	0	42
11:15	0	40	0	0	0	0	0	0	0	0	0	0	0	40
11:30	0	34	1	0	0	0	2	0	0	0	0	0	0	37
11:45	1	40	3	0	0	0	1	0	1	0	0	0	0	46
TOTAL	5	885	96	0	26	9	5	0	2	0	0	0	1	1,029

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	206

PM Time	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	28	4	0	1	1	0	0	0	0	0	0	0	34
12:15	0	46	3	0	2	0	0	0	0	0	0	0	0	51
12:30	1	53	3	0	3	1	2	0	0	0	0	0	0	63
12:45	1	40	7	0	2	0	1	0	0	0	0	0	0	51
13:00	1	43	6	1	0	1	0	0	0	0	0	0	0	52
13:15	0	39	5	0	1	0	0	0	0	0	0	0	0	45
13:30	1	39	2	0	0	0	0	0	0	0	0	0	0	42
13:45	0	36	5	0	2	0	0	0	0	0	0	0	0	43
14:00	0	35	2	0	0	1	0	0	0	0	0	0	0	38
14:15	1	42	5	0	0	0	0	0	0	0	0	0	0	48
14:30	1	37	2	0	1	0	0	0	0	0	0	0	0	41
14:45	0	49	7	0	0	1	0	0	0	0	0	0	0	57
15:00	0	53	5	0	0	0	0	0	0	0	0	0	0	58
15:15	1	50	2	0	0	0	0	0	0	0	0	0	0	53
15:30	0	52	7	0	2	1	1	0	0	0	0	0	0	63
15:45	1	48	3	0	0	0	0	0	0	0	0	0	0	52
16:00	1	44	2	0	0	0	0	0	0	0	0	0	0	47
16:15	1	50	3	0	1	0	0	0	0	0	0	0	0	55
16:30	1	61	4	0	0	1	0	0	0	0	0	0	0	67
16:45	0	51	4	0	1	1	0	0	0	0	0	0	0	57
17:00	0	52	4	0	1	0	0	0	0	0	0	0	0	57
17:15	2	42	6	0	0	1	0	0	0	0	0	0	0	51
17:30	0	49	5	0	0	0	0	0	0	0	0	0	0	54
17:45	1	47	3	0	1	0	0	0	0	0	0	0	0	52
18:00	0	45	1	0	1	0	1	0	0	0	0	0	0	48
18:15	3	52	2	1	0	1	0	0	0	0	0	0	0	59
18:30	0	40	1	0	0	0	0	0	0	0	0	0	0	41
18:45	1	40	5	0	1	0	0	0	0	0	0	0	0	47
19:00	1	47	7	0	0	2	1	0	0	0	0	0	0	58
19:15	0	44	3	0	3	0	0	0	0	0	0	0	0	50
19:30	1	38	6	0	0	0	0	0	0	0	0	0	0	45
19:45	0	41	2	0	1	0	0	0	0	0	0	0	0	44
20:00	0	42	4	0	0	0	0	0	0	0	0	0	0	46
20:15	1	50	5	0	1	0	0	0	0	0	0	0	0	57
20:30	0	41	6	0	0	0	0	0	0	0	0	0	0	47
20:45	0	42	5	0	2	1	0	0	0	0	0	0	0	50
21:00	0	25	0	0	0	0	0	0	0	0	0	0	0	25
21:15	1	42	1	0	0	0	0	0	0	0	0	0	0	44
21:30	0	41	2	0	0	0	0	0	0	0	0	0	0	43
21:45	0	28	3	0	0	0	0	0	0	0	0	0	0	31
22:00	0	20	1	0	0	0	0	0	0	0	0	0	0	21
22:15	0	35	4	0	0	0	0	0	0	0	0	0	0	39
22:30	0	19	0	0	0	1	0	0	0	0	0	0	0	20
22:45	0	25	1	0	0	1	0	0	0	0	0	0	0	27
23:00	0	14	2	0	0	0	1	0	0	0	0	0	0	17
23:15	0	10	1	0	1	0	0	0	0	0	0	0	0	12
23:30	1	14	2	0	1	0	0	0	0	0	0	0	0	18
23:45	0	10	0	0	0	0	0	0	0	0	0	0	0	10
TOTAL	23	1,891	163	2	29	15	7	0	0	0	0	0	0	2,130

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	236

TOTAL: AM+PM	28	2,776	259	2	55	24	12	0	2	0	0	0	1	3,159
% OF TOTAL	0.9%	87.9%	8.2%	0.1%	1.7%	0.8%	0.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS9 Hemlock between Heacock and Davis

AM	EASTBOUND														PM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	6	0	0	1	0	0	0	0	0	0	0	0	7	12:00	1	49	4	0	2	0	0	1	0	0	0	0	0	57
0:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7	12:15	0	40	2	0	3	0	0	0	0	0	0	0	0	45
0:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1	12:30	0	32	7	0	2	0	0	0	0	0	0	0	0	41
0:45	0	8	2	0	0	0	0	0	0	0	0	0	0	10	12:45	0	47	5	0	0	0	0	0	0	0	0	0	0	52
1:00	0	4	0	0	1	0	0	0	0	0	0	0	0	5	13:00	0	43	7	1	4	0	0	0	0	0	0	0	0	55
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:15	0	40	6	1	2	0	0	0	0	0	0	0	0	49
1:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4	13:30	0	52	7	0	4	0	0	0	0	0	0	0	0	63
1:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5	13:45	0	37	5	0	1	0	0	0	1	0	0	0	0	44
2:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3	14:00	0	38	8	1	2	0	0	0	0	0	0	0	0	49
2:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6	14:15	1	32	5	0	2	0	0	0	0	0	0	0	0	40
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14:30	0	39	5	0	2	0	0	1	0	0	0	0	0	47
2:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5	14:45	0	43	3	0	0	0	0	0	0	0	0	0	0	46
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	15:00	0	36	4	0	1	0	0	0	0	0	0	0	0	41
3:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2	15:15	1	28	5	1	0	0	0	0	0	0	0	0	0	35
3:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5	15:30	0	46	5	0	3	0	0	0	0	0	0	0	0	54
3:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6	15:45	0	36	3	0	1	0	0	0	0	0	0	0	0	40
4:00	0	6	1	0	1	0	0	0	0	0	0	0	0	8	16:00	0	49	8	0	2	0	0	0	0	0	0	0	0	59
4:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16:15	1	47	6	0	4	0	0	0	0	0	0	0	0	58
4:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16:30	1	48	5	1	3	0	0	0	1	0	0	0	0	59
4:45	0	3	0	0	6	0	0	0	0	0	0	0	0	9	16:45	0	52	6	0	3	0	0	0	0	0	0	0	0	61
5:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5	17:00	0	58	6	1	1	0	0	0	0	0	0	0	0	66
5:15	0	6	0	0	0	1	0	0	0	0	0	0	0	7	17:15	0	30	5	0	1	0	0	0	1	0	0	0	0	37
5:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3	17:30	0	51	5	1	2	0	0	0	0	0	0	0	0	59
5:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5	17:45	0	53	9	0	1	0	0	0	0	0	0	0	0	63
6:00	0	3	2	0	1	0	0	0	0	0	0	0	0	6	18:00	2	55	4	0	0	0	0	1	1	0	0	0	0	63
6:15	0	5	1	1	0	0	0	0	0	0	0	0	0	7	18:15	0	51	7	0	1	0	0	0	0	0	0	0	0	59
6:30	0	8	3	0	0	0	0	0	0	0	0	0	0	11	18:30	0	59	6	1	1	0	0	0	0	0	0	0	0	67
6:45	0	12	0	0	1	0	0	0	0	0	0	0	0	13	18:45	0	55	5	0	0	0	0	0	2	0	0	0	0	62
7:00	0	14	0	0	4	1	0	0	0	0	0	0	0	19	19:00	0	54	3	0	1	0	0	0	0	0	0	0	0	58
7:15	1	11	0	1	2	0	0	0	0	0	0	0	0	15	19:15	0	28	6	0	1	0	0	0	0	0	0	0	0	35
7:30	0	38	1	0	0	0	0	0	0	0	0	0	0	39	19:30	0	42	4	1	1	0	0	0	0	0	0	0	0	48
7:45	0	39	3	0	1	0	0	0	0	0	0	0	0	43	19:45	0	31	2	0	1	0	0	0	0	0	0	0	0	34
8:00	0	21	3	0	0	0	0	0	1	0	0	0	0	25	20:00	0	31	3	0	1	0	0	0	0	0	0	0	0	35
8:15	0	21	6	0	2	0	0	0	0	0	0	0	0	29	20:15	0	28	1	0	0	0	0	0	0	0	0	0	0	29
8:30	0	23	3	1	1	0	0	0	0	0	0	0	0	28	20:30	0	29	3	1	2	0	0	0	0	0	0	0	0	35
8:45	0	32	3	0	1	0	0	0	0	0	0	0	0	36	20:45	0	38	6	0	1	0	0	0	0	0	0	0	0	45
9:00	0	31	3	1	0	1	0	0	0	0	0	0	0	36	21:00	0	25	2	0	2	0	0	0	0	0	0	0	0	29
9:15	0	22	4	0	2	0	0	0	1	0	0	0	0	29	21:15	0	28	3	0	1	0	0	0	0	0	0	0	0	32
9:30	0	35	7	1	0	0	0	0	0	0	0	0	0	43	21:30	0	22	5	1	0	0	0	0	0	0	0	0	0	28
9:45	0	41	1	0	1	0	0	0	0	0	0	0	0	43	21:45	0	25	2	0	0	0	0	0	0	0	0	0	0	27
10:00	0	34	6	0	2	0	0	0	1	0	0	0	0	43	22:00	0	21	0	0	0	0	0	0	1	0	0	0	0	22
10:15	0	38	6	0	0	0	0	0	0	0	0	0	0	44	22:15	0	23	3	0	1	0	0	0	0	0	0	0	0	27
10:30	0	28	5	0	1	1	0	0	0	0	0	0	0	35	22:30	0	29	2	0	0	0	0	0	0	0	0	0	0	31
10:45	0	34	7	1	3	0	0	0	0	0	0	0	0	45	22:45	0	25	1	0	0	0	0	0	0	0	0	0	0	26
11:00	0	41	4	0	3	1	0	0	0	0	0	0	0	49	23:00	0	18	0	0	0	0	0	0	0	0	0	0	0	18
11:15	0	52	8	0	3	0	0	1	0	0	0	0	0	64	23:15	0	14	3	0	2	0	0	0	0	0	0	0	0	19
11:30	0	29	11	0	1	0	0	0	0	0	0	0	0	41	23:30	1	23	2	0	0	0	0	0	0	0	0	0	0	26
11:45	0	49	7	1	2	0	0	0	0	0	0	0	0	59	23:45	0	15	5	0	1	0	0	0	0	0	0	0	0	21
TOTAL	1	757	98	7	40	5	0	1	3	0	0	0	0	912	TOTAL	8	1,795	209	11	63	0	0	3	7	0	0	0	0	2,096

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	213

PM PEAK HOUR	5:45 PM
PM PEAK VOLUME	252

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	9	2,552	307	18	103	5	0	4	10	0	0	0	0	3,008
% OF TOTAL	0.3%	84.8%	10.2%	0.6%	3.4%	0.2%	0.0%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	12	4,963	620	23	183	8	1	6	16	0	0	0	0	5,832
% OF TOTAL	0.4%	165.0%	20.6%	0.8%	6.1%	0.3%	0.0%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS9 Hemlock between Heacock and Davis

AM	WESTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5
0:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:30	0	1	1	0	0	0	0	0	0	0	0	0	0	2
2:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:15	0	6	1	0	2	0	0	0	0	0	0	0	0	9
3:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:45	0	6	1	0	0	0	0	0	0	0	0	0	0	7
4:00	0	8	2	0	1	0	0	0	0	0	0	0	0	11
4:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6
4:30	0	12	4	0	0	0	0	0	0	0	0	0	0	16
4:45	0	5	0	0	1	0	0	0	0	0	0	0	0	6
5:00	0	9	1	0	0	0	0	0	0	0	0	0	0	10
5:15	0	9	1	0	0	0	0	0	0	0	0	0	0	10
5:30	0	17	4	0	0	0	0	0	0	0	0	0	0	21
5:45	0	6	0	0	6	1	0	0	0	0	0	0	0	13
6:00	0	12	3	0	0	0	0	0	0	0	0	0	0	15
6:15	0	12	2	0	1	0	0	0	0	0	0	0	0	15
6:30	0	7	2	0	0	0	0	0	0	0	0	0	0	9
6:45	0	16	1	0	2	0	0	0	0	0	0	0	0	19
7:00	0	15	1	0	0	0	0	0	0	0	0	0	0	16
7:15	0	21	1	0	0	0	0	0	0	0	0	0	0	22
7:30	0	27	6	0	0	0	0	0	0	0	0	0	0	33
7:45	0	30	6	0	1	1	0	0	0	0	0	0	0	38
8:00	0	28	2	0	0	0	0	0	0	0	0	0	0	30
8:15	0	39	6	0	0	0	0	0	0	0	0	0	0	45
8:30	0	22	5	0	1	0	0	0	0	0	0	0	0	28
8:45	0	19	10	0	2	0	0	0	0	0	0	0	0	31
9:00	0	17	0	0	1	0	0	0	0	0	0	0	0	18
9:15	0	27	3	0	1	0	0	0	0	0	0	0	0	31
9:30	0	38	7	0	2	0	0	0	0	0	0	0	0	47
9:45	0	24	4	0	1	0	0	0	0	0	0	0	0	29
10:00	1	31	4	0	3	0	0	0	0	0	0	0	0	39
10:15	0	23	6	0	0	0	0	0	1	0	0	0	0	30
10:30	0	36	8	0	0	1	0	0	0	0	0	0	0	45
10:45	0	28	6	0	2	0	0	0	0	0	0	0	0	36
11:00	0	33	9	0	2	0	0	0	0	0	0	0	0	44
11:15	0	41	3	0	3	0	0	0	0	0	0	0	0	47
11:30	0	40	8	0	0	0	1	0	0	0	0	0	0	49
11:45	0	45	5	0	0	0	0	0	0	0	0	0	0	50
TOTAL	1	751	125	0	32	3	1	0	1	0	0	0	0	914

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	190

PM	WESTBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	41	6	0	2	0	0	0	0	0	0	0	0	49
12:15	0	35	5	0	4	0	0	0	0	0	0	0	0	44
12:30	1	53	5	0	3	0	0	1	0	0	0	0	0	63
12:45	0	43	8	0	3	0	0	0	0	0	0	0	0	54
13:00	0	44	3	1	0	0	0	0	0	0	0	0	0	48
13:15	0	42	3	0	5	0	0	0	0	0	0	0	0	50
13:30	0	39	5	0	0	0	0	0	0	0	0	0	0	44
13:45	0	36	4	0	0	0	0	0	0	0	0	0	0	40
14:00	0	33	5	0	0	0	0	0	1	0	0	0	0	39
14:15	0	45	1	1	3	0	0	0	0	0	0	0	0	50
14:30	0	24	4	0	0	0	0	0	0	0	0	0	0	28
14:45	0	28	7	0	1	0	0	0	0	0	0	0	0	36
15:00	0	46	8	0	1	0	0	0	0	0	0	0	0	55
15:15	0	40	3	0	0	0	0	0	0	0	0	0	0	43
15:30	0	41	10	1	4	0	0	0	0	0	0	0	0	56
15:45	0	23	4	1	1	0	0	0	0	0	0	0	0	29
16:00	0	32	3	0	2	0	0	0	0	0	0	0	0	37
16:15	0	36	3	0	1	0	0	0	0	0	0	0	0	40
16:30	0	37	4	0	2	0	0	0	0	0	0	0	0	43
16:45	0	39	8	0	1	0	0	0	1	0	0	0	0	49
17:00	0	38	6	1	2	0	0	0	0	0	0	0	0	47
17:15	0	33	4	0	1	0	0	0	0	0	0	0	0	38
17:30	0	28	5	0	0	0	0	0	0	0	0	0	0	33
17:45	0	46	4	0	1	0	0	0	0	0	0	0	0	51
18:00	0	42	7	0	1	0	0	0	1	0	0	0	0	51
18:15	1	35	3	0	1	0	0	0	0	0	0	0	0	40
18:30	0	27	5	0	1	0	0	0	0	0	0	0	0	33
18:45	0	33	4	0	1	0	0	0	0	0	0	0	0	38
19:00	0	42	3	0	2	0	0	0	0	0	0	0	0	47
19:15	0	28	2	0	1	0	0	0	1	0	0	0	0	32
19:30	0	34	4	0	0	0	0	0	0	0	0	0	0	38
19:45	0	40	3	0	0	0	0	0	0	0	0	0	0	43
20:00	0	32	2	0	0	0	0	0	1	0	0	0	0	35
20:15	0	52	4	0	0	0	0	0	0	0	0	0	0	56
20:30	0	34	4	0	2	0	0	0	0	0	0	0	0	40
20:45	0	30	4	0	1	0	0	0	0	0	0	0	0	35
21:00	0	32	1	0	0	0	0	0	0	0	0	0	0	33
21:15	0	42	1	0	0	0	0	0	0	0	0	0	0	43
21:30	0	44	8	0	1	0	0	0	0	0	0	0	0	53
21:45	0	35	1	0	0	0	0	0	0	0	0	0	0	36
22:00	0	27	1	0	0	0	0	0	0	0	0	0	0	28
22:15	0	28	4	0	0	0	0	0	0	0	0	0	0	32
22:30	0	31	3	0	0	0	0	0	0	0	0	0	0	34
22:45	0	25	1	0	0	0	0	0	0	0	0	0	0	26
23:00	0	24	1	0	0	0	0	0	0	0	0	0	0	25
23:15	0	15	1	0	0	0	0	1	0	0	0	0	0	17
23:30	0	11	1	0	0	0	0	0	0	0	0	0	0	12
23:45	0	15	2	0	0	0	0	0	0	0	0	0	0	17
TOTAL	2	1,660	188	5	48	0	0	2	5	0	0	0	0	1,910

PM PEAK HOUR	12:30 PM
PM PEAK VOLUME	215

TOTAL: AM+PM	3	2,411	313	5	80	3	1	2	6	0	0	0	0	2,824
% OF TOTAL	0.1%	85.4%	11.1%	0.2%	2.8%	0.1%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS10 Hemlock east of Indian

AM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	8	2	0	1	0	0	0	0	0	0	0	0	11
0:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
0:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
0:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
1:00	0	6	0	0	1	0	0	0	0	0	0	0	0	7
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
2:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:45	0	6	1	0	0	0	0	0	0	0	0	0	0	7
4:00	0	3	1	0	0	1	0	0	0	0	0	0	0	5
4:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:45	0	3	0	0	1	0	0	0	0	0	0	0	0	4
5:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
5:30	0	2	1	0	0	0	0	0	0	0	0	0	0	3
5:45	0	8	0	0	0	0	0	0	0	0	0	0	0	8
6:00	0	2	3	0	0	0	0	0	0	0	0	0	0	5
6:15	0	4	2	1	0	0	0	0	0	0	0	0	0	7
6:30	0	11	1	0	0	0	0	0	0	0	0	0	0	12
6:45	0	6	1	0	0	0	0	0	0	0	0	0	0	7
7:00	0	18	2	0	4	1	0	0	0	0	0	0	0	25
7:15	1	25	1	1	2	0	0	0	0	0	0	0	0	30
7:30	1	37	1	0	1	0	0	0	0	0	0	0	0	40
7:45	1	41	5	0	1	0	0	0	0	0	0	0	0	48
8:00	0	34	0	0	1	0	0	0	0	0	0	0	0	35
8:15	0	24	2	0	2	0	0	0	0	0	0	0	0	28
8:30	0	20	6	1	0	0	0	0	0	0	0	0	0	27
8:45	0	24	4	0	0	0	0	0	0	0	0	0	0	28
9:00	0	19	5	1	0	0	0	0	0	0	0	0	0	25
9:15	0	14	3	0	1	0	0	0	0	0	0	0	0	18
9:30	0	26	3	1	4	0	0	0	0	0	0	0	0	34
9:45	0	26	4	0	1	0	0	0	0	0	0	0	0	31
10:00	0	28	3	0	4	0	0	0	0	0	0	0	0	35
10:15	0	19	5	0	1	0	0	0	0	0	0	0	0	25
10:30	0	29	0	0	0	0	0	0	0	0	0	0	0	29
10:45	0	21	4	1	1	0	0	0	0	0	0	0	0	27
11:00	0	43	1	0	2	0	0	0	0	0	0	0	0	46
11:15	0	34	3	0	2	0	0	1	0	0	0	0	0	40
11:30	0	30	1	0	2	1	1	0	0	0	0	0	0	35
11:45	0	39	6	0	3	0	0	0	1	0	0	0	0	49
TOTAL	3	658	71	6	35	3	1	1	1	0	0	0	0	779

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	170

PM	EASTBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	38	4	1	1	0	0	0	0	0	0	0	0	44
12:15	0	25	3	0	3	0	0	0	0	0	0	0	0	31
12:30	0	26	2	0	1	0	0	0	0	0	0	0	0	29
12:45	0	32	3	0	1	0	0	0	0	0	0	0	0	36
13:00	0	51	6	1	4	0	0	0	0	0	0	0	0	62
13:15	0	37	5	0	2	0	0	0	0	0	0	0	0	44
13:30	0	42	10	0	3	2	0	0	1	0	0	0	0	58
13:45	0	41	6	0	4	0	0	0	0	0	0	0	0	51
14:00	1	33	8	0	3	0	0	0	0	0	0	0	0	45
14:15	0	53	4	1	0	0	0	0	0	0	0	0	0	58
14:30	0	36	4	0	1	0	0	1	0	0	0	0	0	42
14:45	0	38	2	0	0	1	0	0	0	0	0	0	0	41
15:00	0	43	4	0	0	0	0	0	0	0	0	0	0	47
15:15	1	27	3	1	2	0	0	0	0	0	0	0	0	34
15:30	1	42	10	0	5	1	0	0	0	0	0	0	0	59
15:45	0	36	3	0	3	0	0	0	0	0	0	0	0	42
16:00	0	45	8	0	0	0	0	0	0	0	0	0	0	53
16:15	0	46	4	0	3	0	0	0	0	0	0	0	0	53
16:30	0	44	8	1	1	0	0	0	0	0	0	0	0	54
16:45	1	45	7	0	4	0	0	0	0	0	0	1	0	58
17:00	0	48	6	0	1	0	0	0	0	0	0	0	0	55
17:15	0	42	8	0	1	0	0	0	0	0	0	0	0	51
17:30	0	49	5	1	1	0	0	0	0	0	0	0	0	56
17:45	1	54	9	0	3	0	0	0	0	0	0	0	0	67
18:00	1	45	6	0	4	0	0	1	0	0	0	0	0	57
18:15	0	34	4	0	3	0	0	0	0	0	0	0	0	41
18:30	0	51	7	0	1	0	0	0	0	0	0	0	0	59
18:45	0	46	5	1	1	0	0	0	0	0	0	0	0	53
19:00	1	49	5	0	1	0	0	0	0	0	0	0	0	56
19:15	0	29	4	0	1	0	0	0	0	0	0	0	0	34
19:30	0	38	5	1	0	0	0	0	0	0	0	0	0	44
19:45	0	36	1	0	2	0	0	0	0	0	0	0	0	39
20:00	0	34	4	0	1	0	0	0	0	0	0	0	0	39
20:15	0	33	5	0	0	0	0	0	0	0	0	0	0	38
20:30	0	25	1	1	2	0	0	0	0	0	0	0	0	29
20:45	0	47	4	0	1	1	0	0	0	0	0	0	0	53
21:00	0	28	1	0	2	0	0	0	0	0	0	0	0	31
21:15	0	31	4	0	0	0	0	0	0	0	0	0	0	35
21:30	0	21	2	1	1	0	0	0	0	0	0	0	0	25
21:45	0	23	4	0	2	0	0	0	0	0	0	0	0	29
22:00	0	15	1	0	0	0	0	0	0	0	0	0	0	16
22:15	0	21	3	0	1	0	0	0	0	0	0	0	0	25
22:30	0	16	0	0	0	0	0	0	0	0	0	0	0	16
22:45	0	14	1	0	0	0	0	0	0	0	0	0	0	15
23:00	0	10	0	0	1	0	0	0	0	0	0	0	0	11
23:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7
23:30	0	15	0	0	0	0	0	0	0	0	0	0	0	15
23:45	0	7	2	0	0	0	0	0	0	0	0	0	0	9
TOTAL	7	1,648	201	10	71	5	0	2	1	0	0	1	0	1,946

PM PEAK HOUR	5:15 PM
PM PEAK VOLUME	231

TOTAL: AM+PM	10	2,306	272	16	106	8	1	3	2	0	0	1	0	2,725
% OF TOTAL	0.4%	84.6%	10.0%	0.6%	3.9%	0.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	20	4,404	509	31	184	16	4	5	2	0	0	1	0	5,176
% OF TOTAL	0.7%	161.6%	18.7%	1.1%	6.8%	0.6%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	100.0%

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
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CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS10 Hemlock east of Indian

AM TIME	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:15	0	2	1	0	0	0	0	0	0	0	0	0	0	3
0:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
0:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:30	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15	0	2	1	0	1	0	0	0	0	0	0	0	0	4
3:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:45	0	0	2	0	1	0	0	0	0	0	0	0	0	3
4:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
4:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:30	0	6	0	0	2	0	0	0	0	0	0	0	0	8
4:45	0	7	1	0	0	0	0	0	0	0	0	0	0	8
5:00	0	5	0	0	1	0	0	0	0	0	0	0	0	6
5:15	0	5	0	1	0	0	0	0	0	0	0	0	0	6
5:30	0	8	2	0	0	0	1	0	0	0	0	0	0	11
5:45	0	8	2	0	0	0	0	0	0	0	0	0	0	10
6:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
6:15	0	7	3	0	0	1	0	0	0	0	0	0	0	11
6:30	0	11	2	1	0	0	0	0	0	0	0	0	0	14
6:45	0	16	3	0	1	0	0	0	0	0	0	0	0	20
7:00	0	30	1	0	3	0	0	0	0	0	0	0	0	34
7:15	0	32	1	0	1	0	0	0	0	0	0	0	0	34
7:30	2	42	1	1	0	0	0	0	0	0	0	0	0	46
7:45	0	46	7	0	1	1	0	0	0	0	0	0	0	55
8:00	0	48	3	0	0	0	0	0	0	0	0	0	0	51
8:15	0	33	1	0	1	0	0	0	0	0	0	0	0	35
8:30	0	18	5	1	3	0	0	0	0	0	0	0	0	27
8:45	0	17	5	0	2	0	1	0	0	0	0	0	0	25
9:00	0	19	2	0	1	0	0	0	0	0	0	0	0	22
9:15	0	24	2	0	1	0	0	0	0	0	0	0	0	27
9:30	0	27	8	1	1	0	0	0	0	0	0	0	0	37
9:45	0	30	5	0	2	0	0	0	0	0	0	0	0	37
10:00	0	24	2	0	3	0	0	0	0	0	0	0	0	29
10:15	0	22	4	0	0	0	0	0	0	0	0	0	0	26
10:30	0	30	4	0	2	0	0	0	0	0	0	0	0	36
10:45	1	30	3	1	2	0	0	0	0	0	0	0	0	37
11:00	0	19	3	0	1	0	0	1	0	0	0	0	0	24
11:15	0	20	4	0	0	0	1	0	0	0	0	0	0	25
11:30	0	22	5	0	0	0	0	0	0	0	0	0	0	27
11:45	0	35	2	1	2	1	0	0	0	0	0	0	0	41
TOTAL	3	683	88	7	32	3	3	1	0	0	0	0	0	820

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	187

PM Time	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	19	6	0	1	0	0	0	0	0	0	0	0	26
12:15	0	30	3	0	5	0	0	1	0	0	0	0	0	39
12:30	0	32	5	0	3	1	0	0	0	0	0	0	0	41
12:45	0	35	2	0	1	0	0	0	0	0	0	0	0	38
13:00	0	31	4	1	0	0	0	0	0	0	0	0	0	36
13:15	0	24	1	0	0	0	0	0	0	0	0	0	0	25
13:30	0	37	8	0	4	0	0	0	0	0	0	0	0	49
13:45	0	34	1	0	1	0	0	0	0	0	0	0	0	36
14:00	0	38	4	0	0	0	0	0	0	0	0	0	0	42
14:15	2	38	4	1	1	3	0	0	0	0	0	0	0	49
14:30	0	28	5	0	2	0	0	0	0	0	0	0	0	35
14:45	0	24	6	0	0	0	0	0	0	0	0	0	0	30
15:00	0	29	3	0	2	0	0	0	0	0	0	0	0	34
15:15	1	26	6	1	3	0	0	0	0	0	0	0	0	37
15:30	0	41	6	1	1	0	0	0	0	0	0	0	0	49
15:45	0	28	5	0	0	0	0	0	0	0	0	0	0	33
16:00	0	27	2	0	0	0	0	0	0	0	0	0	0	29
16:15	0	37	5	0	0	0	0	0	0	0	0	0	0	42
16:30	0	33	3	1	2	0	0	0	0	0	0	0	0	39
16:45	0	28	5	0	2	0	0	0	0	0	0	0	0	35
17:00	0	30	2	0	1	0	0	0	0	0	0	0	0	33
17:15	0	25	3	0	1	0	0	0	0	0	0	0	0	29
17:30	0	23	2	0	0	0	0	0	0	0	0	0	0	25
17:45	0	36	3	1	0	0	0	0	0	0	0	0	0	40
18:00	0	32	2	0	1	0	0	0	0	0	0	0	0	35
18:15	0	33	3	0	1	0	0	0	0	0	0	0	0	37
18:30	0	27	2	0	2	0	0	0	0	0	0	0	0	31
18:45	0	33	3	1	0	0	0	0	0	0	0	0	0	37
19:00	0	30	4	0	0	0	0	0	0	0	0	0	0	34
19:15	0	22	3	0	1	1	0	0	0	0	0	0	0	27
19:30	0	30	1	0	0	0	0	0	0	0	0	0	0	31
19:45	0	34	4	1	1	0	0	0	0	0	0	0	0	40
20:00	0	30	2	0	0	0	0	0	0	0	0	0	0	32
20:15	0	36	5	0	0	0	0	0	0	0	0	0	0	41
20:30	0	27	3	0	1	0	0	0	0	0	0	0	0	31
20:45	0	39	2	0	2	0	0	0	0	0	0	0	0	43
21:00	0	29	2	0	0	0	0	0	0	0	0	0	0	31
21:15	1	35	3	0	2	0	0	0	0	0	0	0	0	41
21:30	2	38	5	0	1	0	0	0	0	0	0	0	0	46
21:45	0	42	0	0	1	0	0	0	0	0	0	0	0	43
22:00	0	40	2	0	0	0	0	0	0	0	0	0	0	42
22:15	0	19	3	0	0	0	0	0	0	0	0	0	0	22
22:30	0	28	3	0	1	0	0	0	0	0	0	0	0	32
22:45	0	23	1	0	1	0	0	0	0	0	0	0	0	25
23:00	1	20	0	0	1	0	0	0	0	0	0	0	0	22
23:15	0	13	1	0	0	0	0	0	0	0	0	0	0	14
23:30	0	10	0	0	0	0	0	0	0	0	0	0	0	10
23:45	0	12	1	0	0	0	0	0	0	0	0	0	0	13
TOTAL	7	1,415	149	8	46	5	0	1	0	0	0	0	0	1,631

PM PEAK HOUR	1:30 PM
PM PEAK VOLUME	176

TOTAL: AM+PM	10	2,098	237	15	78	8	3	2	0	0	0	0	0	2,451
% OF TOTAL	0.4%	85.6%	9.7%	0.6%	3.2%	0.3%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS11 Ironwood between Davis and Nita

AM	EASTBOUND														PM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	24	1	0	0	0	0	0	0	0	0	0	0	25	12:00	4	73	11	0	1	2	0	0	0	0	0	1	0	92
0:15	0	17	1	0	2	0	0	0	0	0	0	0	0	20	12:15	0	65	7	1	8	0	0	0	1	0	0	0	0	82
0:30	0	10	2	0	0	0	0	0	0	0	0	0	0	12	12:30	4	58	11	0	6	0	0	0	0	0	0	0	0	79
0:45	0	16	1	0	0	0	0	0	0	0	0	0	0	17	12:45	0	72	3	0	9	0	0	0	0	0	0	0	0	84
1:00	0	10	1	0	0	0	0	0	0	0	0	0	0	11	13:00	0	88	17	1	4	1	0	0	0	0	0	0	0	111
1:15	0	8	2	0	1	0	0	0	0	0	0	0	0	11	13:15	2	97	13	0	8	1	0	0	0	0	0	0	0	121
1:30	0	4	1	0	0	0	0	0	0	0	0	0	0	5	13:30	0	82	10	1	7	0	0	1	0	0	0	0	0	101
1:45	0	12	2	0	0	0	0	0	0	0	0	0	0	14	13:45	0	88	12	2	5	1	0	0	0	0	0	0	0	108
2:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6	14:00	0	83	12	1	12	1	1	0	0	0	0	0	0	110
2:15	0	6	0	0	1	0	0	0	0	0	0	0	0	7	14:15	1	137	17	0	7	2	0	0	0	0	1	0	0	165
2:30	0	2	1	0	0	0	0	0	0	0	0	0	0	3	14:30	0	105	19	0	7	3	0	0	0	0	0	0	0	134
2:45	0	11	0	0	0	0	0	0	0	0	0	0	0	11	14:45	0	78	18	0	7	0	0	0	0	0	0	0	0	103
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	15:00	0	79	12	0	5	1	0	0	0	0	0	0	0	97
3:15	0	4	1	0	1	0	0	0	0	0	0	0	0	6	15:15	0	83	14	1	7	2	0	0	0	0	0	0	0	107
3:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4	15:30	2	78	12	1	5	1	0	0	0	0	0	0	0	99
3:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5	15:45	0	80	14	0	5	1	1	0	0	0	0	0	0	101
4:00	0	8	0	0	1	0	0	0	0	0	0	0	0	9	16:00	0	89	16	0	9	1	0	0	0	0	0	0	0	115
4:15	0	6	0	0	1	0	0	0	0	0	0	0	0	7	16:15	1	110	14	0	9	0	0	0	0	0	0	0	0	134
4:30	0	11	1	0	0	0	0	0	0	0	0	0	0	12	16:30	0	97	12	1	7	3	0	0	0	0	0	0	0	120
4:45	0	15	3	0	2	0	0	0	0	0	0	0	0	20	16:45	0	98	21	0	16	3	0	0	0	0	0	0	0	138
5:00	0	10	2	0	2	0	0	0	0	0	0	0	0	14	17:00	3	114	17	0	8	3	0	0	0	0	0	0	0	145
5:15	0	10	2	1	0	0	0	0	0	0	0	0	0	13	17:15	0	111	12	0	11	2	0	0	0	0	0	0	0	136
5:30	0	10	4	0	2	0	0	0	0	0	0	0	0	16	17:30	5	130	16	0	13	1	0	0	0	0	0	1	0	166
5:45	1	20	2	0	2	0	0	0	0	0	0	0	0	25	17:45	2	134	18	0	9	0	0	0	0	0	0	0	0	163
6:00	0	22	2	0	2	0	0	0	0	0	0	0	0	26	18:00	1	117	19	0	4	3	0	0	0	0	1	1	1	147
6:15	0	19	4	1	2	0	0	0	0	0	0	0	0	26	18:15	1	121	15	0	6	0	0	0	0	0	0	0	0	143
6:30	0	25	3	0	5	0	0	0	0	0	0	0	0	33	18:30	3	100	10	0	9	2	0	0	0	0	0	0	0	124
6:45	0	33	6	0	2	0	1	0	0	0	0	0	0	42	18:45	2	107	11	1	4	2	0	0	0	0	0	0	0	127
7:00	0	62	4	0	5	0	0	0	0	0	0	0	0	71	19:00	1	85	12	0	2	2	0	0	0	0	0	0	0	102
7:15	0	102	13	1	10	3	0	0	0	0	0	0	0	129	19:15	0	84	13	0	6	0	0	0	0	0	0	0	0	103
7:30	1	120	10	0	6	2	0	0	0	0	0	0	0	139	19:30	0	84	8	0	3	1	0	0	0	0	0	0	0	96
7:45	2	101	17	0	6	1	0	0	0	0	0	0	0	127	19:45	0	77	13	0	3	2	0	0	0	0	0	0	0	95
8:00	0	88	6	0	2	3	0	0	0	0	0	0	0	99	20:00	0	83	8	0	5	0	0	0	0	0	0	0	0	96
8:15	0	58	9	0	4	0	0	0	0	0	1	0	0	72	20:15	0	63	11	0	11	0	0	0	0	0	0	0	0	85
8:30	1	61	10	1	4	0	0	0	0	0	0	0	0	77	20:30	2	55	11	0	4	1	0	0	0	0	0	0	0	73
8:45	1	57	9	0	6	1	0	0	0	0	0	0	0	74	20:45	0	71	9	1	4	1	0	0	0	0	0	0	0	86
9:00	0	52	9	0	4	1	0	0	0	0	0	0	0	66	21:00	0	59	6	0	2	0	0	0	0	0	0	0	0	67
9:15	0	37	13	1	8	0	1	1	0	0	0	0	0	61	21:15	0	71	13	0	0	0	0	0	0	0	0	0	0	84
9:30	0	46	12	2	7	0	0	0	0	0	0	0	0	67	21:30	0	50	5	0	3	1	0	0	0	0	0	0	0	59
9:45	0	42	9	0	2	1	0	0	0	0	0	0	0	54	21:45	1	44	4	0	2	0	0	0	0	0	0	0	0	51
10:00	0	44	7	0	1	0	0	0	0	0	0	0	0	52	22:00	0	33	6	0	2	1	0	0	0	0	0	0	0	42
10:15	0	37	10	0	2	3	0	0	0	0	0	0	0	52	22:15	0	41	6	0	1	0	0	0	0	0	0	0	0	48
10:30	0	57	12	1	3	0	0	0	0	0	0	0	0	73	22:30	0	36	3	0	1	0	0	0	0	0	0	0	0	40
10:45	0	55	10	1	4	0	0	1	0	0	1	0	0	72	22:45	0	19	1	0	0	1	0	0	0	0	0	0	0	21
11:00	0	60	8	0	7	3	0	0	0	0	0	0	0	78	23:00	0	32	6	0	1	1	0	0	0	0	0	0	0	40
11:15	0	84	18	0	5	2	0	0	0	0	0	0	0	109	23:15	0	24	1	0	2	0	0	0	0	0	0	0	0	27
11:30	0	89	15	0	1	1	0	0	0	0	0	0	0	106	23:30	0	21	2	0	1	0	0	0	0	0	0	0	0	24
11:45	1	74	16	1	6	1	0	0	0	0	0	0	0	99	23:45	0	13	1	0	1	0	0	0	0	0	0	0	0	15
TOTAL	7	1,655	260	10	119	22	2	2	0	0	2	0	0	2,079	TOTAL	35	3,719	522	11	262	47	2	1	1	0	2	3	1	4,606

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	494

PM PEAK HOUR	5:30 PM
PM PEAK VOLUME	619

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	42	5,374	782	21	381	69	4	3	1	0	4	3	1	6,685
% OF TOTAL	0.6%	80.4%	11.7%	0.3%	5.7%	1.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	108	11,242	1,622	41	654	154	6	6	11	1	7	7	3	13,862
% OF TOTAL	1.6%	168.2%	24.3%	0.6%	9.8%	2.3%	0.1%	0.1%	0.2%	0.0%	0.1%	0.1%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS11 Ironwood between Davis and Nita

AM	WESTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	10	2	0	0	0	0	0	0	0	0	0	0	12
0:15	0	11	2	0	0	0	0	0	0	0	0	0	0	13
0:30	0	6	0	0	0	1	0	0	0	0	0	0	0	7
0:45	0	8	0	0	0	0	0	0	0	0	0	0	0	8
1:00	0	13	0	0	0	0	0	0	0	0	0	0	0	13
1:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:30	0	10	1	0	0	0	0	0	0	0	0	0	0	11
1:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6
2:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
2:15	0	5	1	0	0	0	0	0	0	0	0	0	0	6
2:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
3:00	0	10	3	0	0	0	0	0	0	0	0	0	0	13
3:15	0	10	3	0	0	0	0	0	0	0	0	0	0	13
3:30	2	7	1	0	1	0	0	0	0	0	0	0	0	11
3:45	0	15	6	0	1	0	0	0	0	0	0	0	0	22
4:00	1	11	5	0	3	0	0	0	0	0	0	0	0	20
4:15	0	22	1	0	1	0	0	0	0	0	0	0	0	24
4:30	0	24	7	0	3	1	0	0	0	0	0	0	0	35
4:45	0	25	7	0	1	0	0	0	0	0	0	0	0	33
5:00	0	38	4	0	2	0	0	0	0	0	0	0	0	44
5:15	0	33	5	0	3	0	0	0	0	0	0	0	0	41
5:30	0	38	19	0	5	1	0	0	0	0	0	0	0	63
5:45	0	32	5	0	2	1	0	0	0	0	0	0	0	40
6:00	0	36	8	0	3	1	0	0	0	0	0	0	0	48
6:15	0	47	9	0	2	0	0	0	0	0	0	0	0	58
6:30	0	63	13	1	3	0	0	0	0	0	0	0	0	80
6:45	0	78	16	0	8	1	0	0	0	0	0	0	0	103
7:00	0	104	16	0	5	3	0	0	0	0	0	0	0	128
7:15	4	148	17	0	8	0	0	0	0	0	0	0	0	177
7:30	3	174	23	3	5	2	0	0	0	0	0	0	1	211
7:45	6	190	21	1	6	6	0	0	0	0	0	1	0	231
8:00	5	133	17	0	10	5	0	0	0	0	0	0	0	170
8:15	4	80	9	0	8	0	0	0	0	0	0	0	0	101
8:30	2	65	13	1	3	1	0	0	0	0	0	0	0	85
8:45	1	69	9	0	3	0	0	0	0	0	0	0	0	82
9:00	0	58	15	0	5	0	0	0	0	0	1	0	0	79
9:15	0	73	5	0	4	1	0	0	0	0	0	0	0	83
9:30	0	52	6	0	4	0	0	0	0	0	0	0	0	62
9:45	0	42	15	1	1	0	0	0	0	0	0	0	0	59
10:00	0	67	7	0	1	0	0	0	0	0	0	0	0	75
10:15	0	55	9	0	1	1	0	1	0	0	0	0	0	67
10:30	0	56	12	0	2	1	0	0	0	0	0	0	0	71
10:45	0	62	9	2	3	0	0	0	0	0	0	0	0	76
11:00	0	48	10	0	3	1	0	0	0	0	0	0	0	62
11:15	0	53	3	0	3	0	0	0	0	0	0	0	0	59
11:30	0	111	17	1	5	2	0	0	0	0	0	0	0	136
11:45	0	90	16	0	1	4	0	0	0	0	0	0	0	111
TOTAL	28	2,302	369	10	119	33	0	1	0	0	1	1	1	2,865

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	789

PM	WESTBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	67	16	1	3	1	0	0	0	0	0	0	0	88
12:15	0	89	15	0	3	1	0	0	0	0	0	0	0	108
12:30	0	87	14	0	8	1	0	0	0	0	0	0	0	110
12:45	0	78	18	0	4	0	0	0	1	0	0	0	0	101
13:00	0	94	9	1	7	1	0	0	0	0	0	0	0	112
13:15	0	73	8	0	4	2	0	0	0	0	0	0	0	87
13:30	0	78	11	0	6	1	0	0	0	0	0	1	0	97
13:45	0	93	10	0	4	2	0	0	0	0	0	0	1	110
14:00	0	90	20	0	3	3	0	0	0	0	1	0	0	117
14:15	0	111	10	1	3	3	0	0	0	0	0	0	0	128
14:30	1	88	8	0	6	2	0	0	0	0	0	1	0	106
14:45	0	72	14	0	11	0	0	1	0	0	0	0	0	98
15:00	2	90	14	0	1	0	0	0	0	0	0	0	0	107
15:15	1	78	6	0	1	1	0	0	0	0	0	0	0	87
15:30	4	77	13	1	1	2	1	0	0	0	0	0	0	99
15:45	2	72	16	0	3	2	0	1	0	0	0	0	0	96
16:00	1	79	13	0	2	1	0	0	0	0	0	0	0	96
16:15	0	100	13	0	4	1	0	0	0	0	0	0	0	118
16:30	0	63	13	1	4	2	0	0	0	0	0	0	0	83
16:45	0	93	14	0	8	4	0	0	0	0	0	0	0	119
17:00	2	90	15	0	4	0	0	0	0	0	0	0	0	111
17:15	0	82	13	0	3	0	0	0	0	0	0	0	0	98
17:30	2	96	11	0	8	0	1	0	0	0	0	0	0	118
17:45	2	91	12	1	3	1	0	0	0	0	0	0	0	110
18:00	0	87	7	0	4	2	0	0	0	0	0	0	0	100
18:15	0	77	8	0	1	1	0	0	0	0	0	0	0	87
18:30	2	93	10	0	1	3	0	0	0	0	0	0	0	109
18:45	0	74	13	1	4	2	0	0	0	0	0	0	0	94
19:00	2	85	8	0	2	0	0	0	0	0	0	0	0	97
19:15	0	63	13	0	8	1	0	0	0	0	0	0	0	85
19:30	0	69	12	0	1	1	0	0	0	0	1	0	0	84
19:45	0	72	10	1	1	0	0	0	0	0	0	0	0	84
20:00	2	67	9	0	1	2	0	0	0	0	0	0	0	81
20:15	0	81	13	0	4	0	0	0	1	0	0	0	0	99
20:30	2	109	7	0	2	2	0	0	0	0	0	0	0	122
20:45	3	85	8	1	3	0	0	0	0	0	0	0	0	100
21:00	3	84	8	0	1	1	0	0	1	1	0	0	0	99
21:15	0	86	6	0	2	0	0	0	1	0	0	1	0	96
21:30	0	72	8	0	3	2	0	0	2	0	0	0	0	87
21:45	5	70	5	1	3	3	0	0	0	0	0	0	0	87
22:00	2	49	4	0	1	0	0	0	1	0	0	0	0	57
22:15	0	51	8	0	1	0	0	0	0	0	0	0	0	60
22:30	0	40	4	0	2	1	0	0	0	0	0	0	0	47
22:45	0	25	1	0	0	0	0	0	0	0	0	0	0	26
23:00	0	16	2	0	2	0	0	0	0	0	0	0	0	20
23:15	0	33	0	0	0	0	0	0	1	0	0	0	0	34
23:30	0	23	1	0	3	0	0	0	1	0	0	0	0	28
23:45	0	24	0	0	0	0	0	0	1	0	0	0	0	25
TOTAL	38	3,566	471	10	154	52	2	2	10	1	2	3	1	4,312

PM PEAK HOUR	1:45 PM
PM PEAK VOLUME	461

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	66	5,868	840	20	273	85	2	3	10	1	3	4	2	7,177
% OF TOTAL	0.9%	81.8%	11.7%	0.3%	3.8%	1.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS12 Hemlock between East FMV and Nita

AM	EASTBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	10	1	0	1	0	0	0	0	0	0	0	0	12
0:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7
0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:45	0	8	2	0	0	0	0	0	0	0	0	0	0	10
1:00	0	2	0	0	1	0	0	0	0	0	0	0	0	3
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:15	0	8	1	0	0	0	0	0	0	0	0	0	0	9
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
3:45	0	7	0	0	0	0	0	0	0	0	0	0	0	7
4:00	0	5	1	0	1	0	0	0	0	0	0	0	0	7
4:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
5:15	0	6	0	0	0	0	0	0	0	0	0	0	0	6
5:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:45	0	7	0	0	0	0	0	0	0	0	0	0	0	7
6:00	0	2	1	0	1	0	0	0	0	0	0	0	0	4
6:15	0	2	1	1	0	0	0	0	0	0	0	0	0	4
6:30	0	8	1	0	0	0	0	0	0	0	0	0	0	9
6:45	0	8	1	0	1	0	0	0	0	0	0	0	0	10
7:00	0	10	1	0	3	1	0	0	0	0	0	0	0	15
7:15	1	11	0	1	2	0	0	0	0	0	0	0	0	15
7:30	1	34	1	0	0	0	0	0	0	0	0	0	0	36
7:45	0	32	2	0	1	0	0	0	0	0	0	0	0	35
8:00	0	12	2	0	0	0	0	0	1	0	0	0	0	15
8:15	0	13	4	0	2	0	0	0	0	0	0	0	0	19
8:30	2	16	1	1	0	0	0	0	0	0	0	0	0	20
8:45	0	26	1	0	2	0	0	0	0	0	0	0	0	29
9:00	0	22	3	1	0	0	0	0	0	0	0	0	0	26
9:15	0	7	5	0	0	0	0	0	0	0	0	0	0	12
9:30	0	20	5	1	1	0	0	0	0	0	0	0	0	27
9:45	0	30	0	0	0	0	0	0	0	0	0	0	0	30
10:00	1	23	3	0	1	0	0	0	0	0	0	0	0	28
10:15	0	27	5	0	0	0	0	0	0	0	0	0	0	32
10:30	0	21	2	0	1	0	0	0	0	0	0	0	0	24
10:45	0	31	6	1	2	0	0	0	0	0	0	0	0	40
11:00	0	36	2	0	1	0	1	0	0	0	0	0	0	40
11:15	1	35	7	0	1	0	0	0	0	0	0	0	0	44
11:30	0	25	6	0	0	0	0	0	0	0	0	0	0	31
11:45	0	38	6	1	0	0	0	0	0	0	0	0	0	45
TOTAL	6	590	71	7	22	1	1	0	1	0	0	0	0	699

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	160

PM	EASTBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	1	35	3	0	0	0	0	0	0	0	0	0	0	39
12:15	0	36	1	0	3	0	0	0	0	0	0	0	0	40
12:30	1	24	5	0	1	0	0	0	0	0	0	0	0	31
12:45	0	34	2	0	1	0	0	0	0	0	0	0	0	37
13:00	0	39	6	1	2	0	0	0	0	0	0	0	0	48
13:15	1	33	7	0	1	0	0	0	0	0	0	0	0	42
13:30	0	40	6	0	4	0	0	0	0	0	0	0	0	50
13:45	0	31	5	0	2	0	0	0	0	0	0	0	0	38
14:00	0	36	7	0	2	0	0	0	0	0	0	0	0	45
14:15	0	20	7	1	0	0	0	0	0	0	0	0	0	28
14:30	0	32	7	0	3	0	0	1	0	0	0	0	0	43
14:45	0	34	3	0	0	0	0	0	0	0	0	0	0	37
15:00	0	32	3	0	1	0	0	0	0	0	0	0	0	36
15:15	1	24	4	1	0	0	0	0	0	0	0	0	0	30
15:30	0	35	5	0	1	0	0	1	0	0	0	0	0	42
15:45	1	36	3	0	1	0	0	0	0	0	0	0	0	41
16:00	0	41	8	0	0	0	0	0	0	0	0	0	0	49
16:15	0	37	3	0	3	0	0	0	0	0	0	0	0	43
16:30	1	45	8	1	3	0	0	0	0	0	0	0	0	58
16:45	0	46	5	0	3	0	0	0	0	0	0	0	0	54
17:00	0	50	5	0	1	0	0	0	0	0	0	0	0	56
17:15	1	35	6	0	2	0	0	0	0	0	0	0	0	44
17:30	0	46	7	1	1	0	0	0	0	0	0	0	0	55
17:45	0	53	8	0	3	0	0	0	0	0	0	0	0	64
18:00	1	42	7	0	3	0	0	1	0	0	0	0	0	54
18:15	0	50	7	0	1	0	0	0	0	0	0	0	0	58
18:30	0	41	6	0	2	0	0	0	0	0	0	0	0	49
18:45	0	45	5	1	0	0	0	0	0	0	0	0	0	51
19:00	0	47	4	0	0	0	0	0	0	0	0	0	0	51
19:15	0	23	6	0	1	0	0	0	0	0	0	0	0	30
19:30	0	39	5	1	1	0	0	0	0	0	0	0	0	46
19:45	1	34	2	0	2	0	0	0	0	0	0	0	0	39
20:00	0	34	3	0	2	0	0	0	0	0	0	0	0	39
20:15	0	21	1	0	0	0	0	0	0	0	0	0	0	22
20:30	0	29	1	0	2	0	0	0	0	0	0	0	0	32
20:45	1	34	4	0	1	0	0	0	0	0	0	0	0	40
21:00	0	21	2	0	2	0	0	0	0	0	0	0	0	25
21:15	0	18	4	0	1	0	0	0	0	0	0	0	0	23
21:30	0	18	4	1	0	0	0	0	0	0	0	0	0	23
21:45	0	24	1	0	1	0	0	0	0	0	0	0	0	26
22:00	0	16	1	0	0	0	0	0	0	0	0	0	0	17
22:15	0	16	2	0	1	0	0	0	0	0	0	0	0	19
22:30	0	21	1	0	0	0	0	0	0	0	0	0	0	22
22:45	0	13	1	0	0	0	0	0	0	0	0	0	0	14
23:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
23:15	0	5	2	0	1	0	0	0	0	0	0	0	0	8
23:30	0	11	0	0	0	0	0	0	0	0	0	0	0	11
23:45	0	8	4	0	1	0	0	0	0	0	0	0	0	13
TOTAL	10	1,492	197	8	60	0	0	3	0	0	0	0	0	1,770

PM PEAK HOUR	5:30 PM
PM PEAK VOLUME	231

TOTAL: AM+PM	16	2,082	268	15	82	1	1	3	1	0	0	0	0	2,469
% OF TOTAL	0.6%	84.3%	10.9%	0.6%	3.3%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	16	3,284	379	30	106	4	1	4	1	0	0	0	0	3,825
% OF TOTAL	0.6%	133.0%	15.4%	1.2%	4.3%	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, August 16, 2017
JOB #: SC1422

LOCATION#
CLASS12 Hemlock between East FMV and Nita

AM TIME	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
0:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	1	0	0	1	0	0	0	0	0	0	0	0	2
3:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00	0	7	0	0	1	0	0	0	0	0	0	0	0	8
4:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:30	0	4	1	0	0	0	0	0	0	0	0	0	0	5
4:45	0	2	0	0	1	0	0	0	0	0	0	0	0	3
5:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
5:15	0	6	0	0	0	0	0	0	0	0	0	0	0	6
5:30	0	7	2	1	0	0	0	0	0	0	0	0	0	10
5:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
6:00	0	11	1	0	0	0	0	0	0	0	0	0	0	12
6:15	0	6	1	0	1	0	0	0	0	0	0	0	0	8
6:30	0	4	0	1	0	0	0	0	0	0	0	0	0	5
6:45	0	6	2	0	1	0	0	0	0	0	0	0	0	9
7:00	0	18	2	0	1	0	0	0	0	0	0	0	0	21
7:15	0	16	1	0	0	0	0	0	0	0	0	0	0	17
7:30	0	26	3	1	0	0	0	0	0	0	0	0	0	30
7:45	0	34	5	0	0	1	0	0	0	0	0	0	0	40
8:00	0	38	3	0	1	0	0	0	0	0	0	0	0	42
8:15	0	38	2	0	0	0	0	0	0	0	0	0	0	40
8:30	0	24	2	1	1	0	0	0	0	0	0	0	0	28
8:45	0	18	3	0	2	0	0	0	0	0	0	0	0	23
9:00	0	14	0	0	0	0	0	0	0	0	0	0	0	14
9:15	0	24	2	0	0	0	0	0	0	0	0	0	0	26
9:30	0	14	3	1	1	0	0	0	0	0	0	0	0	19
9:45	0	12	2	0	0	0	0	0	0	0	0	0	0	14
10:00	0	12	2	0	2	0	0	0	0	0	0	0	0	16
10:15	0	6	2	0	0	0	0	0	0	0	0	0	0	8
10:30	0	8	3	0	0	0	0	0	0	0	0	0	0	11
10:45	0	15	1	1	1	0	0	0	0	0	0	0	0	18
11:00	0	16	3	0	1	1	0	0	0	0	0	0	0	21
11:15	0	15	1	0	0	0	0	0	0	0	0	0	0	16
11:30	0	14	2	0	0	0	0	0	0	0	0	0	0	16
11:45	0	15	2	1	0	0	0	0	0	0	0	0	0	18
TOTAL	0	455	53	7	15	2	0	0	0	0	0	0	0	532

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	152

PM Time	WESTBOUND 1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	12	2	0	1	0	0	0	0	0	0	0	0	15
12:15	0	12	1	0	0	0	0	0	0	0	0	0	0	13
12:30	0	8	0	0	0	0	0	0	0	0	0	0	0	8
12:45	0	9	1	0	1	0	0	0	0	0	0	0	0	11
13:00	0	18	1	1	0	0	0	0	0	0	0	0	0	20
13:15	0	14	1	0	0	0	0	0	0	0	0	0	0	15
13:30	0	18	3	0	0	0	0	0	0	0	0	0	0	21
13:45	0	15	3	0	0	0	0	0	0	0	0	0	0	18
14:00	0	10	2	0	0	0	0	0	0	0	0	0	0	12
14:15	0	14	1	1	1	1	0	0	0	0	0	0	0	18
14:30	0	6	0	0	0	0	0	0	0	0	0	0	0	6
14:45	0	8	2	0	0	0	0	0	0	0	0	0	0	10
15:00	0	10	3	0	0	0	0	0	0	0	0	0	0	13
15:15	0	8	0	1	0	0	0	0	0	0	0	0	0	9
15:30	0	15	3	1	1	0	0	0	0	0	0	0	0	20
15:45	0	13	1	0	0	0	0	0	0	0	0	0	0	14
16:00	0	28	1	0	0	0	0	0	0	0	0	0	0	29
16:15	0	35	0	0	0	0	0	0	0	0	0	0	0	35
16:30	0	37	0	0	1	0	0	0	0	0	0	0	0	38
16:45	0	38	2	0	0	0	0	0	0	0	0	0	0	40
17:00	0	48	3	0	0	0	0	0	0	0	0	0	0	51
17:15	0	36	3	0	0	0	0	0	0	0	0	0	0	39
17:30	0	25	4	0	0	0	0	0	0	0	0	0	0	29
17:45	0	29	1	1	0	0	0	0	0	0	0	0	0	31
18:00	0	13	2	0	0	0	0	0	0	0	0	0	0	15
18:15	0	9	0	0	0	0	0	0	0	0	0	0	0	9
18:30	0	13	2	0	0	0	0	0	0	0	0	0	0	15
18:45	0	9	1	1	0	0	0	0	0	0	0	0	0	11
19:00	0	16	1	0	0	0	0	0	0	0	0	0	0	17
19:15	0	10	2	0	0	0	0	0	0	0	0	0	0	12
19:30	0	10	1	0	0	0	0	0	0	0	0	0	0	11
19:45	0	14	0	1	1	0	0	0	0	0	0	0	0	16
20:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
20:15	0	21	1	0	0	0	0	1	0	0	0	0	0	23
20:30	0	13	0	0	0	0	0	0	0	0	0	0	0	13
20:45	0	15	2	1	1	0	0	0	0	0	0	0	0	19
21:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
21:15	0	18	1	0	1	0	0	0	0	0	0	0	0	20
21:30	0	22	1	0	0	0	0	0	0	0	0	0	0	23
21:45	0	14	1	0	0	0	0	0	0	0	0	0	0	15
22:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
22:15	0	11	1	0	0	0	0	0	0	0	0	0	0	12
22:30	0	9	2	0	0	0	0	0	0	0	0	0	0	11
22:45	0	9	1	0	0	0	0	0	0	0	0	0	0	10
23:00	0	14	0	0	1	0	0	0	0	0	0	0	0	15
23:15	0	3	1	0	0	0	0	0	0	0	0	0	0	4
23:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5
23:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
TOTAL	0	747	58	8	9	1	0	1	0	0	0	0	0	824

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	168

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: AM+PM	0	1,202	111	15	24	3	0	1	0	0	0	0	0	1,356
% OF TOTAL	0.0%	88.6%	8.2%	1.1%	1.8%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

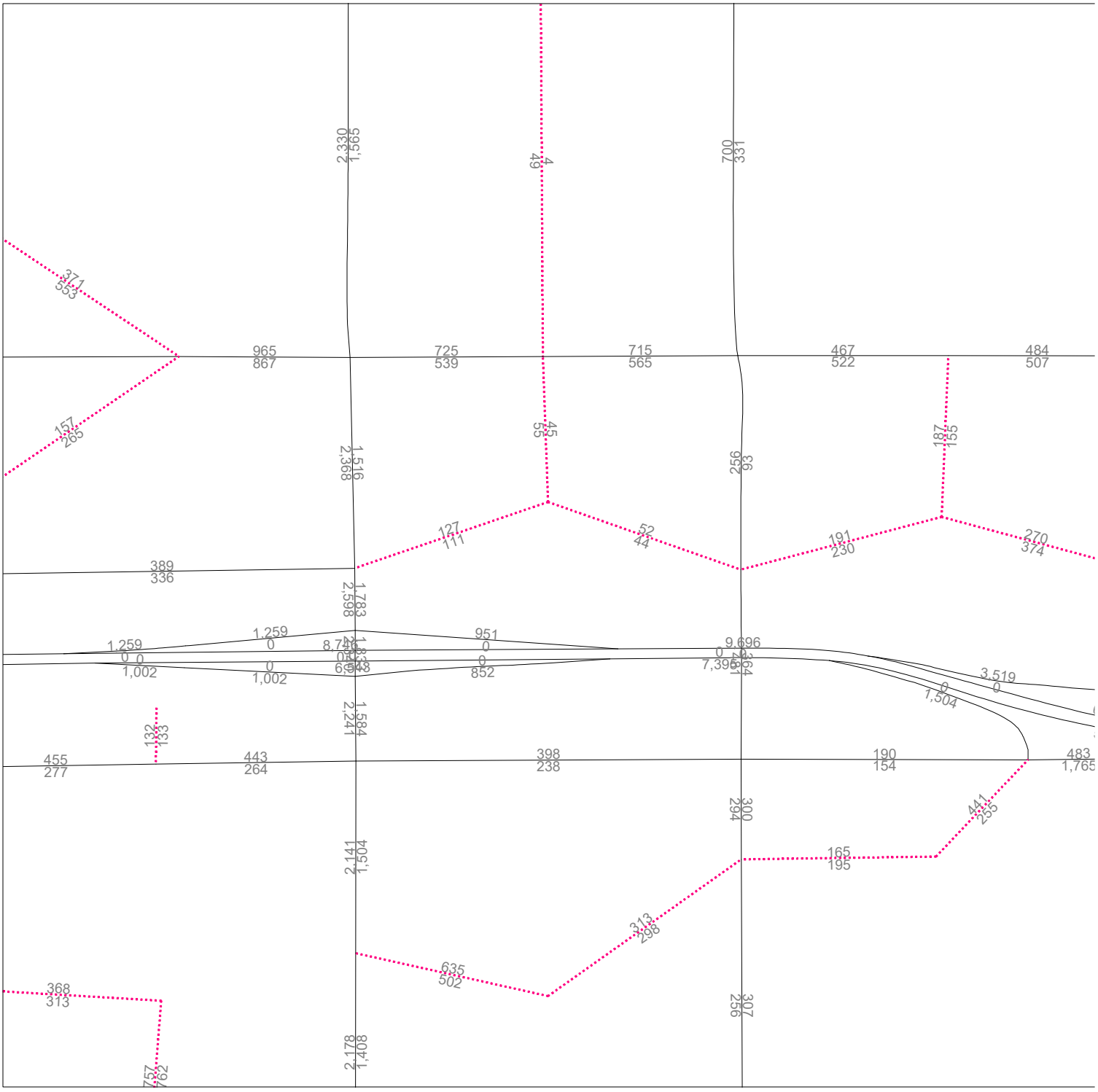
Class	1	2	3	4	5	6	7	8	9	10	11	12	13

Appendix C: LOS Worksheets

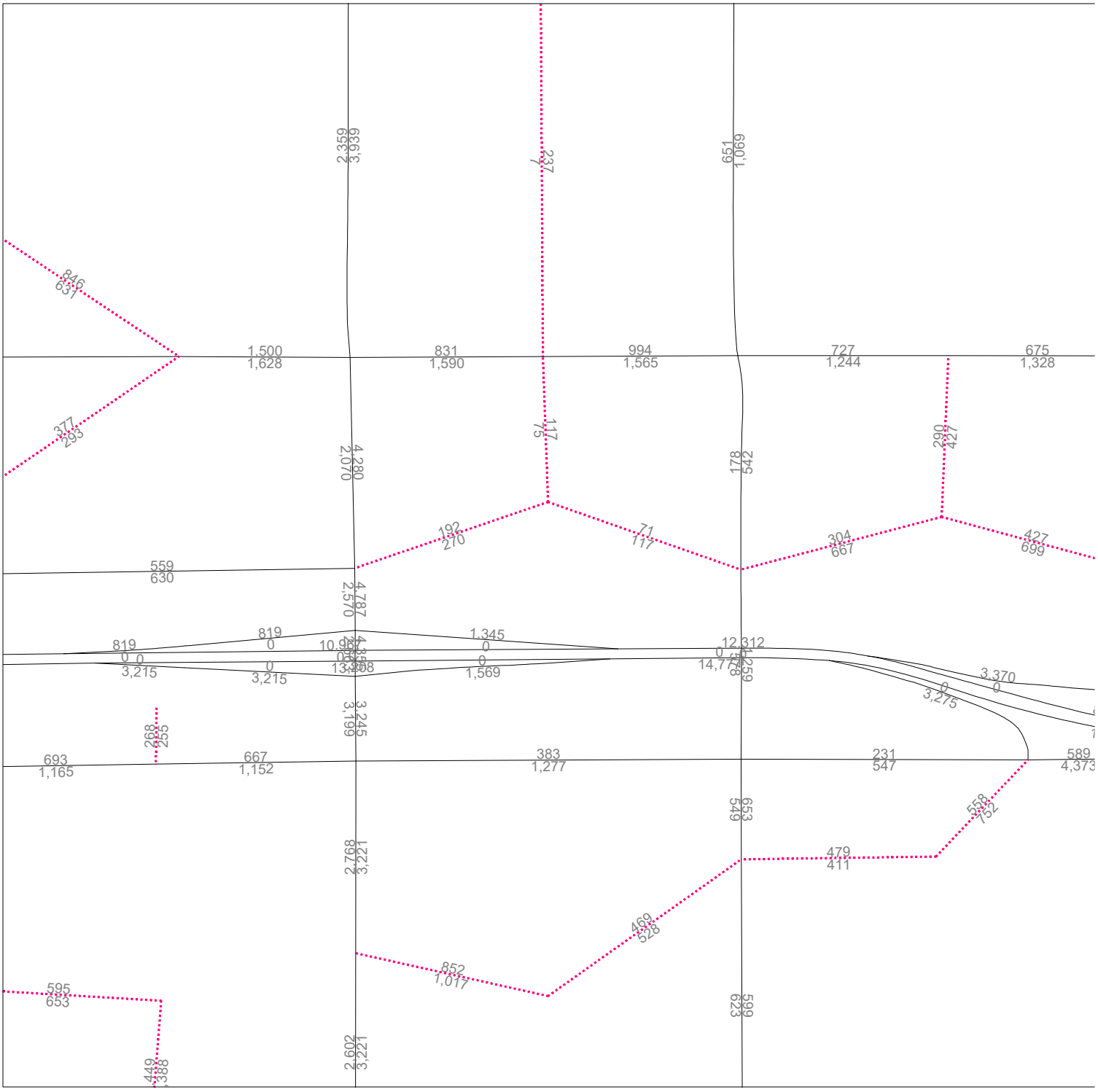
Appendix D: City Approved/Pending Projects List

Project	Address	APN
1. Moreno Valley Plaza (Shopping Center)	23607 Sunnymead Blvd 23935 Sunnymead Blvd	292100016
2. Olivewood Plaza (Office)	23288 Olivewood Plaza Dr.	
3. Riverside County Office Building (Office)	12625 Heacock St., 92553	
4. Sleep Inn & Suites (Hotel)	n/a	292241003
5. Econo Lodge (Hotel)	24412 Sunnymead, 92553	
6. Holiday Inn Express (Hotel)	24630 Sunnymead, 92553	
7. Best Western Hotel and Suites (Hotel)	24840 Elder Ave, 92557	
8. Tract 32710 (Single Family Residential)	n/a	475182043
9. Tract 32126 (Single Family Residential)	n/a	475060001
10. Tract 36761 (Single Family Residential)	n/a	475250067
11. Tract 31621 (Single Family Residential)	n/a	475220060
12. Tract 35956 (Single Family Residential)	TRACT NOT ON FILE	
13. PA14-0027 (Multi-Family Apartments)	23778 Hemlock Ave, 92557	292181001
14. Tract 31814 (Multi-Family Condos)	n/a	479050010
15. Tract 33771 (Multi-Family Condos)	n/a	481120020
16. PEN 16-0066 (Multi-Family Apartments)	24298 Webster Ave, 92553	
17. Tract 35663 (Multi-Family Condos)	n/a	481140024
18. Tract 35769 (Multi-Family Condos)	n/a	481270053
19. PA09-0006 (Multi-Family Apartments)	n/a	482020058

Appendix E:Transportation Analysis Model Outputs

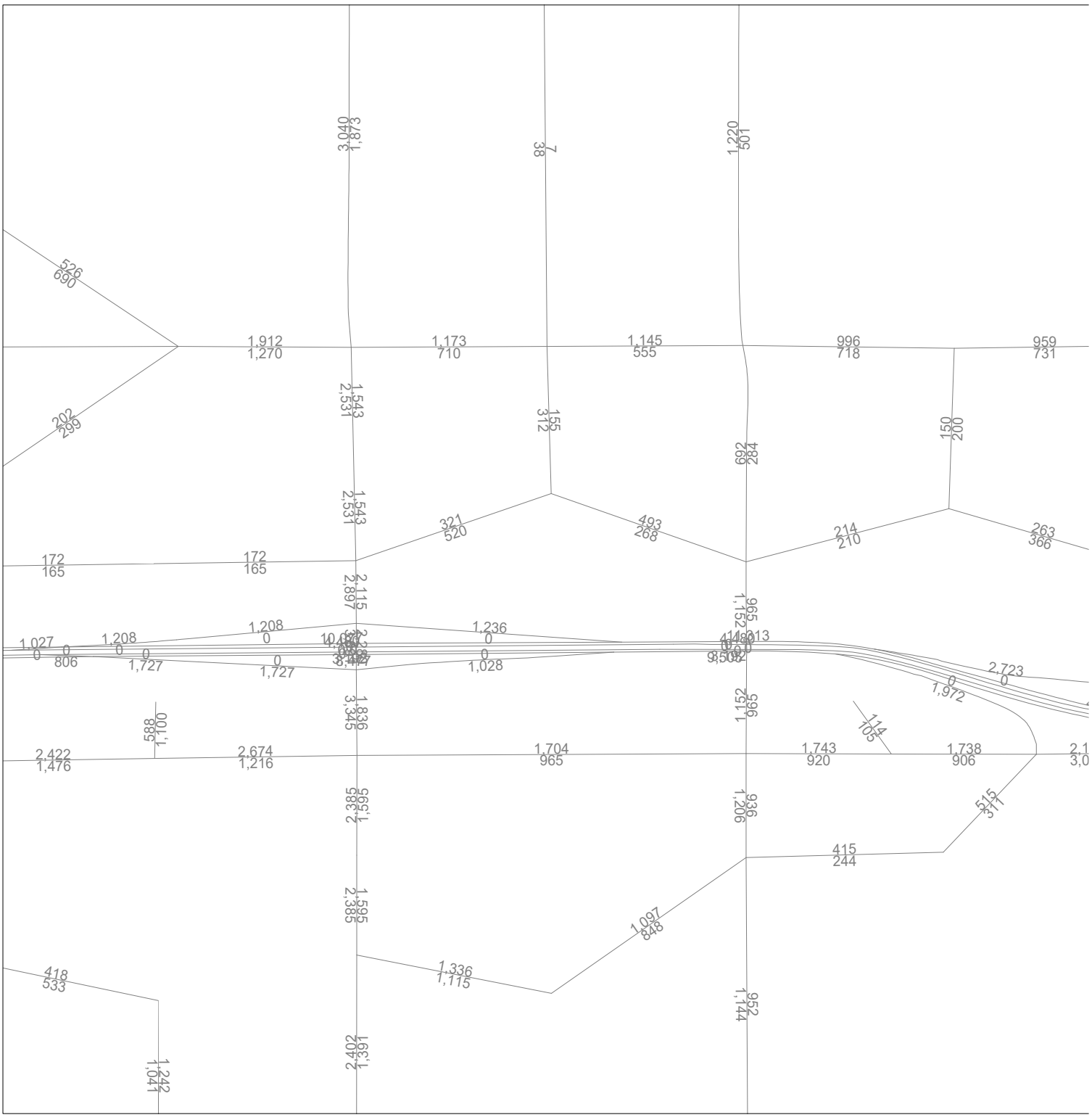


2007 AM

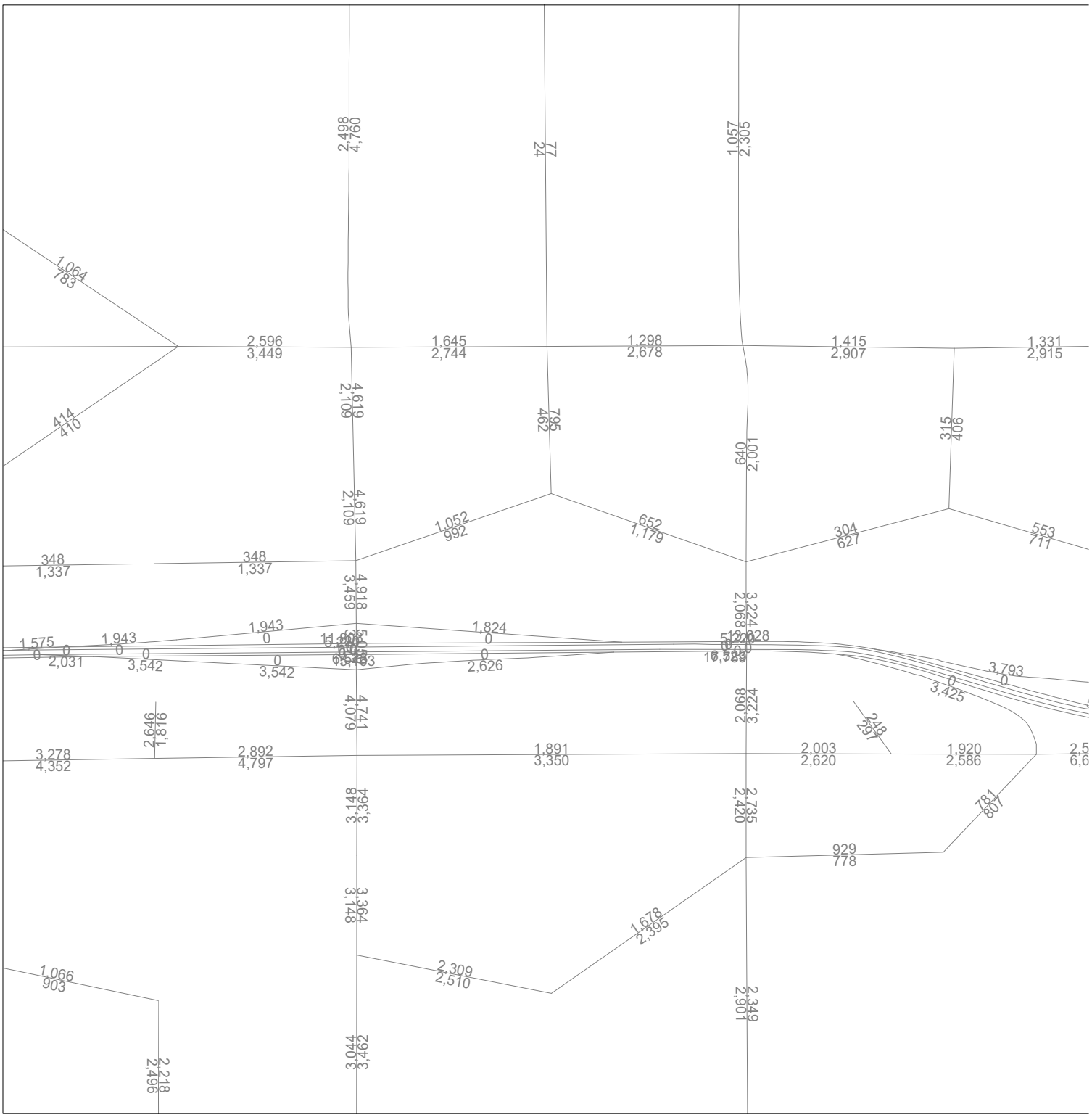


2007 PM

Attachment: Appendix F to Initial Study Traffic Impact Analysis (4266 : PEN20-0137-0139 Plot Plan for a Light Industrial Building)



2035 AM



2035 PM

Attachment: Appendix F to Initial Study Traffic Impact Analysis (4266 : PEN20-0137-0139 Plot Plan for a Light Industrial Building)

Synchro LOS Reports

Existing

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	279	125	161	534	43	107	431	92	52	555	263
Future Volume (veh/h)	133	279	125	161	534	43	107	431	92	52	555	263
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	141	297	133	171	568	46	114	459	98	55	590	280
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	792	354	210	802	65	146	1323	779	109	1249	717
Arrive On Green	0.10	0.22	0.22	0.12	0.24	0.24	0.08	0.37	0.37	0.06	0.35	0.35
Sat Flow, veh/h	1774	3539	1583	1774	3317	268	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	141	297	133	171	303	311	114	459	98	55	590	280
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1815	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	6.3	5.7	5.7	7.6	12.6	12.7	5.1	7.5	2.7	2.4	10.5	9.5
Cycle Q Clear(g_c), s	6.3	5.7	5.7	7.6	12.6	12.7	5.1	7.5	2.7	2.4	10.5	9.5
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	792	354	210	428	439	146	1323	779	109	1249	717
V/C Ratio(X)	0.80	0.38	0.38	0.82	0.71	0.71	0.78	0.35	0.13	0.50	0.47	0.39
Avail Cap(c_a), veh/h	297	1161	520	297	581	596	297	1323	779	297	1249	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	26.6	26.6	34.8	28.0	28.0	36.3	18.2	11.1	36.7	20.3	14.7
Incr Delay (d2), s/veh	7.9	0.3	0.7	11.3	2.5	2.5	8.7	0.7	0.3	3.6	1.3	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	2.8	2.6	4.4	6.4	6.6	2.9	3.8	1.2	1.3	5.3	4.5
LnGrp Delay(d),s/veh	43.4	26.9	27.2	46.0	30.5	30.5	45.0	18.9	11.4	40.3	21.6	16.3
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		571			785			671			925	
Approach Delay, s/veh		31.0			33.9			22.3			21.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	34.7	14.0	22.6	11.2	33.0	12.6	24.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.4	9.5	9.6	7.7	7.1	12.5	8.3	14.7
Green Ext Time (p_c), s	0.1	7.9	0.2	6.1	0.1	7.3	0.1	4.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

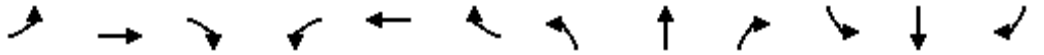
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	620	0	0	841
Future Vol, veh/h	0	9	620	0	0	841
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	660	0	0	895

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1107	330	0	0	660	0
Stage 1	660	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	204	666	-	-	924	-
Stage 1	476	-	-	-	-	-
Stage 2	611	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	204	666	-	-	924	-
Mov Cap-2 Maneuver	335	-	-	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	611	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	666	924	-
HCM Lane V/C Ratio	-	-	0.014	-	-
HCM Control Delay (s)	-	-	10.5	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	61	112	57	75	18	99	602	57	18	812	41
Future Volume (veh/h)	39	61	112	57	75	18	99	602	57	18	812	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	40	63	115	59	77	19	102	621	59	19	837	42
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	90	164	123	309	263	157	1701	761	55	1498	670
Arrive On Green	0.05	0.15	0.15	0.07	0.17	0.17	0.09	0.48	0.48	0.03	0.42	0.42
Sat Flow, veh/h	1774	592	1080	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	40	0	178	59	77	19	102	621	59	19	837	42
Grp Sat Flow(s),veh/h/ln	1774	0	1672	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.5	0.0	6.8	2.2	2.4	0.7	3.7	7.4	1.4	0.7	12.0	1.1
Cycle Q Clear(g_c), s	1.5	0.0	6.8	2.2	2.4	0.7	3.7	7.4	1.4	0.7	12.0	1.1
Prop In Lane	1.00		0.65	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	0	253	123	309	263	157	1701	761	55	1498	670
V/C Ratio(X)	0.41	0.00	0.70	0.48	0.25	0.07	0.65	0.36	0.08	0.34	0.56	0.06
Avail Cap(c_a), veh/h	356	0	658	356	733	623	356	1701	761	356	1498	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	27.1	30.2	24.4	23.7	29.7	11.0	9.4	31.9	14.7	11.5
Incr Delay (d2), s/veh	2.8	0.0	3.5	2.9	0.4	0.1	4.5	0.6	0.2	3.7	1.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	3.4	1.1	1.3	0.3	2.0	3.8	0.6	0.4	6.1	0.5
LnGrp Delay(d),s/veh	33.5	0.0	30.7	33.0	24.8	23.8	34.1	11.6	9.6	35.6	16.2	11.7
LnGrp LOS	C		C	C	C	C	C	B	A	D	B	B
Approach Vol, veh/h		218			155			782			898	
Approach Delay, s/veh		31.2			27.8			14.4			16.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	36.9	9.2	14.7	10.5	33.0	8.2	15.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	2.7	9.4	4.2	8.8	5.7	14.0	3.5	4.4
Green Ext Time (p_c), s	0.0	10.1	0.1	1.4	0.1	8.5	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	257	4	151	267	606	0	0	718	266
Future Volume (veh/h)	0	0	0	257	4	151	267	606	0	0	718	266
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				268	4	157	278	631	0	0	748	277
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				342	5	309	322	2460	0	0	1161	430
Arrive On Green				0.20	0.20	0.20	0.18	0.70	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1749	26	1583	1774	3632	0	0	2623	937
Grp Volume(v), veh/h				272	0	157	278	631	0	0	523	502
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1697
Q Serve(g_s), s				12.0	0.0	7.3	12.5	5.4	0.0	0.0	18.7	18.7
Cycle Q Clear(g_c), s				12.0	0.0	7.3	12.5	5.4	0.0	0.0	18.7	18.7
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.55
Lane Grp Cap(c), veh/h				347	0	309	322	2460	0	0	812	779
V/C Ratio(X)				0.78	0.00	0.51	0.86	0.26	0.00	0.00	0.64	0.64
Avail Cap(c_a), veh/h				733	0	653	451	2460	0	0	812	779
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.4	0.0	29.5	32.6	4.6	0.0	0.0	17.1	17.1
Incr Delay (d2), s/veh				3.9	0.0	1.3	11.8	0.3	0.0	0.0	3.9	4.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.2	0.0	3.3	7.2	2.7	0.0	0.0	9.9	9.5
LnGrp Delay(d),s/veh				35.3	0.0	30.8	44.4	4.9	0.0	0.0	21.0	21.2
LnGrp LOS				D		C	D	A			C	C
Approach Vol, veh/h					429			909			1025	
Approach Delay, s/veh					33.7			17.0			21.1	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			19.4	42.2		20.6
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		7.4			14.5	20.7		14.0
Green Ext Time (p_c), s		16.4			0.4	7.4		2.1

Intersection Summary		
HCM 2010 Ctrl Delay		21.8
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	4	371	0	0	0	0	656	140	150	830	0
Future Volume (veh/h)	209	4	371	0	0	0	0	656	140	150	830	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	216	0	379				0	669	143	153	847	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	940	0	419				0	2039	430	193	2268	0
Arrive On Green	0.26	0.00	0.26				0.00	0.48	0.48	0.11	0.64	0.00
Sat Flow, veh/h	3548	0	1583				0	4376	888	1774	3632	0
Grp Volume(v), veh/h	216	0	379				0	537	275	153	847	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1706	1774	1770	0
Q Serve(g_s), s	4.5	0.0	22.1				0.0	9.3	9.4	8.0	10.8	0.0
Cycle Q Clear(g_c), s	4.5	0.0	22.1				0.0	9.3	9.4	8.0	10.8	0.0
Prop In Lane	1.00		1.00				0.00		0.52	1.00		0.00
Lane Grp Cap(c), veh/h	940	0	419				0	1643	827	193	2268	0
V/C Ratio(X)	0.23	0.00	0.90				0.00	0.33	0.33	0.79	0.37	0.00
Avail Cap(c_a), veh/h	1112	0	496				0	1643	827	556	2268	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.4	0.0	33.9				0.0	15.1	15.1	41.4	8.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	17.9				0.0	0.1	0.2	7.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	11.7				0.0	4.4	4.5	4.3	5.3	0.0
LnGrp Delay(d),s/veh	27.6	0.0	51.8				0.0	15.2	15.3	48.6	8.6	0.0
LnGrp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		595						812			1000	
Approach Delay, s/veh		43.0						15.2			14.7	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.9	50.7		29.8		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.3	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	10.3	11.4		24.1		12.8		
Green Ext Time (p_c), s	0.4	9.4		1.2		16.6		

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	135	1	0	150	0	0	0	1	0	0	0
Future Vol, veh/h	0	135	1	0	150	0	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	148	1	0	165	0	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	165	0	0	149	0	0	231	314	75	239	314	82
Stage 1	-	-	-	-	-	-	149	149	-	165	165	-
Stage 2	-	-	-	-	-	-	82	165	-	74	149	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1411	-	-	1430	-	-	704	600	971	695	600	961
Stage 1	-	-	-	-	-	-	838	773	-	821	761	-
Stage 2	-	-	-	-	-	-	917	761	-	927	773	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1411	-	-	1430	-	-	704	600	971	694	600	961
Mov Cap-2 Maneuver	-	-	-	-	-	-	704	600	-	694	600	-
Stage 1	-	-	-	-	-	-	838	773	-	821	761	-
Stage 2	-	-	-	-	-	-	917	761	-	926	773	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.7	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	971	1411	-	-	1430	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-	-	-	-
HCM Control Delay (s)	8.7	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	126	1	0	144	1	2	0	0	0	0	6
Future Vol, veh/h	11	126	1	0	144	1	2	0	0	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	147	1	0	167	1	2	0	0	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	169	0	0	148	0	0	341	342	74	267	341	168
Stage 1	-	-	-	-	-	-	173	173	-	168	168	-
Stage 2	-	-	-	-	-	-	168	169	-	99	173	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1407	-	-	1432	-	-	601	579	973	675	580	875
Stage 1	-	-	-	-	-	-	812	755	-	833	759	-
Stage 2	-	-	-	-	-	-	833	758	-	897	755	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1407	-	-	1432	-	-	592	574	973	670	575	875
Mov Cap-2 Maneuver	-	-	-	-	-	-	592	574	-	670	575	-
Stage 1	-	-	-	-	-	-	804	748	-	825	759	-
Stage 2	-	-	-	-	-	-	826	758	-	889	748	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	11.1	9.1
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	592	1407	-	-	1432	-	-	-	875
HCM Lane V/C Ratio	0.004	0.009	-	-	-	-	-	-	0.008
HCM Control Delay (s)	11.1	7.6	-	-	0	-	-	0	9.1
HCM Lane LOS	B	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	110	139	4	0	5
Future Vol, veh/h	16	110	139	4	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	131	165	5	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	170	0	-	0	337	168
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	169	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1407	-	-	-	658	876
Stage 1	-	-	-	-	862	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1407	-	-	-	648	876
Mov Cap-2 Maneuver	-	-	-	-	686	-
Stage 1	-	-	-	-	862	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1407	-	-	-	876
HCM Lane V/C Ratio	0.014	-	-	-	0.007
HCM Control Delay (s)	7.6	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	99	140	18	5	4
Future Vol, veh/h	12	99	140	18	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	110	156	20	6	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	176	0	-	0	303	166
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	137	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1400	-	-	-	689	878
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1400	-	-	-	682	878
Mov Cap-2 Maneuver	-	-	-	-	709	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	881	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1400	-	-	-	775
HCM Lane V/C Ratio	0.01	-	-	-	0.013
HCM Control Delay (s)	7.6	-	-	-	9.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	103	155	6	0	1
Future Vol, veh/h	0	103	155	6	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	120	180	7	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	184
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	858
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	858
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	858
HCM Lane V/C Ratio	-	-	-	0.001
HCM Control Delay (s)	-	-	-	9.2
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	104	157	4	0	6
Future Vol, veh/h	0	104	157	4	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	120	180	5	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	183
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	859
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	859
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	859
HCM Lane V/C Ratio	-	-	-	0.008
HCM Control Delay (s)	-	-	-	9.2
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	395	0	0	673	158	0	0	0	129	0	79
Future Volume (veh/h)	46	395	0	0	673	158	0	0	0	129	0	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	0	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	52	449	0	0	765	180	0	0	0	147	0	90
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	69	1568	0	0	1018	240	0	864	0	898	0	735
Arrive On Green	0.04	0.44	0.00	0.00	0.36	0.36	0.00	0.00	0.00	0.46	0.00	0.46
Sat Flow, veh/h	1774	3632	0	0	2938	669	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	52	449	0	0	476	469	0	0	0	147	0	90
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1745	0	1863	0	1774	0	1583
Q Serve(g_s), s	2.8	7.8	0.0	0.0	22.9	22.9	0.0	0.0	0.0	4.7	0.0	3.1
Cycle Q Clear(g_c), s	2.8	7.8	0.0	0.0	22.9	22.9	0.0	0.0	0.0	4.7	0.0	3.1
Prop In Lane	1.00		0.00	0.00		0.38	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	1568	0	0	633	624	0	864	0	898	0	735
V/C Ratio(X)	0.75	0.29	0.00	0.00	0.75	0.75	0.00	0.00	0.00	0.16	0.00	0.12
Avail Cap(c_a), veh/h	91	1679	0	0	840	828	0	864	0	898	0	735
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.1	17.2	0.0	0.0	27.3	27.3	0.0	0.0	0.0	15.2	0.0	14.8
Incr Delay (d2), s/veh	21.7	0.1	0.0	0.0	2.7	2.7	0.0	0.0	0.0	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.8	0.0	0.0	11.6	11.4	0.0	0.0	0.0	2.4	0.0	1.4
LnGrp Delay(d),s/veh	67.8	17.3	0.0	0.0	30.0	30.1	0.0	0.0	0.0	15.6	0.0	15.1
LnGrp LOS	E	B			C	C				B		B
Approach Vol, veh/h		501			945			0			237	
Approach Delay, s/veh		22.6			30.1			0.0			15.4	
Approach LOS		C			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		49.5		47.5		49.5	8.3	39.2
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		45.0		46.0		45.0	5.0	46.0
Max Q Clear Time (g_c+I1), s		0.0		9.8		6.7	4.8	24.9
Green Ext Time (p_c), s		0.0		12.2		1.0	0.0	9.8

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	368	124	90	619	84	120	126	56	93	144	80
Future Volume (veh/h)	32	368	124	90	619	84	120	126	56	93	144	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	38	438	148	107	737	100	143	150	67	111	171	95
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	688	230	137	916	124	179	675	574	142	637	541
Arrive On Green	0.05	0.26	0.26	0.08	0.29	0.29	0.10	0.36	0.36	0.08	0.34	0.34
Sat Flow, veh/h	1774	2606	873	1774	3133	425	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	38	296	290	107	416	421	143	150	67	111	171	95
Grp Sat Flow(s),veh/h/ln	1774	1770	1709	1774	1770	1788	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.7	12.3	12.5	4.9	18.1	18.2	6.6	4.7	2.3	5.1	5.5	3.5
Cycle Q Clear(g_c), s	1.7	12.3	12.5	4.9	18.1	18.2	6.6	4.7	2.3	5.1	5.5	3.5
Prop In Lane	1.00		0.51	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	87	467	451	137	517	523	179	675	574	142	637	541
V/C Ratio(X)	0.44	0.63	0.64	0.78	0.80	0.80	0.80	0.22	0.12	0.78	0.27	0.18
Avail Cap(c_a), veh/h	287	562	543	287	562	568	287	675	574	287	637	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	27.1	27.2	37.8	27.3	27.3	36.7	18.4	17.7	37.6	19.9	19.2
Incr Delay (d2), s/veh	3.4	1.7	1.9	9.1	7.8	7.7	8.0	0.8	0.4	8.9	1.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	6.2	6.1	2.8	9.9	10.0	3.6	2.5	1.1	2.8	3.0	1.6
LnGrp Delay(d),s/veh	41.9	28.8	29.1	46.8	35.1	35.0	44.7	19.2	18.1	46.5	20.9	19.9
LnGrp LOS	D	C	C	D	D	D	D	B	B	D	C	B
Approach Vol, veh/h		624			944			360			377	
Approach Delay, s/veh		29.7			36.4			29.1			28.2	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	34.7	11.0	26.5	12.9	33.0	8.6	28.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	7.1	6.7	6.9	14.5	8.6	7.5	3.7	20.2
Green Ext Time (p_c), s	0.1	2.3	0.1	6.8	0.1	2.3	0.0	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	32.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	73	26	51	77	59	36	210	49	43	299	22
Future Volume (veh/h)	9	73	26	51	77	59	36	210	49	43	299	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	91	32	64	96	74	45	262	61	54	374	28
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	233	78	234	129	99	102	638	149	170	813	61
Arrive On Green	0.09	0.09	0.09	0.13	0.13	0.13	0.06	0.44	0.44	0.10	0.47	0.47
Sat Flow, veh/h	1774	2602	876	1774	977	753	1774	1462	340	1774	1712	128
Grp Volume(v), veh/h	11	61	62	64	0	170	45	0	323	54	0	402
Grp Sat Flow(s),veh/h/ln	1774	1770	1708	1774	0	1730	1774	0	1803	1774	0	1840
Q Serve(g_s), s	0.4	2.4	2.5	2.4	0.0	6.9	1.8	0.0	9.0	2.1	0.0	10.7
Cycle Q Clear(g_c), s	0.4	2.4	2.5	2.4	0.0	6.9	1.8	0.0	9.0	2.1	0.0	10.7
Prop In Lane	1.00		0.51	1.00		0.44	1.00		0.19	1.00		0.07
Lane Grp Cap(c), veh/h	159	158	153	234	0	228	102	0	787	170	0	874
V/C Ratio(X)	0.07	0.38	0.41	0.27	0.00	0.74	0.44	0.00	0.41	0.32	0.00	0.46
Avail Cap(c_a), veh/h	488	487	470	488	0	476	172	0	787	488	0	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.5	31.4	31.4	28.6	0.0	30.5	33.3	0.0	14.1	30.8	0.0	12.9
Incr Delay (d2), s/veh	0.2	1.5	1.7	0.6	0.0	4.8	3.0	0.0	1.6	1.1	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.2	1.3	1.2	0.0	3.6	1.0	0.0	4.7	1.1	0.0	5.8
LnGrp Delay(d),s/veh	30.7	32.9	33.2	29.2	0.0	35.3	36.3	0.0	15.7	31.9	0.0	14.6
LnGrp LOS	C	C	C	C		D	D		B	C		B
Approach Vol, veh/h		134			234			368			456	
Approach Delay, s/veh		32.8			33.6			18.2			16.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	36.4		11.0	8.7	39.2		14.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	14.1	11.0		4.5	3.8	12.7		8.9
Green Ext Time (p_c), s	0.1	3.4		0.5	0.0	4.7		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	164	67	20	222	34	82	199	59	57	225	87
Future Volume (veh/h)	50	164	67	20	222	34	82	199	59	57	225	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	56	184	75	22	249	38	92	224	66	64	253	98
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	459	180	62	469	71	152	817	750	129	793	781
Arrive On Green	0.07	0.18	0.18	0.04	0.15	0.15	0.09	0.44	0.44	0.07	0.43	0.43
Sat Flow, veh/h	1774	2484	976	1774	3085	465	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	56	129	130	22	141	146	92	224	66	64	253	98
Grp Sat Flow(s),veh/h/ln	1774	1770	1690	1774	1770	1781	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.0	4.3	4.5	0.8	4.9	5.1	3.3	5.1	1.5	2.3	6.0	2.2
Cycle Q Clear(g_c), s	2.0	4.3	4.5	0.8	4.9	5.1	3.3	5.1	1.5	2.3	6.0	2.2
Prop In Lane	1.00		0.58	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	327	312	62	269	271	152	817	750	129	793	781
V/C Ratio(X)	0.47	0.40	0.42	0.35	0.53	0.54	0.61	0.27	0.09	0.50	0.32	0.13
Avail Cap(c_a), veh/h	358	700	669	358	700	705	358	817	750	358	793	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	24.0	24.1	31.6	26.2	26.2	29.5	12.0	9.7	29.9	12.8	9.2
Incr Delay (d2), s/veh	2.8	0.8	0.9	3.4	1.6	1.7	3.8	0.8	0.2	2.9	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.2	2.2	0.5	2.5	2.6	1.8	2.8	0.7	1.2	3.3	1.0
LnGrp Delay(d),s/veh	32.8	24.8	25.0	34.9	27.7	27.9	33.4	12.8	9.9	32.8	13.8	9.5
LnGrp LOS	C	C	C	C	C	C	C	B	A	C	B	A
Approach Vol, veh/h		315			309			382			415	
Approach Delay, s/veh		26.3			28.3			17.3			15.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	33.9	6.9	16.9	10.2	33.0	9.0	14.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.3	7.1	2.8	6.5	5.3	8.0	4.0	7.1
Green Ext Time (p_c), s	0.1	3.4	0.0	3.2	0.1	3.3	0.1	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Existing (2017) Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	441	120	97	312	40	157	659	185	74	517	206
Future Volume (veh/h)	227	441	120	97	312	40	157	659	185	74	517	206
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	232	450	122	99	318	41	160	672	189	76	528	210
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	269	905	405	134	567	72	197	1357	727	123	1210	781
Arrive On Green	0.15	0.26	0.26	0.08	0.18	0.18	0.11	0.38	0.38	0.07	0.34	0.34
Sat Flow, veh/h	1774	3539	1583	1774	3157	404	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	232	450	122	99	177	182	160	672	189	76	528	210
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1792	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	10.6	9.0	5.2	4.6	7.6	7.7	7.3	12.0	6.1	3.5	9.6	6.5
Cycle Q Clear(g_c), s	10.6	9.0	5.2	4.6	7.6	7.7	7.3	12.0	6.1	3.5	9.6	6.5
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	269	905	405	134	318	321	197	1357	727	123	1210	781
V/C Ratio(X)	0.86	0.50	0.30	0.74	0.56	0.57	0.81	0.50	0.26	0.62	0.44	0.27
Avail Cap(c_a), veh/h	287	1125	503	287	563	570	287	1357	727	287	1210	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	26.5	25.0	37.7	31.2	31.2	36.2	19.6	13.9	37.7	21.2	12.3
Incr Delay (d2), s/veh	21.7	0.4	0.4	7.7	1.5	1.6	10.7	1.3	0.9	4.9	1.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	4.5	2.3	2.5	3.8	4.0	4.2	6.1	2.8	1.9	4.9	3.0
LnGrp Delay(d),s/veh	56.2	26.9	25.4	45.5	32.7	32.8	46.9	20.9	14.7	42.6	22.4	13.2
LnGrp LOS	E	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		804			458			1021			814	
Approach Delay, s/veh		35.1			35.5			23.8			21.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	36.5	10.8	25.8	13.8	33.0	17.1	19.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	5.5	14.0	6.6	11.0	9.3	11.6	12.6	9.7
Green Ext Time (p_c), s	0.1	7.8	0.1	5.0	0.1	8.5	0.1	5.2

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

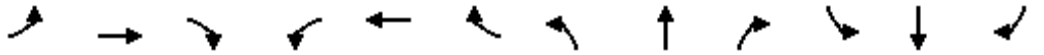
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1001	0	0	733
Future Vol, veh/h	0	0	1001	0	0	733
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1021	0	0	748

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1320	511	0	0	1021	0
Stage 1	1021	-	-	-	-	-
Stage 2	299	-	-	-	-	-
Critical Hdwy	6.29	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	178	508	-	-	675	-
Stage 1	301	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	178	508	-	-	675	-
Mov Cap-2 Maneuver	178	-	-	-	-	-
Stage 1	301	-	-	-	-	-
Stage 2	689	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	675	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	89	159	82	75	30	132	966	109	24	696	44
Future Volume (veh/h)	56	89	159	82	75	30	132	966	109	24	696	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	57	90	161	83	76	30	133	976	110	24	703	44
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	116	208	138	383	326	170	1582	708	65	1373	614
Arrive On Green	0.07	0.19	0.19	0.08	0.21	0.21	0.10	0.45	0.45	0.04	0.39	0.39
Sat Flow, veh/h	1774	600	1073	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	57	0	251	83	76	30	133	976	110	24	703	44
Grp Sat Flow(s),veh/h/ln	1774	0	1673	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	2.3	0.0	10.5	3.3	2.5	1.1	5.4	15.5	3.0	1.0	11.1	1.3
Cycle Q Clear(g_c), s	2.3	0.0	10.5	3.3	2.5	1.1	5.4	15.5	3.0	1.0	11.1	1.3
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	0	324	138	383	326	170	1582	708	65	1373	614
V/C Ratio(X)	0.49	0.00	0.78	0.60	0.20	0.09	0.78	0.62	0.16	0.37	0.51	0.07
Avail Cap(c_a), veh/h	326	0	604	326	672	571	326	1582	708	326	1373	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	0.0	28.1	32.8	24.2	23.6	32.5	15.5	12.1	34.5	17.2	14.1
Incr Delay (d2), s/veh	3.2	0.0	4.0	4.2	0.3	0.1	7.7	1.8	0.5	3.4	1.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	5.2	1.8	1.3	0.5	3.0	7.9	1.4	0.5	5.6	0.6
LnGrp Delay(d),s/veh	36.3	0.0	32.1	36.9	24.4	23.7	40.1	17.3	12.5	37.9	18.5	14.4
LnGrp LOS	D		C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		308			189			1219			771	
Approach Delay, s/veh		32.9			29.8			19.4			18.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	37.3	10.2	18.7	11.5	33.0	9.3	19.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	3.0	17.5	5.3	12.5	7.4	13.1	4.3	4.5
Green Ext Time (p_c), s	0.0	7.9	0.1	1.7	0.1	10.1	0.1	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	197	4	154	342	1061	0	0	709	232
Future Volume (veh/h)	0	0	0	197	4	154	342	1061	0	0	709	232
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				205	4	160	356	1105	0	0	739	242
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				278	5	253	399	2569	0	0	1163	381
Arrive On Green				0.16	0.16	0.16	0.23	0.73	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1742	34	1583	1774	3632	0	0	2715	859
Grp Volume(v), veh/h				209	0	160	356	1105	0	0	499	482
Grp Sat Flow(s),veh/h/ln				1776	0	1583	1774	1770	0	0	1770	1711
Q Serve(g_s), s				8.8	0.0	7.4	15.3	9.8	0.0	0.0	17.2	17.2
Cycle Q Clear(g_c), s				8.8	0.0	7.4	15.3	9.8	0.0	0.0	17.2	17.2
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.50
Lane Grp Cap(c), veh/h				284	0	253	399	2569	0	0	785	759
V/C Ratio(X)				0.74	0.00	0.63	0.89	0.43	0.00	0.00	0.64	0.64
Avail Cap(c_a), veh/h				765	0	682	471	2569	0	0	785	759
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.5	0.0	30.9	29.6	4.3	0.0	0.0	17.0	17.0
Incr Delay (d2), s/veh				3.7	0.0	2.6	17.0	0.5	0.0	0.0	3.9	4.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.6	0.0	3.4	9.4	4.8	0.0	0.0	9.2	8.9
LnGrp Delay(d),s/veh				35.2	0.0	33.5	46.5	4.8	0.0	0.0	20.9	21.0
LnGrp LOS				D		C	D	A			C	C
Approach Vol, veh/h					369			1461			981	
Approach Delay, s/veh					34.5			15.0			20.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			22.2	39.4		17.1
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		11.8			17.3	19.2		10.8
Green Ext Time (p_c), s		23.0			0.4	9.7		1.8

Intersection Summary		
HCM 2010 Ctrl Delay		19.6
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	472	3	334	0	0	0	0	941	252	161	751	0
Future Volume (veh/h)	472	3	334	0	0	0	0	941	252	161	751	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	494	0	348				0	980	262	168	782	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	903	0	403				0	1936	516	209	2300	0
Arrive On Green	0.25	0.00	0.25				0.00	0.48	0.48	0.12	0.65	0.00
Sat Flow, veh/h	3548	0	1583				0	4166	1067	1774	3632	0
Grp Volume(v), veh/h	494	0	348				0	831	411	168	782	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1674	1774	1770	0
Q Serve(g_s), s	11.3	0.0	19.7				0.0	15.7	15.8	8.7	9.3	0.0
Cycle Q Clear(g_c), s	11.3	0.0	19.7				0.0	15.7	15.8	8.7	9.3	0.0
Prop In Lane	1.00		1.00				0.00		0.64	1.00		0.00
Lane Grp Cap(c), veh/h	903	0	403				0	1641	811	209	2300	0
V/C Ratio(X)	0.55	0.00	0.86				0.00	0.51	0.51	0.80	0.34	0.00
Avail Cap(c_a), veh/h	1128	0	504				0	1641	811	564	2300	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.4	0.0	33.5				0.0	16.6	16.6	40.4	7.4	0.0
Incr Delay (d2), s/veh	0.5	0.0	12.2				0.0	0.3	0.5	7.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	10.0				0.0	7.4	7.4	4.7	4.7	0.0
LnGrp Delay(d),s/veh	30.9	0.0	45.7				0.0	16.8	17.1	47.4	7.8	0.0
LnGrp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		842						1242			950	
Approach Delay, s/veh		37.0						16.9			14.8	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	15.6	50.0		28.4		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.9	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	10.7	17.8		21.7		11.3		
Green Ext Time (p_c), s	0.4	7.1		2.2		22.8		

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑			↕			↕	
Traffic Vol, veh/h	0	231	17	0	193	0	0	0	22	0	0	0
Future Vol, veh/h	0	231	17	0	193	0	0	0	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	246	18	0	205	0	0	0	23	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	460	460	132	303	469	205
Stage 1	-	-	-	-	-	-	255	255	-	205	205	-
Stage 2	-	-	-	-	-	-	205	205	-	98	264	-
Critical Hdwy	-	-	-	-	-	-	6.78	6.53	7.13	6.78	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	7.33	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.73	5.53	-
Follow-up Hdwy	-	-	-	-	-	-	3.669	4.019	3.919	3.669	4.019	3.319
Pot Cap-1 Maneuver	0	-	-	0	-	0	517	497	759	645	491	835
Stage 1	0	-	-	0	-	0	663	696	-	767	731	-
Stage 2	0	-	-	0	-	0	767	731	-	858	689	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	517	497	759	625	491	835
Mov Cap-2 Maneuver	-	-	-	-	-	-	517	497	-	625	491	-
Stage 1	-	-	-	-	-	-	663	696	-	767	731	-
Stage 2	-	-	-	-	-	-	767	731	-	832	689	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	9.9	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	759	-	-	-	-
HCM Lane V/C Ratio	0.031	-	-	-	-
HCM Control Delay (s)	9.9	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	208	4	4	147	5	2	2	0	7	0	35
Future Vol, veh/h	45	208	4	4	147	5	2	2	0	7	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	236	5	5	167	6	2	2	0	8	0	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	173	0	0	241	0	0	520	523	120	401	522	170
Stage 1	-	-	-	-	-	-	341	341	-	179	179	-
Stage 2	-	-	-	-	-	-	179	182	-	222	343	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1402	-	-	1324	-	-	453	458	909	547	459	873
Stage 1	-	-	-	-	-	-	648	638	-	822	751	-
Stage 2	-	-	-	-	-	-	822	748	-	761	637	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1402	-	-	1324	-	-	419	440	909	528	441	873
Mov Cap-2 Maneuver	-	-	-	-	-	-	419	440	-	528	441	-
Stage 1	-	-	-	-	-	-	624	615	-	792	748	-
Stage 2	-	-	-	-	-	-	782	745	-	731	614	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.2	13.5	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	429	1402	-	-	1324	-	-	528	873
HCM Lane V/C Ratio	0.011	0.036	-	-	0.003	-	-	0.015	0.046
HCM Control Delay (s)	13.5	7.7	-	-	7.7	-	-	11.9	9.3
HCM Lane LOS	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0	0.1

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	206	147	7	10	10
Future Vol, veh/h	11	206	147	7	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	226	162	8	11	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	169	0	-	0	416	165
Stage 1	-	-	-	-	165	-
Stage 2	-	-	-	-	251	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1409	-	-	-	593	879
Stage 1	-	-	-	-	864	-
Stage 2	-	-	-	-	791	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1409	-	-	-	587	879
Mov Cap-2 Maneuver	-	-	-	-	641	-
Stage 1	-	-	-	-	864	-
Stage 2	-	-	-	-	783	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1409	-	-	-	741
HCM Lane V/C Ratio	0.009	-	-	-	0.03
HCM Control Delay (s)	7.6	0	-	-	10
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱		↰	
Traffic Vol, veh/h	14	199	140	9	25	16
Future Vol, veh/h	14	199	140	9	25	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	219	154	10	27	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	164	0	-	0	408	159
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	249	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1414	-	-	-	599	886
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1414	-	-	-	592	886
Mov Cap-2 Maneuver	-	-	-	-	643	-
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	782	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1414	-	-	-	720
HCM Lane V/C Ratio	0.011	-	-	-	0.063
HCM Control Delay (s)	7.6	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	224	142	20	0	7
Future Vol, veh/h	1	224	142	20	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	241	153	22	0	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	174	0	-	0	-	163
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	-	3.318
Pot Cap-1 Maneuver	1403	-	-	-	0	882
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1403	-	-	-	-	882
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1403	-	-	-	882
HCM Lane V/C Ratio	0.001	-	-	-	0.009
HCM Control Delay (s)	7.6	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	224	153	8	0	9
Future Vol, veh/h	0	224	153	8	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	238	163	9	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	167
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	877
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	877
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	877
HCM Lane V/C Ratio	-	-	-	0.011
HCM Control Delay (s)	-	-	-	9.2
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	611	0	0	388	48	0	0	0	65	0	47
Future Volume (veh/h)	85	611	0	0	388	48	0	0	0	65	0	47
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	0	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	98	702	0	0	446	55	0	0	0	75	0	54
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	82	1778	0	0	1316	162	0	773	0	802	0	657
Arrive On Green	0.05	0.50	0.00	0.00	0.41	0.41	0.00	0.00	0.00	0.41	0.00	0.41
Sat Flow, veh/h	1774	3632	0	0	3267	390	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	98	702	0	0	248	253	0	0	0	75	0	54
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1794	0	1863	0	1774	0	1583
Q Serve(g_s), s	5.0	13.4	0.0	0.0	10.3	10.4	0.0	0.0	0.0	2.8	0.0	2.2
Cycle Q Clear(g_c), s	5.0	13.4	0.0	0.0	10.3	10.4	0.0	0.0	0.0	2.8	0.0	2.2
Prop In Lane	1.00		0.00	0.00		0.22	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	1778	0	0	734	744	0	773	0	802	0	657
V/C Ratio(X)	1.20	0.39	0.00	0.00	0.34	0.34	0.00	0.00	0.00	0.09	0.00	0.08
Avail Cap(c_a), veh/h	82	1778	0	0	734	744	0	773	0	802	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	16.8	0.0	0.0	21.6	21.6	0.0	0.0	0.0	19.4	0.0	19.2
Incr Delay (d2), s/veh	162.5	0.7	0.0	0.0	1.2	1.2	0.0	0.0	0.0	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.7	0.0	0.0	5.3	5.4	0.0	0.0	0.0	1.4	0.0	1.0
LnGrp Delay(d),s/veh	214.3	17.4	0.0	0.0	22.9	22.9	0.0	0.0	0.0	19.6	0.0	19.5
LnGrp LOS	F	B			C	C				B		B
Approach Vol, veh/h		800			501			0			129	
Approach Delay, s/veh		41.5			22.9			0.0			19.6	
Approach LOS		D			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		59.0		49.5	9.5	49.5		49.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		45.0		45.0	5.0	45.0		45.0
Max Q Clear Time (g_c+I1), s		15.4		4.8	7.0	12.4		0.0
Green Ext Time (p_c), s		9.5		0.5	0.0	9.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	471	85	46	320	53	61	120	122	58	79	65
Future Volume (veh/h)	87	471	85	46	320	53	61	120	122	58	79	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	512	92	50	348	58	66	130	133	63	86	71
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	750	134	107	699	115	124	711	604	121	708	602
Arrive On Green	0.08	0.25	0.25	0.06	0.23	0.23	0.07	0.38	0.38	0.07	0.38	0.38
Sat Flow, veh/h	1774	3001	537	1774	3042	502	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	95	301	303	50	201	205	66	130	133	63	86	71
Grp Sat Flow(s),veh/h/ln	1774	1770	1768	1774	1770	1774	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.9	11.5	11.6	2.0	7.4	7.5	2.7	3.5	4.3	2.6	2.3	2.2
Cycle Q Clear(g_c), s	3.9	11.5	11.6	2.0	7.4	7.5	2.7	3.5	4.3	2.6	2.3	2.2
Prop In Lane	1.00		0.30	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	442	442	107	407	408	124	711	604	121	708	602
V/C Ratio(X)	0.67	0.68	0.69	0.47	0.49	0.50	0.53	0.18	0.22	0.52	0.12	0.12
Avail Cap(c_a), veh/h	319	625	625	319	625	627	319	711	604	319	708	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	25.4	25.5	34.1	25.1	25.2	33.7	15.4	15.7	33.8	15.1	15.1
Incr Delay (d2), s/veh	5.2	1.9	1.9	3.1	0.9	1.0	3.5	0.6	0.8	3.4	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.8	5.9	1.1	3.7	3.8	1.4	1.9	2.0	1.4	1.2	1.0
LnGrp Delay(d),s/veh	38.7	27.3	27.4	37.2	26.0	26.1	37.2	16.0	16.5	37.2	15.5	15.5
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		699			456			329			220	
Approach Delay, s/veh		28.9			27.3			20.5			21.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	33.1	9.0	23.2	9.7	33.0	10.5	21.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.6	6.3	4.0	13.6	4.7	4.3	5.9	9.5
Green Ext Time (p_c), s	0.1	1.9	0.0	5.1	0.1	1.9	0.1	5.9

Intersection Summary		
HCM 2010 Ctrl Delay		25.9
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	137	52	41	70	22	50	260	86	16	189	14
Future Volume (veh/h)	37	137	52	41	70	22	50	260	86	16	189	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	39	144	55	43	74	23	53	274	91	17	199	15
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	249	91	164	126	39	114	611	203	175	840	63
Arrive On Green	0.10	0.10	0.10	0.09	0.09	0.09	0.06	0.46	0.46	0.10	0.49	0.49
Sat Flow, veh/h	1774	2537	931	1774	1364	424	1774	1339	445	1774	1711	129
Grp Volume(v), veh/h	39	99	100	43	0	97	53	0	365	17	0	214
Grp Sat Flow(s),veh/h/ln	1774	1770	1698	1774	0	1788	1774	0	1784	1774	0	1840
Q Serve(g_s), s	1.4	3.8	4.0	1.6	0.0	3.7	2.0	0.0	9.9	0.6	0.0	4.7
Cycle Q Clear(g_c), s	1.4	3.8	4.0	1.6	0.0	3.7	2.0	0.0	9.9	0.6	0.0	4.7
Prop In Lane	1.00		0.55	1.00		0.24	1.00		0.25	1.00		0.07
Lane Grp Cap(c), veh/h	174	174	167	164	0	166	114	0	814	175	0	903
V/C Ratio(X)	0.22	0.57	0.60	0.26	0.00	0.59	0.47	0.00	0.45	0.10	0.00	0.24
Avail Cap(c_a), veh/h	504	503	483	504	0	508	178	0	814	504	0	903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	30.5	30.6	29.8	0.0	30.8	31.9	0.0	13.1	29.0	0.0	10.4
Incr Delay (d2), s/veh	0.6	2.9	3.5	0.8	0.0	3.3	3.0	0.0	1.8	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.0	2.0	0.8	0.0	2.0	1.1	0.0	5.3	0.3	0.0	2.5
LnGrp Delay(d),s/veh	30.1	33.4	34.0	30.7	0.0	34.0	34.9	0.0	14.9	29.2	0.0	11.0
LnGrp LOS	C	C	C	C		C	C		B	C		B
Approach Vol, veh/h		238			140			418			231	
Approach Delay, s/veh		33.1			33.0			17.5			12.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	36.8		11.4	9.0	39.2		11.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	12.6	11.9		6.0	4.0	6.7		5.7
Green Ext Time (p_c), s	0.0	2.5		1.0	0.0	3.9		0.5

Intersection Summary			
HCM 2010 Ctrl Delay		22.1	
HCM 2010 LOS		C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	520	113	44	257	45	91	208	74	61	132	64
Future Volume (veh/h)	154	520	113	44	257	45	91	208	74	61	132	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	160	542	118	46	268	47	95	217	77	64	138	67
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	746	162	101	611	106	140	713	696	120	692	766
Arrive On Green	0.11	0.26	0.26	0.06	0.20	0.20	0.08	0.38	0.38	0.07	0.37	0.37
Sat Flow, veh/h	1774	2894	628	1774	3018	522	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	160	331	329	46	156	159	95	217	77	64	138	67
Grp Sat Flow(s),veh/h/ln	1774	1770	1752	1774	1770	1771	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.8	13.1	13.2	1.9	5.9	6.1	4.0	6.2	2.2	2.7	3.9	1.8
Cycle Q Clear(g_c), s	6.8	13.1	13.2	1.9	5.9	6.1	4.0	6.2	2.2	2.7	3.9	1.8
Prop In Lane	1.00		0.36	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	456	452	101	358	359	140	713	696	120	692	766
V/C Ratio(X)	0.80	0.72	0.73	0.45	0.43	0.44	0.68	0.30	0.11	0.53	0.20	0.09
Avail Cap(c_a), veh/h	312	611	605	312	611	611	312	713	696	312	692	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	26.0	26.0	35.0	26.8	26.8	34.4	16.5	12.7	34.6	16.4	10.7
Incr Delay (d2), s/veh	8.0	2.8	3.0	3.2	0.8	0.9	5.6	1.1	0.3	3.6	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	6.7	6.7	1.0	3.0	3.1	2.2	3.4	1.0	1.4	2.1	0.8
LnGrp Delay(d),s/veh	41.2	28.8	29.0	38.2	27.6	27.7	39.9	17.7	13.0	38.2	17.0	10.9
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		820			361			389			269	
Approach Delay, s/veh		31.3			29.0			22.2			20.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	33.9	8.9	24.3	10.6	33.0	13.1	20.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.7	8.2	3.9	15.2	6.0	5.9	8.8	8.1
Green Ext Time (p_c), s	0.1	2.5	0.0	4.6	0.1	2.5	0.2	5.9

Intersection Summary		
HCM 2010 Ctrl Delay		27.3
HCM 2010 LOS		C

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	279	125	161	534	43	107	431	92	52	555	263
Future Volume (veh/h)	133	279	125	161	534	43	107	431	92	52	555	263
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	141	297	133	171	568	46	114	459	98	55	590	280
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	792	354	210	802	65	146	1323	779	109	1249	717
Arrive On Green	0.10	0.22	0.22	0.12	0.24	0.24	0.08	0.37	0.37	0.06	0.35	0.35
Sat Flow, veh/h	1774	3539	1583	1774	3317	268	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	141	297	133	171	303	311	114	459	98	55	590	280
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1815	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	6.3	5.7	5.7	7.6	12.6	12.7	5.1	7.5	2.7	2.4	10.5	9.5
Cycle Q Clear(g_c), s	6.3	5.7	5.7	7.6	12.6	12.7	5.1	7.5	2.7	2.4	10.5	9.5
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	792	354	210	428	439	146	1323	779	109	1249	717
V/C Ratio(X)	0.80	0.38	0.38	0.82	0.71	0.71	0.78	0.35	0.13	0.50	0.47	0.39
Avail Cap(c_a), veh/h	297	1161	520	297	581	596	297	1323	779	297	1249	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	26.6	26.6	34.8	28.0	28.0	36.3	18.2	11.1	36.7	20.3	14.7
Incr Delay (d2), s/veh	7.9	0.3	0.7	11.3	2.5	2.5	8.7	0.7	0.3	3.6	1.3	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	2.8	2.6	4.4	6.4	6.6	2.9	3.8	1.2	1.3	5.3	4.5
LnGrp Delay(d),s/veh	43.4	26.9	27.2	46.0	30.5	30.5	45.0	18.9	11.4	40.3	21.6	16.3
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		571			785			671			925	
Approach Delay, s/veh		31.0			33.9			22.3			21.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	34.7	14.0	22.6	11.2	33.0	12.6	24.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.4	9.5	9.6	7.7	7.1	12.5	8.3	14.7
Green Ext Time (p_c), s	0.1	7.9	0.2	6.1	0.1	7.3	0.1	4.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	620	0	0	841
Future Vol, veh/h	0	9	620	0	0	841
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	660	0	0	895

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1107	330	0	0	660	0
Stage 1	660	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	204	666	-	-	924	-
Stage 1	476	-	-	-	-	-
Stage 2	611	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	204	666	-	-	924	-
Mov Cap-2 Maneuver	335	-	-	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	611	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	666	924	-
HCM Lane V/C Ratio	-	-	0.014	-	-
HCM Control Delay (s)	-	-	10.5	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	50	112	50	64	4	99	602	78	16	812	41
Future Volume (veh/h)	39	50	112	50	64	4	99	602	78	16	812	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	40	52	115	52	66	4	102	621	80	16	837	42
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	74	164	115	287	244	159	1743	780	48	1522	681
Arrive On Green	0.06	0.14	0.14	0.07	0.15	0.15	0.09	0.49	0.49	0.03	0.43	0.43
Sat Flow, veh/h	1774	517	1144	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	40	0	167	52	66	4	102	621	80	16	837	42
Grp Sat Flow(s),veh/h/ln	1774	0	1661	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.4	0.0	6.3	1.9	2.1	0.1	3.7	7.2	1.8	0.6	11.7	1.0
Cycle Q Clear(g_c), s	1.4	0.0	6.3	1.9	2.1	0.1	3.7	7.2	1.8	0.6	11.7	1.0
Prop In Lane	1.00		0.69	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	239	115	287	244	159	1743	780	48	1522	681
V/C Ratio(X)	0.41	0.00	0.70	0.45	0.23	0.02	0.64	0.36	0.10	0.33	0.55	0.06
Avail Cap(c_a), veh/h	361	0	664	361	745	633	361	1743	780	361	1522	681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	0.0	27.0	29.8	24.6	23.8	29.1	10.3	9.0	31.7	14.1	11.1
Incr Delay (d2), s/veh	2.7	0.0	3.7	2.7	0.4	0.0	4.3	0.6	0.3	4.0	1.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	3.2	1.0	1.1	0.1	2.0	3.6	0.8	0.3	6.0	0.5
LnGrp Delay(d),s/veh	33.0	0.0	30.7	32.6	25.0	23.8	33.4	10.9	9.2	35.7	15.5	11.2
LnGrp LOS	C		C	C	C	C	C	B	A	D	B	B
Approach Vol, veh/h		207			122			803			895	
Approach Delay, s/veh		31.1			28.2			13.6			15.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	37.1	8.8	14.0	10.4	33.0	8.1	14.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	2.6	9.2	3.9	8.3	5.7	13.7	3.4	4.1
Green Ext Time (p_c), s	0.0	10.2	0.1	1.2	0.1	8.7	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	257	4	160	267	618	0	0	711	266
Future Volume (veh/h)	0	0	0	257	4	160	267	618	0	0	711	266
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				268	4	167	278	644	0	0	741	277
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				342	5	310	322	2459	0	0	1157	432
Arrive On Green				0.20	0.20	0.20	0.18	0.69	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1749	26	1583	1774	3632	0	0	2616	943
Grp Volume(v), veh/h				272	0	167	278	644	0	0	520	498
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1696
Q Serve(g_s), s				12.0	0.0	7.8	12.5	5.6	0.0	0.0	18.5	18.5
Cycle Q Clear(g_c), s				12.0	0.0	7.8	12.5	5.6	0.0	0.0	18.5	18.5
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.56
Lane Grp Cap(c), veh/h				348	0	310	322	2459	0	0	811	778
V/C Ratio(X)				0.78	0.00	0.54	0.86	0.26	0.00	0.00	0.64	0.64
Avail Cap(c_a), veh/h				732	0	653	451	2459	0	0	811	778
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.4	0.0	29.7	32.7	4.7	0.0	0.0	17.1	17.1
Incr Delay (d2), s/veh				3.9	0.0	1.5	11.8	0.3	0.0	0.0	3.9	4.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.2	0.0	3.5	7.2	2.8	0.0	0.0	9.8	9.5
LnGrp Delay(d),s/veh				35.3	0.0	31.2	44.5	4.9	0.0	0.0	20.9	21.1
LnGrp LOS				D		C	D	A			C	C
Approach Vol, veh/h					439			922			1018	
Approach Delay, s/veh					33.7			16.9			21.0	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			19.4	42.2		20.6
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		7.6			14.5	20.5		14.0
Green Ext Time (p_c), s		16.5			0.4	7.5		2.1

Intersection Summary		
HCM 2010 Ctrl Delay		21.7
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	4	371	0	0	0	0	655	140	147	826	0
Future Volume (veh/h)	222	4	371	0	0	0	0	655	140	147	826	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	230	0	379				0	668	143	150	843	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	941	0	420				0	2045	432	190	2267	0
Arrive On Green	0.27	0.00	0.27				0.00	0.49	0.49	0.11	0.64	0.00
Sat Flow, veh/h	3548	0	1583				0	4375	889	1774	3632	0
Grp Volume(v), veh/h	230	0	379				0	536	275	150	843	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1706	1774	1770	0
Q Serve(g_s), s	4.9	0.0	22.1				0.0	9.2	9.4	7.9	10.7	0.0
Cycle Q Clear(g_c), s	4.9	0.0	22.1				0.0	9.2	9.4	7.9	10.7	0.0
Prop In Lane	1.00		1.00				0.00		0.52	1.00		0.00
Lane Grp Cap(c), veh/h	941	0	420				0	1648	829	190	2267	0
V/C Ratio(X)	0.24	0.00	0.90				0.00	0.33	0.33	0.79	0.37	0.00
Avail Cap(c_a), veh/h	1112	0	496				0	1648	829	556	2267	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.5	0.0	33.9				0.0	15.0	15.0	41.5	8.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	17.8				0.0	0.1	0.2	7.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	11.7				0.0	4.3	4.5	4.2	5.3	0.0
LnGrp Delay(d),s/veh	27.7	0.0	51.7				0.0	15.1	15.2	48.6	8.6	0.0
LnGrp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		609						811			993	
Approach Delay, s/veh		42.6						15.1			14.6	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.7	50.9		29.8		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.3	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	11.9	11.4		24.1		12.7		
Green Ext Time (p_c), s	0.4	9.4		1.2		16.5		

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	143	1	0	265	0	0	0	1	0	0	0
Future Vol, veh/h	0	143	1	0	265	0	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	157	1	0	291	0	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	291	0	0	158	0	0	304	449	79	370	449	146
Stage 1	-	-	-	-	-	-	158	158	-	291	291	-
Stage 2	-	-	-	-	-	-	146	291	-	79	158	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1268	-	-	1419	-	-	625	504	965	562	504	875
Stage 1	-	-	-	-	-	-	828	766	-	693	670	-
Stage 2	-	-	-	-	-	-	842	670	-	921	766	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1268	-	-	1419	-	-	625	504	965	561	504	875
Mov Cap-2 Maneuver	-	-	-	-	-	-	625	504	-	561	504	-
Stage 1	-	-	-	-	-	-	828	766	-	693	670	-
Stage 2	-	-	-	-	-	-	842	670	-	920	766	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.7	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	965	1268	-	-	1419	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-	-	-	-
HCM Control Delay (s)	8.7	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	192	42	3	183	5	28	0	3	4	0	57
Future Vol, veh/h	105	192	42	3	183	5	28	0	3	4	0	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	122	223	49	3	213	6	33	0	3	5	0	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	219	0	0	272	0	0	715	718	136	579	739	216
Stage 1	-	-	-	-	-	-	492	492	-	223	223	-
Stage 2	-	-	-	-	-	-	223	226	-	356	516	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1349	-	-	1290	-	-	332	354	888	412	344	823
Stage 1	-	-	-	-	-	-	528	547	-	779	718	-
Stage 2	-	-	-	-	-	-	779	716	-	635	533	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1349	-	-	1290	-	-	284	321	888	381	312	823
Mov Cap-2 Maneuver	-	-	-	-	-	-	284	321	-	381	312	-
Stage 1	-	-	-	-	-	-	480	498	-	709	716	-
Stage 2	-	-	-	-	-	-	715	714	-	575	485	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.5	0.1	18.4	10.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	304	1349	-	-	1290	-	-	381	823
HCM Lane V/C Ratio	0.119	0.091	-	-	0.003	-	-	0.012	0.081
HCM Control Delay (s)	18.4	7.9	-	-	7.8	-	-	14.6	9.8
HCM Lane LOS	C	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0.4	0.3	-	-	0	-	-	0	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	182	184	4	0	5
Future Vol, veh/h	16	182	184	4	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	217	219	5	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	224	0	-	0	476	221
Stage 1	-	-	-	-	221	-
Stage 2	-	-	-	-	255	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1345	-	-	-	548	819
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	788	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1345	-	-	-	539	819
Mov Cap-2 Maneuver	-	-	-	-	608	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	775	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1345	-	-	-	819
HCM Lane V/C Ratio	0.014	-	-	-	0.007
HCM Control Delay (s)	7.7	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	88	95	136	36	18	53
Future Vol, veh/h	88	95	136	36	18	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	98	106	151	40	20	59

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	191	0	-	0	472	171
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	301	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1383	-	-	-	551	873
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	751	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1383	-	-	-	510	873
Mov Cap-2 Maneuver	-	-	-	-	576	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	695	-

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1383	-	-	-	772
HCM Lane V/C Ratio	0.071	-	-	-	0.102
HCM Control Delay (s)	7.8	-	-	-	10.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	108	3	22	165	32	3	0	15	16	0	3
Future Vol, veh/h	2	108	3	22	165	32	3	0	15	16	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	126	3	26	192	37	3	0	17	19	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	229	0	0	129	0	0	395	412	127	403	396	210
Stage 1	-	-	-	-	-	-	132	132	-	262	262	-
Stage 2	-	-	-	-	-	-	263	280	-	141	134	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1339	-	-	1457	-	-	565	530	923	558	541	830
Stage 1	-	-	-	-	-	-	871	787	-	743	691	-
Stage 2	-	-	-	-	-	-	742	679	-	862	785	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1339	-	-	1457	-	-	553	518	923	538	529	830
Mov Cap-2 Maneuver	-	-	-	-	-	-	553	518	-	538	529	-
Stage 1	-	-	-	-	-	-	869	785	-	742	676	-
Stage 2	-	-	-	-	-	-	723	665	-	844	783	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.8	9.5	11.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	830	1339	-	-	1457	-	-	570
HCM Lane V/C Ratio	0.025	0.002	-	-	0.018	-	-	0.039
HCM Control Delay (s)	9.5	7.7	0	-	7.5	0	-	11.6
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	139	140	4	0	6
Future Vol, veh/h	0	139	140	4	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	160	161	5	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	163
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	882
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	882
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	882
HCM Lane V/C Ratio	-	-	-	0.008
HCM Control Delay (s)	-	-	-	9.1
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 2010 Signalized Intersection Summary
12: Driveway/Davis St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	394	11	11	672	158	7	0	7	129	0	79
Future Volume (veh/h)	46	394	11	11	672	158	7	0	7	129	0	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	52	448	12	12	764	180	8	0	8	147	0	90
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	69	1576	42	44	1004	234	361	18	323	731	0	729
Arrive On Green	0.04	0.45	0.45	0.36	0.36	0.36	0.46	0.00	0.46	0.46	0.00	0.46
Sat Flow, veh/h	1774	3522	94	16	2766	646	664	38	702	1402	0	1583
Grp Volume(v), veh/h	52	225	235	515	0	441	16	0	0	147	0	90
Grp Sat Flow(s),veh/h/ln	1774	1770	1846	1846	0	1581	1404	0	0	1402	0	1583
Q Serve(g_s), s	2.8	7.9	7.9	2.0	0.0	24.1	0.0	0.0	0.0	2.0	0.0	3.2
Cycle Q Clear(g_c), s	2.8	7.9	7.9	23.9	0.0	24.1	3.2	0.0	0.0	5.2	0.0	3.2
Prop In Lane	1.00		0.05	0.02		0.41	0.50		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	69	792	826	708	0	574	701	0	0	731	0	729
V/C Ratio(X)	0.76	0.28	0.28	0.73	0.00	0.77	0.02	0.00	0.00	0.20	0.00	0.12
Avail Cap(c_a), veh/h	91	833	869	904	0	744	701	0	0	731	0	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.5	17.1	17.1	27.4	0.0	27.5	14.4	0.0	0.0	15.6	0.0	15.1
Incr Delay (d2), s/veh	22.5	0.2	0.2	2.2	0.0	3.6	0.1	0.0	0.0	0.6	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.9	4.0	12.6	0.0	11.0	0.2	0.0	0.0	2.5	0.0	1.4
LnGrp Delay(d),s/veh	69.0	17.3	17.3	29.6	0.0	31.1	14.4	0.0	0.0	16.2	0.0	15.4
LnGrp LOS	E	B	B	C		C	B			B		B
Approach Vol, veh/h		512			956			16			237	
Approach Delay, s/veh		22.5			30.3			14.4			15.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		49.5		48.3		49.5	8.3	40.0
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		45.0		46.0		45.0	5.0	46.0
Max Q Clear Time (g_c+I1), s		5.2		9.9		7.2	4.8	26.1
Green Ext Time (p_c), s		1.1		12.0		1.1	0.0	9.4

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	374	124	85	614	84	120	122	51	93	143	80
Future Volume (veh/h)	32	374	124	85	614	84	120	122	51	93	143	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	38	445	148	101	731	100	143	145	61	111	170	95
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	694	229	135	913	125	179	676	574	142	637	542
Arrive On Green	0.05	0.27	0.27	0.08	0.29	0.29	0.10	0.36	0.36	0.08	0.34	0.34
Sat Flow, veh/h	1774	2617	863	1774	3129	428	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	38	300	293	101	413	418	143	145	61	111	170	95
Grp Sat Flow(s),veh/h/ln	1774	1770	1710	1774	1770	1787	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.7	12.5	12.7	4.6	18.0	18.0	6.6	4.5	2.1	5.1	5.5	3.5
Cycle Q Clear(g_c), s	1.7	12.5	12.7	4.6	18.0	18.0	6.6	4.5	2.1	5.1	5.5	3.5
Prop In Lane	1.00		0.50	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	87	469	453	135	516	522	179	676	574	142	637	542
V/C Ratio(X)	0.44	0.64	0.65	0.75	0.80	0.80	0.80	0.21	0.11	0.78	0.27	0.18
Avail Cap(c_a), veh/h	288	563	544	288	563	569	288	676	574	288	637	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	27.1	27.2	37.7	27.3	27.3	36.6	18.3	17.6	37.6	19.8	19.2
Incr Delay (d2), s/veh	3.4	1.8	2.0	8.1	7.5	7.5	8.0	0.7	0.4	8.9	1.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	6.3	6.2	2.6	9.8	9.9	3.6	2.4	1.0	2.8	3.0	1.6
LnGrp Delay(d),s/veh	41.9	28.9	29.1	45.8	34.8	34.7	44.6	19.1	18.0	46.5	20.9	19.9
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		631			932			349			376	
Approach Delay, s/veh		29.8			35.9			29.3			28.2	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	34.7	10.8	26.6	12.9	33.0	8.6	28.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	7.1	6.5	6.6	14.7	8.6	7.5	3.7	20.0
Green Ext Time (p_c), s	0.1	2.3	0.1	6.8	0.1	2.3	0.0	4.3

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	62	24	51	66	59	36	210	49	43	299	16
Future Volume (veh/h)	0	62	24	51	66	59	36	210	49	43	299	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	78	30	64	82	74	45	262	61	54	374	20
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	218	80	221	112	101	102	647	151	172	845	45
Arrive On Green	0.00	0.09	0.09	0.12	0.12	0.12	0.06	0.44	0.44	0.10	0.48	0.48
Sat Flow, veh/h	1774	2539	929	1774	904	815	1774	1462	340	1774	1752	94
Grp Volume(v), veh/h	0	53	55	64	0	156	45	0	323	54	0	394
Grp Sat Flow(s),veh/h/ln	1774	1770	1699	1774	0	1719	1774	0	1803	1774	0	1846
Q Serve(g_s), s	0.0	2.0	2.2	2.4	0.0	6.3	1.8	0.0	8.8	2.0	0.0	10.1
Cycle Q Clear(g_c), s	0.0	2.0	2.2	2.4	0.0	6.3	1.8	0.0	8.8	2.0	0.0	10.1
Prop In Lane	1.00		0.55	1.00		0.47	1.00		0.19	1.00		0.05
Lane Grp Cap(c), veh/h	153	152	146	221	0	214	102	0	797	172	0	890
V/C Ratio(X)	0.00	0.35	0.38	0.29	0.00	0.73	0.44	0.00	0.41	0.31	0.00	0.44
Avail Cap(c_a), veh/h	495	494	474	495	0	480	175	0	797	495	0	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	31.0	31.1	28.6	0.0	30.4	32.8	0.0	13.6	30.3	0.0	12.3
Incr Delay (d2), s/veh	0.0	1.4	1.6	0.7	0.0	4.7	2.9	0.0	1.5	1.0	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	1.1	1.2	0.0	3.3	0.9	0.0	4.6	1.1	0.0	5.5
LnGrp Delay(d),s/veh	0.0	32.4	32.7	29.4	0.0	35.1	35.7	0.0	15.2	31.3	0.0	13.9
LnGrp LOS		C	C	C		D	D		B	C		B
Approach Vol, veh/h		108			220			368			448	
Approach Delay, s/veh		32.5			33.4			17.7			16.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	36.4		10.7	8.7	39.2		13.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	14.3	10.8		4.2	3.8	12.1		8.3
Green Ext Time (p_c), s	0.1	3.4		0.4	0.0	4.7		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	21.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	164	67	20	222	34	82	199	59	57	223	87
Future Volume (veh/h)	50	164	67	20	222	34	82	199	59	57	223	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	56	184	75	22	249	38	92	224	66	64	251	98
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	459	180	62	469	71	152	817	750	129	793	781
Arrive On Green	0.07	0.18	0.18	0.04	0.15	0.15	0.09	0.44	0.44	0.07	0.43	0.43
Sat Flow, veh/h	1774	2484	976	1774	3085	465	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	56	129	130	22	141	146	92	224	66	64	251	98
Grp Sat Flow(s),veh/h/ln	1774	1770	1690	1774	1770	1781	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.0	4.3	4.5	0.8	4.9	5.1	3.3	5.1	1.5	2.3	6.0	2.2
Cycle Q Clear(g_c), s	2.0	4.3	4.5	0.8	4.9	5.1	3.3	5.1	1.5	2.3	6.0	2.2
Prop In Lane	1.00		0.58	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	327	312	62	269	271	152	817	750	129	793	781
V/C Ratio(X)	0.47	0.40	0.42	0.35	0.53	0.54	0.61	0.27	0.09	0.50	0.32	0.13
Avail Cap(c_a), veh/h	358	700	669	358	700	705	358	817	750	358	793	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	24.0	24.1	31.6	26.2	26.2	29.5	12.0	9.7	29.9	12.8	9.2
Incr Delay (d2), s/veh	2.8	0.8	0.9	3.4	1.6	1.7	3.8	0.8	0.2	2.9	1.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.2	2.2	0.5	2.5	2.6	1.8	2.8	0.7	1.2	3.3	1.0
LnGrp Delay(d),s/veh	32.8	24.8	25.0	34.9	27.7	27.9	33.4	12.8	9.9	32.8	13.8	9.5
LnGrp LOS	C	C	C	C	C	C	C	B	A	C	B	A
Approach Vol, veh/h		315			309			382			413	
Approach Delay, s/veh		26.3			28.3			17.3			15.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	33.9	6.9	16.9	10.2	33.0	9.0	14.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.3	7.1	2.8	6.5	5.3	8.0	4.0	7.1
Green Ext Time (p_c), s	0.1	3.4	0.0	3.2	0.1	3.3	0.1	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	450	131	97	323	40	172	673	185	74	529	206
Future Volume (veh/h)	227	450	131	97	323	40	172	673	185	74	529	206
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	232	459	134	99	330	41	176	687	189	76	540	210
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	916	410	132	578	71	213	1368	730	122	1186	770
Arrive On Green	0.15	0.26	0.26	0.07	0.18	0.18	0.12	0.39	0.39	0.07	0.34	0.34
Sat Flow, veh/h	1774	3539	1583	1774	3172	391	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	232	459	134	99	183	188	176	687	189	76	540	210
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1794	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	10.9	9.4	5.8	4.7	8.0	8.1	8.2	12.6	6.2	3.5	10.2	6.7
Cycle Q Clear(g_c), s	10.9	9.4	5.8	4.7	8.0	8.1	8.2	12.6	6.2	3.5	10.2	6.7
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	916	410	132	322	327	213	1368	730	122	1186	770
V/C Ratio(X)	0.87	0.50	0.33	0.75	0.57	0.58	0.83	0.50	0.26	0.62	0.46	0.27
Avail Cap(c_a), veh/h	282	1103	493	282	551	559	282	1368	730	282	1186	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	26.8	25.5	38.6	31.7	31.8	36.6	19.9	14.0	38.5	22.2	12.9
Incr Delay (d2), s/veh	22.7	0.4	0.5	8.3	1.6	1.6	14.0	1.3	0.9	5.1	1.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	4.6	2.6	2.6	4.1	4.2	4.9	6.4	2.9	1.9	5.2	3.1
LnGrp Delay(d),s/veh	58.0	27.3	26.0	46.9	33.3	33.4	50.6	21.2	14.9	43.7	23.5	13.8
LnGrp LOS	E	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		825			470			1052			826	
Approach Delay, s/veh		35.7			36.2			25.0			22.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	37.4	10.8	26.5	14.7	33.0	17.4	20.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	5.5	14.6	6.7	11.4	10.2	12.2	12.9	10.1
Green Ext Time (p_c), s	0.1	7.7	0.1	5.1	0.1	8.5	0.0	5.3

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	38	992	0	0	756
Future Vol, veh/h	0	38	992	0	0	756
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	1012	0	0	771

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1398	506	0	0	1012	0
Stage 1	1012	-	-	-	-	-
Stage 2	386	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	132	512	-	-	681	-
Stage 1	312	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	132	512	-	-	681	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	312	-	-	-	-	-
Stage 2	656	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	512	681	-
HCM Lane V/C Ratio	-	-	0.076	-	-
HCM Control Delay (s)	-	-	12.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	105	159	243	97	21	132	966	236	47	696	44
Future Volume (veh/h)	56	105	159	243	97	21	132	966	236	47	696	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	57	106	161	245	98	21	133	976	238	47	703	44
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	131	199	281	546	464	167	1334	597	98	1196	535
Arrive On Green	0.06	0.20	0.20	0.16	0.29	0.29	0.09	0.38	0.38	0.06	0.34	0.34
Sat Flow, veh/h	1774	668	1015	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	57	0	267	245	98	21	133	976	238	47	703	44
Grp Sat Flow(s),veh/h/ln	1774	0	1684	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	2.6	0.0	12.8	11.4	3.3	0.8	6.2	20.0	9.3	2.2	13.8	1.6
Cycle Q Clear(g_c), s	2.6	0.0	12.8	11.4	3.3	0.8	6.2	20.0	9.3	2.2	13.8	1.6
Prop In Lane	1.00		0.60	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	109	0	330	281	546	464	167	1334	597	98	1196	535
V/C Ratio(X)	0.53	0.00	0.81	0.87	0.18	0.05	0.79	0.73	0.40	0.48	0.59	0.08
Avail Cap(c_a), veh/h	284	0	529	284	585	497	284	1334	597	284	1196	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	0.0	32.4	34.7	22.2	21.4	37.4	22.6	19.3	38.7	23.1	19.0
Incr Delay (d2), s/veh	3.9	0.0	4.9	24.3	0.2	0.0	8.3	3.6	2.0	3.6	2.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	6.4	7.5	1.7	0.4	3.4	10.4	4.4	1.2	7.1	0.7
LnGrp Delay(d),s/veh	42.3	0.0	37.3	58.9	22.4	21.4	45.7	26.2	21.3	42.2	25.2	19.3
LnGrp LOS	D		D	E	C	C	D	C	C	D	C	B
Approach Vol, veh/h		324			364			1347			794	
Approach Delay, s/veh		38.1			46.9			27.2			25.9	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	36.3	17.8	21.0	12.5	33.0	9.7	29.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.2	22.0	13.4	14.8	8.2	15.8	4.6	5.3
Green Ext Time (p_c), s	0.0	5.2	0.0	1.8	0.1	9.0	0.1	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	197	4	210	342	1132	0	0	795	307
Future Volume (veh/h)	0	0	0	197	4	210	342	1132	0	0	795	307
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				205	4	219	356	1179	0	0	828	320
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				314	6	286	397	2506	0	0	1070	413
Arrive On Green				0.18	0.18	0.18	0.22	0.71	0.00	0.00	0.43	0.43
Sat Flow, veh/h				1742	34	1583	1774	3632	0	0	2592	964
Grp Volume(v), veh/h				209	0	219	356	1179	0	0	586	562
Grp Sat Flow(s),veh/h/ln				1776	0	1583	1774	1770	0	0	1770	1693
Q Serve(g_s), s				8.8	0.0	10.6	15.7	11.8	0.0	0.0	22.8	22.9
Cycle Q Clear(g_c), s				8.8	0.0	10.6	15.7	11.8	0.0	0.0	22.8	22.9
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.57
Lane Grp Cap(c), veh/h				320	0	286	397	2506	0	0	758	725
V/C Ratio(X)				0.65	0.00	0.77	0.90	0.47	0.00	0.00	0.77	0.78
Avail Cap(c_a), veh/h				746	0	666	460	2506	0	0	758	725
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				30.7	0.0	31.4	30.4	5.2	0.0	0.0	19.7	19.7
Incr Delay (d2), s/veh				2.2	0.0	4.3	18.1	0.6	0.0	0.0	7.5	8.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.5	0.0	5.0	9.7	5.8	0.0	0.0	12.7	12.2
LnGrp Delay(d),s/veh				32.9	0.0	35.7	48.5	5.8	0.0	0.0	27.3	27.7
LnGrp LOS				C		D	D	A			C	C
Approach Vol, veh/h					428			1535			1148	
Approach Delay, s/veh					34.4			15.7			27.5	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			22.6	39.0		19.1
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		13.8			17.7	24.9		12.6
Green Ext Time (p_c), s		26.3			0.4	6.0		1.9

Intersection Summary		
HCM 2010 Ctrl Delay		22.6
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	532	3	334	0	0	0	0	952	252	232	766	0
Future Volume (veh/h)	532	3	334	0	0	0	0	952	252	232	766	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	556	0	348				0	992	262	242	798	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	908	0	405				0	1767	466	284	2296	0
Arrive On Green	0.26	0.00	0.26				0.00	0.44	0.44	0.16	0.65	0.00
Sat Flow, veh/h	3548	0	1583				0	4177	1057	1774	3632	0
Grp Volume(v), veh/h	556	0	348				0	839	415	242	798	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1676	1774	1770	0
Q Serve(g_s), s	13.0	0.0	19.7				0.0	17.3	17.4	12.5	9.6	0.0
Cycle Q Clear(g_c), s	13.0	0.0	19.7				0.0	17.3	17.4	12.5	9.6	0.0
Prop In Lane	1.00		1.00				0.00		0.63	1.00		0.00
Lane Grp Cap(c), veh/h	908	0	405				0	1494	739	284	2296	0
V/C Ratio(X)	0.61	0.00	0.86				0.00	0.56	0.56	0.85	0.35	0.00
Avail Cap(c_a), veh/h	1126	0	503				0	1494	739	563	2296	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.9	0.0	33.4				0.0	19.6	19.6	38.5	7.5	0.0
Incr Delay (d2), s/veh	0.7	0.0	11.8				0.0	0.5	1.0	7.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	9.9				0.0	8.1	8.2	6.7	4.8	0.0
LnGrp Delay(d),s/veh	31.6	0.0	45.3				0.0	20.1	20.6	45.6	7.9	0.0
LnGrp LOS	C		D					C	C	D	A	
Approach Vol, veh/h		904						1254			1040	
Approach Delay, s/veh		36.9						20.2			16.7	
Approach LOS		D						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	19.6	46.0		28.6		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.9	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	11.5	19.4		21.7		11.6		
Green Ext Time (p_c), s	0.6	6.0		2.3		23.3		

Intersection Summary	
HCM 2010 Ctrl Delay	23.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	397	17	0	675	0	0	0	22	0	0	0
Future Vol, veh/h	0	397	17	0	675	0	0	0	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	422	18	0	718	0	0	0	23	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	718	0	0	440	0	0	790	1149	220	929	1158	359
Stage 1	-	-	-	-	-	-	431	431	-	718	718	-
Stage 2	-	-	-	-	-	-	359	718	-	211	440	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	879	-	-	1116	-	-	281	197	784	222	195	638
Stage 1	-	-	-	-	-	-	573	581	-	386	431	-
Stage 2	-	-	-	-	-	-	632	431	-	771	576	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	879	-	-	1116	-	-	281	197	784	215	195	638
Mov Cap-2 Maneuver	-	-	-	-	-	-	281	197	-	215	195	-
Stage 1	-	-	-	-	-	-	573	581	-	386	431	-
Stage 2	-	-	-	-	-	-	632	431	-	748	576	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	9.7	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	784	879	-	-	1116	-	-	-
HCM Lane V/C Ratio	0.03	-	-	-	-	-	-	-
HCM Control Delay (s)	9.7	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	175.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	268	310	156	28	264	35	164	2	24	37	0	239
Future Vol, veh/h	268	310	156	28	264	35	164	2	24	37	0	239
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	305	352	177	32	300	40	186	2	27	42	0	272

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	340	0	0	530	0	0	1434	1453	265	1170	1523	320
Stage 1	-	-	-	-	-	-	1050	1050	-	384	384	-
Stage 2	-	-	-	-	-	-	384	403	-	786	1139	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1217	-	-	1035	-	-	~ 103	130	734	159	118	720
Stage 1	-	-	-	-	-	-	244	303	-	638	611	-
Stage 2	-	-	-	-	-	-	638	599	-	352	275	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1217	-	-	1035	-	-	~ 51	94	734	119	86	720
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 51	94	-	119	86	-
Stage 1	-	-	-	-	-	-	~ 183	227	-	478	592	-
Stage 2	-	-	-	-	-	-	385	580	-	251	206	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	0.7	$ 1371.9	18.1
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	58	1217	-	-	1035	-	-	119	720
HCM Lane V/C Ratio	3.723	0.25	-	-	0.031	-	-	0.353	0.377
HCM Control Delay (s)	$ 1371.9	8.9	-	-	8.6	-	-	50.9	13
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	23.2	1	-	-	0.1	-	-	1.4	1.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	361	317	7	10	10
Future Vol, veh/h	11	361	317	7	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	397	348	8	11	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	356	0	-	0	773	352
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	421	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1203	-	-	-	367	692
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	662	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1203	-	-	-	362	692
Mov Cap-2 Maneuver	-	-	-	-	475	-
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	653	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1203	-	-	-	563
HCM Lane V/C Ratio	0.01	-	-	-	0.039
HCM Control Delay (s)	8	0	-	-	11.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	204	164	105	79	99	221
Future Vol, veh/h	204	164	105	79	99	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	224	180	115	87	109	243

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	202	0	-	0	788	159
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	629	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1370	-	-	-	360	886
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1370	-	-	-	294	886
Mov Cap-2 Maneuver	-	-	-	-	371	-
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	434	-

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	18.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1370	-	-	-	620
HCM Lane V/C Ratio	0.164	-	-	-	0.567
HCM Control Delay (s)	8.1	-	-	-	18.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.6	-	-	-	3.6

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	227	24	88	141	100	24	0	93	84	0	19
Future Vol, veh/h	13	227	24	88	141	100	24	0	93	84	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	244	26	95	152	108	26	0	100	90	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	259	0	0	270	0	0	690	733	257	730	693	205
Stage 1	-	-	-	-	-	-	285	285	-	395	395	-
Stage 2	-	-	-	-	-	-	405	448	-	335	298	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1306	-	-	1293	-	-	359	348	782	338	367	836
Stage 1	-	-	-	-	-	-	722	676	-	630	605	-
Stage 2	-	-	-	-	-	-	622	573	-	679	667	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1306	-	-	1293	-	-	324	314	782	272	331	836
Mov Cap-2 Maneuver	-	-	-	-	-	-	324	314	-	272	331	-
Stage 1	-	-	-	-	-	-	713	667	-	622	552	-
Stage 2	-	-	-	-	-	-	554	523	-	584	658	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	2.1	12.5	22.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	606	1306	-	-	1293	-	-	311
HCM Lane V/C Ratio	0.208	0.011	-	-	0.073	-	-	0.356
HCM Control Delay (s)	12.5	7.8	0	-	8	0	-	22.8
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.8	0	-	-	0.2	-	-	1.6

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	404	200	8	0	9
Future Vol, veh/h	0	404	200	8	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	430	213	9	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	217
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	823
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	823
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	823
HCM Lane V/C Ratio	-	-	-	0.012
HCM Control Delay (s)	-	-	-	9.4
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	599	44	43	376	48	47	0	47	65	0	47
Future Volume (veh/h)	85	599	44	43	376	48	47	0	47	65	0	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	98	689	51	49	432	55	54	0	54	75	0	54
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	1292	96	101	745	93	416	19	375	784	0	809
Arrive On Green	0.06	0.39	0.39	0.28	0.28	0.28	0.51	0.00	0.51	0.51	0.00	0.51
Sat Flow, veh/h	1774	3342	247	189	2673	335	695	38	733	1345	0	1583
Grp Volume(v), veh/h	98	365	375	268	0	268	108	0	0	75	0	54
Grp Sat Flow(s),veh/h/ln	1774	1770	1819	1561	0	1636	1466	0	0	1345	0	1583
Q Serve(g_s), s	4.9	14.0	14.0	5.0	0.0	12.5	1.1	0.0	0.0	0.0	0.0	1.5
Cycle Q Clear(g_c), s	4.9	14.0	14.0	12.0	0.0	12.5	3.1	0.0	0.0	1.9	0.0	1.5
Prop In Lane	1.00		0.14	0.18		0.20	0.50		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	101	684	704	484	0	456	810	0	0	784	0	809
V/C Ratio(X)	0.97	0.53	0.53	0.55	0.00	0.59	0.13	0.00	0.00	0.10	0.00	0.07
Avail Cap(c_a), veh/h	101	924	950	834	0	855	810	0	0	784	0	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.5	20.9	20.9	26.9	0.0	27.4	11.2	0.0	0.0	11.0	0.0	10.9
Incr Delay (d2), s/veh	80.6	0.6	0.6	1.0	0.0	1.2	0.3	0.0	0.0	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	6.9	7.1	5.7	0.0	5.7	1.5	0.0	0.0	1.0	0.0	0.7
LnGrp Delay(d),s/veh	122.1	21.5	21.5	27.9	0.0	28.6	11.6	0.0	0.0	11.2	0.0	11.1
LnGrp LOS	F	C	C	C		C	B			B		B
Approach Vol, veh/h		838			536			108			129	
Approach Delay, s/veh		33.3			28.2			11.6			11.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		49.5		38.6		49.5	9.5	29.1
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		45.0		46.0		45.0	5.0	46.0
Max Q Clear Time (g_c+I1), s		5.1		16.0		3.9	6.9	14.5
Green Ext Time (p_c), s		1.3		9.9		1.3	0.0	10.1

Intersection Summary	
HCM 2010 Ctrl Delay	28.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	506	85	54	328	53	61	134	132	58	90	65
Future Volume (veh/h)	87	506	85	54	328	53	61	134	132	58	90	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	550	92	59	357	58	66	146	143	63	98	71
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	783	130	116	744	120	122	697	592	120	694	590
Arrive On Green	0.08	0.26	0.26	0.07	0.24	0.24	0.07	0.37	0.37	0.07	0.37	0.37
Sat Flow, veh/h	1774	3037	506	1774	3054	492	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	95	320	322	59	206	209	66	146	143	63	98	71
Grp Sat Flow(s),veh/h/ln	1774	1770	1773	1774	1770	1776	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.0	12.5	12.6	2.5	7.6	7.7	2.8	4.1	4.8	2.6	2.7	2.3
Cycle Q Clear(g_c), s	4.0	12.5	12.6	2.5	7.6	7.7	2.8	4.1	4.8	2.6	2.7	2.3
Prop In Lane	1.00		0.29	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	456	457	116	431	433	122	697	592	120	694	590
V/C Ratio(X)	0.67	0.70	0.71	0.51	0.48	0.48	0.54	0.21	0.24	0.53	0.14	0.12
Avail Cap(c_a), veh/h	313	613	614	313	613	615	313	697	592	313	694	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	25.7	25.8	34.6	24.7	24.8	34.4	16.3	16.5	34.5	15.9	15.8
Incr Delay (d2), s/veh	5.5	2.3	2.4	3.4	0.8	0.8	3.7	0.7	1.0	3.5	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	6.4	6.5	1.3	3.8	3.9	1.5	2.2	2.2	1.4	1.4	1.1
LnGrp Delay(d),s/veh	39.8	28.0	28.1	38.0	25.6	25.6	38.1	16.9	17.4	38.0	16.3	16.2
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		737			474			355			232	
Approach Delay, s/veh		29.6			27.1			21.1			22.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	33.1	9.5	24.2	9.8	33.0	10.6	23.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.6	6.8	4.5	14.6	4.8	4.7	6.0	9.7
Green Ext Time (p_c), s	0.1	2.1	0.1	5.1	0.1	2.1	0.1	6.1

Intersection Summary		
HCM 2010 Ctrl Delay		26.3
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	159	66	41	86	22	62	260	86	16	189	33
Future Volume (veh/h)	61	159	66	41	86	22	62	260	86	16	189	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	167	69	43	91	23	65	274	91	17	199	35
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	275	109	164	133	34	125	606	201	171	738	130
Arrive On Green	0.11	0.11	0.11	0.09	0.09	0.09	0.07	0.45	0.45	0.10	0.48	0.48
Sat Flow, veh/h	1774	2475	984	1774	1436	363	1774	1339	445	1774	1543	271
Grp Volume(v), veh/h	64	118	118	43	0	114	65	0	365	17	0	234
Grp Sat Flow(s),veh/h/ln	1774	1770	1689	1774	0	1799	1774	0	1784	1774	0	1815
Q Serve(g_s), s	2.4	4.6	4.9	1.6	0.0	4.5	2.6	0.0	10.2	0.6	0.0	5.6
Cycle Q Clear(g_c), s	2.4	4.6	4.9	1.6	0.0	4.5	2.6	0.0	10.2	0.6	0.0	5.6
Prop In Lane	1.00		0.58	1.00		0.20	1.00		0.25	1.00		0.15
Lane Grp Cap(c), veh/h	197	197	188	164	0	166	125	0	807	171	0	868
V/C Ratio(X)	0.32	0.60	0.63	0.26	0.00	0.69	0.52	0.00	0.45	0.10	0.00	0.27
Avail Cap(c_a), veh/h	491	490	468	491	0	498	174	0	807	491	0	868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.7	30.7	30.8	30.6	0.0	31.9	32.6	0.0	13.7	29.9	0.0	11.4
Incr Delay (d2), s/veh	0.9	2.9	3.5	0.8	0.0	4.9	3.3	0.0	1.8	0.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.4	2.5	0.8	0.0	2.4	1.4	0.0	5.4	0.3	0.0	3.0
LnGrp Delay(d),s/veh	30.7	33.6	34.3	31.5	0.0	36.9	35.9	0.0	15.5	30.2	0.0	12.1
LnGrp LOS	C	C	C	C		D	D		B	C		B
Approach Vol, veh/h		300			157			430			251	
Approach Delay, s/veh		33.3			35.4			18.6			13.3	
Approach LOS		C			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	37.3		12.6	9.6	39.2		11.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	12.6	12.2		6.9	4.6	7.6		6.5
Green Ext Time (p_c), s	0.0	2.6		1.2	0.0	4.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	23.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	520	113	44	257	45	91	220	74	61	146	64
Future Volume (veh/h)	154	520	113	44	257	45	91	220	74	61	146	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	160	542	118	46	268	47	95	229	77	64	152	67
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	746	162	101	611	106	140	713	696	120	692	766
Arrive On Green	0.11	0.26	0.26	0.06	0.20	0.20	0.08	0.38	0.38	0.07	0.37	0.37
Sat Flow, veh/h	1774	2894	628	1774	3018	522	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	160	331	329	46	156	159	95	229	77	64	152	67
Grp Sat Flow(s),veh/h/ln	1774	1770	1752	1774	1770	1771	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.8	13.1	13.2	1.9	5.9	6.1	4.0	6.6	2.2	2.7	4.3	1.8
Cycle Q Clear(g_c), s	6.8	13.1	13.2	1.9	5.9	6.1	4.0	6.6	2.2	2.7	4.3	1.8
Prop In Lane	1.00		0.36	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	456	452	101	358	359	140	713	696	120	692	766
V/C Ratio(X)	0.80	0.72	0.73	0.45	0.43	0.44	0.68	0.32	0.11	0.53	0.22	0.09
Avail Cap(c_a), veh/h	312	611	605	312	611	611	312	713	696	312	692	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	26.0	26.0	35.0	26.8	26.8	34.4	16.7	12.7	34.6	16.5	10.7
Incr Delay (d2), s/veh	8.0	2.8	3.0	3.2	0.8	0.9	5.6	1.2	0.3	3.6	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	6.7	6.7	1.0	3.0	3.1	2.2	3.6	1.0	1.4	2.3	0.8
LnGrp Delay(d),s/veh	41.2	28.8	29.0	38.2	27.6	27.7	39.9	17.9	13.0	38.2	17.2	10.9
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		820			361			401			283	
Approach Delay, s/veh		31.3			29.0			22.2			20.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	33.9	8.9	24.3	10.6	33.0	13.1	20.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.7	8.6	3.9	15.2	6.0	6.3	8.8	8.1
Green Ext Time (p_c), s	0.1	2.6	0.0	4.6	0.1	2.7	0.2	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Near Term Year (2022)

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2022) Without Project Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	315	162	181	598	47	135	489	103	57	632	290
Future Volume (veh/h)	147	315	162	181	598	47	135	489	103	57	632	290
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	156	335	172	193	636	50	144	520	110	61	672	309
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	823	368	230	844	66	179	1302	787	110	1165	692
Arrive On Green	0.11	0.23	0.23	0.13	0.25	0.25	0.10	0.37	0.37	0.06	0.33	0.33
Sat Flow, veh/h	1774	3539	1583	1774	3325	261	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	156	335	172	193	338	348	144	520	110	61	672	309
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1817	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	7.4	6.9	8.1	9.2	15.3	15.3	6.9	9.4	3.2	2.9	13.6	11.8
Cycle Q Clear(g_c), s	7.4	6.9	8.1	9.2	15.3	15.3	6.9	9.4	3.2	2.9	13.6	11.8
Prop In Lane	1.00		1.00	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	823	368	230	449	461	179	1302	787	110	1165	692
V/C Ratio(X)	0.81	0.41	0.47	0.84	0.75	0.75	0.80	0.40	0.14	0.55	0.58	0.45
Avail Cap(c_a), veh/h	277	1084	485	277	542	556	277	1302	787	277	1165	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	28.2	28.6	36.8	29.8	29.8	38.1	20.3	11.8	39.4	24.0	17.0
Incr Delay (d2), s/veh	11.4	0.3	0.9	17.4	4.8	4.7	9.3	0.9	0.4	4.3	2.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	3.4	3.6	5.6	8.0	8.2	3.8	4.8	1.5	1.6	7.0	5.5
LnGrp Delay(d),s/veh	49.1	28.5	29.5	54.3	34.6	34.5	47.4	21.2	12.1	43.7	26.1	19.1
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		663			879			774			1042	
Approach Delay, s/veh		33.6			38.9			24.8			25.1	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	36.3	15.7	24.6	13.2	33.0	13.9	26.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.9	11.4	11.2	10.1	8.9	15.6	9.4	17.3
Green Ext Time (p_c), s	0.1	8.6	0.1	6.6	0.1	7.2	0.1	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	726	0	0	975
Future Vol, veh/h	0	0	726	0	0	975
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	772	0	0	1037

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1291	386	0	0	772	0
Stage 1	772	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	155	612	-	-	839	-
Stage 1	416	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	155	612	-	-	839	-
Mov Cap-2 Maneuver	287	-	-	-	-	-
Stage 1	416	-	-	-	-	-
Stage 2	562	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	839	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	67	156	63	83	20	124	689	63	20	940	46
Future Volume (veh/h)	45	67	156	63	83	20	124	689	63	20	940	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	46	69	161	65	86	21	128	710	65	21	969	47
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	91	213	126	365	310	164	1626	727	59	1416	633
Arrive On Green	0.06	0.18	0.18	0.07	0.20	0.20	0.09	0.46	0.46	0.03	0.40	0.40
Sat Flow, veh/h	1774	497	1161	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	46	0	230	65	86	21	128	710	65	21	969	47
Grp Sat Flow(s),veh/h/ln	1774	0	1658	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.8	0.0	9.4	2.5	2.8	0.8	5.0	9.7	1.6	0.8	16.1	1.3
Cycle Q Clear(g_c), s	1.8	0.0	9.4	2.5	2.8	0.8	5.0	9.7	1.6	0.8	16.1	1.3
Prop In Lane	1.00		0.70	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	0	304	126	365	310	164	1626	727	59	1416	633
V/C Ratio(X)	0.44	0.00	0.76	0.52	0.24	0.07	0.78	0.44	0.09	0.35	0.68	0.07
Avail Cap(c_a), veh/h	336	0	617	336	693	589	336	1626	727	336	1416	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	0.0	27.6	31.9	24.1	23.3	31.6	13.0	10.9	33.7	17.7	13.2
Incr Delay (d2), s/veh	2.9	0.0	3.8	3.2	0.3	0.1	7.7	0.9	0.2	3.6	2.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.6	1.3	1.5	0.3	2.8	4.9	0.8	0.5	8.3	0.6
LnGrp Delay(d),s/veh	35.3	0.0	31.4	35.1	24.5	23.4	39.3	13.9	11.1	37.2	20.4	13.4
LnGrp LOS	D		C	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		276			172			903			1037	
Approach Delay, s/veh		32.1			28.4			17.3			20.4	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	37.2	9.6	17.6	11.1	33.0	8.7	18.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	2.8	11.7	4.5	11.4	7.0	18.1	3.8	4.8
Green Ext Time (p_c), s	0.0	10.7	0.1	1.7	0.1	7.4	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	342	4	168	332	707	0	0	859	327
Future Volume (veh/h)	0	0	0	342	4	168	332	707	0	0	859	327
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				356	4	175	346	736	0	0	895	341
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				428	5	387	383	2311	0	0	969	367
Arrive On Green				0.24	0.24	0.24	0.22	0.65	0.00	0.00	0.39	0.39
Sat Flow, veh/h				1755	20	1583	1774	3632	0	0	2605	953
Grp Volume(v), veh/h				360	0	175	346	736	0	0	629	607
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1695
Q Serve(g_s), s				16.8	0.0	8.2	16.6	8.0	0.0	0.0	29.7	30.0
Cycle Q Clear(g_c), s				16.8	0.0	8.2	16.6	8.0	0.0	0.0	29.7	30.0
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.56
Lane Grp Cap(c), veh/h				433	0	387	383	2311	0	0	682	654
V/C Ratio(X)				0.83	0.00	0.45	0.90	0.32	0.00	0.00	0.92	0.93
Avail Cap(c_a), veh/h				688	0	614	424	2311	0	0	682	654
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.3	0.0	28.1	33.4	6.6	0.0	0.0	25.6	25.7
Incr Delay (d2), s/veh				4.8	0.0	0.8	21.1	0.4	0.0	0.0	19.9	21.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.8	0.0	3.7	10.3	4.0	0.0	0.0	18.1	17.9
LnGrp Delay(d),s/veh				36.2	0.0	28.9	54.5	7.0	0.0	0.0	45.5	47.1
LnGrp LOS				D		C	D	A			D	D
Approach Vol, veh/h					535			1082			1236	
Approach Delay, s/veh					33.8			22.2			46.3	
Approach LOS					C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			23.4	38.2		25.8
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		10.0			18.6	32.0		18.8
Green Ext Time (p_c), s		21.7			0.3	0.0		2.5

Intersection Summary		
HCM 2010 Ctrl Delay		34.8
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	4	510	0	0	0	0	796	182	171	995	0
Future Volume (veh/h)	234	4	510	0	0	0	0	796	182	171	995	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	242	0	520				0	812	186	174	1015	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1061	0	473				0	1849	420	213	2162	0
Arrive On Green	0.30	0.00	0.30				0.00	0.45	0.45	0.12	0.61	0.00
Sat Flow, veh/h	3548	0	1583				0	4312	942	1774	3632	0
Grp Volume(v), veh/h	242	0	520				0	663	335	174	1015	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1696	1774	1770	0
Q Serve(g_s), s	5.1	0.0	29.9				0.0	13.5	13.6	9.6	15.6	0.0
Cycle Q Clear(g_c), s	5.1	0.0	29.9				0.0	13.5	13.6	9.6	15.6	0.0
Prop In Lane	1.00		1.00				0.00		0.56	1.00		0.00
Lane Grp Cap(c), veh/h	1061	0	473				0	1512	757	213	2162	0
V/C Ratio(X)	0.23	0.00	1.10				0.00	0.44	0.44	0.82	0.47	0.00
Avail Cap(c_a), veh/h	1061	0	473				0	1512	757	530	2162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.4	0.0	35.0				0.0	19.1	19.1	42.9	10.6	0.0
Incr Delay (d2), s/veh	0.1	0.0	70.8				0.0	0.2	0.4	7.5	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	22.3				0.0	6.3	6.4	5.1	7.8	0.0
LnGrp Delay(d),s/veh	26.5	0.0	105.9				0.0	19.3	19.5	50.5	11.3	0.0
LnGrp LOS	C		F					B	B	D	B	
Approach Vol, veh/h		762						998			1189	
Approach Delay, s/veh		80.7						19.4			17.1	
Approach LOS		F						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.5	49.1		34.4		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.3	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	11.6	15.6		31.9		17.6		
Green Ext Time (p_c), s	0.4	8.5		0.0		21.5		

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	149	1	0	166	0	0	0	1	0	0	0
Future Vol, veh/h	0	149	1	0	166	0	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	164	1	0	182	0	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	182	0	0	165	0	0	255	346	82	264	347	91
Stage 1	-	-	-	-	-	-	164	164	-	182	182	-
Stage 2	-	-	-	-	-	-	91	182	-	82	165	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1391	-	-	1411	-	-	677	576	961	668	575	949
Stage 1	-	-	-	-	-	-	822	761	-	802	748	-
Stage 2	-	-	-	-	-	-	906	748	-	917	761	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1391	-	-	1411	-	-	677	576	961	667	575	949
Mov Cap-2 Maneuver	-	-	-	-	-	-	677	576	-	667	575	-
Stage 1	-	-	-	-	-	-	822	761	-	802	748	-
Stage 2	-	-	-	-	-	-	906	748	-	916	761	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.8	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	961	1391	-	-	1411	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-	-	-	-
HCM Control Delay (s)	8.8	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	139	1	0	159	1	2	0	0	0	0	7
Future Vol, veh/h	12	139	1	0	159	1	2	0	0	0	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	162	1	0	185	1	2	0	0	0	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	186	0	0	163	0	0	375	376	81	294	376	185
Stage 1	-	-	-	-	-	-	190	190	-	185	185	-
Stage 2	-	-	-	-	-	-	185	186	-	109	191	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1387	-	-	1414	-	-	569	555	963	647	555	857
Stage 1	-	-	-	-	-	-	794	742	-	816	746	-
Stage 2	-	-	-	-	-	-	816	745	-	885	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1387	-	-	1414	-	-	559	549	963	642	549	857
Mov Cap-2 Maneuver	-	-	-	-	-	-	559	549	-	642	549	-
Stage 1	-	-	-	-	-	-	786	735	-	808	746	-
Stage 2	-	-	-	-	-	-	808	745	-	876	735	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	11.5	9.2
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	559	1387	-	-	1414	-	-	-	857
HCM Lane V/C Ratio	0.004	0.01	-	-	-	-	-	-	0.009
HCM Control Delay (s)	11.5	7.6	-	-	0	-	-	0	9.2
HCM Lane LOS	B	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	121	153	4	0	6
Future Vol, veh/h	18	121	153	4	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	144	182	5	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	187	0	-	0	372	185
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	187	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1387	-	-	-	629	857
Stage 1	-	-	-	-	847	-
Stage 2	-	-	-	-	845	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1387	-	-	-	619	857
Mov Cap-2 Maneuver	-	-	-	-	665	-
Stage 1	-	-	-	-	847	-
Stage 2	-	-	-	-	831	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1387	-	-	-	857
HCM Lane V/C Ratio	0.015	-	-	-	0.008
HCM Control Delay (s)	7.6	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	109	155	20	6	4
Future Vol, veh/h	13	109	155	20	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	121	172	22	7	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	194	0	-	0	333	183
Stage 1	-	-	-	-	183	-
Stage 2	-	-	-	-	150	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1379	-	-	-	662	859
Stage 1	-	-	-	-	848	-
Stage 2	-	-	-	-	878	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1379	-	-	-	655	859
Mov Cap-2 Maneuver	-	-	-	-	690	-
Stage 1	-	-	-	-	848	-
Stage 2	-	-	-	-	868	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1379	-	-	-	749
HCM Lane V/C Ratio	0.01	-	-	-	0.015
HCM Control Delay (s)	7.6	-	-	-	9.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	114	171	7	0	1
Future Vol, veh/h	0	114	171	7	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	133	199	8	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	203
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	838
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	838
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	838
HCM Lane V/C Ratio	-	-	-	0.001
HCM Control Delay (s)	-	-	-	9.3
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	115	173	4	0	7
Future Vol, veh/h	0	115	173	4	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	132	199	5	0	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	201
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	840
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	840
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	840
HCM Lane V/C Ratio	-	-	-	0.01
HCM Control Delay (s)	-	-	-	9.3
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 2010 Signalized Intersection Summary
12: Driveway/Davis St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2022) Without Project Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	437	0	0	748	174	0	0	0	142	0	87
Future Volume (veh/h)	51	437	0	0	748	174	0	0	0	142	0	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	0	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	58	497	0	0	850	198	0	0	0	161	0	99
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	74	1644	0	0	1077	251	0	831	0	863	0	707
Arrive On Green	0.04	0.46	0.00	0.00	0.38	0.38	0.00	0.00	0.00	0.45	0.00	0.45
Sat Flow, veh/h	1774	3632	0	0	2944	664	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	58	497	0	0	527	521	0	0	0	161	0	99
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1746	0	1863	0	1774	0	1583
Q Serve(g_s), s	3.3	8.8	0.0	0.0	26.6	26.7	0.0	0.0	0.0	5.6	0.0	3.7
Cycle Q Clear(g_c), s	3.3	8.8	0.0	0.0	26.6	26.7	0.0	0.0	0.0	5.6	0.0	3.7
Prop In Lane	1.00		0.00	0.00		0.38	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	74	1644	0	0	669	659	0	831	0	863	0	707
V/C Ratio(X)	0.78	0.30	0.00	0.00	0.79	0.79	0.00	0.00	0.00	0.19	0.00	0.14
Avail Cap(c_a), veh/h	88	1644	0	0	807	796	0	831	0	863	0	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	16.8	0.0	0.0	27.8	27.8	0.0	0.0	0.0	17.0	0.0	16.5
Incr Delay (d2), s/veh	30.5	0.1	0.0	0.0	4.4	4.5	0.0	0.0	0.0	0.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	4.3	0.0	0.0	13.9	13.7	0.0	0.0	0.0	2.8	0.0	1.7
LnGrp Delay(d),s/veh	78.3	16.9	0.0	0.0	32.2	32.3	0.0	0.0	0.0	17.5	0.0	16.9
LnGrp LOS	E	B			C	C				B		B
Approach Vol, veh/h		555			1048			0			260	
Approach Delay, s/veh		23.3			32.2			0.0			17.3	
Approach LOS		C			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		49.5		51.3		49.5	8.7	42.6
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		45.0		46.0		45.0	5.0	46.0
Max Q Clear Time (g_c+I1), s		0.0		10.8		7.6	5.3	28.7
Green Ext Time (p_c), s		0.0		14.0		1.1	0.0	9.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	406	137	119	685	94	132	150	74	105	174	91
Future Volume (veh/h)	36	406	137	119	685	94	132	150	74	105	174	91
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	43	483	163	142	815	112	157	179	88	125	207	108
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	677	227	177	961	132	193	644	548	158	608	516
Arrive On Green	0.05	0.26	0.26	0.10	0.31	0.31	0.11	0.35	0.35	0.09	0.33	0.33
Sat Flow, veh/h	1774	2605	873	1774	3127	430	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	43	327	319	142	461	466	157	179	88	125	207	108
Grp Sat Flow(s),veh/h/ln	1774	1770	1709	1774	1770	1787	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.1	14.7	14.8	6.8	21.3	21.3	7.6	6.1	3.4	6.0	7.4	4.3
Cycle Q Clear(g_c), s	2.1	14.7	14.8	6.8	21.3	21.3	7.6	6.1	3.4	6.0	7.4	4.3
Prop In Lane	1.00		0.51	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	460	444	177	544	549	193	644	548	158	608	516
V/C Ratio(X)	0.47	0.71	0.72	0.80	0.85	0.85	0.82	0.28	0.16	0.79	0.34	0.21
Avail Cap(c_a), veh/h	274	537	518	274	544	549	274	644	548	274	608	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	29.4	29.4	38.5	28.3	28.3	38.1	20.7	19.8	39.0	22.3	21.3
Incr Delay (d2), s/veh	3.6	3.6	4.0	9.3	12.0	11.9	11.9	1.1	0.6	8.6	1.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	7.6	7.5	3.8	12.2	12.3	4.3	3.3	1.6	3.3	4.1	2.0
LnGrp Delay(d),s/veh	43.9	33.0	33.4	47.8	40.3	40.2	50.0	21.8	20.4	47.6	23.8	22.2
LnGrp LOS	D	C	C	D	D	D	D	C	C	D	C	C
Approach Vol, veh/h		689			1069			424			440	
Approach Delay, s/veh		33.9			41.3			31.9			30.2	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	34.7	13.2	27.2	14.0	33.0	9.0	31.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	9.0	8.1	8.8	16.8	9.6	9.4	4.1	23.3
Green Ext Time (p_c), s	0.1	2.8	0.1	5.9	0.1	2.8	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	36.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	81	29	76	85	65	40	255	66	47	365	24
Future Volume (veh/h)	10	81	29	76	85	65	40	255	66	47	365	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	12	101	36	95	106	81	50	319	82	59	456	30
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	232	79	254	140	107	107	618	159	167	805	53
Arrive On Green	0.09	0.09	0.09	0.14	0.14	0.14	0.06	0.43	0.43	0.09	0.47	0.47
Sat Flow, veh/h	1774	2592	885	1774	981	750	1774	1430	368	1774	1729	114
Grp Volume(v), veh/h	12	68	69	95	0	187	50	0	401	59	0	486
Grp Sat Flow(s),veh/h/ln	1774	1770	1707	1774	0	1730	1774	0	1798	1774	0	1843
Q Serve(g_s), s	0.5	2.7	2.9	3.6	0.0	7.7	2.0	0.0	12.2	2.3	0.0	14.3
Cycle Q Clear(g_c), s	0.5	2.7	2.9	3.6	0.0	7.7	2.0	0.0	12.2	2.3	0.0	14.3
Prop In Lane	1.00		0.52	1.00		0.43	1.00		0.20	1.00		0.06
Lane Grp Cap(c), veh/h	159	159	153	254	0	247	107	0	777	167	0	858
V/C Ratio(X)	0.08	0.43	0.45	0.37	0.00	0.76	0.47	0.00	0.52	0.35	0.00	0.57
Avail Cap(c_a), veh/h	478	477	460	478	0	467	169	0	777	478	0	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.1	32.1	32.2	28.9	0.0	30.7	33.9	0.0	15.5	31.7	0.0	14.5
Incr Delay (d2), s/veh	0.2	1.8	2.1	0.9	0.0	4.7	3.1	0.0	2.4	1.3	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.4	1.4	1.8	0.0	4.0	1.1	0.0	6.5	1.2	0.0	7.8
LnGrp Delay(d),s/veh	31.3	33.9	34.3	29.8	0.0	35.4	37.0	0.0	17.9	32.9	0.0	17.2
LnGrp LOS	C	C	C	C		D	D		B	C		B
Approach Vol, veh/h		149			282			451			545	
Approach Delay, s/veh		33.9			33.5			20.0			18.9	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	36.7		11.2	9.0	39.2		15.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	14.3	14.2		4.9	4.0	16.3		9.7
Green Ext Time (p_c), s	0.1	3.3		0.6	0.0	5.6		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	189	81	22	247	38	101	224	65	63	252	171
Future Volume (veh/h)	123	189	81	22	247	38	101	224	65	63	252	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	138	212	91	25	278	43	113	252	73	71	283	192
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	545	226	68	500	76	155	768	714	131	743	789
Arrive On Green	0.10	0.22	0.22	0.04	0.16	0.16	0.09	0.41	0.41	0.07	0.40	0.40
Sat Flow, veh/h	1774	2441	1013	1774	3079	471	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	138	152	151	25	158	163	113	252	73	71	283	192
Grp Sat Flow(s),veh/h/ln	1774	1770	1684	1774	1770	1780	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.4	5.2	5.5	1.0	5.9	6.0	4.4	6.6	1.9	2.8	7.7	4.9
Cycle Q Clear(g_c), s	5.4	5.2	5.5	1.0	5.9	6.0	4.4	6.6	1.9	2.8	7.7	4.9
Prop In Lane	1.00		0.60	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	395	376	68	287	289	155	768	714	131	743	789
V/C Ratio(X)	0.78	0.38	0.40	0.37	0.55	0.56	0.73	0.33	0.10	0.54	0.38	0.24
Avail Cap(c_a), veh/h	335	656	625	335	656	660	335	768	714	335	743	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	23.6	23.7	33.5	27.5	27.6	31.8	14.3	11.3	31.9	15.2	10.2
Incr Delay (d2), s/veh	7.4	0.6	0.7	3.3	1.7	1.7	6.4	1.1	0.3	3.4	1.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.6	2.6	0.5	3.0	3.1	2.4	3.6	0.9	1.5	4.2	2.3
LnGrp Delay(d),s/veh	38.8	24.2	24.4	36.8	29.2	29.3	38.1	15.4	11.6	35.3	16.7	11.0
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		441			346			438			546	
Approach Delay, s/veh		28.8			29.8			20.6			17.1	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	34.0	7.2	20.5	10.8	33.0	11.6	16.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.8	8.6	3.0	7.5	6.4	9.7	7.4	8.0
Green Ext Time (p_c), s	0.1	4.1	0.0	3.6	0.1	4.0	0.2	3.6

Intersection Summary		
HCM 2010 Ctrl Delay		23.4
HCM 2010 LOS		C

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2022) Without-Project Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	490	197	109	346	44	245	770	207	82	608	227
Future Volume (veh/h)	251	490	197	109	346	44	245	770	207	82	608	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	256	500	201	111	353	45	250	786	211	84	620	232
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	914	409	141	597	76	264	1400	752	120	1113	734
Arrive On Green	0.15	0.26	0.26	0.08	0.19	0.19	0.15	0.40	0.40	0.07	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3162	400	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	256	500	201	111	196	202	250	786	211	84	620	232
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1792	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	13.0	11.1	9.8	5.6	9.2	9.3	12.7	15.6	7.3	4.2	13.2	8.3
Cycle Q Clear(g_c), s	13.0	11.1	9.8	5.6	9.2	9.3	12.7	15.6	7.3	4.2	13.2	8.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	914	409	141	334	339	264	1400	752	120	1113	734
V/C Ratio(X)	0.97	0.55	0.49	0.79	0.59	0.60	0.95	0.56	0.28	0.70	0.56	0.32
Avail Cap(c_a), veh/h	264	1035	463	264	517	524	264	1400	752	264	1113	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	29.0	28.5	40.9	33.5	33.6	38.2	21.3	14.4	41.3	25.8	15.3
Incr Delay (d2), s/veh	46.5	0.5	0.9	9.2	1.6	1.7	40.8	1.6	0.9	7.1	2.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	5.5	4.4	3.1	4.6	4.7	9.2	8.0	3.4	2.3	6.8	3.9
LnGrp Delay(d),s/veh	84.9	29.5	29.5	50.2	35.2	35.3	79.0	22.9	15.3	48.4	27.8	16.4
LnGrp LOS	F	C	C	D	D	D	E	C	B	D	C	B
Approach Vol, veh/h		957			509			1247			936	
Approach Delay, s/veh		44.3			38.5			32.9			26.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	40.3	11.7	27.9	18.0	33.0	18.0	21.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	6.2	17.6	7.6	13.1	14.7	15.2	15.0	11.3
Green Ext Time (p_c), s	0.1	7.3	0.1	5.4	0.0	8.4	0.0	5.8

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1222	0	0	913
Future Vol, veh/h	0	0	1222	0	0	913
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1247	0	0	932

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1620	623	0	0	1247	0
Stage 1	1247	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Critical Hdwy	6.29	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	118	429	-	-	554	-
Stage 1	229	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	118	429	-	-	554	-
Mov Cap-2 Maneuver	118	-	-	-	-	-
Stage 1	229	-	-	-	-	-
Stage 2	631	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	554	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	98	245	91	83	33	226	1183	120	26	869	52
Future Volume (veh/h)	63	98	245	91	83	33	226	1183	120	26	869	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	64	99	247	92	84	33	228	1195	121	26	878	53
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	115	286	128	467	397	264	1558	697	67	1165	521
Arrive On Green	0.06	0.24	0.24	0.07	0.25	0.25	0.15	0.44	0.44	0.04	0.33	0.33
Sat Flow, veh/h	1774	473	1181	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	64	0	346	92	84	33	228	1195	121	26	878	53
Grp Sat Flow(s),veh/h/ln	1774	0	1654	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	3.0	0.0	17.3	4.4	3.1	1.4	10.9	24.7	4.0	1.2	19.2	2.0
Cycle Q Clear(g_c), s	3.0	0.0	17.3	4.4	3.1	1.4	10.9	24.7	4.0	1.2	19.2	2.0
Prop In Lane	1.00		0.71	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	113	0	401	128	467	397	264	1558	697	67	1165	521
V/C Ratio(X)	0.57	0.00	0.86	0.72	0.18	0.08	0.87	0.77	0.17	0.39	0.75	0.10
Avail Cap(c_a), veh/h	277	0	506	277	570	485	277	1558	697	277	1165	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	31.4	39.3	25.4	24.8	36.0	20.5	14.7	40.7	25.9	20.2
Incr Delay (d2), s/veh	4.4	0.0	11.9	7.4	0.2	0.1	23.0	3.7	0.5	3.7	4.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	9.2	2.4	1.6	0.6	7.0	12.7	1.8	0.7	10.0	0.9
LnGrp Delay(d),s/veh	43.8	0.0	43.4	46.7	25.6	24.9	59.0	24.2	15.2	44.4	30.4	20.5
LnGrp LOS	D		D	D	C	C	E	C	B	D	C	C
Approach Vol, veh/h		410			209			1544			957	
Approach Delay, s/veh		43.4			34.8			28.6			30.3	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	42.6	10.7	25.5	17.4	33.0	10.0	26.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	3.2	26.7	6.4	19.3	12.9	21.2	5.0	5.1
Green Ext Time (p_c), s	0.0	1.6	0.1	1.6	0.0	6.3	0.1	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	347	4	175	442	1362	0	0	948	396
Future Volume (veh/h)	0	0	0	347	4	175	442	1362	0	0	948	396
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				361	4	182	460	1419	0	0	988	412
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				434	5	391	422	2302	0	0	884	364
Arrive On Green				0.25	0.25	0.25	0.24	0.65	0.00	0.00	0.36	0.36
Sat Flow, veh/h				1756	19	1583	1774	3632	0	0	2541	1007
Grp Volume(v), veh/h				365	0	182	460	1419	0	0	711	689
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1685
Q Serve(g_s), s				17.1	0.0	8.6	20.9	20.5	0.0	0.0	31.7	31.7
Cycle Q Clear(g_c), s				17.1	0.0	8.6	20.9	20.5	0.0	0.0	31.7	31.7
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.60
Lane Grp Cap(c), veh/h				438	0	391	422	2302	0	0	639	609
V/C Ratio(X)				0.83	0.00	0.47	1.09	0.62	0.00	0.00	1.11	1.13
Avail Cap(c_a), veh/h				685	0	611	422	2302	0	0	639	609
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.3	0.0	28.1	33.4	8.9	0.0	0.0	28.0	28.0
Incr Delay (d2), s/veh				5.1	0.0	0.9	69.9	1.2	0.0	0.0	70.4	78.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.9	0.0	3.8	18.3	10.3	0.0	0.0	27.8	27.9
LnGrp Delay(d),s/veh				36.4	0.0	29.0	103.4	10.2	0.0	0.0	98.5	106.9
LnGrp LOS				D		C	F	B			F	F
Approach Vol, veh/h					547			1879			1400	
Approach Delay, s/veh					34.0			33.0			102.6	
Approach LOS					C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			25.4	36.2		26.2
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		22.5			22.9	33.7		19.1
Green Ext Time (p_c), s		27.8			0.0	0.0		2.6

Intersection Summary		
HCM 2010 Ctrl Delay		58.6
HCM 2010 LOS		E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	530	3	548	0	0	0	0	1285	431	181	995	0
Future Volume (veh/h)	530	3	548	0	0	0	0	1285	431	181	995	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	554	0	571				0	1339	449	189	1036	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1061	0	473				0	1651	551	228	2162	0
Arrive On Green	0.30	0.00	0.30				0.00	0.44	0.44	0.13	0.61	0.00
Sat Flow, veh/h	3548	0	1583				0	3940	1258	1774	3632	0
Grp Volume(v), veh/h	554	0	571				0	1203	585	189	1036	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1641	1774	1770	0
Q Serve(g_s), s	13.0	0.0	29.9				0.0	30.9	31.2	10.4	16.1	0.0
Cycle Q Clear(g_c), s	13.0	0.0	29.9				0.0	30.9	31.2	10.4	16.1	0.0
Prop In Lane	1.00		1.00				0.00		0.77	1.00		0.00
Lane Grp Cap(c), veh/h	1061	0	473				0	1483	718	228	2162	0
V/C Ratio(X)	0.52	0.00	1.21				0.00	0.81	0.82	0.83	0.48	0.00
Avail Cap(c_a), veh/h	1061	0	473				0	1483	718	530	2162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.1	0.0	35.0				0.0	24.5	24.6	42.5	10.7	0.0
Incr Delay (d2), s/veh	0.5	0.0	111.3				0.0	3.5	7.3	7.5	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	27.7				0.0	15.1	15.4	5.6	8.0	0.0
LnGrp Delay(d),s/veh	29.6	0.0	146.3				0.0	28.0	31.8	50.1	11.5	0.0
LnGrp LOS	C		F					C	C	D	B	
Approach Vol, veh/h		1125						1788			1225	
Approach Delay, s/veh		88.8						29.3			17.4	
Approach LOS		F						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.3	48.3		34.4		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.8	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	12.4	33.2		31.9		18.1		
Green Ext Time (p_c), s	0.5	0.0		0.0		32.7		

Intersection Summary	
HCM 2010 Ctrl Delay	42.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑			↕			↕	
Traffic Vol, veh/h	0	255	19	0	213	0	0	0	24	0	0	0
Future Vol, veh/h	0	255	19	0	213	0	0	0	24	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	271	20	0	227	0	0	0	26	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	508	508	146	336	518	227
Stage 1	-	-	-	-	-	-	281	281	-	227	227	-
Stage 2	-	-	-	-	-	-	227	227	-	109	291	-
Critical Hdwy	-	-	-	-	-	-	6.78	6.53	7.13	6.78	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	7.33	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.73	5.53	-
Follow-up Hdwy	-	-	-	-	-	-	3.669	4.019	3.919	3.669	4.019	3.319
Pot Cap-1 Maneuver	0	-	-	0	-	0	483	467	744	615	461	812
Stage 1	0	-	-	0	-	0	637	678	-	747	716	-
Stage 2	0	-	-	0	-	0	747	716	-	846	671	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	483	467	744	594	461	812
Mov Cap-2 Maneuver	-	-	-	-	-	-	483	467	-	594	461	-
Stage 1	-	-	-	-	-	-	637	678	-	747	716	-
Stage 2	-	-	-	-	-	-	747	716	-	817	671	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	744	-	-	-	-
HCM Lane V/C Ratio	0.034	-	-	-	-
HCM Control Delay (s)	10	-	-	-	0
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	230	4	4	162	6	2	2	0	8	0	39
Future Vol, veh/h	50	230	4	4	162	6	2	2	0	8	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	261	5	5	184	7	2	2	0	9	0	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	191	0	0	266	0	0	574	577	133	442	577	188
Stage 1	-	-	-	-	-	-	377	377	-	197	197	-
Stage 2	-	-	-	-	-	-	197	200	-	245	380	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1381	-	-	1296	-	-	415	427	892	512	427	853
Stage 1	-	-	-	-	-	-	617	615	-	804	737	-
Stage 2	-	-	-	-	-	-	804	735	-	738	613	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1381	-	-	1296	-	-	380	408	892	492	408	853
Mov Cap-2 Maneuver	-	-	-	-	-	-	380	408	-	492	408	-
Stage 1	-	-	-	-	-	-	592	590	-	771	734	-
Stage 2	-	-	-	-	-	-	759	732	-	705	588	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.2	14.2	10
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	394	1381	-	-	1296	-	-	492	853
HCM Lane V/C Ratio	0.012	0.041	-	-	0.004	-	-	0.018	0.052
HCM Control Delay (s)	14.2	7.7	-	-	7.8	-	-	12.5	9.5
HCM Lane LOS	B	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	227	162	8	11	11
Future Vol, veh/h	12	227	162	8	11	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	249	178	9	12	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	187	0	-	0	458	182
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	276	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1387	-	-	-	561	861
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	771	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1387	-	-	-	555	861
Mov Cap-2 Maneuver	-	-	-	-	618	-
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	763	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1387	-	-	-	720
HCM Lane V/C Ratio	0.01	-	-	-	0.034
HCM Control Delay (s)	7.6	0	-	-	10.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱		↾	
Traffic Vol, veh/h	15	220	155	10	28	18
Future Vol, veh/h	15	220	155	10	28	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	242	170	11	31	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	181	0	-	0	451	176
Stage 1	-	-	-	-	176	-
Stage 2	-	-	-	-	275	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1394	-	-	-	566	867
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	771	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1394	-	-	-	559	867
Mov Cap-2 Maneuver	-	-	-	-	620	-
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	761	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1394	-	-	-	698
HCM Lane V/C Ratio	0.012	-	-	-	0.072
HCM Control Delay (s)	7.6	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	247	157	22	0	8
Future Vol, veh/h	1	247	157	22	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	266	169	24	0	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	192	0	-	0	-	181
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	-	3.318
Pot Cap-1 Maneuver	1381	-	-	-	0	862
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1381	-	-	-	-	862
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1381	-	-	-	862
HCM Lane V/C Ratio	0.001	-	-	-	0.01
HCM Control Delay (s)	7.6	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	247	169	9	0	10
Future Vol, veh/h	0	247	169	9	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	263	180	10	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	185
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	857
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	857
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	857
HCM Lane V/C Ratio	-	-	-	0.012
HCM Control Delay (s)	-	-	-	9.3
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	682	0	0	432	53	0	0	0	72	0	52
Future Volume (veh/h)	94	682	0	0	432	53	0	0	0	72	0	52
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	0	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	108	784	0	0	497	61	0	0	0	83	0	60
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	82	1778	0	0	1317	161	0	773	0	802	0	657
Arrive On Green	0.05	0.50	0.00	0.00	0.41	0.41	0.00	0.00	0.00	0.41	0.00	0.41
Sat Flow, veh/h	1774	3632	0	0	3269	388	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	108	784	0	0	276	282	0	0	0	83	0	60
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1794	0	1863	0	1774	0	1583
Q Serve(g_s), s	5.0	15.4	0.0	0.0	11.7	11.8	0.0	0.0	0.0	3.1	0.0	2.5
Cycle Q Clear(g_c), s	5.0	15.4	0.0	0.0	11.7	11.8	0.0	0.0	0.0	3.1	0.0	2.5
Prop In Lane	1.00		0.00	0.00		0.22	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	1778	0	0	734	744	0	773	0	802	0	657
V/C Ratio(X)	1.32	0.44	0.00	0.00	0.38	0.38	0.00	0.00	0.00	0.10	0.00	0.09
Avail Cap(c_a), veh/h	82	1778	0	0	734	744	0	773	0	802	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	17.3	0.0	0.0	22.0	22.0	0.0	0.0	0.0	19.5	0.0	19.3
Incr Delay (d2), s/veh	207.5	0.8	0.0	0.0	1.5	1.5	0.0	0.0	0.0	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	7.7	0.0	0.0	6.1	6.2	0.0	0.0	0.0	1.6	0.0	1.1
LnGrp Delay(d),s/veh	259.3	18.1	0.0	0.0	23.5	23.5	0.0	0.0	0.0	19.8	0.0	19.6
LnGrp LOS	F	B			C	C				B		B
Approach Vol, veh/h		892			558			0			143	
Approach Delay, s/veh		47.3			23.5			0.0			19.7	
Approach LOS		D			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		59.0		49.5	9.5	49.5		49.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		45.0		45.0	5.0	45.0		45.0
Max Q Clear Time (g_c+I1), s		17.4		5.1	7.0	13.8		0.0
Green Ext Time (p_c), s		10.6		0.6	0.0	11.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	523	94	113	355	62	67	171	203	66	125	74
Future Volume (veh/h)	100	523	94	113	355	62	67	171	203	66	125	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	109	568	102	123	386	67	73	186	221	72	136	80
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	783	140	157	815	140	124	663	564	124	662	563
Arrive On Green	0.08	0.26	0.26	0.09	0.27	0.27	0.07	0.36	0.36	0.07	0.36	0.36
Sat Flow, veh/h	1774	3000	537	1774	3021	520	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	109	334	336	123	225	228	73	186	221	72	136	80
Grp Sat Flow(s),veh/h/ln	1774	1770	1768	1774	1770	1771	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.8	13.8	13.9	5.4	8.5	8.7	3.2	5.7	8.4	3.2	4.1	2.7
Cycle Q Clear(g_c), s	4.8	13.8	13.9	5.4	8.5	8.7	3.2	5.7	8.4	3.2	4.1	2.7
Prop In Lane	1.00		0.30	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	462	462	157	478	478	124	663	564	124	662	563
V/C Ratio(X)	0.77	0.72	0.73	0.78	0.47	0.48	0.59	0.28	0.39	0.58	0.21	0.14
Avail Cap(c_a), veh/h	299	585	585	299	585	586	299	663	564	299	662	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	27.0	27.0	35.8	24.5	24.5	36.1	18.5	19.3	36.1	17.9	17.5
Incr Delay (d2), s/veh	8.6	3.3	3.4	8.3	0.7	0.7	4.3	1.1	2.0	4.3	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	7.1	7.1	3.0	4.2	4.3	1.7	3.1	4.0	1.7	2.2	1.3
LnGrp Delay(d),s/veh	44.7	30.2	30.4	44.1	25.2	25.3	40.5	19.5	21.4	40.4	18.6	18.0
LnGrp LOS	D	C	C	D	C	C	D	B	C	D	B	B
Approach Vol, veh/h		779			576			480			288	
Approach Delay, s/veh		32.3			29.2			23.5			23.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	33.0	11.6	25.4	10.1	33.0	10.9	26.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	5.2	10.4	7.4	15.9	5.2	6.1	6.8	10.7
Green Ext Time (p_c), s	0.1	2.7	0.1	5.0	0.1	2.9	0.1	6.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	151	57	107	77	24	55	394	163	18	309	15
Future Volume (veh/h)	41	151	57	107	77	24	55	394	163	18	309	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	43	159	60	113	81	25	58	415	172	19	325	16
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	266	97	173	133	41	118	565	234	172	848	42
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.07	0.45	0.45	0.10	0.48	0.48
Sat Flow, veh/h	1774	2544	925	1774	1367	422	1774	1252	519	1774	1761	87
Grp Volume(v), veh/h	43	109	110	113	0	106	58	0	587	19	0	341
Grp Sat Flow(s),veh/h/ln	1774	1770	1700	1774	0	1788	1774	0	1771	1774	0	1847
Q Serve(g_s), s	1.6	4.2	4.5	4.4	0.0	4.1	2.3	0.0	19.6	0.7	0.0	8.5
Cycle Q Clear(g_c), s	1.6	4.2	4.5	4.4	0.0	4.1	2.3	0.0	19.6	0.7	0.0	8.5
Prop In Lane	1.00		0.54	1.00		0.24	1.00		0.29	1.00		0.05
Lane Grp Cap(c), veh/h	185	185	177	173	0	175	118	0	799	172	0	889
V/C Ratio(X)	0.23	0.59	0.62	0.65	0.00	0.61	0.49	0.00	0.73	0.11	0.00	0.38
Avail Cap(c_a), veh/h	495	494	474	495	0	499	175	0	799	495	0	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.6	30.8	30.9	31.3	0.0	31.2	32.4	0.0	16.2	29.7	0.0	11.9
Incr Delay (d2), s/veh	0.6	3.0	3.5	4.1	0.0	3.4	3.1	0.0	5.9	0.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.2	2.3	2.4	0.0	2.2	1.2	0.0	10.8	0.4	0.0	4.6
LnGrp Delay(d),s/veh	30.3	33.8	34.4	35.4	0.0	34.6	35.6	0.0	22.2	30.0	0.0	13.1
LnGrp LOS	C	C	C	D		C	D		C	C		B
Approach Vol, veh/h		262			219			645			360	
Approach Delay, s/veh		33.5			35.0			23.4			14.0	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	37.0		12.0	9.3	39.2		11.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	12.7	21.6		6.5	4.3	10.5		6.4
Green Ext Time (p_c), s	0.0	0.1		1.1	0.0	6.8		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	381	578	160	49	292	50	132	235	82	67	151	267
Future Volume (veh/h)	381	578	160	49	292	50	132	235	82	67	151	267
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	397	602	167	51	304	52	138	245	85	70	157	278
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	283	809	224	102	587	99	173	684	673	118	627	786
Arrive On Green	0.16	0.30	0.30	0.06	0.19	0.19	0.10	0.37	0.37	0.07	0.34	0.34
Sat Flow, veh/h	1774	2740	759	1774	3030	512	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	397	388	381	51	176	180	138	245	85	70	157	278
Grp Sat Flow(s),veh/h/ln	1774	1770	1729	1774	1770	1772	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	13.5	16.8	16.8	2.4	7.5	7.7	6.4	8.1	2.8	3.2	5.2	9.1
Cycle Q Clear(g_c), s	13.5	16.8	16.8	2.4	7.5	7.7	6.4	8.1	2.8	3.2	5.2	9.1
Prop In Lane	1.00		0.44	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	523	511	102	343	343	173	684	673	118	627	786
V/C Ratio(X)	1.40	0.74	0.75	0.50	0.51	0.52	0.80	0.36	0.13	0.59	0.25	0.35
Avail Cap(c_a), veh/h	283	554	541	283	554	555	283	684	673	283	627	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	26.9	26.9	38.7	30.6	30.6	37.4	19.5	14.8	38.4	20.3	13.0
Incr Delay (d2), s/veh	201.3	5.1	5.3	3.7	1.2	1.2	8.2	1.5	0.4	4.6	1.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.3	8.9	8.8	1.3	3.8	3.9	3.5	4.4	1.3	1.7	2.8	4.2
LnGrp Delay(d),s/veh	236.8	32.0	32.2	42.4	31.8	31.9	45.5	21.0	15.2	43.0	21.3	14.3
LnGrp LOS	F	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1166			407			468			505	
Approach Delay, s/veh		101.8			33.1			27.2			20.4	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	35.6	9.4	29.5	12.7	33.0	18.0	20.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	15.2	10.1	4.4	18.8	8.4	11.1	15.5	9.7
Green Ext Time (p_c), s	0.1	3.5	0.0	4.1	0.1	3.4	0.0	6.7

Intersection Summary		
HCM 2010 Ctrl Delay		61.0
HCM 2010 LOS		E

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2022) With Project Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	309	161	181	592	47	132	487	103	57	631	290
Future Volume (veh/h)	147	309	161	181	592	47	132	487	103	57	631	290
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	156	329	171	193	630	50	140	518	110	61	671	309
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	820	367	230	841	67	175	1300	787	111	1172	696
Arrive On Green	0.11	0.23	0.23	0.13	0.25	0.25	0.10	0.37	0.37	0.06	0.33	0.33
Sat Flow, veh/h	1774	3539	1583	1774	3323	263	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	156	329	171	193	335	345	140	518	110	61	671	309
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1816	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	7.4	6.8	8.0	9.1	15.0	15.1	6.6	9.3	3.2	2.9	13.5	11.7
Cycle Q Clear(g_c), s	7.4	6.8	8.0	9.1	15.0	15.1	6.6	9.3	3.2	2.9	13.5	11.7
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	820	367	230	448	460	175	1300	787	111	1172	696
V/C Ratio(X)	0.81	0.40	0.47	0.84	0.75	0.75	0.80	0.40	0.14	0.55	0.57	0.44
Avail Cap(c_a), veh/h	278	1090	488	278	545	559	278	1300	787	278	1172	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	28.0	28.5	36.6	29.6	29.6	38.0	20.2	11.7	39.2	23.8	16.8
Incr Delay (d2), s/veh	11.2	0.3	0.9	17.2	4.6	4.5	8.4	0.9	0.4	4.2	2.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	3.3	3.6	5.6	7.9	8.1	3.7	4.7	1.5	1.5	6.9	5.5
LnGrp Delay(d),s/veh	48.7	28.3	29.4	53.8	34.2	34.1	46.4	21.1	12.1	43.4	25.8	18.9
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		656			873			768			1041	
Approach Delay, s/veh		33.5			38.5			24.4			24.8	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	36.1	15.7	24.4	13.0	33.0	13.8	26.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.9	11.3	11.1	10.0	8.6	15.5	9.4	17.1
Green Ext Time (p_c), s	0.1	8.6	0.1	6.6	0.1	7.2	0.1	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	30.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	712	0	0	973
Future Vol, veh/h	0	9	712	0	0	973
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	757	0	0	1035

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1275	379	0	0	757	0
Stage 1	757	-	-	-	-	-
Stage 2	518	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	159	619	-	-	850	-
Stage 1	424	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	159	619	-	-	850	-
Mov Cap-2 Maneuver	291	-	-	-	-	-
Stage 1	424	-	-	-	-	-
Stage 2	563	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	619	850	-
HCM Lane V/C Ratio	-	-	0.015	-	-
HCM Control Delay (s)	-	-	10.9	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	56	156	56	72	6	124	689	84	18	940	46
Future Volume (veh/h)	45	56	156	56	72	6	124	689	84	18	940	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	46	58	161	58	74	6	128	710	87	19	969	47
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	77	214	120	345	293	165	1658	742	55	1438	643
Arrive On Green	0.06	0.18	0.18	0.07	0.19	0.19	0.09	0.47	0.47	0.03	0.41	0.41
Sat Flow, veh/h	1774	437	1212	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	46	0	219	58	74	6	128	710	87	19	969	47
Grp Sat Flow(s),veh/h/ln	1774	0	1649	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.8	0.0	8.8	2.2	2.4	0.2	4.9	9.4	2.2	0.7	15.7	1.3
Cycle Q Clear(g_c), s	1.8	0.0	8.8	2.2	2.4	0.2	4.9	9.4	2.2	0.7	15.7	1.3
Prop In Lane	1.00		0.74	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	0	291	120	345	293	165	1658	742	55	1438	643
V/C Ratio(X)	0.44	0.00	0.75	0.48	0.21	0.02	0.78	0.43	0.12	0.35	0.67	0.07
Avail Cap(c_a), veh/h	342	0	623	342	704	598	342	1658	742	342	1438	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	0.0	27.4	31.5	24.3	23.4	31.1	12.4	10.5	33.3	17.0	12.7
Incr Delay (d2), s/veh	2.9	0.0	3.9	3.0	0.3	0.0	7.7	0.8	0.3	3.7	2.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	4.3	1.2	1.2	0.1	2.8	4.7	1.0	0.4	8.2	0.6
LnGrp Delay(d),s/veh	34.7	0.0	31.3	34.5	24.6	23.4	38.8	13.2	10.8	37.0	19.6	13.0
LnGrp LOS	C		C	C	C	C	D	B	B	D	B	B
Approach Vol, veh/h		265			138			925			1035	
Approach Delay, s/veh		31.9			28.7			16.5			19.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	37.3	9.2	16.9	11.0	33.0	8.6	17.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	2.7	11.4	4.2	10.8	6.9	17.7	3.8	4.4
Green Ext Time (p_c), s	0.0	10.9	0.1	1.6	0.1	7.7	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	342	4	177	332	719	0	0	852	327
Future Volume (veh/h)	0	0	0	342	4	177	332	719	0	0	852	327
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				356	4	184	346	749	0	0	888	341
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				429	5	387	383	2310	0	0	966	369
Arrive On Green				0.24	0.24	0.24	0.22	0.65	0.00	0.00	0.39	0.39
Sat Flow, veh/h				1755	20	1583	1774	3632	0	0	2599	958
Grp Volume(v), veh/h				360	0	184	346	749	0	0	626	603
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1694
Q Serve(g_s), s				16.8	0.0	8.7	16.6	8.2	0.0	0.0	29.4	29.7
Cycle Q Clear(g_c), s				16.8	0.0	8.7	16.6	8.2	0.0	0.0	29.4	29.7
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.57
Lane Grp Cap(c), veh/h				434	0	387	383	2310	0	0	682	653
V/C Ratio(X)				0.83	0.00	0.48	0.90	0.32	0.00	0.00	0.92	0.92
Avail Cap(c_a), veh/h				688	0	614	424	2310	0	0	682	653
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.3	0.0	28.3	33.4	6.7	0.0	0.0	25.6	25.7
Incr Delay (d2), s/veh				4.8	0.0	0.9	21.1	0.4	0.0	0.0	19.4	20.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.8	0.0	3.9	10.3	4.1	0.0	0.0	17.9	17.5
LnGrp Delay(d),s/veh				36.1	0.0	29.2	54.5	7.1	0.0	0.0	44.9	46.4
LnGrp LOS				D		C	D	A			D	D
Approach Vol, veh/h					544			1095			1229	
Approach Delay, s/veh					33.8			22.1			45.7	
Approach LOS					C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			23.4	38.2		25.9
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		10.2			18.6	31.7		18.8
Green Ext Time (p_c), s		21.7			0.3	0.0		2.6

Intersection Summary		
HCM 2010 Ctrl Delay		34.4
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	247	4	510	0	0	0	0	795	182	168	991	0
Future Volume (veh/h)	247	4	510	0	0	0	0	795	182	168	991	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	255	0	520				0	811	186	171	1011	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1061	0	473				0	1855	422	210	2162	0
Arrive On Green	0.30	0.00	0.30				0.00	0.45	0.45	0.12	0.61	0.00
Sat Flow, veh/h	3548	0	1583				0	4311	943	1774	3632	0
Grp Volume(v), veh/h	255	0	520				0	663	334	171	1011	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1696	1774	1770	0
Q Serve(g_s), s	5.4	0.0	29.9				0.0	13.4	13.6	9.4	15.6	0.0
Cycle Q Clear(g_c), s	5.4	0.0	29.9				0.0	13.4	13.6	9.4	15.6	0.0
Prop In Lane	1.00		1.00				0.00		0.56	1.00		0.00
Lane Grp Cap(c), veh/h	1061	0	473				0	1518	760	210	2162	0
V/C Ratio(X)	0.24	0.00	1.10				0.00	0.44	0.44	0.82	0.47	0.00
Avail Cap(c_a), veh/h	1061	0	473				0	1518	760	530	2162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.5	0.0	35.0				0.0	18.9	19.0	43.0	10.6	0.0
Incr Delay (d2), s/veh	0.1	0.0	70.8				0.0	0.2	0.4	7.5	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	22.3				0.0	6.3	6.4	5.0	7.8	0.0
LnGrp Delay(d),s/veh	26.6	0.0	105.9				0.0	19.1	19.4	50.6	11.3	0.0
LnGrp LOS	C		F					B	B	D	B	
Approach Vol, veh/h		775						997			1182	
Approach Delay, s/veh		79.8						19.2			17.0	
Approach LOS		E						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.3	49.3		34.4		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.9	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	11.4	15.6		31.9		17.6		
Green Ext Time (p_c), s	0.4	8.6		0.0		21.4		

Intersection Summary	
HCM 2010 Ctrl Delay	34.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	157	1	0	281	0	0	0	1	0	0	0
Future Vol, veh/h	0	157	1	0	281	0	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	173	1	0	309	0	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	309	0	0	174	0	0	327	482	87	395	483	154
Stage 1	-	-	-	-	-	-	173	173	-	309	309	-
Stage 2	-	-	-	-	-	-	154	309	-	86	174	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1248	-	-	1400	-	-	602	482	954	539	482	864
Stage 1	-	-	-	-	-	-	812	755	-	676	658	-
Stage 2	-	-	-	-	-	-	833	658	-	912	754	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1248	-	-	1400	-	-	602	482	954	538	482	864
Mov Cap-2 Maneuver	-	-	-	-	-	-	602	482	-	538	482	-
Stage 1	-	-	-	-	-	-	812	755	-	676	658	-
Stage 2	-	-	-	-	-	-	833	658	-	911	754	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.8	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	954	1248	-	-	1400	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-	-	-	-
HCM Control Delay (s)	8.8	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	205	42	3	198	5	28	0	3	4	0	58
Future Vol, veh/h	106	205	42	3	198	5	28	0	3	4	0	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	123	238	49	3	230	6	33	0	3	5	0	67

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	236	0	0	287	0	0	749	752	144	606	774	233
Stage 1	-	-	-	-	-	-	509	509	-	240	240	-
Stage 2	-	-	-	-	-	-	240	243	-	366	534	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1330	-	-	1274	-	-	314	338	878	395	329	805
Stage 1	-	-	-	-	-	-	516	537	-	763	706	-
Stage 2	-	-	-	-	-	-	763	704	-	627	524	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1330	-	-	1274	-	-	267	306	878	365	298	805
Mov Cap-2 Maneuver	-	-	-	-	-	-	267	306	-	365	298	-
Stage 1	-	-	-	-	-	-	468	487	-	692	704	-
Stage 2	-	-	-	-	-	-	697	702	-	567	476	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.4	0.1	19.4	10.2
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	286	1330	-	-	1274	-	-	365	805
HCM Lane V/C Ratio	0.126	0.093	-	-	0.003	-	-	0.013	0.084
HCM Control Delay (s)	19.4	8	-	-	7.8	-	-	15	9.9
HCM Lane LOS	C	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.4	0.3	-	-	0	-	-	0	0.3

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	193	198	4	0	6
Future Vol, veh/h	18	193	198	4	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	230	236	5	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	240	0	-	0	511	238
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	273	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1327	-	-	-	523	801
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	773	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1327	-	-	-	514	801
Mov Cap-2 Maneuver	-	-	-	-	590	-
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	759	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1327	-	-	-	801
HCM Lane V/C Ratio	0.016	-	-	-	0.009
HCM Control Delay (s)	7.8	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	89	105	151	38	19	53
Future Vol, veh/h	89	105	151	38	19	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	99	117	168	42	21	59

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	210	0	-	0	503	189
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	314	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1361	-	-	-	528	853
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	741	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1361	-	-	-	487	853
Mov Cap-2 Maneuver	-	-	-	-	560	-
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	683	-

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1361	-	-	-	750
HCM Lane V/C Ratio	0.073	-	-	-	0.107
HCM Control Delay (s)	7.9	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	119	3	22	181	33	3	0	15	16	0	3
Future Vol, veh/h	2	119	3	22	181	33	3	0	15	16	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	138	3	26	210	38	3	0	17	19	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	249	0	0	142	0	0	428	445	140	434	428	230
Stage 1	-	-	-	-	-	-	145	145	-	281	281	-
Stage 2	-	-	-	-	-	-	283	300	-	153	147	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1317	-	-	1441	-	-	537	508	908	532	519	809
Stage 1	-	-	-	-	-	-	858	777	-	726	678	-
Stage 2	-	-	-	-	-	-	724	666	-	849	775	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1317	-	-	1441	-	-	525	496	908	513	507	809
Mov Cap-2 Maneuver	-	-	-	-	-	-	525	496	-	513	507	-
Stage 1	-	-	-	-	-	-	856	775	-	725	664	-
Stage 2	-	-	-	-	-	-	706	652	-	831	773	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.7	9.6	11.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	810	1317	-	-	1441	-	-	544
HCM Lane V/C Ratio	0.026	0.002	-	-	0.018	-	-	0.041
HCM Control Delay (s)	9.6	7.7	0	-	7.5	0	-	11.9
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	150	156	4	0	7
Future Vol, veh/h	0	150	156	4	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	172	179	5	0	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	182
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	861
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	861
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	861
HCM Lane V/C Ratio	-	-	-	0.009
HCM Control Delay (s)	-	-	-	9.2
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	436	11	11	747	174	7	0	7	142	0	87
Future Volume (veh/h)	51	436	11	11	747	174	7	0	7	142	0	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	58	495	12	12	849	198	8	0	8	161	0	99
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	1650	40	42	1056	244	343	17	306	707	0	703
Arrive On Green	0.04	0.47	0.47	0.38	0.38	0.38	0.44	0.00	0.44	0.44	0.00	0.44
Sat Flow, veh/h	1774	3532	86	15	2773	641	652	38	690	1402	0	1583
Grp Volume(v), veh/h	58	248	259	571	0	488	16	0	0	161	0	99
Grp Sat Flow(s),veh/h/ln	1774	1770	1848	1847	0	1582	1379	0	0	1402	0	1583
Q Serve(g_s), s	3.3	8.8	8.8	4.1	0.0	28.0	0.0	0.0	0.0	2.4	0.0	3.8
Cycle Q Clear(g_c), s	3.3	8.8	8.8	27.8	0.0	28.0	3.8	0.0	0.0	6.2	0.0	3.8
Prop In Lane	1.00		0.05	0.02		0.41	0.50		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	74	827	863	740	0	603	666	0	0	707	0	703
V/C Ratio(X)	0.78	0.30	0.30	0.77	0.00	0.81	0.02	0.00	0.00	0.23	0.00	0.14
Avail Cap(c_a), veh/h	88	827	863	872	0	718	666	0	0	707	0	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.1	16.7	16.7	28.0	0.0	28.1	15.8	0.0	0.0	17.3	0.0	16.7
Incr Delay (d2), s/veh	30.8	0.2	0.2	3.6	0.0	6.0	0.1	0.0	0.0	0.7	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	4.3	4.5	15.0	0.0	13.2	0.3	0.0	0.0	2.9	0.0	1.7
LnGrp Delay(d),s/veh	78.9	16.9	16.9	31.6	0.0	34.1	15.9	0.0	0.0	18.0	0.0	17.1
LnGrp LOS	E	B	B	C		C	B			B		B
Approach Vol, veh/h		565			1059			16			260	
Approach Delay, s/veh		23.3			32.7			15.9			17.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		49.5		51.9		49.5	8.8	43.1
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		45.0		46.0		45.0	5.0	46.0
Max Q Clear Time (g_c+I1), s		5.8		10.8		8.2	5.3	30.0
Green Ext Time (p_c), s		1.2		13.8		1.2	0.0	8.6

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	412	137	114	680	94	132	146	69	105	173	91
Future Volume (veh/h)	36	412	137	114	680	94	132	146	69	105	173	91
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	43	490	163	136	810	112	157	174	82	125	206	108
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	687	227	170	958	132	193	645	548	158	608	517
Arrive On Green	0.05	0.26	0.26	0.10	0.31	0.31	0.11	0.35	0.35	0.09	0.33	0.33
Sat Flow, veh/h	1774	2615	865	1774	3124	432	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	43	331	322	136	459	463	157	174	82	125	206	108
Grp Sat Flow(s),veh/h/ln	1774	1770	1710	1774	1770	1787	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.1	14.8	14.9	6.5	21.2	21.2	7.6	5.9	3.1	6.0	7.3	4.3
Cycle Q Clear(g_c), s	2.1	14.8	14.9	6.5	21.2	21.2	7.6	5.9	3.1	6.0	7.3	4.3
Prop In Lane	1.00		0.51	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	465	449	170	542	548	193	645	548	158	608	517
V/C Ratio(X)	0.47	0.71	0.72	0.80	0.85	0.85	0.82	0.27	0.15	0.79	0.34	0.21
Avail Cap(c_a), veh/h	274	537	519	274	542	548	274	645	548	274	608	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	29.2	29.2	38.6	28.3	28.3	38.0	20.6	19.7	39.0	22.2	21.2
Incr Delay (d2), s/veh	3.6	3.7	4.0	8.4	11.8	11.7	11.9	1.0	0.6	8.6	1.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	7.6	7.6	3.6	12.1	12.2	4.3	3.2	1.5	3.3	4.0	2.0
LnGrp Delay(d),s/veh	43.8	32.9	33.2	47.0	40.1	40.0	49.9	21.6	20.2	47.6	23.7	22.1
LnGrp LOS	D	C	C	D	D	D	D	C	C	D	C	C
Approach Vol, veh/h		696			1058			413			439	
Approach Delay, s/veh		33.7			41.0			32.1			30.1	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	34.7	12.9	27.4	14.0	33.0	9.0	31.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	9.0	7.9	8.5	16.9	9.6	9.3	4.1	23.2
Green Ext Time (p_c), s	0.1	2.8	0.1	6.0	0.1	2.7	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	35.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	70	27	76	74	65	40	255	66	47	365	18
Future Volume (veh/h)	1	70	27	76	74	65	40	255	66	47	365	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	1	88	34	95	92	81	50	319	82	59	456	22
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	222	82	241	124	109	108	625	161	169	831	40
Arrive On Green	0.09	0.09	0.09	0.14	0.14	0.14	0.06	0.44	0.44	0.10	0.47	0.47
Sat Flow, veh/h	1774	2535	933	1774	915	806	1774	1430	368	1774	1763	85
Grp Volume(v), veh/h	1	60	62	95	0	173	50	0	401	59	0	478
Grp Sat Flow(s),veh/h/ln	1774	1770	1698	1774	0	1721	1774	0	1798	1774	0	1848
Q Serve(g_s), s	0.0	2.4	2.5	3.6	0.0	7.1	2.0	0.0	11.9	2.3	0.0	13.6
Cycle Q Clear(g_c), s	0.0	2.4	2.5	3.6	0.0	7.1	2.0	0.0	11.9	2.3	0.0	13.6
Prop In Lane	1.00		0.55	1.00		0.47	1.00		0.20	1.00		0.05
Lane Grp Cap(c), veh/h	155	155	148	241	0	233	108	0	786	169	0	871
V/C Ratio(X)	0.01	0.39	0.42	0.39	0.00	0.74	0.46	0.00	0.51	0.35	0.00	0.55
Avail Cap(c_a), veh/h	484	483	464	484	0	470	171	0	786	484	0	871
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.7	31.7	31.8	29.0	0.0	30.6	33.4	0.0	15.0	31.2	0.0	13.9
Incr Delay (d2), s/veh	0.0	1.6	1.9	1.0	0.0	4.6	3.1	0.0	2.4	1.2	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.2	1.3	1.8	0.0	3.7	1.1	0.0	6.4	1.2	0.0	7.5
LnGrp Delay(d),s/veh	30.7	33.3	33.7	30.1	0.0	35.2	36.5	0.0	17.4	32.4	0.0	16.4
LnGrp LOS	C	C	C	C		D	D		B	C		B
Approach Vol, veh/h		123			268			451			537	
Approach Delay, s/veh		33.5			33.4			19.5			18.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	36.7		10.9	9.0	39.2		14.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	14.3	13.9		4.5	4.0	15.6		9.1
Green Ext Time (p_c), s	0.1	3.4		0.5	0.0	5.6		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	189	81	22	247	38	101	224	65	63	250	171
Future Volume (veh/h)	123	189	81	22	247	38	101	224	65	63	250	171
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	138	212	91	25	278	43	113	252	73	71	281	192
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	545	226	68	500	76	155	768	714	131	743	789
Arrive On Green	0.10	0.22	0.22	0.04	0.16	0.16	0.09	0.41	0.41	0.07	0.40	0.40
Sat Flow, veh/h	1774	2441	1013	1774	3079	471	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	138	152	151	25	158	163	113	252	73	71	281	192
Grp Sat Flow(s),veh/h/ln	1774	1770	1684	1774	1770	1780	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.4	5.2	5.5	1.0	5.9	6.0	4.4	6.6	1.9	2.8	7.6	4.9
Cycle Q Clear(g_c), s	5.4	5.2	5.5	1.0	5.9	6.0	4.4	6.6	1.9	2.8	7.6	4.9
Prop In Lane	1.00		0.60	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	395	376	68	287	289	155	768	714	131	743	789
V/C Ratio(X)	0.78	0.38	0.40	0.37	0.55	0.56	0.73	0.33	0.10	0.54	0.38	0.24
Avail Cap(c_a), veh/h	335	656	625	335	656	660	335	768	714	335	743	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	23.6	23.7	33.5	27.5	27.6	31.8	14.3	11.3	31.9	15.2	10.2
Incr Delay (d2), s/veh	7.4	0.6	0.7	3.3	1.7	1.7	6.4	1.1	0.3	3.4	1.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.6	2.6	0.5	3.0	3.1	2.4	3.6	0.9	1.5	4.2	2.3
LnGrp Delay(d),s/veh	38.8	24.2	24.4	36.8	29.2	29.3	38.1	15.4	11.6	35.3	16.7	11.0
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		441			346			438			544	
Approach Delay, s/veh		28.8			29.8			20.6			17.1	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	34.0	7.2	20.5	10.8	33.0	11.6	16.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.8	8.6	3.0	7.5	6.4	9.6	7.4	8.0
Green Ext Time (p_c), s	0.1	4.1	0.0	3.6	0.1	4.0	0.2	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2022) With-Project Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	499	208	109	357	44	260	784	207	82	620	227
Future Volume (veh/h)	251	499	208	109	357	44	260	784	207	82	620	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	256	509	212	111	364	45	265	800	211	84	633	232
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	263	924	413	141	610	75	263	1394	749	120	1108	731
Arrive On Green	0.15	0.26	0.26	0.08	0.19	0.19	0.15	0.39	0.39	0.07	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3174	390	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	256	509	212	111	202	207	265	800	211	84	633	232
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1794	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	13.1	11.3	10.4	5.6	9.5	9.6	13.5	16.1	7.4	4.2	13.6	8.4
Cycle Q Clear(g_c), s	13.1	11.3	10.4	5.6	9.5	9.6	13.5	16.1	7.4	4.2	13.6	8.4
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	924	413	141	340	345	263	1394	749	120	1108	731
V/C Ratio(X)	0.97	0.55	0.51	0.79	0.59	0.60	1.01	0.57	0.28	0.70	0.57	0.32
Avail Cap(c_a), veh/h	263	1031	461	263	515	522	263	1394	749	263	1108	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	29.0	28.7	41.1	33.5	33.6	38.8	21.6	14.6	41.5	26.1	15.5
Incr Delay (d2), s/veh	47.7	0.5	1.0	9.3	1.7	1.7	57.2	1.7	0.9	7.1	2.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	5.6	4.7	3.1	4.8	4.9	10.8	8.2	3.4	2.3	7.0	3.9
LnGrp Delay(d),s/veh	86.3	29.5	29.7	50.4	35.2	35.2	96.0	23.3	15.5	48.7	28.3	16.6
LnGrp LOS	F	C	C	D	D	D	F	C	B	D	C	B
Approach Vol, veh/h		977			520			1276			949	
Approach Delay, s/veh		44.4			38.4			37.1			27.2	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	40.3	11.7	28.3	18.0	33.0	18.0	22.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	6.2	18.1	7.6	13.3	15.5	15.6	15.1	11.6
Green Ext Time (p_c), s	0.1	7.1	0.1	5.5	0.0	8.4	0.0	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	36.7
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	38	1213	0	0	936
Future Vol, veh/h	0	38	1213	0	0	936
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	1238	0	0	955

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1620	619	0	0	1238	0
Stage 1	1238	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Critical Hdwy	6.29	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	118	432	-	-	558	-
Stage 1	232	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	118	432	-	-	558	-
Mov Cap-2 Maneuver	118	-	-	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	624	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	432	558	-
HCM Lane V/C Ratio	-	-	0.09	-	-
HCM Control Delay (s)	-	-	14.2	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	114	245	252	105	24	226	1183	247	49	869	52
Future Volume (veh/h)	63	114	245	252	105	24	226	1183	247	49	869	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	64	115	247	255	106	24	228	1195	249	49	878	53
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	127	273	247	598	508	247	1348	603	94	1042	466
Arrive On Green	0.06	0.24	0.24	0.14	0.32	0.32	0.14	0.38	0.38	0.05	0.29	0.29
Sat Flow, veh/h	1774	528	1134	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	64	0	362	255	106	24	228	1195	249	49	878	53
Grp Sat Flow(s),veh/h/ln	1774	0	1663	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	3.4	0.0	20.5	13.5	4.0	1.0	12.3	30.6	11.2	2.6	22.5	2.4
Cycle Q Clear(g_c), s	3.4	0.0	20.5	13.5	4.0	1.0	12.3	30.6	11.2	2.6	22.5	2.4
Prop In Lane	1.00		0.68	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	0	400	247	598	508	247	1348	603	94	1042	466
V/C Ratio(X)	0.61	0.00	0.90	1.03	0.18	0.05	0.92	0.89	0.41	0.52	0.84	0.11
Avail Cap(c_a), veh/h	247	0	455	247	598	508	247	1348	603	247	1042	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	0.0	35.7	41.7	23.7	22.7	41.1	28.0	22.0	44.6	32.1	24.9
Incr Delay (d2), s/veh	5.5	0.0	19.8	65.4	0.1	0.0	36.7	8.9	2.1	4.4	8.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	11.6	11.0	2.1	0.4	8.5	16.6	5.2	1.4	12.2	1.1
LnGrp Delay(d),s/veh	50.0	0.0	55.4	107.1	23.8	22.7	77.9	36.9	24.1	49.1	40.3	25.4
LnGrp LOS	D		E	F	C	C	E	D	C	D	D	C
Approach Vol, veh/h		426			385			1672			980	
Approach Delay, s/veh		54.6			78.9			40.6			40.0	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	41.4	18.0	27.8	18.0	33.0	10.2	35.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.6	32.6	15.5	22.5	14.3	24.5	5.4	6.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.0	3.6	0.1	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	347	4	231	442	1433	0	0	1034	471
Future Volume (veh/h)	0	0	0	347	4	231	442	1433	0	0	1034	471
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				361	4	241	460	1493	0	0	1077	491
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				437	5	394	421	2297	0	0	860	381
Arrive On Green				0.25	0.25	0.25	0.24	0.65	0.00	0.00	0.36	0.36
Sat Flow, veh/h				1756	19	1583	1774	3632	0	0	2481	1058
Grp Volume(v), veh/h				365	0	241	460	1493	0	0	790	778
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1676
Q Serve(g_s), s				17.1	0.0	11.9	20.9	22.5	0.0	0.0	31.7	31.7
Cycle Q Clear(g_c), s				17.1	0.0	11.9	20.9	22.5	0.0	0.0	31.7	31.7
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.63
Lane Grp Cap(c), veh/h				442	0	394	421	2297	0	0	638	604
V/C Ratio(X)				0.83	0.00	0.61	1.09	0.65	0.00	0.00	1.24	1.29
Avail Cap(c_a), veh/h				684	0	610	421	2297	0	0	638	604
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.3	0.0	29.3	33.5	9.4	0.0	0.0	28.1	28.1
Incr Delay (d2), s/veh				4.9	0.0	1.5	70.9	1.4	0.0	0.0	120.9	141.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.9	0.0	5.3	18.5	11.2	0.0	0.0	36.8	38.4
LnGrp Delay(d),s/veh				36.2	0.0	30.8	104.4	10.8	0.0	0.0	149.0	169.9
LnGrp LOS				D		C	F	B			F	F
Approach Vol, veh/h					606			1953			1568	
Approach Delay, s/veh					34.0			32.9			159.4	
Approach LOS					C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			25.4	36.2		26.4
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		24.5			22.9	33.7		19.1
Green Ext Time (p_c), s		28.2			0.0	0.0		2.8

Intersection Summary		
HCM 2010 Ctrl Delay		81.1
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	590	3	548	0	0	0	0	1296	431	252	1010	0
Future Volume (veh/h)	590	3	548	0	0	0	0	1296	431	252	1010	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	617	0	571				0	1350	449	262	1052	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1061	0	473				0	1498	495	302	2162	0
Arrive On Green	0.30	0.00	0.30				0.00	0.40	0.40	0.17	0.61	0.00
Sat Flow, veh/h	3548	0	1583				0	3949	1251	1774	3632	0
Grp Volume(v), veh/h	617	0	571				0	1209	590	262	1052	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1642	1774	1770	0
Q Serve(g_s), s	14.8	0.0	29.9				0.0	33.5	33.8	14.4	16.5	0.0
Cycle Q Clear(g_c), s	14.8	0.0	29.9				0.0	33.5	33.8	14.4	16.5	0.0
Prop In Lane	1.00		1.00				0.00		0.76	1.00		0.00
Lane Grp Cap(c), veh/h	1061	0	473				0	1343	650	302	2162	0
V/C Ratio(X)	0.58	0.00	1.21				0.00	0.90	0.91	0.87	0.49	0.00
Avail Cap(c_a), veh/h	1061	0	473				0	1343	650	530	2162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.7	0.0	35.0				0.0	28.4	28.5	40.4	10.8	0.0
Incr Delay (d2), s/veh	0.8	0.0	111.3				0.0	8.6	16.5	7.6	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.0	27.7				0.0	17.2	18.2	7.7	8.1	0.0
LnGrp Delay(d),s/veh	30.5	0.0	146.3				0.0	37.0	44.9	48.0	11.6	0.0
LnGrp LOS	C		F					D	D	D	B	
Approach Vol, veh/h		1188						1799			1314	
Approach Delay, s/veh		86.2						39.6			18.8	
Approach LOS		F						D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	21.5	44.1		34.4		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.3	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	16.4	35.8		31.9		18.5		
Green Ext Time (p_c), s	0.6	0.0		0.0		32.7		

Intersection Summary	
HCM 2010 Ctrl Delay	46.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑			↕			↕	
Traffic Vol, veh/h	0	421	19	0	695	0	0	0	24	0	0	0
Future Vol, veh/h	0	421	19	0	695	0	0	0	24	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	448	20	0	739	0	0	0	26	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	1197	1197	234	918	1207	739
Stage 1	-	-	-	-	-	-	458	458	-	739	739	-
Stage 2	-	-	-	-	-	-	739	739	-	179	468	-
Critical Hdwy	-	-	-	-	-	-	6.78	6.53	7.13	6.78	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	7.33	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.73	5.53	-
Follow-up Hdwy	-	-	-	-	-	-	3.669	4.019	3.919	3.669	4.019	3.319
Pot Cap-1 Maneuver	0	-	-	0	-	0	178	185	655	268	183	416
Stage 1	0	-	-	0	-	0	483	566	-	397	423	-
Stage 2	0	-	-	0	-	0	397	423	-	768	560	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	178	185	655	258	183	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	178	185	-	258	183	-
Stage 1	-	-	-	-	-	-	483	566	-	397	423	-
Stage 2	-	-	-	-	-	-	397	423	-	738	560	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.7	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	655	-	-	-	-
HCM Lane V/C Ratio	0.039	-	-	-	-
HCM Control Delay (s)	10.7	-	-	-	0
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	200.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	273	332	156	28	279	36	164	2	24	38	0	243
Future Vol, veh/h	273	332	156	28	279	36	164	2	24	38	0	243
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	310	377	177	32	317	41	186	2	27	43	0	276

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	358	0	0	555	0	0	1487	1508	277	1211	1576	338
Stage 1	-	-	-	-	-	-	1086	1086	-	401	401	-
Stage 2	-	-	-	-	-	-	401	422	-	810	1175	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1199	-	-	1013	-	-	~ 94	120	721	148	109	703
Stage 1	-	-	-	-	-	-	232	292	-	625	600	-
Stage 2	-	-	-	-	-	-	625	587	-	341	265	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1199	-	-	1013	-	-	~ 45	86	721	109	78	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 45	86	-	109	78	-
Stage 1	-	-	-	-	-	-	~ 172	217	-	463	581	-
Stage 2	-	-	-	-	-	-	368	568	-	241	196	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0.7	$ 1617.9	19.5
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	51	1199	-	-	1013	-	-	109	703
HCM Lane V/C Ratio	4.234	0.259	-	-	0.031	-	-	0.396	0.393
HCM Control Delay (s)	$ 1617.9	9	-	-	8.7	-	-	58.2	13.4
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	24	1	-	-	0.1	-	-	1.6	1.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	382	332	8	11	11
Future Vol, veh/h	12	382	332	8	11	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	420	365	9	12	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	374	0	-	0	815	369
Stage 1	-	-	-	-	369	-
Stage 2	-	-	-	-	446	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1184	-	-	-	347	677
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	645	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1184	-	-	-	342	677
Mov Cap-2 Maneuver	-	-	-	-	459	-
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	636	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1184	-	-	-	547
HCM Lane V/C Ratio	0.011	-	-	-	0.044
HCM Control Delay (s)	8.1	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	205	185	120	80	102	223
Future Vol, veh/h	205	185	120	80	102	223
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	225	203	132	88	112	245

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	220	0	-	0	830	176
Stage 1	-	-	-	-	176	-
Stage 2	-	-	-	-	654	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1349	-	-	-	340	867
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	517	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1349	-	-	-	276	867
Mov Cap-2 Maneuver	-	-	-	-	357	-
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	420	-

Approach	EB	WB	SB
HCM Control Delay, s	4.3	0	19.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1349	-	-	-	599
HCM Lane V/C Ratio	0.167	-	-	-	0.596
HCM Control Delay (s)	8.2	-	-	-	19.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.6	-	-	-	3.9

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	250	24	88	156	102	24	0	93	84	0	20
Future Vol, veh/h	13	250	24	88	156	102	24	0	93	84	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	269	26	95	168	110	26	0	100	90	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	277	0	0	295	0	0	733	777	282	772	735	223
Stage 1	-	-	-	-	-	-	310	310	-	412	412	-
Stage 2	-	-	-	-	-	-	423	467	-	360	323	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1286	-	-	1266	-	-	336	328	757	317	347	817
Stage 1	-	-	-	-	-	-	700	659	-	617	594	-
Stage 2	-	-	-	-	-	-	609	562	-	658	650	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1286	-	-	1266	-	-	302	295	757	254	312	817
Mov Cap-2 Maneuver	-	-	-	-	-	-	302	295	-	254	312	-
Stage 1	-	-	-	-	-	-	691	650	-	609	541	-
Stage 2	-	-	-	-	-	-	540	511	-	564	642	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	2.1	13	24.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	578	1286	-	-	1266	-	-	293
HCM Lane V/C Ratio	0.218	0.011	-	-	0.075	-	-	0.382
HCM Control Delay (s)	13	7.8	0	-	8.1	0	-	24.7
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.8	0	-	-	0.2	-	-	1.7

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	427	216	9	0	10
Future Vol, veh/h	0	427	216	9	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	454	230	10	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	235
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	804
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	804
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	804
HCM Lane V/C Ratio	-	-	-	0.013
HCM Control Delay (s)	-	-	-	9.5
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	670	44	43	420	53	47	0	47	72	0	52
Future Volume (veh/h)	94	670	44	43	420	53	47	0	47	72	0	52
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	108	770	51	49	483	61	54	0	54	83	0	60
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	1693	112	117	1095	137	334	16	300	630	0	657
Arrive On Green	0.05	0.50	0.50	0.41	0.41	0.41	0.41	0.00	0.41	0.41	0.00	0.41
Sat Flow, veh/h	1774	3370	223	189	2639	330	685	38	723	1345	0	1583
Grp Volume(v), veh/h	108	404	417	290	0	303	108	0	0	83	0	60
Grp Sat Flow(s),veh/h/ln	1774	1770	1823	1521	0	1637	1445	0	0	1345	0	1583
Q Serve(g_s), s	5.0	16.0	16.0	2.8	0.0	14.4	2.8	0.0	0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s	5.0	16.0	16.0	12.5	0.0	14.4	5.3	0.0	0.0	3.8	0.0	2.5
Prop In Lane	1.00		0.12	0.17		0.20	0.50		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	82	889	916	670	0	679	649	0	0	630	0	657
V/C Ratio(X)	1.32	0.45	0.46	0.43	0.00	0.45	0.17	0.00	0.00	0.13	0.00	0.09
Avail Cap(c_a), veh/h	82	889	916	670	0	679	649	0	0	630	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	17.4	17.4	22.1	0.0	22.8	20.1	0.0	0.0	19.7	0.0	19.3
Incr Delay (d2), s/veh	207.5	1.7	1.6	2.0	0.0	2.1	0.6	0.0	0.0	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	8.2	8.4	6.4	0.0	6.9	2.1	0.0	0.0	1.6	0.0	1.1
LnGrp Delay(d),s/veh	259.3	19.1	19.0	24.1	0.0	24.9	20.6	0.0	0.0	20.1	0.0	19.6
LnGrp LOS	F	B	B	C		C	C			C		B
Approach Vol, veh/h		929			593			108			143	
Approach Delay, s/veh		47.0			24.5			20.6			19.9	
Approach LOS		D			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		59.0		49.5	9.5	49.5		49.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		45.0		45.0	5.0	45.0		45.0
Max Q Clear Time (g_c+I1), s		18.0		5.8	7.0	16.4		7.3
Green Ext Time (p_c), s		10.9		1.3	0.0	11.2		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	558	94	121	363	62	67	185	213	66	136	74
Future Volume (veh/h)	100	558	94	121	363	62	67	185	213	66	136	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	109	607	102	132	395	67	73	201	232	72	148	80
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	812	136	167	857	144	123	650	553	122	650	552
Arrive On Green	0.08	0.27	0.27	0.09	0.28	0.28	0.07	0.35	0.35	0.07	0.35	0.35
Sat Flow, veh/h	1774	3034	509	1774	3032	510	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	109	354	355	132	229	233	73	201	232	72	148	80
Grp Sat Flow(s),veh/h/ln	1774	1770	1773	1774	1770	1773	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.9	14.9	15.0	6.0	8.7	8.9	3.3	6.4	9.1	3.2	4.6	2.8
Cycle Q Clear(g_c), s	4.9	14.9	15.0	6.0	8.7	8.9	3.3	6.4	9.1	3.2	4.6	2.8
Prop In Lane	1.00		0.29	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	474	475	167	500	501	123	650	553	122	650	552
V/C Ratio(X)	0.78	0.75	0.75	0.79	0.46	0.46	0.59	0.31	0.42	0.59	0.23	0.14
Avail Cap(c_a), veh/h	293	574	575	293	574	575	293	650	553	293	650	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	27.4	27.4	36.2	24.2	24.2	36.9	19.4	20.3	36.9	18.8	18.3
Incr Delay (d2), s/veh	8.9	4.3	4.4	8.1	0.7	0.7	4.5	1.2	2.3	4.4	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	7.8	7.9	3.3	4.4	4.4	1.8	3.5	4.3	1.7	2.5	1.3
LnGrp Delay(d),s/veh	45.9	31.7	31.8	44.4	24.8	24.9	41.4	20.6	22.6	41.4	19.6	18.8
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		818			594			506			300	
Approach Delay, s/veh		33.6			29.2			24.5			24.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	33.0	12.2	26.4	10.2	33.0	11.0	27.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	5.2	11.1	8.0	17.0	5.3	6.6	6.9	10.9
Green Ext Time (p_c), s	0.1	2.9	0.1	4.9	0.1	3.1	0.1	6.6

Intersection Summary		
HCM 2010 Ctrl Delay		29.1
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	173	71	107	93	24	67	394	163	18	309	34
Future Volume (veh/h)	65	173	71	107	93	24	67	394	163	18	309	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	68	182	75	113	98	25	71	415	172	19	325	36
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	291	115	182	147	37	128	557	231	167	768	85
Arrive On Green	0.12	0.12	0.12	0.10	0.10	0.10	0.07	0.44	0.44	0.09	0.47	0.47
Sat Flow, veh/h	1774	2475	983	1774	1433	365	1774	1252	519	1774	1648	183
Grp Volume(v), veh/h	68	128	129	113	0	123	71	0	587	19	0	361
Grp Sat Flow(s),veh/h/ln	1774	1770	1689	1774	0	1798	1774	0	1771	1774	0	1831
Q Serve(g_s), s	2.6	5.1	5.4	4.5	0.0	4.9	2.9	0.0	20.5	0.7	0.0	9.8
Cycle Q Clear(g_c), s	2.6	5.1	5.4	4.5	0.0	4.9	2.9	0.0	20.5	0.7	0.0	9.8
Prop In Lane	1.00		0.58	1.00		0.20	1.00		0.29	1.00		0.10
Lane Grp Cap(c), veh/h	208	208	198	182	0	184	128	0	787	167	0	853
V/C Ratio(X)	0.33	0.62	0.65	0.62	0.00	0.67	0.55	0.00	0.75	0.11	0.00	0.42
Avail Cap(c_a), veh/h	479	478	456	479	0	485	169	0	787	479	0	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	31.3	31.4	32.0	0.0	32.2	33.4	0.0	17.2	30.9	0.0	13.2
Incr Delay (d2), s/veh	0.9	3.0	3.6	3.5	0.0	4.1	3.7	0.0	6.4	0.3	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.7	2.7	2.4	0.0	2.6	1.5	0.0	11.3	0.4	0.0	5.3
LnGrp Delay(d),s/veh	31.1	34.2	35.0	35.5	0.0	36.3	37.0	0.0	23.5	31.2	0.0	14.8
LnGrp LOS	C	C	C	D		D	D		C	C		B
Approach Vol, veh/h		325			236			658			380	
Approach Delay, s/veh		33.9			35.9			25.0			15.6	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	37.6		13.2	9.9	39.2		12.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	12.7	22.5		7.4	4.9	11.8		6.9
Green Ext Time (p_c), s	0.0	0.0		1.3	0.0	6.8		0.8

Intersection Summary			
HCM 2010 Ctrl Delay		26.2	
HCM 2010 LOS		C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	381	578	160	49	292	50	132	247	82	67	165	267
Future Volume (veh/h)	381	578	160	49	292	50	132	247	82	67	165	267
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	397	602	167	51	304	52	138	257	85	70	172	278
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	283	809	224	102	587	99	173	684	673	118	627	786
Arrive On Green	0.16	0.30	0.30	0.06	0.19	0.19	0.10	0.37	0.37	0.07	0.34	0.34
Sat Flow, veh/h	1774	2740	759	1774	3030	512	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	397	388	381	51	176	180	138	257	85	70	172	278
Grp Sat Flow(s),veh/h/ln	1774	1770	1729	1774	1770	1772	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	13.5	16.8	16.8	2.4	7.5	7.7	6.4	8.6	2.8	3.2	5.7	9.1
Cycle Q Clear(g_c), s	13.5	16.8	16.8	2.4	7.5	7.7	6.4	8.6	2.8	3.2	5.7	9.1
Prop In Lane	1.00		0.44	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	523	511	102	343	343	173	684	673	118	627	786
V/C Ratio(X)	1.40	0.74	0.75	0.50	0.51	0.52	0.80	0.38	0.13	0.59	0.27	0.35
Avail Cap(c_a), veh/h	283	554	541	283	554	555	283	684	673	283	627	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	26.9	26.9	38.7	30.6	30.6	37.4	19.6	14.8	38.4	20.5	13.0
Incr Delay (d2), s/veh	201.3	5.1	5.3	3.7	1.2	1.2	8.2	1.6	0.4	4.6	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.3	8.9	8.8	1.3	3.8	3.9	3.5	4.7	1.3	1.7	3.1	4.2
LnGrp Delay(d),s/veh	236.8	32.0	32.2	42.4	31.8	31.9	45.5	21.2	15.2	43.0	21.6	14.3
LnGrp LOS	F	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1166			407			480			520	
Approach Delay, s/veh		101.8			33.1			27.1			20.6	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	35.6	9.4	29.5	12.7	33.0	18.0	20.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	15.2	10.6	4.4	18.8	8.4	11.1	15.5	9.7
Green Ext Time (p_c), s	0.1	3.6	0.0	4.1	0.1	3.6	0.0	6.7

Intersection Summary	
HCM 2010 Ctrl Delay	60.6
HCM 2010 LOS	E

General Plan (2035)

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2035) Without Project Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	365	161	221	735	58	130	478	112	62	661	313
Future Volume (veh/h)	168	365	161	221	735	58	130	478	112	62	661	313
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	388	171	235	782	62	138	509	119	66	703	333
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	880	394	261	915	73	171	1222	780	110	1101	683
Arrive On Green	0.12	0.25	0.25	0.15	0.28	0.28	0.10	0.35	0.35	0.06	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3323	263	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	179	388	171	235	416	428	138	509	119	66	703	333
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1816	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	9.0	8.5	8.3	11.9	20.4	20.4	7.0	10.1	3.8	3.3	15.6	13.9
Cycle Q Clear(g_c), s	9.0	8.5	8.3	11.9	20.4	20.4	7.0	10.1	3.8	3.3	15.6	13.9
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	214	880	394	261	488	500	171	1222	780	110	1101	683
V/C Ratio(X)	0.84	0.44	0.43	0.90	0.85	0.85	0.81	0.42	0.15	0.60	0.64	0.49
Avail Cap(c_a), veh/h	261	1024	458	261	512	525	261	1222	780	261	1101	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	29.0	29.0	38.4	31.4	31.4	40.6	22.9	12.7	41.8	27.1	18.7
Incr Delay (d2), s/veh	17.7	0.3	0.8	30.7	12.8	12.6	10.2	1.0	0.4	5.1	2.8	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	4.2	3.7	8.0	11.7	12.0	3.9	5.1	1.7	1.8	8.0	6.5
LnGrp Delay(d),s/veh	57.1	29.4	29.7	69.1	44.2	44.0	50.8	24.0	13.2	47.0	30.0	21.2
LnGrp LOS	E	C	C	E	D	D	D	C	B	D	C	C
Approach Vol, veh/h		738			1079			766			1102	
Approach Delay, s/veh		36.2			49.6			27.1			28.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	36.1	18.0	27.3	13.3	33.0	15.5	29.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	5.3	12.1	13.9	10.5	9.0	17.6	11.0	22.4
Green Ext Time (p_c), s	0.1	8.6	0.0	7.9	0.1	6.6	0.1	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	35.9
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	719	0	0	1043
Future Vol, veh/h	0	0	719	0	0	1043
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	765	0	0	1110

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1320	382	0	0	765	0
Stage 1	765	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	148	616	-	-	844	-
Stage 1	420	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	148	616	-	-	844	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	420	-	-	-	-	-
Stage 2	539	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	844	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	71	132	67	90	23	109	672	77	18	1012	41
Future Volume (veh/h)	49	71	132	67	90	23	109	672	77	18	1012	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	51	73	136	69	93	24	112	693	79	19	1043	42
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	100	186	131	339	288	158	1650	738	55	1445	647
Arrive On Green	0.06	0.17	0.17	0.07	0.18	0.18	0.09	0.47	0.47	0.03	0.41	0.41
Sat Flow, veh/h	1774	584	1087	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	51	0	209	69	93	24	112	693	79	19	1043	42
Grp Sat Flow(s),veh/h/ln	1774	0	1671	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.9	0.0	8.3	2.6	3.0	0.9	4.3	9.1	2.0	0.7	17.3	1.1
Cycle Q Clear(g_c), s	1.9	0.0	8.3	2.6	3.0	0.9	4.3	9.1	2.0	0.7	17.3	1.1
Prop In Lane	1.00		0.65	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	0	286	131	339	288	158	1650	738	55	1445	647
V/C Ratio(X)	0.46	0.00	0.73	0.53	0.27	0.08	0.71	0.42	0.11	0.35	0.72	0.06
Avail Cap(c_a), veh/h	343	0	634	343	707	601	343	1650	738	343	1445	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	0.0	27.4	31.1	24.6	23.7	30.9	12.4	10.5	33.1	17.3	12.6
Incr Delay (d2), s/veh	2.9	0.0	3.6	3.2	0.4	0.1	5.8	0.8	0.3	3.7	3.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.1	1.4	1.6	0.4	2.3	4.6	0.9	0.4	9.0	0.5
LnGrp Delay(d),s/veh	34.4	0.0	31.0	34.4	25.0	23.8	36.7	13.1	10.8	36.8	20.5	12.7
LnGrp LOS	C		C	C	C	C	D	B	B	D	C	B
Approach Vol, veh/h		260			186			884			1104	
Approach Delay, s/veh		31.7			28.3			15.9			20.5	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	37.0	9.7	16.4	10.7	33.0	8.9	17.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	2.7	11.1	4.6	10.3	6.3	19.3	3.9	5.0
Green Ext Time (p_c), s	0.0	11.3	0.1	1.7	0.1	6.9	0.1	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	302	4	181	307	676	0	0	868	346
Future Volume (veh/h)	0	0	0	302	4	181	307	676	0	0	868	346
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				315	4	189	320	704	0	0	904	360
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				390	5	352	361	2377	0	0	1030	408
Arrive On Green				0.22	0.22	0.22	0.20	0.67	0.00	0.00	0.42	0.42
Sat Flow, veh/h				1753	22	1583	1774	3632	0	0	2571	981
Grp Volume(v), veh/h				319	0	189	320	704	0	0	644	620
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1690
Q Serve(g_s), s				14.5	0.0	9.0	14.9	6.9	0.0	0.0	28.4	28.8
Cycle Q Clear(g_c), s				14.5	0.0	9.0	14.9	6.9	0.0	0.0	28.4	28.8
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.58
Lane Grp Cap(c), veh/h				395	0	352	361	2377	0	0	735	702
V/C Ratio(X)				0.81	0.00	0.54	0.89	0.30	0.00	0.00	0.88	0.88
Avail Cap(c_a), veh/h				708	0	631	436	2377	0	0	735	702
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.3	0.0	29.2	32.9	5.7	0.0	0.0	22.8	22.9
Incr Delay (d2), s/veh				3.9	0.0	1.3	17.2	0.3	0.0	0.0	13.8	15.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.5	0.0	4.0	9.0	3.4	0.0	0.0	16.6	16.2
LnGrp Delay(d),s/veh				35.3	0.0	30.4	50.1	6.0	0.0	0.0	36.7	38.0
LnGrp LOS				D		C	D	A			D	D
Approach Vol, veh/h					508			1024			1264	
Approach Delay, s/veh					33.5			19.8			37.3	
Approach LOS					C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			21.8	39.8		23.4
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		8.9			16.9	30.8		16.5
Green Ext Time (p_c), s		21.9			0.4	0.8		2.4

Intersection Summary		
HCM 2010 Ctrl Delay		30.2
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	274	4	526	0	0	0	0	701	155	180	995	0
Future Volume (veh/h)	274	4	526	0	0	0	0	701	155	180	995	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	283	0	537				0	715	158	184	1015	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1061	0	473				0	1840	402	223	2162	0
Arrive On Green	0.30	0.00	0.30				0.00	0.44	0.44	0.13	0.61	0.00
Sat Flow, veh/h	3548	0	1583				0	4346	913	1774	3632	0
Grp Volume(v), veh/h	283	0	537				0	579	294	184	1015	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1702	1774	1770	0
Q Serve(g_s), s	6.1	0.0	29.9				0.0	11.5	11.7	10.1	15.6	0.0
Cycle Q Clear(g_c), s	6.1	0.0	29.9				0.0	11.5	11.7	10.1	15.6	0.0
Prop In Lane	1.00		1.00				0.00		0.54	1.00		0.00
Lane Grp Cap(c), veh/h	1061	0	473				0	1493	749	223	2162	0
V/C Ratio(X)	0.27	0.00	1.13				0.00	0.39	0.39	0.83	0.47	0.00
Avail Cap(c_a), veh/h	1061	0	473				0	1493	749	530	2162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.7	0.0	35.0				0.0	18.9	18.9	42.7	10.6	0.0
Incr Delay (d2), s/veh	0.1	0.0	83.6				0.0	0.2	0.3	7.5	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	24.0				0.0	5.4	5.6	5.4	7.8	0.0
LnGrp Delay(d),s/veh	26.8	0.0	118.7				0.0	19.0	19.3	50.2	11.3	0.0
LnGrp LOS	C		F					B	B	D	B	
Approach Vol, veh/h		820						873			1199	
Approach Delay, s/veh		87.0						19.1			17.3	
Approach LOS		F						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.1	48.5		34.4		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.3	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	12.1	13.7		31.9		17.6		
Green Ext Time (p_c), s	0.4	9.3		0.0		19.6		

Intersection Summary	
HCM 2010 Ctrl Delay	37.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	165	1	0	180	0	0	0	1	0	0	0
Future Vol, veh/h	0	165	1	0	180	0	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	181	1	0	198	0	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	182	0	0	281	380	91	289	380	99
Stage 1	-	-	-	-	-	-	182	182	-	198	198	-
Stage 2	-	-	-	-	-	-	99	198	-	91	182	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1372	-	-	1391	-	-	649	551	949	641	551	937
Stage 1	-	-	-	-	-	-	802	748	-	785	736	-
Stage 2	-	-	-	-	-	-	896	736	-	906	748	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1372	-	-	1391	-	-	649	551	949	640	551	937
Mov Cap-2 Maneuver	-	-	-	-	-	-	649	551	-	640	551	-
Stage 1	-	-	-	-	-	-	802	748	-	785	736	-
Stage 2	-	-	-	-	-	-	896	736	-	905	748	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.8	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	949	1372	-	-	1391	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-	-	-	-
HCM Control Delay (s)	8.8	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	156	1	0	174	1	2	0	0	0	0	6
Future Vol, veh/h	11	156	1	0	174	1	2	0	0	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	181	1	0	202	1	2	0	0	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	203	0	0	183	0	0	411	411	91	319	411	203
Stage 1	-	-	-	-	-	-	208	208	-	203	203	-
Stage 2	-	-	-	-	-	-	203	203	-	116	208	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1367	-	-	1391	-	-	538	530	949	622	530	837
Stage 1	-	-	-	-	-	-	775	729	-	798	733	-
Stage 2	-	-	-	-	-	-	798	733	-	877	729	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1367	-	-	1391	-	-	530	525	949	617	525	837
Mov Cap-2 Maneuver	-	-	-	-	-	-	530	525	-	617	525	-
Stage 1	-	-	-	-	-	-	768	722	-	790	733	-
Stage 2	-	-	-	-	-	-	791	733	-	869	722	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	11.8	9.3
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	530	1367	-	-	1391	-	-	-	837
HCM Lane V/C Ratio	0.004	0.009	-	-	-	-	-	-	0.008
HCM Control Delay (s)	11.8	7.7	-	-	0	-	-	0	9.3
HCM Lane LOS	B	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	135	169	4	0	5
Future Vol, veh/h	21	135	169	4	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	161	201	5	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	206	0	-	0	415	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	211	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1365	-	-	-	594	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	824	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1365	-	-	-	582	837
Mov Cap-2 Maneuver	-	-	-	-	639	-
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	808	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1365	-	-	-	837
HCM Lane V/C Ratio	0.018	-	-	-	0.007
HCM Control Delay (s)	7.7	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	124	170	23	5	4
Future Vol, veh/h	12	124	170	23	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	138	189	26	6	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	214	0	-	0	366	202
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1356	-	-	-	634	839
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1356	-	-	-	628	839
Mov Cap-2 Maneuver	-	-	-	-	672	-
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	856	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1356	-	-	-	737
HCM Lane V/C Ratio	0.01	-	-	-	0.014
HCM Control Delay (s)	7.7	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	128	190	6	0	1
Future Vol, veh/h	0	128	190	6	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	149	221	7	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	224
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	815
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	815
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	815
HCM Lane V/C Ratio	-	-	-	0.001
HCM Control Delay (s)	-	-	-	9.4
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	129	192	4	0	6
Future Vol, veh/h	0	129	192	4	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	148	221	5	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	223
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	817
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	817
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	817
HCM Lane V/C Ratio	-	-	-	0.008
HCM Control Delay (s)	-	-	-	9.4
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	480	0	0	913	213	0	0	0	164	0	109
Future Volume (veh/h)	71	480	0	0	913	213	0	0	0	164	0	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	0	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	81	545	0	0	1038	242	0	0	0	186	0	124
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	83	1741	0	0	1149	267	0	789	0	819	0	670
Arrive On Green	0.05	0.49	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.42	0.00	0.42
Sat Flow, veh/h	1774	3632	0	0	2946	663	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	81	545	0	0	642	638	0	0	0	186	0	124
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1746	0	1863	0	1774	0	1583
Q Serve(g_s), s	4.8	9.8	0.0	0.0	36.2	36.5	0.0	0.0	0.0	7.2	0.0	5.2
Cycle Q Clear(g_c), s	4.8	9.8	0.0	0.0	36.2	36.5	0.0	0.0	0.0	7.2	0.0	5.2
Prop In Lane	1.00		0.00	0.00		0.38	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	1741	0	0	712	703	0	789	0	819	0	670
V/C Ratio(X)	0.97	0.31	0.00	0.00	0.90	0.91	0.00	0.00	0.00	0.23	0.00	0.18
Avail Cap(c_a), veh/h	83	1741	0	0	766	756	0	789	0	819	0	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	16.2	0.0	0.0	29.8	29.9	0.0	0.0	0.0	19.7	0.0	19.2
Incr Delay (d2), s/veh	88.4	0.1	0.0	0.0	13.3	14.1	0.0	0.0	0.0	0.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	4.8	0.0	0.0	20.3	20.3	0.0	0.0	0.0	3.7	0.0	2.4
LnGrp Delay(d),s/veh	139.0	16.3	0.0	0.0	43.1	44.0	0.0	0.0	0.0	20.4	0.0	19.8
LnGrp LOS	F	B			D	D				C		B
Approach Vol, veh/h		626			1280			0			310	
Approach Delay, s/veh		32.2			43.5			0.0			20.1	
Approach LOS		C			D						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		49.5		56.8		49.5	9.5	47.3
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		45.0		46.0		45.0	5.0	46.0
Max Q Clear Time (g_c+I1), s		0.0		11.8		9.2	6.8	38.5
Green Ext Time (p_c), s		0.0		17.6		1.3	0.0	4.3

Intersection Summary	
HCM 2010 Ctrl Delay	37.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	443	164	265	829	139	170	256	116	133	204	115
Future Volume (veh/h)	37	443	164	265	829	139	170	256	116	133	204	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	44	527	195	315	987	165	202	305	138	158	243	137
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	605	223	251	1001	167	235	602	512	191	556	473
Arrive On Green	0.05	0.24	0.24	0.14	0.33	0.33	0.13	0.32	0.32	0.11	0.30	0.30
Sat Flow, veh/h	1774	2534	934	1774	3036	507	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	44	367	355	315	575	577	202	305	138	158	243	137
Grp Sat Flow(s),veh/h/ln	1774	1770	1698	1774	1770	1773	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.3	19.0	19.2	13.5	30.8	30.8	10.6	12.6	6.2	8.3	10.0	6.3
Cycle Q Clear(g_c), s	2.3	19.0	19.2	13.5	30.8	30.8	10.6	12.6	6.2	8.3	10.0	6.3
Prop In Lane	1.00		0.55	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	423	405	251	584	585	235	602	512	191	556	473
V/C Ratio(X)	0.49	0.87	0.87	1.25	0.99	0.99	0.86	0.51	0.27	0.83	0.44	0.29
Avail Cap(c_a), veh/h	251	491	472	251	584	585	251	602	512	251	556	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	34.9	34.9	41.0	31.7	31.8	40.5	26.1	23.9	41.7	27.0	25.7
Incr Delay (d2), s/veh	4.1	13.9	14.9	143.0	33.4	33.7	23.8	3.0	1.3	15.7	2.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	10.9	10.6	16.5	20.4	20.5	6.8	7.0	2.9	4.9	5.5	3.0
LnGrp Delay(d),s/veh	48.2	48.7	49.9	184.0	65.1	65.5	64.3	29.1	25.2	57.4	29.5	27.2
LnGrp LOS	D	D	D	F	E	E	E	C	C	E	C	C
Approach Vol, veh/h		766			1467			645			538	
Approach Delay, s/veh		49.2			90.8			39.3			37.1	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	35.3	18.0	27.3	17.1	33.0	9.3	36.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	10.3	14.6	15.5	21.2	12.6	12.0	4.3	32.8
Green Ext Time (p_c), s	0.1	3.7	0.0	1.6	0.1	3.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	88	36	96	97	109	46	400	94	83	529	27
Future Volume (veh/h)	9	88	36	96	97	109	46	400	94	83	529	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	110	45	120	121	136	58	500	118	104	661	34
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	215	84	326	147	165	113	604	142	157	771	40
Arrive On Green	0.09	0.09	0.09	0.18	0.18	0.18	0.06	0.41	0.41	0.09	0.44	0.44
Sat Flow, veh/h	1774	2490	971	1774	802	902	1774	1458	344	1774	1756	90
Grp Volume(v), veh/h	11	77	78	120	0	257	58	0	618	104	0	695
Grp Sat Flow(s),veh/h/ln	1774	1770	1691	1774	0	1704	1774	0	1802	1774	0	1847
Q Serve(g_s), s	0.5	3.3	3.5	4.7	0.0	11.5	2.5	0.0	24.2	4.5	0.0	26.8
Cycle Q Clear(g_c), s	0.5	3.3	3.5	4.7	0.0	11.5	2.5	0.0	24.2	4.5	0.0	26.8
Prop In Lane	1.00		0.57	1.00		0.53	1.00		0.19	1.00		0.05
Lane Grp Cap(c), veh/h	153	153	146	326	0	313	113	0	746	157	0	810
V/C Ratio(X)	0.07	0.50	0.54	0.37	0.00	0.82	0.51	0.00	0.83	0.66	0.00	0.86
Avail Cap(c_a), veh/h	451	450	430	451	0	433	159	0	746	451	0	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	34.5	34.6	28.3	0.0	31.0	35.8	0.0	20.7	34.9	0.0	20.0
Incr Delay (d2), s/veh	0.2	2.5	3.1	0.7	0.0	8.7	3.6	0.0	10.3	4.7	0.0	11.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.7	1.8	2.4	0.0	6.1	1.3	0.0	14.1	2.4	0.0	16.1
LnGrp Delay(d),s/veh	33.4	37.1	37.7	29.0	0.0	39.7	39.4	0.0	30.9	39.6	0.0	31.3
LnGrp LOS	C	D	D	C		D	D		C	D		C
Approach Vol, veh/h		166			377			676			799	
Approach Delay, s/veh		37.1			36.3			31.7			32.4	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	37.2		11.3	9.5	39.2		19.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	13.5	26.2		5.5	4.5	28.8		13.5
Green Ext Time (p_c), s	0.2	0.0		0.7	0.0	4.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	404	167	40	462	59	172	369	124	102	400	152
Future Volume (veh/h)	100	404	167	40	462	59	172	369	124	102	400	152
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	112	454	188	45	519	66	193	415	139	115	449	171
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	659	271	96	766	97	230	712	691	147	625	659
Arrive On Green	0.08	0.27	0.27	0.05	0.24	0.24	0.13	0.38	0.38	0.08	0.34	0.34
Sat Flow, veh/h	1774	2449	1006	1774	3161	401	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	112	327	315	45	290	295	193	415	139	115	449	171
Grp Sat Flow(s),veh/h/ln	1774	1770	1685	1774	1770	1792	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.3	14.1	14.3	2.1	12.6	12.7	9.0	15.0	4.6	5.4	17.9	6.0
Cycle Q Clear(g_c), s	5.3	14.1	14.3	2.1	12.6	12.7	9.0	15.0	4.6	5.4	17.9	6.0
Prop In Lane	1.00		0.60	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	476	454	96	429	434	230	712	691	147	625	659
V/C Ratio(X)	0.78	0.69	0.69	0.47	0.68	0.68	0.84	0.58	0.20	0.78	0.72	0.26
Avail Cap(c_a), veh/h	282	552	525	282	552	559	282	712	691	282	625	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	27.8	27.9	39.0	29.2	29.2	36.1	20.9	14.8	38.2	24.7	16.2
Incr Delay (d2), s/veh	8.9	2.9	3.3	3.6	2.2	2.3	16.6	3.5	0.7	8.8	7.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	7.3	7.1	1.1	6.4	6.5	5.5	8.4	2.1	3.0	10.4	2.8
LnGrp Delay(d),s/veh	47.3	30.8	31.2	42.6	31.4	31.5	52.7	24.3	15.5	47.1	31.7	17.2
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		754			630			747			735	
Approach Delay, s/veh		33.4			32.2			30.0			30.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	37.0	9.1	27.4	15.5	33.0	11.4	25.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	7.4	17.0	4.1	16.3	11.0	19.9	7.3	14.7
Green Ext Time (p_c), s	0.1	5.1	0.0	5.4	0.1	4.2	0.1	5.9

Intersection Summary		
HCM 2010 Ctrl Delay		31.6
HCM 2010 LOS		C

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2035) Without-Project Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	841	170	137	497	60	167	694	195	79	537	216
Future Volume (veh/h)	267	841	170	137	497	60	167	694	195	79	537	216
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	272	858	173	140	507	61	170	708	199	81	548	220
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1016	454	173	761	91	204	1259	718	117	1086	716
Arrive On Green	0.15	0.29	0.29	0.10	0.24	0.24	0.12	0.36	0.36	0.07	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3183	382	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	272	858	173	140	281	287	170	708	199	81	548	220
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1795	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	13.5	21.2	8.1	7.2	13.3	13.4	8.7	15.0	7.3	4.2	11.8	8.2
Cycle Q Clear(g_c), s	13.5	21.2	8.1	7.2	13.3	13.4	8.7	15.0	7.3	4.2	11.8	8.2
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	1016	454	173	423	429	204	1259	718	117	1086	716
V/C Ratio(X)	1.06	0.84	0.38	0.81	0.66	0.67	0.83	0.56	0.28	0.69	0.50	0.31
Avail Cap(c_a), veh/h	258	1016	454	258	505	512	258	1259	718	258	1086	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	31.2	26.5	41.1	32.0	32.0	40.2	24.1	15.9	42.5	26.4	16.2
Incr Delay (d2), s/veh	71.3	6.7	0.5	11.1	2.5	2.6	16.7	1.8	1.0	7.1	1.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	11.3	3.6	4.1	6.8	6.9	5.2	7.6	3.4	2.3	6.0	3.8
LnGrp Delay(d),s/veh	111.0	37.8	27.0	52.2	34.5	34.6	57.0	25.9	16.8	49.5	28.1	17.3
LnGrp LOS	F	D	C	D	C	C	E	C	B	D	C	B
Approach Vol, veh/h		1303			708			1077			849	
Approach Delay, s/veh		51.7			38.0			29.1			27.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	37.6	13.6	31.2	15.2	33.0	18.0	26.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	6.2	17.0	9.2	23.2	10.7	13.8	15.5	15.4
Green Ext Time (p_c), s	0.1	7.0	0.1	2.5	0.1	8.2	0.0	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1056	0	0	843
Future Vol, veh/h	0	0	1056	0	0	843
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1078	0	0	860

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1422	539	0	0	1078	0
Stage 1	1078	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.29	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	155	487	-	-	643	-
Stage 1	281	-	-	-	-	-
Stage 2	653	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	155	487	-	-	643	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	281	-	-	-	-	-
Stage 2	653	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	643	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	144	259	97	90	35	162	981	134	24	806	44
Future Volume (veh/h)	91	144	259	97	90	35	162	981	134	24	806	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	92	145	262	98	91	35	164	991	135	24	814	44
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	162	294	131	510	434	200	1447	647	63	1173	525
Arrive On Green	0.07	0.27	0.27	0.07	0.27	0.27	0.11	0.41	0.41	0.04	0.33	0.33
Sat Flow, veh/h	1774	596	1077	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	92	0	407	98	91	35	164	991	135	24	814	44
Grp Sat Flow(s),veh/h/ln	1774	0	1673	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	4.4	0.0	20.1	4.7	3.2	1.4	7.8	19.8	4.7	1.1	17.2	1.6
Cycle Q Clear(g_c), s	4.4	0.0	20.1	4.7	3.2	1.4	7.8	19.8	4.7	1.1	17.2	1.6
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	0	456	131	510	434	200	1447	647	63	1173	525
V/C Ratio(X)	0.72	0.00	0.89	0.75	0.18	0.08	0.82	0.68	0.21	0.38	0.69	0.08
Avail Cap(c_a), veh/h	279	0	516	279	574	488	279	1447	647	279	1173	525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	30.1	39.1	23.8	23.2	37.3	20.9	16.4	40.5	24.9	19.8
Incr Delay (d2), s/veh	7.2	0.0	16.4	8.4	0.2	0.1	12.5	2.7	0.7	3.7	3.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	11.3	2.6	1.7	0.6	4.5	10.2	2.2	0.6	8.9	0.8
LnGrp Delay(d),s/veh	46.3	0.0	46.4	47.4	24.0	23.3	49.8	23.5	17.2	44.3	28.3	20.1
LnGrp LOS	D		D	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h		499			224			1290			882	
Approach Delay, s/veh		46.4			34.1			26.2			28.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	39.7	10.8	27.9	14.2	33.0	10.7	28.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	3.1	21.8	6.7	22.1	9.8	19.2	6.4	5.2
Green Ext Time (p_c), s	0.0	5.5	0.1	1.3	0.1	7.2	0.1	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	242	4	189	377	1096	0	0	874	292
Future Volume (veh/h)	0	0	0	242	4	189	377	1096	0	0	874	292
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				252	4	197	393	1142	0	0	910	304
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				328	5	298	430	2483	0	0	1054	351
Arrive On Green				0.19	0.19	0.19	0.24	0.70	0.00	0.00	0.40	0.40
Sat Flow, veh/h				1748	28	1583	1774	3632	0	0	2703	869
Grp Volume(v), veh/h				256	0	197	393	1142	0	0	616	598
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1709
Q Serve(g_s), s				11.1	0.0	9.4	17.5	11.6	0.0	0.0	25.9	26.1
Cycle Q Clear(g_c), s				11.1	0.0	9.4	17.5	11.6	0.0	0.0	25.9	26.1
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.51
Lane Grp Cap(c), veh/h				334	0	298	430	2483	0	0	714	690
V/C Ratio(X)				0.77	0.00	0.66	0.91	0.46	0.00	0.00	0.86	0.87
Avail Cap(c_a), veh/h				739	0	659	456	2483	0	0	714	690
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.4	0.0	30.7	30.0	5.4	0.0	0.0	22.2	22.3
Incr Delay (d2), s/veh				3.7	0.0	2.5	22.1	0.6	0.0	0.0	13.0	13.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.8	0.0	4.3	11.2	5.8	0.0	0.0	15.2	14.9
LnGrp Delay(d),s/veh				35.1	0.0	33.2	52.1	6.0	0.0	0.0	35.2	36.1
LnGrp LOS				D		C	D	A			D	D
Approach Vol, veh/h					453			1535			1214	
Approach Delay, s/veh					34.2			17.8			35.6	
Approach LOS					C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			24.2	37.4		19.8
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		13.6			19.5	28.1		13.1
Green Ext Time (p_c), s		26.8			0.2	3.3		2.2

Intersection Summary		
HCM 2010 Ctrl Delay		26.9
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	502	3	354	0	0	0	0	981	322	191	931	0
Future Volume (veh/h)	502	3	354	0	0	0	0	981	322	191	931	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	525	0	369				0	1022	335	199	970	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	942	0	420				0	1736	569	240	2266	0
Arrive On Green	0.27	0.00	0.27				0.00	0.46	0.46	0.14	0.64	0.00
Sat Flow, veh/h	3548	0	1583				0	3959	1242	1774	3632	0
Grp Volume(v), veh/h	525	0	369				0	914	443	199	970	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1644	1774	1770	0
Q Serve(g_s), s	12.2	0.0	21.3				0.0	19.1	19.1	10.4	13.0	0.0
Cycle Q Clear(g_c), s	12.2	0.0	21.3				0.0	19.1	19.1	10.4	13.0	0.0
Prop In Lane	1.00		1.00				0.00		0.76	1.00		0.00
Lane Grp Cap(c), veh/h	942	0	420				0	1552	752	240	2266	0
V/C Ratio(X)	0.56	0.00	0.88				0.00	0.59	0.59	0.83	0.43	0.00
Avail Cap(c_a), veh/h	1112	0	496				0	1552	752	556	2266	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.2	0.0	33.6				0.0	19.2	19.2	40.2	8.5	0.0
Incr Delay (d2), s/veh	0.5	0.0	14.5				0.0	0.6	1.2	7.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	11.0				0.0	9.0	8.9	5.6	6.5	0.0
LnGrp Delay(d),s/veh	30.7	0.0	48.1				0.0	19.8	20.4	47.4	9.1	0.0
LnGrp LOS	C		D					B	C	D	A	
Approach Vol, veh/h		894						1357			1169	
Approach Delay, s/veh		37.9						20.0			15.6	
Approach LOS		D						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.4	48.2		29.8		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.3	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	12.4	21.1		23.3		15.0		
Green Ext Time (p_c), s	0.5	5.0		2.0		27.1		

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑			⇳			⇳	
Traffic Vol, veh/h	0	306	22	0	228	0	0	0	22	0	0	0
Future Vol, veh/h	0	306	22	0	228	0	0	0	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	326	23	0	243	0	0	0	23	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	580	580	174	373	592	243
Stage 1	-	-	-	-	-	-	337	337	-	243	243	-
Stage 2	-	-	-	-	-	-	243	243	-	130	349	-
Critical Hdwy	-	-	-	-	-	-	6.78	6.53	7.13	6.78	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	7.33	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.73	5.53	-
Follow-up Hdwy	-	-	-	-	-	-	3.669	4.019	3.919	3.669	4.019	3.319
Pot Cap-1 Maneuver	0	-	-	0	-	0	436	425	714	584	418	795
Stage 1	0	-	-	0	-	0	584	640	-	732	704	-
Stage 2	0	-	-	0	-	0	732	704	-	822	633	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	436	425	714	565	418	795
Mov Cap-2 Maneuver	-	-	-	-	-	-	436	425	-	565	418	-
Stage 1	-	-	-	-	-	-	584	640	-	732	704	-
Stage 2	-	-	-	-	-	-	732	704	-	795	633	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.2	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	714	-	-	-	-
HCM Lane V/C Ratio	0.033	-	-	-	-
HCM Control Delay (s)	10.2	-	-	-	0
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	273	4	4	182	5	2	2	0	7	0	35
Future Vol, veh/h	55	273	4	4	182	5	2	2	0	7	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	310	5	5	207	6	2	2	0	8	0	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	213	0	0	315	0	0	657	660	157	500	659	210
Stage 1	-	-	-	-	-	-	438	438	-	219	219	-
Stage 2	-	-	-	-	-	-	219	222	-	281	440	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1356	-	-	1244	-	-	364	382	861	467	383	830
Stage 1	-	-	-	-	-	-	568	578	-	783	721	-
Stage 2	-	-	-	-	-	-	783	719	-	703	577	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1244	-	-	333	363	861	447	364	830
Mov Cap-2 Maneuver	-	-	-	-	-	-	333	363	-	447	364	-
Stage 1	-	-	-	-	-	-	542	551	-	747	718	-
Stage 2	-	-	-	-	-	-	742	716	-	668	550	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.2	15.5	10.2
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	347	1356	-	-	1244	-	-	447	830
HCM Lane V/C Ratio	0.013	0.046	-	-	0.004	-	-	0.018	0.048
HCM Control Delay (s)	15.5	7.8	-	-	7.9	-	-	13.2	9.6
HCM Lane LOS	C	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1	0.2

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	271	182	7	10	10
Future Vol, veh/h	11	271	182	7	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	298	200	8	11	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	208	0	-	0	526	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	322	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1363	-	-	-	512	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	735	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1363	-	-	-	506	837
Mov Cap-2 Maneuver	-	-	-	-	582	-
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	727	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1363	-	-	-	687
HCM Lane V/C Ratio	0.009	-	-	-	0.032
HCM Control Delay (s)	7.7	0	-	-	10.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱		⋔	
Traffic Vol, veh/h	19	259	175	9	25	16
Future Vol, veh/h	19	259	175	9	25	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	285	192	10	27	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	202	0	-	0	523	197
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	326	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1370	-	-	-	514	844
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	731	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1370	-	-	-	505	844
Mov Cap-2 Maneuver	-	-	-	-	579	-
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	718	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1370	-	-	-	660
HCM Lane V/C Ratio	0.015	-	-	-	0.068
HCM Control Delay (s)	7.7	-	-	-	10.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	284	177	25	0	7
Future Vol, veh/h	1	284	177	25	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	305	190	27	0	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	217	0	-	0	-	204
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	-	3.318
Pot Cap-1 Maneuver	1353	-	-	-	0	837
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1353	-	-	-	-	837
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1353	-	-	-	837
HCM Lane V/C Ratio	0.001	-	-	-	0.009
HCM Control Delay (s)	7.7	-	-	-	9.3
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	284	193	8	0	9
Future Vol, veh/h	0	284	193	8	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	302	205	9	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	210
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	830
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	830
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	830
HCM Lane V/C Ratio	-	-	-	0.012
HCM Control Delay (s)	-	-	-	9.4
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	991	0	0	618	58	0	0	0	85	0	62
Future Volume (veh/h)	120	991	0	0	618	58	0	0	0	85	0	62
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	0	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	138	1139	0	0	710	67	0	0	0	98	0	71
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	82	1778	0	0	1356	128	0	773	0	802	0	657
Arrive On Green	0.05	0.50	0.00	0.00	0.41	0.41	0.00	0.00	0.00	0.41	0.00	0.41
Sat Flow, veh/h	1774	3632	0	0	3363	308	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	138	1139	0	0	384	393	0	0	0	98	0	71
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1808	0	1863	0	1774	0	1583
Q Serve(g_s), s	5.0	25.6	0.0	0.0	17.6	17.6	0.0	0.0	0.0	3.7	0.0	3.0
Cycle Q Clear(g_c), s	5.0	25.6	0.0	0.0	17.6	17.6	0.0	0.0	0.0	3.7	0.0	3.0
Prop In Lane	1.00		0.00	0.00		0.17	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	1778	0	0	734	750	0	773	0	802	0	657
V/C Ratio(X)	1.69	0.64	0.00	0.00	0.52	0.52	0.00	0.00	0.00	0.12	0.00	0.11
Avail Cap(c_a), veh/h	82	1778	0	0	734	750	0	773	0	802	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	19.8	0.0	0.0	23.7	23.7	0.0	0.0	0.0	19.7	0.0	19.5
Incr Delay (d2), s/veh	356.5	1.8	0.0	0.0	2.7	2.6	0.0	0.0	0.0	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	12.9	0.0	0.0	9.1	9.3	0.0	0.0	0.0	1.9	0.0	1.4
LnGrp Delay(d),s/veh	408.3	21.6	0.0	0.0	26.4	26.3	0.0	0.0	0.0	20.0	0.0	19.8
LnGrp LOS	F	C			C	C				B		B
Approach Vol, veh/h		1277			777			0			169	
Approach Delay, s/veh		63.4			26.4			0.0			19.9	
Approach LOS		E			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		59.0		49.5	9.5	49.5		49.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		45.0		45.0	5.0	45.0		45.0
Max Q Clear Time (g_c+I1), s		27.6		5.7	7.0	19.6		0.0
Green Ext Time (p_c), s		12.0		0.7	0.0	15.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	801	120	86	475	83	121	250	242	78	184	90
Future Volume (veh/h)	122	801	120	86	475	83	121	250	242	78	184	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	133	871	130	93	516	90	132	272	263	85	200	98
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	934	139	127	845	147	166	652	554	124	608	517
Arrive On Green	0.09	0.30	0.30	0.07	0.28	0.28	0.09	0.35	0.35	0.07	0.33	0.33
Sat Flow, veh/h	1774	3090	461	1774	3016	524	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	133	499	502	93	302	304	132	272	263	85	200	98
Grp Sat Flow(s),veh/h/ln	1774	1770	1781	1774	1770	1770	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.4	23.9	23.9	4.5	12.9	13.0	6.4	9.7	11.3	4.1	7.1	3.9
Cycle Q Clear(g_c), s	6.4	23.9	23.9	4.5	12.9	13.0	6.4	9.7	11.3	4.1	7.1	3.9
Prop In Lane	1.00		0.26	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	535	539	127	496	496	166	652	554	124	608	517
V/C Ratio(X)	0.80	0.93	0.93	0.73	0.61	0.61	0.80	0.42	0.47	0.68	0.33	0.19
Avail Cap(c_a), veh/h	274	537	541	274	537	537	274	652	554	274	608	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	29.6	29.6	39.7	27.3	27.3	38.8	21.6	22.1	39.7	22.2	21.1
Incr Delay (d2), s/veh	8.4	23.3	23.2	7.8	1.8	1.8	8.4	2.0	2.9	6.5	1.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	15.1	15.2	2.5	6.5	6.6	3.5	5.3	5.4	2.2	3.9	1.8
LnGrp Delay(d),s/veh	47.2	52.9	52.8	47.5	29.0	29.1	47.2	23.6	25.0	46.2	23.6	21.9
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1134			699			667			383	
Approach Delay, s/veh		52.2			31.5			28.8			28.2	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	35.0	10.8	30.9	12.7	33.0	12.7	29.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	6.1	13.3	6.5	25.9	8.4	9.1	8.4	15.0
Green Ext Time (p_c), s	0.1	3.7	0.1	0.5	0.1	4.0	0.1	7.4

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	172	72	86	85	107	65	480	156	36	339	24
Future Volume (veh/h)	42	172	72	86	85	107	65	480	156	36	339	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	44	181	76	91	89	113	68	505	164	38	357	25
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	280	113	269	113	144	122	564	183	157	754	53
Arrive On Green	0.11	0.11	0.11	0.15	0.15	0.15	0.07	0.42	0.42	0.09	0.44	0.44
Sat Flow, veh/h	1774	2461	995	1774	747	948	1774	1348	438	1774	1721	121
Grp Volume(v), veh/h	44	128	129	91	0	202	68	0	669	38	0	382
Grp Sat Flow(s),veh/h/ln	1774	1770	1687	1774	0	1695	1774	0	1786	1774	0	1841
Q Serve(g_s), s	1.8	5.5	5.8	3.6	0.0	9.1	2.9	0.0	27.6	1.6	0.0	11.6
Cycle Q Clear(g_c), s	1.8	5.5	5.8	3.6	0.0	9.1	2.9	0.0	27.6	1.6	0.0	11.6
Prop In Lane	1.00		0.59	1.00		0.56	1.00		0.25	1.00		0.07
Lane Grp Cap(c), veh/h	202	202	192	269	0	257	122	0	747	157	0	807
V/C Ratio(X)	0.22	0.64	0.67	0.34	0.00	0.79	0.56	0.00	0.90	0.24	0.00	0.47
Avail Cap(c_a), veh/h	450	449	428	450	0	430	159	0	747	450	0	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.9	33.5	33.6	30.0	0.0	32.3	35.7	0.0	21.4	33.6	0.0	15.8
Incr Delay (d2), s/veh	0.5	3.3	4.0	0.7	0.0	5.2	4.0	0.0	15.5	0.8	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.9	2.9	1.8	0.0	4.6	1.6	0.0	16.8	0.8	0.0	6.3
LnGrp Delay(d),s/veh	32.4	36.8	37.6	30.8	0.0	37.6	39.7	0.0	36.9	34.4	0.0	17.7
LnGrp LOS	C	D	D	C		D	D		D	C		B
Approach Vol, veh/h		301			293			737			420	
Approach Delay, s/veh		36.5			35.5			37.2			19.2	
Approach LOS		D			D			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	37.6		13.5	9.9	39.2		16.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	13.6	29.6		7.8	4.9	13.6		11.1
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	7.5		0.9

Intersection Summary		
HCM 2010 Ctrl Delay	32.5	
HCM 2010 LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	965	208	99	567	85	231	393	184	111	242	119
Future Volume (veh/h)	234	965	208	99	567	85	231	393	184	111	242	119
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	244	1005	217	103	591	89	241	409	192	116	252	124
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	858	185	131	705	106	251	668	685	146	557	698
Arrive On Green	0.14	0.30	0.30	0.07	0.23	0.23	0.14	0.36	0.36	0.08	0.30	0.30
Sat Flow, veh/h	1774	2898	624	1774	3087	464	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	244	613	609	103	338	342	241	409	192	116	252	124
Grp Sat Flow(s),veh/h/ln	1774	1770	1753	1774	1770	1781	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	13.0	28.2	28.2	5.4	17.4	17.5	12.9	17.2	7.5	6.1	10.4	4.5
Cycle Q Clear(g_c), s	13.0	28.2	28.2	5.4	17.4	17.5	12.9	17.2	7.5	6.1	10.4	4.5
Prop In Lane	1.00		0.36	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	524	519	131	404	407	251	668	685	146	557	698
V/C Ratio(X)	0.97	1.17	1.17	0.78	0.84	0.84	0.96	0.61	0.28	0.79	0.45	0.18
Avail Cap(c_a), veh/h	251	524	519	251	492	495	251	668	685	251	557	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	33.5	33.5	43.4	35.1	35.1	40.6	25.1	17.5	42.9	27.1	16.2
Incr Delay (d2), s/veh	48.4	95.1	97.0	9.8	10.2	10.4	45.2	4.2	1.0	9.3	2.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	27.5	27.5	3.0	9.6	9.7	9.5	9.6	3.5	3.4	5.8	2.1
LnGrp Delay(d),s/veh	89.1	128.6	130.5	53.2	45.3	45.5	85.8	29.3	18.5	52.2	29.7	16.7
LnGrp LOS	F	F	F	D	D	D	F	C	B	D	C	B
Approach Vol, veh/h		1466			783			842			492	
Approach Delay, s/veh		122.8			46.4			43.0			31.7	
Approach LOS		F			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	38.7	11.5	32.7	18.0	33.0	18.0	26.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	9.1	19.2	7.4	30.2	14.9	12.4	15.0	19.5
Green Ext Time (p_c), s	0.1	3.6	0.1	0.0	0.0	4.8	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	74.9
HCM 2010 LOS	E

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2022) With-Project Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	251	499	208	109	357	44	260	784	207	82	620	227
Future Volume (veh/h)	251	499	208	109	357	44	260	784	207	82	620	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	256	509	212	111	364	45	265	800	211	84	633	232
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	263	924	413	141	610	75	263	1394	749	120	1108	731
Arrive On Green	0.15	0.26	0.26	0.08	0.19	0.19	0.15	0.39	0.39	0.07	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3174	390	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	256	509	212	111	202	207	265	800	211	84	633	232
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1794	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	13.1	11.3	10.4	5.6	9.5	9.6	13.5	16.1	7.4	4.2	13.6	8.4
Cycle Q Clear(g_c), s	13.1	11.3	10.4	5.6	9.5	9.6	13.5	16.1	7.4	4.2	13.6	8.4
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	924	413	141	340	345	263	1394	749	120	1108	731
V/C Ratio(X)	0.97	0.55	0.51	0.79	0.59	0.60	1.01	0.57	0.28	0.70	0.57	0.32
Avail Cap(c_a), veh/h	263	1031	461	263	515	522	263	1394	749	263	1108	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	29.0	28.7	41.1	33.5	33.6	38.8	21.6	14.6	41.5	26.1	15.5
Incr Delay (d2), s/veh	47.7	0.5	1.0	9.3	1.7	1.7	57.2	1.7	0.9	7.1	2.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	5.6	4.7	3.1	4.8	4.9	10.8	8.2	3.4	2.3	7.0	3.9
LnGrp Delay(d),s/veh	86.3	29.5	29.7	50.4	35.2	35.2	96.0	23.3	15.5	48.7	28.3	16.6
LnGrp LOS	F	C	C	D	D	D	F	C	B	D	C	B
Approach Vol, veh/h		977			520			1276			949	
Approach Delay, s/veh		44.4			38.4			37.1			27.2	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	40.3	11.7	28.3	18.0	33.0	18.0	22.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	6.2	18.1	7.6	13.3	15.5	15.6	15.1	11.6
Green Ext Time (p_c), s	0.1	7.1	0.1	5.5	0.0	8.4	0.0	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	36.7
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	38	1213	0	0	936
Future Vol, veh/h	0	38	1213	0	0	936
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	1238	0	0	955

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1620	619	0	0	1238	0
Stage 1	1238	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Critical Hdwy	6.29	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	118	432	-	-	558	-
Stage 1	232	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	118	432	-	-	558	-
Mov Cap-2 Maneuver	118	-	-	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	624	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	432	558	-
HCM Lane V/C Ratio	-	-	0.09	-	-
HCM Control Delay (s)	-	-	14.2	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	114	245	252	105	24	226	1183	247	49	869	52
Future Volume (veh/h)	63	114	245	252	105	24	226	1183	247	49	869	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	64	115	247	255	106	24	228	1195	249	49	878	53
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	127	273	247	598	508	247	1348	603	94	1042	466
Arrive On Green	0.06	0.24	0.24	0.14	0.32	0.32	0.14	0.38	0.38	0.05	0.29	0.29
Sat Flow, veh/h	1774	528	1134	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	64	0	362	255	106	24	228	1195	249	49	878	53
Grp Sat Flow(s),veh/h/ln	1774	0	1663	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	3.4	0.0	20.5	13.5	4.0	1.0	12.3	30.6	11.2	2.6	22.5	2.4
Cycle Q Clear(g_c), s	3.4	0.0	20.5	13.5	4.0	1.0	12.3	30.6	11.2	2.6	22.5	2.4
Prop In Lane	1.00		0.68	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	0	400	247	598	508	247	1348	603	94	1042	466
V/C Ratio(X)	0.61	0.00	0.90	1.03	0.18	0.05	0.92	0.89	0.41	0.52	0.84	0.11
Avail Cap(c_a), veh/h	247	0	455	247	598	508	247	1348	603	247	1042	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	0.0	35.7	41.7	23.7	22.7	41.1	28.0	22.0	44.6	32.1	24.9
Incr Delay (d2), s/veh	5.5	0.0	19.8	65.4	0.1	0.0	36.7	8.9	2.1	4.4	8.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	11.6	11.0	2.1	0.4	8.5	16.6	5.2	1.4	12.2	1.1
LnGrp Delay(d),s/veh	50.0	0.0	55.4	107.1	23.8	22.7	77.9	36.9	24.1	49.1	40.3	25.4
LnGrp LOS	D		E	F	C	C	E	D	C	D	D	C
Approach Vol, veh/h		426			385			1672			980	
Approach Delay, s/veh		54.6			78.9			40.6			40.0	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	41.4	18.0	27.8	18.0	33.0	10.2	35.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.6	32.6	15.5	22.5	14.3	24.5	5.4	6.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.0	3.6	0.1	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	347	4	231	442	1433	0	0	1034	471
Future Volume (veh/h)	0	0	0	347	4	231	442	1433	0	0	1034	471
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				361	4	241	460	1493	0	0	1077	491
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				437	5	394	421	2297	0	0	860	381
Arrive On Green				0.25	0.25	0.25	0.24	0.65	0.00	0.00	0.36	0.36
Sat Flow, veh/h				1756	19	1583	1774	3632	0	0	2481	1058
Grp Volume(v), veh/h				365	0	241	460	1493	0	0	790	778
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1676
Q Serve(g_s), s				17.1	0.0	11.9	20.9	22.5	0.0	0.0	31.7	31.7
Cycle Q Clear(g_c), s				17.1	0.0	11.9	20.9	22.5	0.0	0.0	31.7	31.7
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.63
Lane Grp Cap(c), veh/h				442	0	394	421	2297	0	0	638	604
V/C Ratio(X)				0.83	0.00	0.61	1.09	0.65	0.00	0.00	1.24	1.29
Avail Cap(c_a), veh/h				684	0	610	421	2297	0	0	638	604
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.3	0.0	29.3	33.5	9.4	0.0	0.0	28.1	28.1
Incr Delay (d2), s/veh				4.9	0.0	1.5	70.9	1.4	0.0	0.0	120.9	141.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.9	0.0	5.3	18.5	11.2	0.0	0.0	36.8	38.4
LnGrp Delay(d),s/veh				36.2	0.0	30.8	104.4	10.8	0.0	0.0	149.0	169.9
LnGrp LOS				D		C	F	B			F	F
Approach Vol, veh/h					606			1953			1568	
Approach Delay, s/veh					34.0			32.9			159.4	
Approach LOS					C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			25.4	36.2		26.4
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		24.5			22.9	33.7		19.1
Green Ext Time (p_c), s		28.2			0.0	0.0		2.8

Intersection Summary		
HCM 2010 Ctrl Delay		81.1
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	590	3	548	0	0	0	0	1296	431	252	1010	0
Future Volume (veh/h)	590	3	548	0	0	0	0	1296	431	252	1010	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	617	0	571				0	1350	449	262	1052	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1061	0	473				0	1498	495	302	2162	0
Arrive On Green	0.30	0.00	0.30				0.00	0.40	0.40	0.17	0.61	0.00
Sat Flow, veh/h	3548	0	1583				0	3949	1251	1774	3632	0
Grp Volume(v), veh/h	617	0	571				0	1209	590	262	1052	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1642	1774	1770	0
Q Serve(g_s), s	14.8	0.0	29.9				0.0	33.5	33.8	14.4	16.5	0.0
Cycle Q Clear(g_c), s	14.8	0.0	29.9				0.0	33.5	33.8	14.4	16.5	0.0
Prop In Lane	1.00		1.00				0.00		0.76	1.00		0.00
Lane Grp Cap(c), veh/h	1061	0	473				0	1343	650	302	2162	0
V/C Ratio(X)	0.58	0.00	1.21				0.00	0.90	0.91	0.87	0.49	0.00
Avail Cap(c_a), veh/h	1061	0	473				0	1343	650	530	2162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.7	0.0	35.0				0.0	28.4	28.5	40.4	10.8	0.0
Incr Delay (d2), s/veh	0.8	0.0	111.3				0.0	8.6	16.5	7.6	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.0	27.7				0.0	17.2	18.2	7.7	8.1	0.0
LnGrp Delay(d),s/veh	30.5	0.0	146.3				0.0	37.0	44.9	48.0	11.6	0.0
LnGrp LOS	C		F					D	D	D	B	
Approach Vol, veh/h		1188						1799			1314	
Approach Delay, s/veh		86.2						39.6			18.8	
Approach LOS		F						D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	21.5	44.1		34.4		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.3	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	16.4	35.8		31.9		18.5		
Green Ext Time (p_c), s	0.6	0.0		0.0		32.7		

Intersection Summary	
HCM 2010 Ctrl Delay	46.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑			↕			↕	
Traffic Vol, veh/h	0	421	19	0	695	0	0	0	24	0	0	0
Future Vol, veh/h	0	421	19	0	695	0	0	0	24	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	448	20	0	739	0	0	0	26	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	1197	1197	234	918	1207	739
Stage 1	-	-	-	-	-	-	458	458	-	739	739	-
Stage 2	-	-	-	-	-	-	739	739	-	179	468	-
Critical Hdwy	-	-	-	-	-	-	6.78	6.53	7.13	6.78	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	7.33	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.73	5.53	-
Follow-up Hdwy	-	-	-	-	-	-	3.669	4.019	3.919	3.669	4.019	3.319
Pot Cap-1 Maneuver	0	-	-	0	-	0	178	185	655	268	183	416
Stage 1	0	-	-	0	-	0	483	566	-	397	423	-
Stage 2	0	-	-	0	-	0	397	423	-	768	560	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	178	185	655	258	183	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	178	185	-	258	183	-
Stage 1	-	-	-	-	-	-	483	566	-	397	423	-
Stage 2	-	-	-	-	-	-	397	423	-	738	560	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.7	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	655	-	-	-	-
HCM Lane V/C Ratio	0.039	-	-	-	-
HCM Control Delay (s)	10.7	-	-	-	0
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	200.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	273	332	156	28	279	36	164	2	24	38	0	243
Future Vol, veh/h	273	332	156	28	279	36	164	2	24	38	0	243
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	310	377	177	32	317	41	186	2	27	43	0	276

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	358	0	0	555	0	0	1487	1508	277	1211	1576	338
Stage 1	-	-	-	-	-	-	1086	1086	-	401	401	-
Stage 2	-	-	-	-	-	-	401	422	-	810	1175	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1199	-	-	1013	-	-	~ 94	120	721	148	109	703
Stage 1	-	-	-	-	-	-	232	292	-	625	600	-
Stage 2	-	-	-	-	-	-	625	587	-	341	265	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1199	-	-	1013	-	-	~ 45	86	721	109	78	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 45	86	-	109	78	-
Stage 1	-	-	-	-	-	-	~ 172	217	-	463	581	-
Stage 2	-	-	-	-	-	-	368	568	-	241	196	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0.7	$ 1617.9	19.5
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	51	1199	-	-	1013	-	-	109	703
HCM Lane V/C Ratio	4.234	0.259	-	-	0.031	-	-	0.396	0.393
HCM Control Delay (s)	$ 1617.9	9	-	-	8.7	-	-	58.2	13.4
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	24	1	-	-	0.1	-	-	1.6	1.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	382	332	8	11	11
Future Vol, veh/h	12	382	332	8	11	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	420	365	9	12	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	374	0	-	0	815	369
Stage 1	-	-	-	-	369	-
Stage 2	-	-	-	-	446	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1184	-	-	-	347	677
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	645	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1184	-	-	-	342	677
Mov Cap-2 Maneuver	-	-	-	-	459	-
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	636	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1184	-	-	-	547
HCM Lane V/C Ratio	0.011	-	-	-	0.044
HCM Control Delay (s)	8.1	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	205	185	120	80	102	223
Future Vol, veh/h	205	185	120	80	102	223
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	225	203	132	88	112	245

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	220	0	-	0	830	176
Stage 1	-	-	-	-	176	-
Stage 2	-	-	-	-	654	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1349	-	-	-	340	867
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	517	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1349	-	-	-	276	867
Mov Cap-2 Maneuver	-	-	-	-	357	-
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	420	-

Approach	EB	WB	SB
HCM Control Delay, s	4.3	0	19.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1349	-	-	-	599
HCM Lane V/C Ratio	0.167	-	-	-	0.596
HCM Control Delay (s)	8.2	-	-	-	19.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.6	-	-	-	3.9

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	250	24	88	156	102	24	0	93	84	0	20
Future Vol, veh/h	13	250	24	88	156	102	24	0	93	84	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	269	26	95	168	110	26	0	100	90	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	277	0	0	295	0	0	733	777	282	772	735	223
Stage 1	-	-	-	-	-	-	310	310	-	412	412	-
Stage 2	-	-	-	-	-	-	423	467	-	360	323	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1286	-	-	1266	-	-	336	328	757	317	347	817
Stage 1	-	-	-	-	-	-	700	659	-	617	594	-
Stage 2	-	-	-	-	-	-	609	562	-	658	650	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1286	-	-	1266	-	-	302	295	757	254	312	817
Mov Cap-2 Maneuver	-	-	-	-	-	-	302	295	-	254	312	-
Stage 1	-	-	-	-	-	-	691	650	-	609	541	-
Stage 2	-	-	-	-	-	-	540	511	-	564	642	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	2.1	13	24.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	578	1286	-	-	1266	-	-	293
HCM Lane V/C Ratio	0.218	0.011	-	-	0.075	-	-	0.382
HCM Control Delay (s)	13	7.8	0	-	8.1	0	-	24.7
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.8	0	-	-	0.2	-	-	1.7

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	427	216	9	0	10
Future Vol, veh/h	0	427	216	9	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	454	230	10	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	235
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	804
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	804
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	804
HCM Lane V/C Ratio	-	-	-	0.013
HCM Control Delay (s)	-	-	-	9.5
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	670	44	43	420	53	47	0	47	72	0	52
Future Volume (veh/h)	94	670	44	43	420	53	47	0	47	72	0	52
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	108	770	51	49	483	61	54	0	54	83	0	60
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	1693	112	117	1095	137	334	16	300	630	0	657
Arrive On Green	0.05	0.50	0.50	0.41	0.41	0.41	0.41	0.00	0.41	0.41	0.00	0.41
Sat Flow, veh/h	1774	3370	223	189	2639	330	685	38	723	1345	0	1583
Grp Volume(v), veh/h	108	404	417	290	0	303	108	0	0	83	0	60
Grp Sat Flow(s),veh/h/ln	1774	1770	1823	1521	0	1637	1445	0	0	1345	0	1583
Q Serve(g_s), s	5.0	16.0	16.0	2.8	0.0	14.4	2.8	0.0	0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s	5.0	16.0	16.0	12.5	0.0	14.4	5.3	0.0	0.0	3.8	0.0	2.5
Prop In Lane	1.00		0.12	0.17		0.20	0.50		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	82	889	916	670	0	679	649	0	0	630	0	657
V/C Ratio(X)	1.32	0.45	0.46	0.43	0.00	0.45	0.17	0.00	0.00	0.13	0.00	0.09
Avail Cap(c_a), veh/h	82	889	916	670	0	679	649	0	0	630	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	17.4	17.4	22.1	0.0	22.8	20.1	0.0	0.0	19.7	0.0	19.3
Incr Delay (d2), s/veh	207.5	1.7	1.6	2.0	0.0	2.1	0.6	0.0	0.0	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	8.2	8.4	6.4	0.0	6.9	2.1	0.0	0.0	1.6	0.0	1.1
LnGrp Delay(d),s/veh	259.3	19.1	19.0	24.1	0.0	24.9	20.6	0.0	0.0	20.1	0.0	19.6
LnGrp LOS	F	B	B	C		C	C			C		B
Approach Vol, veh/h		929			593			108			143	
Approach Delay, s/veh		47.0			24.5			20.6			19.9	
Approach LOS		D			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		59.0		49.5	9.5	49.5		49.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		45.0		45.0	5.0	45.0		45.0
Max Q Clear Time (g_c+I1), s		18.0		5.8	7.0	16.4		7.3
Green Ext Time (p_c), s		10.9		1.3	0.0	11.2		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	558	94	121	363	62	67	185	213	66	136	74
Future Volume (veh/h)	100	558	94	121	363	62	67	185	213	66	136	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	109	607	102	132	395	67	73	201	232	72	148	80
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	812	136	167	857	144	123	650	553	122	650	552
Arrive On Green	0.08	0.27	0.27	0.09	0.28	0.28	0.07	0.35	0.35	0.07	0.35	0.35
Sat Flow, veh/h	1774	3034	509	1774	3032	510	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	109	354	355	132	229	233	73	201	232	72	148	80
Grp Sat Flow(s),veh/h/ln	1774	1770	1773	1774	1770	1773	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.9	14.9	15.0	6.0	8.7	8.9	3.3	6.4	9.1	3.2	4.6	2.8
Cycle Q Clear(g_c), s	4.9	14.9	15.0	6.0	8.7	8.9	3.3	6.4	9.1	3.2	4.6	2.8
Prop In Lane	1.00		0.29	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	474	475	167	500	501	123	650	553	122	650	552
V/C Ratio(X)	0.78	0.75	0.75	0.79	0.46	0.46	0.59	0.31	0.42	0.59	0.23	0.14
Avail Cap(c_a), veh/h	293	574	575	293	574	575	293	650	553	293	650	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	27.4	27.4	36.2	24.2	24.2	36.9	19.4	20.3	36.9	18.8	18.3
Incr Delay (d2), s/veh	8.9	4.3	4.4	8.1	0.7	0.7	4.5	1.2	2.3	4.4	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	7.8	7.9	3.3	4.4	4.4	1.8	3.5	4.3	1.7	2.5	1.3
LnGrp Delay(d),s/veh	45.9	31.7	31.8	44.4	24.8	24.9	41.4	20.6	22.6	41.4	19.6	18.8
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		818			594			506			300	
Approach Delay, s/veh		33.6			29.2			24.5			24.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	33.0	12.2	26.4	10.2	33.0	11.0	27.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	5.2	11.1	8.0	17.0	5.3	6.6	6.9	10.9
Green Ext Time (p_c), s	0.1	2.9	0.1	4.9	0.1	3.1	0.1	6.6

Intersection Summary		
HCM 2010 Ctrl Delay		29.1
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	173	71	107	93	24	67	394	163	18	309	34
Future Volume (veh/h)	65	173	71	107	93	24	67	394	163	18	309	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	68	182	75	113	98	25	71	415	172	19	325	36
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	291	115	182	147	37	128	557	231	167	768	85
Arrive On Green	0.12	0.12	0.12	0.10	0.10	0.10	0.07	0.44	0.44	0.09	0.47	0.47
Sat Flow, veh/h	1774	2475	983	1774	1433	365	1774	1252	519	1774	1648	183
Grp Volume(v), veh/h	68	128	129	113	0	123	71	0	587	19	0	361
Grp Sat Flow(s),veh/h/ln	1774	1770	1689	1774	0	1798	1774	0	1771	1774	0	1831
Q Serve(g_s), s	2.6	5.1	5.4	4.5	0.0	4.9	2.9	0.0	20.5	0.7	0.0	9.8
Cycle Q Clear(g_c), s	2.6	5.1	5.4	4.5	0.0	4.9	2.9	0.0	20.5	0.7	0.0	9.8
Prop In Lane	1.00		0.58	1.00		0.20	1.00		0.29	1.00		0.10
Lane Grp Cap(c), veh/h	208	208	198	182	0	184	128	0	787	167	0	853
V/C Ratio(X)	0.33	0.62	0.65	0.62	0.00	0.67	0.55	0.00	0.75	0.11	0.00	0.42
Avail Cap(c_a), veh/h	479	478	456	479	0	485	169	0	787	479	0	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	31.3	31.4	32.0	0.0	32.2	33.4	0.0	17.2	30.9	0.0	13.2
Incr Delay (d2), s/veh	0.9	3.0	3.6	3.5	0.0	4.1	3.7	0.0	6.4	0.3	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.7	2.7	2.4	0.0	2.6	1.5	0.0	11.3	0.4	0.0	5.3
LnGrp Delay(d),s/veh	31.1	34.2	35.0	35.5	0.0	36.3	37.0	0.0	23.5	31.2	0.0	14.8
LnGrp LOS	C	C	C	D		D	D		C	C		B
Approach Vol, veh/h		325			236			658			380	
Approach Delay, s/veh		33.9			35.9			25.0			15.6	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	37.6		13.2	9.9	39.2		12.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	12.7	22.5		7.4	4.9	11.8		6.9
Green Ext Time (p_c), s	0.0	0.0		1.3	0.0	6.8		0.8

Intersection Summary		
HCM 2010 Ctrl Delay	26.2	
HCM 2010 LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	381	578	160	49	292	50	132	247	82	67	165	267
Future Volume (veh/h)	381	578	160	49	292	50	132	247	82	67	165	267
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	397	602	167	51	304	52	138	257	85	70	172	278
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	283	809	224	102	587	99	173	684	673	118	627	786
Arrive On Green	0.16	0.30	0.30	0.06	0.19	0.19	0.10	0.37	0.37	0.07	0.34	0.34
Sat Flow, veh/h	1774	2740	759	1774	3030	512	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	397	388	381	51	176	180	138	257	85	70	172	278
Grp Sat Flow(s),veh/h/ln	1774	1770	1729	1774	1770	1772	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	13.5	16.8	16.8	2.4	7.5	7.7	6.4	8.6	2.8	3.2	5.7	9.1
Cycle Q Clear(g_c), s	13.5	16.8	16.8	2.4	7.5	7.7	6.4	8.6	2.8	3.2	5.7	9.1
Prop In Lane	1.00		0.44	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	523	511	102	343	343	173	684	673	118	627	786
V/C Ratio(X)	1.40	0.74	0.75	0.50	0.51	0.52	0.80	0.38	0.13	0.59	0.27	0.35
Avail Cap(c_a), veh/h	283	554	541	283	554	555	283	684	673	283	627	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	26.9	26.9	38.7	30.6	30.6	37.4	19.6	14.8	38.4	20.5	13.0
Incr Delay (d2), s/veh	201.3	5.1	5.3	3.7	1.2	1.2	8.2	1.6	0.4	4.6	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.3	8.9	8.8	1.3	3.8	3.9	3.5	4.7	1.3	1.7	3.1	4.2
LnGrp Delay(d),s/veh	236.8	32.0	32.2	42.4	31.8	31.9	45.5	21.2	15.2	43.0	21.6	14.3
LnGrp LOS	F	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1166			407			480			520	
Approach Delay, s/veh		101.8			33.1			27.1			20.6	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	35.6	9.4	29.5	12.7	33.0	18.0	20.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	15.2	10.6	4.4	18.8	8.4	11.1	15.5	9.7
Green Ext Time (p_c), s	0.1	3.6	0.0	4.1	0.1	3.6	0.0	6.7

Intersection Summary		
HCM 2010 Ctrl Delay		60.6
HCM 2010 LOS		E

General Plan (2035)

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2035) Without Project Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	365	161	221	735	58	130	478	112	62	661	313
Future Volume (veh/h)	168	365	161	221	735	58	130	478	112	62	661	313
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	388	171	235	782	62	138	509	119	66	703	333
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	880	394	261	915	73	171	1222	780	110	1101	683
Arrive On Green	0.12	0.25	0.25	0.15	0.28	0.28	0.10	0.35	0.35	0.06	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3323	263	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	179	388	171	235	416	428	138	509	119	66	703	333
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1816	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	9.0	8.5	8.3	11.9	20.4	20.4	7.0	10.1	3.8	3.3	15.6	13.9
Cycle Q Clear(g_c), s	9.0	8.5	8.3	11.9	20.4	20.4	7.0	10.1	3.8	3.3	15.6	13.9
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	214	880	394	261	488	500	171	1222	780	110	1101	683
V/C Ratio(X)	0.84	0.44	0.43	0.90	0.85	0.85	0.81	0.42	0.15	0.60	0.64	0.49
Avail Cap(c_a), veh/h	261	1024	458	261	512	525	261	1222	780	261	1101	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	29.0	29.0	38.4	31.4	31.4	40.6	22.9	12.7	41.8	27.1	18.7
Incr Delay (d2), s/veh	17.7	0.3	0.8	30.7	12.8	12.6	10.2	1.0	0.4	5.1	2.8	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	4.2	3.7	8.0	11.7	12.0	3.9	5.1	1.7	1.8	8.0	6.5
LnGrp Delay(d),s/veh	57.1	29.4	29.7	69.1	44.2	44.0	50.8	24.0	13.2	47.0	30.0	21.2
LnGrp LOS	E	C	C	E	D	D	D	C	B	D	C	C
Approach Vol, veh/h		738			1079			766			1102	
Approach Delay, s/veh		36.2			49.6			27.1			28.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	36.1	18.0	27.3	13.3	33.0	15.5	29.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	5.3	12.1	13.9	10.5	9.0	17.6	11.0	22.4
Green Ext Time (p_c), s	0.1	8.6	0.0	7.9	0.1	6.6	0.1	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	35.9
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	719	0	0	1043
Future Vol, veh/h	0	0	719	0	0	1043
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	765	0	0	1110

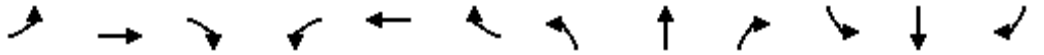
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1320	382	0	0	765	0
Stage 1	765	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	148	616	-	-	844	-
Stage 1	420	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	148	616	-	-	844	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	420	-	-	-	-	-
Stage 2	539	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	844	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 2010 Signalized Intersection Summary
3: Heacock St & Hemlock Ave

Festival at Moreno Valley Mixed Use
Future (2035) Without Project Weekday AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	71	132	67	90	23	109	672	77	18	1012	41
Future Volume (veh/h)	49	71	132	67	90	23	109	672	77	18	1012	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	51	73	136	69	93	24	112	693	79	19	1043	42
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	100	186	131	339	288	158	1650	738	55	1445	647
Arrive On Green	0.06	0.17	0.17	0.07	0.18	0.18	0.09	0.47	0.47	0.03	0.41	0.41
Sat Flow, veh/h	1774	584	1087	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	51	0	209	69	93	24	112	693	79	19	1043	42
Grp Sat Flow(s),veh/h/ln	1774	0	1671	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.9	0.0	8.3	2.6	3.0	0.9	4.3	9.1	2.0	0.7	17.3	1.1
Cycle Q Clear(g_c), s	1.9	0.0	8.3	2.6	3.0	0.9	4.3	9.1	2.0	0.7	17.3	1.1
Prop In Lane	1.00		0.65	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	0	286	131	339	288	158	1650	738	55	1445	647
V/C Ratio(X)	0.46	0.00	0.73	0.53	0.27	0.08	0.71	0.42	0.11	0.35	0.72	0.06
Avail Cap(c_a), veh/h	343	0	634	343	707	601	343	1650	738	343	1445	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	0.0	27.4	31.1	24.6	23.7	30.9	12.4	10.5	33.1	17.3	12.6
Incr Delay (d2), s/veh	2.9	0.0	3.6	3.2	0.4	0.1	5.8	0.8	0.3	3.7	3.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.1	1.4	1.6	0.4	2.3	4.6	0.9	0.4	9.0	0.5
LnGrp Delay(d),s/veh	34.4	0.0	31.0	34.4	25.0	23.8	36.7	13.1	10.8	36.8	20.5	12.7
LnGrp LOS	C		C	C	C	C	D	B	B	D	C	B
Approach Vol, veh/h		260			186			884			1104	
Approach Delay, s/veh		31.7			28.3			15.9			20.5	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	37.0	9.7	16.4	10.7	33.0	8.9	17.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	2.7	11.1	4.6	10.3	6.3	19.3	3.9	5.0
Green Ext Time (p_c), s	0.0	11.3	0.1	1.7	0.1	6.9	0.1	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	302	4	181	307	676	0	0	868	346
Future Volume (veh/h)	0	0	0	302	4	181	307	676	0	0	868	346
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				315	4	189	320	704	0	0	904	360
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				390	5	352	361	2377	0	0	1030	408
Arrive On Green				0.22	0.22	0.22	0.20	0.67	0.00	0.00	0.42	0.42
Sat Flow, veh/h				1753	22	1583	1774	3632	0	0	2571	981
Grp Volume(v), veh/h				319	0	189	320	704	0	0	644	620
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1690
Q Serve(g_s), s				14.5	0.0	9.0	14.9	6.9	0.0	0.0	28.4	28.8
Cycle Q Clear(g_c), s				14.5	0.0	9.0	14.9	6.9	0.0	0.0	28.4	28.8
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.58
Lane Grp Cap(c), veh/h				395	0	352	361	2377	0	0	735	702
V/C Ratio(X)				0.81	0.00	0.54	0.89	0.30	0.00	0.00	0.88	0.88
Avail Cap(c_a), veh/h				708	0	631	436	2377	0	0	735	702
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.3	0.0	29.2	32.9	5.7	0.0	0.0	22.8	22.9
Incr Delay (d2), s/veh				3.9	0.0	1.3	17.2	0.3	0.0	0.0	13.8	15.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.5	0.0	4.0	9.0	3.4	0.0	0.0	16.6	16.2
LnGrp Delay(d),s/veh				35.3	0.0	30.4	50.1	6.0	0.0	0.0	36.7	38.0
LnGrp LOS				D		C	D	A			D	D
Approach Vol, veh/h					508			1024			1264	
Approach Delay, s/veh					33.5			19.8			37.3	
Approach LOS					C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			21.8	39.8		23.4
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		8.9			16.9	30.8		16.5
Green Ext Time (p_c), s		21.9			0.4	0.8		2.4

Intersection Summary		
HCM 2010 Ctrl Delay		30.2
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	274	4	526	0	0	0	0	701	155	180	995	0
Future Volume (veh/h)	274	4	526	0	0	0	0	701	155	180	995	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	283	0	537				0	715	158	184	1015	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1061	0	473				0	1840	402	223	2162	0
Arrive On Green	0.30	0.00	0.30				0.00	0.44	0.44	0.13	0.61	0.00
Sat Flow, veh/h	3548	0	1583				0	4346	913	1774	3632	0
Grp Volume(v), veh/h	283	0	537				0	579	294	184	1015	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1702	1774	1770	0
Q Serve(g_s), s	6.1	0.0	29.9				0.0	11.5	11.7	10.1	15.6	0.0
Cycle Q Clear(g_c), s	6.1	0.0	29.9				0.0	11.5	11.7	10.1	15.6	0.0
Prop In Lane	1.00		1.00				0.00		0.54	1.00		0.00
Lane Grp Cap(c), veh/h	1061	0	473				0	1493	749	223	2162	0
V/C Ratio(X)	0.27	0.00	1.13				0.00	0.39	0.39	0.83	0.47	0.00
Avail Cap(c_a), veh/h	1061	0	473				0	1493	749	530	2162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.7	0.0	35.0				0.0	18.9	18.9	42.7	10.6	0.0
Incr Delay (d2), s/veh	0.1	0.0	83.6				0.0	0.2	0.3	7.5	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	24.0				0.0	5.4	5.6	5.4	7.8	0.0
LnGrp Delay(d),s/veh	26.8	0.0	118.7				0.0	19.0	19.3	50.2	11.3	0.0
LnGrp LOS	C		F					B	B	D	B	
Approach Vol, veh/h		820						873			1199	
Approach Delay, s/veh		87.0						19.1			17.3	
Approach LOS		F						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.1	48.5		34.4		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.9	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	12.1	13.7		31.9		17.6		
Green Ext Time (p_c), s	0.4	9.3		0.0		19.6		

Intersection Summary	
HCM 2010 Ctrl Delay	37.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	165	1	0	180	0	0	0	1	0	0	0
Future Vol, veh/h	0	165	1	0	180	0	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	181	1	0	198	0	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	182	0	0	281	380	91	289	380	99
Stage 1	-	-	-	-	-	-	182	182	-	198	198	-
Stage 2	-	-	-	-	-	-	99	198	-	91	182	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1372	-	-	1391	-	-	649	551	949	641	551	937
Stage 1	-	-	-	-	-	-	802	748	-	785	736	-
Stage 2	-	-	-	-	-	-	896	736	-	906	748	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1372	-	-	1391	-	-	649	551	949	640	551	937
Mov Cap-2 Maneuver	-	-	-	-	-	-	649	551	-	640	551	-
Stage 1	-	-	-	-	-	-	802	748	-	785	736	-
Stage 2	-	-	-	-	-	-	896	736	-	905	748	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.8	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	949	1372	-	-	1391	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-	-	-	-
HCM Control Delay (s)	8.8	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	156	1	0	174	1	2	0	0	0	0	6
Future Vol, veh/h	11	156	1	0	174	1	2	0	0	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	181	1	0	202	1	2	0	0	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	203	0	0	183	0	0	411	411	91	319	411	203
Stage 1	-	-	-	-	-	-	208	208	-	203	203	-
Stage 2	-	-	-	-	-	-	203	203	-	116	208	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1367	-	-	1391	-	-	538	530	949	622	530	837
Stage 1	-	-	-	-	-	-	775	729	-	798	733	-
Stage 2	-	-	-	-	-	-	798	733	-	877	729	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1367	-	-	1391	-	-	530	525	949	617	525	837
Mov Cap-2 Maneuver	-	-	-	-	-	-	530	525	-	617	525	-
Stage 1	-	-	-	-	-	-	768	722	-	790	733	-
Stage 2	-	-	-	-	-	-	791	733	-	869	722	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	11.8	9.3
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	530	1367	-	-	1391	-	-	-	837
HCM Lane V/C Ratio	0.004	0.009	-	-	-	-	-	-	0.008
HCM Control Delay (s)	11.8	7.7	-	-	0	-	-	0	9.3
HCM Lane LOS	B	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	135	169	4	0	5
Future Vol, veh/h	21	135	169	4	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	161	201	5	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	206	0	-	0	415	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	211	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1365	-	-	-	594	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	824	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1365	-	-	-	582	837
Mov Cap-2 Maneuver	-	-	-	-	639	-
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	808	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1365	-	-	-	837
HCM Lane V/C Ratio	0.018	-	-	-	0.007
HCM Control Delay (s)	7.7	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	124	170	23	5	4
Future Vol, veh/h	12	124	170	23	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	138	189	26	6	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	214	0	-	0	366	202
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1356	-	-	-	634	839
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1356	-	-	-	628	839
Mov Cap-2 Maneuver	-	-	-	-	672	-
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	856	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1356	-	-	-	737
HCM Lane V/C Ratio	0.01	-	-	-	0.014
HCM Control Delay (s)	7.7	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	128	190	6	0	1
Future Vol, veh/h	0	128	190	6	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	149	221	7	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	224
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	815
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	815
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	815
HCM Lane V/C Ratio	-	-	-	0.001
HCM Control Delay (s)	-	-	-	9.4
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	129	192	4	0	6
Future Vol, veh/h	0	129	192	4	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	148	221	5	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	223
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	817
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	817
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	817
HCM Lane V/C Ratio	-	-	-	0.008
HCM Control Delay (s)	-	-	-	9.4
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	480	0	0	913	213	0	0	0	164	0	109
Future Volume (veh/h)	71	480	0	0	913	213	0	0	0	164	0	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	0	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	81	545	0	0	1038	242	0	0	0	186	0	124
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	83	1741	0	0	1149	267	0	789	0	819	0	670
Arrive On Green	0.05	0.49	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.42	0.00	0.42
Sat Flow, veh/h	1774	3632	0	0	2946	663	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	81	545	0	0	642	638	0	0	0	186	0	124
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1746	0	1863	0	1774	0	1583
Q Serve(g_s), s	4.8	9.8	0.0	0.0	36.2	36.5	0.0	0.0	0.0	7.2	0.0	5.2
Cycle Q Clear(g_c), s	4.8	9.8	0.0	0.0	36.2	36.5	0.0	0.0	0.0	7.2	0.0	5.2
Prop In Lane	1.00		0.00	0.00		0.38	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	1741	0	0	712	703	0	789	0	819	0	670
V/C Ratio(X)	0.97	0.31	0.00	0.00	0.90	0.91	0.00	0.00	0.00	0.23	0.00	0.18
Avail Cap(c_a), veh/h	83	1741	0	0	766	756	0	789	0	819	0	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	16.2	0.0	0.0	29.8	29.9	0.0	0.0	0.0	19.7	0.0	19.2
Incr Delay (d2), s/veh	88.4	0.1	0.0	0.0	13.3	14.1	0.0	0.0	0.0	0.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	4.8	0.0	0.0	20.3	20.3	0.0	0.0	0.0	3.7	0.0	2.4
LnGrp Delay(d),s/veh	139.0	16.3	0.0	0.0	43.1	44.0	0.0	0.0	0.0	20.4	0.0	19.8
LnGrp LOS	F	B			D	D				C		B
Approach Vol, veh/h		626			1280			0			310	
Approach Delay, s/veh		32.2			43.5			0.0			20.1	
Approach LOS		C			D						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		49.5		56.8		49.5	9.5	47.3
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		45.0		46.0		45.0	5.0	46.0
Max Q Clear Time (g_c+I1), s		0.0		11.8		9.2	6.8	38.5
Green Ext Time (p_c), s		0.0		17.6		1.3	0.0	4.3

Intersection Summary	
HCM 2010 Ctrl Delay	37.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	443	164	265	829	139	170	256	116	133	204	115
Future Volume (veh/h)	37	443	164	265	829	139	170	256	116	133	204	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	44	527	195	315	987	165	202	305	138	158	243	137
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	605	223	251	1001	167	235	602	512	191	556	473
Arrive On Green	0.05	0.24	0.24	0.14	0.33	0.33	0.13	0.32	0.32	0.11	0.30	0.30
Sat Flow, veh/h	1774	2534	934	1774	3036	507	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	44	367	355	315	575	577	202	305	138	158	243	137
Grp Sat Flow(s),veh/h/ln	1774	1770	1698	1774	1770	1773	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.3	19.0	19.2	13.5	30.8	30.8	10.6	12.6	6.2	8.3	10.0	6.3
Cycle Q Clear(g_c), s	2.3	19.0	19.2	13.5	30.8	30.8	10.6	12.6	6.2	8.3	10.0	6.3
Prop In Lane	1.00		0.55	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	423	405	251	584	585	235	602	512	191	556	473
V/C Ratio(X)	0.49	0.87	0.87	1.25	0.99	0.99	0.86	0.51	0.27	0.83	0.44	0.29
Avail Cap(c_a), veh/h	251	491	472	251	584	585	251	602	512	251	556	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	34.9	34.9	41.0	31.7	31.8	40.5	26.1	23.9	41.7	27.0	25.7
Incr Delay (d2), s/veh	4.1	13.9	14.9	143.0	33.4	33.7	23.8	3.0	1.3	15.7	2.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	10.9	10.6	16.5	20.4	20.5	6.8	7.0	2.9	4.9	5.5	3.0
LnGrp Delay(d),s/veh	48.2	48.7	49.9	184.0	65.1	65.5	64.3	29.1	25.2	57.4	29.5	27.2
LnGrp LOS	D	D	D	F	E	E	E	C	C	E	C	C
Approach Vol, veh/h		766			1467			645			538	
Approach Delay, s/veh		49.2			90.8			39.3			37.1	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	35.3	18.0	27.3	17.1	33.0	9.3	36.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	10.3	14.6	15.5	21.2	12.6	12.0	4.3	32.8
Green Ext Time (p_c), s	0.1	3.7	0.0	1.6	0.1	3.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	88	36	96	97	109	46	400	94	83	529	27
Future Volume (veh/h)	9	88	36	96	97	109	46	400	94	83	529	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	110	45	120	121	136	58	500	118	104	661	34
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	215	84	326	147	165	113	604	142	157	771	40
Arrive On Green	0.09	0.09	0.09	0.18	0.18	0.18	0.06	0.41	0.41	0.09	0.44	0.44
Sat Flow, veh/h	1774	2490	971	1774	802	902	1774	1458	344	1774	1756	90
Grp Volume(v), veh/h	11	77	78	120	0	257	58	0	618	104	0	695
Grp Sat Flow(s),veh/h/ln	1774	1770	1691	1774	0	1704	1774	0	1802	1774	0	1847
Q Serve(g_s), s	0.5	3.3	3.5	4.7	0.0	11.5	2.5	0.0	24.2	4.5	0.0	26.8
Cycle Q Clear(g_c), s	0.5	3.3	3.5	4.7	0.0	11.5	2.5	0.0	24.2	4.5	0.0	26.8
Prop In Lane	1.00		0.57	1.00		0.53	1.00		0.19	1.00		0.05
Lane Grp Cap(c), veh/h	153	153	146	326	0	313	113	0	746	157	0	810
V/C Ratio(X)	0.07	0.50	0.54	0.37	0.00	0.82	0.51	0.00	0.83	0.66	0.00	0.86
Avail Cap(c_a), veh/h	451	450	430	451	0	433	159	0	746	451	0	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	34.5	34.6	28.3	0.0	31.0	35.8	0.0	20.7	34.9	0.0	20.0
Incr Delay (d2), s/veh	0.2	2.5	3.1	0.7	0.0	8.7	3.6	0.0	10.3	4.7	0.0	11.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.7	1.8	2.4	0.0	6.1	1.3	0.0	14.1	2.4	0.0	16.1
LnGrp Delay(d),s/veh	33.4	37.1	37.7	29.0	0.0	39.7	39.4	0.0	30.9	39.6	0.0	31.3
LnGrp LOS	C	D	D	C		D	D		C	D		C
Approach Vol, veh/h		166			377			676			799	
Approach Delay, s/veh		37.1			36.3			31.7			32.4	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	37.2		11.3	9.5	39.2		19.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	13.5	26.2		5.5	4.5	28.8		13.5
Green Ext Time (p_c), s	0.2	0.0		0.7	0.0	4.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	404	167	40	462	59	172	369	124	102	400	152
Future Volume (veh/h)	100	404	167	40	462	59	172	369	124	102	400	152
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	112	454	188	45	519	66	193	415	139	115	449	171
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	659	271	96	766	97	230	712	691	147	625	659
Arrive On Green	0.08	0.27	0.27	0.05	0.24	0.24	0.13	0.38	0.38	0.08	0.34	0.34
Sat Flow, veh/h	1774	2449	1006	1774	3161	401	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	112	327	315	45	290	295	193	415	139	115	449	171
Grp Sat Flow(s),veh/h/ln	1774	1770	1685	1774	1770	1792	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.3	14.1	14.3	2.1	12.6	12.7	9.0	15.0	4.6	5.4	17.9	6.0
Cycle Q Clear(g_c), s	5.3	14.1	14.3	2.1	12.6	12.7	9.0	15.0	4.6	5.4	17.9	6.0
Prop In Lane	1.00		0.60	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	476	454	96	429	434	230	712	691	147	625	659
V/C Ratio(X)	0.78	0.69	0.69	0.47	0.68	0.68	0.84	0.58	0.20	0.78	0.72	0.26
Avail Cap(c_a), veh/h	282	552	525	282	552	559	282	712	691	282	625	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	27.8	27.9	39.0	29.2	29.2	36.1	20.9	14.8	38.2	24.7	16.2
Incr Delay (d2), s/veh	8.9	2.9	3.3	3.6	2.2	2.3	16.6	3.5	0.7	8.8	7.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	7.3	7.1	1.1	6.4	6.5	5.5	8.4	2.1	3.0	10.4	2.8
LnGrp Delay(d),s/veh	47.3	30.8	31.2	42.6	31.4	31.5	52.7	24.3	15.5	47.1	31.7	17.2
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		754			630			747			735	
Approach Delay, s/veh		33.4			32.2			30.0			30.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	37.0	9.1	27.4	15.5	33.0	11.4	25.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	7.4	17.0	4.1	16.3	11.0	19.9	7.3	14.7
Green Ext Time (p_c), s	0.1	5.1	0.0	5.4	0.1	4.2	0.1	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2035) Without-Project Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	841	170	137	497	60	167	694	195	79	537	216
Future Volume (veh/h)	267	841	170	137	497	60	167	694	195	79	537	216
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	272	858	173	140	507	61	170	708	199	81	548	220
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1016	454	173	761	91	204	1259	718	117	1086	716
Arrive On Green	0.15	0.29	0.29	0.10	0.24	0.24	0.12	0.36	0.36	0.07	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3183	382	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	272	858	173	140	281	287	170	708	199	81	548	220
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1795	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	13.5	21.2	8.1	7.2	13.3	13.4	8.7	15.0	7.3	4.2	11.8	8.2
Cycle Q Clear(g_c), s	13.5	21.2	8.1	7.2	13.3	13.4	8.7	15.0	7.3	4.2	11.8	8.2
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	1016	454	173	423	429	204	1259	718	117	1086	716
V/C Ratio(X)	1.06	0.84	0.38	0.81	0.66	0.67	0.83	0.56	0.28	0.69	0.50	0.31
Avail Cap(c_a), veh/h	258	1016	454	258	505	512	258	1259	718	258	1086	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	31.2	26.5	41.1	32.0	32.0	40.2	24.1	15.9	42.5	26.4	16.2
Incr Delay (d2), s/veh	71.3	6.7	0.5	11.1	2.5	2.6	16.7	1.8	1.0	7.1	1.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	11.3	3.6	4.1	6.8	6.9	5.2	7.6	3.4	2.3	6.0	3.8
LnGrp Delay(d),s/veh	111.0	37.8	27.0	52.2	34.5	34.6	57.0	25.9	16.8	49.5	28.1	17.3
LnGrp LOS	F	D	C	D	C	C	E	C	B	D	C	B
Approach Vol, veh/h		1303			708			1077			849	
Approach Delay, s/veh		51.7			38.0			29.1			27.3	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	37.6	13.6	31.2	15.2	33.0	18.0	26.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	6.2	17.0	9.2	23.2	10.7	13.8	15.5	15.4
Green Ext Time (p_c), s	0.1	7.0	0.1	2.5	0.1	8.2	0.0	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	1056	0	0	843
Future Vol, veh/h	0	0	1056	0	0	843
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1078	0	0	860

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1422	539	0	0	1078	0
Stage 1	1078	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.29	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	155	487	-	-	643	-
Stage 1	281	-	-	-	-	-
Stage 2	653	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	155	487	-	-	643	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	281	-	-	-	-	-
Stage 2	653	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	643	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	144	259	97	90	35	162	981	134	24	806	44
Future Volume (veh/h)	91	144	259	97	90	35	162	981	134	24	806	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	92	145	262	98	91	35	164	991	135	24	814	44
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	162	294	131	510	434	200	1447	647	63	1173	525
Arrive On Green	0.07	0.27	0.27	0.07	0.27	0.27	0.11	0.41	0.41	0.04	0.33	0.33
Sat Flow, veh/h	1774	596	1077	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	92	0	407	98	91	35	164	991	135	24	814	44
Grp Sat Flow(s),veh/h/ln	1774	0	1673	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	4.4	0.0	20.1	4.7	3.2	1.4	7.8	19.8	4.7	1.1	17.2	1.6
Cycle Q Clear(g_c), s	4.4	0.0	20.1	4.7	3.2	1.4	7.8	19.8	4.7	1.1	17.2	1.6
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	0	456	131	510	434	200	1447	647	63	1173	525
V/C Ratio(X)	0.72	0.00	0.89	0.75	0.18	0.08	0.82	0.68	0.21	0.38	0.69	0.08
Avail Cap(c_a), veh/h	279	0	516	279	574	488	279	1447	647	279	1173	525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	30.1	39.1	23.8	23.2	37.3	20.9	16.4	40.5	24.9	19.8
Incr Delay (d2), s/veh	7.2	0.0	16.4	8.4	0.2	0.1	12.5	2.7	0.7	3.7	3.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	11.3	2.6	1.7	0.6	4.5	10.2	2.2	0.6	8.9	0.8
LnGrp Delay(d),s/veh	46.3	0.0	46.4	47.4	24.0	23.3	49.8	23.5	17.2	44.3	28.3	20.1
LnGrp LOS	D		D	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h		499			224			1290			882	
Approach Delay, s/veh		46.4			34.1			26.2			28.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	39.7	10.8	27.9	14.2	33.0	10.7	28.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	3.1	21.8	6.7	22.1	9.8	19.2	6.4	5.2
Green Ext Time (p_c), s	0.0	5.5	0.1	1.3	0.1	7.2	0.1	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	242	4	189	377	1096	0	0	874	292
Future Volume (veh/h)	0	0	0	242	4	189	377	1096	0	0	874	292
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				252	4	197	393	1142	0	0	910	304
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				328	5	298	430	2483	0	0	1054	351
Arrive On Green				0.19	0.19	0.19	0.24	0.70	0.00	0.00	0.40	0.40
Sat Flow, veh/h				1748	28	1583	1774	3632	0	0	2703	869
Grp Volume(v), veh/h				256	0	197	393	1142	0	0	616	598
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1709
Q Serve(g_s), s				11.1	0.0	9.4	17.5	11.6	0.0	0.0	25.9	26.1
Cycle Q Clear(g_c), s				11.1	0.0	9.4	17.5	11.6	0.0	0.0	25.9	26.1
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.51
Lane Grp Cap(c), veh/h				334	0	298	430	2483	0	0	714	690
V/C Ratio(X)				0.77	0.00	0.66	0.91	0.46	0.00	0.00	0.86	0.87
Avail Cap(c_a), veh/h				739	0	659	456	2483	0	0	714	690
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.4	0.0	30.7	30.0	5.4	0.0	0.0	22.2	22.3
Incr Delay (d2), s/veh				3.7	0.0	2.5	22.1	0.6	0.0	0.0	13.0	13.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.8	0.0	4.3	11.2	5.8	0.0	0.0	15.2	14.9
LnGrp Delay(d),s/veh				35.1	0.0	33.2	52.1	6.0	0.0	0.0	35.2	36.1
LnGrp LOS				D		C	D	A			D	D
Approach Vol, veh/h					453			1535			1214	
Approach Delay, s/veh					34.2			17.8			35.6	
Approach LOS					C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			24.2	37.4		19.8
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		13.6			19.5	28.1		13.1
Green Ext Time (p_c), s		26.8			0.2	3.3		2.2

Intersection Summary		
HCM 2010 Ctrl Delay		26.9
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	502	3	354	0	0	0	0	981	322	191	931	0
Future Volume (veh/h)	502	3	354	0	0	0	0	981	322	191	931	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	525	0	369				0	1022	335	199	970	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	942	0	420				0	1736	569	240	2266	0
Arrive On Green	0.27	0.00	0.27				0.00	0.46	0.46	0.14	0.64	0.00
Sat Flow, veh/h	3548	0	1583				0	3959	1242	1774	3632	0
Grp Volume(v), veh/h	525	0	369				0	914	443	199	970	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1644	1774	1770	0
Q Serve(g_s), s	12.2	0.0	21.3				0.0	19.1	19.1	10.4	13.0	0.0
Cycle Q Clear(g_c), s	12.2	0.0	21.3				0.0	19.1	19.1	10.4	13.0	0.0
Prop In Lane	1.00		1.00				0.00		0.76	1.00		0.00
Lane Grp Cap(c), veh/h	942	0	420				0	1552	752	240	2266	0
V/C Ratio(X)	0.56	0.00	0.88				0.00	0.59	0.59	0.83	0.43	0.00
Avail Cap(c_a), veh/h	1112	0	496				0	1552	752	556	2266	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.2	0.0	33.6				0.0	19.2	19.2	40.2	8.5	0.0
Incr Delay (d2), s/veh	0.5	0.0	14.5				0.0	0.6	1.2	7.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	11.0				0.0	9.0	8.9	5.6	6.5	0.0
LnGrp Delay(d),s/veh	30.7	0.0	48.1				0.0	19.8	20.4	47.4	9.1	0.0
LnGrp LOS	C		D					B	C	D	A	
Approach Vol, veh/h		894						1357			1169	
Approach Delay, s/veh		37.9						20.0			15.6	
Approach LOS		D						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.4	48.2		29.8		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.3	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	12.4	21.1		23.3		15.0		
Green Ext Time (p_c), s	0.5	5.0		2.0		27.1		

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑			↕			↕	
Traffic Vol, veh/h	0	306	22	0	228	0	0	0	22	0	0	0
Future Vol, veh/h	0	306	22	0	228	0	0	0	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	326	23	0	243	0	0	0	23	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	580	580	174	373	592	243
Stage 1	-	-	-	-	-	-	337	337	-	243	243	-
Stage 2	-	-	-	-	-	-	243	243	-	130	349	-
Critical Hdwy	-	-	-	-	-	-	6.78	6.53	7.13	6.78	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	7.33	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.73	5.53	-
Follow-up Hdwy	-	-	-	-	-	-	3.669	4.019	3.919	3.669	4.019	3.319
Pot Cap-1 Maneuver	0	-	-	0	-	0	436	425	714	584	418	795
Stage 1	0	-	-	0	-	0	584	640	-	732	704	-
Stage 2	0	-	-	0	-	0	732	704	-	822	633	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	436	425	714	565	418	795
Mov Cap-2 Maneuver	-	-	-	-	-	-	436	425	-	565	418	-
Stage 1	-	-	-	-	-	-	584	640	-	732	704	-
Stage 2	-	-	-	-	-	-	732	704	-	795	633	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.2	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	714	-	-	-	-
HCM Lane V/C Ratio	0.033	-	-	-	-
HCM Control Delay (s)	10.2	-	-	-	0
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	273	4	4	182	5	2	2	0	7	0	35
Future Vol, veh/h	55	273	4	4	182	5	2	2	0	7	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	310	5	5	207	6	2	2	0	8	0	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	213	0	0	315	0	0	657	660	157	500	659	210
Stage 1	-	-	-	-	-	-	438	438	-	219	219	-
Stage 2	-	-	-	-	-	-	219	222	-	281	440	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1356	-	-	1244	-	-	364	382	861	467	383	830
Stage 1	-	-	-	-	-	-	568	578	-	783	721	-
Stage 2	-	-	-	-	-	-	783	719	-	703	577	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1244	-	-	333	363	861	447	364	830
Mov Cap-2 Maneuver	-	-	-	-	-	-	333	363	-	447	364	-
Stage 1	-	-	-	-	-	-	542	551	-	747	718	-
Stage 2	-	-	-	-	-	-	742	716	-	668	550	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.2	15.5	10.2
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	347	1356	-	-	1244	-	-	447	830
HCM Lane V/C Ratio	0.013	0.046	-	-	0.004	-	-	0.018	0.048
HCM Control Delay (s)	15.5	7.8	-	-	7.9	-	-	13.2	9.6
HCM Lane LOS	C	A	-	-	A	-	-	B	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1	0.2

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	271	182	7	10	10
Future Vol, veh/h	11	271	182	7	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	298	200	8	11	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	208	0	-	0	526	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	322	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1363	-	-	-	512	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	735	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1363	-	-	-	506	837
Mov Cap-2 Maneuver	-	-	-	-	582	-
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	727	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1363	-	-	-	687
HCM Lane V/C Ratio	0.009	-	-	-	0.032
HCM Control Delay (s)	7.7	0	-	-	10.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱		↾	
Traffic Vol, veh/h	19	259	175	9	25	16
Future Vol, veh/h	19	259	175	9	25	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	285	192	10	27	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	202	0	-	0	523	197
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	326	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1370	-	-	-	514	844
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	731	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1370	-	-	-	505	844
Mov Cap-2 Maneuver	-	-	-	-	579	-
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	718	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1370	-	-	-	660
HCM Lane V/C Ratio	0.015	-	-	-	0.068
HCM Control Delay (s)	7.7	-	-	-	10.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	284	177	25	0	7
Future Vol, veh/h	1	284	177	25	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	305	190	27	0	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	217	0	-	0	-	204
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	-	3.318
Pot Cap-1 Maneuver	1353	-	-	-	0	837
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1353	-	-	-	-	837
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1353	-	-	-	837
HCM Lane V/C Ratio	0.001	-	-	-	0.009
HCM Control Delay (s)	7.7	-	-	-	9.3
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	284	193	8	0	9
Future Vol, veh/h	0	284	193	8	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	302	205	9	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	210
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	830
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	830
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	830
HCM Lane V/C Ratio	-	-	-	0.012
HCM Control Delay (s)	-	-	-	9.4
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	991	0	0	618	58	0	0	0	85	0	62
Future Volume (veh/h)	120	991	0	0	618	58	0	0	0	85	0	62
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	0	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	138	1139	0	0	710	67	0	0	0	98	0	71
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	82	1778	0	0	1356	128	0	773	0	802	0	657
Arrive On Green	0.05	0.50	0.00	0.00	0.41	0.41	0.00	0.00	0.00	0.41	0.00	0.41
Sat Flow, veh/h	1774	3632	0	0	3363	308	0	1863	0	1774	0	1583
Grp Volume(v), veh/h	138	1139	0	0	384	393	0	0	0	98	0	71
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1808	0	1863	0	1774	0	1583
Q Serve(g_s), s	5.0	25.6	0.0	0.0	17.6	17.6	0.0	0.0	0.0	3.7	0.0	3.0
Cycle Q Clear(g_c), s	5.0	25.6	0.0	0.0	17.6	17.6	0.0	0.0	0.0	3.7	0.0	3.0
Prop In Lane	1.00		0.00	0.00		0.17	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	1778	0	0	734	750	0	773	0	802	0	657
V/C Ratio(X)	1.69	0.64	0.00	0.00	0.52	0.52	0.00	0.00	0.00	0.12	0.00	0.11
Avail Cap(c_a), veh/h	82	1778	0	0	734	750	0	773	0	802	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	19.8	0.0	0.0	23.7	23.7	0.0	0.0	0.0	19.7	0.0	19.5
Incr Delay (d2), s/veh	356.5	1.8	0.0	0.0	2.7	2.6	0.0	0.0	0.0	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	12.9	0.0	0.0	9.1	9.3	0.0	0.0	0.0	1.9	0.0	1.4
LnGrp Delay(d),s/veh	408.3	21.6	0.0	0.0	26.4	26.3	0.0	0.0	0.0	20.0	0.0	19.8
LnGrp LOS	F	C			C	C				B		B
Approach Vol, veh/h		1277			777			0			169	
Approach Delay, s/veh		63.4			26.4			0.0			19.9	
Approach LOS		E			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		59.0		49.5	9.5	49.5		49.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		45.0		45.0	5.0	45.0		45.0
Max Q Clear Time (g_c+I1), s		27.6		5.7	7.0	19.6		0.0
Green Ext Time (p_c), s		12.0		0.7	0.0	15.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	801	120	86	475	83	121	250	242	78	184	90
Future Volume (veh/h)	122	801	120	86	475	83	121	250	242	78	184	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	133	871	130	93	516	90	132	272	263	85	200	98
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	934	139	127	845	147	166	652	554	124	608	517
Arrive On Green	0.09	0.30	0.30	0.07	0.28	0.28	0.09	0.35	0.35	0.07	0.33	0.33
Sat Flow, veh/h	1774	3090	461	1774	3016	524	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	133	499	502	93	302	304	132	272	263	85	200	98
Grp Sat Flow(s),veh/h/ln	1774	1770	1781	1774	1770	1770	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.4	23.9	23.9	4.5	12.9	13.0	6.4	9.7	11.3	4.1	7.1	3.9
Cycle Q Clear(g_c), s	6.4	23.9	23.9	4.5	12.9	13.0	6.4	9.7	11.3	4.1	7.1	3.9
Prop In Lane	1.00		0.26	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	535	539	127	496	496	166	652	554	124	608	517
V/C Ratio(X)	0.80	0.93	0.93	0.73	0.61	0.61	0.80	0.42	0.47	0.68	0.33	0.19
Avail Cap(c_a), veh/h	274	537	541	274	537	537	274	652	554	274	608	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	29.6	29.6	39.7	27.3	27.3	38.8	21.6	22.1	39.7	22.2	21.1
Incr Delay (d2), s/veh	8.4	23.3	23.2	7.8	1.8	1.8	8.4	2.0	2.9	6.5	1.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	15.1	15.2	2.5	6.5	6.6	3.5	5.3	5.4	2.2	3.9	1.8
LnGrp Delay(d),s/veh	47.2	52.9	52.8	47.5	29.0	29.1	47.2	23.6	25.0	46.2	23.6	21.9
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1134			699			667			383	
Approach Delay, s/veh		52.2			31.5			28.8			28.2	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	35.0	10.8	30.9	12.7	33.0	12.7	29.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	6.1	13.3	6.5	25.9	8.4	9.1	8.4	15.0
Green Ext Time (p_c), s	0.1	3.7	0.1	0.5	0.1	4.0	0.1	7.4

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	172	72	86	85	107	65	480	156	36	339	24
Future Volume (veh/h)	42	172	72	86	85	107	65	480	156	36	339	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	44	181	76	91	89	113	68	505	164	38	357	25
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	280	113	269	113	144	122	564	183	157	754	53
Arrive On Green	0.11	0.11	0.11	0.15	0.15	0.15	0.07	0.42	0.42	0.09	0.44	0.44
Sat Flow, veh/h	1774	2461	995	1774	747	948	1774	1348	438	1774	1721	121
Grp Volume(v), veh/h	44	128	129	91	0	202	68	0	669	38	0	382
Grp Sat Flow(s),veh/h/ln	1774	1770	1687	1774	0	1695	1774	0	1786	1774	0	1841
Q Serve(g_s), s	1.8	5.5	5.8	3.6	0.0	9.1	2.9	0.0	27.6	1.6	0.0	11.6
Cycle Q Clear(g_c), s	1.8	5.5	5.8	3.6	0.0	9.1	2.9	0.0	27.6	1.6	0.0	11.6
Prop In Lane	1.00		0.59	1.00		0.56	1.00		0.25	1.00		0.07
Lane Grp Cap(c), veh/h	202	202	192	269	0	257	122	0	747	157	0	807
V/C Ratio(X)	0.22	0.64	0.67	0.34	0.00	0.79	0.56	0.00	0.90	0.24	0.00	0.47
Avail Cap(c_a), veh/h	450	449	428	450	0	430	159	0	747	450	0	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.9	33.5	33.6	30.0	0.0	32.3	35.7	0.0	21.4	33.6	0.0	15.8
Incr Delay (d2), s/veh	0.5	3.3	4.0	0.7	0.0	5.2	4.0	0.0	15.5	0.8	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.9	2.9	1.8	0.0	4.6	1.6	0.0	16.8	0.8	0.0	6.3
LnGrp Delay(d),s/veh	32.4	36.8	37.6	30.8	0.0	37.6	39.7	0.0	36.9	34.4	0.0	17.7
LnGrp LOS	C	D	D	C		D	D		D	C		B
Approach Vol, veh/h		301			293			737			420	
Approach Delay, s/veh		36.5			35.5			37.2			19.2	
Approach LOS		D			D			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	37.6		13.5	9.9	39.2		16.5
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	13.6	29.6		7.8	4.9	13.6		11.1
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	7.5		0.9

Intersection Summary		
HCM 2010 Ctrl Delay	32.5	
HCM 2010 LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	965	208	99	567	85	231	393	184	111	242	119
Future Volume (veh/h)	234	965	208	99	567	85	231	393	184	111	242	119
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	244	1005	217	103	591	89	241	409	192	116	252	124
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	858	185	131	705	106	251	668	685	146	557	698
Arrive On Green	0.14	0.30	0.30	0.07	0.23	0.23	0.14	0.36	0.36	0.08	0.30	0.30
Sat Flow, veh/h	1774	2898	624	1774	3087	464	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	244	613	609	103	338	342	241	409	192	116	252	124
Grp Sat Flow(s),veh/h/ln	1774	1770	1753	1774	1770	1781	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	13.0	28.2	28.2	5.4	17.4	17.5	12.9	17.2	7.5	6.1	10.4	4.5
Cycle Q Clear(g_c), s	13.0	28.2	28.2	5.4	17.4	17.5	12.9	17.2	7.5	6.1	10.4	4.5
Prop In Lane	1.00		0.36	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	524	519	131	404	407	251	668	685	146	557	698
V/C Ratio(X)	0.97	1.17	1.17	0.78	0.84	0.84	0.96	0.61	0.28	0.79	0.45	0.18
Avail Cap(c_a), veh/h	251	524	519	251	492	495	251	668	685	251	557	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	33.5	33.5	43.4	35.1	35.1	40.6	25.1	17.5	42.9	27.1	16.2
Incr Delay (d2), s/veh	48.4	95.1	97.0	9.8	10.2	10.4	45.2	4.2	1.0	9.3	2.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	27.5	27.5	3.0	9.6	9.7	9.5	9.6	3.5	3.4	5.8	2.1
LnGrp Delay(d),s/veh	89.1	128.6	130.5	53.2	45.3	45.5	85.8	29.3	18.5	52.2	29.7	16.7
LnGrp LOS	F	F	F	D	D	D	F	C	B	D	C	B
Approach Vol, veh/h		1466			783			842			492	
Approach Delay, s/veh		122.8			46.4			43.0			31.7	
Approach LOS		F			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	38.7	11.5	32.7	18.0	33.0	18.0	26.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	9.1	19.2	7.4	30.2	14.9	12.4	15.0	19.5
Green Ext Time (p_c), s	0.1	3.6	0.1	0.0	0.0	4.8	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	74.9
HCM 2010 LOS	E

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2035) With Project Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	359	160	221	729	58	127	476	112	62	660	313
Future Volume (veh/h)	168	359	160	221	729	58	127	476	112	62	660	313
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	179	382	170	235	776	62	135	506	119	66	702	333
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	877	392	262	914	73	168	1220	780	111	1105	685
Arrive On Green	0.12	0.25	0.25	0.15	0.28	0.28	0.09	0.34	0.34	0.06	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	1774	3320	265	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	179	382	170	235	413	425	135	506	119	66	702	333
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1816	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	9.0	8.3	8.3	11.9	20.2	20.2	6.8	10.0	3.8	3.3	15.5	13.8
Cycle Q Clear(g_c), s	9.0	8.3	8.3	11.9	20.2	20.2	6.8	10.0	3.8	3.3	15.5	13.8
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	214	877	392	262	487	500	168	1220	780	111	1105	685
V/C Ratio(X)	0.84	0.44	0.43	0.90	0.85	0.85	0.80	0.41	0.15	0.60	0.64	0.49
Avail Cap(c_a), veh/h	262	1028	460	262	514	527	262	1220	780	262	1105	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	28.9	28.9	38.2	31.3	31.3	40.5	22.9	12.7	41.7	26.9	18.6
Incr Delay (d2), s/veh	17.5	0.3	0.8	30.0	12.2	12.0	9.5	1.0	0.4	5.1	2.8	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	4.1	3.7	8.0	11.5	11.8	3.8	5.0	1.7	1.8	8.0	6.5
LnGrp Delay(d),s/veh	56.8	29.3	29.7	68.2	43.5	43.3	50.0	23.9	13.1	46.7	29.7	21.0
LnGrp LOS	E	C	C	E	D	D	D	C	B	D	C	C
Approach Vol, veh/h		731			1073			760			1101	
Approach Delay, s/veh		36.1			48.8			26.8			28.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	36.0	18.0	27.1	13.1	33.0	15.5	29.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	5.3	12.0	13.9	10.3	8.8	17.5	11.0	22.2
Green Ext Time (p_c), s	0.1	8.6	0.0	7.8	0.1	6.6	0.1	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	35.5
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	705	0	0	1041
Future Vol, veh/h	0	9	705	0	0	1041
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	750	0	0	1107

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1304	375	0	0	750	0
Stage 1	750	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	152	623	-	-	855	-
Stage 1	427	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	152	623	-	-	855	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	427	-	-	-	-	-
Stage 2	539	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	623	855	-
HCM Lane V/C Ratio	-	-	0.015	-	-
HCM Control Delay (s)	-	-	10.9	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	60	132	60	79	9	109	672	98	16	1012	41
Future Volume (veh/h)	49	60	132	60	79	9	109	672	98	16	1012	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	51	62	136	62	81	9	112	693	101	16	1043	42
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	85	187	125	319	271	159	1689	756	48	1466	656
Arrive On Green	0.06	0.16	0.16	0.07	0.17	0.17	0.09	0.48	0.48	0.03	0.41	0.41
Sat Flow, veh/h	1774	520	1141	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	51	0	198	62	81	9	112	693	101	16	1043	42
Grp Sat Flow(s),veh/h/ln	1774	0	1661	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.9	0.0	7.8	2.3	2.6	0.3	4.2	8.8	2.5	0.6	16.8	1.1
Cycle Q Clear(g_c), s	1.9	0.0	7.8	2.3	2.6	0.3	4.2	8.8	2.5	0.6	16.8	1.1
Prop In Lane	1.00		0.69	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	0	272	125	319	271	159	1689	756	48	1466	656
V/C Ratio(X)	0.45	0.00	0.73	0.49	0.25	0.03	0.70	0.41	0.13	0.34	0.71	0.06
Avail Cap(c_a), veh/h	348	0	640	348	717	610	348	1689	756	348	1466	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	0.0	27.3	30.8	24.7	23.8	30.4	11.7	10.0	32.9	16.7	12.1
Incr Delay (d2), s/veh	2.8	0.0	3.7	3.0	0.4	0.0	5.6	0.7	0.4	4.1	3.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	3.9	1.2	1.4	0.1	2.3	4.4	1.1	0.4	8.7	0.5
LnGrp Delay(d),s/veh	33.9	0.0	31.0	33.8	25.1	23.8	36.0	12.4	10.4	37.0	19.7	12.3
LnGrp LOS	C		C	C	C	C	D	B	B	D	B	B
Approach Vol, veh/h		249			152			906			1101	
Approach Delay, s/veh		31.6			28.6			15.1			19.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	37.3	9.4	15.8	10.7	33.0	8.9	16.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	2.6	10.8	4.3	9.8	6.2	18.8	3.9	4.6
Green Ext Time (p_c), s	0.0	11.5	0.1	1.5	0.1	7.2	0.1	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	302	4	190	307	688	0	0	861	346
Future Volume (veh/h)	0	0	0	302	4	190	307	688	0	0	861	346
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				315	4	198	320	717	0	0	897	360
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				391	5	353	360	2376	0	0	1026	410
Arrive On Green				0.22	0.22	0.22	0.20	0.67	0.00	0.00	0.42	0.42
Sat Flow, veh/h				1753	22	1583	1774	3632	0	0	2565	986
Grp Volume(v), veh/h				319	0	198	320	717	0	0	641	616
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1689
Q Serve(g_s), s				14.5	0.0	9.4	14.9	7.1	0.0	0.0	28.2	28.6
Cycle Q Clear(g_c), s				14.5	0.0	9.4	14.9	7.1	0.0	0.0	28.2	28.6
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.58
Lane Grp Cap(c), veh/h				396	0	353	360	2376	0	0	735	701
V/C Ratio(X)				0.81	0.00	0.56	0.89	0.30	0.00	0.00	0.87	0.88
Avail Cap(c_a), veh/h				708	0	631	436	2376	0	0	735	701
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.3	0.0	29.4	32.9	5.8	0.0	0.0	22.8	22.9
Incr Delay (d2), s/veh				3.9	0.0	1.4	17.2	0.3	0.0	0.0	13.5	14.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.5	0.0	4.3	9.0	3.5	0.0	0.0	16.5	16.0
LnGrp Delay(d),s/veh				35.2	0.0	30.8	50.1	6.1	0.0	0.0	36.3	37.6
LnGrp LOS				D		C	D	A			D	D
Approach Vol, veh/h					517			1037			1257	
Approach Delay, s/veh					33.5			19.7			36.9	
Approach LOS					C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			21.8	39.8		23.5
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		9.1			16.9	30.6		16.5
Green Ext Time (p_c), s		21.9			0.4	1.0		2.5

Intersection Summary		
HCM 2010 Ctrl Delay		29.9
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	4	526	0	0	0	0	700	155	177	991	0
Future Volume (veh/h)	287	4	526	0	0	0	0	700	155	177	991	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	296	0	537				0	714	158	181	1011	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1061	0	473				0	1847	404	220	2162	0
Arrive On Green	0.30	0.00	0.30				0.00	0.44	0.44	0.12	0.61	0.00
Sat Flow, veh/h	3548	0	1583				0	4345	914	1774	3632	0
Grp Volume(v), veh/h	296	0	537				0	578	294	181	1011	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1701	1774	1770	0
Q Serve(g_s), s	6.4	0.0	29.9				0.0	11.5	11.7	10.0	15.6	0.0
Cycle Q Clear(g_c), s	6.4	0.0	29.9				0.0	11.5	11.7	10.0	15.6	0.0
Prop In Lane	1.00		1.00				0.00		0.54	1.00		0.00
Lane Grp Cap(c), veh/h	1061	0	473				0	1499	752	220	2162	0
V/C Ratio(X)	0.28	0.00	1.13				0.00	0.39	0.39	0.82	0.47	0.00
Avail Cap(c_a), veh/h	1061	0	473				0	1499	752	530	2162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.8	0.0	35.0				0.0	18.8	18.8	42.7	10.6	0.0
Incr Delay (d2), s/veh	0.1	0.0	83.6				0.0	0.2	0.3	7.5	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	24.0				0.0	5.4	5.5	5.3	7.8	0.0
LnGrp Delay(d),s/veh	26.9	0.0	118.7				0.0	18.9	19.1	50.3	11.3	0.0
LnGrp LOS	C		F					B	B	D	B	
Approach Vol, veh/h		833						872			1192	
Approach Delay, s/veh		86.1						19.0			17.2	
Approach LOS		F						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.9	48.7		34.4		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.9	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	12.0	13.7		31.9		17.6		
Green Ext Time (p_c), s	0.4	9.3		0.0		19.6		

Intersection Summary	
HCM 2010 Ctrl Delay	37.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	173	1	0	295	0	0	0	1	0	0	0
Future Vol, veh/h	0	173	1	0	295	0	0	0	1	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	190	1	0	324	0	0	0	1	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	324	0	0	191	0	0	353	515	96	419	515	162
Stage 1	-	-	-	-	-	-	191	191	-	324	324	-
Stage 2	-	-	-	-	-	-	162	324	-	95	191	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1233	-	-	1380	-	-	577	462	942	518	462	854
Stage 1	-	-	-	-	-	-	792	741	-	662	648	-
Stage 2	-	-	-	-	-	-	824	648	-	901	741	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1233	-	-	1380	-	-	577	462	942	517	462	854
Mov Cap-2 Maneuver	-	-	-	-	-	-	577	462	-	517	462	-
Stage 1	-	-	-	-	-	-	792	741	-	662	648	-
Stage 2	-	-	-	-	-	-	824	648	-	900	741	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	8.8	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	942	1233	-	-	1380	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-	-	-	-
HCM Control Delay (s)	8.8	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	222	42	3	213	5	28	0	3	4	0	57
Future Vol, veh/h	105	222	42	3	213	5	28	0	3	4	0	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	122	258	49	3	248	6	33	0	3	5	0	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	253	0	0	307	0	0	785	787	153	631	809	251
Stage 1	-	-	-	-	-	-	527	527	-	258	258	-
Stage 2	-	-	-	-	-	-	258	260	-	373	551	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1311	-	-	1252	-	-	296	323	866	379	314	787
Stage 1	-	-	-	-	-	-	503	527	-	746	694	-
Stage 2	-	-	-	-	-	-	746	692	-	621	514	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1311	-	-	1252	-	-	251	292	866	350	284	787
Mov Cap-2 Maneuver	-	-	-	-	-	-	251	292	-	350	284	-
Stage 1	-	-	-	-	-	-	456	478	-	677	692	-
Stage 2	-	-	-	-	-	-	682	690	-	561	466	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.3	0.1	20.4	10.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	270	1311	-	-	1252	-	-	350	787
HCM Lane V/C Ratio	0.134	0.093	-	-	0.003	-	-	0.013	0.084
HCM Control Delay (s)	20.4	8	-	-	7.9	-	-	15.4	10
HCM Lane LOS	C	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.5	0.3	-	-	0	-	-	0	0.3

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	207	214	4	0	5
Future Vol, veh/h	21	207	214	4	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	246	255	5	0	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	260	0	-	0	553	257
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	296	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1304	-	-	-	494	782
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	755	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1304	-	-	-	483	782
Mov Cap-2 Maneuver	-	-	-	-	567	-
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	738	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1304	-	-	-	782
HCM Lane V/C Ratio	0.019	-	-	-	0.008
HCM Control Delay (s)	7.8	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	88	120	166	41	18	53
Future Vol, veh/h	88	120	166	41	18	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	98	133	184	46	20	59

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	230	0	-	0	536	207
Stage 1	-	-	-	-	207	-
Stage 2	-	-	-	-	329	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1338	-	-	-	505	833
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	729	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1338	-	-	-	465	833
Mov Cap-2 Maneuver	-	-	-	-	544	-
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	671	-

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1338	-	-	-	734
HCM Lane V/C Ratio	0.073	-	-	-	0.107
HCM Control Delay (s)	7.9	-	-	-	10.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	133	3	22	200	32	3	0	15	16	0	3
Future Vol, veh/h	2	133	3	22	200	32	3	0	15	16	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	155	3	26	233	37	3	0	17	19	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	270	0	0	158	0	0	465	482	156	472	465	251
Stage 1	-	-	-	-	-	-	161	161	-	302	302	-
Stage 2	-	-	-	-	-	-	304	321	-	170	163	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1293	-	-	1422	-	-	508	484	890	502	495	788
Stage 1	-	-	-	-	-	-	841	765	-	707	664	-
Stage 2	-	-	-	-	-	-	705	652	-	832	763	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1293	-	-	1422	-	-	497	472	890	483	483	788
Mov Cap-2 Maneuver	-	-	-	-	-	-	497	472	-	483	483	-
Stage 1	-	-	-	-	-	-	839	763	-	706	649	-
Stage 2	-	-	-	-	-	-	686	638	-	814	761	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.7	9.7	12.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	786	1293	-	-	1422	-	-	514
HCM Lane V/C Ratio	0.027	0.002	-	-	0.018	-	-	0.043
HCM Control Delay (s)	9.7	7.8	0	-	7.6	0	-	12.3
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	164	175	4	0	6
Future Vol, veh/h	0	164	175	4	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	189	201	5	0	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	203
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	838
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	838
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	838
HCM Lane V/C Ratio	-	-	-	0.008
HCM Control Delay (s)	-	-	-	9.3
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	479	11	11	912	213	7	0	7	164	0	109
Future Volume (veh/h)	71	479	11	11	912	213	7	0	7	164	0	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	81	544	12	12	1036	242	8	0	8	186	0	124
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	1757	39	39	1132	262	311	16	276	658	0	665
Arrive On Green	0.05	0.50	0.50	0.41	0.41	0.41	0.42	0.00	0.42	0.42	0.00	0.42
Sat Flow, veh/h	1774	3541	78	12	2776	642	620	38	658	1402	0	1583
Grp Volume(v), veh/h	81	272	284	693	0	597	16	0	0	186	0	124
Grp Sat Flow(s),veh/h/ln	1774	1770	1849	1848	0	1582	1316	0	0	1402	0	1583
Q Serve(g_s), s	4.9	9.8	9.8	11.3	0.0	38.5	0.0	0.0	0.0	4.0	0.0	5.3
Cycle Q Clear(g_c), s	4.9	9.8	9.8	38.0	0.0	38.5	5.3	0.0	0.0	9.3	0.0	5.3
Prop In Lane	1.00		0.04	0.02		0.41	0.50		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	83	878	918	787	0	645	603	0	0	658	0	665
V/C Ratio(X)	0.98	0.31	0.31	0.88	0.00	0.93	0.03	0.00	0.00	0.28	0.00	0.19
Avail Cap(c_a), veh/h	83	878	918	827	0	679	603	0	0	658	0	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.0	16.1	16.1	30.0	0.0	30.2	18.3	0.0	0.0	20.7	0.0	19.6
Incr Delay (d2), s/veh	91.6	0.2	0.2	10.5	0.0	18.2	0.1	0.0	0.0	1.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	4.8	5.0	21.6	0.0	20.0	0.3	0.0	0.0	3.9	0.0	2.4
LnGrp Delay(d),s/veh	142.7	16.3	16.3	40.5	0.0	48.4	18.3	0.0	0.0	21.8	0.0	20.2
LnGrp LOS	F	B	B	D		D	B			C		C
Approach Vol, veh/h		637			1290			16			310	
Approach Delay, s/veh		32.3			44.2			18.3			21.2	
Approach LOS		C			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6	7	8
Phs Duration (G+Y+Rc), s		49.5		57.7		49.5	9.5	48.2
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		45.0		46.0		45.0	5.0	46.0
Max Q Clear Time (g_c+I1), s		7.3		11.8		11.3	6.9	40.5
Green Ext Time (p_c), s		1.5		17.4		1.4	0.0	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	37.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	449	164	260	824	139	170	252	111	133	203	115
Future Volume (veh/h)	37	449	164	260	824	139	170	252	111	133	203	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	44	535	195	310	981	165	202	300	132	158	242	137
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	612	222	250	1004	169	235	601	511	191	555	472
Arrive On Green	0.05	0.24	0.24	0.14	0.33	0.33	0.13	0.32	0.32	0.11	0.30	0.30
Sat Flow, veh/h	1774	2545	924	1774	3033	510	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	44	371	359	310	572	574	202	300	132	158	242	137
Grp Sat Flow(s),veh/h/ln	1774	1770	1700	1774	1770	1773	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.3	19.3	19.4	13.5	30.6	30.6	10.7	12.4	5.9	8.3	10.0	6.4
Cycle Q Clear(g_c), s	2.3	19.3	19.4	13.5	30.6	30.6	10.7	12.4	5.9	8.3	10.0	6.4
Prop In Lane	1.00		0.54	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	425	409	250	586	587	235	601	511	191	555	472
V/C Ratio(X)	0.49	0.87	0.88	1.24	0.98	0.98	0.86	0.50	0.26	0.83	0.44	0.29
Avail Cap(c_a), veh/h	250	490	471	250	586	587	250	601	511	250	555	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	34.9	35.0	41.1	31.6	31.6	40.6	26.2	23.9	41.8	27.1	25.8
Incr Delay (d2), s/veh	4.1	14.4	15.5	136.5	31.1	31.5	23.9	2.9	1.2	15.8	2.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	11.1	10.8	16.0	20.0	20.1	6.8	6.9	2.7	4.9	5.6	3.0
LnGrp Delay(d),s/veh	48.3	49.3	50.4	177.5	62.7	63.1	64.5	29.1	25.2	57.6	29.6	27.4
LnGrp LOS	D	D	D	F	E	E	E	C	C	E	C	C
Approach Vol, veh/h		774			1456			634			537	
Approach Delay, s/veh		49.8			87.3			39.6			37.2	
Approach LOS		D			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	35.4	18.0	27.5	17.2	33.0	9.3	36.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	10.3	14.4	15.5	21.4	12.7	12.0	4.3	32.6
Green Ext Time (p_c), s	0.1	3.6	0.0	1.6	0.0	3.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	62.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	77	34	96	86	109	46	400	94	83	529	21
Future Volume (veh/h)	0	77	34	96	86	109	46	400	94	83	529	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	96	42	120	108	136	58	500	118	104	661	26
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	207	86	315	133	168	114	610	144	159	790	31
Arrive On Green	0.00	0.09	0.09	0.18	0.18	0.18	0.06	0.42	0.42	0.09	0.44	0.44
Sat Flow, veh/h	1774	2441	1013	1774	751	945	1774	1458	344	1774	1780	70
Grp Volume(v), veh/h	0	68	70	120	0	244	58	0	618	104	0	687
Grp Sat Flow(s),veh/h/ln	1774	1770	1684	1774	0	1696	1774	0	1802	1774	0	1850
Q Serve(g_s), s	0.0	2.9	3.1	4.7	0.0	10.8	2.5	0.0	23.8	4.4	0.0	25.7
Cycle Q Clear(g_c), s	0.0	2.9	3.1	4.7	0.0	10.8	2.5	0.0	23.8	4.4	0.0	25.7
Prop In Lane	1.00		0.60	1.00		0.56	1.00		0.19	1.00		0.04
Lane Grp Cap(c), veh/h	151	150	143	315	0	301	114	0	753	159	0	821
V/C Ratio(X)	0.00	0.45	0.49	0.38	0.00	0.81	0.51	0.00	0.82	0.66	0.00	0.84
Avail Cap(c_a), veh/h	456	455	433	456	0	436	161	0	753	456	0	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	34.1	34.2	28.4	0.0	30.9	35.4	0.0	20.2	34.5	0.0	19.3
Incr Delay (d2), s/veh	0.0	2.1	2.6	0.8	0.0	7.3	3.5	0.0	9.7	4.5	0.0	9.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	1.5	2.3	0.0	5.7	1.3	0.0	13.7	2.4	0.0	15.2
LnGrp Delay(d),s/veh	0.0	36.2	36.7	29.2	0.0	38.3	38.9	0.0	29.9	39.0	0.0	29.2
LnGrp LOS		D	D	C		D	D		C	D		C
Approach Vol, veh/h		138			364			676			791	
Approach Delay, s/veh		36.5			35.3			30.7			30.5	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	37.2		11.2	9.5	39.2		18.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	12.4	25.8		5.1	4.5	27.7		12.8
Green Ext Time (p_c), s	0.2	0.0		0.6	0.0	4.5		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	404	167	40	462	59	172	369	124	102	398	152
Future Volume (veh/h)	100	404	167	40	462	59	172	369	124	102	398	152
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	112	454	188	45	519	66	193	415	139	115	447	171
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	659	271	96	766	97	230	712	691	147	625	659
Arrive On Green	0.08	0.27	0.27	0.05	0.24	0.24	0.13	0.38	0.38	0.08	0.34	0.34
Sat Flow, veh/h	1774	2449	1006	1774	3161	401	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	112	327	315	45	290	295	193	415	139	115	447	171
Grp Sat Flow(s),veh/h/ln	1774	1770	1685	1774	1770	1792	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.3	14.1	14.3	2.1	12.6	12.7	9.0	15.0	4.6	5.4	17.8	6.0
Cycle Q Clear(g_c), s	5.3	14.1	14.3	2.1	12.6	12.7	9.0	15.0	4.6	5.4	17.8	6.0
Prop In Lane	1.00		0.60	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	476	454	96	429	434	230	712	691	147	625	659
V/C Ratio(X)	0.78	0.69	0.69	0.47	0.68	0.68	0.84	0.58	0.20	0.78	0.72	0.26
Avail Cap(c_a), veh/h	282	552	525	282	552	559	282	712	691	282	625	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	27.8	27.9	39.0	29.2	29.2	36.1	20.9	14.8	38.2	24.7	16.2
Incr Delay (d2), s/veh	8.9	2.9	3.3	3.6	2.2	2.3	16.6	3.5	0.7	8.8	6.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	7.3	7.1	1.1	6.4	6.5	5.5	8.4	2.1	3.0	10.4	2.8
LnGrp Delay(d),s/veh	47.3	30.8	31.2	42.6	31.4	31.5	52.7	24.3	15.5	47.1	31.6	17.2
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		754			630			747			733	
Approach Delay, s/veh		33.4			32.2			30.0			30.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	37.0	9.1	27.4	15.5	33.0	11.4	25.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	7.4	17.0	4.1	16.3	11.0	19.8	7.3	14.7
Green Ext Time (p_c), s	0.1	5.1	0.0	5.4	0.1	4.2	0.1	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2035) With-Project Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	850	181	137	508	60	182	708	195	79	549	216
Future Volume (veh/h)	267	850	181	137	508	60	182	708	195	79	549	216
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	272	867	185	140	518	61	186	722	199	81	560	220
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	1007	450	173	760	89	220	1279	726	116	1072	707
Arrive On Green	0.14	0.28	0.28	0.10	0.24	0.24	0.12	0.36	0.36	0.07	0.30	0.30
Sat Flow, veh/h	1774	3539	1583	1774	3192	375	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	272	867	185	140	286	293	186	722	199	81	560	220
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1797	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	13.5	21.8	8.9	7.3	13.8	13.9	9.7	15.4	7.3	4.2	12.3	8.4
Cycle Q Clear(g_c), s	13.5	21.8	8.9	7.3	13.8	13.9	9.7	15.4	7.3	4.2	12.3	8.4
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	1007	450	173	422	428	220	1279	726	116	1072	707
V/C Ratio(X)	1.07	0.86	0.41	0.81	0.68	0.68	0.85	0.56	0.27	0.70	0.52	0.31
Avail Cap(c_a), veh/h	255	1007	450	255	499	506	255	1279	726	255	1072	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	31.9	27.3	41.6	32.6	32.6	40.3	24.1	15.8	43.0	27.1	16.7
Incr Delay (d2), s/veh	75.6	7.7	0.6	11.6	3.0	3.0	20.2	1.8	0.9	7.3	1.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	11.7	3.9	4.1	7.1	7.3	6.0	7.8	3.4	2.3	6.3	3.9
LnGrp Delay(d),s/veh	115.9	39.6	27.9	53.2	35.5	35.6	60.5	25.9	16.7	50.4	29.0	17.9
LnGrp LOS	F	D	C	D	D	D	E	C	B	D	C	B
Approach Vol, veh/h		1324			719			1107			861	
Approach Delay, s/veh		53.7			39.0			30.1			28.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	38.5	13.7	31.3	16.1	33.0	18.0	26.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	6.2	17.4	9.3	23.8	11.7	14.3	15.5	15.9
Green Ext Time (p_c), s	0.1	6.9	0.1	2.1	0.1	8.2	0.0	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	38	1047	0	0	866
Future Vol, veh/h	0	38	1047	0	0	866
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	1068	0	0	884

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1421	534	0	0	1068	0
Stage 1	1068	-	-	-	-	-
Stage 2	353	-	-	-	-	-
Critical Hdwy	6.29	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	155	491	-	-	648	-
Stage 1	285	-	-	-	-	-
Stage 2	646	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	155	491	-	-	648	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	285	-	-	-	-	-
Stage 2	646	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	491	648	-
HCM Lane V/C Ratio	-	-	0.079	-	-
HCM Control Delay (s)	-	-	13	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	160	259	258	112	26	162	981	261	47	806	44
Future Volume (veh/h)	91	160	259	258	112	26	162	981	261	47	806	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	92	162	262	261	113	26	164	991	264	47	814	44
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	173	279	247	637	542	197	1251	560	92	1042	466
Arrive On Green	0.07	0.27	0.27	0.14	0.34	0.34	0.11	0.35	0.35	0.05	0.29	0.29
Sat Flow, veh/h	1774	642	1038	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	92	0	424	261	113	26	164	991	264	47	814	44
Grp Sat Flow(s),veh/h/ln	1774	0	1680	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	4.9	0.0	23.9	13.5	4.1	1.1	8.8	24.3	12.5	2.5	20.4	2.0
Cycle Q Clear(g_c), s	4.9	0.0	23.9	13.5	4.1	1.1	8.8	24.3	12.5	2.5	20.4	2.0
Prop In Lane	1.00		0.62	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	0	452	247	637	542	197	1251	560	92	1042	466
V/C Ratio(X)	0.78	0.00	0.94	1.06	0.18	0.05	0.83	0.79	0.47	0.51	0.78	0.09
Avail Cap(c_a), veh/h	247	0	460	247	637	542	247	1251	560	247	1042	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	0.0	34.6	41.7	22.3	21.3	42.2	28.1	24.3	44.7	31.3	24.8
Incr Delay (d2), s/veh	10.5	0.0	26.8	72.4	0.1	0.0	17.5	5.2	2.8	4.3	5.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	14.4	11.5	2.1	0.5	5.2	12.7	5.9	1.3	10.8	0.9
LnGrp Delay(d),s/veh	55.0	0.0	61.4	114.1	22.4	21.3	59.6	33.3	27.1	49.0	37.1	25.2
LnGrp LOS	D		E	F	C	C	E	C	C	D	D	C
Approach Vol, veh/h		516			400			1419			905	
Approach Delay, s/veh		60.3			82.2			35.2			37.2	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	38.7	18.0	30.6	15.2	33.0	10.9	37.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	4.5	26.3	15.5	25.9	10.8	22.4	6.9	6.1
Green Ext Time (p_c), s	0.0	1.9	0.0	0.2	0.1	5.1	0.1	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	45.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	242	4	245	377	1167	0	0	960	367
Future Volume (veh/h)	0	0	0	242	4	245	377	1167	0	0	960	367
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				252	4	255	393	1216	0	0	1000	382
Adj No. of Lanes				0	1	1	1	2	0	0	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				358	6	324	429	2431	0	0	984	372
Arrive On Green				0.20	0.20	0.20	0.24	0.69	0.00	0.00	0.39	0.39
Sat Flow, veh/h				1748	28	1583	1774	3632	0	0	2608	950
Grp Volume(v), veh/h				256	0	255	393	1216	0	0	700	682
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1695
Q Serve(g_s), s				11.1	0.0	12.7	17.9	13.6	0.0	0.0	32.5	32.5
Cycle Q Clear(g_c), s				11.1	0.0	12.7	17.9	13.6	0.0	0.0	32.5	32.5
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.56
Lane Grp Cap(c), veh/h				364	0	324	429	2431	0	0	692	663
V/C Ratio(X)				0.70	0.00	0.79	0.92	0.50	0.00	0.00	1.01	1.03
Avail Cap(c_a), veh/h				724	0	646	446	2431	0	0	692	663
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				30.7	0.0	31.3	30.7	6.2	0.0	0.0	25.3	25.3
Incr Delay (d2), s/veh				2.5	0.0	4.2	23.3	0.7	0.0	0.0	37.1	42.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.7	0.0	5.9	11.5	6.8	0.0	0.0	22.9	22.9
LnGrp Delay(d),s/veh				33.2	0.0	35.5	54.0	6.9	0.0	0.0	62.5	67.6
LnGrp LOS				C		D	D	A			F	F
Approach Vol, veh/h					511			1609			1382	
Approach Delay, s/veh					34.4			18.4			65.0	
Approach LOS					C			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		61.6			24.6	37.0		21.5
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		57.1			20.9	31.7		33.9
Max Q Clear Time (g_c+I1), s		15.6			19.9	34.5		14.7
Green Ext Time (p_c), s		29.5			0.1	0.0		2.3

Intersection Summary		
HCM 2010 Ctrl Delay		39.1
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	562	3	354	0	0	0	0	992	322	262	946	0
Future Volume (veh/h)	562	3	354	0	0	0	0	992	322	262	946	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	587	0	369				0	1033	335	273	985	0
Adj No. of Lanes	2	0	1				0	3	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	946	0	422				0	1577	511	315	2262	0
Arrive On Green	0.27	0.00	0.27				0.00	0.41	0.41	0.18	0.64	0.00
Sat Flow, veh/h	3548	0	1583				0	3970	1233	1774	3632	0
Grp Volume(v), veh/h	587	0	369				0	921	447	273	985	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1695	1645	1774	1770	0
Q Serve(g_s), s	13.9	0.0	21.3				0.0	20.9	20.9	14.3	13.3	0.0
Cycle Q Clear(g_c), s	13.9	0.0	21.3				0.0	20.9	20.9	14.3	13.3	0.0
Prop In Lane	1.00		1.00				0.00		0.75	1.00		0.00
Lane Grp Cap(c), veh/h	946	0	422				0	1406	682	315	2262	0
V/C Ratio(X)	0.62	0.00	0.87				0.00	0.65	0.66	0.87	0.44	0.00
Avail Cap(c_a), veh/h	1110	0	495				0	1406	682	555	2262	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.8	0.0	33.5				0.0	22.5	22.5	38.2	8.6	0.0
Incr Delay (d2), s/veh	0.8	0.0	14.2				0.0	1.1	2.3	7.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	11.0				0.0	9.9	9.9	7.6	6.6	0.0
LnGrp Delay(d),s/veh	31.6	0.0	47.7				0.0	23.6	24.8	45.5	9.2	0.0
LnGrp LOS	C		D					C	C	D	A	
Approach Vol, veh/h		956						1368			1258	
Approach Delay, s/veh		37.8						24.0			17.1	
Approach LOS		D						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	21.5	44.1		30.0		65.6		
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	29.3	26.7		29.9		61.1		
Max Q Clear Time (g_c+I1), s	16.3	22.9		23.3		15.3		
Green Ext Time (p_c), s	0.7	3.5		2.2		27.4		

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑			↕			↕	
Traffic Vol, veh/h	0	472	22	0	710	0	0	0	22	0	0	0
Future Vol, veh/h	0	472	22	0	710	0	0	0	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	502	23	0	755	0	0	0	23	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	1269	1269	263	956	1281	755
Stage 1	-	-	-	-	-	-	514	514	-	755	755	-
Stage 2	-	-	-	-	-	-	755	755	-	201	526	-
Critical Hdwy	-	-	-	-	-	-	6.78	6.53	7.13	6.78	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	7.33	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.73	5.53	-
Follow-up Hdwy	-	-	-	-	-	-	3.669	4.019	3.919	3.669	4.019	3.319
Pot Cap-1 Maneuver	0	-	-	0	-	0	160	168	627	254	165	408
Stage 1	0	-	-	0	-	0	443	534	-	389	416	-
Stage 2	0	-	-	0	-	0	389	416	-	745	528	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	160	168	627	245	165	408
Mov Cap-2 Maneuver	-	-	-	-	-	-	160	168	-	245	165	-
Stage 1	-	-	-	-	-	-	443	534	-	389	416	-
Stage 2	-	-	-	-	-	-	389	416	-	717	528	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	627	-	-	-	-
HCM Lane V/C Ratio	0.037	-	-	-	-
HCM Control Delay (s)	11	-	-	-	0
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	237.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	278	375	156	28	299	35	164	2	24	37	0	239
Future Vol, veh/h	278	375	156	28	299	35	164	2	24	37	0	239
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	180	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	316	426	177	32	340	40	186	2	27	42	0	272

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	380	0	0	603	0	0	1570	1590	302	1269	1658	360
Stage 1	-	-	-	-	-	-	1147	1147	-	423	423	-
Stage 2	-	-	-	-	-	-	423	443	-	846	1235	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1177	-	-	973	-	-	~ 82	107	695	135	97	684
Stage 1	-	-	-	-	-	-	212	273	-	608	587	-
Stage 2	-	-	-	-	-	-	608	575	-	324	248	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1177	-	-	973	-	-	~ 38	76	695	98	69	684
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 38	76	-	98	69	-
Stage 1	-	-	-	-	-	-	~ 155	200	-	445	568	-
Stage 2	-	-	-	-	-	-	355	556	-	225	181	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0.7	$ 1997.3	20.8
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	43	1177	-	-	973	-	-	98	684
HCM Lane V/C Ratio	5.021	0.268	-	-	0.033	-	-	0.429	0.397
HCM Control Delay (s)	$ 1997.3	9.2	-	-	8.8	-	-	66.9	13.7
HCM Lane LOS	F	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	24.9	1.1	-	-	0.1	-	-	1.8	1.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	426	352	7	10	10
Future Vol, veh/h	11	426	352	7	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	468	387	8	11	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	395	0	-	0	883	391
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	492	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1164	-	-	-	316	658
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	615	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1164	-	-	-	312	658
Mov Cap-2 Maneuver	-	-	-	-	435	-
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1164	-	-	-	524
HCM Lane V/C Ratio	0.01	-	-	-	0.042
HCM Control Delay (s)	8.1	0	-	-	12.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	209	224	140	79	99	221
Future Vol, veh/h	209	224	140	79	99	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	230	246	154	87	109	243

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	241	0	-	0	902	197
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	705	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1326	-	-	-	308	844
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	490	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1326	-	-	-	246	844
Mov Cap-2 Maneuver	-	-	-	-	331	-
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	392	-

Approach	EB	WB	SB
HCM Control Delay, s	4	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1326	-	-	-	570
HCM Lane V/C Ratio	0.173	-	-	-	0.617
HCM Control Delay (s)	8.3	-	-	-	20.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.6	-	-	-	4.2

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	287	24	88	176	105	24	0	93	84	0	19
Future Vol, veh/h	13	287	24	88	176	105	24	0	93	84	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	309	26	95	189	113	26	0	100	90	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	302	0	0	334	0	0	794	840	322	834	797	246
Stage 1	-	-	-	-	-	-	349	349	-	435	435	-
Stage 2	-	-	-	-	-	-	445	491	-	399	362	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1259	-	-	1225	-	-	306	302	719	288	319	793
Stage 1	-	-	-	-	-	-	667	633	-	600	580	-
Stage 2	-	-	-	-	-	-	592	548	-	627	625	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1259	-	-	1225	-	-	274	269	719	227	285	793
Mov Cap-2 Maneuver	-	-	-	-	-	-	274	269	-	227	285	-
Stage 1	-	-	-	-	-	-	658	624	-	592	525	-
Stage 2	-	-	-	-	-	-	522	496	-	532	616	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	2	13.7	28.6
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	539	1259	-	-	1225	-	-	261
HCM Lane V/C Ratio	0.233	0.011	-	-	0.077	-	-	0.424
HCM Control Delay (s)	13.7	7.9	0	-	8.2	0	-	28.6
HCM Lane LOS	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.9	0	-	-	0.3	-	-	2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	464	240	8	0	9
Future Vol, veh/h	0	464	240	8	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	494	255	9	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	260
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	779
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	779
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	779
HCM Lane V/C Ratio	-	-	-	0.012
HCM Control Delay (s)	-	-	-	9.7
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	979	44	43	606	58	47	0	47	85	0	62
Future Volume (veh/h)	120	979	44	43	606	58	47	0	47	85	0	62
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	138	1125	51	49	697	67	54	0	54	98	0	71
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	1732	79	82	1093	108	329	16	295	626	0	657
Arrive On Green	0.05	0.50	0.50	0.41	0.41	0.41	0.41	0.00	0.41	0.41	0.00	0.41
Sat Flow, veh/h	1774	3448	156	108	2635	260	673	38	711	1345	0	1583
Grp Volume(v), veh/h	138	577	599	388	0	425	108	0	0	98	0	71
Grp Sat Flow(s),veh/h/ln	1774	1770	1835	1355	0	1649	1423	0	0	1345	0	1583
Q Serve(g_s), s	5.0	26.1	26.2	9.0	0.0	22.0	2.8	0.0	0.0	0.0	0.0	3.0
Cycle Q Clear(g_c), s	5.0	26.1	26.2	25.7	0.0	22.0	5.8	0.0	0.0	4.8	0.0	3.0
Prop In Lane	1.00		0.09	0.13		0.16	0.50		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	82	889	922	599	0	684	640	0	0	626	0	657
V/C Ratio(X)	1.69	0.65	0.65	0.65	0.00	0.62	0.17	0.00	0.00	0.16	0.00	0.11
Avail Cap(c_a), veh/h	82	889	922	599	0	684	640	0	0	626	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	19.9	19.9	24.9	0.0	25.0	20.2	0.0	0.0	20.0	0.0	19.5
Incr Delay (d2), s/veh	356.5	3.7	3.5	5.4	0.0	4.2	0.6	0.0	0.0	0.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	13.6	14.0	10.4	0.0	10.8	2.2	0.0	0.0	1.9	0.0	1.4
LnGrp Delay(d),s/veh	408.3	23.6	23.5	30.2	0.0	29.2	20.8	0.0	0.0	20.5	0.0	19.8
LnGrp LOS	F	C	C	C		C	C			C		B
Approach Vol, veh/h		1314			813			108			169	
Approach Delay, s/veh		64.0			29.7			20.8			20.2	
Approach LOS		E			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		59.0		49.5	9.5	49.5		49.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s		45.0		45.0	5.0	45.0		45.0
Max Q Clear Time (g_c+I1), s		28.2		6.8	7.0	27.7		7.8
Green Ext Time (p_c), s		12.0		1.5	0.0	12.3		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	47.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	836	120	94	483	83	121	264	252	78	195	90
Future Volume (veh/h)	122	836	120	94	483	83	121	264	252	78	195	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	133	909	130	102	525	90	132	287	274	85	212	98
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	940	134	131	854	146	166	649	552	124	606	515
Arrive On Green	0.09	0.30	0.30	0.07	0.28	0.28	0.09	0.35	0.35	0.07	0.33	0.33
Sat Flow, veh/h	1774	3109	445	1774	3025	517	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	133	517	522	102	306	309	132	287	274	85	212	98
Grp Sat Flow(s),veh/h/ln	1774	1770	1784	1774	1770	1772	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.4	25.3	25.3	5.0	13.2	13.3	6.4	10.4	11.9	4.1	7.6	3.9
Cycle Q Clear(g_c), s	6.4	25.3	25.3	5.0	13.2	13.3	6.4	10.4	11.9	4.1	7.6	3.9
Prop In Lane	1.00		0.25	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	535	539	131	499	500	166	649	552	124	606	515
V/C Ratio(X)	0.80	0.97	0.97	0.78	0.61	0.62	0.80	0.44	0.50	0.69	0.35	0.19
Avail Cap(c_a), veh/h	273	535	539	273	535	536	273	649	552	273	606	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	30.1	30.1	39.9	27.3	27.3	38.9	22.0	22.5	39.8	22.5	21.3
Incr Delay (d2), s/veh	8.4	30.5	30.4	9.5	1.9	1.9	8.5	2.2	3.2	6.6	1.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	16.9	17.0	2.8	6.6	6.8	3.5	5.7	5.7	2.2	4.2	1.8
LnGrp Delay(d),s/veh	47.3	60.7	60.6	49.4	29.2	29.3	47.4	24.2	25.7	46.4	24.1	22.1
LnGrp LOS	D	E	E	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1172			717			693			395	
Approach Delay, s/veh		59.1			32.1			29.2			28.4	
Approach LOS		E			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	35.1	11.0	31.0	12.7	33.0	12.7	29.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	10.1	13.9	7.0	27.3	8.4	9.6	8.4	15.3
Green Ext Time (p_c), s	0.1	3.8	0.1	0.0	0.1	4.2	0.1	7.5

Intersection Summary	
HCM 2010 Ctrl Delay	41.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	194	86	86	101	107	77	480	156	36	339	43
Future Volume (veh/h)	66	194	86	86	101	107	77	480	156	36	339	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	69	204	91	91	106	113	81	505	164	38	357	45
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	304	131	283	132	140	128	552	179	151	687	87
Arrive On Green	0.13	0.13	0.13	0.16	0.16	0.16	0.07	0.41	0.41	0.09	0.42	0.42
Sat Flow, veh/h	1774	2411	1038	1774	826	881	1774	1348	438	1774	1622	204
Grp Volume(v), veh/h	69	148	147	91	0	219	81	0	669	38	0	402
Grp Sat Flow(s),veh/h/ln	1774	1770	1680	1774	0	1707	1774	0	1786	1774	0	1827
Q Serve(g_s), s	2.9	6.5	6.9	3.7	0.0	10.1	3.6	0.0	29.0	1.6	0.0	13.3
Cycle Q Clear(g_c), s	2.9	6.5	6.9	3.7	0.0	10.1	3.6	0.0	29.0	1.6	0.0	13.3
Prop In Lane	1.00		0.62	1.00		0.52	1.00		0.25	1.00		0.11
Lane Grp Cap(c), veh/h	223	223	211	283	0	272	128	0	732	151	0	773
V/C Ratio(X)	0.31	0.66	0.70	0.32	0.00	0.80	0.64	0.00	0.91	0.25	0.00	0.52
Avail Cap(c_a), veh/h	435	434	412	435	0	419	154	0	732	435	0	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	34.2	34.3	30.5	0.0	33.2	37.0	0.0	22.8	35.0	0.0	17.5
Incr Delay (d2), s/veh	0.8	3.4	4.1	0.7	0.0	6.4	6.1	0.0	17.9	0.9	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.4	3.4	1.9	0.0	5.3	2.0	0.0	17.8	0.8	0.0	7.2
LnGrp Delay(d),s/veh	33.4	37.5	38.4	31.2	0.0	39.6	43.1	0.0	40.8	35.9	0.0	20.0
LnGrp LOS	C	D	D	C		D	D		D	D		B
Approach Vol, veh/h		364			310			750			440	
Approach Delay, s/veh		37.1			37.1			41.0			21.4	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	38.1		14.8	10.4	39.2		17.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.1	21.7		20.1	7.1	34.7		20.1
Max Q Clear Time (g_c+I1), s	12.6	31.0		8.9	5.6	15.3		12.1
Green Ext Time (p_c), s	0.0	0.0		1.4	0.0	7.4		0.9

Intersection Summary		
HCM 2010 Ctrl Delay	35.0	
HCM 2010 LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	965	208	99	567	85	231	405	184	111	256	119
Future Volume (veh/h)	234	965	208	99	567	85	231	405	184	111	256	119
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	244	1005	217	103	591	89	241	422	192	116	267	124
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	858	185	131	705	106	251	668	685	146	557	698
Arrive On Green	0.14	0.30	0.30	0.07	0.23	0.23	0.14	0.36	0.36	0.08	0.30	0.30
Sat Flow, veh/h	1774	2898	624	1774	3087	464	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	244	613	609	103	338	342	241	422	192	116	267	124
Grp Sat Flow(s),veh/h/ln	1774	1770	1753	1774	1770	1781	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	13.0	28.2	28.2	5.4	17.4	17.5	12.9	17.9	7.5	6.1	11.2	4.5
Cycle Q Clear(g_c), s	13.0	28.2	28.2	5.4	17.4	17.5	12.9	17.9	7.5	6.1	11.2	4.5
Prop In Lane	1.00		0.36	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	524	519	131	404	407	251	668	685	146	557	698
V/C Ratio(X)	0.97	1.17	1.17	0.78	0.84	0.84	0.96	0.63	0.28	0.79	0.48	0.18
Avail Cap(c_a), veh/h	251	524	519	251	492	495	251	668	685	251	557	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	33.5	33.5	43.4	35.1	35.1	40.6	25.3	17.5	42.9	27.3	16.2
Incr Delay (d2), s/veh	48.4	95.1	97.0	9.8	10.2	10.4	45.2	4.5	1.0	9.3	2.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	27.5	27.5	3.0	9.6	9.7	9.5	10.0	3.5	3.4	6.2	2.1
LnGrp Delay(d),s/veh	89.1	128.6	130.5	53.2	45.3	45.5	85.8	29.8	18.5	52.2	30.2	16.7
LnGrp LOS	F	F	F	D	D	D	F	C	B	D	C	B
Approach Vol, veh/h		1466			783			855			507	
Approach Delay, s/veh		122.8			46.4			43.1			32.0	
Approach LOS		F			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	38.7	11.5	32.7	18.0	33.0	18.0	26.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	28.5	13.5	26.5	13.5	28.5	13.5	26.5
Max Q Clear Time (g_c+I1), s	9.1	19.9	7.4	30.2	14.9	13.2	15.0	19.5
Green Ext Time (p_c), s	0.1	3.5	0.1	0.0	0.0	4.9	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	74.6
HCM 2010 LOS	E

Synchro Queue Reports

Existing

Queues
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Existing (2017) Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	141	303	134	171	620	117	461	98	55	591	280
v/c Ratio	0.62	0.37	0.28	0.70	0.73	0.54	0.37	0.11	0.31	0.50	0.31
Control Delay	51.5	30.6	7.1	55.2	36.7	48.9	24.5	5.1	45.6	28.2	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	30.6	7.1	55.2	36.7	48.9	24.5	5.1	45.6	28.2	7.8
Queue Length 50th (ft)	79	79	0	97	175	66	106	6	31	151	38
Queue Length 95th (ft)	149	120	44	#201	244	127	170	34	70	226	98
Internal Link Dist (ft)		1991			1226		695			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	278	1091	580	278	1085	278	1258	927	278	1174	929
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.28	0.23	0.62	0.57	0.42	0.37	0.11	0.20	0.50	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	40	178	59	77	19	102	621	59	19	837	42
v/c Ratio	0.20	0.56	0.28	0.27	0.06	0.41	0.30	0.06	0.10	0.52	0.05
Control Delay	35.4	23.7	35.5	31.2	0.3	36.0	10.6	0.5	35.6	19.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	23.7	35.5	31.2	0.3	36.0	10.6	0.5	35.6	19.2	0.1
Queue Length 50th (ft)	17	38	25	32	0	44	68	0	8	156	0
Queue Length 95th (ft)	50	103	66	74	0	98	175	4	31	277	0
Internal Link Dist (ft)		2085		364			354			592	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	351	709	351	725	686	351	2092	983	351	1615	784
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.25	0.17	0.11	0.03	0.29	0.30	0.06	0.05	0.52	0.05

Intersection Summary

Queues
4: Heacock St & SR 60 WB Ramp

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	272	157	278	631	1025
v/c Ratio	0.70	0.39	0.77	0.26	0.71
Control Delay	40.7	18.7	46.8	6.5	24.7
Queue Delay	0.0	0.0	0.2	0.5	0.4
Total Delay	40.7	18.7	47.0	7.0	25.0
Queue Length 50th (ft)	134	39	137	58	220
Queue Length 95th (ft)	213	90	#246	114	#394
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	712	676	437	2390	1446
Starvation Cap Reductn	0	0	12	1270	101
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.23	0.65	0.56	0.76

Intersection Summary

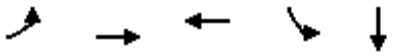
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Heacock St & SR 60 EB Ramp

Festival at Moreno Valley Mixed Use
Existing (2017) Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	109	108	379	812	153	847
v/c Ratio	0.31	0.31	0.81	0.33	0.59	0.35
Control Delay	31.1	31.0	31.0	15.3	46.0	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.9
Total Delay	31.1	31.0	31.0	15.3	46.0	8.0
Queue Length 50th (ft)	54	53	108	90	81	87
Queue Length 95th (ft)	101	100	211	168	150	172
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	567	570	651	2466	597	2442
Starvation Cap Reductn	0	0	0	0	0	1218
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.19	0.58	0.33	0.26	0.69

Intersection Summary

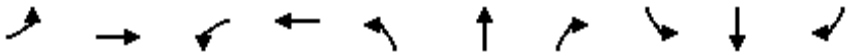


Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	52	449	945	147	90
v/c Ratio	0.55	0.30	0.78	0.22	0.10
Control Delay	70.5	17.8	31.5	18.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	70.5	17.8	31.5	18.4	0.2
Queue Length 50th (ft)	32	90	263	53	0
Queue Length 95th (ft)	#96	119	323	111	0
Internal Link Dist (ft)		1226	1262		1473
Turn Bay Length (ft)	150			40	
Base Capacity (vph)	94	2093	1701	676	860
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.21	0.56	0.22	0.10

Intersection Summary

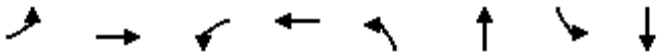
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
13: Indian St & Ironwood Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	38	586	107	837	143	150	67	111	171	95
v/c Ratio	0.24	0.66	0.51	0.78	0.63	0.22	0.10	0.52	0.28	0.16
Control Delay	44.7	32.5	47.9	34.5	51.7	25.3	1.5	48.2	26.7	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	32.5	47.9	34.5	51.7	25.3	1.5	48.2	26.7	4.4
Queue Length 50th (ft)	22	152	60	239	80	65	0	63	77	0
Queue Length 95th (ft)	51	199	109	298	140	118	4	113	133	21
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	275	1071	275	1149	275	690	659	275	612	597
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.55	0.39	0.73	0.52	0.22	0.10	0.40	0.28	0.16

Intersection Summary

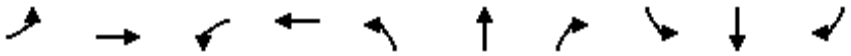


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	124	64	170	45	324	54	402
v/c Ratio	0.06	0.31	0.24	0.57	0.26	0.36	0.27	0.43
Control Delay	34.4	27.7	31.5	32.2	39.3	17.0	37.0	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	27.7	31.5	32.2	39.3	17.0	37.0	17.0
Queue Length 50th (ft)	5	22	28	62	21	102	25	135
Queue Length 95th (ft)	19	43	57	107	50	179	55	212
Internal Link Dist (ft)		299		2291		1240		1355
Turn Bay Length (ft)	150		80		145		100	
Base Capacity (vph)	495	974	495	512	174	893	495	933
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.13	0.13	0.33	0.26	0.36	0.11	0.43

Intersection Summary

Queues
15: Indian St & Sunnymead Blvd

Festival at Moreno Valley Mixed Use
Existing (2017) Weekday AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	56	259	22	287	92	224	66	64	253	98
v/c Ratio	0.26	0.41	0.12	0.51	0.38	0.28	0.07	0.29	0.32	0.10
Control Delay	36.0	23.6	35.5	31.5	36.5	18.2	3.2	36.1	19.6	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	23.6	35.5	31.5	36.5	18.2	3.2	36.1	19.6	3.3
Queue Length 50th (ft)	24	43	10	62	40	69	0	28	82	2
Queue Length 95th (ft)	62	81	33	107	89	143	19	68	168	24
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	354	1366	354	1371	354	812	1119	354	786	1106
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.19	0.06	0.21	0.26	0.28	0.06	0.18	0.32	0.09

Intersection Summary

Queues
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Existing (2017) Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	232	450	122	99	359	160	672	189	76	528	210
v/c Ratio	0.85	0.59	0.28	0.49	0.57	0.67	0.49	0.21	0.40	0.46	0.22
Control Delay	66.2	34.9	8.6	45.9	35.4	51.6	24.4	6.7	44.5	26.2	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.2	34.9	8.6	45.9	35.4	51.6	24.4	6.7	44.5	26.2	2.7
Queue Length 50th (ft)	126	121	3	52	94	83	146	22	40	120	0
Queue Length 95th (ft)	#292	176	47	108	137	#176	253	69	88	195	37
Internal Link Dist (ft)		1991			1226		585			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	273	1074	560	273	1066	273	1361	976	273	1155	941
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.42	0.22	0.36	0.34	0.59	0.49	0.19	0.28	0.46	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	57	251	83	76	30	133	976	110	24	703	44
v/c Ratio	0.28	0.67	0.37	0.18	0.07	0.52	0.55	0.13	0.13	0.50	0.06
Control Delay	40.0	30.5	40.3	28.6	0.3	42.9	18.8	4.4	39.7	23.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	40.0	30.5	40.3	28.6	0.3	42.9	19.3	4.4	39.7	23.4	0.2
Queue Length 50th (ft)	27	77	40	33	0	63	149	0	11	147	0
Queue Length 95th (ft)	70	164	92	73	0	136	355	32	39	258	0
Internal Link Dist (ft)		2085		313			354			702	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	335	682	335	693	661	335	1774	851	335	1416	702
Starvation Cap Reductn	0	0	0	0	0	0	375	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.37	0.25	0.11	0.05	0.40	0.70	0.13	0.07	0.50	0.06

Intersection Summary

Queues
4: Heacock St & SR 60 WB Ramp

Festival at Moreno Valley Mixed Use
Existing (2017) Weekday PM Peak Hour

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	209	160	356	1105	981
v/c Ratio	0.65	0.45	0.79	0.44	0.71
Control Delay	40.1	18.8	43.9	6.3	23.8
Queue Delay	0.0	0.0	3.2	1.3	0.2
Total Delay	40.1	18.8	47.1	7.5	24.0
Queue Length 50th (ft)	99	34	167	103	204
Queue Length 95th (ft)	166	87	#336	186	314
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	743	711	457	2497	1379
Starvation Cap Reductn	0	0	43	1099	59
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.23	0.86	0.79	0.74

Intersection Summary

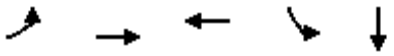
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Heacock St & SR 60 EB Ramp

Festival at Moreno Valley Mixed Use
Existing (2017) Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	246	249	348	1243	168	782
v/c Ratio	0.64	0.65	0.67	0.53	0.62	0.33
Control Delay	39.6	39.8	19.5	19.0	46.8	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.9
Total Delay	39.6	39.8	19.5	19.0	46.8	8.4
Queue Length 50th (ft)	134	136	71	168	92	88
Queue Length 95th (ft)	215	218	163	282	160	156
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	553	555	658	2351	583	2382
Starvation Cap Reductn	0	0	0	0	0	1226
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.45	0.53	0.53	0.29	0.68

Intersection Summary



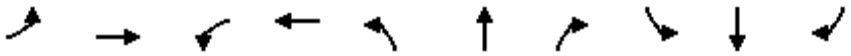
Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	98	702	501	75	54
v/c Ratio	1.21	0.40	0.34	0.13	0.06
Control Delay	211.7	17.6	21.8	20.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	211.7	17.6	21.8	20.5	0.1
Queue Length 50th (ft)	~83	153	118	32	0
Queue Length 95th (ft)	#183	190	154	61	0
Internal Link Dist (ft)		1226	1262		1473
Turn Bay Length (ft)	150			40	
Base Capacity (vph)	81	1777	1453	584	861
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.21	0.40	0.34	0.13	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

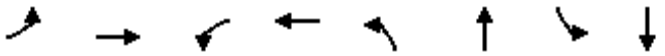
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
13: Indian St & Ironwood Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	95	604	50	406	66	130	133	63	86	71
v/c Ratio	0.42	0.64	0.26	0.53	0.32	0.18	0.19	0.31	0.12	0.10
Control Delay	41.7	29.4	40.7	30.0	40.9	22.6	5.5	40.9	22.2	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.7	29.4	40.7	30.0	40.9	22.6	5.5	40.9	22.2	1.8
Queue Length 50th (ft)	47	146	25	94	33	47	0	31	30	0
Queue Length 95th (ft)	103	222	64	152	78	107	41	75	75	11
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	324	1259	324	1260	324	724	697	324	722	684
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.48	0.15	0.32	0.20	0.18	0.19	0.19	0.12	0.10

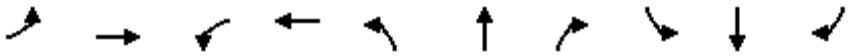
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	39	199	43	97	53	365	17	214
v/c Ratio	0.18	0.43	0.19	0.41	0.31	0.35	0.10	0.23
Control Delay	33.5	26.6	33.1	33.2	39.4	12.0	35.7	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	26.6	33.1	33.2	39.4	12.0	35.7	13.9
Queue Length 50th (ft)	17	35	19	38	24	76	8	61
Queue Length 95th (ft)	46	70	49	85	63	214	28	122
Internal Link Dist (ft)		299		2291		1240		1355
Turn Bay Length (ft)	150		80		145		100	
Base Capacity (vph)	495	986	495	512	174	1032	495	949
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.20	0.09	0.19	0.30	0.35	0.03	0.23

Intersection Summary

Queues
15: Indian St & Sunnymead Blvd



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	160	660	46	315	95	217	77	64	138	67
v/c Ratio	0.64	0.67	0.26	0.45	0.44	0.32	0.09	0.34	0.21	0.07
Control Delay	49.2	31.3	42.7	30.3	44.3	24.1	3.9	43.2	24.3	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	31.3	42.7	30.3	44.3	24.1	3.9	43.2	24.3	3.8
Queue Length 50th (ft)	83	166	24	75	50	87	0	33	54	0
Queue Length 95th (ft)	#175	247	61	120	104	169	24	77	114	22
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	297	1152	297	1153	297	684	967	297	660	943
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.57	0.15	0.27	0.32	0.32	0.08	0.22	0.21	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
1: Heacock St & Ironwood Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	141	297	133	171	614	114	459	98	55	590	280
v/c Ratio	0.62	0.36	0.28	0.70	0.72	0.53	0.36	0.11	0.31	0.50	0.31
Control Delay	51.3	30.5	7.1	55.0	36.5	48.4	24.4	5.1	45.5	28.0	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	30.5	7.1	55.0	36.5	48.4	24.4	5.1	45.5	28.0	7.6
Queue Length 50th (ft)	78	77	0	96	172	63	105	6	31	149	35
Queue Length 95th (ft)	149	117	44	#201	242	124	168	34	70	226	96
Internal Link Dist (ft)		1991			1226		695			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	278	1094	581	278	1088	278	1259	928	278	1177	934
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.27	0.23	0.62	0.56	0.41	0.36	0.11	0.20	0.50	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	40	167	52	66	4	102	621	80	16	837	42
v/c Ratio	0.20	0.54	0.25	0.26	0.01	0.41	0.29	0.08	0.09	0.51	0.05
Control Delay	34.4	19.6	34.5	31.8	0.0	35.0	9.8	1.7	34.5	18.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	19.6	34.5	31.8	0.0	35.0	9.8	1.7	34.5	18.1	0.1
Queue Length 50th (ft)	17	24	22	27	0	42	63	0	7	148	0
Queue Length 95th (ft)	49	84	59	66	0	95	165	13	27	264	0
Internal Link Dist (ft)		2085		364			354			592	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	352	718	352	727	688	352	2139	1002	352	1652	800
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.23	0.15	0.09	0.01	0.29	0.29	0.08	0.05	0.51	0.05

Intersection Summary

Queues
4: Heacock St & SR 60 WB Ramp

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	272	167	278	644	1018
v/c Ratio	0.70	0.41	0.77	0.27	0.70
Control Delay	40.7	18.8	46.8	6.5	24.5
Queue Delay	0.0	0.0	0.2	0.6	0.4
Total Delay	40.7	18.8	47.0	7.0	24.9
Queue Length 50th (ft)	134	41	137	60	217
Queue Length 95th (ft)	213	94	#246	116	#374
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	712	679	437	2390	1446
Starvation Cap Reductn	0	0	12	1264	101
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.25	0.65	0.57	0.76

Intersection Summary

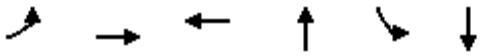
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Heacock St & SR 60 EB Ramp

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	116	115	379	811	150	843
v/c Ratio	0.33	0.33	0.81	0.33	0.59	0.34
Control Delay	31.6	31.5	30.7	15.2	45.8	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.9
Total Delay	31.6	31.5	30.7	15.2	45.8	7.9
Queue Length 50th (ft)	58	57	107	89	80	86
Queue Length 95th (ft)	106	105	210	167	147	171
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	568	570	653	2476	598	2444
Starvation Cap Reductn	0	0	0	0	0	1220
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.20	0.58	0.33	0.25	0.69

Intersection Summary



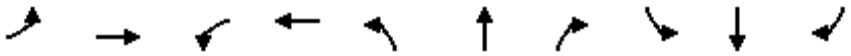
Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	52	461	957	16	147	90
v/c Ratio	0.57	0.30	0.80	0.02	0.22	0.11
Control Delay	72.9	17.4	32.6	0.1	19.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.9	17.4	32.6	0.1	19.3	0.3
Queue Length 50th (ft)	33	92	274	0	55	0
Queue Length 95th (ft)	#96	122	337	0	112	0
Internal Link Dist (ft)		1226	1262	148		1473
Turn Bay Length (ft)	150				40	
Base Capacity (vph)	92	2046	1582	784	654	848
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.23	0.60	0.02	0.22	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
13: Indian St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	38	593	101	831	143	145	61	111	170	95
v/c Ratio	0.24	0.67	0.49	0.78	0.63	0.21	0.09	0.52	0.28	0.16
Control Delay	44.7	32.7	47.4	34.4	51.6	25.2	0.8	48.1	26.6	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	32.7	47.4	34.4	51.6	25.2	0.8	48.1	26.6	4.4
Queue Length 50th (ft)	22	154	57	236	80	62	0	63	76	0
Queue Length 95th (ft)	51	202	104	295	140	115	0	113	132	21
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	275	1073	275	1149	275	692	660	275	613	598
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.55	0.37	0.72	0.52	0.21	0.09	0.40	0.28	0.16

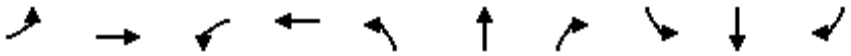
Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	108	64	157	45	324	54	394
v/c Ratio	0.28	0.25	0.55	0.26	0.36	0.27	0.41
Control Delay	27.2	32.0	30.7	38.7	16.3	36.4	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	32.0	30.7	38.7	16.3	36.4	16.1
Queue Length 50th (ft)	18	28	53	21	99	25	127
Queue Length 95th (ft)	38	57	96	50	173	53	201
Internal Link Dist (ft)	299		2291		1240		1355
Turn Bay Length (ft)		80		145		100	
Base Capacity (vph)	962	490	508	173	911	490	953
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.13	0.31	0.26	0.36	0.11	0.41

Intersection Summary

Queues
15: Indian St & Sunnymead Blvd

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	56	259	22	287	92	224	66	64	251	98
v/c Ratio	0.26	0.41	0.12	0.51	0.38	0.28	0.07	0.29	0.32	0.10
Control Delay	36.0	23.6	35.5	31.5	36.5	18.2	3.2	36.1	19.6	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	23.6	35.5	31.5	36.5	18.2	3.2	36.1	19.6	3.3
Queue Length 50th (ft)	24	43	10	62	40	69	0	28	81	2
Queue Length 95th (ft)	62	81	33	107	89	143	19	68	167	24
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	354	1366	354	1371	354	812	1119	354	786	1106
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.19	0.06	0.21	0.26	0.28	0.06	0.18	0.32	0.09

Intersection Summary

Queues
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	232	459	134	99	371	176	687	189	76	540	210
v/c Ratio	0.86	0.60	0.31	0.49	0.59	0.72	0.50	0.21	0.40	0.47	0.22
Control Delay	67.5	35.1	10.1	46.3	35.8	54.7	24.7	6.9	44.8	26.6	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.5	35.1	10.1	46.3	35.8	54.7	24.7	6.9	44.8	26.6	2.8
Queue Length 50th (ft)	126	123	9	52	98	93	152	23	40	123	1
Queue Length 95th (ft)	#294	180	55	108	142	#203	260	70	88	201	38
Internal Link Dist (ft)		1991			1226		695			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	271	1065	556	271	1056	271	1365	974	271	1145	934
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.43	0.24	0.37	0.35	0.65	0.50	0.19	0.28	0.47	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	57	267	245	98	21	133	976	238	47	703	44
v/c Ratio	0.33	0.74	0.89	0.20	0.04	0.59	0.66	0.33	0.28	0.60	0.07
Control Delay	43.8	36.7	71.5	28.4	0.1	48.6	25.7	12.6	43.3	28.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	43.8	36.7	71.5	28.4	0.1	48.6	26.0	12.6	43.3	28.4	0.2
Queue Length 50th (ft)	30	101	134	43	0	70	240	45	25	169	0
Queue Length 95th (ft)	71	186	#310	89	0	138	#406	122	62	266	0
Internal Link Dist (ft)		2085		364			354			592	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	276	570	276	571	565	276	1488	732	276	1167	598
Starvation Cap Reductn	0	0	0	0	0	0	102	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.47	0.89	0.17	0.04	0.48	0.70	0.33	0.17	0.60	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
4: Heacock St & SR 60 WB Ramp

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday PM Peak Hour

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	209	219	356	1179	1148
v/c Ratio	0.63	0.62	0.80	0.47	0.84
Control Delay	39.3	28.5	44.6	6.8	29.0
Queue Delay	0.0	0.0	3.3	1.6	0.6
Total Delay	39.3	28.5	47.9	8.3	29.6
Queue Length 50th (ft)	99	69	167	114	256
Queue Length 95th (ft)	166	139	#341	212	#439
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	740	700	455	2486	1373
Starvation Cap Reductn	0	0	43	1060	51
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.31	0.86	0.83	0.87

Intersection Summary

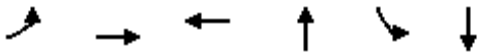
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Heacock St & SR 60 EB Ramp

Festival at Moreno Valley Mixed Use
Existing (2017) With Project Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	277	280	348	1255	242	798
v/c Ratio	0.68	0.68	0.65	0.60	0.71	0.34
Control Delay	40.5	40.7	19.1	23.4	46.9	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.1	1.0
Total Delay	40.5	40.7	19.1	23.4	47.0	9.1
Queue Length 50th (ft)	155	156	76	199	136	101
Queue Length 95th (ft)	243	246	168	311	212	160
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	542	544	644	2099	571	2335
Starvation Cap Reductn	0	0	0	0	34	1192
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.51	0.54	0.60	0.45	0.70

Intersection Summary

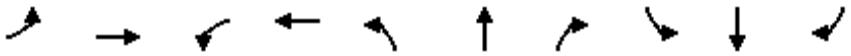


Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	98	740	536	108	75	54
v/c Ratio	0.94	0.58	0.74	0.13	0.11	0.05
Control Delay	117.6	23.4	35.3	6.3	11.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	117.6	23.4	35.3	6.3	11.8	0.1
Queue Length 50th (ft)	53	162	134	12	19	0
Queue Length 95th (ft)	#154	205	181	40	46	0
Internal Link Dist (ft)		1226	1262	148		1473
Turn Bay Length (ft)	150				40	
Base Capacity (vph)	104	2306	1565	827	682	1014
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.32	0.34	0.13	0.11	0.05

Intersection Summary

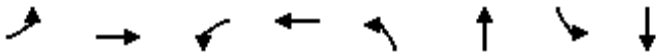
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
13: Indian St & Ironwood Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	95	642	59	415	66	146	143	63	98	71
v/c Ratio	0.42	0.72	0.30	0.50	0.33	0.21	0.21	0.32	0.14	0.11
Control Delay	43.0	32.9	42.0	29.0	42.1	23.7	5.5	42.1	23.4	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	32.9	42.0	29.0	42.1	23.7	5.5	42.1	23.4	1.9
Queue Length 50th (ft)	48	160	30	96	34	56	0	32	37	0
Queue Length 95th (ft)	104	241	72	155	78	119	43	76	85	11
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	316	1226	316	1226	316	705	688	316	702	668
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.52	0.19	0.34	0.21	0.21	0.21	0.20	0.14	0.11

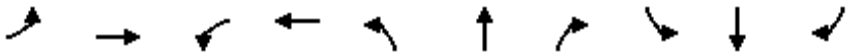
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	236	43	114	65	365	17	234
v/c Ratio	0.28	0.48	0.18	0.46	0.38	0.36	0.10	0.27
Control Delay	35.6	28.0	33.6	36.3	43.4	13.0	37.1	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	28.0	33.6	36.3	43.4	13.0	37.1	15.7
Queue Length 50th (ft)	29	44	19	48	31	82	8	68
Queue Length 95th (ft)	68	82	50	101	76	230	29	141
Internal Link Dist (ft)		299		2291		1240		1355
Turn Bay Length (ft)	150		80		145		100	
Base Capacity (vph)	481	962	481	499	170	1026	481	883
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.25	0.09	0.23	0.38	0.36	0.04	0.27

Intersection Summary

Queues
15: Indian St & Sunnymead Blvd



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	160	660	46	315	95	229	77	64	152	67
v/c Ratio	0.64	0.67	0.26	0.45	0.44	0.33	0.09	0.34	0.23	0.07
Control Delay	49.2	31.3	42.7	30.3	44.3	24.4	3.9	43.2	24.4	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	31.3	42.7	30.3	44.3	24.4	3.9	43.2	24.4	3.8
Queue Length 50th (ft)	83	166	24	75	50	93	0	33	61	0
Queue Length 95th (ft)	#175	247	61	120	104	179	24	77	125	22
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	297	1152	297	1153	297	684	967	297	660	943
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.57	0.15	0.27	0.32	0.33	0.08	0.22	0.23	0.07

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Near Term Year (2022)

Queues
1: Heacock St & Ironwood Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	156	335	172	193	686	144	520	110	61	672	309
v/c Ratio	0.69	0.40	0.34	0.79	0.79	0.66	0.40	0.12	0.36	0.62	0.37
Control Delay	57.1	31.6	6.6	64.9	40.1	55.1	25.8	5.8	47.4	32.1	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	31.6	6.6	64.9	40.1	55.1	25.8	5.8	47.4	32.1	11.2
Queue Length 50th (ft)	94	91	0	120	207	87	133	10	37	195	70
Queue Length 95th (ft)	#176	131	50	#237	274	152	194	40	76	261	136
Internal Link Dist (ft)		1991			1226		695			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	256	1008	574	256	1003	256	1286	915	256	1084	851
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.33	0.30	0.75	0.68	0.56	0.40	0.12	0.24	0.62	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Festival at Moreno Valley Mixed Use
Future (2022) Without Project Weekday AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	46	230	65	86	21	128	710	65	21	969	47
v/c Ratio	0.23	0.64	0.31	0.23	0.05	0.50	0.38	0.07	0.12	0.66	0.06
Control Delay	37.7	25.5	38.0	29.7	0.2	40.1	14.7	1.0	37.5	24.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	25.5	38.0	29.7	0.2	40.1	14.7	1.0	37.5	24.5	0.2
Queue Length 50th (ft)	21	52	29	37	0	57	86	0	9	205	0
Queue Length 95th (ft)	57	129	73	80	0	124	219	7	34	#382	0
Internal Link Dist (ft)		2085		364			354			592	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	342	704	342	708	673	342	1845	880	342	1477	727
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.33	0.19	0.12	0.03	0.37	0.38	0.07	0.06	0.66	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
4: Heacock St & SR 60 WB Ramp

Festival at Moreno Valley Mixed Use
Future (2022) Without Project Weekday AM Peak Hour

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	360	175	346	736	1236
v/c Ratio	0.77	0.38	0.87	0.33	0.98
Control Delay	42.0	18.5	57.9	8.9	50.7
Queue Delay	0.0	0.0	6.9	0.8	8.3
Total Delay	42.0	18.5	64.8	9.8	59.0
Queue Length 50th (ft)	189	49	189	91	~354
Queue Length 95th (ft)	284	103	#390	164	#598
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	670	638	412	2251	1260
Starvation Cap Reductn	0	0	39	1141	44
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.27	0.93	0.66	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

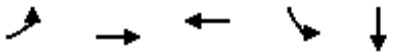
Queues
5: Heacock St & SR 60 EB Ramp

Festival at Moreno Valley Mixed Use
Future (2022) Without Project Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	122	121	520	998	174	1015
v/c Ratio	0.25	0.25	0.95	0.47	0.65	0.46
Control Delay	28.3	28.3	56.2	21.4	50.3	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	3.2
Total Delay	28.3	28.3	56.2	21.4	50.3	14.4
Queue Length 50th (ft)	62	61	256	157	106	171
Queue Length 95th (ft)	111	110	#466	218	165	217
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	508	510	564	2110	536	2190
Starvation Cap Reductn	0	0	0	0	0	1045
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.24	0.92	0.47	0.32	0.89

Intersection Summary

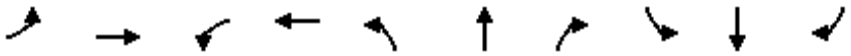
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	58	497	1048	161	99
v/c Ratio	0.64	0.31	0.80	0.25	0.12
Control Delay	81.6	17.5	32.1	20.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	81.6	17.5	32.1	20.2	0.3
Queue Length 50th (ft)	38	101	306	64	0
Queue Length 95th (ft)	#108	132	372	122	0
Internal Link Dist (ft)		1226	1262		1473
Turn Bay Length (ft)	150			40	
Base Capacity (vph)	90	2010	1636	649	822
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.64	0.25	0.64	0.25	0.12

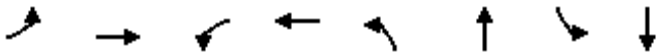
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	43	646	142	927	157	179	88	125	207	108
v/c Ratio	0.27	0.77	0.65	0.80	0.69	0.30	0.15	0.59	0.36	0.19
Control Delay	46.2	37.3	54.2	35.8	56.2	27.7	3.5	51.8	28.9	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	37.3	54.2	35.8	56.2	27.7	3.5	51.8	28.9	5.7
Queue Length 50th (ft)	25	180	84	280	93	84	0	74	101	0
Queue Length 95th (ft)	56	223	139	341	152	138	17	124	158	29
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	261	1018	261	1153	261	597	586	261	580	572
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.63	0.54	0.80	0.60	0.30	0.15	0.48	0.36	0.19

Intersection Summary

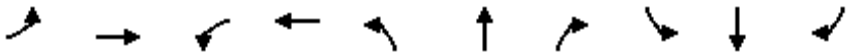


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	13	137	95	187	50	402	59	486
v/c Ratio	0.07	0.34	0.33	0.60	0.30	0.53	0.30	0.56
Control Delay	35.1	28.0	32.8	33.6	41.1	22.0	38.0	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.1	28.0	32.8	33.6	41.1	22.0	38.0	20.4
Queue Length 50th (ft)	6	25	43	72	24	140	28	178
Queue Length 95th (ft)	21	47	77	119	55	237	59	275
Internal Link Dist (ft)		299		2291		1240		1355
Turn Bay Length (ft)	150		80		145		100	
Base Capacity (vph)	477	944	477	495	168	753	477	862
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.15	0.20	0.38	0.30	0.53	0.12	0.56

Intersection Summary

Queues
15: Indian St & Sunnymead Blvd

Festival at Moreno Valley Mixed Use
Future (2022) Without Project Weekday AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	138	303	25	321	113	252	73	71	283	192
v/c Ratio	0.56	0.35	0.15	0.57	0.48	0.35	0.08	0.35	0.41	0.20
Control Delay	42.9	22.3	38.8	34.3	41.4	21.4	3.6	39.9	23.4	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	22.3	38.8	34.3	41.4	21.4	3.6	39.9	23.4	3.6
Queue Length 50th (ft)	66	54	12	76	54	91	0	34	108	8
Queue Length 95th (ft)	130	93	38	122	110	174	21	77	202	41
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	312	1214	312	1212	312	725	1016	312	694	1022
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.25	0.08	0.26	0.36	0.35	0.07	0.23	0.41	0.19

Intersection Summary

Queues
1: Heacock St & Ironwood Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	256	500	201	111	398	250	786	211	84	620	232
v/c Ratio	0.98	0.63	0.44	0.54	0.58	0.96	0.58	0.23	0.44	0.56	0.26
Control Delay	92.7	35.9	14.2	49.2	35.5	87.4	27.4	8.1	46.8	29.5	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.7	35.9	14.2	49.2	35.5	87.4	27.4	8.1	46.8	29.5	5.9
Queue Length 50th (ft)	148	138	31	61	106	144	193	32	46	154	21
Queue Length 95th (ft)	#338	196	93	122	152	#328	314	87	96	238	71
Internal Link Dist (ft)		1991			1226		585			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	261	1028	555	261	1020	261	1347	955	261	1106	884
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.49	0.36	0.43	0.39	0.96	0.58	0.22	0.32	0.56	0.26

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	64	346	92	84	33	228	1195	121	26	878	53
v/c Ratio	0.35	0.80	0.45	0.21	0.08	0.80	0.67	0.14	0.17	0.73	0.09
Control Delay	44.3	35.6	45.5	29.4	0.4	60.0	23.7	5.6	43.1	31.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Total Delay	44.3	35.6	45.5	29.4	0.4	60.0	25.0	5.6	43.1	31.7	0.3
Queue Length 50th (ft)	34	119	48	38	0	124	232	2	14	227	0
Queue Length 95th (ft)	79	226	104	79	0	#293	#560	41	42	#385	0
Internal Link Dist (ft)		2085		313			354			702	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	285	610	285	594	583	285	1781	853	285	1206	615
Starvation Cap Reductn	0	0	0	0	0	0	352	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.57	0.32	0.14	0.06	0.80	0.84	0.14	0.09	0.73	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	365	182	460	1419	1401
v/c Ratio	0.77	0.39	1.12	0.63	1.13
Control Delay	42.3	18.9	116.6	12.8	99.5
Queue Delay	0.0	0.0	0.9	16.0	0.1
Total Delay	42.3	18.9	117.4	28.9	99.6
Queue Length 50th (ft)	192	53	~306	235	~483
Queue Length 95th (ft)	290	108	#560	398	#716
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	668	636	410	2245	1235
Starvation Cap Reductn	0	0	34	844	39
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.29	1.22	1.01	1.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

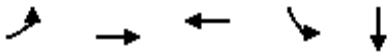
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	276	279	571	1788	189	1036
v/c Ratio	0.55	0.55	1.03	0.88	0.67	0.48
Control Delay	34.4	34.5	75.3	33.2	50.5	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.1	4.6
Total Delay	34.4	34.5	75.3	33.2	50.6	16.2
Queue Length 50th (ft)	154	156	~336	363	115	176
Queue Length 95th (ft)	243	246	#547	#531	176	223
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	502	504	554	2034	529	2162
Starvation Cap Reductn	0	0	0	0	18	1035
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.55	1.03	0.88	0.37	0.92

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

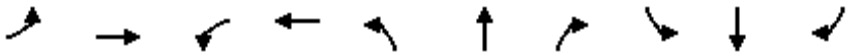


Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	108	784	558	83	60
v/c Ratio	1.33	0.44	0.38	0.14	0.07
Control Delay	253.6	18.3	22.4	20.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	253.6	18.3	22.4	20.6	0.2
Queue Length 50th (ft)	~98	176	135	35	0
Queue Length 95th (ft)	#201	215	173	66	0
Internal Link Dist (ft)		1226	1262		1473
Turn Bay Length (ft)	150			40	
Base Capacity (vph)	81	1777	1453	584	840
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.33	0.44	0.38	0.14	0.07

Intersection Summary

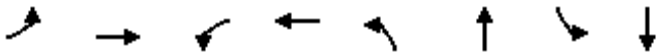
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	109	670	123	453	73	186	221	72	136	80
v/c Ratio	0.49	0.73	0.53	0.48	0.36	0.28	0.33	0.36	0.20	0.13
Control Delay	46.6	34.4	47.7	28.6	44.6	26.4	8.6	44.7	25.9	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	34.4	47.7	28.6	44.6	26.4	8.6	44.7	25.9	2.7
Queue Length 50th (ft)	60	180	68	110	40	81	17	40	58	0
Queue Length 95th (ft)	119	262	132	171	86	154	77	85	116	17
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	299	1160	299	1164	299	665	680	299	664	638
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.58	0.41	0.39	0.24	0.28	0.33	0.24	0.20	0.13

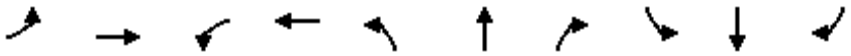
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	219	113	106	58	587	19	341
v/c Ratio	0.19	0.46	0.46	0.41	0.35	0.66	0.11	0.39
Control Delay	34.2	28.3	38.1	32.6	41.7	21.3	37.0	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	28.3	38.1	32.6	41.7	21.3	37.0	17.0
Queue Length 50th (ft)	20	42	53	43	28	160	9	112
Queue Length 95th (ft)	51	79	106	93	69	#467	31	210
Internal Link Dist (ft)		299		2291		1240		1355
Turn Bay Length (ft)	150		80		145		100	
Base Capacity (vph)	480	957	480	498	169	892	480	868
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.23	0.24	0.21	0.34	0.66	0.04	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	397	769	51	356	138	245	85	70	157	278
v/c Ratio	1.49	0.75	0.31	0.49	0.62	0.36	0.10	0.39	0.27	0.29
Control Delay	271.9	34.5	45.1	32.2	51.3	25.5	3.8	45.8	26.4	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	271.9	34.5	45.1	32.2	51.3	25.5	3.8	45.8	26.4	3.3
Queue Length 50th (ft)	~335	210	29	91	78	109	0	40	70	5
Queue Length 95th (ft)	#538	296	66	135	143	193	25	83	129	49
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	266	1044	266	1036	266	690	941	266	592	945
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.49	0.74	0.19	0.34	0.52	0.36	0.09	0.26	0.27	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
1: Heacock St & Ironwood Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	156	329	171	193	680	140	518	110	61	671	309
v/c Ratio	0.69	0.39	0.34	0.79	0.78	0.64	0.40	0.12	0.36	0.62	0.37
Control Delay	56.9	31.5	6.7	64.6	39.8	54.4	25.8	5.8	47.4	31.9	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	31.5	6.7	64.6	39.8	54.4	25.8	5.8	47.4	31.9	10.9
Queue Length 50th (ft)	94	88	0	119	204	84	132	10	37	193	67
Queue Length 95th (ft)	#176	129	50	#237	271	148	193	40	76	261	133
Internal Link Dist (ft)		1991			1226		695			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	257	1011	574	257	1006	257	1286	916	257	1088	856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.33	0.30	0.75	0.68	0.54	0.40	0.12	0.24	0.62	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	46	219	58	74	6	128	710	87	19	969	47
v/c Ratio	0.22	0.61	0.27	0.26	0.02	0.48	0.36	0.09	0.10	0.62	0.06
Control Delay	35.9	21.0	35.9	31.5	0.2	37.4	12.9	2.3	36.2	21.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	21.0	35.9	31.5	0.2	37.4	12.9	2.3	36.2	21.6	0.2
Queue Length 50th (ft)	20	36	25	31	0	55	81	0	8	195	0
Queue Length 95th (ft)	56	108	65	72	0	120	207	18	31	#345	0
Internal Link Dist (ft)		2085		364			354			592	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	358	741	358	741	699	358	1975	934	358	1573	767
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.30	0.16	0.10	0.01	0.36	0.36	0.09	0.05	0.62	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
4: Heacock St & SR 60 WB Ramp

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	360	184	346	749	1229
v/c Ratio	0.77	0.40	0.87	0.33	0.98
Control Delay	42.0	19.2	57.9	9.0	49.6
Queue Delay	0.0	0.0	6.9	0.9	7.6
Total Delay	42.0	19.2	64.8	9.9	57.1
Queue Length 50th (ft)	189	54	189	93	348
Queue Length 95th (ft)	284	109	#390	166	#593
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	670	638	412	2251	1260
Starvation Cap Reductn	0	0	39	1135	44
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.29	0.93	0.67	1.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

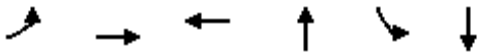
Queues
5: Heacock St & SR 60 EB Ramp

Festival at Moreno Valley Mixed Use
Future (2022) With Project Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	129	127	520	997	171	1011
v/c Ratio	0.27	0.26	0.95	0.47	0.64	0.46
Control Delay	28.6	28.5	55.9	21.3	50.2	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	3.2
Total Delay	28.6	28.5	55.9	21.3	50.2	14.2
Queue Length 50th (ft)	65	64	256	157	104	170
Queue Length 95th (ft)	116	114	#465	217	162	216
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	509	511	565	2118	536	2191
Starvation Cap Reductn	0	0	0	0	0	1047
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.25	0.92	0.47	0.32	0.88

Intersection Summary

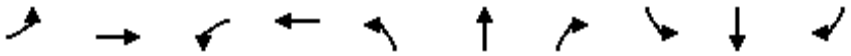
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	58	508	1060	16	161	99
v/c Ratio	0.66	0.31	0.83	0.02	0.26	0.12
Control Delay	84.2	17.1	33.7	0.1	21.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.2	17.1	33.7	0.1	21.1	0.3
Queue Length 50th (ft)	39	103	319	0	68	0
Queue Length 95th (ft)	#108	134	389	0	122	0
Internal Link Dist (ft)		1226	1262	148		1473
Turn Bay Length (ft)	150				40	
Base Capacity (vph)	88	1966	1521	754	628	810
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.26	0.70	0.02	0.26	0.12

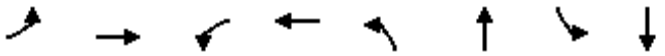
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	43	653	136	922	157	174	82	125	206	108
v/c Ratio	0.27	0.77	0.63	0.80	0.69	0.29	0.14	0.59	0.36	0.19
Control Delay	46.2	37.5	53.2	35.6	56.2	27.5	2.9	51.8	28.8	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	37.5	53.2	35.6	56.2	27.5	2.9	51.8	28.8	5.7
Queue Length 50th (ft)	25	182	80	278	93	81	0	74	100	0
Queue Length 95th (ft)	56	226	134	338	152	135	14	124	158	29
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	261	1019	261	1152	261	598	587	261	580	572
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.64	0.52	0.80	0.60	0.29	0.14	0.48	0.36	0.19

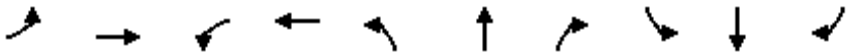
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	1	122	95	174	50	402	59	479
v/c Ratio	0.01	0.30	0.34	0.57	0.29	0.46	0.29	0.52
Control Delay	34.0	27.5	33.3	31.5	39.9	18.7	37.1	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	27.5	33.3	31.5	39.9	18.7	37.1	18.6
Queue Length 50th (ft)	0	21	43	62	24	135	27	170
Queue Length 95th (ft)	5	42	77	108	54	228	58	262
Internal Link Dist (ft)		299		2291		1240		1355
Turn Bay Length (ft)	150		80		145		100	
Base Capacity (vph)	500	982	500	517	176	880	500	928
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.12	0.19	0.34	0.28	0.46	0.12	0.52

Intersection Summary

Queues
15: Indian St & Sunnymead Blvd



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	138	303	25	321	113	252	73	71	281	192
v/c Ratio	0.56	0.35	0.15	0.57	0.48	0.35	0.08	0.35	0.40	0.20
Control Delay	42.9	22.3	38.8	34.3	41.4	21.4	3.6	39.9	23.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	22.3	38.8	34.3	41.4	21.4	3.6	39.9	23.4	3.5
Queue Length 50th (ft)	66	54	12	76	54	91	0	34	108	8
Queue Length 95th (ft)	130	93	38	122	110	174	21	77	200	41
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	312	1214	312	1212	312	725	1016	312	694	1023
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.25	0.08	0.26	0.36	0.35	0.07	0.23	0.40	0.19

Intersection Summary

Queues
1: Heacock St & Ironwood Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	256	509	212	111	409	265	800	211	84	633	232
v/c Ratio	0.98	0.63	0.45	0.54	0.59	1.02	0.60	0.23	0.44	0.57	0.26
Control Delay	93.4	36.0	14.7	49.3	35.7	101.7	27.8	8.3	46.9	29.9	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.4	36.0	14.7	49.3	35.7	101.7	27.8	8.3	46.9	29.9	6.5
Queue Length 50th (ft)	148	141	35	61	110	~156	198	32	46	158	24
Queue Length 95th (ft)	#338	200	99	122	156	#352	320	88	96	244	76
Internal Link Dist (ft)		1991			1226		585			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	261	1025	557	261	1017	261	1343	952	261	1103	877
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.50	0.38	0.43	0.40	1.02	0.60	0.22	0.32	0.57	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Festival at Moreno Valley Mixed Use
Future (2022) With-Project Weekday PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	64	362	255	106	24	228	1195	249	49	878	53
v/c Ratio	0.37	0.84	1.00	0.20	0.05	0.89	0.82	0.34	0.31	0.81	0.09
Control Delay	46.9	41.9	97.8	28.1	0.2	75.8	33.2	14.0	46.2	37.9	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	46.9	41.9	97.8	28.1	0.2	75.8	34.4	14.0	46.2	37.9	0.3
Queue Length 50th (ft)	36	148	~154	49	0	135	354	55	28	253	0
Queue Length 95th (ft)	79	254	#337	96	0	#293	#586	136	65	#385	0
Internal Link Dist (ft)		2085		313			354			702	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	256	551	256	552	550	256	1465	722	256	1084	565
Starvation Cap Reductn	0	0	0	0	0	0	107	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.66	1.00	0.19	0.04	0.89	0.88	0.34	0.19	0.81	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	365	241	460	1493	1568
v/c Ratio	0.77	0.51	1.12	0.67	1.27
Control Delay	41.9	23.7	117.6	13.6	155.3
Queue Delay	0.0	0.0	0.9	26.9	0.1
Total Delay	41.9	23.7	118.5	40.4	155.4
Queue Length 50th (ft)	192	83	~306	257	~588
Queue Length 95th (ft)	290	153	#560	435	#834
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	667	635	409	2239	1235
Starvation Cap Reductn	0	0	34	812	33
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.38	1.23	1.05	1.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

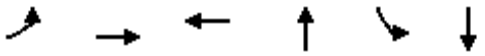
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	307	311	571	1799	263	1052
v/c Ratio	0.61	0.62	1.04	0.98	0.74	0.49
Control Delay	36.3	36.4	77.2	48.0	49.6	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.4	5.0
Total Delay	36.3	36.4	77.2	48.0	50.1	16.7
Queue Length 50th (ft)	175	178	~340	395	158	180
Queue Length 95th (ft)	272	276	#551	#597	226	228
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	502	504	551	1838	529	2162
Starvation Cap Reductn	0	0	0	0	59	1028
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.62	1.04	0.98	0.56	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

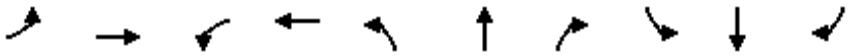


Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	108	821	593	108	83	60
v/c Ratio	1.33	0.46	0.50	0.17	0.15	0.07
Control Delay	253.6	18.4	24.6	10.4	20.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	253.6	18.4	24.6	10.4	20.9	0.2
Queue Length 50th (ft)	~98	185	153	20	35	0
Queue Length 95th (ft)	#201	226	196	52	66	0
Internal Link Dist (ft)		1226	1262	148		1473
Turn Bay Length (ft)	150				40	
Base Capacity (vph)	81	1766	1191	647	539	846
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.33	0.46	0.50	0.17	0.15	0.07

Intersection Summary

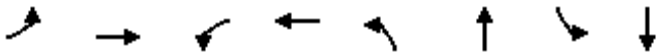
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	109	709	132	462	73	201	232	72	148	80
v/c Ratio	0.51	0.78	0.59	0.44	0.38	0.32	0.36	0.38	0.24	0.13
Control Delay	47.8	37.3	50.0	27.7	45.7	27.1	9.8	45.7	26.3	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	37.3	50.0	27.7	45.7	27.1	9.8	45.7	26.3	2.7
Queue Length 50th (ft)	61	196	74	113	41	92	25	41	66	0
Queue Length 95th (ft)	119	280	140	174	86	166	89	85	125	17
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	279	1083	279	1089	279	621	643	279	620	603
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.65	0.47	0.42	0.26	0.32	0.36	0.26	0.24	0.13

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	68	257	113	123	71	587	19	361
v/c Ratio	0.29	0.52	0.48	0.49	0.44	0.65	0.12	0.44
Control Delay	35.9	29.6	40.2	37.1	46.3	21.6	38.0	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	29.6	40.2	37.1	46.3	21.6	38.0	18.9
Queue Length 50th (ft)	32	50	54	53	35	164	9	122
Queue Length 95th (ft)	72	91	109	110	#85	#489	32	233
Internal Link Dist (ft)		299		2291		1240		1355
Turn Bay Length (ft)	150		80		145		100	
Base Capacity (vph)	459	918	459	477	162	908	459	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.28	0.25	0.26	0.44	0.65	0.04	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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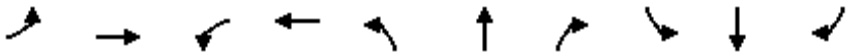

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	397	769	51	356	138	257	85	70	172	278
v/c Ratio	1.49	0.75	0.31	0.49	0.62	0.37	0.10	0.39	0.29	0.29
Control Delay	271.9	34.5	45.1	32.2	51.3	25.7	3.8	45.8	26.7	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	271.9	34.5	45.1	32.2	51.3	25.7	3.8	45.8	26.7	3.3
Queue Length 50th (ft)	~335	210	29	91	78	115	0	40	78	5
Queue Length 95th (ft)	#538	296	66	135	143	203	25	83	140	49
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	266	1044	266	1036	266	690	941	266	592	945
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.49	0.74	0.19	0.34	0.52	0.37	0.09	0.26	0.29	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

General Plan (2035)

Queues
1: Heacock St & Ironwood Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	179	388	171	235	844	138	509	119	66	703	333
v/c Ratio	0.77	0.43	0.33	0.95	0.90	0.65	0.41	0.13	0.39	0.67	0.41
Control Delay	64.1	31.8	8.9	89.6	48.6	55.8	27.1	5.7	48.5	34.4	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.1	31.8	8.9	89.6	48.6	55.8	27.1	5.7	48.5	34.4	12.9
Queue Length 50th (ft)	111	106	11	151	269	84	132	11	40	208	86
Queue Length 95th (ft)	#214	151	62	#304	#386	147	191	42	80	275	157
Internal Link Dist (ft)		1991			1226		695			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	247	973	543	247	969	247	1227	884	247	1047	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.40	0.31	0.95	0.87	0.56	0.41	0.13	0.27	0.67	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	51	209	69	93	24	112	693	79	19	1043	42
v/c Ratio	0.25	0.62	0.32	0.25	0.06	0.46	0.38	0.09	0.10	0.70	0.06
Control Delay	37.5	26.8	37.8	30.0	0.3	39.1	14.6	1.9	37.1	25.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	26.8	37.8	30.0	0.3	39.1	14.6	1.9	37.1	25.4	0.1
Queue Length 50th (ft)	23	52	31	40	0	50	84	0	8	224	0
Queue Length 95th (ft)	62	127	76	86	0	110	212	14	32	#428	0
Internal Link Dist (ft)		2085		364			354			592	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	341	692	341	704	670	341	1844	880	341	1491	733
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.30	0.20	0.13	0.04	0.33	0.38	0.09	0.06	0.70	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
4: Heacock St & SR 60 WB Ramp

Festival at Moreno Valley Mixed Use
Future (2035) Without Project Weekday AM Peak Hour

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	319	189	320	704	1264
v/c Ratio	0.74	0.43	0.82	0.30	0.95
Control Delay	41.3	19.7	52.1	7.8	42.6
Queue Delay	0.0	0.0	2.7	0.7	3.8
Total Delay	41.3	19.7	54.9	8.5	46.4
Queue Length 50th (ft)	162	53	165	78	347
Queue Length 95th (ft)	250	111	#336	144	#593
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	688	657	423	2314	1334
Starvation Cap Reductn	0	0	40	1186	43
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.29	0.84	0.62	0.98

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Heacock St & SR 60 EB Ramp

Festival at Moreno Valley Mixed Use
Future (2035) Without Project Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	143	141	537	873	184	1015
v/c Ratio	0.29	0.28	0.97	0.42	0.66	0.47
Control Delay	28.9	28.8	60.1	21.2	50.4	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	3.7
Total Delay	28.9	28.8	60.1	21.2	50.4	15.0
Queue Length 50th (ft)	73	72	272	134	112	171
Queue Length 95th (ft)	128	126	#491	189	172	217
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	505	507	560	2063	532	2174
Starvation Cap Reductn	0	0	0	0	16	1045
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.28	0.96	0.42	0.36	0.90

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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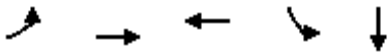

Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	81	545	1280	186	124
v/c Ratio	1.00	0.31	0.89	0.32	0.17
Control Delay	152.2	16.5	38.1	23.5	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	152.2	16.5	38.1	23.5	3.0
Queue Length 50th (ft)	~58	113	416	87	0
Queue Length 95th (ft)	#155	145	497	140	25
Internal Link Dist (ft)		1226	1262		1473
Turn Bay Length (ft)	150			40	
Base Capacity (vph)	81	1821	1485	588	743
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.00	0.30	0.86	0.32	0.17

Intersection Summary

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95th percentile volume exceeds capacity, queue may be longer.
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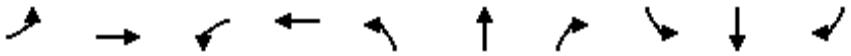

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	44	722	315	1152	202	305	138	158	243	137
v/c Ratio	0.29	0.82	1.29	0.94	0.85	0.54	0.25	0.71	0.45	0.25
Control Delay	47.5	40.5	192.3	47.0	73.0	33.7	8.8	60.0	31.9	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.5	40.5	192.3	47.0	73.0	33.7	8.8	60.0	31.9	8.8
Queue Length 50th (ft)	27	208	~261	~410	127	166	11	97	127	10
Queue Length 95th (ft)	56	252	#390	#514	#223	233	48	153	184	48
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	245	962	245	1229	245	563	559	245	545	545
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.75	1.29	0.94	0.82	0.54	0.25	0.64	0.45	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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95th percentile volume exceeds capacity, queue may be longer.
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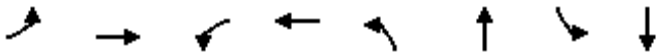


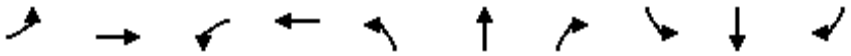
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	155	120	257	58	618	104	695
v/c Ratio	0.06	0.39	0.37	0.73	0.37	0.85	0.46	0.86
Control Delay	36.1	28.8	33.4	38.1	45.4	39.7	41.4	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	28.8	33.4	38.1	45.4	39.7	41.4	36.4
Queue Length 50th (ft)	5	28	55	102	29	293	51	328
Queue Length 95th (ft)	19	52	93	158	63	#510	91	#507
Internal Link Dist (ft)		299		2291		1240		1355
Turn Bay Length (ft)	150		80		145		100	
Base Capacity (vph)	446	886	446	470	157	723	446	806
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.17	0.27	0.55	0.37	0.85	0.23	0.86

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
15: Indian St & Sunnymead Blvd

Festival at Moreno Valley Mixed Use
Future (2035) Without Project Weekday AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	112	642	45	585	193	415	139	115	449	171
v/c Ratio	0.54	0.71	0.28	0.73	0.78	0.61	0.16	0.55	0.77	0.21
Control Delay	49.4	32.4	45.5	37.8	61.2	32.2	5.1	49.6	40.3	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	32.4	45.5	37.8	61.2	32.2	5.1	49.6	40.3	8.3
Queue Length 50th (ft)	62	160	25	163	109	206	7	64	237	26
Queue Length 95th (ft)	121	225	61	224	#233	#377	41	124	#428	67
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	263	1069	263	1027	263	683	946	263	586	855
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.60	0.17	0.57	0.73	0.61	0.15	0.44	0.77	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2035) Without-Project Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	272	858	173	140	568	170	708	199	81	548	220
v/c Ratio	1.10	0.90	0.34	0.66	0.65	0.75	0.58	0.23	0.45	0.52	0.27
Control Delay	128.2	48.8	13.1	56.2	35.6	62.2	30.0	8.2	49.2	31.3	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	128.2	48.8	13.1	56.2	35.6	62.2	30.0	8.2	49.2	31.3	7.8
Queue Length 50th (ft)	~202	277	28	85	163	105	198	32	49	154	32
Queue Length 95th (ft)	#364	#395	84	148	221	#199	277	78	94	208	77
Internal Link Dist (ft)		1991			1226		585			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	247	971	518	247	965	247	1229	892	247	1045	828
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.88	0.33	0.57	0.59	0.69	0.58	0.22	0.33	0.52	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Festival at Moreno Valley Mixed Use
Future (2035) Without-Project Weekday PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	92	407	98	91	35	164	991	135	24	814	44
v/c Ratio	0.45	0.85	0.48	0.20	0.07	0.68	0.60	0.17	0.16	0.70	0.07
Control Delay	47.4	43.7	47.9	29.2	0.3	54.9	23.8	6.8	44.6	32.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
Total Delay	47.4	43.7	47.9	29.2	0.3	54.9	24.6	6.8	44.6	32.4	0.2
Queue Length 50th (ft)	53	183	57	43	0	95	215	6	14	234	0
Queue Length 95th (ft)	104	#342	109	86	0	#189	#390	50	40	327	0
Internal Link Dist (ft)		2085		313			354			702	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	277	579	277	574	568	277	1655	801	277	1171	601
Starvation Cap Reductn	0	0	0	0	0	0	356	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.70	0.35	0.16	0.06	0.59	0.76	0.17	0.09	0.70	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	256	197	393	1142	1214
v/c Ratio	0.69	0.50	0.89	0.47	0.92
Control Delay	40.4	21.8	56.0	7.7	37.6
Queue Delay	0.0	0.0	11.4	1.7	2.7
Total Delay	40.4	21.8	67.4	9.5	40.3
Queue Length 50th (ft)	125	55	197	123	298
Queue Length 95th (ft)	200	116	#412	229	#517
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	719	686	442	2415	1320
Starvation Cap Reductn	0	0	40	1044	51
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.29	0.98	0.83	0.96

Intersection Summary

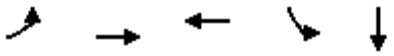
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Heacock St & SR 60 EB Ramp

Festival at Moreno Valley Mixed Use
Future (2035) Without-Project Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	261	265	369	1357	199	970
v/c Ratio	0.65	0.65	0.76	0.61	0.66	0.41
Control Delay	39.1	39.4	31.2	22.0	47.3	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.1	1.5
Total Delay	39.1	39.4	31.2	22.0	47.3	10.3
Queue Length 50th (ft)	145	147	129	208	112	129
Queue Length 95th (ft)	228	232	233	326	182	204
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	544	546	603	2216	573	2341
Starvation Cap Reductn	0	0	0	0	21	1115
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.49	0.61	0.61	0.36	0.79

Intersection Summary

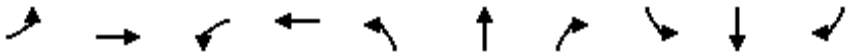


Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	138	1139	777	98	71
v/c Ratio	1.70	0.64	0.53	0.17	0.09
Control Delay	396.1	21.9	25.2	21.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	396.1	21.9	25.2	21.0	0.2
Queue Length 50th (ft)	~141	294	206	42	0
Queue Length 95th (ft)	#256	347	253	76	0
Internal Link Dist (ft)		1226	1262		1473
Turn Bay Length (ft)	150			40	
Base Capacity (vph)	81	1777	1455	584	780
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.70	0.64	0.53	0.17	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

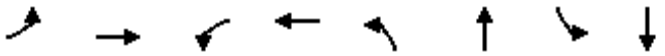


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	133	1001	93	606	132	272	263	85	200	98
v/c Ratio	0.62	0.98	0.48	0.69	0.61	0.41	0.40	0.45	0.35	0.17
Control Delay	53.0	58.7	48.7	35.5	52.7	28.3	14.3	48.1	28.7	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	58.7	48.7	35.5	52.7	28.3	14.3	48.1	28.7	4.7
Queue Length 50th (ft)	77	~341	54	169	77	130	52	50	95	0
Queue Length 95th (ft)	142	#502	105	235	141	226	133	97	167	29
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	261	1019	261	1015	261	662	657	261	579	572
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.98	0.36	0.60	0.51	0.41	0.40	0.33	0.35	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

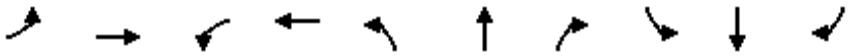
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	44	257	91	202	68	669	38	382
v/c Ratio	0.19	0.53	0.33	0.65	0.43	0.81	0.22	0.47
Control Delay	35.8	30.6	35.1	33.7	48.1	32.3	40.6	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	30.6	35.1	33.7	48.1	32.3	40.6	21.2
Queue Length 50th (ft)	21	51	43	71	34	304	19	139
Queue Length 95th (ft)	54	95	89	146	#89	#674	52	273
Internal Link Dist (ft)		299		2291		1240		1355
Turn Bay Length (ft)	150		80		145		100	
Base Capacity (vph)	447	899	447	474	158	828	447	807
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.29	0.20	0.43	0.43	0.81	0.09	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	244	1222	103	680	241	409	192	116	252	124
v/c Ratio	1.00	1.26	0.53	0.78	0.99	0.69	0.24	0.58	0.46	0.16
Control Delay	101.8	158.2	51.4	40.7	98.7	37.9	6.9	53.0	32.2	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.8	158.2	51.4	40.7	98.7	37.9	6.9	53.0	32.2	7.7
Queue Length 50th (ft)	~159	~502	62	203	154	229	23	70	131	18
Queue Length 95th (ft)	#318	#663	114	268	#314	#377	64	126	209	51
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	244	968	244	953	244	590	855	244	543	791
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	1.26	0.42	0.71	0.99	0.69	0.22	0.48	0.46	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2035) With Project Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	179	382	170	235	838	135	506	119	66	702	333
v/c Ratio	0.77	0.42	0.33	0.95	0.90	0.64	0.41	0.13	0.39	0.67	0.41
Control Delay	64.0	31.7	8.7	89.0	48.0	55.2	27.1	5.7	48.5	34.3	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.0	31.7	8.7	89.0	48.0	55.2	27.1	5.7	48.5	34.3	12.7
Queue Length 50th (ft)	110	104	10	150	265	82	131	11	40	207	85
Queue Length 95th (ft)	#214	150	61	#304	#382	144	189	42	80	275	156
Internal Link Dist (ft)		1991			1226		695			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	248	975	544	248	970	248	1227	884	248	1049	823
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.39	0.31	0.95	0.86	0.54	0.41	0.13	0.27	0.67	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	51	198	62	81	9	112	693	101	16	1043	42
v/c Ratio	0.25	0.59	0.29	0.29	0.03	0.44	0.33	0.10	0.09	0.66	0.05
Control Delay	35.9	22.9	36.0	31.8	0.1	36.8	11.1	3.0	36.1	22.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	22.9	36.0	31.8	0.1	36.8	11.1	3.0	36.1	22.5	0.1
Queue Length 50th (ft)	22	39	27	34	0	48	79	0	7	214	0
Queue Length 95th (ft)	60	108	69	77	0	108	200	24	28	#410	0
Internal Link Dist (ft)		2085		364			354			592	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	355	724	355	734	694	355	2074	975	355	1586	773
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.27	0.17	0.11	0.01	0.32	0.33	0.10	0.05	0.66	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
4: Heacock St & SR 60 WB Ramp

Festival at Moreno Valley Mixed Use
Future (2035) With Project Weekday AM Peak Hour

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	319	198	320	717	1257
v/c Ratio	0.74	0.45	0.82	0.31	0.94
Control Delay	41.3	20.0	52.1	7.8	41.7
Queue Delay	0.0	0.0	2.7	0.7	3.2
Total Delay	41.3	20.0	54.9	8.5	44.9
Queue Length 50th (ft)	162	56	165	80	344
Queue Length 95th (ft)	250	116	#336	147	#588
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	688	659	423	2314	1335
Starvation Cap Reductn	0	0	40	1180	42
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.30	0.84	0.63	0.97

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

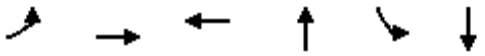
Queues
5: Heacock St & SR 60 EB Ramp

Festival at Moreno Valley Mixed Use
Future (2035) With Project Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	149	148	537	872	181	1011
v/c Ratio	0.30	0.30	0.97	0.42	0.66	0.46
Control Delay	29.1	29.0	59.8	21.0	50.4	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	3.6
Total Delay	29.1	29.0	59.8	21.0	50.4	14.9
Queue Length 50th (ft)	76	75	271	134	110	170
Queue Length 95th (ft)	132	131	#490	188	170	216
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	505	507	562	2073	532	2175
Starvation Cap Reductn	0	0	0	0	0	1047
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.29	0.96	0.42	0.34	0.90

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

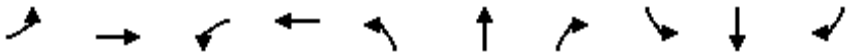


Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	81	557	1291	16	186	124
v/c Ratio	1.00	0.31	0.94	0.02	0.32	0.17
Control Delay	155.2	16.4	43.7	0.1	23.8	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	155.2	16.4	43.7	0.1	23.8	3.0
Queue Length 50th (ft)	~58	115	437	0	87	0
Queue Length 95th (ft)	#155	148	#564	0	141	25
Internal Link Dist (ft)		1226	1262	148		1473
Turn Bay Length (ft)	150				40	
Base Capacity (vph)	81	1798	1394	689	574	737
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.31	0.93	0.02	0.32	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	44	730	310	1146	202	300	132	158	242	137
v/c Ratio	0.29	0.82	1.27	0.93	0.85	0.53	0.24	0.72	0.44	0.25
Control Delay	47.5	40.9	185.5	46.2	73.2	33.5	8.2	60.1	31.9	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.5	40.9	185.5	46.2	73.2	33.5	8.2	60.1	31.9	8.8
Queue Length 50th (ft)	27	212	~254	~393	127	163	8	97	127	10
Queue Length 95th (ft)	56	255	#384	#510	#223	229	44	153	184	48
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	245	961	245	1230	245	562	558	245	544	544
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.76	1.27	0.93	0.82	0.53	0.24	0.64	0.44	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

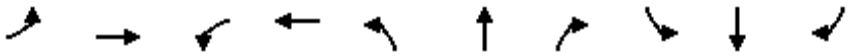
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	139	120	244	58	618	104	687
v/c Ratio	0.36	0.39	0.71	0.37	0.84	0.46	0.84
Control Delay	28.1	33.7	35.9	44.6	38.0	40.7	34.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	33.7	35.9	44.6	38.0	40.7	34.0
Queue Length 50th (ft)	24	55	91	29	283	50	313
Queue Length 95th (ft)	47	93	145	63	#505	90	#492
Internal Link Dist (ft)	299		2291		1240		1355
Turn Bay Length (ft)		80		145		100	
Base Capacity (vph)	893	451	478	159	732	451	817
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.27	0.51	0.36	0.84	0.23	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
15: Indian St & Sunnymead Blvd



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	112	642	45	585	193	415	139	115	447	171
v/c Ratio	0.54	0.71	0.28	0.73	0.78	0.61	0.16	0.55	0.76	0.21
Control Delay	49.4	32.4	45.5	37.8	61.2	32.2	5.1	49.6	40.1	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	32.4	45.5	37.8	61.2	32.2	5.1	49.6	40.1	8.3
Queue Length 50th (ft)	62	160	25	163	109	206	7	64	236	26
Queue Length 95th (ft)	121	225	61	224	#233	#377	41	124	#425	67
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	263	1069	263	1027	263	683	946	263	586	855
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.60	0.17	0.57	0.73	0.61	0.15	0.44	0.76	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
1: Heacock St & Ironwood Ave

Festival at Moreno Valley Mixed Use
Future (2035) With-Project Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	272	867	185	140	579	186	722	199	81	560	220
v/c Ratio	1.11	0.91	0.36	0.66	0.66	0.80	0.59	0.23	0.45	0.54	0.27
Control Delay	130.6	50.1	14.4	56.5	36.1	66.9	30.2	8.3	49.4	31.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	130.6	50.1	14.4	56.5	36.1	66.9	30.2	8.3	49.4	31.7	8.7
Queue Length 50th (ft)	~202	282	34	85	167	116	204	33	49	158	38
Queue Length 95th (ft)	#364	#402	93	148	225	#226	283	79	94	214	84
Internal Link Dist (ft)		1991			1226		585			1447	
Turn Bay Length (ft)	90		65	135		140		45	100		95
Base Capacity (vph)	245	966	516	245	959	245	1234	892	245	1039	817
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	0.90	0.36	0.57	0.60	0.76	0.59	0.22	0.33	0.54	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
3: Heacock St & Hemlock Ave

Festival at Moreno Valley Mixed Use
Future (2035) With-Project Weekday PM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	92	424	261	113	26	164	991	264	47	814	44
v/c Ratio	0.49	0.90	1.05	0.20	0.05	0.73	0.72	0.38	0.31	0.77	0.08
Control Delay	50.1	51.4	112.9	28.3	0.2	60.5	31.0	15.6	47.5	37.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	50.1	51.4	112.9	28.3	0.2	60.5	31.6	15.6	47.5	37.5	0.3
Queue Length 50th (ft)	56	212	~189	54	0	101	302	69	29	253	0
Queue Length 95th (ft)	104	#376	#345	103	0	#189	#436	148	64	327	0
Internal Link Dist (ft)		2085		313			354			702	
Turn Bay Length (ft)	70		360		200	100		50	95		
Base Capacity (vph)	249	524	249	570	565	249	1377	686	249	1054	552
Starvation Cap Reductn	0	0	0	0	0	0	113	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.81	1.05	0.20	0.05	0.66	0.78	0.38	0.19	0.77	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
4: Heacock St & SR 60 WB Ramp

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	256	255	393	1216	1382
v/c Ratio	0.68	0.66	0.89	0.50	1.05
Control Delay	40.0	30.8	56.4	8.2	65.3
Queue Delay	0.0	0.0	11.3	2.1	14.0
Total Delay	40.0	30.8	67.7	10.2	79.2
Queue Length 50th (ft)	125	91	201	142	~414
Queue Length 95th (ft)	200	167	#412	251	#628
Internal Link Dist (ft)	1003			225	354
Turn Bay Length (ft)		30	200		
Base Capacity (vph)	717	678	441	2410	1319
Starvation Cap Reductn	0	0	39	1000	43
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.38	0.98	0.86	1.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

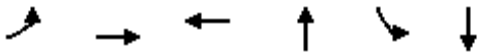
Queues
5: Heacock St & SR 60 EB Ramp

Festival at Moreno Valley Mixed Use
Future (2035) With-Project Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	292	296	369	1368	273	985
v/c Ratio	0.69	0.70	0.75	0.69	0.74	0.43
Control Delay	40.8	41.1	30.3	26.8	47.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.3	1.7
Total Delay	40.8	41.1	30.3	26.8	47.4	11.0
Queue Length 50th (ft)	166	168	132	235	155	138
Queue Length 95th (ft)	257	261	236	#387	232	209
Internal Link Dist (ft)		711		649		225
Turn Bay Length (ft)					190	
Base Capacity (vph)	536	538	593	1983	565	2309
Starvation Cap Reductn	0	0	0	0	57	1097
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.55	0.62	0.69	0.54	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

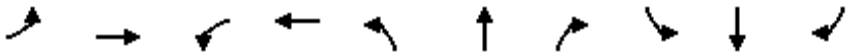


Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	138	1176	813	108	98	71
v/c Ratio	1.70	0.67	0.73	0.17	0.18	0.09
Control Delay	396.1	22.4	31.1	10.5	21.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	396.1	22.4	31.1	10.5	21.3	0.2
Queue Length 50th (ft)	~141	308	242	20	42	0
Queue Length 95th (ft)	#256	362	302	52	77	0
Internal Link Dist (ft)		1226	1262	148		1473
Turn Bay Length (ft)	150				40	
Base Capacity (vph)	81	1768	1108	644	539	782
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.70	0.67	0.73	0.17	0.18	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	133	1039	102	615	132	287	274	85	212	98
v/c Ratio	0.62	1.02	0.51	0.70	0.61	0.43	0.42	0.45	0.37	0.17
Control Delay	53.1	69.2	49.6	35.7	52.9	28.9	15.2	48.2	29.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	69.2	49.6	35.7	52.9	28.9	15.2	48.2	29.2	4.7
Queue Length 50th (ft)	78	~371	60	172	77	139	58	50	103	0
Queue Length 95th (ft)	142	#530	113	239	141	238	143	97	176	29
Internal Link Dist (ft)		1262		2351		1355			1475	
Turn Bay Length (ft)	95		100		110		50	80		50
Base Capacity (vph)	260	1014	260	1012	260	660	654	260	578	570
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	1.02	0.39	0.61	0.51	0.43	0.42	0.33	0.37	0.17

Intersection Summary

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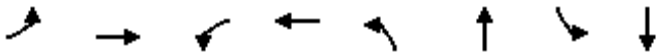
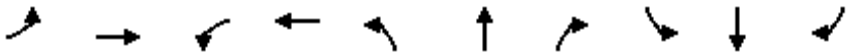


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	69	295	91	219	81	669	38	402
v/c Ratio	0.29	0.57	0.31	0.68	0.53	0.83	0.22	0.51
Control Delay	37.4	31.7	35.0	37.6	53.8	34.7	41.7	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	31.7	35.0	37.6	53.8	34.7	41.7	22.8
Queue Length 50th (ft)	34	61	43	86	42	320	19	155
Queue Length 95th (ft)	76	108	91	169	#114	#688	53	295
Internal Link Dist (ft)		299		2291		1240		1355
Turn Bay Length (ft)	150		80		145		100	
Base Capacity (vph)	438	883	438	461	154	810	438	786
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.33	0.21	0.48	0.53	0.83	0.09	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	244	1222	103	680	241	422	192	116	267	124
v/c Ratio	1.00	1.26	0.53	0.78	0.99	0.72	0.24	0.58	0.49	0.16
Control Delay	101.8	158.2	51.4	40.7	98.7	38.9	6.9	53.0	32.8	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.8	158.2	51.4	40.7	98.7	38.9	6.9	53.0	32.8	7.7
Queue Length 50th (ft)	~159	~502	62	203	154	238	23	70	140	18
Queue Length 95th (ft)	#318	#663	114	268	#314	#397	64	126	221	51
Internal Link Dist (ft)		683		1025		879			1240	
Turn Bay Length (ft)	90		100		145		105	90		60
Base Capacity (vph)	244	968	244	953	244	590	855	244	543	791
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	1.26	0.42	0.71	0.99	0.72	0.22	0.48	0.49	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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Queue shown is maximum after two cycles.

SimTraffic Queue Reports

Existing

SimTraffic Performance Report
Existing (2017) Weekday AM Peak Hour 12/04/2017

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Vehicles Entered	0	393	149	0	0	398	345	0	274	340	0	0
Vehicles Exited	125	155	131	125	152	271	325	113	184	230	88	49
Hourly Exit Rate	125	155	131	125	152	271	325	113	184	230	88	49

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Vehicles Entered	526	349	0	2773
Vehicles Exited	310	245	275	2776
Hourly Exit Rate	310	245	275	2776

2: Heacock St & New Project Access Performance by lane

Lane	NB	NB	SB	SB	All
Movements Served	T	TR	LT	T	
Vehicles Entered	297	333	399	433	1461
Vehicles Exited	282	350	332	495	1460
Hourly Exit Rate	282	350	332	495	1460

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Vehicles Entered	137	75	1	145	1	0	357	380	0	0	348	463
Vehicles Exited	39	171	50	79	17	95	267	308	63	17	359	439
Hourly Exit Rate	39	171	50	79	17	95	267	308	63	17	359	439

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Vehicles Entered	45	1954
Vehicles Exited	45	1949
Hourly Exit Rate	45	1949

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Vehicles Entered	422	0	1	646	222	406	554	2251
Vehicles Exited	268	155	285	328	252	459	494	2240
Hourly Exit Rate	268	155	285	328	252	459	494	2240

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Vehicles Entered	183	42	365	505	137	156	1	619	334	2342
Vehicles Exited	168	47	374	473	160	164	145	422	387	2338
Hourly Exit Rate	168	47	374	473	160	164	145	422	387	2338

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	WB	WB	NB	All
Movements Served	LT	TR	LT	TR	LTR	
Vehicles Entered	71	72	122	25	1	291
Vehicles Exited	64	79	122	24	1	290
Hourly Exit Rate	64	79	122	24	1	290

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	All
Movements Served	L	T	TR	L	TR	LTR	R	
Vehicles Entered	0	66	77	0	142	1	4	291
Vehicles Exited	10	57	78	0	142	1	4	293
Hourly Exit Rate	10	57	78	0	142	1	4	293

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Vehicles Entered	132	143	5	280
Vehicles Exited	132	144	5	280
Hourly Exit Rate	132	144	5	280

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Vehicles Entered	114	156	10	278
Vehicles Exited	114	156	9	278
Hourly Exit Rate	114	156	9	278

10: Hemlock Ave & West Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Vehicles Entered	104	158	1	263
Vehicles Exited	104	158	1	263
Hourly Exit Rate	104	158	1	263

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Vehicles Entered	103	157	7	267
Vehicles Exited	102	157	7	266
Hourly Exit Rate	102	157	7	266

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	SB	SB	All
Movements Served	L	T	TR	T	TR	L	TR	
Vehicles Entered	0	209	231	404	422	0	213	1480
Vehicles Exited	45	170	228	386	433	131	84	1478
Hourly Exit Rate	45	170	228	386	433	131	84	1478

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Vehicles Entered	0	254	280	0	598	195	0	300	0	0	308	0
Vehicles Exited	30	208	294	90	319	384	122	128	50	89	147	71
Hourly Exit Rate	30	208	294	90	319	384	122	128	50	89	147	71

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Vehicles Entered	1935
Vehicles Exited	1932
Hourly Exit Rate	1932

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	L	TR	L	TR	
Vehicles Entered	0	77	30	0	191	0	294	0	368	960
Vehicles Exited	8	45	53	53	138	33	259	35	335	957
Hourly Exit Rate	8	45	53	53	138	33	259	35	335	957

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Vehicles Entered	0	183	88	0	217	65	0	345	0	0	398	0
Vehicles Exited	48	126	96	22	164	98	82	200	63	60	254	86
Hourly Exit Rate	48	126	96	22	164	98	82	200	63	60	254	86

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Vehicles Entered	1295
Vehicles Exited	1299
Hourly Exit Rate	1299

Total Network Performance

Vehicles Entered	6077
Vehicles Exited	6053
Hourly Exit Rate	6053
Input Volume	24251
% of Volume	25

Queuing and Blocking Report
Existing (2017) Weekday AM Peak Hour

12/04/2017

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	176	150	90	160	268	266	161	181	200	70	124
Average Queue (ft)	74	79	68	45	106	143	152	76	74	98	39	49
95th Queue (ft)	120	148	132	98	178	258	257	139	148	171	88	111
Link Distance (ft)		2012	2012			1213	1213		694	694		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	10	5	11	1	7	12		2	1	31	2	1
Queuing Penalty (veh)	15	7	14	2	19	20		4	1	29	5	2

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	219	275	120
Average Queue (ft)	128	137	99
95th Queue (ft)	204	242	145
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			95
Storage Blk Time (%)	18	13	8
Queuing Penalty (veh)	9	34	23

Intersection: 2: Heacock St & New Project Access

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Queuing and Blocking Report
Existing (2017) Weekday AM Peak Hour

12/04/2017

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	71	142	80	99	20	123	190	199	75	89	251	279
Average Queue (ft)	25	63	31	37	7	57	70	79	26	17	111	139
95th Queue (ft)	57	116	68	79	22	113	148	155	70	56	210	238
Link Distance (ft)	2106	2106		357			350	350			592	592
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)						1	3	14	0		10	
Queuing Penalty (veh)						3	3	8	0		2	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	44
Average Queue (ft)	12
95th Queue (ft)	33
Link Distance (ft)	592
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	316	58	224	298	259	344	360
Average Queue (ft)	179	49	167	123	85	190	223
95th Queue (ft)	295	65	239	261	181	310	343
Link Distance (ft)	1034			257	257	350	350
Upstream Blk Time (%)				2	0	0	1
Queuing Penalty (veh)				11	1	0	2
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	55	11	7	0			
Queuing Penalty (veh)	83	28	22	1			

Queuing and Blocking Report
Existing (2017) Weekday AM Peak Hour

12/04/2017

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	177	138	208	282	240	113	186	176	198
Average Queue (ft)	96	33	101	143	68	31	89	74	72
95th Queue (ft)	157	92	173	242	164	77	158	149	157
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							0	0	
Queuing Penalty (veh)							2	0	

Intersection: 6: Hemlock Ave & New Project Access

Movement	NB
Directions Served	LTR
Maximum Queue (ft)	17
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	255
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	NB	SB
Directions Served	L	LTR	R
Maximum Queue (ft)	20	17	25
Average Queue (ft)	1	1	3
95th Queue (ft)	10	8	17
Link Distance (ft)		157	573
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	180		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
Existing (2017) Weekday AM Peak Hour

12/04/2017

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	31	28
Average Queue (ft)	2	4
95th Queue (ft)	15	20
Link Distance (ft)	284	380
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	23	31
Average Queue (ft)	2	9
95th Queue (ft)	15	31
Link Distance (ft)	542	236
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Hemlock Ave & West Access

Movement	SB
Directions Served	R
Maximum Queue (ft)	9
Average Queue (ft)	1
95th Queue (ft)	7
Link Distance (ft)	328
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
Existing (2017) Weekday AM Peak Hour

12/04/2017

Intersection: 11: Hemlock Ave & Nita Dr

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	6
95th Queue (ft)	26
Link Distance (ft)	253
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	L	T	TR	T	TR	L	TR
Maximum Queue (ft)	110	137	160	294	322	64	141
Average Queue (ft)	42	68	83	174	198	44	45
95th Queue (ft)	88	126	144	275	305	74	116
Link Distance (ft)		1213	1213	1261	1261		1507
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150					40	
Storage Blk Time (%)	0	0				14	3
Queuing Penalty (veh)	0	0				11	4

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	83	198	207	124	271	296	132	206	74	105	219	75
Average Queue (ft)	25	85	107	70	131	155	83	75	29	62	88	37
95th Queue (ft)	69	160	189	131	221	242	139	161	72	111	182	78
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	0	6		2	14		7	16	1	10	20	1
Queuing Penalty (veh)	0	2		7	12		12	27	2	22	36	3

Queuing and Blocking Report
Existing (2017) Weekday AM Peak Hour

12/04/2017

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	33	65	72	99	141	88	204	113	216
Average Queue (ft)	6	30	28	39	65	29	80	32	95
95th Queue (ft)	25	57	58	81	118	65	155	78	181
Link Distance (ft)		318	318		2337		1227		1353
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150			80		145		100	
Storage Blk Time (%)				1	6		1		8
Queuing Penalty (veh)				2	3		0		4

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	93	138	96	60	131	122	113	170	107	114	269	85
Average Queue (ft)	32	54	28	17	72	44	56	69	24	47	93	37
95th Queue (ft)	67	105	64	46	117	92	97	130	64	98	194	93
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	1	2			2		0	2	0	1	12	1
Queuing Penalty (veh)	0	1			0		0	3	0	3	18	4

Network Summary

Network wide Queuing Penalty: 527

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	43.6	52.1	33.0	3.1	38.6	34.6	32.5	42.0	25.3	34.1	5.6	40.3
Vehicles Entered	0	562	217	0	0	238	228	0	432	552	0	0
Vehicles Exited	225	200	241	121	103	163	209	144	334	315	183	71
Hourly Exit Rate	225	200	241	121	103	163	209	144	334	315	183	71

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				0.5
Total Del/Veh (s)	28.1	28.8	9.5	30.0
Vehicles Entered	501	299	0	3029
Vehicles Exited	279	233	212	3034
Hourly Exit Rate	279	233	212	3034

2: Heacock St & New Project Access Performance by lane

Lane	NB	NB	SB	SB	SB	All
Movements Served	T	TR	LT	T	T	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	2.6	2.6	2.7	1.8	2.8	2.5
Vehicles Entered	484	553	339	237	162	1775
Vehicles Exited	459	580	294	397	48	1778
Hourly Exit Rate	459	580	294	397	48	1778

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	35.1	20.7	30.9	24.7	7.9	34.5	17.8	17.9	1.2	37.6	20.1	21.2
Vehicles Entered	178	115	0	190	0	0	539	667	0	0	315	407
Vehicles Exited	50	243	68	88	32	134	450	515	109	20	320	388
Hourly Exit Rate	50	243	68	88	32	134	450	515	109	20	320	388

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		0.0
Total Del/Veh (s)	3.3	19.9
Vehicles Entered	48	2458
Vehicles Exited	45	2463
Hourly Exit Rate	45	2463

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								0.2
Total Del/Veh (s)	39.3	5.3	39.5	12.4	9.5	22.8	25.2	21.0
Vehicles Entered	339	0	0	869	551	384	547	2689
Vehicles Exited	190	148	354	521	543	443	487	2686
Hourly Exit Rate	190	148	354	521	543	443	487	2686

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										0.2
Total Del/Veh (s)	46.1	27.7	11.5	28.8	19.8	10.6	39.7	10.4	10.1	21.4
Vehicles Entered	357	123	323	661	256	297	1	565	333	2916
Vehicles Exited	298	178	331	571	312	326	158	381	356	2910
Hourly Exit Rate	298	178	331	571	312	326	158	381	356	2910

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	EB	WB	NB	All
Movements Served	T	T	TR	T	LTR	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	1.5	1.4	0.5	0.3	2.8	0.8
Vehicles Entered	114	31	105	190	24	464
Vehicles Exited	107	36	108	190	24	465
Hourly Exit Rate	107	36	108	190	24	465

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	LTR	LT	R	
Denied Del/Veh (s)									0.0
Total Del/Veh (s)	2.0	0.2	0.2	1.8	0.4	8.1	5.6	2.7	0.8
Vehicles Entered	2	116	145	7	147	3	6	38	462
Vehicles Exited	48	70	145	7	146	3	6	38	463
Hourly Exit Rate	48	70	145	7	146	3	6	38	463

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.3	0.5	3.9	0.6
Vehicles Entered	216	152	18	387
Vehicles Exited	216	151	18	385
Hourly Exit Rate	216	151	18	385

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.5	0.5	5.0	1.0
Vehicles Entered	214	148	41	403
Vehicles Exited	214	147	40	402
Hourly Exit Rate	214	147	40	402

10: Hemlock Ave & West Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.5	0.3	2.0	0.4
Vehicles Entered	229	160	8	398
Vehicles Exited	229	161	8	398
Hourly Exit Rate	229	161	8	398

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.1	1.6	2.5	0.8
Vehicles Entered	227	163	8	398
Vehicles Exited	227	163	8	398
Hourly Exit Rate	227	163	8	398

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	SB	SB	All
Movements Served	L	T	TR	T	TR	L	TR	
Denied Del/Veh (s)								0.2
Total Del/Veh (s)	100.0	20.4	18.1	20.9	21.6	17.5	7.5	24.2
Vehicles Entered	0	281	435	220	238	0	111	1285
Vehicles Exited	75	269	366	216	237	62	49	1274
Hourly Exit Rate	75	269	366	216	237	62	49	1274

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	37.2	26.2	26.9	38.5	25.7	22.5	35.5	22.5	3.9	37.0	20.8	2.8
Vehicles Entered	0	310	364	0	346	73	0	317	0	0	213	0
Vehicles Exited	92	263	325	47	171	202	63	133	119	58	85	69
Hourly Exit Rate	92	263	325	47	171	202	63	133	119	58	85	69

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	24.4
Vehicles Entered	1624
Vehicles Exited	1628
Hourly Exit Rate	1628

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)										0.1
Total Del/Veh (s)	26.3	32.3	16.7	26.8	25.9	34.1	12.1	41.6	12.2	18.3
Vehicles Entered	0	177	53	0	128	0	408	0	231	997
Vehicles Exited	33	82	113	40	88	51	358	17	216	999
Hourly Exit Rate	33	82	113	40	88	51	358	17	216	999

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	40.4	30.9	21.9	40.6	31.4	20.7	38.7	20.7	10.1	39.3	22.0	7.9
Vehicles Entered	0	529	263	0	263	82	0	375	0	0	291	0
Vehicles Exited	154	333	306	43	178	125	88	209	76	60	166	64
Hourly Exit Rate	154	333	306	43	178	125	88	209	76	60	166	64

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	26.7
Vehicles Entered	1803
Vehicles Exited	1802
Hourly Exit Rate	1802

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	58.4
Vehicles Entered	6950
Vehicles Exited	6943
Hourly Exit Rate	6943
Input Volume	27855
% of Volume	25

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	114	364	368	90	157	191	204	164	274	310	70	125
Average Queue (ft)	110	196	170	61	67	85	103	104	145	176	54	63
95th Queue (ft)	126	332	296	114	128	157	173	175	259	295	94	117
Link Distance (ft)		2012	2012			1213	1213		586	586		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	47	11	31	1	1	3		3	10	37	8	2
Queuing Penalty (veh)	103	25	37	1	2	3		10	16	69	25	6

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	231	242	120
Average Queue (ft)	126	118	81
95th Queue (ft)	198	206	141
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			95
Storage Blk Time (%)	16	11	3
Queuing Penalty (veh)	12	23	9

Intersection: 2: Heacock St & New Project Access

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	78	200	104	108	56	124	349	340	75	98	268	284
Average Queue (ft)	32	93	42	40	14	78	149	165	42	20	125	141
95th Queue (ft)	66	168	85	84	39	136	289	298	93	62	241	246
Link Distance (ft)	2106	2106		306			337	337			702	702
Upstream Blk Time (%)							0	0				
Queuing Penalty (veh)							3	2				
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)						4	13	30	1		14	
Queuing Penalty (veh)						20	17	33	3		3	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	49
Average Queue (ft)	13
95th Queue (ft)	35
Link Distance (ft)	702
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	253	64	224	319	273	316	334
Average Queue (ft)	140	50	187	185	125	163	192
95th Queue (ft)	230	67	256	347	247	280	317
Link Distance (ft)	1034			257	257	337	337
Upstream Blk Time (%)				7	0	0	0
Queuing Penalty (veh)				50	3	0	1
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	55	18	16	2			
Queuing Penalty (veh)	84	37	84	5			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	386	341	195	441	329	212	188	239	225
Average Queue (ft)	191	131	90	232	160	88	100	92	91
95th Queue (ft)	317	266	162	382	292	178	168	191	186
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)								0	0
Queuing Penalty (veh)								0	0
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							0	1	
Queuing Penalty (veh)							1	1	

Intersection: 6: Hemlock Ave & New Project Access

Movement	NB
Directions Served	LTR
Maximum Queue (ft)	40
Average Queue (ft)	14
95th Queue (ft)	36
Link Distance (ft)	238
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	WB	NB	SB	SB
Directions Served	L	L	LTR	LT	R
Maximum Queue (ft)	48	20	24	26	49
Average Queue (ft)	5	1	2	5	16
95th Queue (ft)	26	9	12	20	35
Link Distance (ft)		285	155	572	572
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	180				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	29	33
Average Queue (ft)	2	12
95th Queue (ft)	14	35
Link Distance (ft)	285	380
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	34	39
Average Queue (ft)	3	23
95th Queue (ft)	19	45
Link Distance (ft)	542	236
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Hemlock Ave & West Access

Movement	EB	SB
Directions Served	LT	R
Maximum Queue (ft)	10	23
Average Queue (ft)	1	5
95th Queue (ft)	8	21
Link Distance (ft)	622	328
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Hemlock Ave & Nita Dr

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	253
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	L	T	TR	T	TR	L	TR
Maximum Queue (ft)	174	270	252	176	197	63	88
Average Queue (ft)	86	117	130	88	96	31	27
95th Queue (ft)	162	222	221	153	163	66	67
Link Distance (ft)		1213	1213	1261	1261		1507
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150					40	
Storage Blk Time (%)	5	3				8	2
Queuing Penalty (veh)	16	3				4	1

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	119	231	240	97	152	161	116	173	75	99	146	75
Average Queue (ft)	69	123	140	33	71	82	47	59	45	44	46	31
95th Queue (ft)	122	215	229	73	117	135	95	134	84	85	104	70
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	2	13		0	2		0	12	3	3	8	1
Queuing Penalty (veh)	4	11		0	1		1	23	6	4	10	1

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	70	93	97	81	115	120	206	56	153
Average Queue (ft)	23	47	50	29	52	43	94	17	69
95th Queue (ft)	58	79	87	67	96	91	179	46	127
Link Distance (ft)		318	318		2337		1227		1353
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150			80		145		100	
Storage Blk Time (%)				0	3		2		3
Queuing Penalty (veh)				0	1		1		0

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	115	313	263	113	176	147	152	187	130	109	195	85
Average Queue (ft)	97	173	135	34	87	57	66	89	40	50	73	37
95th Queue (ft)	136	279	230	82	142	116	115	156	98	97	139	93
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	21	24		0	6		0	5	0	2	12	1
Queuing Penalty (veh)	55	37		0	3		0	8	0	3	15	2

Network Summary

Network wide Queuing Penalty: 900

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	38.0	32.2	30.7	6.4	40.5	33.1	33.3	37.6	21.5	25.6	6.6	43.5
Vehicles Entered	0	410	156	0	0	415	347	0	281	341	0	0
Vehicles Exited	136	153	144	129	167	274	323	101	196	228	98	47
Hourly Exit Rate	136	153	144	129	167	274	323	101	196	228	98	47

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				0.5
Total Del/Veh (s)	26.0	32.4	10.2	27.4
Vehicles Entered	535	354	0	2838
Vehicles Exited	322	251	269	2838
Hourly Exit Rate	322	251	269	2838

2: Heacock St & New Project Access Performance by lane

Lane	WB	NB	NB	SB	SB	All
Movements Served	LR	T	TR	LT	T	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	4.3	1.8	1.8	2.9	2.1	2.1
Vehicles Entered	8	312	332	419	450	1521
Vehicles Exited	8	293	349	347	521	1517
Hourly Exit Rate	8	293	349	347	521	1517

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	31.0	16.7	30.0	7.4	3.3	29.6	10.3	10.2	1.2	34.9	13.7	16.0
Vehicles Entered	132	70	0	258	0	0	366	408	0	0	363	484
Vehicles Exited	38	162	44	211	3	93	285	320	79	15	368	461
Hourly Exit Rate	38	162	44	211	3	93	285	320	79	15	368	461

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		0.0
Total Del/Veh (s)	2.0	13.6
Vehicles Entered	45	2127
Vehicles Exited	44	2123
Hourly Exit Rate	44	2123

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								0.3
Total Del/Veh (s)	39.7	2.4	37.9	11.2	8.9	25.5	28.2	23.4
Vehicles Entered	416	0	2	622	237	410	576	2262
Vehicles Exited	251	163	254	337	271	469	521	2265
Hourly Exit Rate	251	163	254	337	271	469	521	2265

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										0.1
Total Del/Veh (s)	32.9	26.5	12.5	15.7	11.4	4.3	37.2	8.3	7.7	14.4
Vehicles Entered	183	49	353	483	139	144	1	624	353	2327
Vehicles Exited	166	56	361	452	167	153	155	432	392	2333
Hourly Exit Rate	166	56	361	452	167	153	155	432	392	2333

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	WB	WB	NB	All
Movements Served	LT	TR	LT	TR	LTR	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	1.5	0.6	0.2	0.3	2.8	0.5
Vehicles Entered	76	74	169	96	1	416
Vehicles Exited	76	75	174	91	1	416
Hourly Exit Rate	76	75	174	91	1	416

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	LTR	LT	R	
Denied Del/Veh (s)									0.1
Total Del/Veh (s)	2.3	0.5	0.3	1.6	0.2	5.6	6.1	2.7	1.1
Vehicles Entered	54	183	105	3	190	31	3	53	622
Vehicles Exited	97	137	107	3	189	31	3	53	620
Hourly Exit Rate	97	137	107	3	189	31	3	53	620

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.5	0.4	2.7	0.5
Vehicles Entered	205	194	4	403
Vehicles Exited	205	195	4	402
Hourly Exit Rate	205	195	4	402

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	1.8	0.7	4.2	1.8
Vehicles Entered	191	171	75	436
Vehicles Exited	189	171	75	435
Hourly Exit Rate	189	171	75	435

10: Hemlock Ave & West Access Performance by lane

Lane	EB	WB	NB	SB	All
Movements Served	LTR	LTR	LTR	LTR	
Denied Del/Veh (s)					0.1
Total Del/Veh (s)	0.4	0.7	3.6	4.8	1.0
Vehicles Entered	112	210	16	20	358
Vehicles Exited	112	210	16	20	358
Hourly Exit Rate	112	210	16	20	358

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.2	1.4	2.3	0.8
Vehicles Entered	137	137	6	280
Vehicles Exited	138	136	6	280
Hourly Exit Rate	138	136	6	280

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	LT	TR	LTR	L	TR	
Denied Del/Veh (s)									0.3
Total Del/Veh (s)	54.4	17.1	17.9	27.0	28.1	7.4	12.5	12.5	23.4
Vehicles Entered	0	211	257	421	435	17	0	212	1554
Vehicles Exited	45	179	249	407	446	17	128	82	1554
Hourly Exit Rate	45	179	249	407	446	17	128	82	1554

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	47.0	24.7	24.9	42.7	26.6	26.6	37.8	27.5	2.4	39.6	26.0	4.9
Vehicles Entered	0	267	296	0	593	196	0	306	0	0	300	0
Vehicles Exited	32	222	307	85	327	376	122	129	55	75	146	80
Hourly Exit Rate	32	222	307	85	327	376	122	129	55	75	146	80

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	26.8
Vehicles Entered	1957
Vehicles Exited	1956
Hourly Exit Rate	1956

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)									0.1
Total Del/Veh (s)	14.7	14.1	24.9	20.5	30.2	12.1	29.7	11.9	15.6
Vehicles Entered	109	28	0	176	0	293	0	363	967
Vehicles Exited	91	47	47	128	33	261	47	315	969
Hourly Exit Rate	91	47	47	128	33	261	47	315	969

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	33.6	23.5	10.7	35.1	26.0	15.6	29.4	14.2	6.2	34.1	19.5	6.3
Vehicles Entered	0	191	91	0	226	59	0	340	0	0	374	0
Vehicles Exited	48	134	100	22	165	97	74	202	64	52	235	88
Hourly Exit Rate	48	134	100	22	165	97	74	202	64	52	235	88

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	19.4
Vehicles Entered	1282
Vehicles Exited	1281
Hourly Exit Rate	1281

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	51.0
Vehicles Entered	6519
Vehicles Exited	6515
Hourly Exit Rate	6515
Input Volume	25503
% of Volume	26

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	222	179	90	160	298	293	162	191	217	71	124
Average Queue (ft)	80	86	76	51	109	149	159	69	84	109	43	48
95th Queue (ft)	128	162	144	101	180	272	271	128	156	192	93	108
Link Distance (ft)		2012	2012			1213	1213		694	694		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	13	6	16	2	9	10		1	1	30	5	1
Queuing Penalty (veh)	18	7	20	3	23	16		1	2	28	12	3

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	225	264	120
Average Queue (ft)	132	141	95
95th Queue (ft)	199	231	148
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			95
Storage Blk Time (%)	18	14	7
Queuing Penalty (veh)	10	37	19

Intersection: 2: Heacock St & New Project Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	7
95th Queue (ft)	27
Link Distance (ft)	461
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	58	146	61	86	20	119	190	190	75	69	259	292
Average Queue (ft)	25	60	29	30	1	54	69	81	30	13	113	139
95th Queue (ft)	53	114	59	65	10	108	145	159	76	43	209	241
Link Distance (ft)	2106	2106		357			350	350			592	592
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)						1	2	14	0		8	
Queuing Penalty (veh)						4	2	11	1		1	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	35
Average Queue (ft)	9
95th Queue (ft)	26
Link Distance (ft)	592
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	319	57	222	284	198	352	374
Average Queue (ft)	181	49	148	107	76	200	231
95th Queue (ft)	294	63	230	226	156	336	358
Link Distance (ft)	1034			257	257	350	350
Upstream Blk Time (%)				1	0	0	1
Queuing Penalty (veh)				6	0	1	4
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	55	11	5	0			
Queuing Penalty (veh)	88	29	15	0			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	168	133	203	291	216	100	185	208	204
Average Queue (ft)	92	40	94	137	67	27	96	87	82
95th Queue (ft)	150	96	161	234	154	62	157	180	176
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)								0	0
Queuing Penalty (veh)								0	0
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							0	0	
Queuing Penalty (veh)							1	1	

Intersection: 6: Hemlock Ave & New Project Access

Movement	NB
Directions Served	LTR
Maximum Queue (ft)	17
Average Queue (ft)	1
95th Queue (ft)	10
Link Distance (ft)	255
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	60	9	11	5	2	48	28	52
Average Queue (ft)	12	0	0	0	0	15	3	23
95th Queue (ft)	39	7	8	4	2	36	17	43
Link Distance (ft)		222	222	284	284	157	573	573
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	180							
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	44	27
Average Queue (ft)	3	3
95th Queue (ft)	21	18
Link Distance (ft)	284	380
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	69	4	62
Average Queue (ft)	15	0	31
95th Queue (ft)	48	3	52
Link Distance (ft)	542	620	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Hemlock Ave & West Access

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	12	38	35	28
Average Queue (ft)	1	4	13	12
95th Queue (ft)	8	23	38	31
Link Distance (ft)	620	105	225	328
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Hemlock Ave & Nita Dr

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	5
95th Queue (ft)	24
Link Distance (ft)	253
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	TR	LTR	L	TR
Maximum Queue (ft)	118	156	174	336	372	44	64	152
Average Queue (ft)	39	65	91	184	204	8	44	41
95th Queue (ft)	82	131	159	300	331	31	74	109
Link Distance (ft)		1213	1213	1261	1261	182		1507
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150						40	
Storage Blk Time (%)	0	0					14	4
Queuing Penalty (veh)	0	0					11	5

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	114	206	218	124	298	322	134	251	76	105	238	76
Average Queue (ft)	28	91	116	65	137	156	82	79	27	58	77	40
95th Queue (ft)	75	175	197	125	241	258	140	171	73	102	164	83
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	0	9		2	14		7	17	1	6	19	2
Queuing Penalty (veh)	1	3		6	12		12	29	1	13	34	5

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	56	65	90	176	96	185	123	204
Average Queue (ft)	28	24	33	65	29	71	40	90
95th Queue (ft)	53	53	70	126	74	151	90	167
Link Distance (ft)	318	318		2337		1227		1353
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			80		145		100	
Storage Blk Time (%)			1	5		1	0	7
Queuing Penalty (veh)			1	3		1	1	3

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	79	122	86	86	157	133	102	188	111	104	273	85
Average Queue (ft)	31	57	30	20	72	41	53	73	27	44	93	39
95th Queue (ft)	65	104	64	61	130	95	92	145	81	91	195	93
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	0	2		0	3			3	0	1	13	1
Queuing Penalty (veh)	0	1		0	1			4	0	3	19	4

Network Summary

Network wide Queuing Penalty: 537

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	46.3	73.6	36.4	4.5	44.7	29.2	28.0	44.8	29.4	40.2	4.6	42.4
Vehicles Entered	0	578	224	0	0	213	246	0	489	561	0	0
Vehicles Exited	228	197	245	132	91	161	215	172	353	325	194	71
Hourly Exit Rate	228	197	245	132	91	161	215	172	353	325	194	71

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				0.5
Total Del/Veh (s)	28.9	30.9	10.5	33.0
Vehicles Entered	510	299	0	3121
Vehicles Exited	294	235	207	3120
Hourly Exit Rate	294	235	207	3120

2: Heacock St & New Project Access Performance by lane

Lane	WB	NB	NB	SB	SB	All
Movements Served	LR	T	TR	LT	T	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	9.0	3.0	2.8	2.8	2.2	2.8
Vehicles Entered	33	563	503	361	392	1851
Vehicles Exited	32	514	558	330	425	1859
Hourly Exit Rate	32	514	558	330	425	1859

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	32.7	28.2	72.8	10.3	9.5	46.0	32.8	41.5	1.5	43.0	29.0	32.1
Vehicles Entered	208	122	0	662	0	0	584	774	0	0	353	387
Vehicles Exited	64	267	245	398	18	125	528	467	237	48	324	370
Hourly Exit Rate	64	267	245	398	18	125	528	467	237	48	324	370

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		0.0
Total Del/Veh (s)	3.3	31.4
Vehicles Entered	48	3138
Vehicles Exited	47	3137
Hourly Exit Rate	47	3137

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								0.3
Total Del/Veh (s)	48.0	8.3	45.0	16.8	16.0	34.8	37.9	28.5
Vehicles Entered	408	0	0	829	672	495	618	3021
Vehicles Exited	201	209	342	559	598	549	561	3021
Hourly Exit Rate	201	209	342	559	598	549	561	3021

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										0.2
Total Del/Veh (s)	64.2	43.9	11.7	45.9	36.0	21.5	37.6	12.6	11.2	31.0
Vehicles Entered	376	164	321	624	295	305	2	677	325	3087
Vehicles Exited	297	227	333	531	343	357	236	391	375	3090
Hourly Exit Rate	297	227	333	531	343	357	236	391	375	3090

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	WB	WB	NB	All
Movements Served	LT	TR	LT	TR	LTR	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	1.2	0.8	6.6	8.4	3.6	4.9
Vehicles Entered	197	221	351	328	22	1118
Vehicles Exited	199	218	414	260	22	1114
Hourly Exit Rate	199	218	414	260	22	1114

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	LTR	LT	R	
Denied Del/Veh (s)									2.1
Total Del/Veh (s)	3.7	0.8	0.7	3.7	1.6	51.5	21.5	7.8	9.5
Vehicles Entered	111	326	298	32	295	192	38	237	1530
Vehicles Exited	272	173	291	33	294	189	34	241	1528
Hourly Exit Rate	272	173	291	33	294	189	34	241	1528

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.7	0.5	6.7	0.8
Vehicles Entered	364	322	20	706
Vehicles Exited	364	321	20	705
Hourly Exit Rate	364	321	20	705

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.1
Total Del/Veh (s)	2.8	1.4	11.2	5.6
Vehicles Entered	361	189	320	868
Vehicles Exited	360	189	320	868
Hourly Exit Rate	360	189	320	868

10: Hemlock Ave & West Access Performance by lane

Lane	EB	WB	NB	SB	All
Movements Served	LTR	LTR	LTR	LTR	
Denied Del/Veh (s)					0.1
Total Del/Veh (s)	1.2	1.6	5.6	8.6	2.9
Vehicles Entered	260	338	115	99	812
Vehicles Exited	261	338	115	100	813
Hourly Exit Rate	261	338	115	100	813

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.4	1.7	4.3	0.9
Vehicles Entered	398	213	11	622
Vehicles Exited	397	214	10	620
Hourly Exit Rate	397	214	10	620

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	LT	TR	LTR	L	TR	
Denied Del/Veh (s)									0.2
Total Del/Veh (s)	67.4	18.9	20.1	31.9	24.2	8.1	10.8	6.1	23.4
Vehicles Entered	0	277	455	229	219	97	0	110	1387
Vehicles Exited	83	289	352	202	243	97	58	52	1375
Hourly Exit Rate	83	289	352	202	243	97	58	52	1375

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	41.1	24.3	25.1	39.1	25.3	23.8	36.9	25.0	4.0	37.3	19.5	3.0
Vehicles Entered	0	336	363	0	355	74	0	334	0	0	206	0
Vehicles Exited	86	277	339	50	179	202	54	152	127	59	89	57
Hourly Exit Rate	86	277	339	50	179	202	54	152	127	59	89	57

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	24.3
Vehicles Entered	1667
Vehicles Exited	1670
Hourly Exit Rate	1670

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)										0.1
Total Del/Veh (s)	25.3	15.7	15.8	26.6	29.3	35.4	14.5	34.4	12.9	18.3
Vehicles Entered	0	286	111	0	143	0	417	0	226	1183
Vehicles Exited	60	187	150	35	109	62	356	18	208	1184
Hourly Exit Rate	60	187	150	35	109	62	356	18	208	1184

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	40.9	30.6	20.4	41.1	29.9	19.7	38.7	20.9	9.5	40.8	20.2	8.0
Vehicles Entered	0	520	274	0	271	85	0	376	0	0	275	0
Vehicles Exited	158	320	314	43	187	128	91	212	71	57	157	61
Hourly Exit Rate	158	320	314	43	187	128	91	212	71	57	157	61

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	26.2
Vehicles Entered	1801
Vehicles Exited	1799
Hourly Exit Rate	1799

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	64.5
Vehicles Entered	8673
Vehicles Exited	8670
Hourly Exit Rate	8670
Input Volume	34011
% of Volume	25

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	462	425	90	150	188	197	165	314	335	71	125
Average Queue (ft)	109	233	187	63	62	81	95	124	165	194	50	67
95th Queue (ft)	128	450	387	116	124	154	167	188	301	333	96	130
Link Distance (ft)		2012	2012			1213	1213		694	694		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	51	9	32	1	1	1		9	14	40	6	2
Queuing Penalty (veh)	114	20	42	2	2	1		32	23	75	21	5

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	230	272	120
Average Queue (ft)	132	128	87
95th Queue (ft)	211	226	145
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			95
Storage Blk Time (%)	19	14	5
Queuing Penalty (veh)	14	30	12

Intersection: 2: Heacock St & New Project Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	59
Average Queue (ft)	22
95th Queue (ft)	51
Link Distance (ft)	461
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	114	244	306	274	33	124	371	388	75	120	289	326
Average Queue (ft)	38	119	188	109	8	95	272	292	60	49	159	171
95th Queue (ft)	83	203	337	328	25	149	416	416	99	116	276	288
Link Distance (ft)	2106	2106		357			350	350			592	592
Upstream Blk Time (%)			1	6			4	5				
Queuing Penalty (veh)			0	38			24	34				
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)			1			9	29	46	3	1	22	
Queuing Penalty (veh)			1			42	39	107	14	4	10	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	48
Average Queue (ft)	13
95th Queue (ft)	33
Link Distance (ft)	592
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	329	61	225	321	280	371	377
Average Queue (ft)	181	52	198	219	178	261	280
95th Queue (ft)	288	64	262	372	314	390	405
Link Distance (ft)	1034			257	257	350	350
Upstream Blk Time (%)				11	3	2	4
Queuing Penalty (veh)				80	20	12	24
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	49	36	18	5			
Queuing Penalty (veh)	102	72	104	17			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	401	361	210	505	478	319	214	294	264
Average Queue (ft)	227	175	85	294	219	140	143	110	104
95th Queue (ft)	423	369	152	461	403	268	225	244	228
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)								1	0
Queuing Penalty (veh)								5	2
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							4	1	
Queuing Penalty (veh)							15	4	

Intersection: 6: Hemlock Ave & New Project Access

Movement	WB	WB	NB
Directions Served	LT	TR	LTR
Maximum Queue (ft)	74	67	35
Average Queue (ft)	25	25	15
95th Queue (ft)	137	138	39
Link Distance (ft)	222	222	255
Upstream Blk Time (%)	3	3	
Queuing Penalty (veh)	10	8	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	98	11	38	42	191	67	135
Average Queue (ft)	38	0	9	7	107	24	55
95th Queue (ft)	77	5	30	46	196	52	103
Link Distance (ft)		222	284	284	157	573	573
Upstream Blk Time (%)					21		
Queuing Penalty (veh)					0		
Storage Bay Dist (ft)	180						
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	44	32
Average Queue (ft)	4	14
95th Queue (ft)	22	37
Link Distance (ft)	284	380
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	98	18	218
Average Queue (ft)	37	1	85
95th Queue (ft)	78	9	164
Link Distance (ft)	542	620	236
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Hemlock Ave & West Access

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	36	99	85	76
Average Queue (ft)	3	29	40	34
95th Queue (ft)	17	77	69	62
Link Distance (ft)	620	105	225	328
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Hemlock Ave & Nita Dr

Movement	SB
Directions Served	R
Maximum Queue (ft)	40
Average Queue (ft)	9
95th Queue (ft)	33
Link Distance (ft)	253
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	TR	LTR	L	TR
Maximum Queue (ft)	163	271	237	217	218	90	62	82
Average Queue (ft)	78	109	122	110	112	33	23	21
95th Queue (ft)	146	205	199	180	187	71	55	56
Link Distance (ft)		1213	1213	1261	1261	182		1507
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150						40	
Storage Blk Time (%)	1	2					3	1
Queuing Penalty (veh)	4	2					1	1

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	119	211	225	117	169	185	128	220	75	98	124	74
Average Queue (ft)	61	105	126	38	75	85	44	76	52	45	46	29
95th Queue (ft)	116	197	216	88	133	151	98	164	91	83	94	71
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	4	13		0	3		0	17	4	3	8	1
Queuing Penalty (veh)	10	11		0	2		1	33	8	4	10	1

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	92	100	139	97	154	169	278	66	180
Average Queue (ft)	37	51	59	32	68	51	109	18	71
95th Queue (ft)	74	86	106	80	127	111	214	50	137
Link Distance (ft)		318	318		2337		1227		1353
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150			80		145		100	
Storage Blk Time (%)				0	8	0	4		3
Queuing Penalty (veh)				0	3	0	2		1

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	115	314	288	119	189	144	150	234	130	106	174	83
Average Queue (ft)	93	173	131	35	90	58	67	91	34	47	65	36
95th Queue (ft)	138	276	232	83	152	115	127	168	91	92	130	89
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	21	23		0	6		0	5	0	2	10	1
Queuing Penalty (veh)	53	35		0	3		1	8	0	4	12	2

Network Summary

Network wide Queuing Penalty: 1397

Near Term Year (2022)

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	39.7	32.6	31.6	6.8	49.1	35.4	35.0	43.4	24.4	27.7	5.8	44.7
Vehicles Entered	0	426	183	0	0	467	384	0	322	408	0	0
Vehicles Exited	145	161	147	154	185	308	355	125	239	266	100	60
Hourly Exit Rate	145	161	147	154	185	308	355	125	239	266	100	60

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				0.5
Total Del/Veh (s)	30.1	37.7	10.3	30.2
Vehicles Entered	596	407	0	3193
Vehicles Exited	357	299	291	3191
Hourly Exit Rate	357	299	291	3191

2: Heacock St & New Project Access Performance by lane

Lane	NB	NB	SB	SB	All
Movements Served	T	TR	LT	T	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	2.4	2.2	6.4	6.1	4.5
Vehicles Entered	347	413	466	530	1756
Vehicles Exited	333	427	415	574	1750
Hourly Exit Rate	333	427	415	574	1750

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	33.8	37.6	76.6	25.3	4.8	34.7	18.6	17.2	1.4	40.0	66.8	74.5
Vehicles Entered	163	99	1	168	0	0	402	490	0	0	431	534
Vehicles Exited	42	220	53	91	25	122	315	380	69	17	463	471
Hourly Exit Rate	42	220	53	91	25	122	315	380	69	17	463	471

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		2.5
Total Del/Veh (s)	5.1	43.3
Vehicles Entered	51	2339
Vehicles Exited	50	2318
Hourly Exit Rate	50	2318

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								0.6
Total Del/Veh (s)	47.5	3.3	45.9	19.8	13.8	48.1	52.3	37.7
Vehicles Entered	522	0	2	707	342	520	644	2738
Vehicles Exited	353	172	333	365	352	580	573	2727
Hourly Exit Rate	353	172	333	365	352	580	573	2727

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										0.2
Total Del/Veh (s)	48.5	25.8	21.7	34.0	18.7	8.2	45.5	9.7	8.6	21.6
Vehicles Entered	200	58	483	610	177	202	0	779	397	2907
Vehicles Exited	172	67	502	531	239	218	176	532	472	2909
Hourly Exit Rate	172	67	502	531	239	218	176	532	472	2909

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	WB	WB	NB	All
Movements Served	LT	TR	LT	TR	LTR	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	2.1	0.7	0.1	0.2	2.7	0.7
Vehicles Entered	71	82	135	34	2	324
Vehicles Exited	67	87	138	31	2	325
Hourly Exit Rate	67	87	138	31	2	325

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	All
Movements Served	L	T	TR	L	TR	LTR	R	
Denied Del/Veh (s)								0.0
Total Del/Veh (s)	2.3	0.1	0.1	0.0	0.2	5.1	2.1	0.3
Vehicles Entered	0	67	86	1	156	3	9	321
Vehicles Exited	12	56	86	1	156	3	9	322
Hourly Exit Rate	12	56	86	1	156	3	9	322

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.6	0.4	2.7	0.5
Vehicles Entered	140	159	6	305
Vehicles Exited	140	159	6	305
Hourly Exit Rate	140	159	6	305

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.4	0.6	4.8	0.6
Vehicles Entered	124	174	9	308
Vehicles Exited	124	174	9	308
Hourly Exit Rate	124	174	9	308

10: Hemlock Ave & West Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.3	0.2	1.7	0.2
Vehicles Entered	115	179	1	296
Vehicles Exited	115	179	1	295
Hourly Exit Rate	115	179	1	295

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.1	1.4	2.7	1.0
Vehicles Entered	113	177	7	297
Vehicles Exited	113	176	7	296
Hourly Exit Rate	113	176	7	296

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	SB	SB	All
Movements Served	L	T	TR	T	TR	L	TR	
Denied Del/Veh (s)								0.3
Total Del/Veh (s)	53.5	18.3	16.8	28.0	31.0	12.9	13.4	24.9
Vehicles Entered	0	219	263	463	465	0	226	1636
Vehicles Exited	53	177	253	452	474	140	89	1637
Hourly Exit Rate	53	177	253	452	474	140	89	1637

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	44.3	24.8	26.6	43.7	29.0	30.2	41.3	28.4	3.4	41.9	32.7	4.7
Vehicles Entered	0	271	309	0	660	226	0	337	0	0	381	0
Vehicles Exited	36	237	307	107	370	412	126	143	67	103	189	89
Hourly Exit Rate	36	237	307	107	370	412	126	143	67	103	189	89

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	29.3
Vehicles Entered	2185
Vehicles Exited	2186
Hourly Exit Rate	2186

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)										0.1
Total Del/Veh (s)	29.5	33.7	14.8	23.8	24.9	33.0	14.6	36.9	15.7	19.3
Vehicles Entered	0	86	33	0	223	0	377	0	436	1157
Vehicles Exited	8	49	63	77	145	42	335	47	386	1153
Hourly Exit Rate	8	49	63	77	145	42	335	47	386	1153

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	32.9	23.2	12.3	39.6	29.8	18.6	33.7	16.3	8.8	38.4	27.5	6.3
Vehicles Entered	0	266	129	0	241	66	0	380	0	0	497	0
Vehicles Exited	115	142	139	22	177	108	97	218	64	61	265	171
Hourly Exit Rate	115	142	139	22	177	108	97	218	64	61	265	171

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	22.2
Vehicles Entered	1579
Vehicles Exited	1578
Hourly Exit Rate	1578

Total Network Performance

Denied Del/Veh (s)	1.7
Total Del/Veh (s)	74.2
Vehicles Entered	7198
Vehicles Exited	7168
Hourly Exit Rate	7168
Input Volume	28411
% of Volume	25

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	196	198	90	160	352	340	164	261	275	70	125
Average Queue (ft)	84	94	85	57	126	164	173	93	104	117	37	63
95th Queue (ft)	128	172	165	105	187	308	304	161	212	224	88	131
Link Distance (ft)		2012	2012			1213	1213		694	694		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	16	6	15	2	14	13		4	5	32	4	2
Queuing Penalty (veh)	25	9	25	3	41	23		9	7	33	9	6

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	294	351	120
Average Queue (ft)	160	182	105
95th Queue (ft)	251	298	148
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			95
Storage Blk Time (%)	25	22	9
Queuing Penalty (veh)	15	65	27

Intersection: 2: Heacock St & New Project Access

Movement	SB	SB
Directions Served	LT	T
Maximum Queue (ft)	152	161
Average Queue (ft)	25	29
95th Queue (ft)	133	153
Link Distance (ft)	694	694
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	73	256	127	106	32	124	277	284	76	119	519	545
Average Queue (ft)	30	114	50	44	9	79	122	130	36	19	335	357
95th Queue (ft)	65	233	120	87	26	134	249	248	87	71	644	656
Link Distance (ft)	2106	2106		357			350	350			592	592
Upstream Blk Time (%)							0	0			5	7
Queuing Penalty (veh)							1	0			17	23
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)						5	9	25	1	0	45	
Queuing Penalty (veh)						18	11	16	2	1	9	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	62
Average Queue (ft)	16
95th Queue (ft)	47
Link Distance (ft)	592
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	488	61	225	324	275	380	376
Average Queue (ft)	263	48	201	220	144	322	340
95th Queue (ft)	415	64	254	370	268	416	418
Link Distance (ft)	1034			257	257	350	350
Upstream Blk Time (%)				11	1	11	20
Queuing Penalty (veh)				59	3	65	116
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	55	14	22	2			
Queuing Penalty (veh)	93	47	76	6			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	211	180	315	393	365	163	208	251	223
Average Queue (ft)	115	59	176	242	158	55	117	100	93
95th Queue (ft)	215	157	285	368	308	118	191	208	201
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)								0	0
Queuing Penalty (veh)								1	0
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							1	1	
Queuing Penalty (veh)							4	2	

Intersection: 6: Hemlock Ave & New Project Access

Movement	NB
Directions Served	LTR
Maximum Queue (ft)	24
Average Queue (ft)	2
95th Queue (ft)	14
Link Distance (ft)	255
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	NB	SB
Directions Served	L	LTR	R
Maximum Queue (ft)	21	22	26
Average Queue (ft)	2	2	6
95th Queue (ft)	11	12	24
Link Distance (ft)		157	573
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	180		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	35	28
Average Queue (ft)	2	5
95th Queue (ft)	16	22
Link Distance (ft)	284	380
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	12	31
Average Queue (ft)	1	9
95th Queue (ft)	8	32
Link Distance (ft)	542	236
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Hemlock Ave & West Access

Movement	SB
Directions Served	R
Maximum Queue (ft)	9
Average Queue (ft)	0
95th Queue (ft)	6
Link Distance (ft)	328
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: Hemlock Ave & Nita Dr

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	6
95th Queue (ft)	26
Link Distance (ft)	253
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	L	T	TR	T	TR	L	TR
Maximum Queue (ft)	105	174	181	357	366	64	164
Average Queue (ft)	46	69	89	210	228	46	47
95th Queue (ft)	92	141	156	330	345	76	117
Link Distance (ft)		1213	1213	1261	1261		1507
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150					40	
Storage Blk Time (%)	0	1				17	4
Queuing Penalty (veh)	0	0				15	5

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	119	206	245	124	318	329	133	229	75	104	361	75
Average Queue (ft)	34	95	122	85	167	182	85	81	33	74	122	42
95th Queue (ft)	87	178	212	147	271	284	137	173	77	118	260	86
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	0	10		5	20		6	19	1	16	26	2
Queuing Penalty (veh)	0	4		20	24		13	39	3	44	51	6

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	43	56	94	104	178	168	273	124	303
Average Queue (ft)	6	32	33	51	78	39	104	42	123
95th Queue (ft)	27	55	72	97	141	101	216	95	233
Link Distance (ft)		318	318		2337		1227		1353
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150			80		145		100	
Storage Blk Time (%)				2	10		4	1	11
Queuing Penalty (veh)				2	8		2	2	6

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	112	168	117	93	155	141	162	199	112	114	308	85
Average Queue (ft)	63	64	43	20	85	50	68	85	29	57	129	63
95th Queue (ft)	111	128	88	56	139	103	123	158	78	111	246	109
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	7	2			5		0	3	0	1	19	4
Queuing Penalty (veh)	6	3			1		1	6	0	5	44	13

Network Summary

Network wide Queuing Penalty: 1190

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	49.9	106.0	105.8	11.7	90.1	92.1	33.6	51.0	30.5	39.9	4.2	46.4
Vehicles Entered	0	632	293	0	0	252	264	0	437	490	0	0
Vehicles Exited	238	227	264	173	102	168	234	186	298	282	168	70
Hourly Exit Rate	238	227	264	173	102	168	234	186	298	282	168	70

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				12.8
Total Del/Veh (s)	161.6	168.1	9.0	73.2
Vehicles Entered	531	330	0	3228
Vehicles Exited	278	268	197	3154
Hourly Exit Rate	278	268	197	3154

2: Heacock St & New Project Access Performance by lane

Lane	NB	NB	SB	SB	SB	All
Movements Served	T	TR	LT	T	T	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	3.3	3.5	106.7	123.2	119.9	54.9
Vehicles Entered	487	482	334	269	218	1790
Vehicles Exited	460	513	335	316	137	1762
Hourly Exit Rate	460	513	335	316	137	1762

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	231.7	239.7	1085.0	308.0	7.3	56.3	47.1	49.9	0.9	57.2	228.1	247.6
Vehicles Entered	238	139	0	82	0	0	520	651	0	0	344	322
Vehicles Exited	59	264	28	32	11	163	453	459	96	25	351	338
Hourly Exit Rate	59	264	28	32	11	163	453	459	96	25	351	338

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		12.8
Total Del/Veh (s)	143.6	156.4
Vehicles Entered	140	2437
Vehicles Exited	48	2328
Hourly Exit Rate	48	2328

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								26.8
Total Del/Veh (s)	137.0	10.7	71.1	38.2	31.9	72.4	74.5	63.1
Vehicles Entered	477	0	0	665	660	449	578	2829
Vehicles Exited	301	163	314	486	526	518	511	2819
Hourly Exit Rate	301	163	314	486	526	518	511	2819

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										246.6
Total Del/Veh (s)	310.3	209.9	39.5	183.8	153.0	143.2	75.8	24.0	24.0	117.4
Vehicles Entered	270	188	391	454	395	402	0	693	316	3108
Vehicles Exited	215	186	420	450	349	438	135	463	405	3061
Hourly Exit Rate	215	186	420	450	349	438	135	463	405	3061

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	EB	WB	NB	All
Movements Served	T	T	TR	T	LTR	
Denied Del/Veh (s)						14.7
Total Del/Veh (s)	1.7	1.5	0.6	363.1	2.8	98.6
Vehicles Entered	115	27	94	95	23	354
Vehicles Exited	109	33	95	83	23	343
Hourly Exit Rate	109	33	95	83	23	343

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	LTR	LT	R	
Denied Del/Veh (s)									7.0
Total Del/Veh (s)	2.0	0.2	0.2	2.3	307.3	467.3	46.1	790.8	149.8
Vehicles Entered	1	119	129	3	94	4	10	34	393
Vehicles Exited	41	79	128	3	82	2	8	12	355
Hourly Exit Rate	41	79	128	3	82	2	8	12	355

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.4	367.0	487.5	156.1
Vehicles Entered	215	121	23	359
Vehicles Exited	215	97	13	326
Hourly Exit Rate	215	97	13	326

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				5.3
Total Del/Veh (s)	0.5	198.4	218.8	95.0
Vehicles Entered	209	135	44	388
Vehicles Exited	209	112	38	358
Hourly Exit Rate	209	112	38	358

10: Hemlock Ave & West Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.5	18.3	60.2	8.7
Vehicles Entered	221	153	7	380
Vehicles Exited	221	150	7	379
Hourly Exit Rate	221	150	7	379

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				2.2
Total Del/Veh (s)	0.1	34.3	62.0	15.8
Vehicles Entered	221	156	12	389
Vehicles Exited	221	149	10	381
Hourly Exit Rate	221	149	10	381

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	SB	SB	All
Movements Served	L	T	TR	T	TR	L	TR	
Denied Del/Veh (s)								0.2
Total Del/Veh (s)	162.4	33.5	17.8	22.2	21.9	17.8	8.1	31.5
Vehicles Entered	0	307	446	237	258	0	128	1375
Vehicles Exited	88	274	392	232	264	70	58	1378
Hourly Exit Rate	88	274	392	232	264	70	58	1378

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	41.2	28.1	29.7	39.1	26.3	23.2	39.4	30.0	4.9	38.7	27.7	3.2
Vehicles Entered	0	317	397	0	430	96	0	390	0	0	255	0
Vehicles Exited	100	281	334	104	189	232	57	162	172	60	123	68
Hourly Exit Rate	100	281	334	104	189	232	57	162	172	60	123	68

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	26.7
Vehicles Entered	1887
Vehicles Exited	1881
Hourly Exit Rate	1881

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)										0.3
Total Del/Veh (s)	26.4	32.2	17.9	26.1	68.0	59.9	18.6	39.1	38.8	30.5
Vehicles Entered	0	171	51	0	214	0	574	0	328	1336
Vehicles Exited	31	80	109	108	93	43	520	16	306	1306
Hourly Exit Rate	31	80	109	108	93	43	520	16	306	1306

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	55.0	636.1	73.0	40.0	32.5	22.4	39.8	22.3	10.5	41.4	43.4	8.3
Vehicles Entered	0	353	486	0	293	105	0	449	0	0	457	0
Vehicles Exited	278	117	440	42	205	151	129	240	86	57	146	256
Hourly Exit Rate	278	117	440	42	205	151	129	240	86	57	146	256

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	212.9
Total Del/Veh (s)	79.4
Vehicles Entered	2144
Vehicles Exited	2147
Hourly Exit Rate	2147

Total Network Performance

Denied Del/Veh (s)	176.1
Total Del/Veh (s)	212.5
Vehicles Entered	8021
Vehicles Exited	7623
Hourly Exit Rate	7623
Input Volume	35589
% of Volume	21

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	842	840	90	160	476	414	165	350	330	71	125
Average Queue (ft)	111	395	368	71	102	201	177	124	154	161	48	75
95th Queue (ft)	132	854	857	118	174	545	441	208	323	323	95	149
Link Distance (ft)		2012	2012			1213	1213		586	586		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	63	11	41	12	21	12		14	11	35	5	4
Queuing Penalty (veh)	153	27	81	28	36	13		55	28	72	21	13

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	855	897	120
Average Queue (ft)	421	434	93
95th Queue (ft)	1174	1186	163
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)	7	7	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			95
Storage Blk Time (%)	45	42	5
Queuing Penalty (veh)	37	95	15

Intersection: 2: Heacock St & New Project Access

Movement	SB	SB	SB
Directions Served	LT	T	T
Maximum Queue (ft)	536	541	519
Average Queue (ft)	305	310	271
95th Queue (ft)	722	723	690
Link Distance (ft)	586	586	586
Upstream Blk Time (%)	16	15	12
Queuing Penalty (veh)	48	46	38
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	943	1201	305	356	122	125	363	378	75	120	740	747
Average Queue (ft)	245	563	264	286	7	102	296	300	35	34	661	666
95th Queue (ft)	1090	1481	354	453	43	170	476	484	92	100	843	843
Link Distance (ft)	2106	2106		306			337	337			702	702
Upstream Blk Time (%)	3	4	28	80			16	17			44	51
Queuing Penalty (veh)	0	0	0	170			120	132			135	156
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)			28	0		28	27	44	0	1	78	
Queuing Penalty (veh)			32	0		166	61	53	2	3	20	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	733
Average Queue (ft)	433
95th Queue (ft)	954
Link Distance (ft)	702
Upstream Blk Time (%)	8
Queuing Penalty (veh)	23
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	731	59	225	321	311	376	376
Average Queue (ft)	421	45	219	283	220	360	365
95th Queue (ft)	854	74	246	354	377	388	380
Link Distance (ft)	1034			257	257	337	337
Upstream Blk Time (%)	11			39	17	44	48
Queuing Penalty (veh)	0			356	158	265	290
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	61	35	45	18			
Queuing Penalty (veh)	106	123	304	81			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	671	664	684	736	721	720	201	254	236
Average Queue (ft)	530	423	368	659	626	587	119	149	140
95th Queue (ft)	974	945	854	825	825	856	210	294	278
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)	50	25	13	59	22	27		12	12
Queuing Penalty (veh)	0	0	0	0	0	0		80	75
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							13	14	
Queuing Penalty (veh)							64	26	

Intersection: 6: Hemlock Ave & New Project Access

Movement	WB	NB
Directions Served	T	LTR
Maximum Queue (ft)	296	34
Average Queue (ft)	220	16
95th Queue (ft)	397	38
Link Distance (ft)	272	238
Upstream Blk Time (%)	67	
Queuing Penalty (veh)	137	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	WB	WB	NB	SB	SB
Directions Served	L	L	TR	LTR	LT	R
Maximum Queue (ft)	23	5	295	46	249	509
Average Queue (ft)	2	0	190	11	22	191
95th Queue (ft)	13	3	406	44	177	497
Link Distance (ft)		285	285	155	572	572
Upstream Blk Time (%)			57		1	6
Queuing Penalty (veh)			49		0	0
Storage Bay Dist (ft)	180					
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	19	553	253
Average Queue (ft)	1	291	84
95th Queue (ft)	11	712	242
Link Distance (ft)	285	542	380
Upstream Blk Time (%)		39	
Queuing Penalty (veh)		65	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	29	544	232
Average Queue (ft)	1	187	87
95th Queue (ft)	13	603	229
Link Distance (ft)	542	622	236
Upstream Blk Time (%)		16	16
Queuing Penalty (veh)		26	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Hemlock Ave & West Access

Movement	WB	SB
Directions Served	TR	R
Maximum Queue (ft)	71	45
Average Queue (ft)	21	6
95th Queue (ft)	90	25
Link Distance (ft)	106	328
Upstream Blk Time (%)	14	
Queuing Penalty (veh)	25	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Hemlock Ave & Nita Dr

Movement	WB	SB
Directions Served	TR	R
Maximum Queue (ft)	199	62
Average Queue (ft)	39	13
95th Queue (ft)	199	46
Link Distance (ft)	318	253
Upstream Blk Time (%)	6	
Queuing Penalty (veh)	9	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	L	T	TR	T	TR	L	TR
Maximum Queue (ft)	174	335	302	190	215	60	81
Average Queue (ft)	123	170	160	98	110	30	26
95th Queue (ft)	209	368	329	179	202	63	66
Link Distance (ft)		1213	1213	1261	1261		1507
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150					40	
Storage Blk Time (%)	32	3				9	2
Queuing Penalty (veh)	111	3				5	1

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	120	259	274	124	189	205	123	229	75	95	227	74
Average Queue (ft)	74	131	144	68	84	94	50	91	58	46	67	33
95th Queue (ft)	136	237	243	118	152	163	107	188	92	90	163	75
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	6	16		4	4		1	17	8	3	18	1
Queuing Penalty (veh)	16	16		7	4		2	47	20	7	25	2

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	62	108	130	104	340	168	488	98	466
Average Queue (ft)	22	47	50	61	92	54	160	17	153
95th Queue (ft)	54	86	96	107	333	129	386	60	524
Link Distance (ft)		318	318		2337		1227		1353
Upstream Blk Time (%)							0		2
Queuing Penalty (veh)							2		6
Storage Bay Dist (ft)	150			80		145		100	
Storage Blk Time (%)		0		6	9	3	8	0	14
Queuing Penalty (veh)		0		6	9	18	4	0	2

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	115	767	734	118	185	173	163	232	130	114	323	85
Average Queue (ft)	114	732	681	37	100	71	91	107	47	49	124	71
95th Queue (ft)	115	778	876	90	163	141	157	202	118	103	257	110
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)		95	11									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	86	2		0	10		1	7	0	2	12	13
Queuing Penalty (veh)	248	8		0	5		4	16	1	10	40	29

Network Summary

Network wide Queuing Penalty: 4793

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	39.0	32.3	31.4	6.7	46.3	35.2	33.4	45.1	21.9	24.1	5.9	45.6
Vehicles Entered	0	437	183	0	0	466	390	0	321	393	0	0
Vehicles Exited	145	159	150	161	182	307	361	134	213	262	98	56
Hourly Exit Rate	145	159	150	161	182	307	361	134	213	262	98	56

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				0.5
Total Del/Veh (s)	31.2	37.7	10.9	29.5
Vehicles Entered	581	402	0	3174
Vehicles Exited	346	291	294	3160
Hourly Exit Rate	346	291	294	3160

2: Heacock St & New Project Access Performance by lane

Lane	WB	NB	NB	SB	SB	All
Movements Served	LR	T	TR	LT	T	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	5.3	2.3	2.2	3.5	2.7	2.7
Vehicles Entered	10	352	382	456	524	1724
Vehicles Exited	9	331	402	383	591	1715
Hourly Exit Rate	9	331	402	383	591	1715

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	33.0	29.9	76.1	8.4	3.8	35.2	19.4	18.9	1.2	38.2	43.8	51.0
Vehicles Entered	157	85	0	273	0	0	403	487	0	0	397	547
Vehicles Exited	42	201	52	215	7	125	319	368	83	18	454	476
Hourly Exit Rate	42	201	52	215	7	125	319	368	83	18	454	476

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		0.2
Total Del/Veh (s)	3.6	31.4
Vehicles Entered	55	2406
Vehicles Exited	54	2415
Hourly Exit Rate	54	2415

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								0.6
Total Del/Veh (s)	53.2	3.2	46.7	21.1	15.7	45.7	49.7	37.9
Vehicles Entered	534	0	3	708	340	520	640	2743
Vehicles Exited	360	178	337	367	342	581	578	2743
Hourly Exit Rate	360	178	337	367	342	581	578	2743

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										0.2
Total Del/Veh (s)	45.2	25.5	24.9	35.7	18.4	7.6	42.1	8.6	7.7	21.6
Vehicles Entered	210	65	494	597	175	199	0	784	405	2929
Vehicles Exited	187	66	520	515	238	216	176	541	472	2929
Hourly Exit Rate	187	66	520	515	238	216	176	541	472	2929

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	WB	WB	NB	All
Movements Served	LT	TR	LT	TR	LTR	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	1.5	0.6	0.2	0.2	1.9	0.5
Vehicles Entered	73	80	177	103	1	434
Vehicles Exited	72	81	183	97	1	434
Hourly Exit Rate	72	81	183	97	1	434

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	LTR	LT	R	
Denied Del/Veh (s)									0.1
Total Del/Veh (s)	2.1	0.5	0.2	1.7	0.3	7.1	6.7	2.6	1.1
Vehicles Entered	55	185	107	4	201	30	4	54	641
Vehicles Exited	95	143	108	4	201	30	4	54	640
Hourly Exit Rate	95	143	108	4	201	30	4	54	640

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.6	0.4	2.7	0.5
Vehicles Entered	217	202	5	424
Vehicles Exited	217	203	5	425
Hourly Exit Rate	217	203	5	425

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	1.8	0.8	4.3	1.8
Vehicles Entered	199	186	73	459
Vehicles Exited	198	186	74	458
Hourly Exit Rate	198	186	74	458

10: West Access/West Access & Hemlock Ave Performance by lane

Lane	EB	WB	NB	SB	All
Movements Served	LTR	LTR	LTR	LTR	
Denied Del/Veh (s)					0.1
Total Del/Veh (s)	0.5	0.7	3.3	5.1	1.0
Vehicles Entered	129	230	17	21	397
Vehicles Exited	129	230	17	21	397
Hourly Exit Rate	129	230	17	21	397

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.2	1.6	2.7	0.9
Vehicles Entered	155	153	7	315
Vehicles Exited	155	154	7	316
Hourly Exit Rate	155	154	7	316

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	LT	TR	LTR	L	TR	
Denied Del/Veh (s)									0.3
Total Del/Veh (s)	58.4	18.7	17.8	28.6	30.2	8.3	14.4	17.7	25.3
Vehicles Entered	0	222	268	471	474	15	0	252	1702
Vehicles Exited	50	182	259	460	491	15	155	94	1705
Hourly Exit Rate	50	182	259	460	491	15	155	94	1705

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	48.4	26.1	27.0	44.2	29.0	29.9	40.4	32.2	3.4	40.4	31.0	5.2
Vehicles Entered	0	283	321	0	656	243	0	350	0	0	359	0
Vehicles Exited	40	242	327	116	369	419	134	149	67	100	166	94
Hourly Exit Rate	40	242	327	116	369	419	134	149	67	100	166	94

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	29.5
Vehicles Entered	2211
Vehicles Exited	2223
Hourly Exit Rate	2223

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)										0.1
Total Del/Veh (s)		14.7	14.0	25.9	23.7	33.2	13.2	35.4	13.5	17.1
Vehicles Entered	0	121	33	0	212	0	387	0	438	1189
Vehicles Exited	0	101	54	73	138	41	347	45	395	1193
Hourly Exit Rate	0	101	54	73	138	41	347	45	395	1193

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	32.4	23.3	12.5	38.3	29.9	17.4	35.7	18.4	10.6	39.0	31.2	6.6
Vehicles Entered	0	272	142	0	242	68	0	384	0	0	500	0
Vehicles Exited	119	146	148	24	180	107	102	221	63	63	268	167
Hourly Exit Rate	119	146	148	24	180	107	102	221	63	63	268	167

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	23.5
Vehicles Entered	1607
Vehicles Exited	1607
Hourly Exit Rate	1607

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	66.5
Vehicles Entered	7702
Vehicles Exited	7715
Hourly Exit Rate	7715
Input Volume	29889
% of Volume	26

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	210	178	90	160	291	297	164	258	231	70	125
Average Queue (ft)	84	93	79	59	123	158	165	94	94	108	39	58
95th Queue (ft)	129	173	151	106	187	277	273	163	197	197	90	124
Link Distance (ft)		2012	2012			1213	1213		694	694		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	15	6	16	2	14	12		5	2	30	4	3
Queuing Penalty (veh)	24	9	25	4	43	22		12	3	31	11	8

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	292	358	120
Average Queue (ft)	161	178	108
95th Queue (ft)	249	291	144
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			95
Storage Blk Time (%)	25	20	10
Queuing Penalty (veh)	15	58	33

Intersection: 2: Heacock St & New Project Access

Movement	WB	SB	SB
Directions Served	LR	LT	T
Maximum Queue (ft)	31	24	57
Average Queue (ft)	8	1	3
95th Queue (ft)	30	22	42
Link Distance (ft)	461	694	694
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	85	228	158	101	20	124	320	321	75	119	501	524
Average Queue (ft)	29	92	46	38	3	80	131	141	35	22	246	276
95th Queue (ft)	66	188	119	79	14	142	268	266	88	76	486	510
Link Distance (ft)	2106	2106		357			350	350			592	592
Upstream Blk Time (%)							0	0			0	1
Queuing Penalty (veh)							1	0			1	2
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)						7	10	25	0	0	36	
Queuing Penalty (veh)						24	12	21	2	1	7	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	155
Average Queue (ft)	19
95th Queue (ft)	80
Link Distance (ft)	592
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	542	58	225	321	268	390	378
Average Queue (ft)	280	48	205	227	146	317	336
95th Queue (ft)	460	65	260	373	266	422	415
Link Distance (ft)	1034			257	257	350	350
Upstream Blk Time (%)				12	0	11	16
Queuing Penalty (veh)				62	2	64	94
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	58	13	23	3			
Queuing Penalty (veh)	103	46	82	9			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	253	207	437	460	362	172	199	242	215
Average Queue (ft)	124	53	193	241	154	54	106	87	77
95th Queue (ft)	212	148	349	408	309	129	175	188	173
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)								0	0
Queuing Penalty (veh)								0	0
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							0	1	
Queuing Penalty (veh)							2	1	

Intersection: 6: Hemlock Ave & New Project Access

Movement	NB
Directions Served	LTR
Maximum Queue (ft)	17
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	255
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	WB	WB	NB	SB	SB
Directions Served	L	L	TR	LTR	LT	R
Maximum Queue (ft)	45	10	3	46	28	54
Average Queue (ft)	12	0	0	14	3	24
95th Queue (ft)	34	5	2	36	17	42
Link Distance (ft)		284	284	157	573	573
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	180					
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	44	28
Average Queue (ft)	3	4
95th Queue (ft)	21	21
Link Distance (ft)	284	380
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	69	57
Average Queue (ft)	14	30
95th Queue (ft)	47	52
Link Distance (ft)	542	236
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: West Access/West Access & Hemlock Ave

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	41	34	28
Average Queue (ft)	3	12	12
95th Queue (ft)	22	37	31
Link Distance (ft)	105	235	328
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Hemlock Ave & Nita Dr

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	6
95th Queue (ft)	26
Link Distance (ft)	253
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	TR	LTR	L	TR
Maximum Queue (ft)	144	174	198	352	373	35	64	211
Average Queue (ft)	48	77	94	213	233	7	50	62
95th Queue (ft)	102	150	168	341	361	29	75	153
Link Distance (ft)		1213	1213	1261	1261	182		1507
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150						40	
Storage Blk Time (%)	0	1					22	5
Queuing Penalty (veh)	0	0					19	7

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	120	201	239	124	292	313	134	233	75	105	294	75
Average Queue (ft)	40	102	128	88	172	185	89	95	41	72	106	47
95th Queue (ft)	102	182	213	145	268	280	147	196	91	118	223	91
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	1	11		7	20		8	24	1	14	24	3
Queuing Penalty (veh)	1	4		23	24		18	49	3	38	47	10

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	6	67	71	105	187	144	244	124	226
Average Queue (ft)	0	31	27	49	67	38	99	43	117
95th Queue (ft)	4	59	59	96	130	90	201	100	209
Link Distance (ft)		318	318		2337		1227		1353
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150			80		145		100	
Storage Blk Time (%)				3	8		3	1	10
Queuing Penalty (veh)				4	6		1	2	5

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	110	178	126	124	168	136	132	187	130	114	334	85
Average Queue (ft)	66	66	47	23	86	46	68	91	35	61	156	62
95th Queue (ft)	111	139	96	70	145	102	116	162	91	117	293	114
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	7	2			6		0	5	0	2	24	5
Queuing Penalty (veh)	7	3			1		0	8	0	9	58	15

Network Summary

Network wide Queuing Penalty: 1197

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	51.9	176.8	73.5	3.7	48.5	36.2	33.3	60.4	38.7	34.1	4.0	47.5
Vehicles Entered	0	649	294	0	0	244	288	0	475	537	0	0
Vehicles Exited	253	186	304	194	107	185	237	225	298	332	163	77
Hourly Exit Rate	253	186	304	194	107	185	237	225	298	332	163	77

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				0.6
Total Del/Veh (s)	88.6	95.4	9.8	56.3
Vehicles Entered	576	363	0	3427
Vehicles Exited	315	291	224	3389
Hourly Exit Rate	315	291	224	3389

2: Heacock St & New Project Access Performance by lane

Lane	WB	NB	NB	SB	SB	SB	All
Movements Served	LR	T	TR	LT	T	T	
Denied Del/Veh (s)							0.0
Total Del/Veh (s)	11.5	3.4	3.3	70.4	74.0	72.9	35.3
Vehicles Entered	40	528	494	389	283	236	1969
Vehicles Exited	40	489	528	373	378	131	1938
Hourly Exit Rate	40	489	528	373	378	131	1938

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	527.5	509.2	643.4	122.0	3.9	54.2	45.7	50.2	1.5	58.2	172.8	188.1
Vehicles Entered	357	64	0	163	0	0	599	747	0	0	388	381
Vehicles Exited	50	255	59	91	7	178	501	479	190	42	402	388
Hourly Exit Rate	50	255	59	91	7	178	501	479	190	42	402	388

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		5.3
Total Del/Veh (s)	91.0	171.6
Vehicles Entered	136	2833
Vehicles Exited	53	2696
Hourly Exit Rate	53	2696

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								3.0
Total Del/Veh (s)	166.5	11.2	51.9	29.8	31.4	62.6	66.0	59.2
Vehicles Entered	580	0	0	721	738	526	631	3196
Vehicles Exited	345	227	335	553	566	587	573	3187
Hourly Exit Rate	345	227	335	553	566	587	573	3187

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										303.3
Total Del/Veh (s)	72.5	47.1	23.6	209.9	191.7	170.3	41.2	8.2	6.4	85.1
Vehicles Entered	617	407	109	364	409	391	0	785	362	3444
Vehicles Exited	288	284	546	432	326	408	222	483	439	3429
Hourly Exit Rate	288	284	546	432	326	408	222	483	439	3429

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	EB	WB	NB	All
Movements Served	LT	T	TR	TR	LTR	
Denied Del/Veh (s)						34.5
Total Del/Veh (s)	1.2	1.6	0.6	236.8	3.3	76.9
Vehicles Entered	162	45	139	169	27	541
Vehicles Exited	164	44	137	165	27	537
Hourly Exit Rate	164	44	137	165	27	537

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	LTR	LT	R	
Denied Del/Veh (s)									541.1
Total Del/Veh (s)	4.7	0.6	0.6	13.7	253.3	1211.9	993.7	2054.8	178.8
Vehicles Entered	106	310	251	16	155	15	14	29	897
Vehicles Exited	238	182	247	15	151	14	8	15	869
Hourly Exit Rate	238	182	247	15	151	14	8	15	869

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	EB	WB	SB	All
Movements Served	LT	T	TR	LR	
Denied Del/Veh (s)					0.1
Total Del/Veh (s)	4.1	5.3	355.2	849.6	165.7
Vehicles Entered	190	114	187	20	512
Vehicles Exited	186	117	172	11	487
Hourly Exit Rate	186	117	172	11	487

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				352.1
Total Del/Veh (s)	4.7	274.1	207.9	128.4
Vehicles Entered	298	178	140	615
Vehicles Exited	296	163	133	592
Hourly Exit Rate	296	163	133	592

10: West Access/West Access & Hemlock Ave Performance by lane

Lane	EB	WB	NB	SB	All
Movements Served	LTR	LTR	LTR	LTR	
Denied Del/Veh (s)					73.5
Total Del/Veh (s)	1.3	19.4	102.2	150.2	47.5
Vehicles Entered	181	317	119	105	720
Vehicles Exited	181	315	115	102	712
Hourly Exit Rate	181	315	115	102	712

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				7.8
Total Del/Veh (s)	0.6	68.0	155.1	28.1
Vehicles Entered	332	201	8	540
Vehicles Exited	332	197	9	538
Hourly Exit Rate	332	197	9	538

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	LT	TR	LTR	L	TR	
Denied Del/Veh (s)									0.2
Total Del/Veh (s)	163.8	29.5	19.2	31.2	23.8	13.0	17.4	7.9	31.5
Vehicles Entered	0	269	492	241	271	99	0	122	1494
Vehicles Exited	87	277	394	229	282	100	67	55	1492
Hourly Exit Rate	87	277	394	229	282	100	67	55	1492

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	44.2	28.8	33.4	47.3	40.0	25.1	40.7	33.4	4.2	39.7	31.7	3.0
Vehicles Entered	0	328	410	0	448	114	0	392	0	0	278	0
Vehicles Exited	96	302	340	129	191	238	56	162	174	66	134	79
Hourly Exit Rate	96	302	340	129	191	238	56	162	174	66	134	79

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	30.3
Vehicles Entered	1969
Vehicles Exited	1967
Hourly Exit Rate	1967

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)										0.7
Total Del/Veh (s)	30.6	16.6	18.6	28.3	161.9	136.4	58.7	39.6	104.7	69.3
Vehicles Entered	0	232	98	0	215	0	544	0	362	1452
Vehicles Exited	52	153	125	101	109	52	481	19	330	1423
Hourly Exit Rate	52	153	125	101	109	52	481	19	330	1423

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	57.2	1037.4	311.9	43.4	29.4	30.4	40.9	52.8	9.0	43.5	62.8	7.9
Vehicles Entered	0	619	369	0	328	70	0	453	0	0	467	0
Vehicles Exited	260	147	486	49	161	187	132	230	87	68	153	245
Hourly Exit Rate	260	147	486	49	161	187	132	230	87	68	153	245

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	37.8
Total Del/Veh (s)	203.5
Vehicles Entered	2307
Vehicles Exited	2205
Hourly Exit Rate	2205

Total Network Performance

Denied Del/Veh (s)	221.1
Total Del/Veh (s)	235.4
Vehicles Entered	9570
Vehicles Exited	9115
Hourly Exit Rate	9115
Input Volume	41743
% of Volume	22

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	689	672	90	159	251	229	165	378	384	71	125
Average Queue (ft)	114	415	385	68	84	103	113	145	195	180	45	79
95th Queue (ft)	117	713	685	119	153	197	190	194	388	356	94	146
Link Distance (ft)		2012	2012			1213	1213		586	586		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	72	5	45	4	5	5		31	7	36	5	5
Queuing Penalty (veh)	181	12	94	9	8	5		123	18	75	18	16

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	652	663	120
Average Queue (ft)	302	311	101
95th Queue (ft)	908	904	155
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)	2	2	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			95
Storage Blk Time (%)	35	32	5
Queuing Penalty (veh)	29	71	15

Intersection: 2: Heacock St & New Project Access

Movement	WB	SB	SB	SB
Directions Served	LR	LT	T	T
Maximum Queue (ft)	57	408	408	389
Average Queue (ft)	25	231	233	209
95th Queue (ft)	53	664	663	623
Link Distance (ft)	602	586	586	586
Upstream Blk Time (%)		3	3	1
Queuing Penalty (veh)		9	8	2
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	1804	2131	306	377	28	125	367	383	75	120	708	713
Average Queue (ft)	756	1199	288	332	2	109	333	337	58	58	604	615
95th Queue (ft)	2333	2651	327	406	13	151	402	408	99	131	861	867
Link Distance (ft)	2940	2940		306			336	336			702	702
Upstream Blk Time (%)	3	3	52	89			16	18			29	35
Queuing Penalty (veh)	0	0	0	617			131	149			91	108
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)			52	2		28	30	48	2	2	71	
Queuing Penalty (veh)			68	5		163	68	118	12	9	35	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	603
Average Queue (ft)	319
95th Queue (ft)	853
Link Distance (ft)	702
Upstream Blk Time (%)	8
Queuing Penalty (veh)	25
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	1186	70	225	323	298	376	382
Average Queue (ft)	601	53	217	281	259	359	368
95th Queue (ft)	1192	64	264	330	325	379	379
Link Distance (ft)	2390			259	259	336	336
Upstream Blk Time (%)				22	15	37	46
Queuing Penalty (veh)				212	144	255	314
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	57	48	25	16			
Queuing Penalty (veh)	131	170	182	71			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	481	456	410	743	725	722	210	240	242
Average Queue (ft)	232	200	190	703	687	632	128	84	69
95th Queue (ft)	530	460	346	724	754	807	210	206	177
Link Distance (ft)	2919	2919	2919	684	684	684		259	259
Upstream Blk Time (%)				87	36	24		1	0
Queuing Penalty (veh)				0	0	0		6	0
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							4	0	
Queuing Penalty (veh)							18	1	

Intersection: 6: Hemlock Ave & New Project Access

Movement	WB	NB
Directions Served	TR	LTR
Maximum Queue (ft)	302	38
Average Queue (ft)	274	16
95th Queue (ft)	343	38
Link Distance (ft)	272	238
Upstream Blk Time (%)	84	
Queuing Penalty (veh)	579	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	121	5	8	67	313	172	476	592
Average Queue (ft)	32	0	0	8	277	154	410	547
95th Queue (ft)	91	4	5	40	390	183	824	722
Link Distance (ft)		272	272	295	295	157	572	572
Upstream Blk Time (%)					77	96	70	89
Queuing Penalty (veh)					133	0	0	0
Storage Bay Dist (ft)	180							
Storage Blk Time (%)	0							
Queuing Penalty (veh)	0							

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	EB	WB	SB
Directions Served	LT	T	TR	LR
Maximum Queue (ft)	102	79	558	226
Average Queue (ft)	9	7	453	111
95th Queue (ft)	73	64	758	288
Link Distance (ft)	295	295	542	380
Upstream Blk Time (%)	0	0	62	3
Queuing Penalty (veh)	0	0	215	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	244	568	268
Average Queue (ft)	31	350	209
95th Queue (ft)	148	799	322
Link Distance (ft)	542	620	236
Upstream Blk Time (%)	0	32	74
Queuing Penalty (veh)	0	64	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: West Access/West Access & Hemlock Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	57	126	210	258
Average Queue (ft)	3	59	109	124
95th Queue (ft)	24	142	252	343
Link Distance (ft)	620	105	214	328
Upstream Blk Time (%)		30	29	20
Queuing Penalty (veh)		68	0	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Hemlock Ave & Nita Dr

Movement	WB	SB
Directions Served	TR	R
Maximum Queue (ft)	263	65
Average Queue (ft)	106	15
95th Queue (ft)	341	56
Link Distance (ft)	318	253
Upstream Blk Time (%)	19	
Queuing Penalty (veh)	37	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	TR	LTR	L	TR
Maximum Queue (ft)	174	374	374	225	243	102	61	96
Average Queue (ft)	125	175	164	118	121	42	31	26
95th Queue (ft)	210	350	313	205	216	88	63	64
Link Distance (ft)		1213	1213	1260	1260	1123		1507
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150						40	
Storage Blk Time (%)	34	4					8	2
Queuing Penalty (veh)	113	4					4	1

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	120	303	329	124	332	305	132	231	75	102	280	75
Average Queue (ft)	77	147	165	84	116	114	49	97	56	53	82	40
95th Queue (ft)	137	263	276	135	308	289	110	209	95	97	209	80
Link Distance (ft)		1260	1260		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	7	16		13	3		0	21	7	3	19	1
Queuing Penalty (veh)	19	16		23	4		2	59	18	7	27	2

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	103	112	173	105	598	170	894	110	971
Average Queue (ft)	36	48	54	61	183	84	328	25	342
95th Queue (ft)	80	92	119	118	565	185	955	84	1024
Link Distance (ft)		318	318		2337		1228		1353
Upstream Blk Time (%)							6		3
Queuing Penalty (veh)							40		11
Storage Bay Dist (ft)	150			80		145		100	
Storage Blk Time (%)	0	0		9	27	17	11		32
Queuing Penalty (veh)	0	0		10	28	91	8		6

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	115	2470	2474	117	152	159	163	550	130	114	513	85
Average Queue (ft)	113	1844	1811	40	79	93	97	165	47	56	162	68
95th Queue (ft)	124	2842	2834	87	130	146	167	490	121	116	449	113
Link Distance (ft)		2433	2433		2328	2328		913			1228	
Upstream Blk Time (%)		32	23					1				
Queuing Penalty (veh)		0	0					0				
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	85	6		0	3		2	13	0	5	14	12
Queuing Penalty (veh)	246	21		0	1		5	29	0	23	48	29

Network Summary

Network wide Queuing Penalty: 5786

General Plan (2035)

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	41.8	35.0	34.2	6.7	51.6	42.6	42.4	41.1	23.8	29.4	7.3	44.5
Vehicles Entered	0	481	200	0	0	552	440	0	320	401	0	0
Vehicles Exited	165	184	169	162	211	373	409	130	227	248	112	60
Hourly Exit Rate	165	184	169	162	211	373	409	130	227	248	112	60

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				0.5
Total Del/Veh (s)	33.1	42.2	10.1	33.2
Vehicles Entered	602	426	0	3421
Vehicles Exited	359	297	314	3419
Hourly Exit Rate	359	297	314	3419

2: Heacock St & New Project Access Performance by lane

Lane	NB	NB	SB	SB	All
Movements Served	T	TR	LT	T	
Denied Del/Veh (s)					0.0
Total Del/Veh (s)	2.2	2.2	3.6	2.8	2.7
Vehicles Entered	353	396	482	546	1778
Vehicles Exited	334	415	410	620	1778
Hourly Exit Rate	334	415	410	620	1778

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	29.5	27.7	50.7	24.6	5.1	33.4	17.6	17.3	1.2	40.4	39.4	47.4
Vehicles Entered	155	88	1	187	1	0	396	462	0	0	429	588
Vehicles Exited	44	201	66	99	22	110	322	363	72	17	490	514
Hourly Exit Rate	44	201	66	99	22	110	322	363	72	17	490	514

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		0.1
Total Del/Veh (s)	4.1	31.0
Vehicles Entered	45	2352
Vehicles Exited	44	2362
Hourly Exit Rate	44	2362

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								0.4
Total Del/Veh (s)	45.3	2.7	40.3	15.5	12.1	43.4	46.1	33.8
Vehicles Entered	483	0	3	698	280	549	663	2676
Vehicles Exited	306	176	301	365	314	599	610	2672
Hourly Exit Rate	306	176	301	365	314	599	610	2672

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										0.2
Total Del/Veh (s)	30.9	22.1	26.1	25.4	15.6	6.1	42.0	10.8	9.8	19.8
Vehicles Entered	227	69	514	542	149	164	1	778	387	2831
Vehicles Exited	208	64	536	487	194	172	175	523	470	2828
Hourly Exit Rate	208	64	536	487	194	172	175	523	470	2828

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	WB	WB	NB	All
Movements Served	LT	TR	LT	TR	LTR	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	2.0	0.6	0.1	0.2	2.3	0.6
Vehicles Entered	70	83	154	36	1	345
Vehicles Exited	64	90	155	35	1	345
Hourly Exit Rate	64	90	155	35	1	345

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	All
Movements Served	L	T	TR	L	TR	LTR	R	
Denied Del/Veh (s)								0.0
Total Del/Veh (s)	2.3	0.1	0.1	0.1	0.3	5.0	2.2	0.3
Vehicles Entered	0	67	85	1	183	1	5	342
Vehicles Exited	9	58	86	1	184	1	5	344
Hourly Exit Rate	9	58	86	1	184	1	5	344

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.5	0.5	2.6	0.5
Vehicles Entered	142	189	5	336
Vehicles Exited	142	188	5	335
Hourly Exit Rate	142	188	5	335

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.5	0.6	4.1	0.6
Vehicles Entered	126	209	9	344
Vehicles Exited	126	209	9	344
Hourly Exit Rate	126	209	9	344

10: Hemlock Ave & West Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.3	0.1	2.0	0.2
Vehicles Entered	120	211	2	333
Vehicles Exited	120	211	2	333
Hourly Exit Rate	120	211	2	333

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.1	1.5	3.0	1.0
Vehicles Entered	119	207	7	333
Vehicles Exited	119	208	7	334
Hourly Exit Rate	119	208	7	334

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	SB	SB	All
Movements Served	L	T	TR	T	TR	L	TR	
Denied Del/Veh (s)								0.3
Total Del/Veh (s)	88.6	18.2	16.6	29.9	34.5	14.7	21.3	28.4
Vehicles Entered	0	243	295	518	575	0	284	1915
Vehicles Exited	72	190	278	541	551	172	111	1916
Hourly Exit Rate	72	190	278	541	551	172	111	1916

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	44.4	28.9	30.8	61.1	229.1	170.9	46.6	55.5	2.1	43.2	43.7	5.6
Vehicles Entered	0	296	350	0	853	380	0	554	0	0	447	0
Vehicles Exited	40	262	344	242	404	522	171	263	123	134	199	109
Hourly Exit Rate	40	262	344	242	404	522	171	263	123	134	199	109

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	93.5
Vehicles Entered	2879
Vehicles Exited	2813
Hourly Exit Rate	2813

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)										0.4
Total Del/Veh (s)	32.3	33.4	18.3	23.6	26.1	37.1	41.9	37.0	22.0	30.5
Vehicles Entered	0	90	34	0	311	0	552	0	615	1602
Vehicles Exited	7	54	62	93	217	45	507	84	531	1601
Hourly Exit Rate	7	54	62	93	217	45	507	84	531	1601

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	40.0	28.2	18.5	40.5	31.3	22.2	45.3	35.2	11.5	44.8	56.2	5.8
Vehicles Entered	0	404	272	0	401	147	0	652	0	0	640	0
Vehicles Exited	98	277	301	35	283	227	166	368	118	90	402	150
Hourly Exit Rate	98	277	301	35	283	227	166	368	118	90	402	150

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	32.7
Vehicles Entered	2515
Vehicles Exited	2515
Hourly Exit Rate	2515

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	92.7
Vehicles Entered	8518
Vehicles Exited	8462
Hourly Exit Rate	8462
Input Volume	32688
% of Volume	26

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	243	233	90	160	429	441	164	232	245	70	125
Average Queue (ft)	92	117	101	63	142	237	237	95	109	134	42	63
95th Queue (ft)	133	209	192	111	188	421	408	168	200	226	91	132
Link Distance (ft)		2012	2012			1213	1213		694	694		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	23	10	20	2	22	19		3	4	33	6	2
Queuing Penalty (veh)	42	17	33	4	81	43		8	5	36	14	5

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	311	366	120
Average Queue (ft)	173	196	103
95th Queue (ft)	270	315	149
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			95
Storage Blk Time (%)	29	24	9
Queuing Penalty (veh)	18	74	31

Intersection: 2: Heacock St & New Project Access

Movement	SB	SB
Directions Served	LT	T
Maximum Queue (ft)	26	31
Average Queue (ft)	2	3
95th Queue (ft)	25	33
Link Distance (ft)	694	694
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	77	233	127	114	29	124	284	285	75	119	472	478
Average Queue (ft)	28	94	50	47	9	72	121	133	30	20	263	288
95th Queue (ft)	65	182	104	98	26	132	242	251	79	71	472	488
Link Distance (ft)	2106	2106		357			350	350			592	592
Upstream Blk Time (%)								0			1	1
Queuing Penalty (veh)								0			2	3
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)						3	9	23	0	0	39	
Queuing Penalty (veh)						11	10	18	1	0	7	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	107
Average Queue (ft)	17
95th Queue (ft)	81
Link Distance (ft)	592
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	390	60	225	314	250	379	382
Average Queue (ft)	229	49	179	170	108	320	339
95th Queue (ft)	354	65	258	318	209	424	420
Link Distance (ft)	1034			257	257	350	350
Upstream Blk Time (%)				3	0	8	13
Queuing Penalty (veh)				15	0	51	80
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	56	13	11	2			
Queuing Penalty (veh)	101	39	36	6			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	209	174	422	320	252	142	214	264	252
Average Queue (ft)	113	45	201	182	102	35	117	117	107
95th Queue (ft)	183	116	358	283	216	83	194	237	233
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)								0	0
Queuing Penalty (veh)								2	1
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							1	2	
Queuing Penalty (veh)							3	4	

Intersection: 6: Hemlock Ave & New Project Access

Movement	NB
Directions Served	LTR
Maximum Queue (ft)	12
Average Queue (ft)	1
95th Queue (ft)	7
Link Distance (ft)	255
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	NB	SB
Directions Served	L	LTR	R
Maximum Queue (ft)	20	13	26
Average Queue (ft)	1	1	4
95th Queue (ft)	8	8	19
Link Distance (ft)		157	573
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	180		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	30	28
Average Queue (ft)	3	4
95th Queue (ft)	18	21
Link Distance (ft)	284	380
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	25	31
Average Queue (ft)	1	8
95th Queue (ft)	10	29
Link Distance (ft)	542	236
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Hemlock Ave & West Access

Movement	SB
Directions Served	R
Maximum Queue (ft)	18
Average Queue (ft)	1
95th Queue (ft)	10
Link Distance (ft)	328
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: Hemlock Ave & Nita Dr

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	253
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	L	T	TR	T	TR	L	TR
Maximum Queue (ft)	147	200	207	382	428	64	246
Average Queue (ft)	72	77	95	257	281	52	77
95th Queue (ft)	138	173	175	386	414	73	184
Link Distance (ft)		1213	1213	1261	1261		1507
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150					40	
Storage Blk Time (%)	4	1				23	7
Queuing Penalty (veh)	10	0				25	11

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	119	258	294	124	1574	1558	134	539	75	105	378	75
Average Queue (ft)	34	114	142	123	908	893	114	234	47	87	162	51
95th Queue (ft)	85	204	246	137	1801	1761	162	437	95	125	318	97
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	0	13		66	23		21	36	1	24	33	4
Queuing Penalty (veh)	1	5		273	62		78	105	5	79	83	15

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	39	78	93	105	244	169	762	125	388
Average Queue (ft)	7	35	34	60	106	62	268	71	200
95th Queue (ft)	28	62	71	114	202	164	624	134	335
Link Distance (ft)		318	318		2337		1227		1353
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150			80		145		100	
Storage Blk Time (%)				4	16	0	25	2	25
Queuing Penalty (veh)				9	16	0	12	12	21

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	115	258	210	124	234	213	170	496	130	114	560	85
Average Queue (ft)	70	129	109	40	138	111	125	207	76	82	298	56
95th Queue (ft)	123	222	191	106	210	190	195	411	157	133	509	115
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	7	20		0	19		7	22	0	7	46	3
Queuing Penalty (veh)	15	20		0	8		36	67	2	41	118	12

Network Summary

Network wide Queuing Penalty: 1943

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	53.1	452.0	358.1	1.8	44.2	37.4	37.3	48.9	31.6	43.5	4.9	46.0
Vehicles Entered	0	770	456	0	0	354	343	0	478	579	0	0
Vehicles Exited	231	323	407	151	124	265	305	165	371	331	196	83
Hourly Exit Rate	231	323	407	151	124	265	305	165	371	331	196	83

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				6.8
Total Del/Veh (s)	32.2	33.0	11.4	116.6
Vehicles Entered	535	317	0	3835
Vehicles Exited	296	260	215	3723
Hourly Exit Rate	296	260	215	3723

2: Heacock St & New Project Access Performance by lane

Lane	NB	NB	SB	SB	SB	All
Movements Served	T	TR	LT	T	T	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	3.0	3.0	2.8	1.9	2.7	2.7
Vehicles Entered	535	565	363	277	191	1931
Vehicles Exited	502	602	319	465	47	1935
Hourly Exit Rate	502	602	319	465	47	1935

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	37.2	69.6	62.3	27.8	7.1	47.4	27.7	29.7	1.5	47.7	39.1	44.5
Vehicles Entered	296	187	1	220	0	0	554	726	0	0	339	476
Vehicles Exited	93	390	94	95	32	158	483	504	133	25	376	406
Hourly Exit Rate	93	390	94	95	32	158	483	504	133	25	376	406

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		0.1
Total Del/Veh (s)	5.3	38.8
Vehicles Entered	47	2846
Vehicles Exited	43	2830
Hourly Exit Rate	43	2830

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								0.3
Total Del/Veh (s)	53.2	6.9	48.3	17.5	13.6	40.2	44.3	32.0
Vehicles Entered	436	0	0	818	645	474	656	3028
Vehicles Exited	234	193	373	518	571	561	569	3019
Hourly Exit Rate	234	193	373	518	571	561	569	3019

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										0.2
Total Del/Veh (s)	68.8	33.4	14.0	53.9	31.3	19.1	46.3	13.8	12.3	31.0
Vehicles Entered	378	133	354	655	274	350	1	697	374	3216
Vehicles Exited	289	206	367	529	356	405	182	460	428	3221
Hourly Exit Rate	289	206	367	529	356	405	182	460	428	3221

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	EB	WB	NB	All
Movements Served	T	T	TR	T	LTR	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	1.9	1.9	0.6	0.3	2.9	1.0
Vehicles Entered	142	48	136	221	24	571
Vehicles Exited	130	54	141	221	24	571
Hourly Exit Rate	130	54	141	221	24	571

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	LTR	LT	R	
Denied Del/Veh (s)									0.0
Total Del/Veh (s)	2.2	0.2	0.2	2.0	0.4	7.7	7.4	2.9	0.8
Vehicles Entered	1	140	196	5	178	5	5	38	568
Vehicles Exited	53	88	196	5	178	5	5	38	568
Hourly Exit Rate	53	88	196	5	178	5	5	38	568

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.4	0.5	5.0	0.6
Vehicles Entered	285	180	18	483
Vehicles Exited	285	181	18	483
Hourly Exit Rate	285	181	18	483

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.7	0.5	5.3	1.0
Vehicles Entered	282	175	39	496
Vehicles Exited	282	174	39	495
Hourly Exit Rate	282	174	39	495

10: Hemlock Ave & West Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.6	0.3	2.5	0.5
Vehicles Entered	283	191	10	484
Vehicles Exited	283	191	10	484
Hourly Exit Rate	283	191	10	484

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.1	1.4	2.8	0.7
Vehicles Entered	283	190	7	480
Vehicles Exited	283	190	7	480
Hourly Exit Rate	283	190	7	480

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	SB	SB	All
Movements Served	L	T	TR	T	TR	L	TR	
Denied Del/Veh (s)								1.5
Total Del/Veh (s)	216.0	122.8	49.6	24.3	25.8	18.7	11.5	61.7
Vehicles Entered	0	413	625	337	351	0	150	1875
Vehicles Exited	98	354	559	328	354	89	60	1843
Hourly Exit Rate	98	354	559	328	354	89	60	1843

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	49.2	39.4	43.3	41.7	28.1	27.5	44.1	40.0	5.1	43.4	30.7	3.8
Vehicles Entered	0	407	560	0	506	138	0	589	0	0	355	0
Vehicles Exited	111	423	439	86	257	304	108	259	222	73	187	95
Hourly Exit Rate	111	423	439	86	257	304	108	259	222	73	187	95

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	33.5
Vehicles Entered	2554
Vehicles Exited	2564
Hourly Exit Rate	2564

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)										0.1
Total Del/Veh (s)	30.3	32.7	19.6	27.9	27.7	40.5	27.1	42.3	19.1	26.0
Vehicles Entered	0	209	75	0	286	0	654	0	381	1603
Vehicles Exited	45	97	143	93	193	60	588	32	351	1602
Hourly Exit Rate	45	97	143	93	193	60	588	32	351	1602

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	56.9	185.7	177.6	44.3	35.9	27.8	62.3	105.1	8.9	45.7	38.3	10.5
Vehicles Entered	0	614	521	0	521	223	0	790	0	0	491	0
Vehicles Exited	188	452	503	104	332	312	223	386	172	99	265	122
Hourly Exit Rate	188	452	503	104	332	312	223	386	172	99	265	122

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	166.0
Total Del/Veh (s)	90.2
Vehicles Entered	3162
Vehicles Exited	3157
Hourly Exit Rate	3157

Total Network Performance

Denied Del/Veh (s)	61.0
Total Del/Veh (s)	132.4
Vehicles Entered	9609
Vehicles Exited	9456
Hourly Exit Rate	9456
Input Volume	37764
% of Volume	25

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	2058	2053	90	160	299	287	165	356	372	70	125
Average Queue (ft)	112	1479	1455	61	101	144	160	125	184	208	50	74
95th Queue (ft)	129	2370	2333	121	174	263	268	194	333	360	96	135
Link Distance (ft)		2012	2012			1213	1213		586	586		
Upstream Blk Time (%)		20	16									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	66	18	67	1	5	14		7	16	44	7	5
Queuing Penalty (veh)	279	48	113	4	13	20		23	27	85	25	13

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	240	254	120
Average Queue (ft)	146	144	90
95th Queue (ft)	227	238	147
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			95
Storage Blk Time (%)	23	18	5
Queuing Penalty (veh)	18	38	13

Intersection: 2: Heacock St & New Project Access

Movement	SB
Directions Served	T
Maximum Queue (ft)	6
Average Queue (ft)	0
95th Queue (ft)	4
Link Distance (ft)	586
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	194	619	204	155	46	125	361	365	75	119	367	387
Average Queue (ft)	61	286	76	50	12	99	227	238	56	31	201	223
95th Queue (ft)	137	595	166	117	34	156	382	383	98	91	385	403
Link Distance (ft)	2106	2106		306			337	337			702	702
Upstream Blk Time (%)							2	3			0	0
Queuing Penalty (veh)							13	18			0	0
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)						17	20	42	1	0	33	
Queuing Penalty (veh)						86	32	57	6	0	8	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	146
Average Queue (ft)	19
95th Queue (ft)	111
Link Distance (ft)	702
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	474	59	225	320	278	368	379
Average Queue (ft)	203	50	210	249	169	286	309
95th Queue (ft)	391	67	256	378	306	419	432
Link Distance (ft)	1034			257	257	337	337
Upstream Blk Time (%)	0			17	1	6	13
Queuing Penalty (veh)	0			125	10	34	75
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	55	28	29	3			
Queuing Penalty (veh)	103	70	160	11			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	434	385	223	606	544	312	214	285	271
Average Queue (ft)	235	178	106	318	248	137	135	134	123
95th Queue (ft)	424	362	187	539	464	283	222	274	250
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)				1	0			3	0
Queuing Penalty (veh)				0	0			16	2
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							5	3	
Queuing Penalty (veh)							25	6	

Intersection: 6: Hemlock Ave & New Project Access

Movement	NB
Directions Served	LTR
Maximum Queue (ft)	35
Average Queue (ft)	15
95th Queue (ft)	36
Link Distance (ft)	238
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	WB	WB	NB	SB	SB
Directions Served	L	L	TR	LTR	LT	R
Maximum Queue (ft)	32	21	3	23	30	41
Average Queue (ft)	6	1	0	3	4	16
95th Queue (ft)	24	11	2	15	21	35
Link Distance (ft)		285	285	155	572	572
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	180					
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	32	32
Average Queue (ft)	2	14
95th Queue (ft)	21	37
Link Distance (ft)	285	380
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	48	49
Average Queue (ft)	4	23
95th Queue (ft)	23	46
Link Distance (ft)	542	236
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Hemlock Ave & West Access

Movement	SB
Directions Served	R
Maximum Queue (ft)	24
Average Queue (ft)	6
95th Queue (ft)	23
Link Distance (ft)	328
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: Hemlock Ave & Nita Dr

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	5
95th Queue (ft)	24
Link Distance (ft)	253
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	L	T	TR	T	TR	L	TR
Maximum Queue (ft)	174	883	880	269	279	63	120
Average Queue (ft)	158	487	481	143	159	40	33
95th Queue (ft)	212	1043	1039	244	262	71	85
Link Distance (ft)		1213	1213	1261	1261		1507
Upstream Blk Time (%)		1	1				
Queuing Penalty (veh)		6	7				
Storage Bay Dist (ft)	150					40	
Storage Blk Time (%)	69	5				14	2
Queuing Penalty (veh)	342	6				9	2

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	120	440	444	124	219	228	134	375	75	104	272	75
Average Queue (ft)	86	230	240	70	116	131	88	176	64	59	115	45
95th Queue (ft)	145	401	412	129	187	201	148	317	94	111	220	88
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	12	31		2	11		5	32	11	9	29	2
Queuing Penalty (veh)	49	38		4	9		23	117	39	23	49	5

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	84	109	108	105	202	170	467	125	262
Average Queue (ft)	31	53	62	62	101	73	238	36	129
95th Queue (ft)	67	89	106	114	183	164	416	96	220
Link Distance (ft)		318	318		2337		1227		1353
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150			80		145		100	
Storage Blk Time (%)				7	15	0	23	0	14
Queuing Penalty (veh)				13	13	0	15	2	5

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	115	762	762	124	308	267	170	820	130	114	330	85
Average Queue (ft)	111	733	734	94	185	158	159	516	85	86	170	65
95th Queue (ft)	124	747	748	151	273	243	197	975	171	138	291	112
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)		76	77					10				
Queuing Penalty (veh)		0	0					0				
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	53	47		5	29		34	32	1	11	31	4
Queuing Penalty (veh)	254	110		14	29		194	131	6	40	70	15

Network Summary

Network wide Queuing Penalty: 3215

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	42.5	37.2	32.8	7.2	52.1	44.7	43.9	43.2	24.5	28.0	6.0	47.4
Vehicles Entered	0	478	193	0	0	540	428	0	316	375	0	0
Vehicles Exited	166	177	176	154	205	362	401	126	209	241	112	59
Hourly Exit Rate	166	177	176	154	205	362	401	126	209	241	112	59

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				0.5
Total Del/Veh (s)	33.1	40.0	10.3	33.8
Vehicles Entered	613	411	0	3352
Vehicles Exited	360	307	297	3353
Hourly Exit Rate	360	307	297	3353

2: Heacock St & New Project Access Performance by lane

Lane	WB	NB	NB	SB	SB	All
Movements Served	LR	T	TR	LT	T	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	4.5	2.4	2.3	11.8	10.4	7.5
Vehicles Entered	10	341	361	478	548	1737
Vehicles Exited	10	322	379	438	588	1738
Hourly Exit Rate	10	322	379	438	588	1738

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	34.7	33.8	65.7	9.0	5.6	33.5	17.9	18.1	1.4	36.1	65.0	71.9
Vehicles Entered	148	90	0	288	0	0	383	467	0	0	454	557
Vehicles Exited	45	190	61	214	11	106	307	340	96	14	490	500
Hourly Exit Rate	45	190	61	214	11	106	307	340	96	14	490	500

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		2.1
Total Del/Veh (s)	4.3	40.6
Vehicles Entered	44	2430
Vehicles Exited	43	2419
Hourly Exit Rate	43	2419

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								0.4
Total Del/Veh (s)	50.0	2.9	41.4	14.9	11.4	45.2	50.0	35.4
Vehicles Entered	485	0	2	669	291	539	648	2635
Vehicles Exited	295	190	305	345	311	596	588	2630
Hourly Exit Rate	295	190	305	345	311	596	588	2630

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										0.2
Total Del/Veh (s)	31.8	24.5	22.9	26.6	17.4	6.9	42.6	10.6	9.5	19.6
Vehicles Entered	230	73	502	508	154	171	1	768	368	2774
Vehicles Exited	209	73	527	458	194	179	170	511	452	2772
Hourly Exit Rate	209	73	527	458	194	179	170	511	452	2772

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	WB	WB	NB	All
Movements Served	LT	TR	LT	TR	LTR	
Denied Del/Veh (s)						0.0
Total Del/Veh (s)	1.5	0.6	0.2	0.3	3.5	0.5
Vehicles Entered	80	90	183	113	1	466
Vehicles Exited	81	89	192	103	1	466
Hourly Exit Rate	81	89	192	103	1	466

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	LTR	LT	R	
Denied Del/Veh (s)									0.1
Total Del/Veh (s)	2.1	0.5	0.3	0.9	0.2	7.7	8.1	2.8	1.2
Vehicles Entered	63	195	115	4	210	32	4	59	682
Vehicles Exited	111	146	116	4	211	32	4	59	683
Hourly Exit Rate	111	146	116	4	211	32	4	59	683

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.6	0.4	3.0	0.5
Vehicles Entered	228	214	6	448
Vehicles Exited	227	214	6	447
Hourly Exit Rate	227	214	6	447

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	1.7	0.9	4.6	1.8
Vehicles Entered	210	204	68	482
Vehicles Exited	211	204	68	483
Hourly Exit Rate	211	204	68	483

10: West Access/West Access & Hemlock Ave Performance by lane

Lane	EB	WB	NB	SB	All
Movements Served	LTR	LTR	LTR	LTR	
Denied Del/Veh (s)					0.1
Total Del/Veh (s)	0.5	0.7	2.9	5.1	0.9
Vehicles Entered	139	253	16	16	425
Vehicles Exited	139	254	16	16	425
Hourly Exit Rate	139	254	16	16	425

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.2	1.5	3.0	0.9
Vehicles Entered	158	180	6	344
Vehicles Exited	157	179	6	342
Hourly Exit Rate	157	179	6	342

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	LT	TR	LTR	L	TR	
Denied Del/Veh (s)									0.3
Total Del/Veh (s)	89.2	19.2	17.6	29.2	34.0	8.2	15.8	19.1	28.4
Vehicles Entered	0	245	306	506	577	14	0	264	1913
Vehicles Exited	74	201	273	533	539	13	161	103	1897
Hourly Exit Rate	74	201	273	533	539	13	161	103	1897

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	49.0	28.9	31.0	63.0	322.3	224.7	48.7	56.5	2.7	43.4	46.5	6.2
Vehicles Entered	0	302	339	0	846	398	0	544	0	0	434	0
Vehicles Exited	34	270	342	251	385	525	165	253	124	126	190	116
Hourly Exit Rate	34	270	342	251	385	525	165	253	124	126	190	116

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	119.2
Vehicles Entered	2863
Vehicles Exited	2780
Hourly Exit Rate	2780

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)									0.1
Total Del/Veh (s)	16.8	18.2	22.7	24.5	33.6	28.7	35.3	22.3	25.1
Vehicles Entered	122	35	0	289	0	562	0	615	1623
Vehicles Exited	100	58	94	195	46	514	84	532	1623
Hourly Exit Rate	100	58	94	195	46	514	84	532	1623

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	44.5	29.8	19.4	43.3	31.6	22.9	44.3	33.0	10.7	47.7	68.3	6.4
Vehicles Entered	0	416	256	0	413	145	0	672	0	0	643	0
Vehicles Exited	102	279	290	40	289	231	174	375	125	92	420	133
Hourly Exit Rate	102	279	290	40	289	231	174	375	125	92	420	133

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	35.4
Vehicles Entered	2544
Vehicles Exited	2551
Hourly Exit Rate	2551

Total Network Performance

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	100.4
Vehicles Entered	8947
Vehicles Exited	8847
Hourly Exit Rate	8847
Input Volume	33934
% of Volume	26

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	254	235	90	160	428	446	159	189	221	70	125
Average Queue (ft)	92	121	104	63	137	229	230	86	93	118	46	62
95th Queue (ft)	135	224	194	113	189	402	402	153	175	211	94	125
Link Distance (ft)		2012	2012			1213	1213		694	694		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	24	8	21	3	24	22		3	3	32	5	1
Queuing Penalty (veh)	44	14	34	6	88	48		8	4	36	12	5

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	314	354	120
Average Queue (ft)	175	194	106
95th Queue (ft)	272	313	150
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			95
Storage Blk Time (%)	28	24	9
Queuing Penalty (veh)	18	77	30

Intersection: 2: Heacock St & New Project Access

Movement	WB	SB	SB
Directions Served	LR	LT	T
Maximum Queue (ft)	35	179	191
Average Queue (ft)	9	50	53
95th Queue (ft)	31	226	239
Link Distance (ft)	461	694	694
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	72	237	154	96	20	124	289	292	75	103	519	534
Average Queue (ft)	31	90	51	39	5	70	117	125	38	20	337	362
95th Queue (ft)	63	185	123	80	18	130	238	238	87	74	639	646
Link Distance (ft)	2106	2106		357			350	350			592	592
Upstream Blk Time (%)							0	0			8	11
Queuing Penalty (veh)							0	0			29	37
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)						3	9	24	1	0	44	
Queuing Penalty (veh)						10	10	24	2	0	7	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	103
Average Queue (ft)	14
95th Queue (ft)	59
Link Distance (ft)	592
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	476	66	225	305	256	375	374
Average Queue (ft)	234	50	178	153	109	319	334
95th Queue (ft)	413	64	257	316	222	428	423
Link Distance (ft)	1034			257	257	350	350
Upstream Blk Time (%)				5	0	11	18
Queuing Penalty (veh)				23	1	64	106
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	55	14	12	1			
Queuing Penalty (veh)	104	43	42	4			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	210	170	343	335	264	142	213	261	254
Average Queue (ft)	114	52	186	182	103	41	123	116	103
95th Queue (ft)	183	121	313	304	218	94	209	241	229
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)								1	0
Queuing Penalty (veh)								4	2
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							1	2	
Queuing Penalty (veh)							4	4	

Intersection: 6: Hemlock Ave & New Project Access

Movement	NB
Directions Served	LTR
Maximum Queue (ft)	23
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	255
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	WB	WB	NB	SB	SB
Directions Served	L	L	TR	LTR	LT	R
Maximum Queue (ft)	53	5	3	54	33	51
Average Queue (ft)	13	0	0	17	4	24
95th Queue (ft)	37	4	2	41	19	41
Link Distance (ft)		284	284	157	573	573
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	180					
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	49	28
Average Queue (ft)	6	5
95th Queue (ft)	29	22
Link Distance (ft)	284	380
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	58	4	55
Average Queue (ft)	17	0	30
95th Queue (ft)	47	3	51
Link Distance (ft)	542	620	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: West Access/West Access & Hemlock Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	6	48	34	29
Average Queue (ft)	0	5	13	9
95th Queue (ft)	4	27	37	28
Link Distance (ft)	620	105	235	328
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Hemlock Ave & Nita Dr

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	253
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	TR	LTR	L	TR
Maximum Queue (ft)	172	198	203	428	434	44	64	203
Average Queue (ft)	79	86	98	252	275	7	51	70
95th Queue (ft)	155	172	181	390	422	31	76	158
Link Distance (ft)		1213	1213	1261	1261	182		1507
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150						40	
Storage Blk Time (%)	2	1					24	6
Queuing Penalty (veh)	6	1					26	10

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	119	263	284	124	1899	1866	134	477	75	105	409	75
Average Queue (ft)	36	129	155	124	1205	1183	114	228	48	84	165	48
95th Queue (ft)	94	225	258	128	2238	2196	160	444	95	122	346	90
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)					2	0						
Queuing Penalty (veh)					0	0						
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	0	15		74	20		22	36	2	24	31	5
Queuing Penalty (veh)	1	6		303	54		83	102	9	78	78	16

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	76	84	105	276	169	490	125	441
Average Queue (ft)	34	32	57	94	55	222	73	192
95th Queue (ft)	62	65	107	190	142	421	137	350
Link Distance (ft)	318	318		2337		1227		1353
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			80		145		100	
Storage Blk Time (%)			3	12	0	20	2	23
Queuing Penalty (veh)			7	12	0	10	9	20

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	115	238	204	124	225	198	170	462	130	114	749	85
Average Queue (ft)	75	137	112	42	139	112	128	214	78	81	351	56
95th Queue (ft)	132	213	190	107	204	187	194	389	159	131	664	115
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	9	23		0	21		6	22	1	8	50	3
Queuing Penalty (veh)	20	23		0	8		31	67	4	42	127	14

Network Summary

Network wide Queuing Penalty: 2111

1: Heacock St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Movements Served	L	T	T	R	L	T	TR	L	T	T	R	L
Denied Del/Veh (s)												
Total Del/Veh (s)	53.9	500.1	395.6	2.8	46.7	36.1	34.7	56.8	25.1	32.9	3.5	44.7
Vehicles Entered	0	709	502	0	0	318	426	0	464	540	0	0
Vehicles Exited	230	317	405	150	141	269	326	164	334	331	176	75
Hourly Exit Rate	230	317	405	150	141	269	326	164	334	331	176	75

1: Heacock St & Ironwood Ave Performance by lane

Lane	SB	SB	SB	All
Movements Served	T	T	R	
Denied Del/Veh (s)				13.4
Total Del/Veh (s)	39.4	40.6	11.0	126.7
Vehicles Entered	519	310	0	3787
Vehicles Exited	287	249	210	3666
Hourly Exit Rate	287	249	210	3666

2: Heacock St & New Project Access Performance by lane

Lane	WB	NB	NB	SB	SB	SB	All
Movements Served	LR	T	TR	LT	T	T	
Denied Del/Veh (s)							0.0
Total Del/Veh (s)	9.9	3.3	3.2	15.7	13.0	23.7	8.5
Vehicles Entered	36	539	479	369	268	189	1881
Vehicles Exited	36	484	534	333	425	58	1870
Hourly Exit Rate	36	484	534	333	425	58	1870

3: Heacock St & Hemlock Ave Performance by lane

Lane	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Movements Served	L	TR	L	T	R	L	T	T	R	L	T	T
Denied Del/Veh (s)												
Total Del/Veh (s)	362.9	496.7	197.6	33.7	7.0	55.5	45.7	55.7	1.9	48.9	65.1	68.6
Vehicles Entered	303	184	0	521	0	0	560	765	0	0	348	436
Vehicles Exited	81	330	184	317	16	140	495	439	256	46	355	381
Hourly Exit Rate	81	330	184	317	16	140	495	439	256	46	355	381

3: Heacock St & Hemlock Ave Performance by lane

Lane	SB	All
Movements Served	R	
Denied Del/Veh (s)		4.2
Total Del/Veh (s)	13.9	123.2
Vehicles Entered	59	3175
Vehicles Exited	48	3087
Hourly Exit Rate	48	3087

4: Heacock St & SR 60 WB Ramp Performance by lane

Lane	WB	WB	NB	NB	NB	SB	SB	All
Movements Served	LT	R	L	T	T	T	TR	
Denied Del/Veh (s)								1.5
Total Del/Veh (s)	125.1	10.8	55.1	27.1	25.7	56.9	57.0	47.8
Vehicles Entered	486	0	0	723	707	502	635	3052
Vehicles Exited	234	242	343	521	564	550	578	3033
Hourly Exit Rate	234	242	343	521	564	550	578	3033

5: Heacock St & SR 60 EB Ramp Performance by lane

Lane	EB	EB	EB	NB	NB	NB	SB	SB	SB	All
Movements Served	L	LT	R	T	T	TR	L	T	T	
Denied Del/Veh (s)										24.7
Total Del/Veh (s)	111.4	72.5	17.8	149.5	131.8	113.9	42.9	13.2	10.7	75.2
Vehicles Entered	375	188	349	517	336	355	2	693	352	3168
Vehicles Exited	303	248	365	421	341	412	224	419	402	3135
Hourly Exit Rate	303	248	365	421	341	412	224	419	402	3135

6: Hemlock Ave & New Project Access Performance by lane

Lane	EB	EB	EB	WB	NB	All
Movements Served	T	T	TR	T	LTR	
Denied Del/Veh (s)						1.1
Total Del/Veh (s)	1.3	1.7	0.6	41.9	3.4	22.8
Vehicles Entered	203	60	190	538	22	1013
Vehicles Exited	201	63	190	530	22	1007
Hourly Exit Rate	201	63	190	530	22	1007

7: Davis St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	LTR	LT	R	
Denied Del/Veh (s)									165.2
Total Del/Veh (s)	6.0	0.9	0.7	5.0	35.1	252.0	151.4	280.2	67.3
Vehicles Entered	110	336	315	28	317	94	52	165	1415
Vehicles Exited	273	191	296	28	309	91	27	163	1378
Hourly Exit Rate	273	191	296	28	309	91	27	163	1378

8: Hemlock Ave & IHOP Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.8	28.9	82.9	16.1
Vehicles Entered	386	353	21	759
Vehicles Exited	387	343	20	750
Hourly Exit Rate	387	343	20	750

9: Hemlock Ave & Middle Access Performance by lane

Lane	EB	WB	SB	All
Movements Served	LT	TR	LR	
Denied Del/Veh (s)				11.8
Total Del/Veh (s)	2.9	11.6	22.5	11.8
Vehicles Entered	382	219	319	918
Vehicles Exited	382	217	318	917
Hourly Exit Rate	382	217	318	917

10: West Access/West Access & Hemlock Ave Performance by lane

Lane	EB	WB	NB	SB	All
Movements Served	LTR	LTR	LTR	LTR	
Denied Del/Veh (s)					0.1
Total Del/Veh (s)	1.4	1.8	6.0	9.7	3.1
Vehicles Entered	298	372	117	98	884
Vehicles Exited	299	371	117	98	884
Hourly Exit Rate	299	371	117	98	884

11: Hemlock Ave & Nita Dr Performance by lane

Lane	EB	WB	SB	All
Movements Served	T	TR	R	
Denied Del/Veh (s)				0.0
Total Del/Veh (s)	0.4	1.8	4.0	0.9
Vehicles Entered	444	249	8	701
Vehicles Exited	444	248	8	700
Hourly Exit Rate	444	248	8	700

12: Driveway/Davis St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	SB	SB	All
Movements Served	L	T	TR	LT	TR	LTR	L	TR	
Denied Del/Veh (s)									0.3
Total Del/Veh (s)	190.0	102.2	42.9	44.1	26.0	15.5	17.4	11.1	54.9
Vehicles Entered	0	411	606	357	356	93	0	142	1965
Vehicles Exited	94	371	540	296	416	94	83	60	1955
Hourly Exit Rate	94	371	540	296	416	94	83	60	1955

13: Indian St & Ironwood Ave Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	50.0	38.7	43.3	42.9	27.2	26.7	45.0	44.0	4.8	43.4	31.8	4.0
Vehicles Entered	0	430	553	0	523	148	0	601	0	0	361	0
Vehicles Exited	99	432	453	94	272	306	114	256	233	77	194	88
Hourly Exit Rate	99	432	453	94	272	306	114	256	233	77	194	88

13: Indian St & Ironwood Ave Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	33.8
Vehicles Entered	2613
Vehicles Exited	2618
Hourly Exit Rate	2618

14: Indian St & Hemlock Ave Performance by lane

Lane	EB	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	T	TR	L	TR	L	TR	L	TR	
Denied Del/Veh (s)										0.1
Total Del/Veh (s)	30.4	16.6	19.6	27.3	32.3	46.7	30.7	42.8	20.7	26.8
Vehicles Entered	0	311	130	0	297	0	664	0	403	1804
Vehicles Exited	66	200	176	86	211	68	588	31	370	1796
Hourly Exit Rate	66	200	176	86	211	68	588	31	370	1796

15: Indian St & Sunnymead Blvd Performance by lane

Lane	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Movements Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Denied Del/Veh (s)												
Total Del/Veh (s)	56.7	184.6	179.3	48.6	36.2	28.3	64.0	139.1	8.6	46.9	42.8	8.8
Vehicles Entered	0	607	524	0	528	223	0	833	0	0	492	0
Vehicles Exited	184	453	494	98	338	319	230	395	192	105	276	111
Hourly Exit Rate	184	453	494	98	338	319	230	395	192	105	276	111

15: Indian St & Sunnymead Blvd Performance by lane

Lane	All
Movements Served	
Denied Del/Veh (s)	151.2
Total Del/Veh (s)	94.6
Vehicles Entered	3208
Vehicles Exited	3195
Hourly Exit Rate	3195

Total Network Performance

Denied Del/Veh (s)	82.0
Total Del/Veh (s)	175.3
Vehicles Entered	11003
Vehicles Exited	10640
Hourly Exit Rate	10640
Input Volume	43914
% of Volume	24

Intersection: 1: Heacock St & Ironwood Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	115	2062	2050	90	160	334	308	164	269	281	71	125
Average Queue (ft)	113	1595	1574	59	106	149	161	117	113	125	39	72
95th Queue (ft)	120	2408	2394	117	180	278	273	182	239	243	92	135
Link Distance (ft)		2012	2012			1213	1213		586	586		
Upstream Blk Time (%)		39	34									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	90			65	135			140			45	100
Storage Blk Time (%)	68	16	67	2	6	13		12	6	45	4	2
Queuing Penalty (veh)	288	44	121	11	16	17		42	11	88	15	6

Intersection: 1: Heacock St & Ironwood Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	361	383	120
Average Queue (ft)	159	161	95
95th Queue (ft)	295	313	150
Link Distance (ft)	1480	1480	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			95
Storage Blk Time (%)	27	20	6
Queuing Penalty (veh)	21	44	16

Intersection: 2: Heacock St & New Project Access

Movement	WB	SB	SB	SB
Directions Served	LR	LT	T	T
Maximum Queue (ft)	68	128	133	127
Average Queue (ft)	26	36	36	31
95th Queue (ft)	56	258	258	238
Link Distance (ft)	602	586	586	586
Upstream Blk Time (%)		2	1	1
Queuing Penalty (veh)		5	3	2
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Heacock St & Hemlock Ave

Movement	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	T	R	L	T	T
Maximum Queue (ft)	1896	1973	306	371	111	125	375	377	75	120	543	546
Average Queue (ft)	885	1402	276	297	8	98	321	333	65	55	284	299
95th Queue (ft)	2080	2357	350	464	54	157	416	403	97	125	544	551
Link Distance (ft)	2106	2106		306			337	337			702	702
Upstream Blk Time (%)	12	18	21	50			13	16			5	6
Queuing Penalty (veh)	0	0	0	355			89	116			14	16
Storage Bay Dist (ft)			360		200	100			50	95		
Storage Blk Time (%)			21	1		18	33	50	4	1	45	
Queuing Penalty (veh)			29	2		88	54	131	19	5	21	

Intersection: 3: Heacock St & Hemlock Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	181
Average Queue (ft)	55
95th Queue (ft)	313
Link Distance (ft)	702
Upstream Blk Time (%)	1
Queuing Penalty (veh)	2
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Heacock St & SR 60 WB Ramp

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	TR
Maximum Queue (ft)	686	63	225	319	291	374	386
Average Queue (ft)	353	52	218	279	224	349	363
95th Queue (ft)	766	68	251	355	345	386	394
Link Distance (ft)	1034			257	257	337	337
Upstream Blk Time (%)	4			26	10	20	28
Queuing Penalty (veh)	0			202	77	132	187
Storage Bay Dist (ft)		30	200				
Storage Blk Time (%)	50	49	33	11			
Queuing Penalty (veh)	124	120	194	40			

Intersection: 5: Heacock St & SR 60 EB Ramp

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	TR	L	T	T
Maximum Queue (ft)	575	530	338	724	710	659	212	277	255
Average Queue (ft)	330	268	132	549	507	437	133	110	96
95th Queue (ft)	680	624	361	851	856	848	218	264	227
Link Distance (ft)	742	742	742	685	685	685		257	257
Upstream Blk Time (%)	9	4	1	32	18	18		6	1
Queuing Penalty (veh)	0	0	0	0	0	0		34	5
Storage Bay Dist (ft)							190		
Storage Blk Time (%)							8	2	
Queuing Penalty (veh)							36	6	

Intersection: 6: Hemlock Ave & New Project Access

Movement	WB	NB
Directions Served	T	LTR
Maximum Queue (ft)	299	36
Average Queue (ft)	205	14
95th Queue (ft)	396	36
Link Distance (ft)	272	238
Upstream Blk Time (%)	33	
Queuing Penalty (veh)	236	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Davis St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	151	9	20	34	285	188	590	595
Average Queue (ft)	48	0	1	9	109	161	269	370
95th Queue (ft)	105	6	9	30	307	196	724	756
Link Distance (ft)		272	272	285	285	155	572	572
Upstream Blk Time (%)					15	85	39	45
Queuing Penalty (veh)					27	0	0	0
Storage Bay Dist (ft)	180							
Storage Blk Time (%)	0							
Queuing Penalty (veh)	0							

Intersection: 8: Hemlock Ave & IHOP Access

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	69	364	67
Average Queue (ft)	6	83	24
95th Queue (ft)	40	379	75
Link Distance (ft)	285	542	380
Upstream Blk Time (%)		6	
Queuing Penalty (veh)		22	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Hemlock Ave & Middle Access

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	87	177	226
Average Queue (ft)	34	24	105
95th Queue (ft)	76	172	217
Link Distance (ft)	542	620	236
Upstream Blk Time (%)			11
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: West Access/West Access & Hemlock Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	59	107	100	70
Average Queue (ft)	4	31	41	32
95th Queue (ft)	25	85	74	59
Link Distance (ft)	620	105	214	328
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		1		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Hemlock Ave & Nita Dr

Movement	WB	SB
Directions Served	TR	R
Maximum Queue (ft)	15	31
Average Queue (ft)	1	7
95th Queue (ft)	15	28
Link Distance (ft)	318	253
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: Driveway/Davis St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	LT	TR	LTR	L	TR
Maximum Queue (ft)	174	688	705	299	316	92	63	116
Average Queue (ft)	149	425	425	177	182	42	39	31
95th Queue (ft)	219	913	903	289	294	87	69	80
Link Distance (ft)		1213	1213	1261	1261	182		1507
Upstream Blk Time (%)		0	0					
Queuing Penalty (veh)		1	2					
Storage Bay Dist (ft)	150						40	
Storage Blk Time (%)	54	8					11	3
Queuing Penalty (veh)	267	9					7	2

Intersection: 13: Indian St & Ironwood Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	120	438	444	122	223	225	134	391	75	105	300	75
Average Queue (ft)	81	234	254	73	119	132	96	186	63	64	119	49
95th Queue (ft)	144	412	434	137	193	202	158	350	94	114	222	92
Link Distance (ft)		1261	1261		2384	2384		1353			1508	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	95			100			110		50	80		50
Storage Blk Time (%)	8	31		5	10		7	32	11	9	31	2
Queuing Penalty (veh)	33	38		11	10		34	120	41	26	53	6

Intersection: 14: Indian St & Hemlock Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	103	121	148	105	271	170	462	124	297
Average Queue (ft)	41	57	71	63	118	82	258	33	145
95th Queue (ft)	83	95	121	119	219	177	438	85	253
Link Distance (ft)		318	318		2337		1227		1353
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150			80		145		100	
Storage Blk Time (%)		0		4	22	0	26	0	19
Queuing Penalty (veh)		0		9	19	1	20	0	7

Intersection: 15: Indian St & Sunnymead Blvd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	R	L	T	R
Maximum Queue (ft)	115	772	770	124	279	266	170	951	130	114	385	85
Average Queue (ft)	109	735	736	87	184	160	161	651	82	81	193	60
95th Queue (ft)	130	752	754	152	261	230	195	1114	174	132	343	112
Link Distance (ft)		715	715		1059	1059		913			1227	
Upstream Blk Time (%)		76	76					19				
Queuing Penalty (veh)		0	0					0				
Storage Bay Dist (ft)	90			100			145		105	90		60
Storage Blk Time (%)	50	47		5	31		37	32	2	13	34	2
Queuing Penalty (veh)	240	110		14	31		215	132	11	50	78	8

Network Summary

Network wide Queuing Penalty: 4736

Intersection Warrant Analysis

1.h

Warrants Summary

Information			
Analyst	Transpo	Intersection	Heacock St/Project Access
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Project Access	North/South Street	Heacock St
File Name	Heacock St & Project Access.xhy	Major Street	North-South

Project Description *Festival at Moreno Valley*

General				Roadway Network	
Major Street Speed (mph)	30	☐	Population < 10,000	Two Major Routes	☐
Nearest Signal (ft)	775	☐	Coordinated Signal System	Weekend Count	☐
Crashes (per year)	0	☐	Adequate Trials of Alternatives	5-yr Growth Factor	2

Geometry and Traffic	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N	0	0	0	0	0	1	0	1	0	0	1	0
Lane usage						R		TR			LT	
Vehicle Volume Averages (vph)	196	239	112	26	201	26	119	850	0	0	668	174
Peds (ped/h) / Gaps (gaps/h)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Delay (s/veh) / (veh-hr)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--

Warrant 1: Eight-Hour Vehicular Volume	☐
1 A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	☐
1 B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	☐
1 (80%) Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 2: Four-Hour Vehicular Volume	☐
2 A. Four-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 3: Peak Hour	☐
3 A. Peak-Hour Conditions (Minor delay --and-- minor volume --and-- total volume) --or--	☐
3 B. Peak- Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 4: Pedestrian Volume	☐
4 A. Four Hour Volumes --or--	☐
4 B. One-Hour Volumes	☐
Warrant 5: School Crossing	☐
5. Student Volumes --and--	☐
5. Gaps Same Period	☐
Warrant 6: Coordinated Signal System	☐
6. Degree of Platooning (Predominant direction or both directions)	☐
Warrant 7: Crash Experience	☐
7 A. Adequate trials of alternatives, observance and enforcement failed --and--	☐
7 B. Reported crashes susceptible to correction by signal (12-month period) --and--	☐

7 C. (80%) Volumes for Warrants 1A, 1B --or-- 4 are satisfied	☑
Warrant 8: Roadway Network	☐
8 A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2 or 3) --or--	☐
8 B. Weekend Volume (Five hours total)	☐
Warrant 9: Grade Crossing	☐
9 A. Grade Crossing within 140 ft --and--	☐
9 B. Peak-Hour Vehicular Volumes	☐

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1.h

Warrants Volume

Information

Analyst	Transpo	Intersection	Heacock St/Project Access
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Project Access	North/South Street	Heacock St
File Name	Heacock St & Project Access.xhy	Major Street	North-South

Project Description *Festival at Moreno Valley*

Warrant 1

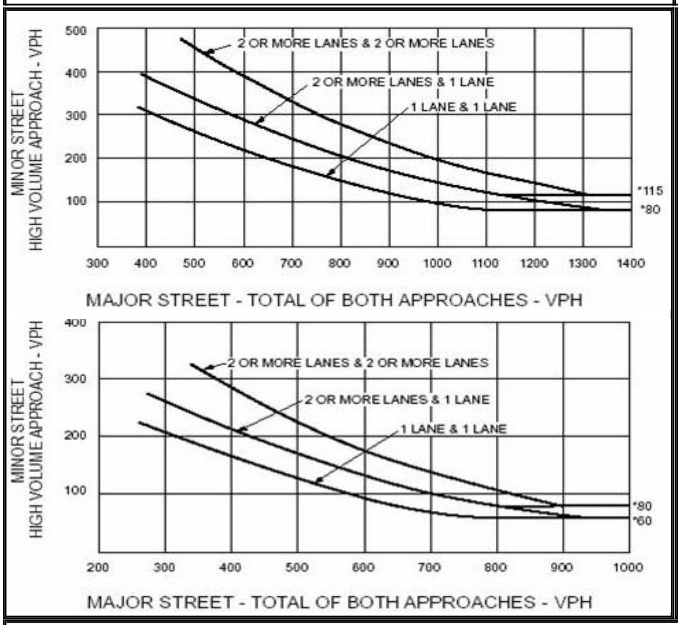
Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

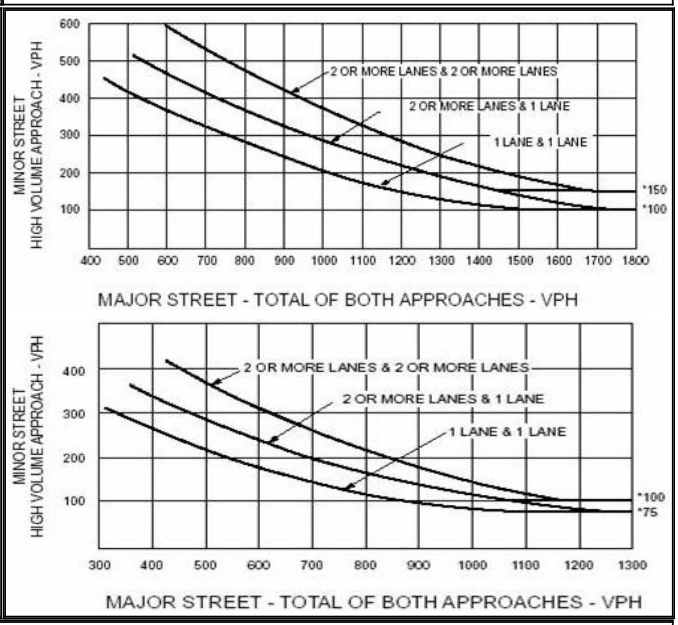
Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant 2



Warrant 3



Volume Summary

Major Street Lanes 1 **Minor Street Lanes** 1 **Speed** 30 **Population** 10000+

Hours	Major Volume	Minor Volume	Total Volume	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)
07-08	1695	30	1725	No	No	No	No	No	No	No
08-09	1261	22	1283	No	No	No	No	No	No	No
09-10	1064	16	1080	No	No	No	No	No	No	No
10-11	1123	20	1143	No	No	No	No	No	No	No
11-12	1306	23	1329	No	No	No	No	No	No	No
12-13	1712	30	1742	No	No	No	No	No	No	No
13-14	1469	26	1495	No	No	No	No	No	No	No
14-15	1611	28	1639	No	No	No	No	No	No	No
15-16	2089	37	2126	No	No	No	No	No	No	No
16-17	2125	38	2163	No	No	No	No	No	No	No
17-18	1573	28	1601	No	No	No	No	No	No	No
18-19	1203	21	1224	No	No	No	No	No	No	No
Totals	18231	319	18550	0	0	0	0	0	0	0

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Warrants Summary

Information			
Analyst	Transpo	Intersection	Project Access/Hemlock Ave
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Hemlock Ave	North/South Street	Project Access (Int 6)
File Name	Project Access & Hemlock Ave.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

General				Roadway Network	
Major Street Speed (mph)	30	☐	Population < 10,000	Two Major Routes	☐
Nearest Signal (ft)	400	☐	Coordinated Signal System	Weekend Count	☐
Crashes (per year)	0	☐	Adequate Trials of Alternatives	5-yr Growth Factor	2

Geometry and Traffic	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N	0	3	0	0	1	0	0	1	0	0	1	0
Lane usage		LTR			LTR			LTR			LTR	
Vehicle Volume Averages (vph)	0	310	14	0	522	0	0	0	18	0	0	0
Peds (ped/h) / Gaps (gaps/h)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Delay (s/veh) / (veh-hr)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--

Warrant 1: Eight-Hour Vehicular Volume	☐
1 A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	☐
1 B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	☐
1 (80%) Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 2: Four-Hour Vehicular Volume	☐
2 A. Four-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 3: Peak Hour	☐
3 A. Peak-Hour Conditions (Minor delay --and-- minor volume --and-- total volume) --or--	☐
3 B. Peak- Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 4: Pedestrian Volume	☐
4 A. Four Hour Volumes --or--	☐
4 B. One-Hour Volumes	☐
Warrant 5: School Crossing	☐
5. Student Volumes --and--	☐
5. Gaps Same Period	☐
Warrant 6: Coordinated Signal System	☐
6. Degree of Platooning (Predominant direction or both directions)	☐
Warrant 7: Crash Experience	☐
7 A. Adequate trials of alternatives, observance and enforcement failed --and--	☐
7 B. Reported crashes susceptible to correction by signal (12-month period) --and--	☐

7 C. (80%) Volumes for Warrants 1A, 1B --or-- 4 are satisfied	☐
Warrant 8: Roadway Network	☐
8 A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2 or 3) --or--	☐
8 B. Weekend Volume (Five hours total)	☐
Warrant 9: Grade Crossing	☐
9 A. Grade Crossing within 140 ft --and--	☐
9 B. Peak-Hour Vehicular Volumes	☐

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Warrants Volume

Information

Analyst	Transpo	Intersection	Project Access/Hemlock Ave
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Hemlock Ave	North/South Street	Project Access (Int 6)
File Name	Project Access & Hemlock Ave.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

Warrant 1

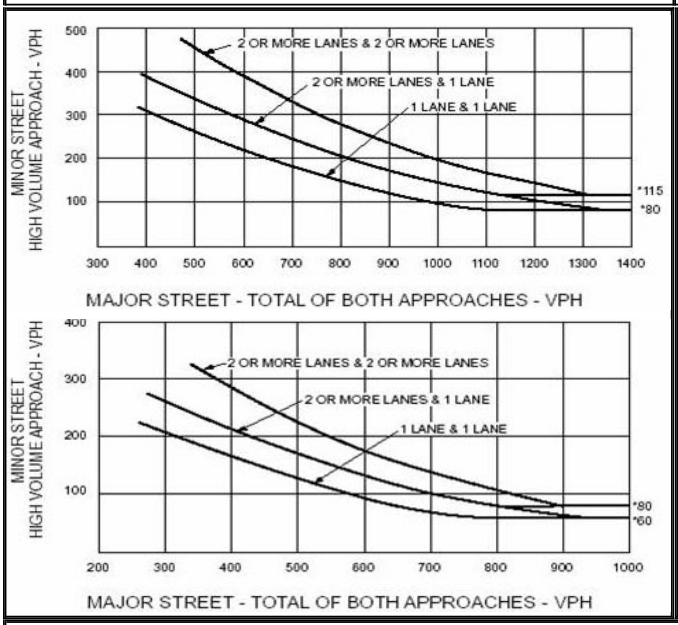
Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

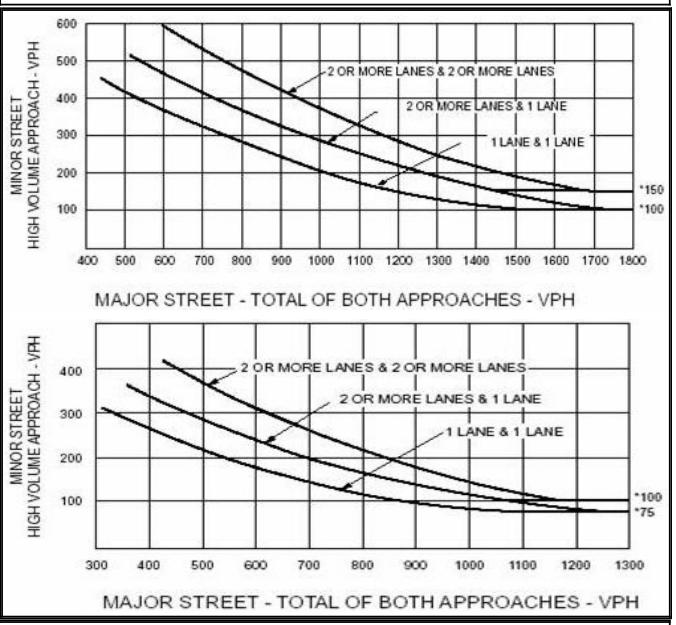
Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant 2



Warrant 3



Volume Summary

Major Street Lanes 2+ **Minor Street Lanes** 1 **Speed** 30 **Population** 10000+

Hours	Major Volume	Minor Volume	Total Volume	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)
07-08	895	19	914	No	No	No	No	No	No	No
08-09	666	14	680	No	No	No	No	No	No	No
09-10	595	14	609	No	No	No	No	No	No	No
10-11	593	13	606	No	No	No	No	No	No	No
11-12	690	15	705	No	No	No	No	No	No	No
12-13	904	19	923	No	No	No	No	No	No	No
13-14	776	16	792	No	No	No	No	No	No	No
14-15	851	18	869	No	No	No	No	No	No	No
15-16	1103	23	1126	No	No	No	No	No	No	No
16-17	1135	24	1159	No	No	No	No	No	No	No
17-18	1122	24	1146	No	No	No	No	No	No	No
18-19	831	18	849	No	No	No	No	No	No	No
Totals	10161	217	10378	0	0	0	0	0	0	0

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Warrants Summary

Information			
Analyst	Transpo	Intersection	Davis Street/Hemlock Avenue
Agency/Co	City of Moreno Valley		
Date Performed	11/20/2017	Jurisdiction	Moreno Valley
Project ID	Festival at Moreno Valley	Units	U.S. Customary
East/West Street	Hemlock Avenue	Time Period Analyzed	PM Peak Hour
File Name	Hemlock Ave & Davis St.xhy	North/South Street	Davis Street
		Major Street	East-West

Project Description *Festival at Moreno Valley*

General				Roadway Network	
Major Street Speed (mph)	30	☐	Population < 10,000	Two Major Routes	☐
Nearest Signal (ft)	600	☐	Coordinated Signal System	Weekend Count	☐
Crashes (per year)	0	☐	Adequate Trials of Alternatives	5-yr Growth Factor	2

Geometry and Traffic	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N	1	2	0	1	1	0	0	1	0	0	1	0
Lane usage	L	TR		L	TR			LTR			LTR	
Vehicle Volume Averages (vph)	196	239	112	20	201	26	119	1	17	27	0	174
Peds (ped/h) / Gaps (gaps/h)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Delay (s/veh) / (veh-hr)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--

Warrant 1: Eight-Hour Vehicular Volume	☑
1 A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	☑
1 B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	☐
1 (80%) Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 2: Four-Hour Vehicular Volume	☑
2 A. Four-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☑
Warrant 3: Peak Hour	☑
3 A. Peak-Hour Conditions (Minor delay --and-- minor volume --and-- total volume) --or--	☐
3 B. Peak- Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☑
Warrant 4: Pedestrian Volume	☐
4 A. Four Hour Volumes --or--	☐
4 B. One-Hour Volumes	☐
Warrant 5: School Crossing	☐
5. Student Volumes --and--	☐
5. Gaps Same Period	☐
Warrant 6: Coordinated Signal System	☐
6. Degree of Platooning (Predominant direction or both directions)	☐
Warrant 7: Crash Experience	☐
7 A. Adequate trials of alternatives, observance and enforcement failed --and--	☐
7 B. Reported crashes susceptible to correction by signal (12-month period) --and--	☐

7 C. (80%) Volumes for Warrants 1A, 1B --or-- 4 are satisfied	☑
Warrant 8: Roadway Network	☐
8 A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2 or 3) --or--	☐
8 B. Weekend Volume (Five hours total)	☐
Warrant 9: Grade Crossing	☐
9 A. Grade Crossing within 140 ft --and--	☐
9 B. Peak-Hour Vehicular Volumes	☐

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Warrants Summary

Information			
Analyst	Transpo	Intersection	Davis Street/Hemlock Avenue
Agency/Co	City of Moreno Valley		
Date Performed	11/20/2017	Jurisdiction	Moreno Valley
Project ID	Festival at Moreno Valley	Units	U.S. Customary
East/West Street	Hemlock Avenue	Time Period Analyzed	PM Peak Hour
File Name	Hemlock Ave & Davis St.xhy	North/South Street	Davis Street
		Major Street	East-West

Project Description *Festival at Moreno Valley*

General				Roadway Network	
Major Street Speed (mph)	30	☐	Population < 10,000	Two Major Routes	☐
Nearest Signal (ft)	600	☐	Coordinated Signal System	Weekend Count	☐
Crashes (per year)	0	☐	Adequate Trials of Alternatives	5-yr Growth Factor	2

Geometry and Traffic	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N	1	2	0	1	1	0	0	1	0	0	1	0
Lane usage	L	TR		L	TR			LTR			LTR	
Vehicle Volume Averages (vph)	196	239	112	20	201	26	119	1	17	27	0	174
Peds (ped/h) / Gaps (gaps/h)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Delay (s/veh) / (veh-hr)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--

Warrant 1: Eight-Hour Vehicular Volume	☑
1 A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	☑
1 B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	☐
1 (80%) Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 2: Four-Hour Vehicular Volume	☑
2 A. Four-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☑
Warrant 3: Peak Hour	☑
3 A. Peak-Hour Conditions (Minor delay --and-- minor volume --and-- total volume) --or--	☐
3 B. Peak- Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☑
Warrant 4: Pedestrian Volume	☐
4 A. Four Hour Volumes --or--	☐
4 B. One-Hour Volumes	☐
Warrant 5: School Crossing	☐
5. Student Volumes --and--	☐
5. Gaps Same Period	☐
Warrant 6: Coordinated Signal System	☐
6. Degree of Platooning (Predominant direction or both directions)	☐
Warrant 7: Crash Experience	☐
7 A. Adequate trials of alternatives, observance and enforcement failed --and--	☐
7 B. Reported crashes susceptible to correction by signal (12-month period) --and--	☐

7 C. (80%) Volumes for Warrants 1A, 1B --or-- 4 are satisfied	☑
Warrant 8: Roadway Network	☐
8 A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2 or 3) --or--	☐
8 B. Weekend Volume (Five hours total)	☐
Warrant 9: Grade Crossing	☐
9 A. Grade Crossing within 140 ft --and--	☐
9 B. Peak-Hour Vehicular Volumes	☐

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1.h

Warrants Volume

Information

Analyst	Transpo	Intersection	Davis Street/Hemlock Avenue
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	11/20/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Hemlock Avenue	North/South Street	Davis Street
File Name	Hemlock Ave & Davis St.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

Warrant 1

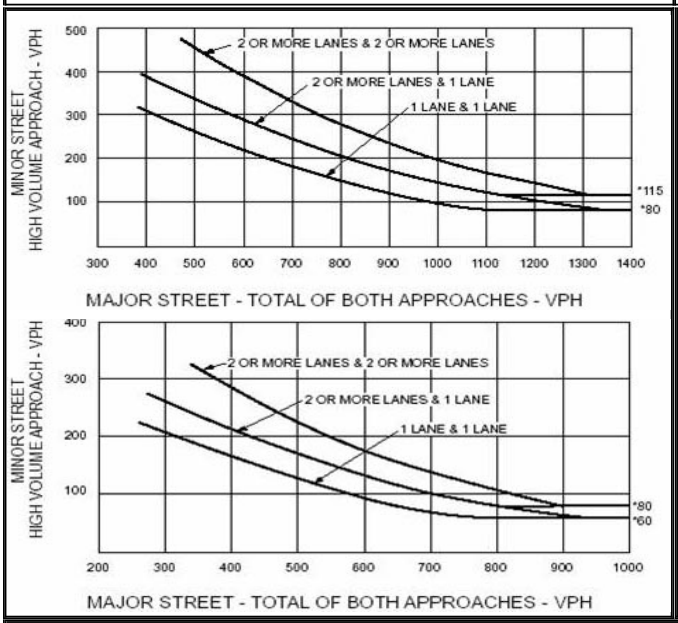
Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

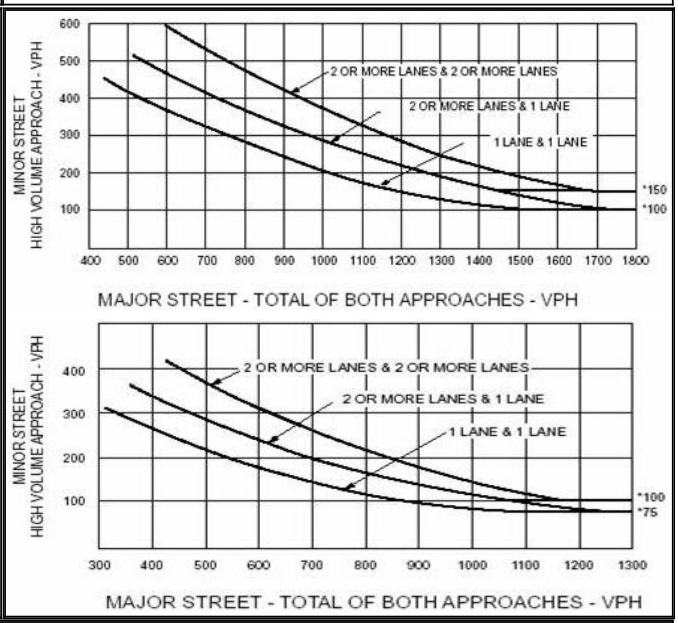
Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant 2



Warrant 3



Volume Summary

Major Street Lanes 2+ **Minor Street Lanes** 1 **Speed** 30 **Population** 10000+

Hours	Major Volume	Minor Volume	Total Volume	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)
07-08	868	221	1240	Yes	Yes	No	Yes	Yes	No	No
08-09	646	164	922	Yes	Yes	No	No	No	No	No
09-10	467	119	667	No	No	No	No	No	No	No
10-11	577	147	824	No	Yes	No	No	No	No	No
11-12	670	170	956	Yes	Yes	No	No	No	No	No
12-13	877	223	1252	Yes	Yes	No	Yes	Yes	No	No
13-14	753	191	1074	Yes	Yes	No	Yes	No	No	No
14-15	825	209	1177	Yes	Yes	No	Yes	Yes	No	No
15-16	1070	272	1527	Yes	Yes	Yes	Yes	Yes	No	Yes
16-17	1101	277	1569	Yes	Yes	Yes	Yes	Yes	No	Yes
17-18	1089	277	1555	Yes	Yes	Yes	Yes	Yes	No	Yes
18-19	616	156	878	Yes	Yes	No	No	No	No	No
Totals	9559	2426	13641	10	11	3	7	6	0	3

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Warrants Volume

Information

Analyst	Transpo	Intersection	Davis Street/Hemlock Avenue
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	11/20/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Hemlock Avenue	North/South Street	Davis Street
File Name	Hemlock Ave & Davis St.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

Warrant 1

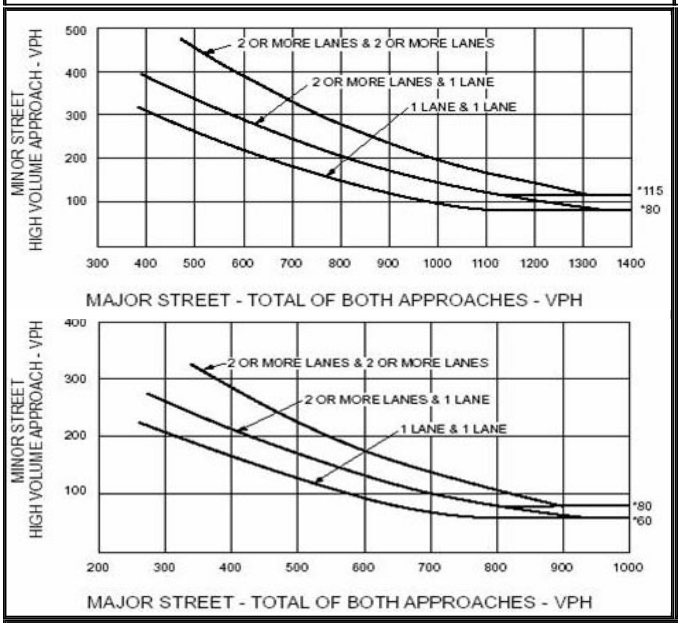
Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

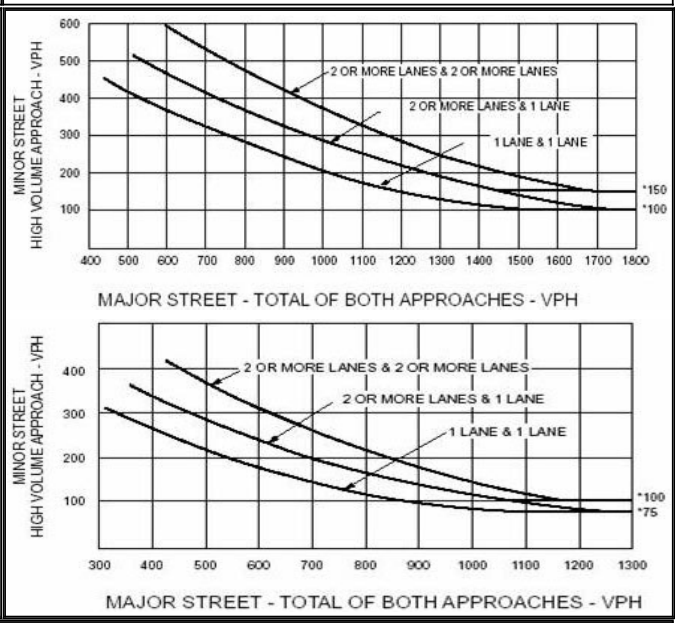
Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant 2



Warrant 3



Volume Summary

Major Street Lanes 2+ **Minor Street Lanes** 1 **Speed** 30 **Population** 10000+

Hours	Major Volume	Minor Volume	Total Volume	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)
07-08	868	221	1240	Yes	Yes	No	Yes	Yes	No	No
08-09	646	164	922	Yes	Yes	No	No	No	No	No
09-10	467	119	667	No	No	No	No	No	No	No
10-11	577	147	824	No	Yes	No	No	No	No	No
11-12	670	170	956	Yes	Yes	No	No	No	No	No
12-13	877	223	1252	Yes	Yes	No	Yes	Yes	No	No
13-14	753	191	1074	Yes	Yes	No	Yes	No	No	No
14-15	825	209	1177	Yes	Yes	No	Yes	Yes	No	No
15-16	1070	272	1527	Yes	Yes	Yes	Yes	Yes	No	Yes
16-17	1101	277	1569	Yes	Yes	Yes	Yes	Yes	No	Yes
17-18	1089	277	1555	Yes	Yes	Yes	Yes	Yes	No	Yes
18-19	616	156	878	Yes	Yes	No	No	No	No	No
Totals	9559	2426	13641	10	11	3	7	6	0	3

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Warrants Summary

Information			
Analyst	Transpo	Intersection	Project Access/Hemlock Ave
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Hemlock Ave	North/South Street	Project Access (IHOP - Int 8)
File Name	8_Project Access & Hemlock.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

General				Roadway Network	
Major Street Speed (mph)	30	☐	Population < 10,000	Two Major Routes	☐
Nearest Signal (ft)	400	☐	Coordinated Signal System	Weekend Count	☐
Crashes (per year)	0	☐	Adequate Trials of Alternatives	5-yr Growth Factor	2

Geometry and Traffic	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N	0	1	0	0	1	0	0	0	0	0	0	0
Lane usage		LT			TR						LR	
Vehicle Volume Averages (vph)	8	281	0	0	245	5	0	0	0	8	0	8
Peds (ped/h) / Gaps (gaps/h)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Delay (s/veh) / (veh-hr)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--

Warrant 1: Eight-Hour Vehicular Volume	☐
1 A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	☐
1 B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	☐
1 (80%) Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 2: Four-Hour Vehicular Volume	☐
2 A. Four-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 3: Peak Hour	☐
3 A. Peak-Hour Conditions (Minor delay --and-- minor volume --and-- total volume) --or--	☐
3 B. Peak- Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 4: Pedestrian Volume	☐
4 A. Four Hour Volumes --or--	☐
4 B. One-Hour Volumes	☐
Warrant 5: School Crossing	☐
5. Student Volumes --and--	☐
5. Gaps Same Period	☐
Warrant 6: Coordinated Signal System	☐
6. Degree of Platooning (Predominant direction or both directions)	☐
Warrant 7: Crash Experience	☐
7 A. Adequate trials of alternatives, observance and enforcement failed --and--	☐
7 B. Reported crashes susceptible to correction by signal (12-month period) --and--	☐

7 C. (80%) Volumes for Warrants 1A, 1B --or-- 4 are satisfied	☐
Warrant 8: Roadway Network	☐
8 A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2 or 3) --or--	☐
8 B. Weekend Volume (Five hours total)	☐
Warrant 9: Grade Crossing	☐
9 A. Grade Crossing within 140 ft --and--	☐
9 B. Peak-Hour Vehicular Volumes	☐

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1.h

Warrants Volume

Information

Analyst	Transpo	Intersection	Project Access/Hemlock Ave
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Hemlock Ave	North/South Street	Project Access (IHOP - Int 8)
File Name	8_Project Access & Hemlock.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

Warrant 1

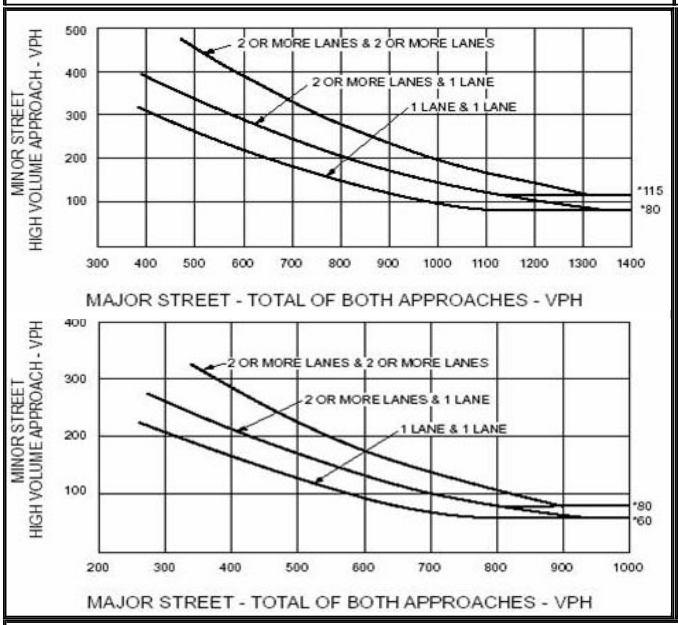
Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

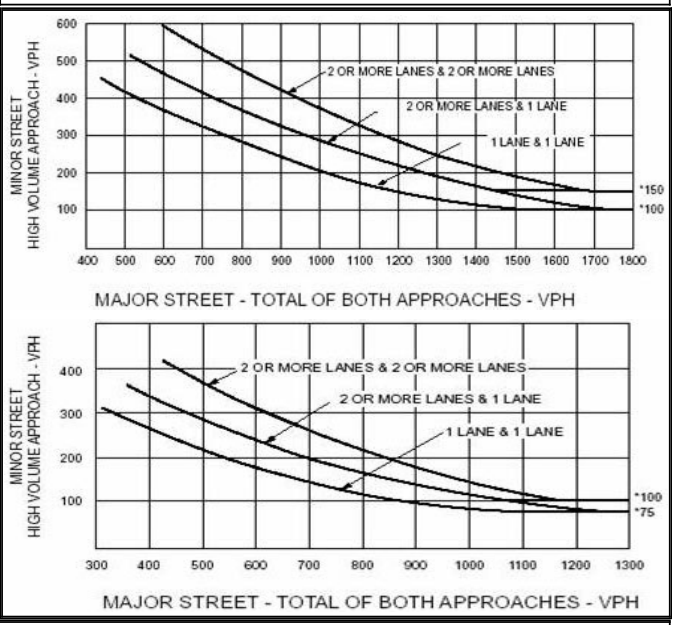
Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant 2



Warrant 3



Volume Summary

Major Street Lanes 1 **Minor Street Lanes** 1 **Speed** 30 **Population** 10000+

Hours	Major Volume	Minor Volume	Total Volume	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)
07-08	578	18	596	No	No	No	No	No	No	No
08-09	431	12	443	No	No	No	No	No	No	No
09-10	311	10	321	No	No	No	No	No	No	No
10-11	384	12	396	No	No	No	No	No	No	No
11-12	446	14	460	No	No	No	No	No	No	No
12-13	584	18	602	No	No	No	No	No	No	No
13-14	501	16	517	No	No	No	No	No	No	No
14-15	550	16	566	No	No	No	No	No	No	No
15-16	714	22	736	No	No	No	No	No	No	No
16-17	734	22	756	No	No	No	No	No	No	No
17-18	726	16	742	No	No	No	No	No	No	No
18-19	538	16	554	No	No	No	No	No	No	No
Totals	6497	192	6689	0	0	0	0	0	0	0

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Warrants Summary

Information			
Analyst	Transpo	Intersection	MiddProject Access/Hemlock Ave
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Hemlock Ave	North/South Street	Middle Project Access (Int 9)
File Name	9_Middle Project Access & Hemlock.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

General				Roadway Network	
Major Street Speed (mph)	30	☐	Population < 10,000	Two Major Routes	☐
Nearest Signal (ft)	1700	☐	Coordinated Signal System	Weekend Count	☐
Crashes (per year)	0	☐	Adequate Trials of Alternatives	5-yr Growth Factor	2

Geometry and Traffic	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N	0	1	0	0	1	0	0	0	0	0	0	0
Lane usage		LT			TR						LR	
Vehicle Volume Averages (vph)	151	136	0	0	88	75	0	0	0	75	0	164
Peds (ped/h) / Gaps (gaps/h)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Delay (s/veh) / (veh-hr)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--

Warrant 1: Eight-Hour Vehicular Volume	☐
1 A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	☐
1 B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	☐
1 (80%) Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 2: Four-Hour Vehicular Volume	☐
2 A. Four-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 3: Peak Hour	☐
3 A. Peak-Hour Conditions (Minor delay --and-- minor volume --and-- total volume) --or--	☐
3 B. Peak- Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 4: Pedestrian Volume	☐
4 A. Four Hour Volumes --or--	☐
4 B. One-Hour Volumes	☐
Warrant 5: School Crossing	☐
5. Student Volumes --and--	☐
5. Gaps Same Period	☐
Warrant 6: Coordinated Signal System	☐
6. Degree of Platooning (Predominant direction or both directions)	☐
Warrant 7: Crash Experience	☐
7 A. Adequate trials of alternatives, observance and enforcement failed --and--	☐
7 B. Reported crashes susceptible to correction by signal (12-month period) --and--	☐

7 C. (80%) Volumes for Warrants 1A, 1B --or-- 4 are satisfied	☑
Warrant 8: Roadway Network	☐
8 A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2 or 3) --or--	☐
8 B. Weekend Volume (Five hours total)	☐
Warrant 9: Grade Crossing	☐
9 A. Grade Crossing within 140 ft --and--	☐
9 B. Peak-Hour Vehicular Volumes	☐

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Warrants Volume

Information

Analyst	Transpo	Intersection	MiddProject Access/Hemlock Ave
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Hemlock Ave	North/South Street	Middle Project Access (Int 9)
File Name	9_Middle Project Access & Hemlock.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

Warrant 1

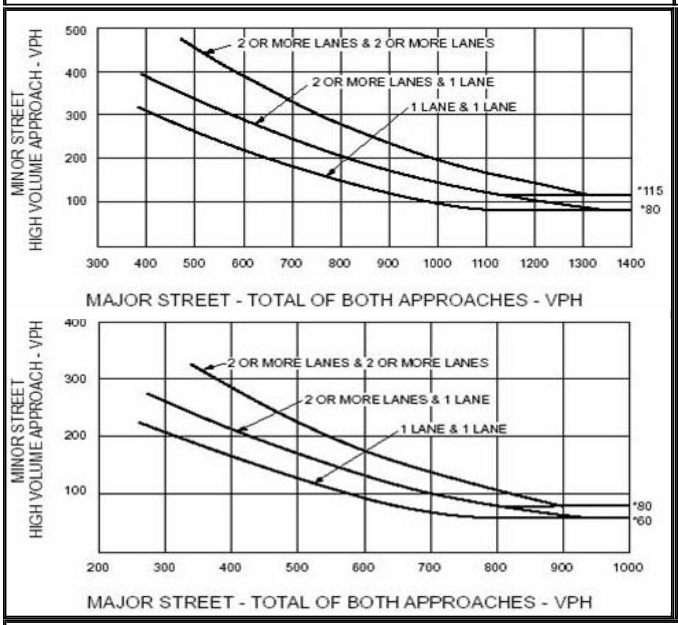
Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

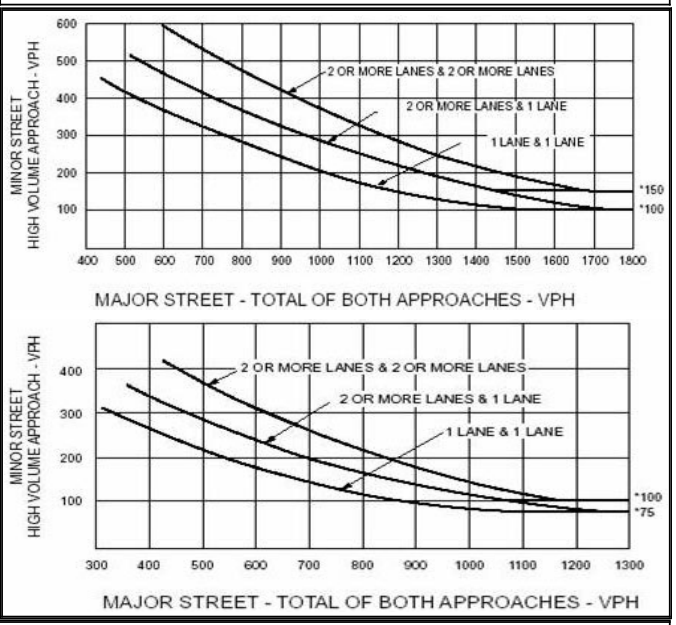
Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant 2



Warrant 3



Volume Summary

Major Street Lanes 1 **Minor Street Lanes** 1 **Speed** 30 **Population** 10000+

Hours	Major Volume	Minor Volume	Total Volume	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)
07-08	466	256	722	No	Yes	No	No	No	No	No
08-09	346	191	537	No	No	No	No	No	No	No
09-10	251	138	389	No	No	No	No	No	No	No
10-11	309	170	479	No	No	No	No	No	No	No
11-12	432	198	630	No	Yes	No	No	No	No	No
12-13	470	259	729	No	Yes	No	No	No	No	No
13-14	404	222	626	No	Yes	No	No	No	No	No
14-15	443	243	686	No	Yes	No	No	No	No	No
15-16	574	316	890	Yes	Yes	No	No	Yes	No	No
16-17	590	325	915	Yes	Yes	No	No	Yes	No	No
17-18	703	322	1025	Yes	Yes	No	Yes	Yes	No	No
18-19	432	238	670	No	Yes	No	No	No	No	No
Totals	5420	2878	8298	3	9	0	1	3	0	0

1.h

Warrants Summary

Information			
Analyst	Transpo	Intersection	West Access/Hemlock Avenue
Agency/Co	City of Moreno Valley		
Date Performed	12/4/2017	Jurisdiction	Moreno Valley
Project ID	Festival at Moreno Valley	Units	U.S. Customary
East/West Street	Hemlock Avenue	Time Period Analyzed	PM Peak Hour
File Name	10_West Project Access & Hemlock.xhy	North/South Street	West Project Access
		Major Street	East-West

Project Description *Festival at Moreno Valley*

General				Roadway Network	
Major Street Speed (mph)	30	☐	Population < 10,000	Two Major Routes	☐
Nearest Signal (ft)	500	☐	Coordinated Signal System	Weekend Count	☐
Crashes (per year)	0	☐	Adequate Trials of Alternatives	5-yr Growth Factor	2

Geometry and Traffic	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N	0	1	0	0	1	0	0	1	0	0	1	0
Lane usage		LTR			LTR			LTR			LTR	
Vehicle Volume Averages (vph)	35	158	46	64	115	75	17	0	68	61	0	14
Peds (ped/h) / Gaps (gaps/h)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Delay (s/veh) / (veh-hr)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--

Warrant 1: Eight-Hour Vehicular Volume	☐
1 A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	☐
1 B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	☐
1 (80%) Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 2: Four-Hour Vehicular Volume	☐
2 A. Four-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 3: Peak Hour	☐
3 A. Peak-Hour Conditions (Minor delay --and-- minor volume --and-- total volume) --or--	☐
3 B. Peak- Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 4: Pedestrian Volume	☐
4 A. Four Hour Volumes --or--	☐
4 B. One-Hour Volumes	☐
Warrant 5: School Crossing	☐
5. Student Volumes --and--	☐
5. Gaps Same Period	☐
Warrant 6: Coordinated Signal System	☐
6. Degree of Platooning (Predominant direction or both directions)	☐
Warrant 7: Crash Experience	☐
7 A. Adequate trials of alternatives, observance and enforcement failed --and--	☐
7 B. Reported crashes susceptible to correction by signal (12-month period) --and--	☐

7 C. (80%) Volumes for Warrants 1A, 1B --or-- 4 are satisfied	☐
Warrant 8: Roadway Network	☐
8 A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2 or 3) --or--	☐
8 B. Weekend Volume (Five hours total)	☐
Warrant 9: Grade Crossing	☐
9 A. Grade Crossing within 140 ft --and--	☐
9 B. Peak-Hour Vehicular Volumes	☐

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1.h

Warrants Volume

Information

Analyst	Transpo	Intersection	West Access/Hemlock Avenue
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Hemlock Avenue	North/South Street	West Project Access
File Name	10_West Project Access & Hemlock.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

Warrant 1

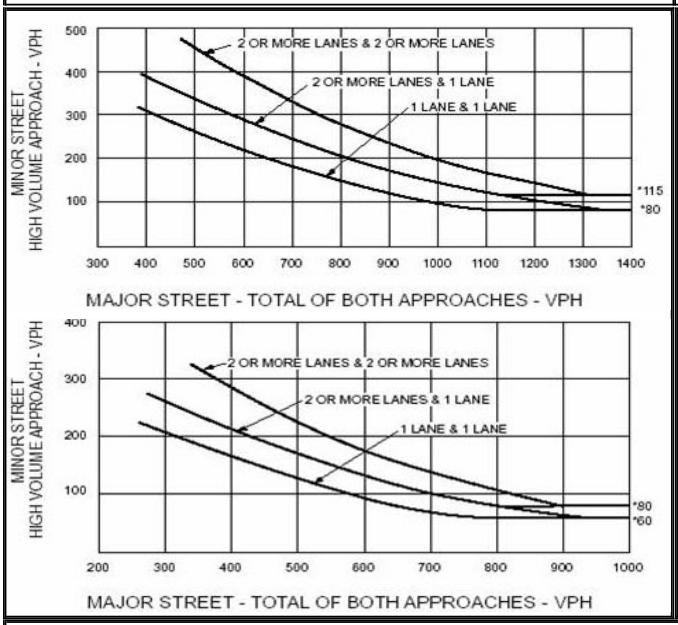
Condition A—Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

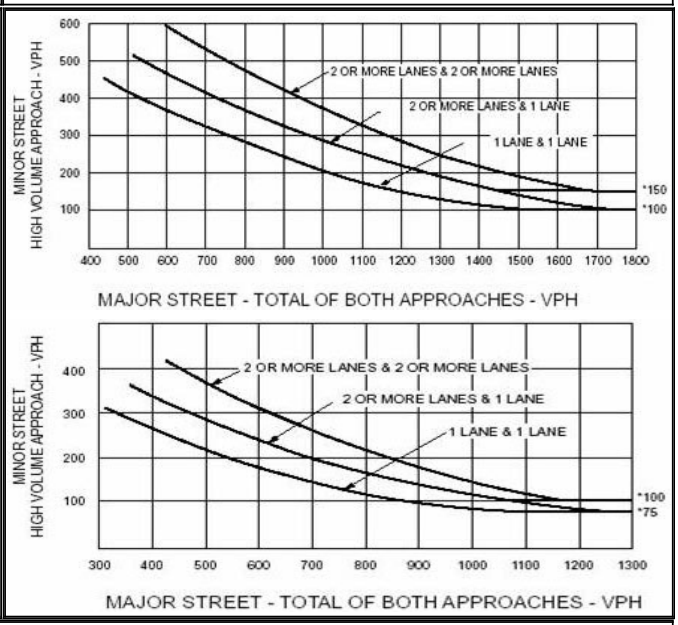
Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant 2



Warrant 3



Volume Summary

Major Street Lanes 1 **Minor Street Lanes** 1 **Speed** 30 **Population** 10000+

Hours	Major Volume	Minor Volume	Total Volume	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)
07-08	498	92	672	No	No	No	No	No	No	No
08-09	534	69	664	No	No	No	No	No	No	No
09-10	268	49	361	No	No	No	No	No	No	No
10-11	332	62	448	No	No	No	No	No	No	No
11-12	503	93	679	No	No	No	No	No	No	No
12-13	433	80	584	No	No	No	No	No	No	No
13-14	474	88	640	No	No	No	No	No	No	No
14-15	623	117	844	No	No	No	Yes	No	No	No
15-16	633	117	853	No	No	No	Yes	No	No	No
16-17	630	116	849	No	No	No	Yes	No	No	No
17-18	665	86	827	No	No	No	Yes	No	No	No
18-19	353	65	476	No	No	No	No	No	No	No
Totals	5946	1034	7897	0	0	0	4	0	0	0

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1.h

Warrants Summary

Information			
Analyst	Transpo	Intersection	Nita Drive/Hemlock Ave
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
East/West Street	Hemlock Ave	North/South Street	Nita Drive (Int 11)
File Name	11_Nita & Hemlock.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

General				Roadway Network	
Major Street Speed (mph)	30	☐	Population < 10,000	Two Major Routes	☐
Nearest Signal (ft)	400	☐	Coordinated Signal System	Weekend Count	☐
Crashes (per year)	0	☐	Adequate Trials of Alternatives	5-yr Growth Factor	2

Geometry and Traffic	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N	0	1	0	0	1	0	0	0	0	0	0	1
Lane usage		T			TR							R
Vehicle Volume Averages (vph)	0	314	0	0	159	6	0	0	0	0	0	7
Peds (ped/h) / Gaps (gaps/h)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--
Delay (s/veh) / (veh-hr)	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--	--	0 / 0	--

Warrant 1: Eight-Hour Vehicular Volume	☐
1 A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	☐
1 B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	☐
1 (80%) Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 2: Four-Hour Vehicular Volume	☐
2 A. Four-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 3: Peak Hour	☐
3 A. Peak-Hour Conditions (Minor delay --and-- minor volume --and-- total volume) --or--	☐
3 B. Peak- Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	☐
Warrant 4: Pedestrian Volume	☐
4 A. Four Hour Volumes --or--	☐
4 B. One-Hour Volumes	☐
Warrant 5: School Crossing	☐
5. Student Volumes --and--	☐
5. Gaps Same Period	☐
Warrant 6: Coordinated Signal System	☐
6. Degree of Platooning (Predominant direction or both directions)	☐
Warrant 7: Crash Experience	☐
7 A. Adequate trials of alternatives, observance and enforcement failed --and--	☐
7 B. Reported crashes susceptible to correction by signal (12-month period) --and--	☐
7 C. (80%) Volumes for Warrants 1A, 1B --or-- 4 are satisfied	☐

Warrant 8: Roadway Network	☐
8 A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2 or 3) --or--	☐
8 B. Weekend Volume (Five hours total)	☐
Warrant 9: Grade Crossing	☐
9 A. Grade Crossing within 140 ft --and--	☐
9 B. Peak-Hour Vehicular Volumes	☐

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1.h

Warrants Volume

Information

Analyst	Transpo	Intersection	Nita Drive/Hemlock Ave
Agency/Co	City of Moreno Valley	Jurisdiction	Moreno Valley
Date Performed	12/4/2017	Units	U.S. Customary
Project ID	Festival at Moreno Valley	Time Period Analyzed	PM Peak Hour
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File Name	11_Nita & Hemlock.xhy	Major Street	East-West

Project Description *Festival at Moreno Valley*

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2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

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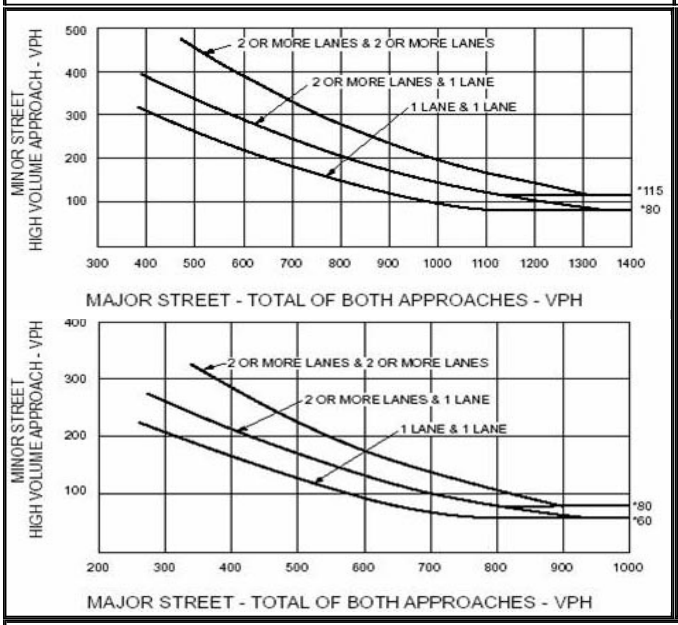
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant 2



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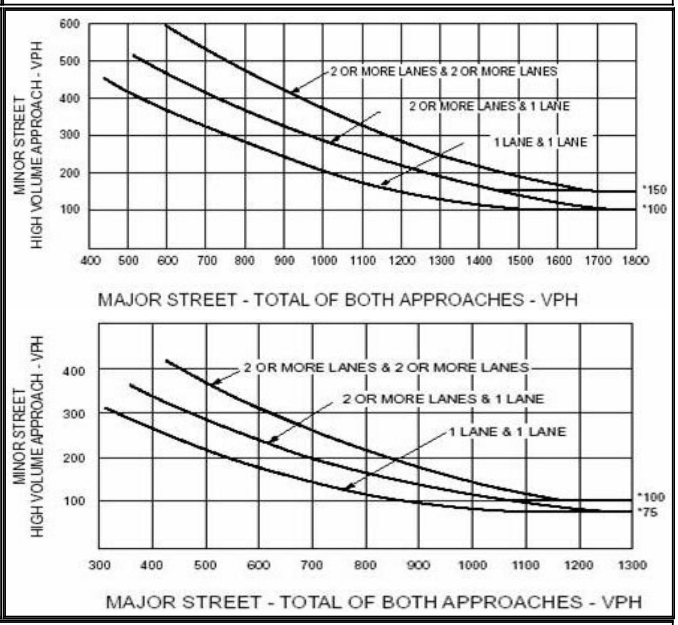

Volume Summary

Major Street Lanes 1 **Minor Street Lanes** 1 **Speed** 30 **Population** 10000+

Hours	Major Volume	Minor Volume	Total Volume	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)
07-08	514	8	522	No	No	No	No	No	No	No
08-09	382	6	388	No	No	No	No	No	No	No
09-10	277	4	281	No	No	No	No	No	No	No
10-11	341	5	346	No	No	No	No	No	No	No
11-12	396	6	402	No	No	No	No	No	No	No
12-13	519	8	527	No	No	No	No	No	No	No
13-14	446	7	453	No	No	No	No	No	No	No
14-15	489	7	496	No	No	No	No	No	No	No
15-16	634	10	644	No	No	No	No	No	No	No
16-17	652	10	662	No	No	No	No	No	No	No
17-18	645	7	652	No	No	No	No	No	No	No
18-19	475	7	482	No	No	No	No	No	No	No
Totals	5770	85	5855	0	0	0	0	0	0	0

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Mitigation Measures SIDRA Output

MOVEMENT SUMMARY

Site: Davis Street/Hemlock Avenue

Future (2022) With-Project PM
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Driveway											
3	L2	178	2.0	0.309	14.4	LOS B	1.7	44.1	0.73	0.88	32.0
8	T1	2	2.0	0.309	9.9	LOS A	1.7	44.1	0.73	0.88	32.1
18	R2	26	2.0	0.309	9.7	LOS A	1.7	44.1	0.73	0.88	31.5
Approach		207	2.0	0.309	13.7	LOS B	1.7	44.1	0.73	0.88	31.9
East: Hemlock Ave											
1	L2	30	2.0	0.462	13.1	LOS B	3.0	76.3	0.69	0.80	34.2
6	T1	303	2.0	0.462	8.6	LOS A	3.0	76.3	0.69	0.80	34.4
16	R2	39	2.0	0.462	8.5	LOS A	3.0	76.3	0.69	0.80	33.6
Approach		373	2.0	0.462	9.0	LOS A	3.0	76.3	0.69	0.80	34.3
North: Davis St											
7	L2	41	2.0	0.404	12.7	LOS B	2.4	61.8	0.70	0.81	34.3
4	T1	1	2.0	0.404	8.2	LOS A	2.4	61.8	0.70	0.81	34.4
14	R2	264	2.0	0.404	8.1	LOS A	2.4	61.8	0.70	0.81	33.6
Approach		307	2.0	0.404	8.7	LOS A	2.4	61.8	0.70	0.81	33.7
West: Hemlock Ave											
5	L2	310	2.0	0.334	9.5	LOS A	2.2	56.5	0.29	0.59	34.3
2	T1	377	2.0	0.334	5.0	LOS A	2.2	56.8	0.28	0.51	35.5
12	R2	177	2.0	0.334	5.1	LOS A	2.2	56.8	0.28	0.48	35.0
Approach		865	2.0	0.334	6.7	LOS A	2.2	56.8	0.28	0.54	35.0
All Vehicles		1751	2.0	0.462	8.3	LOS A	3.0	76.3	0.50	0.68	34.2

Level of Service (LOS) Method: Delay (HCM 2000).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

CITY OF MORENO VALLEY
PLANNING COMMISSION

VIA TELECONFERENCE ONLY
PURSUANT TO COVID-19
GOVERNOR EXECUTIVE ORDER N-29-20

NOTICE OF PUBLIC HEARING AND ENVIRONMENTAL NOTICE OF AVAILABILITY

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:	January 14, 2021 at 7:00 p.m.
Location:	**VIA TELECONFERENCE ONLY** **Go to http://morenovalleyca.iqm2.com/Citizens/default.aspx for instructions.**
Item:	PEN20-0139 General Plan Amendment; PEN20-0138 Specific Plan Amendment; and PEN20-0137 Plot Plan
Applicant:	LCG 10MV, LLC
Property Owner:	SCNDSC, LLC
APN:	481-020-013, 029, 030, 034, 035 & 038
Location:	Southeast corner of Heacock Street and Ironwood Avenue
Proposal:	Applicant is requesting approval of the following entitlements for a 10-acre site: 1) a General Plan Amendment (GPA) amending the City's General Plan from Commercial to Business Park, 2); a Specific Plan Amendment from SP205 Retail Commercial to SP 205 Mixed Use; and 3) a Plot Plan for an approximately 200,000 square foot light industrial building.
Council District:	1

Environmental Determination: The project has been evaluated against the criteria set forth in the California Environmental Quality Act (CEQA) and CEQA Guidelines and staff has determined that a Mitigated Negative Declaration is the appropriate environmental document for the proposed project.

The Draft Initial Study/Mitigated Negative Declaration is being circulated for public review by responsible and trustee agencies and other interested parties for a review period commencing December 23, 2020, through January 11, 2021. The documents can be obtained in electronic format via email by request. The final document 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).

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 or at 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.iqm2.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, any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Guy Pegan, ADA Coordinator, at (951) 413-3120 at least 48 hours before the meeting. The 48-hour notification will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

STAFF CONTACT: If you have questions regarding this public hearing, please contact Julia Descoteaux, Associate Planner, by telephone at (951) 413-3209 or via email at planning@moval.org.

	Press-Enterprise	December 23, 2020
Patty Nevins Planning Official Community Development Department	Newspaper	Date of Publication

MITIGATION MONITORING AND REPORTING PROGRAM

MORENO VALLEY BUSINESS PARK
AMENDMENT NO. 2
MORENO VALLEY FESTIVAL SPECIFIC PLAN (SP-205)
MORENO VALLEY, CALIFORNIA

LEAD AGENCY:

CITY OF MORENO VALLEY
COMMUNITY DEVELOPMENT DEPARTMENT
14177 FREDERICK STREET
P. O. BOX 88005
MORENO VALLEY, CALIFORNIA 92552

REPORT PREPARED BY:

BLODGETT BAYLOSIS ENVIRONMENTAL PLANNING
2211 HACIENDA BOULEVARD, SUITE 107
HACIENDA HEIGHTS, CALIFORNIA 91745

DECEMBER 16, 2020

MORV 007

TABLE OF CONTENTS

1. OVERVIEW OF THE PROJECT

The Specific Plan Amendment that is the focus of this Initial Study and Mitigated Negative Declaration (IS/MND) is the *second amendment* to the adopted *Moreno Valley Festival Specific Plan/EIR (SP-205)*. The original Specific Plan was adopted, and the Environmental Impact Report (EIR) was certified, by the City Council of Moreno Valley on October 27, 1987. *Amendment Number 1* was adopted in 2018 as a means to promote a wider range of land uses and development so as to take advantage of more recent development trends that were occurring since the original Specific Plan was adopted.[1] This current proposed amendment (Amendment Number 2) that is the subject of this IS/MND, expands the geographic area of the Specific Plan's Planning Area 1 to include a 9.98-acre property located on the southeast corner of Heacock Street and Ironwood Avenue. This IS/MND for Amendment No. 2 also tiers off of the Final EIR that was certified for the *Moreno Valley Festival Specific Plan/EIR (SP-205)*. This Specific Plan Amendment Number 2 is contemplating a new light industrial building totaling 220,390 square feet of floor area. The original SP-205 designated the area as *Regional Commercial* in the geographic area that is now included in the expanded Planning Area 1. This Second Amendment is now designating this area as *Mixed Uses*.

2. FINDINGS OF THE ENVIRONMENTAL ASSESSMENT

The Initial Study prepared for the project indicated that the project's construction and subsequent occupation are not expected to result in significant adverse environmental impacts upon implementation of the required mitigation measures. The following Mandatory Findings of Significance can be made as set forth in Section 15065 of the CEQA Guidelines, as amended, based on the results of this environmental assessment:

- The proposed project *will not* have the potential to degrade the quality of the environment;
- The proposed project *will not* have the potential to achieve short-term goals to the disadvantage of long-term environmental goals;
- The proposed project *will not* have impacts, that are individually limited, but cumulatively considerable; and,
- The proposed project *will not* have environmental effects that will adversely affect humans, either directly or indirectly.

3.FINDINGS RELATED TO MITIGATION MONITORING

Section 21081(a) of the Public Resources Code states that findings must be adopted by the decision-makers coincidental to the approval of a Mitigated Negative Declaration. These findings shall be incorporated as part

[1] The expanded range of allowable uses will include a Mix of Uses Development (MU), Commercial/Retail Development (CR), Retail Mix of Uses (RMU) and Open Space (OS) designation. The plan amendment will also facilitate the extension of Davis Street in a northerly direction to ultimately re-connect with the segment of Davis Street that extends north of Ironwood Avenue. The overall placement, design, and phasing of future development will be responsive to the employment and community service needs while mitigating the potential impacts on sensitive development that will be located both within and in close proximity to the Planning Area.

of the decision-maker's findings of fact, in response to AB-3180. In accordance with the requirements of Section 21081(a) and 21081.6 of the Public Resources Code, the following additional findings may be made:

- A mitigation reporting or monitoring program will be required;
- Site plans and/or building plans, submitted for approval by the responsible monitoring agency, shall include the required standard conditions; and,
- An accountable enforcement agency or monitoring agency shall be identified for the mitigations adopted as part of the decision-maker's final determination.

4. MITIGATION MEASURES

The analysis indicated that the proposed project may result in impacts to protected species and habitat. As a result, the following mitigation is required:

Mitigation Measure No. 1 (Biological Resources Impacts). The proposed project must be consistent with the Western Riverside MSHCP. Payment of the appropriate development mitigation fees will mitigate any impacts to these species.

Mitigation Measure No. 2 (Biological Resources Impacts). Prior to any land disturbance, a focused pre-construction burrowing owl survey shall be conducted prior to construction in accordance with the Burrowing Owl Survey instructions of the Western Riverside County MSHCP. This survey is to be conducted within 30 days prior to ground disturbance. After the pre-construction burrowing owl survey has been completed, a survey report will be prepared in accordance with the MSHCP 30-day Pre-construction Burrowing Owl Survey Report Format.

Mitigation Measure No. 3 (Biological Resources Impacts). Future developers must consult with the California Department of Fish and Wildlife, the U.S. Army Corps of Engineers, and the Santa Ana Regional Water Quality Control Board to determine the need for permits that must be obtained prior to initiation of construction of a proposed project.

Mitigation Measure No. 4 (Biological Resources Impacts). Prior to the start of construction activity, developers must prepare a Multiple Species Habitat Conservation Program (MSHCP) Determination of Biologically Equivalent or Superior Preservation (DBESP) should a future project affect Western Riverside MSHCP riverine resources.

Mitigation Measure No. 5 (Biological Resources Impacts). Vegetation removal shall be conducted outside of the nesting season for migratory birds to avoid direct impacts. The migratory bird nesting season is between February 1 and September 15.

Mitigation Measure No. 6 (Biological Resources Impacts). If active nests are found during nesting bird surveys, they shall be flagged and a 200-foot buffer shall be fenced around the nests.

Mitigation Measure No. 7 (Biological Resources Impacts). If vegetation removal will occur during the migratory bird nesting season, between February 1 and September 15, pre-construction nesting bird surveys must be performed within three days prior to vegetation removal.

The following mitigation will be effective in minimizing potential impacts to possible cultural resources:

Mitigation Measure No. 8 (Cultural Resources Impacts). 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 must 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, must develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB-52 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 AB-52 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 AB-52. Details in the Plan shall include:

- Project grading and development scheduling;

- The project archeologist and the Consulting Tribes(s) as defined in this mitigation must 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;

- 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.

Mitigation Measure No. 9 (Cultural Resources Impacts). Prior to the issuance of a grading permit, the developer shall secure agreements with the Pechanga Band of Luiseño Indians, the Soboba Band of Luiseño Indians, and the Morongo Band of Mission 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.

Mitigation Measure No. 10 (Cultural Resources Impacts). 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:

- 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 the initial mitigation. 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 the first mitigation identified in Section 3.5.2.B.

- 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."

Mitigation Measure No. 11 (Cultural Resources Impacts). 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 previously identified mitigation before any further work commences in the affected area.

Mitigation Measure No. 12 (Cultural Resources Impacts). 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 five-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).

Mitigation Measure No. 13 (Cultural Resources Impacts). If previously unidentified paleontological resources are unearthed during construction, work shall cease within 50 feet of the find and the project Applicant must retain a qualified paleontologist, approved by the City, to assess the significance of the find. If a find is determined to be significant, the Lead Agency and the paleontologist will determine appropriate avoidance measures or other appropriate mitigation. All significant fossil materials recovered will be, as necessary and at the discretion of the qualified paleontologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.

The following mitigation is required to further reduce future projects greenhouse gas emissions impacts:

Mitigation Measure No. 14 (Greenhouse Gases Emissions Impacts). The Applicant must install ENERGY STAR appliances wherever appliances are installed.

Mitigation Measure No. 15 (Greenhouse Gases Emissions Impacts). The Applicant shall install ENERGY STAR rated light emitting diodes (LEDs) for traffic, street, and outdoor lighting.

Mitigation Measure No. 16 (Greenhouse Gases Emissions Impacts). The Applicant must install ENERGY STAR rated Compact Florescent Lights (CFLs) in all indoor areas that require continuous lighting. CFLs should not be used in rooms or areas that are subject to frequent on/off cycling, as the lifespan of CFLs diminishes when there are frequently turned off.

Mitigation Measure No. 17 (Greenhouse Gases Emissions Impacts). The Applicant must install light colored "cool" roofs.

Mitigation Measure No. 18 (Greenhouse Gases Emissions Impacts). The Applicant must install "cool" pavement (lighter colored) throughout the parking areas.

Mitigation Measure No. 19 (Greenhouse Gases Emissions Impacts). All landscape planted on-site must be watered by water dispensed through drip irrigation.

Mitigation Measure No. 20 (Greenhouse Gases Emissions Impacts). The building contractors shall install bicycle racks consistent with the City's Municipal Code adjacent to each building.

Mitigation Measure No. 21 (Greenhouse Gases Emissions Impacts). The building contractors shall install electric vehicle charging stations in the parking areas. Preferential parking spaces for electric vehicles must be provided.

The following mitigation will be effective in reducing potential impacts in regards to construction noise:

Mitigation Measure No. 22 (Noise Impacts). The Applicant shall ensure that the contractors conduct demolition and construction activities between the hours of 7:00 AM and 6:00 PM on weekdays and 9:00 AM to 12:00 PM on Saturdays, with no construction permitted on Sundays or Federal holidays.

Mitigation Measure No. 23 (Noise Impacts). The Applicant shall ensure that the contractors use construction equipment that includes working mufflers and other sound suppression equipment as a means to reduce machinery noise.

Mitigation Measure No. 24 (Noise Impacts). Signs must be installed around the perimeter of the Planning Area that display the name and phone number of the local contact person residents may call to complain about noise. Upon receipt of a complaint, the contractor must respond immediately by reducing noise to meet Code requirements. In addition, copies of all complaints and subsequent communication between the affected residents and contractors must be forwarded to the City's Community Development Department.

Mitigation Measure No. 25 (Noise Impacts). The use of any such equipment which is capable of causing ground shaking is not permitted without prior written approval from the Public Works Director, or designee. If ground shaking vibratory equipment is requested and approved, the Contractor is responsible for making any repairs or replacements to facilities damaged due to nearby soils settling or other impacts of vibrating. The Contractor must install vibratory monitoring equipment to monitor for any settlement/damage caused.

Mitigation Measure No. 26 (Noise Impacts). Construction staging must occur over 200 feet from the nearest residential use. The location of staging and queuing areas will be subject to the approval of the Community Development Department prior to the issuance of any building or grading permit.

The traffic report prepared for the original Specific Plan indicated that the following mitigation measures will be required:

- For the Heacock Street and Westbound SR-60 ramps, the Applicant must optimize the cycle length (90 second cycle length), splits, and offsets and restripe the defacto right-turn lane to a southbound right-turn lane with 50-foot storage and a southbound through lane. This mitigation will improve the LOS to C;

- The Applicant must optimize the cycle length (60 second cycle length), splits, and offsets for the intersection of Davis Street and Ironwood Avenue. This mitigation will yield a LOS B;

- The Applicant must optimize the cycle length (60 second cycle length), splits, and offsets for the intersection of Indian Street and Sunnymead Boulevard. This mitigation will yield a LOS C.

- For the Heacock Street/Ironwood Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 150 feet of storage to accommodate 95th percentile queues;

- For the Heacock Street/Ironwood Avenue intersection, the Applicant must restripe the westbound left turn lanes to provide 190 feet of storage to accommodate 95th percentile queues;

- For the Heacock Street/Ironwood Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 210 feet of storage to accommodate 95th percentile queues;

- For the Heacock Street/Hemlock Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 105 feet of storage to accommodate 95th percentile queues;

- For the Heacock Street/Hemlock Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 170 feet of storage to accommodate 95th percentile queues;

- For the Heacock Street/Hemlock Avenue intersection, the Applicant must restripe the southbound left turn lanes to provide 150 feet of storage to accommodate 95th percentile queues;

- For the Heacock Street/State Route (SR 60) eastbound ramps, the Applicant must restripe 50 feet of the two-way left turn lane north of the Heacock/ SR-60 westbound ramps intersection as a "Freeway Only" lane;

- For the Davis Street/Ironwood Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 220 feet of storage to accommodate 95th percentile queues;

- For the Davis Street/Ironwood Avenue intersection, the Applicant must restripe the southbound left turn lanes to provide 145 of feet storage to accommodate 95th percentile queues;

- For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 145 feet of storage to accommodate 95th percentile queues;

- For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the westbound left turn lanes to provide 140 feet of storage to accommodate 95th percentile queues;

- For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 165 feet of storage to accommodate 95th percentile queues;

- For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the southbound left turn lanes to provide 155 feet of storage to accommodate 95th percentile queues;

- For the Indian Street/Hemlock Avenue intersection, the Applicant must restripe the westbound left turn lanes to provide 110 feet of storage to accommodate 95th percentile queues;

- For the Indian Street/Hemlock Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 180 feet of storage to accommodate 95th percentile queues;

- For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the eastbound left turn lanes to provide 140 feet of storage to accommodate 95th percentile queues. This might require replacing the concrete island with stripping;

- For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the westbound left turn lanes to provide 115 feet of storage to accommodate 95th percentile queues;

- For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the northbound left turn lanes to provide 200 feet of storage to accommodate 95th percentile queues; and,

- For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the southbound left turn lanes to provide 125 feet of storage to accommodate 95th percentile queues.

5. MITIGATION MONITORING

The monitoring and reporting on the implementation of these measures, including the period for implementation, monitoring agency, and the monitoring action are identified in Table 1 provided on the following pages.

Table 1
Mitigation-Monitoring Program

Measure	Enforcement Agency	Monitoring Phase
Mitigation Measure No. 1 (Biological Resources Impacts). The proposed project must be consistent with the Western Riverside MSHCP. Payment of the appropriate development mitigation fees will mitigate any impacts to these species.	Community Development Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of Building Permits.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 2 (Biological Resources Impacts). Prior to any land disturbance, a focused pre-construction burrowing owl survey shall be conducted prior to construction in accordance with the Burrowing Owl Survey instructions of the Western Riverside County MSHCP. This survey is to be conducted within 30 days prior to ground disturbance. After the pre-construction burrowing owl survey has been completed, a survey report will be prepared in accordance with the MSHCP 30-day Pre-construction Burrowing Owl Survey Report Format.	Community Development Department. ● *(The Applicant is responsible for implementation)*	*Prior to the start of ground disturbing activities.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 3 (Biological Resources Impacts). Future developers must consult with the California Department of Fish and Wildlife, the U.S. Army Corps of Engineers, and the Santa Ana Regional Water Quality Control Board to determine the need for permits that must be obtained prior to initiation of construction of a proposed project.	Community Development Department and the California Department of Fish and Wildlife, the U.S. Army Corps of Engineers, and the Santa Ana Regional Water Quality Control Board. ● *(The Applicant is responsible for implementation)*	*Prior to the start of ground disturbing activities.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 4 (Biological Resources Impacts). Prior to the start of construction activity, developers must prepare a Multiple Species Habitat Conservation Program (MSHCP) Determination of Biologically Equivalent or Superior Preservation (DBESP) should a future project affect Western Riverside MSHCP riverine resources.	Community Development Department and the Western Riverside County Regional Conservation Authority. ● *(The Applicant is responsible for implementation)*	*Prior to the start of ground disturbing activities.* ● Mitigation ends at the completion of the construction phase
Mitigation Measure No. 5 (Biological Resources Impacts). Vegetation removal shall be conducted outside of the nesting season for migratory birds to avoid direct impacts. The migratory bird nesting season is between February 1 and September 15.	Community Development Department. ● *(The Applicant is responsible for implementation)*	*Prior to the start of ground disturbing activities.* ● Mitigation ends at the completion of the construction phase.

Table 1
Mitigation-Monitoring Program (continued)

Measure	Enforcement Agency	Monitoring Phase
Mitigation Measure No. 6 (Biological Resources Impacts). If active nests are found during nesting bird surveys, they shall be flagged and a 200-foot buffer shall be fenced around the nests.	Community Development Department. ● *(The Applicant is responsible for implementation)*	*Prior to the start of ground disturbing activities.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 7 (Biological Resources Impacts). If vegetation removal will occur during the migratory bird nesting season, between February 1 and September 15, pre-construction nesting bird surveys must be performed within three days prior to vegetation removal.	Community Development Department. ● *(The Applicant is responsible for implementation)*	*Three days prior to the start of vegetation removal.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 8 (Cultural Resources Impacts). 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 must 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, must develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB-52 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 AB-52 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.	Community Development Department ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a grading permit.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 9 (Cultural Resources Impacts). Prior to the issuance of a grading permit, the developer shall secure agreements with the Pechanga Band of Luiseño Indians, the Soboba Band of Luiseño Indians, and the Morongo Band of Mission 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	Community Development Department, Pechanga Band of Luiseño Indians, Soboba Band of Luiseño Indians, and Morongo Band of Mission Indians. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a grading permit.* ● Mitigation ends at the completion of the construction phase.

Table 1
Mitigation-Monitoring Program (continued)

Measure	Enforcement Agency	Monitoring Phase
Mitigation Measure No. 10 (Cultural Resources Impacts). 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: ● 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 the initial mitigation. 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 the first mitigation identified in Section 3.5.2.B. ● 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."	Community Development Department. ● *(The Applicant is responsible for implementation)*	*During project construction.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 11 (Cultural Resources Impacts). 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 previously identified mitigation before any further work commences in the affected area.	Community Development Department. ● *(The Applicant is responsible for implementation)*	*During project construction.* ● Mitigation ends at the completion of the construction phase.

Table 1
Mitigation-Monitoring Program (continued)

Measure	Enforcement Agency	Monitoring Phase
Mitigation Measure No. 12 (Cultural Resources Impacts). 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 five-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).	Community Development Department. ● *(The Applicant is responsible for implementation)*	*During project construction.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 13 (Cultural Resources Impacts). If previously unidentified paleontological resources are unearthed during construction, work shall cease within 50 feet of the find and the project Applicant must retain a qualified paleontologist, approved by the City, to assess the significance of the find. If a find is determined to be significant, the Lead Agency and the paleontologist will determine appropriate avoidance measures or other appropriate mitigation. All significant fossil materials recovered will be, as necessary and at the discretion of the qualified paleontologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards.	Community Development Department. ● *(The Applicant is responsible for implementation)*	*During project construction.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 14 (Greenhouse Gases Emissions Impacts). The Applicant must install ENERGY STAR appliances wherever appliances are installed.	Community Development Department and the Building Official. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Mitigation Measure No. 15 (Greenhouse Gases Emissions Impacts). The Applicant shall install ENERGY STAR rated light emitting diodes (LEDs) for traffic, street, and outdoor lighting.	Community Development Department and the Building Official. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Mitigation Measure No. 16 (Greenhouse Gases Emissions Impacts). The Applicant must install ENERGY STAR rated Compact Florescent Lights (CFLs) in all indoor areas that require continuous lighting. CFLs should not be used in rooms or areas that are subject to frequent on/off cycling, as the lifespan of CFLs diminishes when there are frequently turned off.	Community Development Department and the Building Official. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.

Table 1
Mitigation-Monitoring Program (continued)

Measure	Enforcement Agency	Monitoring Phase
Mitigation Measure No. 17 (Greenhouse Gases Emissions Impacts). The Applicant must install light colored "cool" roofs.	Community Development Department and the Building Official. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Mitigation Measure No. 18 (Greenhouse Gases Emissions Impacts). The Applicant must install "cool" pavement (lighter colored) throughout the parking areas.	Community Development Department and the Building Official. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Mitigation Measure No. 19 (Greenhouse Gases Emissions Impacts). All landscape planted on-site must be watered by water dispensed through drip irrigation.	Community Development Department and the Building Official. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Mitigation Measure No. 20 (Greenhouse Gases Emissions Impacts). The building contractors shall install bicycle racks consistent with the City's Municipal Code adjacent to each building.	Community Development Department and the Building Official. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Mitigation Measure No. 21 (Greenhouse Gases Emissions Impacts). The building contractors shall install electric vehicle charging stations in the parking areas. Preferential parking spaces for electric vehicles must be provided.	Community Development Department and the Building Official. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Mitigation Measure No. 22 (Noise Impacts). The Applicant shall ensure that the contractors conduct demolition and construction activities between the hours of 7:00 AM and 6:00 PM on weekdays and 9:00 AM to 12:00 PM on Saturdays, with no construction permitted on Sundays or Federal holidays.	Community Development Department and Code Enforcement. ● *(The Applicant is responsible for implementation)*	*During project construction.* ● Mitigation ends at the completion of the construction phase.

Table 1
Mitigation-Monitoring Program (continued)

Measure	Enforcement Agency	Monitoring Phase
Mitigation Measure No. 23 (Noise Impacts). The Applicant shall ensure that the contractors use construction equipment that includes working mufflers and other sound suppression equipment as a means to reduce machinery noise.	Community Development Department and Code Enforcement. ● *(The Applicant is responsible for implementation)*	*During project construction.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 24 (Noise Impacts). Signs must be installed around the perimeter of the Planning Area that display the name and phone number of the local contact person residents may call to complain about noise. Upon receipt of a complaint, the contractor must respond immediately by reducing noise to meet Code requirements. In addition, copies of all complaints and subsequent communication between the affected residents and contractors must be forwarded to the City's Community Development Department.	Community Development Department. ● *(The Applicant is responsible for implementation)*	*During project construction.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 25 (Noise Impacts). The use of any such equipment which is capable of causing ground shaking is not permitted without prior written approval from the Public Works Director, or designee. If ground shaking vibratory equipment is requested and approved, the Contractor is responsible for making any repairs or replacements to facilities damaged due to nearby soils settling or other impacts of vibrating. The Contractor must install vibratory monitoring equipment to monitor for any settlement/damage caused.	Community Development Department. ● *(The Applicant is responsible for implementation)*	*During project construction.* ● Mitigation ends at the completion of the construction phase.
Mitigation Measure No. 26 (Noise Impacts). Construction staging must occur over 200 feet from the nearest residential use. The location of staging and queuing areas will be subject to the approval of the Community Development Department prior to the issuance of any building or grading permit.	Community Development Department and Code Enforcement. ● *(The Applicant is responsible for implementation)*	*During project construction.* ● Mitigation ends at the completion of the construction phase.
Previous traffic mitigation still applicable. For the Heacock Street and Westbound SR-60 ramps, the Applicant must optimize the cycle length (90 second cycle length), splits, and offsets and restripe the defacto right-turn lane to a southbound right-turn lane with 50-foot storage and a southbound through lane. This mitigation will improve the LOS to C.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. The Applicant must optimize the cycle length (60 second cycle length), splits, and offsets for the intersection of Davis Street and Ironwood Avenue. This mitigation will yield a LOS B.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.

Table 1
Mitigation-Monitoring Program (continued)

Measure	Enforcement Agency	Monitoring Phase
Previous traffic mitigation still applicable. The Applicant must optimize the cycle length (60 second cycle length), splits, and offsets for the intersection of Indian Street and Sunnymead Boulevard. This mitigation will yield a LOS C.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Heacock Street/Ironwood Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 150 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Heacock Street/Ironwood Avenue intersection, the Applicant must restripe the westbound left turn lanes to provide 190 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Heacock Street/Ironwood Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 210 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Heacock Street/Hemlock Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 105 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Heacock Street/Hemlock Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 170 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Heacock Street/Hemlock Avenue intersection, the Applicant must restripe the southbound left turn lanes to provide 150 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.

Table 1
Mitigation-Monitoring Program (continued)

Measure	Enforcement Agency	Monitoring Phase
Previous traffic mitigation still applicable. For the Heacock Street/State Route (SR 60) eastbound ramps, the Applicant must restripe 50 feet of the two-way left turn lane north of the Heacock/ SR-60 westbound ramps intersection as a "Freeway Only" lane.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Davis Street/Ironwood Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 220 feet of storage to accommodate 95th percentile queues**.**	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Davis Street/Ironwood Avenue intersection, the Applicant must restripe the southbound left turn lanes to provide 145 of feet storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the eastbound left turn lanes to provide 145 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the westbound left turn lanes to provide 140 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 165 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Indian Street/Ironwood Avenue intersection, the Applicant must restripe the southbound left turn lanes to provide 155 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.

Table 1
Mitigation-Monitoring Program (continued)

Measure	Enforcement Agency	Monitoring Phase
Previous traffic mitigation still applicable. For the Indian Street/Hemlock Avenue intersection, the Applicant must restripe the westbound left turn lanes to provide 110 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Indian Street/Hemlock Avenue intersection, the Applicant must restripe the northbound left turn lanes to provide 180 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the eastbound left turn lanes to provide 140 feet of storage to accommodate 95th percentile queues. This might require replacing the concrete island with stripping.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the westbound left turn lanes to provide 115 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the northbound left turn lanes to provide 200 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.
Previous traffic mitigation still applicable. For the Indian Street/Sunnymead Boulevard intersection, the Applicant must restripe the southbound left turn lanes to provide 125 feet of storage to accommodate 95th percentile queues.	Public Works Department. ● *(The Applicant is responsible for implementation)*	*Prior to the issuance of a Certificate of Occupancy.* ● Mitigation to continue over the project's operational lifetime.

RESOLUTION NUMBER 2021-02

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL APPROVE GENERAL PLAN AMENDMENT PEN20-0139 TO AMEND THE GENERAL PLAN LAND USE MAP, CHANGING THE LAND USE DESIGNATION FROM COMMERCIAL TO BUSINESS PARK FOR THE PROPERTY LOCATED ON THE SOUTHEAST CORNER OF HEACOCK STREET AND IRONWOOD AVENUE (481-020-013, 029, 030, 034, 035 & 038) AND THE NECESSARY AND CORRESPONDING AMENDMENTS TO THE CITY'S ZONING ATLAS

WHEREAS, the City of Moreno Valley ("City") is a general law city and a municipal corporation of the State of California; and

WHEREAS, LCG 10MV LLC., ("Developer") has filed an application for the approval of General Plan Amendment PEN20-0139 ("Application") to amend the Moreno Valley General Plan from Commercial to Business Park for the project located on the southeast corner of Heacock Street and Ironwood Avenue (APN 481-020-013, 029, 030, 034, 035 & 038) ("Site"), which shall also require any necessary and corresponding amendment to the City's Zoning Atlas to reflect the proposed changes in the zoning classification and/or redistricting associated with the General Plan Amendment; 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 January 14, 2021, 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 January 14, 2021, 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, on January 14, 2021, in accordance with the provisions of the California Environmental Quality Act (CEQA[1]) and CEQA Guidelines,[2] the Planning Commission considered and recommended that the City Council approve Resolution 2021-01 recommending that the City Council adopt a Mitigated Negative Declaration and Mitigation Monitoring Plan for the Moreno Valley Business Park Project located at the southeast corner of Heacock Street and Ironwood Avenue (APN'S 481-020-013, 029, 030, 034, 035, 038).

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

[1] Public Resources Code §§ 21000-21177
[2] 14 California Code of Regulations §§15000-15387

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 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 Commercial to Business Park and all relevant provisions contained therein as shown on Exhibit A;
(d) Application for the approval of a General Plan Amendment PEN20-0139 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 General Plan amendment is consistent with the existing goals, objectives, policies and programs of the General Plan; and
(b) The proposed 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 PEN20-0139 as depicted in the exhibit attached hereto as Exhibit A, and any necessary and corresponding amendment to the City's Zoning Atlas to reflect the proposed changes in the zoning classification and/or redistricting associated with the General Plan Amendment.

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 _____, 2021.

CITY OF MORENO VALLEY
PLANNING COMMISSION

_____
Patricia Korzec, Chairperson

ATTEST:

_____
Patty Nevins,
Planning Official

APPROVED AS TO FORM:

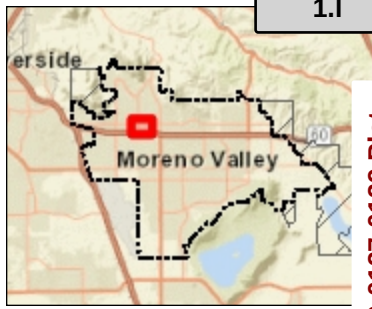
_____
Steven B. Quintanilla,
Interim City Attorney

Exhibits:
Exhibit A General Plan Land Use Designation

Exhibit A

General Plan Amendment Land Use Designation Map

PEN20-0139
General Plan Amendment



Legend

- Parcels
- C to BP

Image Source: Nearmap

Notes:

General Plan Amendment (GPA) changing the land use designation from Commercial (C) to Business Park (BP).

1,232.1 0 616.05 1,232.1 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere

Print Date: 12/15/2020

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.

RESOLUTION NUMBER 2021-03

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL APPROVE SPECIFIC PLAN AMENDMENT PEN20-0137 TO AMEND THE LAND USE DESIGNATION OF THE 9.96-ACRE PROJECT SITE WITHIN THE MORENO VALLEY FESTIVAL SPECIFIC PLAN 205 FROM SP205 RETAIL COMMERCIAL TO SP205 MIXED USE FOR THE PROPERTY LOCATED ON THE SOUTHEAST CORNER OF HEACOCK STREET AND IRONWOOD AVENUE (481-020-013, 029, 030, 034, 035 & 038) AND THE NECESSARY AND CORRESPONDING AMENDMENTS TO THE CITY'S ZONING ATLAS

WHEREAS, the City of Moreno Valley ("City") is a general law city and a municipal corporation of the State of California; and

WHEREAS, LCG 10MV LLC., ("Developer") has filed an application for the approval of Specific Plan Amendment PEN20-0138 ("Application") to amend the Moreno Valley Festival Specific Plan 205 from SP205 Retail Commercial to SP205 Mixed Use for the project located on the southeast corner of Heacock Street and Ironwood Avenue (APN 481-020-013, 029, 030, 034, 035 & 038) ("Site"), which shall also require any necessary and corresponding amendment to the City's Zoning Atlas to reflect the proposed changes in the zoning classification and/or redistricting associated with the Specific Plan Amendment; 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 January 14, 2021, 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 January 14, 2021, 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, on January 14, 2021, in accordance with the provisions of the California Environmental Quality Act (CEQA[1]) and CEQA Guidelines,[2] the Planning Commission considered and recommended that the City Council approve Resolution 2021-01.

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

Section 1. Recitals and Exhibits

[1] Public Resources Code §§ 21000-21177
[2] 14 California Code of Regulations §§15000-15387

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 Specific 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 Specific Plan Amendment to amend the Land Use Designation of the 9.96-acre Project site within the Moreno Valley Festival Specific Plan 205 from SP205 Retail Commercial to SP205 Mixed Use and all other relevant provisions contained therein as shown on Exhibit A;
(d) Application for the approval of a Specific Plan Amendment PEN20-0138 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 Specific Plan Amendment is consistent with the existing goals, objectives, policies and programs of the General Plan;
(b) The proposed Specific Plan Amendment will not adversely affect the public health, safety or general welfare; and
(c) The proposed Specific Plan Amendment 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 Specific Plan Amendment PEN20-0138 as depicted in the exhibit attached hereto as Exhibit A, and any necessary and corresponding amendment to the City's Zoning Atlas to reflect the proposed changes in the zoning classification and/or redistricting associated with the Specific Plan Amendment.

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 _____, 2021.

CITY OF MORENO VALLEY
PLANNING COMMISSION

_____
Patricia Korzec, Chairperson

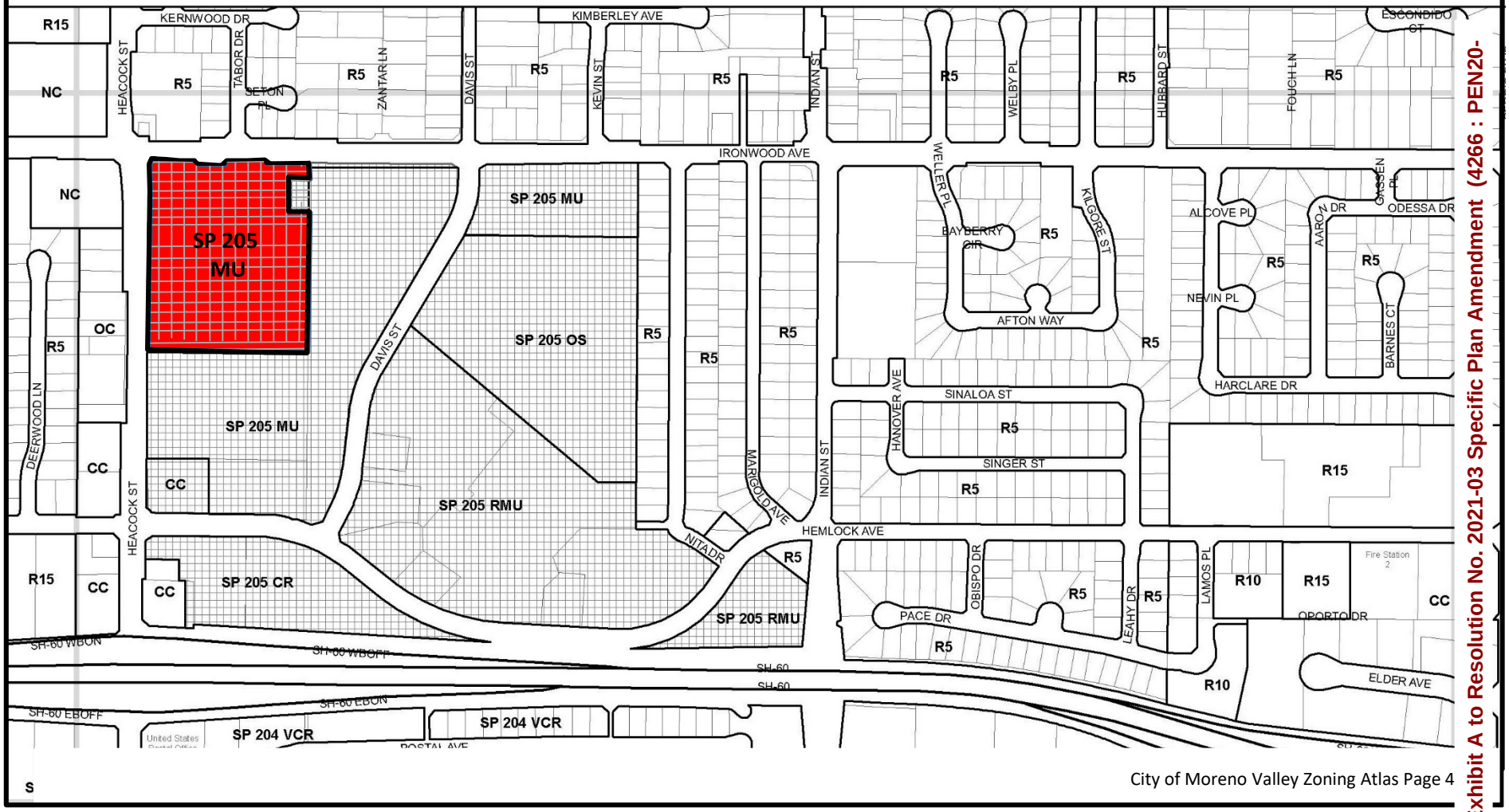
ATTEST:

_____
Patty Nevins,
Planning Official

APPROVED AS TO FORM:

_____
Steven B. Quintanilla,
Interim City Attorney

Exhibits:
Exhibit A The Moreno Valley Festival Amendment to Specific Plan 205



City of Moreno Valley Zoning Atlas Page 4

The Festival Specific Plan (SP 205) – Specific Plan Amendment PEN20-0138

SP 205 Mix of Uses (MU)

Moreno Valley Festival Specific Plan (SP 205)

RESOLUTION NUMBER 2021-04

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL APPROVE PLOT PLAN PEN20-0137 FOR THE MORENO VALLEY BUSINESS PARK LOCATED ON THE SOUTHEAST CORNER OF HEACOCK STREET AND IRONWOOD AVENUE (481-020-013, 029, 030, 034, 035 & 038)

WHEREAS, the City of Moreno Valley ("City") is a general law city and a municipal corporation of the State of California; and

WHEREAS, LCG 10MV LLC., ("Developer") has filed an application for the approval of Plot Plan PEN20-0137 ("Application") for an approximately 220,390 square foot light industrial building with associated public improvements ("Project") located at the southeast corner of Heacock Street and Ironwood Avenue (APN'S 481-020-013, 029, 030, 034, 035, 038) ("Site"); and

WHEREAS, Section 9.02.070 (Plot Plan) of the Moreno Valley Municipal Code acknowledges that the purpose of plot plans is to provide a mechanism by which all new construction of industrial, commercial or multiple-family residential can be reviewed when not subject to other discretionary review processes which have review authority over project design; and

WHEREAS, the Application has been evaluated in accordance with Section 9.02.070 (Plot Plan) of the Municipal Code with consideration given to the City's General Plan, Specific Plan 205, Zoning Ordinance, and other applicable laws and regulations; and

WHEREAS, Section 9.02.070 of the Municipal Code imposes conditions of approval upon projects for which a Plot Plan 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 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, Staff has presented for the Planning Commission's consideration Conditions of Approval to be imposed upon Plot Plan PEN20-0137, 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 January 14, 2021, 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 January 14, 2021, 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 Section 9.02.070 (Plot Plan) of the Municipal Code, at the public hearing the Planning Commission considered Conditions of Approval to be imposed upon Plot Plan PEN20-0137, which conditions were prepared by Planning Division staff who deemed said conditions to be necessary to protect the 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 9.02.070 of the Municipal Code and set forth herein could be made with respect to the proposed Project as conditioned by Conditions of Approval; and

WHEREAS, on January 14, 2021, in accordance with the provisions of the California Environmental Quality Act (CEQA[1]) and CEQA Guidelines,[2] the Planning Commission considered and recommended that the City Council approve Resolution 2021-01.

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 Plot Plan, including, but not limited to, the following:

[1] Public Resources Code §§ 21000-21177
[2] 14 California Code of Regulations §§15000-15387

(a) Moreno Valley General Plan and all other relevant provisions contained therein;
(b) Title 9 (Planning and Zoning) of the Moreno Valley Municipal Code and all other relevant provisions referenced therein;
(c) Application for the approval of Plot Plan PEN20-0137 and all documents, records and references contained therein;
(d) Conditions of Approval for Plot Plan PEN20-0137, 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 and/or comments from all persons that was 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 Plot Plan PEN20-0137

(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;
(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 Plot Plan PEN20-0137 subject to the Conditions of Approval for Plot Plan PEN20-0137 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 _____, 2021.

CITY OF MORENO VALLEY
PLANNING COMMISSION

_____
Patricia Korzec, Chairperson

ATTEST:

_____
Patty Nevins, Planning Official

APPROVED AS TO FORM:

_____
Steven B. Quintanilla, City Attorney

Exhibits:
Exhibit A: Conditions of Approval PEN20-0137

Exhibit A

CONDITIONS OF APPROVAL

CITY OF MORENO VALLEY
CONDITIONS OF APPROVAL
Plot Plan (PEN20-0137)

EFFECTIVE DATE:
EXPIRATION DATE:

COMMUNITY DEVELOPMENT DEPARTMENT

Planning 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. This approval shall expire three years after the approval date of this project unless used or extended as provided for by the City of Moreno Valley Municipal Code; otherwise it shall become null and void and of no effect whatsoever. Use means the beginning of substantial construction contemplated by this approval within the three-year period, which is thereafter pursued to completion, or the beginning of substantial utilization contemplated by this approval. (MC 9.02.230)

5. All landscaped areas shall be maintained in a healthy and thriving condition, free from weeds, trash and debris. (MC 9.02.030)

6. This project is located within Specific Plan 205. The provisions of the specific plan, the design manual, their subsequent amendments, and the Conditions of Approval shall prevail unless modified herein. (MC 9.13)

7. The site shall be developed in accordance with the approved plans on file in the Community Development Department - Planning Division, the Municipal Code regulations, General Plan, and the conditions contained herein. Prior to any use of the project site or business activity being commenced thereon, all Conditions of Approval shall be completed to the satisfaction of the Planning Official. (MC 9.14.020)

8. Any signs indicated on the submitted plans are not included with this approval. Any signs, whether permanent (e.g. wall, monument) or temporary (e.g. banner, flag), require separate application and approval by the Planning Division. No signs are permitted in the public right of way. (MC 9.12)

9. All site plans, grading plans, landscape and irrigation plans, fence/wall plans, lighting plans and street improvement plans shall be coordinated for consistency with this approval.

Special Conditions

10. The site has been approved for an approximately 222,000 square foot light industrial building with associated on-site and off-site improvements. A change or modification shall require separate approval.

Prior to Building Permit

11. Prior to issuance of any building permit, all Mitigation Measures and Conditions of Approval shall be printed on the building plans.

12. 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.

13. Prior to the issuance of building permits, if proposed, covered trash enclosures shall be included in the Planning review of the Fence and Wall plan included in the building plan submittal. The trash enclosure(s), including the roof materials, shall be compatible with the architecture, color and materials of the building(s) design. Trash enclosure areas shall include landscaping on three sides unless it is located in the truck court. Approved design plans shall be included in a Building submittal (Fence and Wall or building design plans). (GP Objective 43.6, DG)

14. Prior to issuance of any building permits, final landscaping and irrigation plans shall be submitted for review and approved by the Planning Division. After the third plan check review for landscape plans, an additional plan check fee shall apply. The plans shall be prepared in accordance with the City's Landscape Requirements and shall include:

a. Finger and end planters with required step outs and curbing shall be provided every 12 parking stalls as well as at the terminus of each aisle.

b. Drought tolerant landscape shall be used. No sod shall be installed.

c. Street trees shall be provided every 40 feet on center in the right of way.

d. On-site trees shall be planted at an equivalent of one (1) tree per thirty (30) linear feet of the perimeter of a parking lot and per thirty linear feet of a building dimension for the portions of the building visible from a parking lot or right of way. Trees may be massed for pleasing aesthetic effects.

e. Enhanced landscaping shall be provided at all driveway entries, street corner locations and adjacent to the building. The review of all utility boxes, transformers etc. shall be coordinated to provide adequate screening from public view.

f. All site perimeter and parking lot landscape and irrigation shall be installed prior to the release of certificate of any occupancy permits for the site.

15. 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)

16. 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)

17. Prior to or at building plan check submittal, the elevation plans shall include decorative lighting sconces on all sides of the buildings of the complex facing a parking lot, courtyard or plaza, or public right of way or open space to provide up-lighting and shadowing on the structures. Include drawings of the sconce details for each building within the elevation plans, approved by the Planning Division prior to building permit issuance.

18. Included with the Building Plan submittal, two copies of a detailed, on-site, computer generated, point-by-point comparison lighting plan, including exterior building, parking lot, and landscaping lighting, shall be submitted for review and approval prior to the issuance of a building permit. The lighting plan shall be generated on the plot plan and shall be integrated with the final landscape plan. The plan shall indicate the manufacturer's specifications for light fixtures used, shall include style, illumination, location, height and method of shielding per the City's Municipal Code requirements. (MC 9.08.100, 9.16.280)

19. Prior to issuance of building permits, screening details shall be addressed on the building plans for roof top equipment submitted for Planning Division review and approval through the building plan check process. All equipment shall be

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

20. Prior to issuance of any grading permit, all Mitigation Measures and Conditions of Approval shall be printed on the grading plans.

21. 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)

22. Prior to issuance of grading permits, the developer shall pay the applicable Stephens' Kangaroo Rat (SKR) Habitat Conservation Plan mitigation fee. (Ord)

23. 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).

24. 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.

25. 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.

26. Prior to issuance of grading permits, the developer shall submit wall/fence plans to the Planning Division for review and approval in accordance with the Municipal Code and Specific Plan fence and wall requirements.

27. 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.

Prior to Building Final or Occupancy

28. 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).

29. Prior to building final, Planning approved/stamped landscape plans shall be provided to the Community Development Department – Planning Division on a CD disk.

30. 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

31. The proposed non-residential project shall comply with the latest Federal Law, Americans with Disabilities Act, and State Law, California Code of Regulations, Title 24, Chapter 11B for accessibility standards for the disabled including access to the site, exits, bathrooms, work spaces, etc.

32. 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.

33. Contact the Building Safety Division for permit application submittal requirements.

34. 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.

35. Building plans submitted shall be signed and sealed by a California licensed design professional as required by the State Business and Professions Code.

36. 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.

37. 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.

38. 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.

39. The proposed non-residential project shall comply with California Green Building Standards Code, Section 5.106.5.3, mandatory requirements for Electric Vehicle Charging Station (EVCS).

40. 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 California Plumbing Code, Table 422.1. The occupant load and occupancy classification shall be determined in accordance with the California Building Code.

41. 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)

42. All new buildings 10,000 square feet and over, shall include building commissioning in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (OPR). All requirements in The California Green Building Standards Code, sections 5.410.2 - 5.410.2.6 must be met.

ECONOMIC DEVELOPMENT DEPARTMENT (EDD)

43. New Moreno Valley businesses may work with the Economic Development Department to coordinate job recruitment fairs.

44. New Moreno Valley businesses may adopt a "First Source" approach to employee recruitment that gives notice of job openings to Moreno Valley residents for one week in advance of the public recruitment.

45. New Moreno Valley businesses are encouraged to hire local residents.

46. New Moreno Valley businesses are encouraged to provide a job fair flyer and/or web announcement to the City in advance of job recruitments, so that the City can assist in publicizing these events.

47. New Moreno Valley businesses may utilize the workforce recruitment services provided by the Moreno Valley Employment Resource Center ("ERC").

    The ERC offers no cost assistance to businesses recruiting and training potential employees. Complimentary services include:

    • Job Announcements
    • Applicant testing / pre-screening
    • Interviewing
    • Job Fair support
    • Training space

FIRE DEPARTMENT

Fire Prevention Bureau

48. All Fire Department access roads or driveways shall not exceed 12 percent grade. (CFC 503.2.7 and MVMC 8.36.060[G])

49. 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)

50. 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)

51. 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)

52. 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)

53. 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)

54. 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)

55. Prior to issuance of Certificate of Occupancy or Building Final, all commercial buildings shall display street numbers in a prominent location on the street side and rear access locations. The numerals shall be a minimum of twelve inches in height. (CFC 505.1, MVMC 8.36.060[I])

56. 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 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.

57. 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.

58. Prior to issuance of Certificate of Occupancy or Building Final, the applicant/developer shall install a fire alarm system monitored by an approved Underwriters Laboratory listed central station based on a requirement for monitoring the sprinkler system, occupancy or use. Fire alarm panel shall be accessible from exterior of building in an approved location. Plans shall be submitted to the Fire Prevention Bureau for approval prior to installation. (CFC Chapter 9 and MVMC 8.36.100)

59. The Fire Code Official is authorized to enforce the fire safety during construction requirements of Chapter 33. (CFC Chapter 33 & CBC Chapter 33)

60. 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 the thirteen (13) feet six (6) inches. (CFC 503.2.1 and MVMC 8.36.060[E])

61. 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])

62. 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)

63. Prior to issuance of a Certificate of Occupancy or Building Final, a "Knox Box Rapid Entry System" shall be provided. The Knox-Box shall be installed in an accessible location approved by the Fire Code Official. All exterior security emergency access gates shall be electronically operated and be provided with Knox key switches for access by emergency personnel. (CFC 506.1)

64. 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. A fire hydrant shall be located within 50 feet of the fire department connection for buildings protected with a fire sprinkler system. The size and number of outlets required for the approved fire hydrants are (6" x 4" x 2 ½" x 2 ½") (CFC 507.5.1, 507.5.7, Appendix C, NFPA 24-7.2.3, MVMC 912.2.1)

65. Fire Department access driveways over 150 feet in length shall have a turn-around as determined by the Fire Prevention Bureau capable of accommodating fire apparatus. (CFC 503 and MVMC 8.36.060, CFC 501.4)

66. 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)

67. 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)

68. 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 block walls), fuel modification zones, etc. (CFC Chapter 49)

69. Plans for private water mains supplying fire sprinkler systems and/or private fire hydrants shall be submitted to the Fire Prevention Bureau for approval. (CFC 105 and CFC 3312.1)

70. The Fire Prevention Bureau is required to set a minimum fire flow for the remodel or construction of all commercial buildings per CFC Appendix B and Table B105.1. The applicant/developer shall provide documentation to show there exists a water system capable of delivering said waterflow for 2 hour(s) duration at 20-PSI residual operating pressure. The required fire flow may be adjusted during the approval process to reflect changes in design, construction type, or automatic fire protection measures as approved by the Fire Prevention Bureau. Specific requirements for the project will be determined at time of submittal. (CFC 507.3, Appendix B)

71. Dead-end streets and/or fire apparatus access roads in excess of 150 feet in length shall be provided with an approved turnaround for fire apparatus.

72. Prior to construction, all traffic calming designs/devices must be approved by the Fire Marshal and City Engineer.

73. Prior to building construction, dead end roadways and streets which have not been completed shall have a turnaround capable of accommodating fire apparatus. (CFC 503.2.5)

74. Prior to issuance of Certificate of Occupancy or Building Final, the applicant/developer shall be responsible for obtaining underground and/or above ground tank permits for the storage of combustible liquids, flammable liquids, or any other hazardous materials from both the County of Riverside Community Health Agency Department of Environmental Health and the Fire Prevention Bureau. (CFC 105)

75. 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.

PUBLIC WORKS DEPARTMENT

Land Development

76. 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.

77. 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]

78. 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.

79. The developer shall monitor, supervise and control all construction related activities, so as to prevent these activities from causing a public nuisance, including but not limited to, insuring strict adherence to the following:
(a) Removal of dirt, debris, or other construction material deposited on any public street no later than the end of each working day.
(b) Observance of working hours as stipulated on permits issued by the Land Development Division.
(c) The construction site shall accommodate the parking of all motor vehicles used by persons working at or providing deliveries to the site.
(d) All dust control measures per South Coast Air Quality Management District (SCAQMD) requirements during the grading operations.
Violation of any condition, restriction or prohibition set forth in these conditions shall subject the owner, applicant, developer or contractor(s) to remedy as noted in City Municipal Code 8.14.090. In addition, the City Engineer or Building Official may suspend all construction related activities for violation of any condition, restriction or prohibition set forth in these conditions until such time as it has been determined that all operations and activities are in conformance with these conditions.

80. 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.

81. 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]

82. 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)]

83. 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]

84. Public drainage easements, when required, shall be a minimum of 25 feet wide and shall be shown on the map and plan, and noted as follows: "Drainage Easement – no structures, obstructions, or encroachments by land fills are allowed." In addition, the grade within the easement area shall not exceed a 3:1 (H:V) slope, unless approved by the City Engineer.

85. 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.

86. The proposed private storm drain system shall connect to the existing RCFC&CWD. A storm drain manhole shall be placed at the right-of-way line to mark the beginning of the publicly maintained portion of this storm drain.

87. 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. Rough grading w/ erosion control plan (prior to grading permit issuance);

b. Precise grading w/ erosion control plan (prior to Building permit issuance);

c. Public Improvement Plan (e.g., STREET/STORM DRAIN w/ STRIPING, RCFC STORM DRAIN, SEWER/WATER, etc.) (prior to Encroachment Permit Issuance);

d. Final drainage study (prior to grading plan approval);

e. Final WQMP (prior to grading plan approval);

f. Legal Documents (e.g., EASEMENT(s),DEDICATION(s), LOT LINE ADJUSTMENT, VACATION, etc.) (prior to BUILDING PERMIT ISSUANCE);

g. As-Built revision for all plans (prior to Occupancy release);

Prior to Grading Plan Approval

88. Resolution of all drainage issues shall be as approved by the City Engineer.

89. 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.

90. Emergency overflow areas shall be shown at all applicable drainage improvement locations in the event that the drainage improvement fails or exceeds full capacity. This may include, but not be limited to, the southeast corner of the property.

91. A final project-specific Water Quality Management Plan (WQMP) shall be submitted for review and approved by the City Engineer, which:

a. Addresses Site Design Best Management Practices (BMPs) such as minimizing impervious areas, maximizing permeability, minimizes directly connected impervious areas to the City's street and storm drain systems, and conserves natural areas;

b. Incorporates Source Control BMPs and provides a detailed description of their implementation;

c. Describes the long-term operation and maintenance requirements for BMPs requiring maintenance; and

d. Describes the mechanism for funding the long-term operation and maintenance of the BMPs.

A copy of the final WQMP template can be obtained on the City's Website or by contacting the Land Development Division. A digital (pdf) copy of the approved final project-specific Water Quality Management Plan (WQMP) shall be submitted to the Land Development Division.

92. The developer shall ensure compliance with the City Grading ordinance, these Conditions of Approval and the following criteria:

a. The project street and lot grading shall be designed in a manner that perpetuates the existing natural drainage patterns with respect to tributary drainage area and outlet points. Unless otherwise approved by the City Engineer, lot lines shall be located at the top of slopes.

b. Any grading that creates cut or fill slopes adjacent to the street shall provide erosion control, sight distance control, and slope easements as approved by the City Engineer.

c. All improvement plans are substantially complete and appropriate clearance letters are provided to the City.

d. A soils/geotechnical report (addressing the soil's stability and geological conditions of the site) shall be submitted to the Land Development Division for review. A digital (pdf) copy of the soils/geotechnical report shall be submitted to the Land Development Division.

93. 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.

94. The developer shall select Low Impact Development (LID) Best Management Practices (BMPs) designed per the latest version of the Water Quality Management Plan (WQMP) - a guidance document for the Santa Ana region of Riverside County.

95. The developer shall submit recorded slope easements from adjacent property owners in all areas where grading resulting in slopes is proposed to take place outside of the project boundaries. For all other offsite grading, written permission from adjacent property owners shall be submitted.

96. The developer shall pay all remaining plan check fees.

97. 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.

98. 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.

99. Any proposed trash enclosure shall include a solid cover (roof) and sufficient size for dual bin (one for trash and one for recyclables). The architecture shall be approved by the Planning Division and any structural approvals shall be made by the Building & Safety Division.

100. 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.

101. Prior to precise grading plan approval, the grading plans shall clearly show that the parking lot conforms to City standards. The parking lot shall be 5% maximum, 1% minimum, 2% maximum at or near any disabled parking stall and travel way. Ramps, curb openings and travel paths shall all conform to current ADA standards as outlined in Department of Justice's "ADA Standards for Accessible Design", Excerpt from 28 CFR Part 36. (www.usdoj.gov) and as approved by the City's Building and Safety Division.

Prior to Grading Permit

102. 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)]

103. 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.

104. The developer shall pay current DIF fees adopted by the City Council. [Ord. 695 § 1.1 (part), 2005] [MC 3.38.030, 040, 050]

105. A digital (pdf) copy of all approved grading plans shall be submitted to the Land Development Division.

106. 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)]

107. 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]

108. The developer shall pay all applicable inspection fees.

109. The developer shall pay current Transportation Uniform Mitigation Fee (TUMF), as adopted by the City Council. [Ord. 835 § 2.1, 2012] [MC 3.44.060]

Prior to Improvement Plan Approval

110. The developer is required to bring any existing access ramps adjacent to and fronting the project to current ADA (Americans with Disabilities Act) requirements. However, when work is required in an intersection that involves or impacts existing access ramps, all access ramps in that intersection shall be retrofitted to comply with current ADA requirements, unless otherwise approved by the City Engineer.

111. The developer shall submit clearances from all applicable agencies, and pay all applicable plan check fees.

112. The street improvement plans shall comply with current City policies, plans and applicable City standards (i.e. MVSI-160 series, etc.) throughout this project.

113. The design plan and profile shall be based upon a centerline, extending beyond the project boundaries a minimum distance of 300 feet at a grade and alignment approved by the City Engineer.

114. The hydrology study shall be designed to accept and properly convey all off-site drainage flowing onto or through the site. In the event that the City Engineer permits the use of streets for drainage purposes, the provisions of current City standards shall apply. Should the quantities exceed the street capacity or the use of streets be prohibited for drainage purposes, as in the case where one travel lane in each direction shall not be used for drainage conveyance for emergency vehicle access on streets classified as minor arterials and greater, the developer shall provide adequate facilities as approved by the City Engineer. [MC 9.14.110 A.2]

115. 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.

116. Any missing or deficient existing improvements along the project frontage within Heacock Street and Ironwood Avenue 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.

117. For non-subdivision projects, all street dedications shall be free of encumbrances, irrevocably offered to the public and shall continue in force until the City accepts or abandons such offers, unless otherwise approved by the City Engineer.

118. 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.

119. 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.

Prior to Encroachment Permit

120. A digital (pdf) copy of all approved improvement plans shall be submitted to the Land Development Division.

121. All applicable inspection fees shall be paid.

122. For non-subdivision projects, execution of a Public Improvement Agreement (PIA) and/or security (in the form of a cash deposit or other approved means) may be required as determined by the City Engineer. [MC 9.14.220]

123. 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.

124. Any work performed within public right-of-way requires an encroachment permit.

Prior to Building Permit

125. 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.

126. For non-subdivision projects, 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.

127. For non-subdivision projects, the developer shall guarantee the completion of all related public improvements required for this project by executing a Public Improvement Agreement (PIA) with the City and posting the required security. [MC 9.14.220]

128. For non-subdivision projects, 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.

129. For Commercial/Industrial projects, the owner may have to secure coverage under the State's General Industrial Activities Storm Water Permit as issued by the State Water Resources Control Board.

130. For non-subdivision projects, all street dedications shall be free of encumbrances, irrevocably offered to the public and shall continue in force until the City accepts or abandons such offers, unless otherwise approved by the City Engineer.

131. 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.

132. 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).

133. Prior to building permit issuance, the developer shall construct or secure the construction of any missing or deficient improvements along the project frontage within Ironwood Avenue, including the ultimate structural section for pavement to half-street plus 18 feet or provide to the City Engineer the results of a coring test confirming that said pavement section has previously been completed per City Standard No. MVSI-104A-0 (modified). The City Engineer may require additional signing and striping for the frontage improvements to accommodate increased traffic imposed by the development.

134. Prior to building permit issuance, the developer shall construct or secure the construction of any missing or deficient improvements along the project frontage within Heacock Street, including the ultimate structural section for pavement to half-street plus 18 feet or provide to the City Engineer the results of a coring test

confirming that said pavement section has previously been completed per City Standard No. MVSI-104A-0. The City Engineer may require additional signing and striping for the frontage improvements to accommodate increased traffic imposed by the development.

Prior to Occupancy

135. All outstanding fees shall be paid.

136. 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.

137. The final/precise grade certification shall be submitted for review and approved by the City Engineer.

138. For commercial, industrial and multi-family projects, in compliance with Proposition 218, the developer shall agree to approve the City of Moreno Valley NPDES Regulatory Rate Schedule that is in place at the time of certificate of occupancy issuance. Under the current permit for storm water activities required as part of the National Pollutant Discharge Elimination System (NPDES) as mandated by the Federal Clean Water Act, this project is subject to the following requirements:

a. Select one of the following options to meet the financial responsibility to provide storm water utilities services for the required continuous operation, maintenance, monitoring system evaluations and enhancements, remediation and/or replacement, all in accordance with Resolution No. 2002-46.

i. Participate in the mail ballot proceeding in compliance with Proposition 218, for the Common Interest, Commercial, Industrial and Quasi-Public Use NPDES Regulatory Rate Schedule and pay all associated costs with the ballot process; or

ii. Establish an endowment to cover future City costs as specified in the Common Interest, Commercial, Industrial and Quasi-Public Use NPDES Regulatory Rate Schedule.

b. Notify the Special Districts Division of the intent to request building permits 90 days prior to their issuance and the financial option selected. The financial option selected shall be in place prior to the issuance of certificate of occupancy. [California Government Code & Municipal Code]

139. 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 (MVU: SL-2), signing, striping, under sidewalk drains,

landscaping and irrigation, medians, pavement tapers/transitions and traffic control devices as appropriate.

b. Storm drain facilities including, but not limited to: storm drain pipe, storm drain laterals, open channels, catch basins and local depressions.

c. City-owned utilities.

d. Sewer and water systems including, but not limited to: sanitary sewer, potable water and recycled water.

e. Under grounding of all existing and proposed utilities adjacent to and on-site. [MC 9.14.130]

f. Relocation of overhead electrical utility lines including, but not limited to: electrical, cable and telephone.

140. For commercial, industrial and multi-family projects, a “Stormwater Treatment Device and Control Measure Access and Maintenance Covenant”, "Maintenance Agreement for Water Quality Improvements located in the public right-of-way" and a "Declaration of Restrictive Covenants (encroachment on City easement)" shall be recorded to provide public notice of the maintenance requirements to be implemented per the approved final project-specific WQMP. A boilerplate copy of the covenants and agreements can be obtained by contacting the Land Development Division.

141. 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.

142. The Developer shall comply with the following water quality related items:

a. Notify the Land Development Division prior to construction and installation of all structural BMPs so that an inspection can be performed.

b. Demonstrate that all structural BMPs described in the approved final project-specific WQMP have been constructed and installed in conformance with the approved plans and specifications;

c. Demonstrate that Developer is prepared to implement all non-structural BMPs described in the approved final project-specific WQMP; and

d. Demonstrate that an adequate number of copies of the approved final project-specific WQMP are available for future owners/occupants.

e. Clean and repair the water quality BMP's, including re-grading to approved civil drawing if necessary.

f. Obtain approval and complete installation of the irrigation and landscaping.

Special Conditions

143. Prior to building permit issuance, the Developer shall guarantee the construction of the following improvements by entering into a public improvement agreement and posting security. The improvements shall be completed prior to occupancy of the first building or as otherwise determined by the City Engineer.

a. Pavement core samples of existing pavement shall be taken and findings submitted to the City for review and consideration of pavement improvements. The City will determine the adequacy of the existing pavement structural section. If the existing pavement structural section is found to be adequate, the developer shall be required to perform a full street-width two (2) inch grind and rubberize asphalt overlay to Heacock Street and Ironwood Avenue along the project's frontage, as required by the City Engineer. If the existing pavement section is found to be inadequate, the Developer shall replace the pavement to meet or exceed the City's pavement structural section standard. Removal/relocation and/or undergrounding of any power poles with overhead utility lines less than 115,000 volts.

b. A 4-foot minimum pedestrian right-of-way dedication behind any driveway approach per City Standard MVSI-112C-0, on Heacock Street and Ironwood Avenue.

Special Districts Division

144. NEW STREET LIGHT INSTALLATION FEES. Prior to the issuance of the first building permit for this project, the Developer shall pay New Street Light Installation Fees for all applicable Residential and Arterial Street Lights required for this development. Payment shall be made to the City of Moreno Valley and collected by the Land Development Division. Fees are based upon the Advanced Energy fee rate in place at the time of payment, as set forth in the current Listing of City Fees, Charges, and Rates adopted by City Council. The Developer shall provide a copy of the receipt to the Special Districts Division (specialdistricts@moval.org). Any change in the project which may increase the number of street lights to be installed will require payment of additional Advanced Energy fees at the then current fee. Questions may be directed to the Special Districts Division at 951.413.3480 or specialdistricts@moval.org.

145. This project is conditioned for a proposed district to provide a funding source for the operation and maintenance of public improvements and/or services associated with new development in that territory. The Developer shall satisfy this condition with one of the options outlined below.

a. Participate in a special election for maintenance/services and pay all associated costs of the election process and formation, if any. Financing may be structured through a Community Facilities District, Landscape and Lighting Maintenance District, or other financing structure as determined by the City; or

b. Establish an endowment fund to cover the future maintenance and/or service costs.

The Developer must notify the Special Districts Division at 951.413.3480 or at specialdistricts@moval.org when submitting the application for building permit issuance. If the first building permit is pulled prior to formation of the district, this condition will not apply. If the district has been or is in the process of being formed the Developer must inform the Special Districts Division of its selected financing option (a. or b. above). The option for participating in a special election requires 90 days to complete the special election process. This allows adequate time to be in compliance with the provisions of Article 13C of the California Constitution.

The financial option selected shall be in place prior to the issuance of the first certificate of occupancy for the project.

146. This project is conditioned to provide a funding source for the following special financing program(s):

a. Street Lighting Services for capital improvements, energy charges, and maintenance.

The Developer's responsibility is to provide a funding source for the capital improvements and the continued maintenance. The Developer shall satisfy this condition with one of the options below.

i. Participate in a special election (mail ballot proceeding) and pay all associated costs of the special election and formation, if any. Financing may be structured through a Community Services District zone, Community Facilities District, Landscape and Lighting Maintenance District, or other financing structure as determined by the City; or

ii. Establish a Property Owner's Association (POA) or Home Owner's Association (HOA) which will be responsible for any and all operation and maintenance costs

The Developer must notify the Special Districts Division at 951.413.3480 or at specialdistricts@moval.org of its selected financial option when submitting the application for building permit issuance. The option for participating in a special election requires approximately 90 days to complete the special election process. This allows adequate time to be in compliance with the provisions of Article 13C of

the California Constitution.

The financial option selected shall be in place prior to the issuance of the first certificate of occupancy for the project.

147. Commercial (BP) If Land Development, a Division of the Public Works Department, requires this project to supply a funding source necessary to provide for, but not limited to, stormwater utilities services for the continuous operation, remediation and/or replacement, monitoring, systems evaluations and enhancement of on-site facilities and performing annual inspections of the affected areas to ensure compliance with state mandated stormwater 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 when submitting the application for the first building permit issuance (see Land Development's related condition). Participating in a special election the process requires a 90 day period prior to the City's issuance of a building permit. This allows adequate time to be in compliance with the provisions of Article 13D of the California Constitution. (California Health and Safety Code Sections 5473 through 5473.8 (Ord. 708 Section 3.1, 2006) & City of Moreno Valley Municipal Code Title 3, Section 3.50.050.)

148. This project has been identified to be included in the formation of a Community Facilities District (Mello-Roos) for Public Safety services, including but not limited to Police, Fire Protection, Paramedic Services, Park Rangers, and Animal Control services. The property owner(s) shall not protest the formation; however, they retain the right to object to the rate and method of maximum special tax. In compliance with Proposition 218, the property owner shall agree to approve the mail ballot proceeding (special election) for either formation of the CFD or annexation into an existing district. The Developer must notify the Special Districts Division at 951.413.3480 or at specialdistricts@moval.org when submitting the application for building permit issuance to determine the requirement for participation. If the first building permit is pulled prior to formation of the district, this condition will not apply. If the condition applies, the special election will require a minimum of 90 days prior to issuance of the first building permit. This allows adequate time to be in compliance with the provisions of Article 13C of the California Constitution. (California Government Code Section 53313 et. seq.)

149. The ongoing maintenance of any landscaping required to be installed behind the curb shall be the responsibility of the property owner.

150. 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.

151. Street Light Authorization forms for all street lights that are conditioned to be installed as part of this project must be submitted to the Special Districts Division for approval, prior to street light installation. The Street Light Authorization form can be obtained from the utility company providing electric service to the project, either Moreno Valley Utility or Southern California Edison. For questions, contact the Special Districts Division at 951.413.3480 or specialdistricts@moval.org.

152. 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.

153. PARKS MAINTENANCE FUNDING. Prior to applying for the 1st Building Permit, the qualified elector (e.g. property owner) must initiate the process (i.e. pay the annexation fee or fund an endowment) to provide an ongoing funding source for the continued maintenance, enhancement, and or retrofit of parks, open spaces, linear parks, and/or trails systems, and programs.

This condition must be fully satisfied prior to issuance of the 1st Certificate of Occupancy. This condition will be satisfied with the successful annexation/formation (i.e. special election process) into a special financing district and payment of all costs associated with the special election process. Annexation into a special financing district requires an annual payment of the annual special tax, assessment, or fee levied against the property tax bill, or other lawful means, of the parcels of the project for such district. At the time of the public hearing to consider annexation into or formation of the district, the qualified elector(s) will not protest the annexation or formation, 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 receives from the improvements to be installed and/or maintained or services provided. The special election requires a minimum 90-day process in compliance with the provisions of Article 13C of the California Constitution, Proposition 218, or other applicable legislation, and consistent with the scheduling for City Council meetings.

Alternatively, the condition can be satisfied by the Developer funding an endowment in an amount sufficient to yield an annual revenue stream that meets the annual obligation. The Developer must contact Special Districts Administration at 951.413.3470 or at SDAdmin@moval.org to satisfy this condition.

Transportation Engineering Division

154. All project driveways 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. MVSI-112A~D-0 for commercial driveway approaches.

155. Each gated entrance shall be provided with the following: A storage lane with a minimum of 75 feet queuing length for entering traffic. Signing and striping. A separate pedestrian entry. All of these features must be kept in working order.

156. The first parking stall/drive aisle juncture shall be 60 feet from the property line per Municipal Code Section 9.11.080 - A.18 or as approved by the City Engineer.

157. 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.

158. Heacock Street is designated as an Arterial Road (100' RW/76' CC) per City of Moreno Valley Standard MVSI-104A-0. Any improvements undertaken by this project shall be consistent with the City's standards for this facility or as approved by the City Engineer.

159. Ironwood Avenue is designated as a Minor Arterial Road (88' RW/64' CC) per City of Moreno Valley Standard MVSI-105A-1. Any improvements undertaken by this project shall be consistent with the City's standards for this facility or as approved by the City Engineer.

160. Communication conduit along the project frontages may be required per City Standard Plan No. MVSI-186-0.

161. Prior to issuance of an encroachment permit for work within the public right-of-way, construction traffic control plans prepared by a qualified, registered Civil or Traffic Engineer shall be required for plan approval by the City Traffic Engineer.

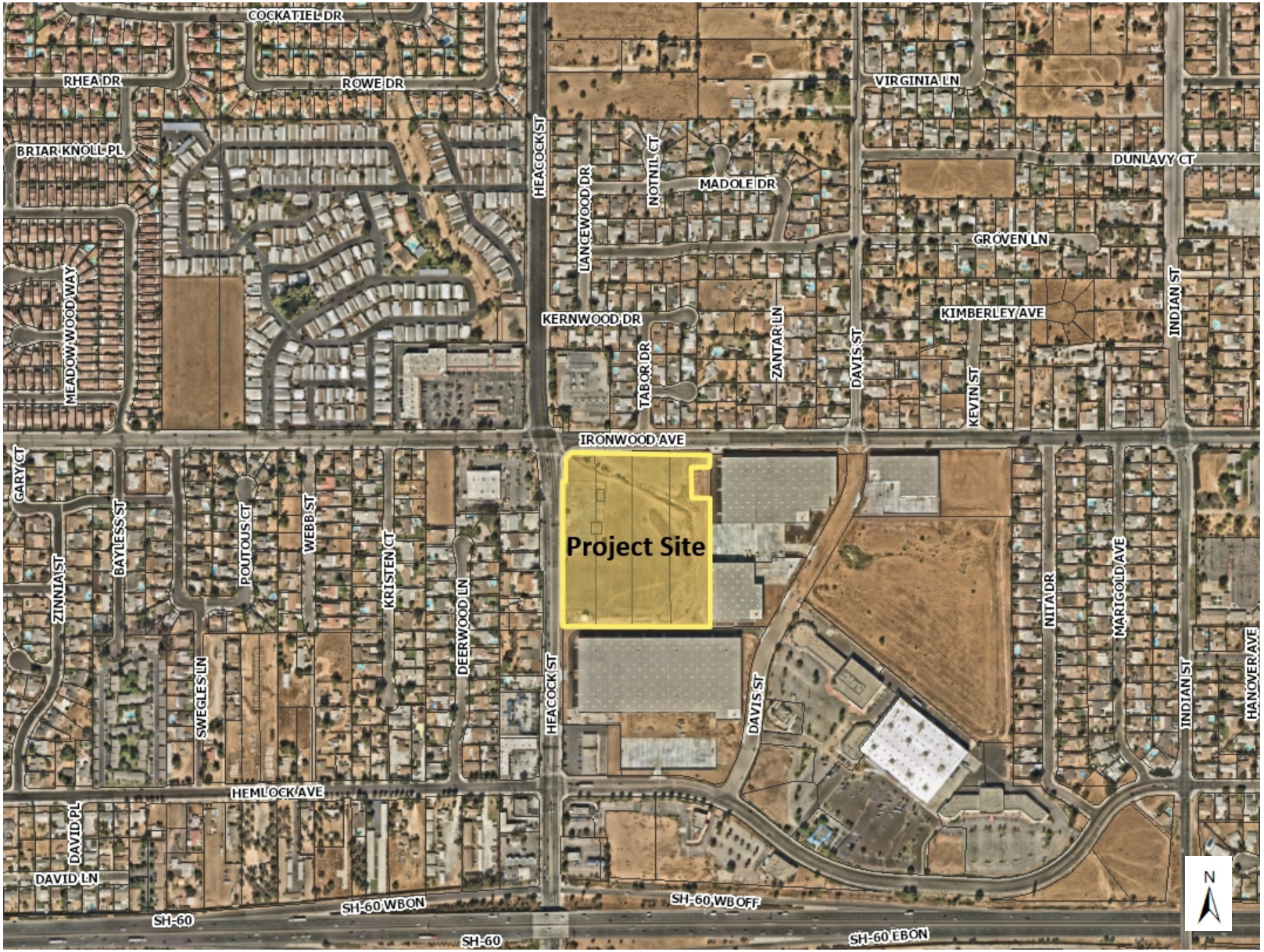
162. Prior to final approval of the landscape plans and construction plans for any type of fencing or monument sign, the project plans shall be demonstrate that sight distance at the project driveway conforms to City Standard Plan No. MVSI-164A-0 through MVSI-164C-0. Trees, plants, shrubs, fence and monument sign shall not be located in an area that obstructs the drivers' line of sight.

163. All proposed on-site traffic signing and striping shall be accordance with the latest California Manual on Uniform Traffic Control Devices (CAMUTCD)

164. Prior to the final approval of the street improvements plans, a signing and striping plan shall be prepared per City of Moreno Valley Standard Plans - Section 4 for all streets along the project frontages. Signing and striping plans shall be prepared per the latest edition of the California Manual on Uniform Traffic Control Devices (CAMUTCD) and current City of Moreno Valley Standard Plans by a qualified registered Civil or traffic Engineer.

165. Prior to issuance of a Building Final or Certificate of Occupancy, all approved signing and striping shall be installed per current City Standards and the approved plans.

Aerial Map



Legend

Master Plan of Trails
- Bridge
- Improved
- Multiuse
- Proposed
- Regional
- State

Road Labels

Parcels

City Boundary

Sphere of Influence

Image Source: Nearmap

Notes:

PEN20-0139 - General Plan Amendment
PEN20-0138 - Specific Plan Amendment
PEN20-0137 - Plot Plan

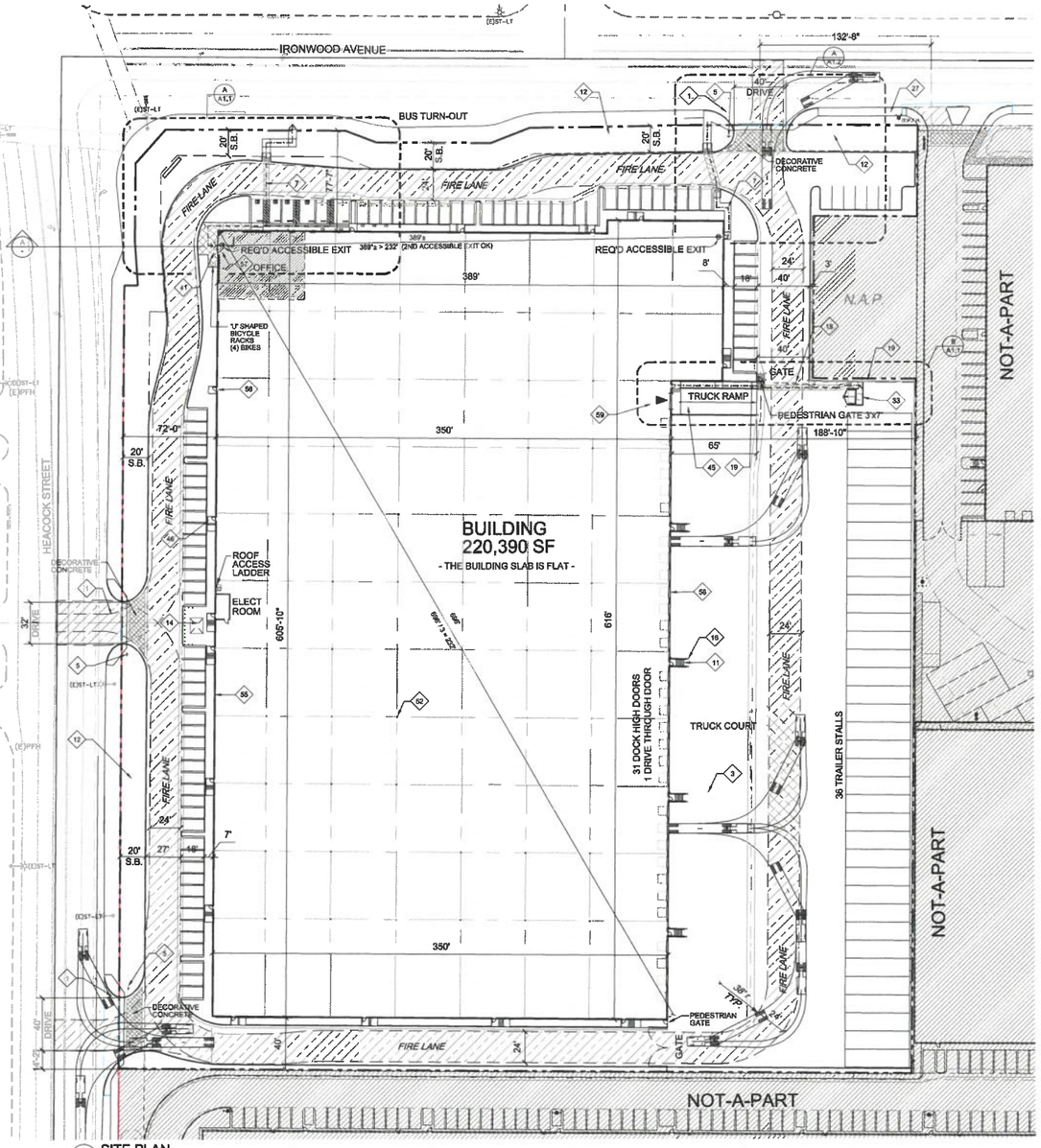
1,261.9 0 630.96 1,261.9 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere

Print Date: 12/31/2020

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 (4266 : PEN20-0137-0139 Plot Plan for a Light Industrial Building)



A SITE PLAN
SCALE: 1" = 40'

LEGAL DESCRIPTION

LEGAL DESCRIPTION:

(APN 481-020-013, 028, 030, 029 & 035)

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:

LOTS 1, 2, 3 AND 4 OF RIVERSIDE GROUND FARMS TRACT, IN THE CITY OF MORENO VALLEY, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 14, PAGES 12 AND 13 OF MAPS, RIVERSIDE COUNTY RECORDS.

TOGETHER WITH THE SOUTHERLY 10 FEET OF IRONWOOD AVENUE, AS VACATED BY ORDER OF THE BOARD OF SUPERVISORS OF RIVERSIDE COUNTY, DATED JUNE 5, 1978 OR FILE IN SUPERVISOR'S MINUTE BOOK 30, PAGE 358, AND AS VACATED BY ORDER OF WHICH WAS RECORDED JUNE 7, 1978 IN BOOK 795, PAGE 297 OF DEEDS.

EXCEPTING THEREFROM THAT PORTION AS DESCRIBED IN THE DEED TO THE COUNTY OF RIVERSIDE, RECORDED JULY 16, 1968 AS INSTRUMENT NO. 73039 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION OF LOT 1 AS CONVEYED TO EASTERN MUNICIPAL WATER DISTRICT, A PUBLIC AGENCY, AS CONTAINED IN DEED RECORDED NOVEMBER 3, 2015 AS INSTRUMENT NO. 2015-444855 OF OFFICIAL RECORDS OF SAID COUNTY.

PROJECT INFORMATION

BUILDING ADDRESS:	T.B.D., MORENO VALLEY, CA
CONSTRUCTION TYPE:	SB
NUMBER OF FLOORS:	1
OCCUPANCY:	S / S-1
FIRE SPRINKLER:	YES (E.S.F.R.)
CLEAR HEIGHT:	32' CLEAR AT 6" INSIDE FIRST 60FT BAY
ZONING:	MU (INDEX USES)
GENERAL PLAN:	THE MORENO VALLEY FESTIVAL SP 205

BASIC ALLOWABLE HEIGHT

PER C.B.C. TABLE 504.3:	55 FT

BASIC ALLOWABLE STORIES - TYPE 2B

PER C.B.C. TABLE 504.4:	
OCCUPANCY - B - SPRINKLERED	1
OCCUPANCY - S - 1 - SPRINKLERED	1

OCCUPANCY GROUP 'S1' & 'S-1'

PROJECT DESCRIPTION

CONSTRUCT A NEW SINGLE STORY 220,390 SF CONCRETE TILT-UP WAREHOUSE/DISTRIBUTION FACILITY (214,390 SF WAREHOUSE & 6,000 SF OFFICE) WITH ONE TRASH ENCLOSURE (228 SF), CONCRETE SITE WALLS (12 FT HIGH X 109 LIN. FT) AND TUBULAR STEEL FENCING (8 FT., HIGH X 10 LIN FT) AND 31 DOCK DOORS WITH ONE DRIVE THRU LOADING DOOR, ONSITE AND OFFSITE IMPROVEMENTS INCLUDING GRADING, STORM DRAIN, WATER, SEWER, FIRE HYDRANTS, LANDSCAPE, IRRIGATION AND HARDSCAPE AND (1) SLIDING METAL GATE AT 8 FT. HIGH, (1) SWING GATE AT 8 FT HIGH AND SITE LIGHTING WITH LIGHT POLES.

THERE ARE NO EXISTING STRUCTURES ON-SITE.

UTILITY PROVIDERS

UTILITY PURVEYORS:

CHARTER SPECTRUM	*(877) 906-9121*
EASTERN MUNICIPAL WATER DIST	*(951) 928-3777*
CITY OF MORENO VALLEY	*(951) 413-3160*
SC EDISON COMPANY	*(800) 655-4555*
SC GAS COMPANY	*(800) 427-2200*
RIVERSIDE TRANSIT AGENCY	*(951) 565-5164*
UNDERGROUND SERVICE ALERT	*(800) 227-2600*
MORENO VALLEY UTILITY ADMINISTRATION	*(951) 413-3500*
CROWN CASTLE	*(888) 632-0931*

CONTACT INFORMATION

OWNER:
LCG MVBP, LLC
3310 OLD RANCH PARKWAY - SUITE 470
SEAL BEACH, CA 90740
CONTACT: RYAN MARTIN
PHONE: 303.419-8790
EMAIL: RMARTIN@LEDOCG.COM

ARCHITECT:
HERDMAN ARCHITECTURE+DESIGN, INC.
16201 SCIENTIFIC WAY
IRVINE, CALIFORNIA 92618
CONTACT: BRIDGET HERDMAN
(714) 389-2800
EMAIL: bridget@herdman-AD.com

PROPOSED INCENTIVES FOR INCREASED COVERAGE

1. LOT CONSOLIDATION (AS INDICATED PER CIVIL DWGS)
2. RECIPROCAL DRIVEWAY ACCESS
3. PEDESTRIAN BUILDING ORIENTATION
4. PUBLIC ART: T.B.D.
5. SUSTAINABLE FEATURES/LEED CHECKLIST FOR CERTIFICATION
6. LANDMARK INTERSECTION
7. BUSINESS RETENTION

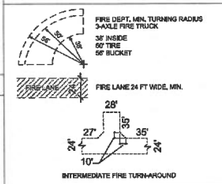
FIRE DEPARTMENT NOTES:

1. THE MOTORIZED DRIVEWAY GATES SHALL BE PROVIDED WITH A SYSTEM THAT AUTOMATICALLY OPENS THE GATES REMOTELY BY SIGNAL PREEMPTION FROM AN APPROACHING EMERGENCY FIRE APPARATUS VEHICLE UPON INSTALLATION OF THE SYSTEM, FUNCTIONAL TESTING SHALL BE WITNESSED BY THE RIVERSIDE COUNTY FIRE DEPARTMENT. (MORENO VALLEY FIRE CODE 503.6.1)
2. THE MOTORIZED GATES SHALL BE EQUIPPED WITH KNOX BOX SWITCHES ON BOTH THE PRIVATE PROPERTY SIDE AND THE PUBLIC ACCESS SIDE OF THE GATES. IF VEHICLE SENSOR LOOPS ARE PROVIDED TO OPERATE THE GATES AUTOMATICALLY FROM THE INGRESS DIRECTION, THEN THE KEY SWITCHES ARE ONLY REQUIRED ON THE INGRESS SIDE. (CFC 503.6)

SITE PLAN KEY NOTES

1. NEW DRIVE CUT, PER CITY OR COUNTY STANDARDS. REFER TO LANDSCAPE DRAWINGS FOR ENHANCED PAVING DESIGN IF APPLICABLE. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFO.
2. ASPHALT PAVING, TYP. REFER TO SOILS REPORT @ CIVIL DRAWINGS FOR ADDITIONAL DESIGN CRITERIA.
3. CONCRETE PAVING. REFER TO CIVIL DRAWINGS FOR SECTION AND DRAINAGE. G.C. TO COORDINATE WITH SOILS REPORT. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE DESIGN AT TRUCK APRONS IF APPLICABLE.
4. TRUNCATED DOMES
5. ADA SITE ENTRY SIGN PER CODE, TYP.
6. ADA PARKING STALL SIGN PER CODE, TYP. PROVIDE AT ALL ADA STALLS.
7. ADA PATH OF TRAVEL
8. PRECAST CONCRETE WHEEL STOP
9. ZERO CURB FACE.
10. CONCRETE WALK. SEE SITE PLAN FOR ADA PATH OF TRAVEL. 4" MIN THICKNESS. SCORE CONCRETE @ 5' O.C., PROVIDE A LIGHT BROOM FINISH. REFER TO LANDSCAPE DRAWINGS FOR SPECIALTY CONCRETE FINISHING, TYP. REFER TO SOILS REPORT FOR ADDITIONAL MIN. REQ.
11. EXTERIOR CONCRETE STAIR W/CONCRETE WALLS. WALLS & RAILINGS PAINTED PER EXTERIOR COLOR SCHEDULE. REFER TO CIVIL AND STRUCTURAL DRAWINGS
12. LANDSCAPE AREA - SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION
14. PROPOSED TRANSFORMER LOCATION. PROVIDE BOLLARDS PER UTILITY COMPANY REQUIREMENTS. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
15. SLIDING METAL GATE, ELECTRONICALLY OR MANUALY OPERATED. PROVIDE CONDUIT TO GUARD SHACK AND OFFICE AREA FOR GATE CONTROL @ INTERCOM. PROVIDE KNOX PAD PER FIRE DEPT. STD.
16. PROTECTIVE METAL BOLLARDS, CONCRETE FILLED, PAINTED, TYP.
19. CONCRETE TILT-UP SCREEN WALL, PAINTED
20. CHAIN LINK FENCE, 8 FT HIGH, WITH SLATS
21. METAL TUBE STEEL FENCE PAINTED, 6 FT HIGH
27. PUBLIC SIDE WALK, REFER TO CIVIL DRAWINGS.
28. SECURE BICYCLE RACK, REFER TO LANDSCAPE PLANS FOR MODEL SPECIFICATION AND ADDITIONAL INFORMATION.
31. UNDERGROUND STORAGE, REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFO.
33. CONCRETE TRASH ENCLOSURE PER CITY REQUIREMENTS.
38. PROVIDE AN EXIT SWING GATE 3'-0" WIDE X 7'-0" FROM THE ENCLOSED YARD. PROVIDE KNOX PAD PER FIRE DEPT. STANDARDS.
41. AFFIX THE INTERNATIONAL ACCESSIBILITY SYMBOL AT ALL ACCESSIBLE ENTRANCES.
45. CONCRETE TRUCK RAMP WITH 42" HIGH CONC. TILT UP GUARD WALLS PAINTED TO MATCH BUILDING, SEE ELEVATIONS.
46. CONCRETE LANDING PAD @ EXTERIOR MAN DOOR WITH STEP(S) WHEN SHOWN, PROVIDE HANDRAILS/GUARDRAIL AS REQUIRED, TYP. CONFIRM QUANTITY OF RISERS W/FINAL GRADING PLAN.
52. STRUCTURAL STEEL COLUMN
55. CONCRETE TILT-UP PANEL, TYP. PAINTED, SEE EXTERIOR COLOR SCHEDULE, REFER TO ELEVATIONS AND "S" DRAWINGS FOR ADDITIONAL INFORMATION.
56. EXTERIOR MAN DOOR 3'X7', HOLLOW METAL, PAINTED. SEE EXTERIOR COLOR SCHEDULE & DOOR SCHEDULE FOR ADDITIONAL INFO.
57. EXTERIOR STOREFRONT DOOR, SEE EXTERIOR COLOR SCHEDULE & DOOR SCHEDULE FOR ADDITIONAL INFO.
58. DOCK-HI LOADING DOOR, 9'X10', WITH VISION GLAZING PRE FINISHED BY MANUFACTURER PER COLOR SCHEDULE.
59. DRIVE THRU LOADING DOOR 12'X14' WITH VISION GLAZING, PRE FINISHED BY MANUFACTURER PER COLOR SCHEDULE.

FIRE DEPT. MIN. TURNING RADIUS



OCCUPANCY LOAD CALCULATIONS

OCCUPANCY LOAD: 2019 CBC 1004.1.2

	AREA	OCC FACTOR	OCCUPANT LOAD
OFFICE (S)	6,000.00	100	60.00
WAREHOUSE (S-1)	214,390.00	500	428.78
TOTAL:	220,390.00		488.78

GENERAL NOTES

1. POLICE NOTE: PROVIDE SECURITY CAMERAS INSIDE THE BUSINESSES AND SEVERAL CAMERAS OUTSIDE.
2. POLICE NOTE: THE PARKING LOTS, STREET AND BUILDINGS SHOULD BE WELL LIT. MINIMIZE THE SHADOWS CAST BY LANDSCAPING AND TREES ON THE PROPERTY, WALKWAYS AND PUBLIC AREAS.
3. TRANSPORTATION ENGINEERING DIVISION NOTE: ALL PUBLIC IMPROVEMENTS AND INFRASTRUCTURES SHALL BE INSTALLED/ CONSTRUCTED WITHIN THE PUBLIC RIGHT-OF-WAY. ADDITIONAL DEDICATION AT DRIVEWAY APPROACHES MAY BE REQUIRED IN ORDER TO ACCOMMODATE THESE.

ELECTRIC VEHICLE CHARGING STATION INFORMATION

TOTAL PARKING = 98 STALLS

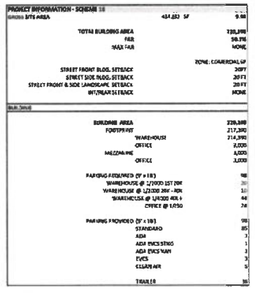
NUMBER OF REQUIRED ELECTRIC VEHICLE STALLS = 7 STALLS

NUMBER OF PROVIDED ELECTRIC VEHICLE STALLS:

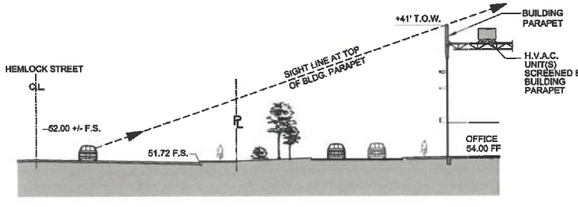
1 - VAN ACCESSIBLE E.V. STALL
1 - STANDARD ACCESSIBLE STALL
3 - STANDARD E.V. STALLS

5 - TOTAL E.V. CHARGING STATIONS PROVIDED
TOTAL CLEAN AIR PARKING = 5 STALLS

PROJECT INFORMATION

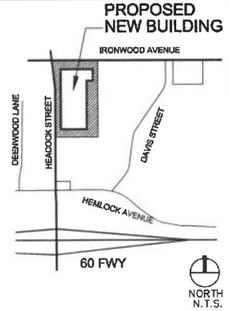


SITE LINE SECTION - A

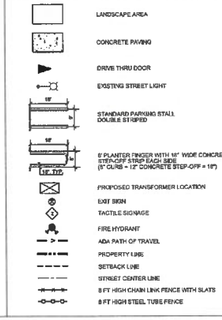


SCALE: 1/16" =1'-0"

VICINITY MAP



SITE LEGEND



PROJECT
RYAN MARTIN - HEACOCK
MORENO VALLEY, CA

HERDMAN
ARCHITECTURE + DESIGN

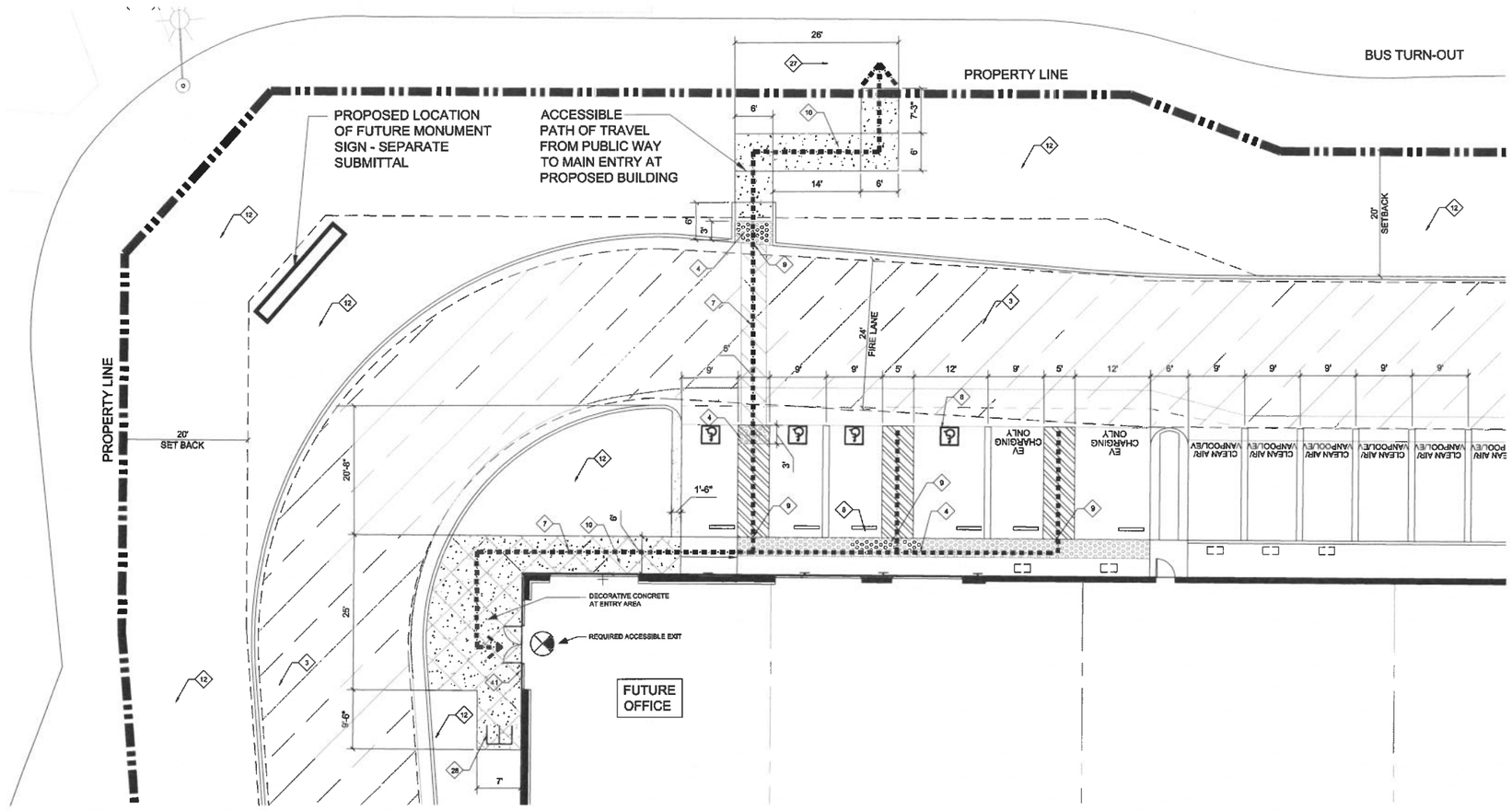
16201 Scientific Way
Irvine, CA 92618
www.Herdman-AD.com
714.389.2800
info@Herdman-AD.com

A19-2030
09.22.2020
PLANNING.2

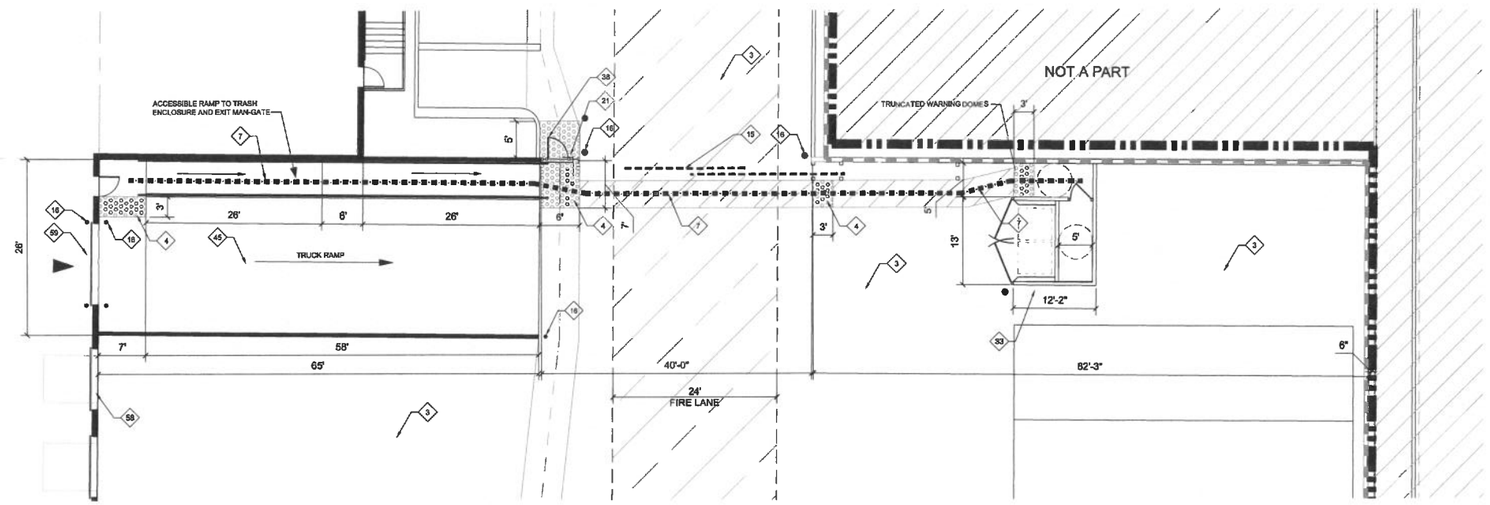
NORTH

SITE PLAN

A1.0



A N.W. ENLARGED SITE PLAN
SCALE: 1/8"=1'-0"



B ENLARGED SITE PLAN
SCALE: 1/8"=1'-0"

SITE PLAN KEY NOTES

1 NEW DRIVE CUT, PER CITY OR COUNTY STANDARDS. REFER TO LANDSCAPE DRAWINGS FOR ENHANCED PAVING DESIGN IF APPLICABLE. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFO.

2 ASPHALT PAVING, TYP., REFER TO SOILS REPORT @ CIVIL DRAWINGS FOR ADDITIONAL DESIGN CRITERIA.

3 CONCRETE PAVING, REFER TO CIVIL DRAWINGS FOR SECTION AND DRAINAGE, G.C. TO COORDINATE WITH SOILS REPORT, REFER TO STRUCTURAL DRAWINGS FOR CONCRETE DESIGN AT TRUCK APRONS IF APPLICABLE.

4 TRUNCATED DOMES

5 ADA SITE ENTRY SIGN PER CODE, TYP.

6 ADA PARKING STALL SIGN PER CODE, TYP. PROVIDE AT ALL ADA STALLS.

7 ADA PATH OF TRAVEL

8 PRECAST CONCRETE WHEEL STOP

9 ZERO CURB FACE.

10 CONCRETE WALK, SEE SITE PLAN FOR ADA PATH OF TRAVEL. 4" MIN THICKNESS, SCORE CONCRETE @ 5' O.C., PROVIDE A LIGHT BROOM FINISH, REFER TO LANDSCAPE DRAWINGS FOR SPECIALTY CONCRETE FINISHING, TYP. REFER TO SOILS REPORT FOR ADDITIONAL MIN. REQ.

11 EXTERIOR CONCRETE STAIR W/CONCRETE WALLS, WALLS & RAILINGS PAINTED PER EXTERIOR COLOR SCHEDULE. REFER TO CIVIL AND STRUCTURAL DRAWINGS

12 LANDSCAPE AREA - SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION

14 PROPOSED TRANSFORMER LOCATION, PROVIDE BOLLARDS PER UTILITY COMPANY REQUIREMENTS. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

15 SLIDING METAL GATE, ELECTRONICALLY OR MANUALY OPERATED, PROVIDE CONDUIT TO GUARD SHACK AND OFFICE AREA FOR GATE CONTROL @ INTERCOM, PROVIDE KNOX PAD PER FIRE DEPT. STD.

18 PROTECTIVE METAL BOLLARDS, CONCRETE FILLED, PAINTED, TYP.

19 CONCRETE TILT-UP SCREEN WALL, PAINTED

20 CHAIN LINK FENCE, 6 FT HIGH, WITH SLATS

21 METAL TUBE STEEL FENCE PAINTED, 8 FT HIGH

27 PUBLIC SIDE WALK, REFER TO CIVIL DRAWINGS.

28 SECURE BICYCLE RACK. REFER TO LANDSCAPE PLANS FOR MODEL SPECIFICATION AND ADDITIONAL INFORMATION.

31 UNDERGROUND STORAGE, REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFO.

33 CONCRETE TRASH ENCLOSURE PER CITY REQUIREMENTS.

38 PROVIDE AN EXIT SWING GATE 5'-0" WIDE X 7'-0" FROM THE ENCLOSED YARD. PROVIDE KNOX PAD PER FIRE DEPT. STANDARDS.

41 AFFIX THE INTERNATIONAL ACCESSIBILITY SYMBOL AT ALL ACCESSIBLE ENTRANCES.

45 CONCRETE TRUCK RAMP WITH 42" HIGH CONC. TILT UP GUARD WALLS PAINTED TO MATCH BUILDING, SEE ELEVATIONS.

46 CONCRETE LANDING PAD @ EXTERIOR MAN DOOR WITH STEP(S) WHEN SHOWN, PROVIDE HANDRAIL/GUARDRAIL AS REQUIRED, TYP., CONFIRM QUANTITY OF RISERS W/FINAL GRADING PLAN.

52 STRUCTURAL STEEL COLUMN

55 CONCRETE TILT-UP PANEL, TYP. PAINTED, SEE EXTERIOR COLOR SCHEDULE, REFER TO ELEVATIONS AND "S" DRAWINGS FOR ADDITIONAL INFORMATION.

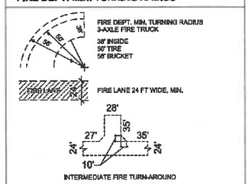
56 EXTERIOR MAN DOOR 3'X7', HOLLOW METAL, PAINTED, SEE EXTERIOR COLOR SCHEDULE & DOOR SCHEDULE FOR ADDITIONAL INFO.

57 EXTERIOR STOREFRONT DOOR, SEE EXTERIOR COLOR SCHEDULE & DOOR SCHEDULE FOR ADDITIONAL INFO.

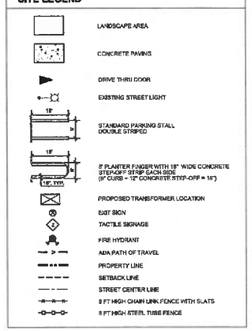
58 DOCK-HI LOADING DOOR, 9'X10', WITH VISION GLAZING PRE FINISHED BY MANUFACTURER PER COLOR SCHEDULE.

59 DRIVE THRU LOADING DOOR 12'X14' WITH VISION GLAZING, PRE FINISHED BY MANUFACTURER PER COLOR SCHEDULE.

FIRE DEPT. MIN. TURNING RADIUS



SITE LEGEND



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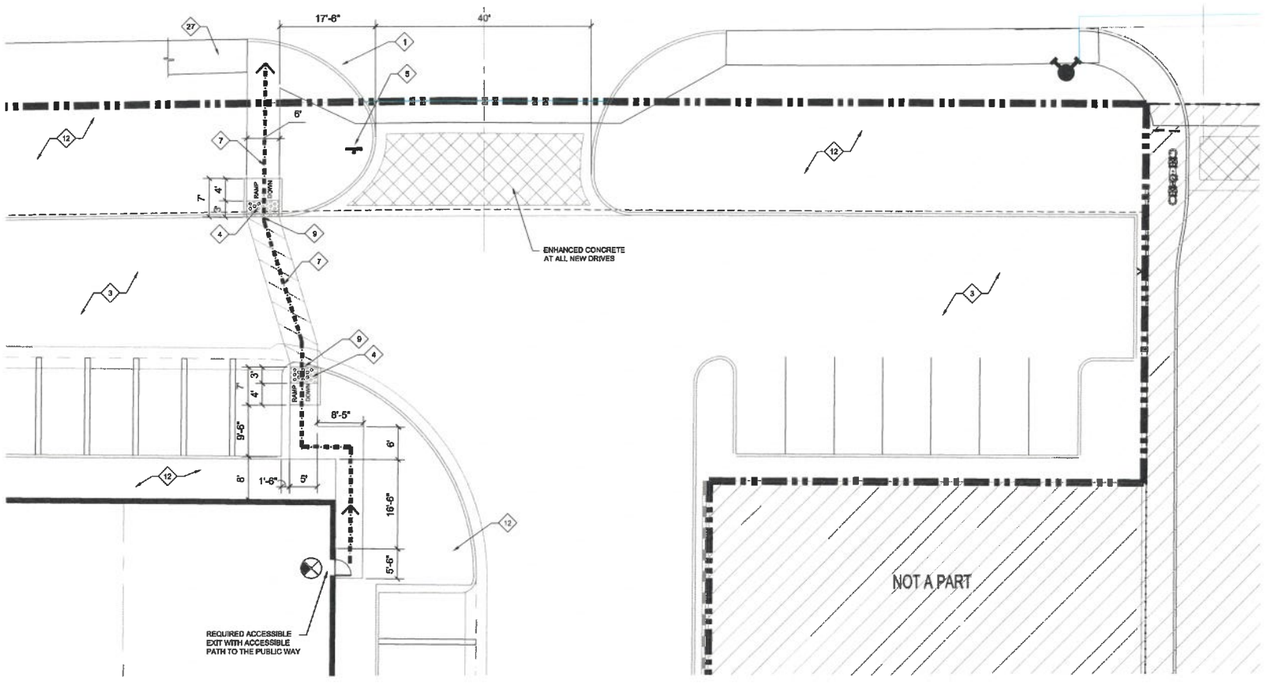
A19-2030
09.22.2020
PLANNING.2

NORTH

ENLARGED SITE PLAN
A1.1



A ENLARGED SITE PLAN
SCALE: 1" = 10'

SITE PLAN KEY NOTES

1 NEW DRIVE CUT, PER CITY OR COUNTY STANDARDS. REFER TO LANDSCAPE DRAWINGS FOR ENHANCED PAVING DESIGN IF APPLICABLE. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFO.

2 ASPHALT PAVING, TYP. REFER TO SOILS REPORT @ CIVIL DRAWINGS FOR ADDITIONAL DESIGN CRITERIA.

3 CONCRETE PAVING, REFER TO CIVIL DRAWINGS FOR SECTION AND DRAINAGE. G.C. TO COORDINATE WITH SOILS REPORT. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE DESIGN AT TRUCK APRONS IF APPLICABLE.

4 TRUNCATED DOMES

5 ADA SITE ENTRY SIGN PER CODE, TYP.

6 ADA PARKING STALL SIGN PER CODE. TYP. PROVIDE AT ALL ADA STALLS.

7 ADA PATH OF TRAVEL

8 PRECAST CONCRETE WHEEL STOP

9 ZERO CURB FACE.

10 CONCRETE WALK, SEE SITE PLAN FOR ADA PATH OF TRAVEL. 4" MIN THICKNESS. SCORE CONCRETE @ 5' O.C., PROVIDE A LIGHT BROOM FINISH. REFER TO LANDSCAPE DRAWINGS FOR SPECIALTY CONCRETE FINISHING, TYP. REFER TO SOILS REPORT FOR ADDITIONAL MIN. REQ.

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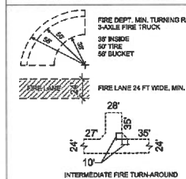
FIRE DEPT. MIN. TURNING RADIUS



SITE LEGEND

- LANDSCAPE AREA
- CONCRETE PAVING
- DRIVE THRU DOOR
- EXISTING STREET LIGHT
- STANDARD PARKING STALL DOUBLE STRIPED
- 8" PLANTER RINGED WITH 18" WIDE CONCRETE STEP-OFF STRIP EACH SIDE (6" CURB + 12" CONCRETE STEP-OFF = 18")
- PROPOSED TRANSFORMER LOCATION
- EXIT SIGN
- TACTILE SIGNAGE
- FIRE HYDRANT
- ADA PATH OF TRAVEL
- PROPERTY LINE
- SETBACK LINE
- STREET CENTER LINE
- 6 FT HIGH CHAIN LINK FENCE WITH SLATS
- 6 FT HIGH STEEL TUBE FENCE

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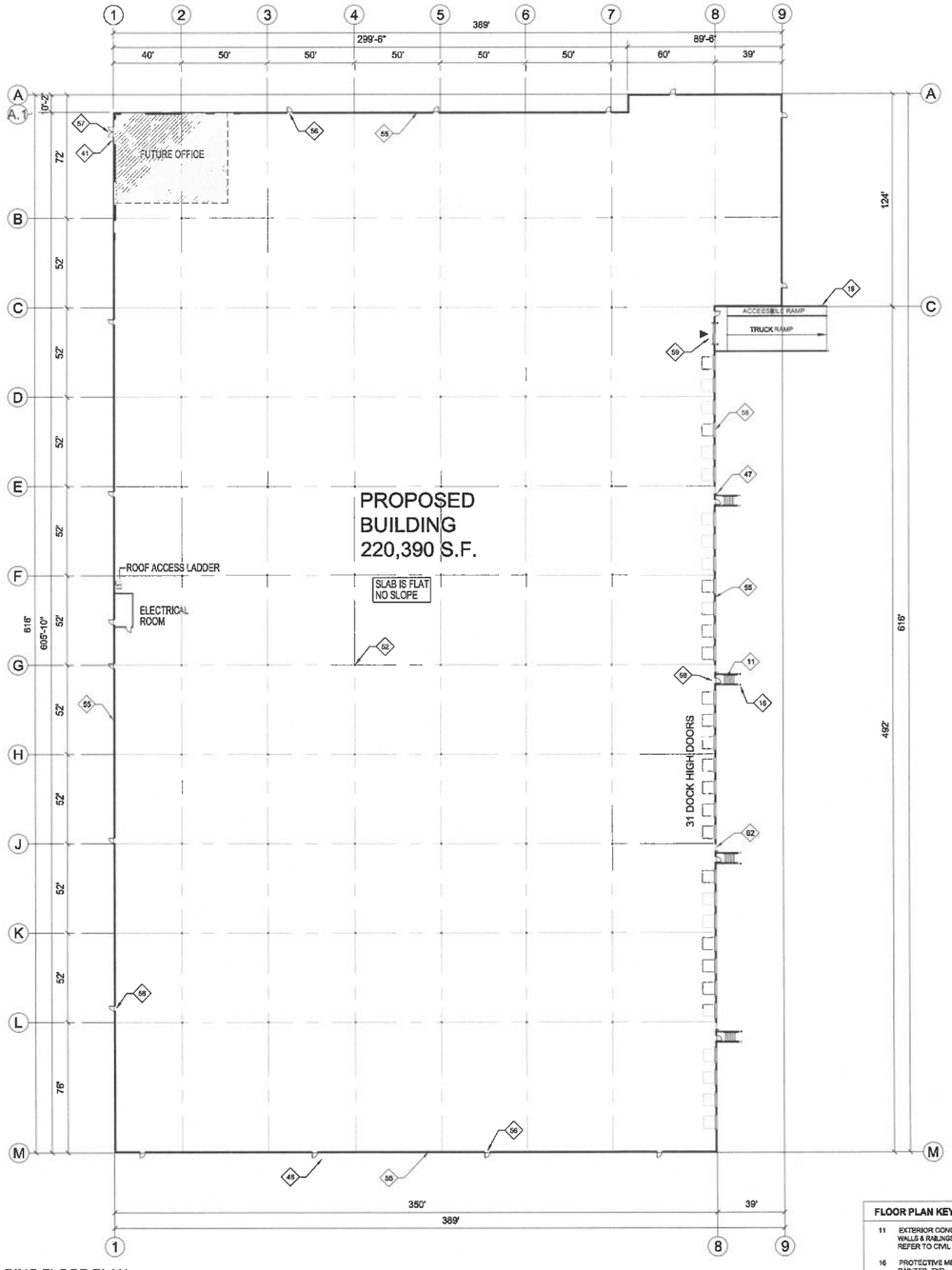
NORTH

ENLARGED SITE PLAN
A1.2



A BUILDING FLOOR PLAN
SCALE: 1" = 30'

FLOOR PLAN KEY NOTES

11	EXTERIOR CONCRETE STAIR W/CONCRETE WALLS. WALLS & RAILINGS PAINTED PER EXTERIOR COLOR SCHEDULE. REFER TO CIVIL DRAWINGS
16	PROTECTIVE METAL BOLLARDS, CONCRETE FILLED, PAINTED, TYP.
19	CONCRETE SCREEN WALL.
41	AFFIX THE INTERNATIONAL ACCESSIBILITY SYMBOL AT ALL ACCESSIBLE ENTRANCES.
46	CONCRETE TRUCK RAMP WITH 42" HIGH CONC. TILT UP GUARD WALLS PAINTED TO MATCH BUILDING, SEE ELEVATIONS.
46	CONCRETE LANDING PAD @ EXTERIOR MAN DOOR WITH STEP(S) WHEN SHOWN. PROVIDE HANDRAIL/GUARDRAIL AS REQUIRED, TYP. CONFIRM QUANTITY OF RISERS W/FINAL GRADING PLAN.
47	EXTERIOR METAL DOWNSPOUT AND OVERFLOW SCUPPERS PAINTED TO MATCH BUILDING. REFER TO PLUMBING PLANS FOR MINIMUM SCUPPER OPENINGS ALLOWABLE PER CODE
52	STRUCTURAL BUILDING COLUMN
55	CONCRETE TILT-UP PANEL. TYP. PAINTED. SEE EXTERIOR COLOR SCHEDULE - REFER TO ELEVATIONS
56	EXTERIOR MAN DOOR 3'X7', HOLLOW METAL. PAINTED. SEE EXTERIOR COLOR SCHEDULE
57	EXTERIOR STOREFRONT DOOR. SEE EXTERIOR COLOR SCHEDULE FOR ADDITIONAL INFO.
58	DOCK-HI LOADING DOOR, 9'X10', WITH VISION GLAZING PRE FINISHED BY MANUFACTURER PER COLOR SCHEDULE.
59	DRIVE THRU LOADING DOOR 12'X14' WITH VISION GLAZING, PRE FINISHED BY MANUFACTURER PER COLOR SCHEDULE.
62	AIR INTAKE LOUVER. PAINT TO MATCH BUILDING WALL. TYP. SIZE: HORIZONTAL 4'X8', PROVIDE BIRD SCREEN, FILTER AND BURGLAR BARS.

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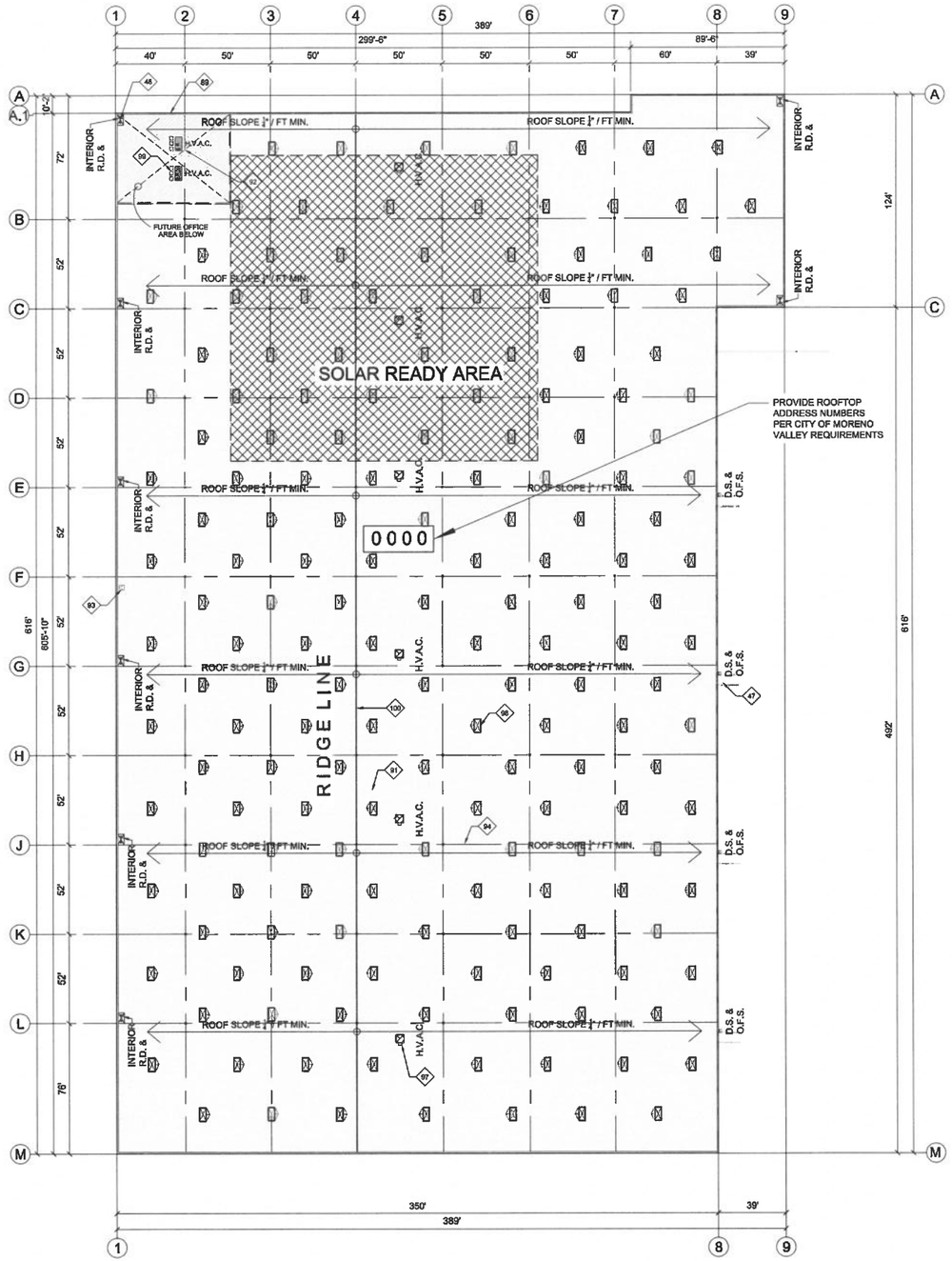
NORTH

BUILDING FLOOR PLAN
A2.0



A BUILDING ROOF PLAN
SCALE: 1" = 30'

ROOF PLAN GENERAL NOTES

- POLICE NOTE: ENSURE ANY TREES SURROUNDING BUILDING ROOFTOPS TO BE KEPT AT A DISTANCE TO PREVENT ROOF ACCESSIBILITY BY POTENTIAL BURGLARS. SINCE TREES ALSO ACT AS A NATURAL LADDER, THE BRANCHES MUST BE PRUNED TO HAVE AT LEAST SIX-FOOT CLEARANCE FROM THE BUILDING.
- POLICE NOTE: ROOFTOP ADDRESSING OF ALL BUILDINGS IS RECOMMENDED.

ROOF PLAN KEY NOTES

47 EXTERIOR METAL DOWNSPOUT AND OVERFLOW SCUPPERS PAINTED TO MATCH BUILDING. REFER TO PLUMBING PLANS FOR MINIMUM SCUPPER OPENINGS ALLOWABLE PER CODE.
48 INTERIOR ROOF DRAIN AND INTERIOR OVERFLOW DRAIN.
89 CONCRETE PARAPET, TYP.
91 4-PLY BUILT UP ROOFING CLASS "A". REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION. VERIFY WARRANTY REQUIREMENTS WITH OWNER.
92 FUTURE MECHANICAL EQUIPMENT
93 ROOF ACCESS HATCH.
94 ROOF FRAMING BELOW
95 PARAPET RETURN 2' MIN. OR PER PLAN
97 FUTURE EXHAUST FANS
98 4'X 8' SKYLIGHT.
99 WALKWAY PADS.
100 RIDGE/HIGH POINT OF ROOF.

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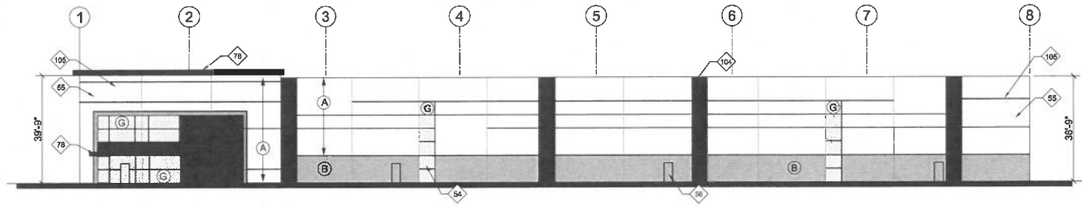
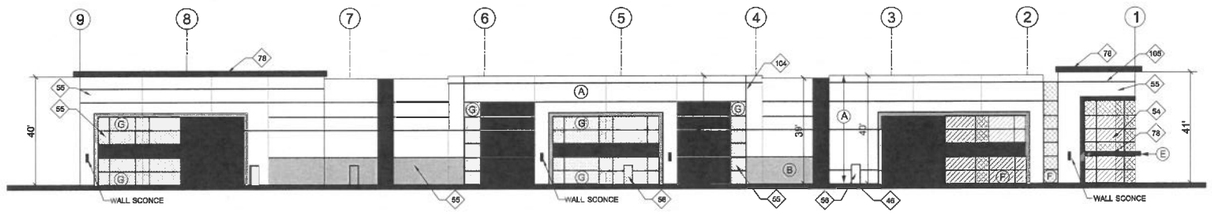
NORTH

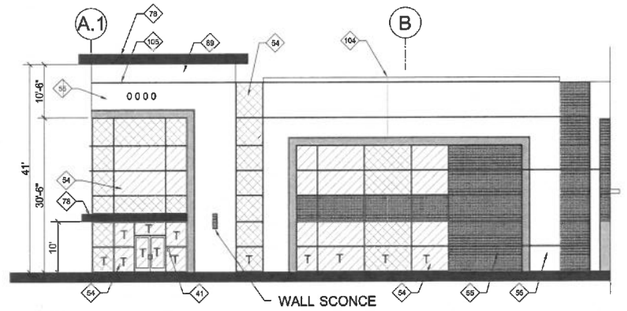
ROOF PLAN
A3.0



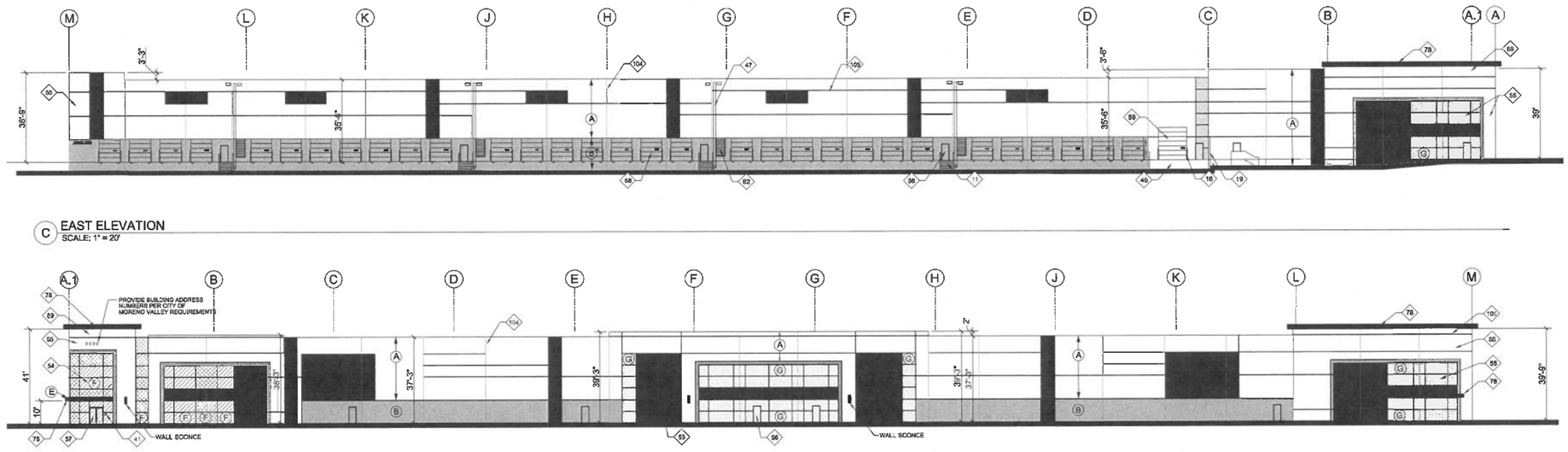
A SOUTH ELEVATION
SCALE: 1" = 20'



B NORTH ELEVATION
SCALE: 1" = 20'

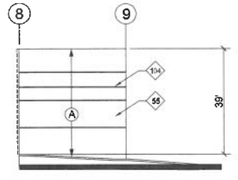


F ENLARGED PARTIAL WEST ELEVATION
SCALE: 3/32" = 1'-0"



C EAST ELEVATION
SCALE: 1" = 20'

D WEST ELEVATION
SCALE: 1" = 20'



E SOUTH ELEVATION AT TRUCK RAMP
SCALE: 1" = 20'

EXTERIOR ELEVATION KEY NOTES

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16	PROTECTIVE METAL BOLLARDS, CONCRETE FILLED, PAINTED, TYP.
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41	AFFIX THE INTERNATIONAL ACCESSIBILITY SYMBOL AT ALL ACCESSIBLE ENTRANCES.
45	CONCRETE TRUCK RAMP WITH 42" HIGH CONC. TILT UP GUARD WALLS PAINTED TO MATCH BUILDING, SEE ELEVATIONS.
48	CONCRETE LANDING PAD @ EXTERIOR MAN DOOR WITH STEP(S) WHEN SHOWN, PROVIDE HANDRAIL/GUARDRAIL AS REQUIRED, TYP. CONFIRM QUANTITY OF RISERS W/FINAL GRADING PLAN.
47	EXTERIOR METAL DOWNSPOUT & OVERFLOW SCUPPERS PAINTED TO MATCH BUILDING. SEE DETAIL 16/A2.4 REFER TO PLUMBING PLANS FOR MIN. SCUPPER OPENINGS ALLOWED PER CODE.
48	INTERIOR ROOF DRAIN AND INTERIOR OVERFLOW DRAIN
49	INTERIOR ROOF DRAIN AND OVERFLOW SCUPPER PAINTED TO MATCH BUILDING.
54	STOREFRONT, SEE ELEVATIONS & EXTERIOR COLOR SCHEDULE. STORE FRONT TO BE DESIGNED TO RESIST WIND LOADING AS REQUIRED BY BUILDING CODES AND LOCAL JURISDICTION. DESIGN OF STOREFRONT FRAMING SYSTEM AND STRUCTURAL CALCULATIONS TO BE DESIGN BUILD BY G.C. AND UNDER DEFERRED SUBMITTAL
55	CONCRETE TILT-UP PANEL, TYP., PAINTED, SEE EXTERIOR COLOR SCHEDULE, REFER TO ELEVATIONS
56	EXTERIOR MAN DOOR 3'X7', HOLLOW METAL, PAINTED, SEE EXTERIOR COLOR SCHEDULE
57	EXTERIOR STOREFRONT DOOR, SEE EXTERIOR COLOR SCHEDULE FOR ADDITIONAL INFO.
58	DOCK-HI LOADING DOOR, 9'X10', WITH VISION GLAZING PRE FINISHED BY MANUFACTURER PER COLOR SCHEDULE.
59	DRIVE THRU LOADING DOOR 12'X14' WITH VISION GLAZING, PRE FINISHED BY MANUFACTURER PER COLOR SCHEDULE.
62	AIR INTAKE LOUVER, PAINT TO MATCH BUILDING WALL, TYP. SIZE: HORIZONTAL 4'x3', PROVIDE BIRD SCREEN, FILTER AND BURGLAR BARS.
78	DECORATIVE METAL BROW
89	CONCRETE PARAPET, TYP.
104	PANEL JOINT, TYP.
105	2" DECORATIVE CONCRETE REVEAL WITH CHAMFERED EDGES, TYP."
109	ROOF LINE BEYOND

GLAZING LEGEND

VISION GLAZING:

SPANDREL GLAZING:

TEMPERED GLAZING = T

EXTERIOR COLOR SCHEDULE

- (A) SW EXTERIOR PAINT COLOR: SW 7007 - CEILING BRIGHT WHITE
- (B) SW EXTERIOR PAINT COLOR: SW 7072 - ONLINE
- (C) SW EXTERIOR PAINT COLOR: SW 7074 - SOFTWARE
- (D) SW EXTERIOR PAINT COLOR: SW 7075 - WEB GRAY
- (E) CHARCOAL METAL BROW & CANOPY
- (F) STOREFRONT MEDIUM PERFORMANCE BLUE REFLECTIVE GLAZING - NOT TO EXCEED AN OUTDOOR REFLECTANCE OF 25% - CLEAR ANODIZED MULLIONS
- (G) EXTERIOR PAINT COLOR: SW 7606 - BLUE CRUISE

TYPICAL PAINT NOTES:

1. PAINT MAN DOORS, GUARD WALLS, RAMP WALLS, STAIR WALLS, GUARD RAILS, ROOF DRAINS, AND LOUVERS TO MATCH ADJACENT BUILDING WALL U.N.O.
2. TRUCK DOORS TO BE PRE-FINISHED BY MANUFACTURER IN WHITE FINISH AND PAINT TO MATCH ADJACENT BUILDING WALL, U.N.O.

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EXTERIOR ELEVATIONS
A4.0

HEACOCK INDUSTRIAL
CONCEPTUAL GRADING PLAN
CITY OF MORENO VALLEY

EXISTING EASEMENTS:

(1) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIATION
PURPOSE: INSTALLATION AND MAINTENANCE OF PIPES, POLES OR OTHER NECESSARY EQUIPMENT FOR THE SUPPLY OF ELECTRICITY, GAS OR OTHER PUBLIC UTILITIES
RECORDED: MAY 29, 1933 IN BOOK 124, PAGE 325, O.R.

(2) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CITY OF MORENO VALLEY, A MUNICIPAL CORPORATION
PURPOSE: STREET RIGHT-OF-WAY
RECORDED: OCTOBER 21, 2009 AS DOC NO. 2009-0545361, O.R.

(3) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
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PURPOSE: STREET RIGHT-OF-WAY
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(4) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CITY OF MORENO VALLEY, A MUNICIPAL CORPORATION
PURPOSE: STREET RIGHT-OF-WAY
RECORDED: OCTOBER 21, 2009 AS DOC NO. 2009-0545363, O.R.

(5) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CITY OF MORENO VALLEY, A MUNICIPAL CORPORATION
PURPOSE: PUBLIC HIGHWAY PURPOSES, INCLUDING PUBLIC UTILITY AND PUBLIC SERVICE FACILITIES
RECORDED: JUNE 10, 2010 AS DOC NO. 2010-0266822, O.R.

(6) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CITY OF MORENO VALLEY, A MUNICIPAL CORPORATION
PURPOSE: PUBLIC HIGHWAY PURPOSES, INCLUDING PUBLIC UTILITY AND PUBLIC SERVICE FACILITIES
RECORDED: JUNE 10, 2010 AS DOC NO. 2010-0266823, O.R.

(7) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
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PURPOSE: PUBLIC HIGHWAY PURPOSES, INCLUDING PUBLIC UTILITY AND PUBLIC SERVICE FACILITIES
RECORDED: JUNE 10, 2010 AS DOC NO. 2010-0266824, O.R.

(8) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CITY OF MORENO VALLEY, A MUNICIPAL CORPORATION
PURPOSE: PUBLIC HIGHWAY PURPOSES, INCLUDING PUBLIC UTILITY AND PUBLIC SERVICE FACILITIES
RECORDED: JUNE 10, 2010 AS DOC NO. 2010-0266825, O.R.

(9) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
PURPOSE: STUB POLES, GUY WIRES, ANCHORS AND OTHER APPURTENANT FIXTURES AND/OR EQUIPMENT NEEDED FOR ANCHORAGE PURPOSES
RECORDED: OCTOBER 28, 2010 AS DOC NO. 2010-0516390, O.R.

(10) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
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RECORDED: OCTOBER 28, 2010 AS DOC NO. 2010-0516391, O.R.

(11) AN IRREVOCABLE OFFER TO DEDICATE AN EASEMENT OVER A PORTION OF SAID LAND FOR
PURPOSE(S): STORM DRAIN FACILITIES AND ALL APPURTENANT WORKS, INCLUDING INGRESS AND EGRESS
RECORDED: NOVEMBER 15, 2011 AS DOC NO. 2011-0508264, O.R.

(12) AN IRREVOCABLE OFFER TO DEDICATE AN EASEMENT OVER A PORTION OF SAID LAND FOR
PURPOSE(S): STORM DRAIN FACILITIES AND ALL APPURTENANT WORKS, INCLUDING INGRESS AND EGRESS
RECORDED: NOVEMBER 15, 2011 AS DOC NO. 2011-0508265, O.R.

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RECORDED: NOVEMBER 15, 2011 AS DOC NO. 2011-0508266, O.R.

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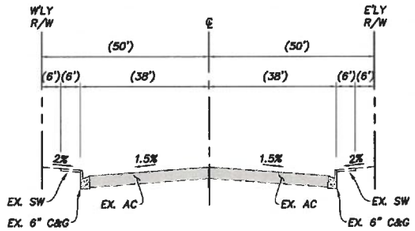
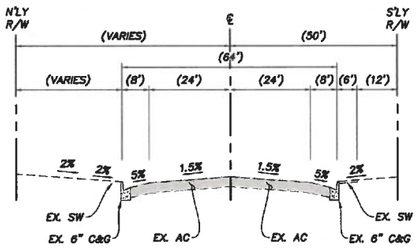
PURPOSE(S): STORM DRAIN FACILITIES AND ALL APPURTENANT WORKS, INCLUDING INGRESS AND EGRESS
RECORDED: NOVEMBER 15, 2011 AS DOC NO. 2011-0508267, O.R.

(15) 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: A PIPELINE OR PIPELINES AND OTHER FACILITIES
RECORDED: NOVEMBER 2, 2015 AS DOC NO.2015-0481001, O.R.

MARK	DATE	INITIAL	DESCRIPTION	REC	APPR	DATE
		EOR	REVISION			





TYPICAL SECTION
EX. IRONWOOD AVENUE
SCALE: 1"=20' (H.); 1"=4' (V)

OWNER
LEDO CAPITOL GROUP
670 LEDO WAY
LOS ANGELES, CA 94009
PHONE: (303) 419-6780
CONTACT: RYAN MARTIN

APPLICANT
HERDMAN ARCHITECTURE & DESIGN
16201 SCIENTIFIC WAY
IRVINE, CA 92618
PHONE: (949) 430-6072
CONTACT: JOHN SAULIETIS

CIVIL ENGINEER
SB&O, INC.
41889 ENTERPRISE CIRCLE NORTH, SUITE 126
TEMECULA, CA 92590
PHONE: (951) 695-8900
CONTACT: DON BROOKS

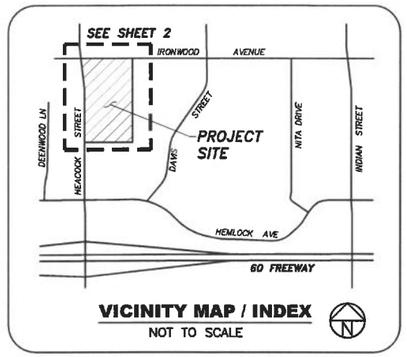
EARTHWORK QUANTITIES

	EXCAVATION	EMBANKMENT
RAW VOLUMES:	15,214	21,718
RAW SHRINKAGE (15%):	-2,282	
OVEREXAVATION SHRINKAGE (15%):	-6,321	
SUBSIDENCE (0.2%):		3,190
INFILTRATION SYSTEM SPOILS	1,347	
SPOILS	464	
TOTALS	8,422	24,909

THE ESTIMATE OF EARTHWORK QUANTITIES IS PROVIDED BY THE ENGINEER ONLY FOR THE CONVENIENCE OF THE CONTRACTOR AND DETERMINATION OF PLAN CHECK FEES. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF THE CONSTRUCTED QUANTITIES BEFORE SUBMITTING A BID.

LEGEND

- EXISTING RIGHT-OF-WAY
- EXISTING PROPERTY LINE
- PROPOSED BOUNDARY LINE
- PROPOSED PROPERTY LINE
- STREET CENTERLINE
- EXISTING CURB & GUTTER
- EXISTING SIDEWALK
- (626) EXISTING CONTOUR
- 626 PROPOSED CONTOUR
- DIRECTION OF DRAINAGE
- DRIVEWAY SIGHT DISTANCE
- PROPOSED SLOPE
- PROPOSED CURB & GUTTER
- PROPOSED RETAINING WALL
- PROPOSED CONC. SCREEN WALL
- PROPOSED 8' CHAIN LINK FENCE
- S6 PROPOSED SEWER
- W2 PROPOSED WATER
- PROPOSED STORM DRAIN
- (SB) EXISTING SEWER
- (W2) EXISTING WATER
- (SD42) EXISTING STORM DRAIN
- (UGE) EXISTING UNDERGROUND ELECTRICAL



PROJECT DESCRIPTION

THE PROJECT SITE IS LOCATED AT THE SOUTHEAST CORNER OF HEACOCK STREET AND IRONWOOD AVENUE ON 9.89 ACRES OF LAND WITHIN THE MORENO VALLEY FESTIVAL SPECIFIC PLAN 205, IN THE CITY OF MORENO VALLEY. THE PROJECT PROPOSES TO CONSTRUCT ONE INDUSTRIAL CONCRETE TILT-UP BUILDING.

A LOT MERGER IS BEING PROPOSED TO CONSOLIDATE THE EXISTING SIX LOTS.

LEGAL DESCRIPTION:

(APN 481-020-013, 029, 030, 035 & 038)

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:

LOTS 1, 2, 3 AND 4 OF SUNNYMEAD ORCHARD FARMS TRACT, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 14, PAGES 12 AND 13 OF MAPS, RIVERSIDE COUNTY RECORDS.

TOGETHER WITH THE SOUTHERLY 10 FEET OF IRONWOOD AVENUE, AS VACATED BY ORDER OF THE BOARD OF SUPERVISORS OF RIVERSIDE COUNTY, DATED JUNE 4, 1928 ON FILE IN SUPERVISOR'S MINUTE BOOK 20, PAGE 398, A CERTIFIED COPY OF WHICH WAS RECORDED JUNE 7, 1928 IN BOOK 768, PAGE 387 OF DEEDS.

EXCEPTING THEREFROM THAT PORTION AS DESCRIBED IN THE DEED TO THE COUNTY OF RIVERSIDE, RECORDED JULY 19, 1966 AS INSTRUMENT NO. 73738 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THAT PORTION OF LOT 1 AS CONVEYED TO EASTERN MUNICIPAL WATER DISTRICT, A PUBLIC AGENCY, AS CONTAINED IN DEED RECORDED NOVEMBER 2, 2015 AS INSTRUMENT NO. 2015-0481000 OF OFFICIAL RECORDS OF SAID COUNTY.

GENERAL NOTES

1. PROPERTY ADDRESS: SOUTHEAST CORNER OF HEACOCK STREET AND IRONWOOD AVENUE
2. APN's 481-020-013, 029, 030, 035 & 038
3. LEGAL DESCRIPTION: SEE LEFT HEREON.
4. BUILDING FOOTPRINT AREA: 217,390 SF
   BUILDING AREA: 220,390
5. PROPOSED USE: INDUSTRIAL WAREHOUSE/OFFICE FACILITY
   ZONING: MU (MIX OF USES) – MORENO VALLEY FESTIVAL SP 205
   BUILDING SETBACKS: IRONWOOD AVENUE – 30 FEET
   HEACOCK STREET – 20 FEET

   THE SUBJECT PROPERTY IS LOCATED WITHIN ZONE X, PER FEMA FLOOD INSURANCE RATE MAP 06065C0753G DATED 08/28/2008 AND AS AMENDED BY LOMR 09-09-0818P EFFECTIVE 4/30/09 & LOMR 12-09-0582P EFFECTIVE 1\31\13

   ZONE X OTHER AREAS – AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL FLOODPLAIN.
6. AERIAL TOPOGRAPHY PROVIDED BY AEROTECH MAPPING, PROJECT IRONWOOD, COMPILED FROM AERIAL PHOTOGRAPHY DATED 06/24/14.
   ACCURACY OF AERIAL TOPOGRAPHY:
   HORIZONTAL: 1"=40'
   VERTICAL: 1' CONTOUR INTERVAL

   AND SUPPLEMENT WITH FIELD SURVEY ON 7/28/2020
7. UTILITY PURVEYORS:

CHARTER SPECTRUM	(877) 906-9121
EASTERN MUNICIPAL WATER DIST	(951) 928-3777
CITY OF MORENO VALLEY	(951) 413-3160
SC EDISON COMPANY	(800) 655-4555
SC GAS COMPANY	(800) 427-2200
RIVERSIDE TRANSIT AGENCY	(951) 565-5164
UNDERGROUND SERVICE ALERT	(800) 227-2600
MORENO VALLEY UTILITY ADMINISTRATION	(951) 413-3500
CROWN CASTLE	(888) 632-0931

8. THERE ARE NO EXISTING STRUCTURES ON-SITE.
9. SEE ARCHITECTURAL SITE PLAN FOR LOCATION AND AND TYPES OF SIGNS.

SB&O INC.
PLANNING ENGINEERING SURVEYING
41889 Enterprise Circle North, Suite 126
Temecula, Ca. 92590
951-695-8900
951-695-8901 Fax

CONCEPTUAL GRADING PLAN
HEACOCK INDUSTRIAL
TITLE SHEET

PLAN PREPARED 11/4/20 SHEET 1 OF 2

I:\75542 HEACOCK INDUSTRIAL\DWG\C-75542-COP.DWG 11/4/2020 8:25:39 AM PLOTTED BY:BLAKE HATCH

HEACOCK STREET

PROPOSED 220,390 SF
INDUSTRIAL TILT-UP BUILDING
1654.00 FF

APN 481-020-035
VACANT LAND

APN 481-020-029
VACANT LAND

APN 481-020-013
VACANT LAND

APN 481-020-038
VACANT LAND

APN 481-020-045
INDUSTRIAL BUILDING

APN 481-020-043
INDUSTRIAL BUILDING

APN 481-020-044
INDUSTRIAL BUILDING

NOT A PART
APN 481-020-039
EMWD WELL SITE

IRONWOOD AVENUE

SUBSURFACE INFILTRATION BASIN 1650.6 GRADE BREAK

SCALE: 1" = 40'

GRAPHIC SCALE
40' 0 40' 80' 120'

MARK	DATE	INITIAL	DESCRIPTION	REC	APPR	DATE
		EOR	REVISION			

SB&O INC.
PLANNING ENGINEERING SURVEYING
41889 Enterprise Circle North, Suite 126
Temecula, Ca. 92590
951-695-6900
951-695-6901 Fax

CONCEPTUAL GRADING PLAN
HEACOCK INDUSTRIAL
TITLE SHEET

PLAN PREPARED 11/4/20 SHEET 2 OF 2

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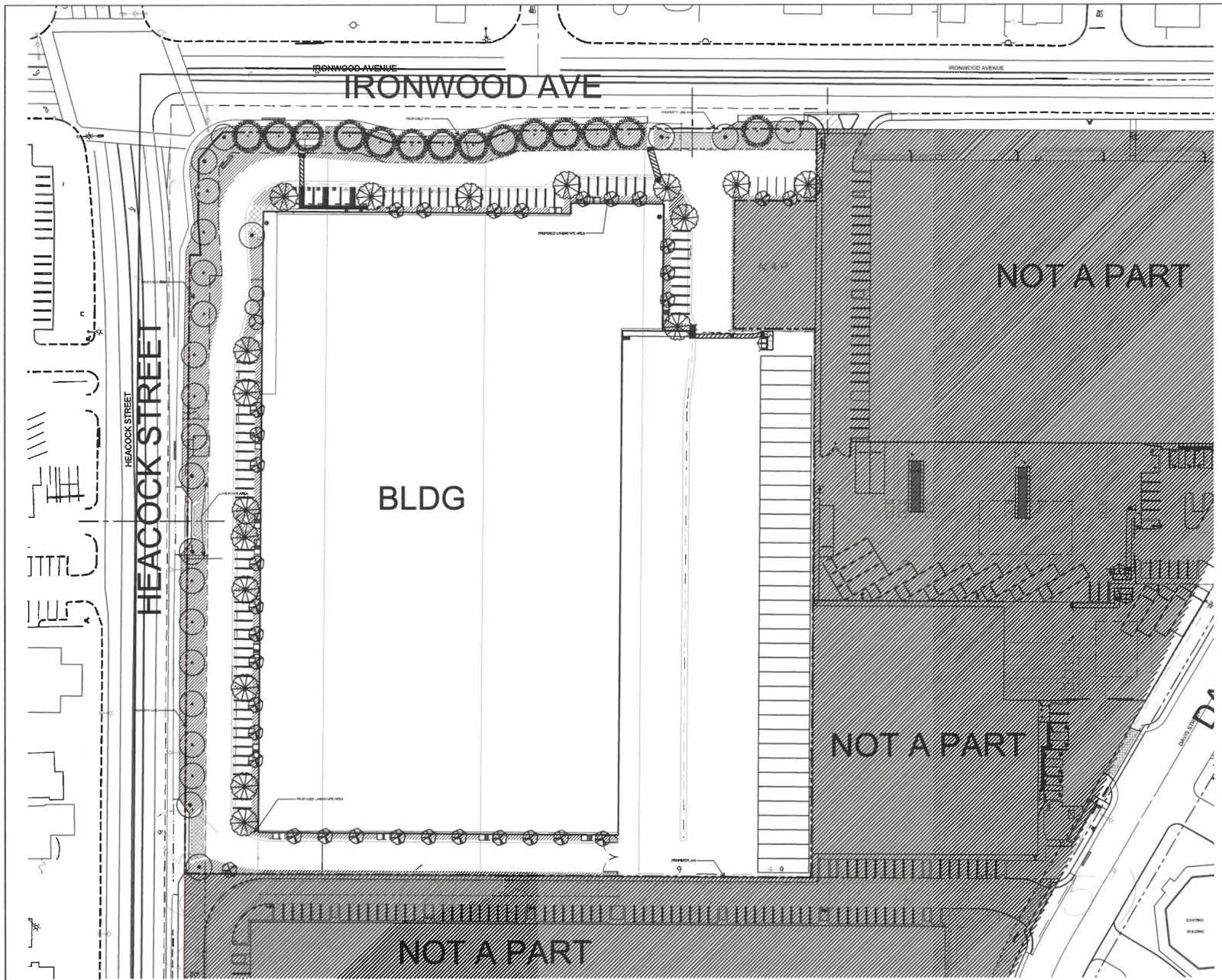


PLANTING LEGEND

TREES

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Acacia b. 'Purpurea' Purple Acacia	24" Box	1	L	Multi
	Geijera parvi 'Regent Shower' Blue Palo Verde	24" Box	19	L	Multi
	Arbutus 'Marina' Strawberry Tree	24" Box	17	L	Standard
	Pinus canariensis Canary Island Pine	24" Box	13	M	Standard
	Pinus eldarica Afghan Pine	24" Box	2	L	Standard
	Platanus acerifolia London Plane	24" Box	14	M	Standard
	Tristania conferta Brisbane Box	15 Gal	33	M	Standard

SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Callistemon 'Little John' Dwarf Bottle Brush	5 Gal	0	M	
	Carissa macrocarpa 'Tuttle' Natal Plum	5 Gal	0	M	
	Carissa 'Boxwood Beauty' Dwarf Fire Bush	5 Gal	0	M	
	Dianella 'Little Rev' Dwarf Dianella	5 Gal	0	M	
	Dianella tasmanica Dianella	5 Gal	0	M	
	Dietes bicolor Yellow Iris	5 Gal	0	M	
	Dodonaea viscosa 'Purpurea' Hopseed Bush	5 Gal	0	M	
	Rosmarinus officinalis Rosemary	5 Gal	0	L	
	Leucophyllum f. 'Green Cloud' Texas Ranger	5 Gal	0	L	
	Leucophyllum f. 'Rio Bravo' Texas Ranger	5 Gal	0	M	
	Myoporum californica Creeping	5 Gal	0	L	
	Rosmarinus o. 'Mound San Bruno' Dwarf Rosemary	5 Gal	0	L	
	Rosmarinus o. 'Tuscan Blue' Rosemary	5 Gal	0	L	
	Salvia c. 'Allen Chickering' Allen Chickering Sage	5 Gal	0	L	
	Salvia greggii Autumn Sage	5 Gal	0	L	
	Salvia leucantha Mexican Sage	5 Gal	0	L	
	Senna artemisioides Feathery Cassia	5 Gal	0	L	
	Westringia fruticosa Coast Rosemary	5 Gal	0	L	

ACCENTS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QTY	WUCOLS	REMARKS
	Agave americana Century Plant	5 Gal	0	L	
	Agave 'Blue Flame' Blue Flame Agave	5 Gal	0	L	
	Agave 'Blue Glow' Blue Glow Agave	5 Gal	0	L	
	Agave ovatifolia Agave	5 Gal	0	L	
	Agave parryi Agave	5 Gal	0	L	
	Aloe maculata Soap Aloe	5 Gal	0	L	
	Aloe striata Coral Aloe	5 Gal	0	L	
	Dasylirion wheeleri Desert Spoon	5 Gal	0	L	
	Hesperaloe 'Rutilla' Rutilla Hesperaloe	5 Gal	0	L	
	Hesperaloe parviflora Red Yucca	5 Gal	0	L	
	Kniphofia 'Gold Mound' Yellow Kanlana	5 Gal	0	L	

GROUNDCOVER

SYMBOL	BOTANICAL/COMMON NAME	SIZE	SPACING	WUCOLS	REMARKS
	Acacia redolens 'Low Boy' Dwarf Acacia	1 Gal	8' O.C.	L	
	Carex pansa California Meadow Sedge	4" Pots	12" O.C.	M	Grass
	Lantana - 'Yellow' Yellow Trailing Lantana	1 Gal	48" O.C.	L	
	Muhlenbergia capillaris Pink Muhly	1 Gal	36" O.C.	L	Grass
	Myoporum parvifolium Myoporum	1 Gal	36" O.C.	L	
	Nassella pulchra Northern Feather Grass	1 Gal	24" O.C.	VL	Grass
	Rosa 'Flower Carpet'-Red Red Flower Carpet Rose	1 Gal	36" O.C.	L	
	Rosmarinus o. 'Huntington Carpet' Prostrate Rosemary	1 Gal	48" O.C.	L	
	Sesleria autumnalis Moor Grass	1 Gal	18" O.C.	M	Grass
	Trachelospermum jasminoides Star Jasmine	1 Gal	24" O.C.	M	
	Tulbaghia violacea Society Garlic	1 Gal	24" O.C.	M	

PROJECT INFORMATION

GROSS SITE AREA	434,902 S.F.
BUILDING AREA	229,368 S.F.
PARKING AREA	98,229 S.F.
LANDSCAPE AREA	47,722 S.F.

PROJECT DESCRIPTION

SOUTHEAST CORNER OF HEACOCK STREET AND IRONWOOD AVENUE ON 9.98 ACRES OF LAND.

N

N.T.S.

N

0 20' 40' 80'

Ryan Martin - Heacock St.

Conceptual Landscape Improvement plan

20-080
08.04.20
09.12.20
11.02.20

A.P.N. 481-020-013, 029, 030, 035 & 038

Moreno Valley, California

HUNTER LANDSCAPE
711 FEE ANA STREET PLACENTIA, CA 92870
714.986.2400 FAX 714.986.2408

PLANTING LEGEND — PHOTO

TREES

SYMBOL	BOTANICAL/COMMON NAME	SIZE	PHOTO
	Cercidium 'Desert Museum' Blue Palo Verde	24" Box	1

SHRUBS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	PHOTO
	Rhamnus californica Coffeeberry	5 Gal	2
	Salvia greggii Autumn Sage	5 Gal	3
	Salvia c. 'Allen Chickering' Allen Chickering Sage	5 Gal	4
	Westringia f. 'Grey Box Dwarf Coast Rosemary	5 Gal	

ACCENTS

SYMBOL	BOTANICAL/COMMON NAME	SIZE	PHOTO
	Agave 'Blue Glow Blue Glow Agave	5 Gal	5
	Agave desmeniana Smooth Agave	5 Gal	6
	Echinocactus grusonii Golden Glow Barrel Cactus	5 Gal	7

GROUNDCOVER

SYMBOL	BOTANICAL/COMMON NAME	SIZE	PHOTO
	Lantana 'Gold Mound' Yellow Lantana	1 Gal	8

3/4" crushed rock decorative rock -Desert Gold. 3" layer over filter fabric.

N

0 20 40 80'

Ryan Martin - Heacock St.

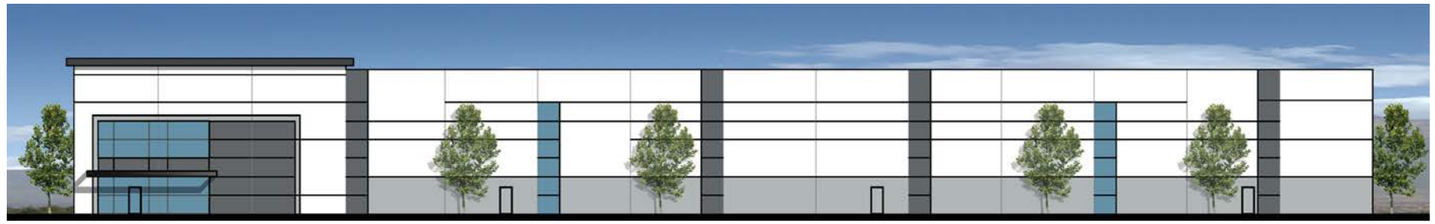
Conceptual Landscape Improvement plan

20-080
08.04.20 12.17.20
08.12.20
11.02.20

A.P.N. 481-020-013, 029, 030, 035 & 038

Moreno Valley, California

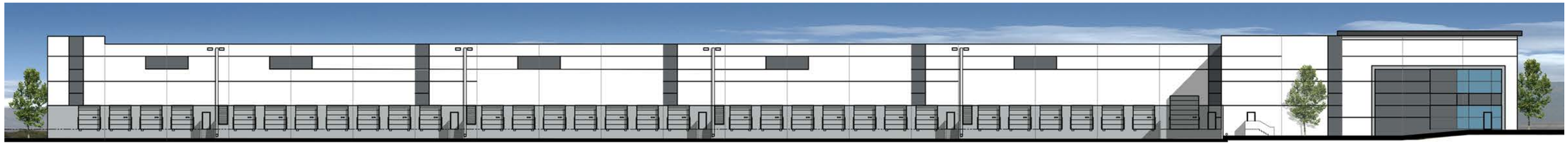
HUNTER LANDSCAPE
711 FEE ANA STREET PLACENTIA, CA 92870
714.986.2400 FAX 714.986.2408



SOUTH ELEVATION

NORTH ELEVATION

ENLARGED PARTIAL WEST ELEVATION



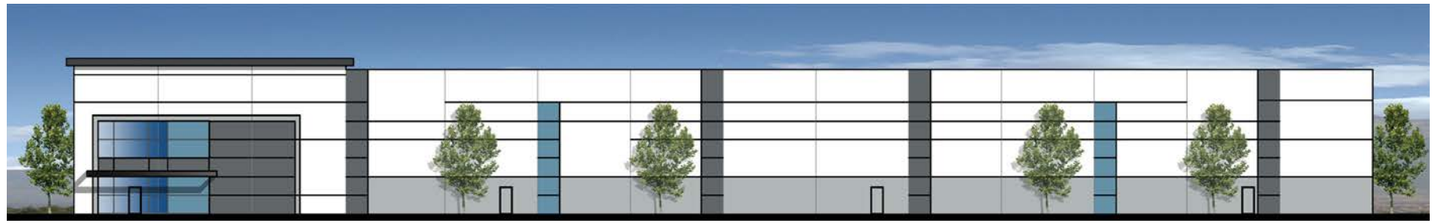
EAST ELEVATION

WEST ELEVATION

HERDMAN
ARCHITECTURE + DESIGN

RYAN MARTIN
MORENO VALLEY, CA

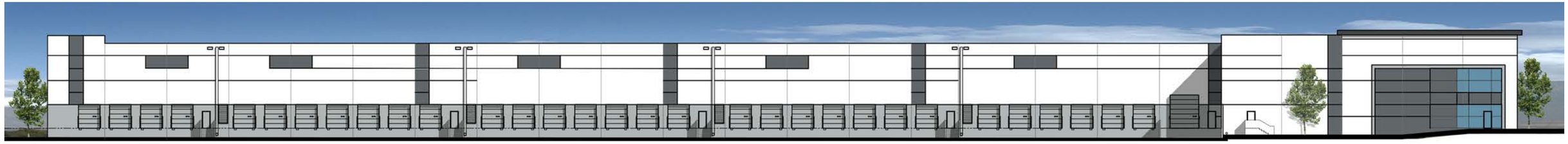
11.25.2020
H-A+D JOB NO: A19-2030_SCHEME 1



SOUTH ELEVATION

NORTH ELEVATION

ENLARGED PARTIAL WEST ELEVATION



EAST ELEVATION

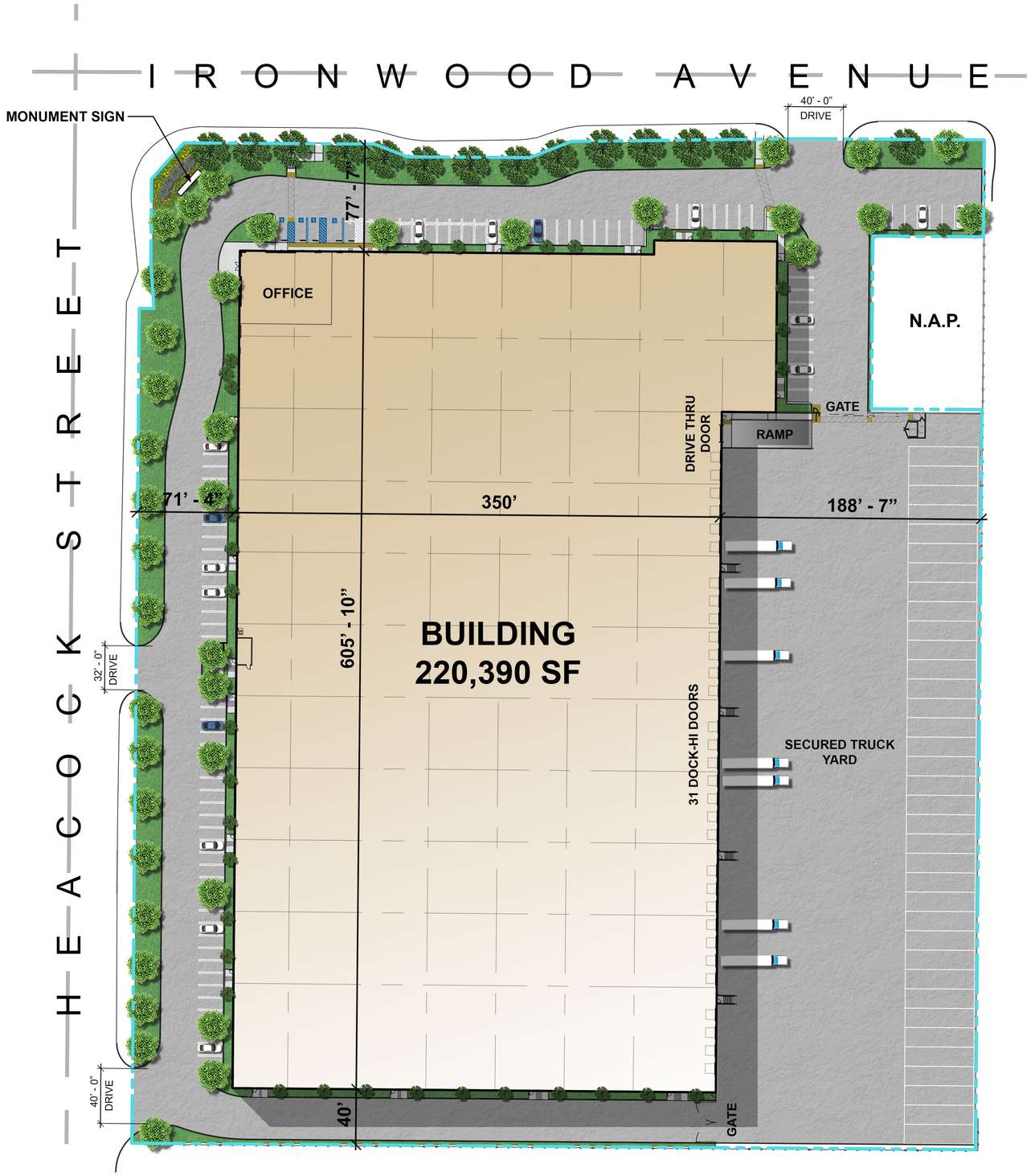
WEST ELEVATION

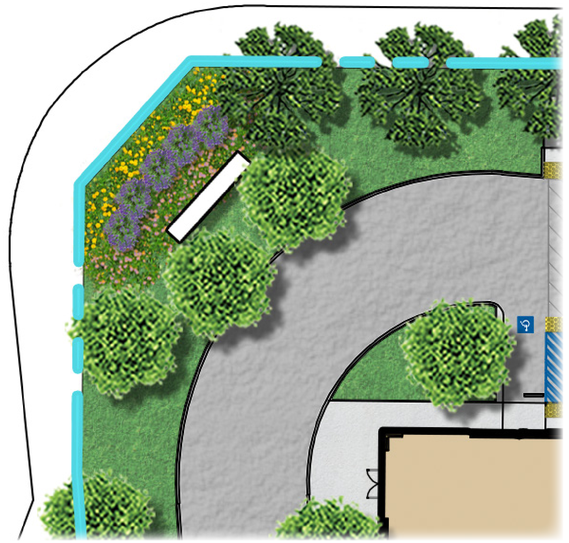
HERDMAN
ARCHITECTURE + DESIGN

RYAN MARTIN
MORENO VALLEY, CA

11.25.2020
H-A+D JOB NO: A19-2030_SCHEME 2

Attachment: Elevation corner view (4266 : PEN20-0137-0139 Plot Plan for a Light Industrial Building)





ENLARGED MONUMENT SIGN AREA

PROJECT INFORMATION - SCHEME 18		
GROSS SITE AREA	434,832 SF	9.98
TOTAL BUILDING AREA		220,390
FAR		50.7%
MAX FAR		NONE
		ZONE: COMERCIAL SP
STREET FRONT BLDG. SETBACK		20FT
STREET SIDE BLDG. SETBACK		20 FT
STREET FRONT & SIDE LANDSCAPE SETBACK		20 FT
INT/REAR SETBACK		NONE

BUILDING		
BUILDING AREA		220,390
FOOTPRINT		217,390
	WAREHOUSE	214,390
	OFFICE	3,000
MEZZANINE		3,000
	OFFICE	3,000
PARKING REQUIRED	(9' x 18')	98
	WAREHOUSE @ 1/1000 1ST 20K	20
	WAREHOUSE @ 1/2000 20K - 40K	10
	WAREHOUSE @ 1/4000 40K +	44
	OFFICE @ 1/250	24
PARKING PROVIDED	(9' x 18')	98
	STANDARD	85
	ADA	3
	ADA EVCS STND	1
	ADA EVCS VAN	1
	EVCS	3
	CLEAN AIR	5
	TRAILER	36

NORTH

HERDMAN
ARCHITECTURE + DESIGN

RYAN MARTIN
MORENO VALLEY, CA

12.16.2020
H-A+D JOB NO: A19-2030

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 Commissio
the City of Moreno Valley:

DATE & TIME: January 14, 2021at 7:00 P.M. **VIA TELECONFEREN ONLY**

COVID-19 TELECONFERENCE INSTRUCTIONS:
For Teleconference Meeting public participation instructions please agenda at **http://morenovalleyca.iqm2.com/Citizens/default.aspx**

PROJECT LOCATION: Southeast corner of Heacock Street and Ironw Avenue APN's 481-020-013, 029, 030, 034, 035 & 038

CASE NUMBER(s): PEN20-0137 – PEN20-0139

CASE PLANNER: Julia Descoteaux, Associate Planner (951) 413 320
juliad@moval.org

<APN>
<Property Owner>
<Street Address>
<City, State, Zip>

NOTICE OF PUBLIC HEARING

PROPOSAL: Applicant is requesting approval of the following entitlements for a 10-acre site: 1) a General Plan Amendment (GPA) amendin the City's General Plan from Commercial to Business Park, 2); a Specific Plan Amendment from SP205 Retail Commercial to SP 205 Mixe Use; and 3) a Plot Plan for an approximately 200,000 square foot light industrial building.

ENVIRONMENTAL DETERMINATION: The project has been evaluated against the criteria set forth in the California Environmental Qualit Act (CEQA) and CEQA Guidelines and staff has determined that a Mitigated Negative Declaration is the appropriate environmental documer for the proposed project.

The Draft Initial Study/Mitigated Negative Declaration is being circulated for public review by responsible and trustee agencies and othe interested parties for a review period commencing December 23, 2020, through January 11, 2021. The documents can be obtained in electroni format via email by request. The final document may be inspected by appointment at the Community Development Department at 1417 Frederick Street, Moreno Valley, California by calling (951) 413-3206 during normal business hours (7:30 a.m. to 5:30 p.m., Monday throug Thursday).

PUBLIC HEARING: All interested parties will be provided an opportunity to submit oral testimony during the teleconferenced Public Hearin and/or provide written testimony during or prior to the teleconferenced Public Hearing. The application file and related environmental document may be inspected by appointment at the Community Development Department at 14177 Frederick Street, Moreno Valley, California by callin (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 the COVID-19 pandemic situation, staff will attempt to make reasonabl arrangements to ensure accessibility to inspect the aforementioned records. **In addition, special instructions on how to effectivel participate in the teleconferenced Public Hearing, as approved by Governor Executive Order N-25-20, will be posted a http://morenovalleyca.iqm2.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 t teleconferenced Public Hearing.

GOVERNMENT CODE § 65009 NOTICE: If you challenge any of the proposed actions taken by the Planning Commission in court, you m be limited to raising only those issues you or someone else raised during the teleconferenced Public Hearing described in this notice, or 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 o 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 accessib

KERNWOOD DR.
LANEWOOD DR. LOT C
LOT B
PAR 1
10
4.50 AC NT
451.13
526.28
333.15
100
120
150
POR LOT 64
271
1.85 AC
S.B.E. 148-33-16-1
TRA 021-021
TRA 021-015
LOT D
TABOR DR.
LOT E
SETON PL.
LOT F
IRONWOOD AVE.
T. 2 S.
SOF TR PM163/16
545363 10/09
545362 10/09
545361 10/09
POR PAR 1
1.01 AC ML
POR PAR 4
POR LOT 63
272
021-021
021-015
PAR 1
PAR 2
PAR 3
PAR 4
POR PAR 3
POR PAR 4
ZANTAR
DAVIS ST.
L.N.
POR 6
2.01 AC
193
292/19
PAR 1
PAR 2
PAR 3
LOT B
LOT A
DEERWOOD LANE
POR 5
POR 6
182
292/18
POR 36
POR 37
LOT B
LOT C
STREET
30
EX
34
EX
1
(11.82)
4
3
2
POR 1
39
EX
021-329
021-330
44
5.36 AC ML
PAR 14
35
2.21 AC ML
29
2.44 AC ML
13
2.54 AC ML
38
2.54 AC ML
481/2
TRA
TRA
TRA
021-329
021-330
43
2.03 AC ML
POR 8
45
9.77 AC ML
BLK 2
POR 8
36
1.61 AC ML
HEACOCK
SO TR
HEMLOCK AVENUE
DAVIS
STREET
LOT A
PAR 3
21
PAR 4
22
23
1.00 AC ML
PAR 2
20
EX
12.90 AC
600 FT
1" = 200'
1" 200'
N
LOT E
AVENUE
POR PAR 1
40
1.97 AC ML
POR PAR 1
41
EX
1.87 AC ML
280.44
301.96
357.93
301.54
475/27
264/19
PM163/16

PLANNING COMMISSION

STAFF REPORT

Meeting Date: January 14, 2021

CONDITIONAL USE PERMIT FOR A 1032 SQUARE FOOT LIQUOR STORE NAMED "DUKE'S LIQUOR"

Case:	PEN20-0194 Conditional Use Permit
Applicant:	Rafael Shahid
Property Owner	Butterfield Valley Partners
Representative	Samuel Meleika
Location:	25045 Sunnymead Boulevard, east side of Perris Boulevard Assessor's Parcel Number 479-040-027
Case Planner:	Claudia Manrique
Council District:	3
Proposal	Conditional Use Permit for a 1032 square foot Liquor Store named "Duke's Liquor"

SUMMARY

The applicant, Rafael Shahid, is requesting approval of a Conditional Use Permit (CUP) to allow for a 1032 square foot liquor store named "Duke's Liquor" in the Butterfield Valley Plaza in the Village Specific Plan SP 204, Community Commercial zoning district.

PROJECT DESCRIPTION

Project

The applicant is proposing to relocate his existing convenience store at 25073 Sunnymead Boulevard to the proposed site at 25045 Sunnymead Boulevard. Both sites are within the Butterfield Valley Village commercial center; the current location is within a multi-tenant in-line building within the center, and the proposed location is within a freestanding building in the center adjacent to Perris Boulevard. Existing operations will remain substantially the same; there will be an increase in cooler space and the store will continue to sell beer, wine, and liquor and related product sales along with convenience food and other items. The current location has a Type 21 alcohol license (Off-Sale General, which authorizes the sale of beer, wine, and distilled spirits for consumption off-premises); the same is proposed for the current location. The applicant is not proposing any exterior modifications to the building or site as part of the proposed project. Hours of operation will be between the hours of 8:00 am to 9:00 pm.

Site and Surrounding Area

The proposed liquor store will be located within the existing Butterfield Valley Shopping Center on the south side of Sunnymead Boulevard east of Perris Boulevard. The site is located in the Sunnymead Village Specific Plan (SP 204) Community Commercial (CC) land use district. The Sunnymead Village Specific Plan (SP 204) Community Commercial (CC) land use district is subject to the development standards and permitted uses table of the City's Municipal Code Community Commercial (CC) District. A liquor store is a conditionally permitted use in the Community Commercial (CC) District when located three hundred (300) feet or less from a residential zone or use.

The surrounding parcels to the north, south, east and west are located within the Sunnymead Village Specific Plan (SP 204) Community Commercial (CC) land use district, which are developed with a combination of retail and service uses. To the southeast is an existing apartment complex zoned Residential 15 (R115) as well as single-family residences within the Residential 5 (R5) District.

Access/Parking

The project is accessible from multiple existing driveways along Sunnymead Boulevard and Perris Boulevard.

Existing parking spaces within the proposed site exceed the required number of parking spaces (5 spaces) for retail uses. The parcel is providing twenty (20) parking spaces.

Conditional Use Permit

Staff finds the project to be consistent with Municipal Code requirements and required Conditional Use Permit findings. The proposed use will replace a previously approved use in the vicinity with similar operations, and the proposed location is further from residential uses and zoning than the existing location. To avoid the operation of multiple liquor stores within one center and potential associated impacts, staff has included a condition of approval requiring the surrender of the existing conditional use permit.

REVIEW PROCESS

The Planning Division reviewed the project for consistency with the Municipal Code and routed to City departments, including routing to the Moreno Valley Police Department for their review.

ENVIRONMENTAL

Staff recommends that the Planning Commission find that the proposed Project is exempt from the provisions of the California Environmental Quality Act (CEQA) under CEQA Guidelines as a Class 32 Exemption (Section 15332, In-Fill Development Projects).

Pursuant to the California Code of Regulations a Class 32 Exemption can be applied to a project when the project is 1) consistent with the applicable General Plan designation and applicable policies; 2) occurs on a site that is less than five acres in size; 3) the site has no valuable habitat for rare or endangered species; 4) the project will not result in significant effects related to traffic, noise, air quality, or water quality; and 5) the site is adequately served by utilities and public services. The proposed Project has been found to meet all of the conditions of the Class 32 exemption as the Project is consistent with the applicable General Plan designation and policies; is associated with the reuse of an existing 1032 square foot tenant space; contains no valuable habitat for rare or endangered species; will not result in significant environmental effects; and is adequately served by utilities and public services.

NOTIFICATION

Public notices were sent to all property owners of record within 600' of the Project on December 29, 2020. The public hearing notice for this project was posted on the Project site and published in the local newspaper on January 2, 2021.

STAFF RECOMMENDATION

Staff recommends that the Planning Commission

1. **APPROVE** Resolution No. 2021-05:

    a. **FINDING AND DETERMINING** that PEN20-0194 has been evaluated pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines Section 15332 and is categorically exempt from environmental review as a Class 32 exemption (Infill Development Projects); and

    b. **APPROVING** Conditional Use Permit PEN20-0194 subject to the Conditions of Approval attached as Exhibit A.

Prepared by: Approved by:

Claudia Manrique
Associate Planner

Manuel A. Mancha
Community Development Director

ATTACHMENTS

1. Resolution No. 2021-05 Conditional Use Permit
2. Exhibit A to Resolution No. 2021-05 Conditions of Approval
3. Site Plans and Elevation Photos
4. Aerial Photograph
5. Zoning
6. Mailing Notice
7. Radius Map

RESOLUTION NUMBER 2021-05

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, APPROVING A CONDITIONAL USE PERMIT (PEN20-0194) FOR A LIQUOR STORE LOCATED AT 25045 SUNNYMEAD BOULEVARD (APN 479-040-027)

WHEREAS, the City of Moreno Valley ("City") is a general law city and a municipal corporation of the State of California; and

WHEREAS, Rafael Shahid ("Applicant") has filed an application for the approval of Conditional Use Permit PEN20-0194 ("Application") for the development of a Liquor Store named "Duke's Liquor" in an existing 1,032 square foot building within the Butterfield Valley Plaza ("Project") located at 25045 Sunnymead 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, Specific Plan 204 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 the public health, safety and welfare to 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 January 14, 2021, 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 January 14, 2021, 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 Section 9.02.060 ("Conditional Use Permits") of the Municipal Code, at the public hearing the Planning Commission

considered Conditions of Approval Nos. 1 through 21 to be imposed upon Conditional Use Permit PEN20-0194 ("CUP"), which conditions were prepared by Planning Division staff who deemed said conditions to be necessary to protect the 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 reviewed and considered the Planning Division's recommendation that the proposed Project is Categorically Exempt from the provisions of the California Environmental Quality Act (CEQA[1]) under CEQA Guidelines[2] Section 15332 (In-Fill Development Projects) which can be applied to a project when the project is 1) consistent with the applicable General Plan designation and applicable policies; 2) occurs on a site that is less than five acres in size; 3) the site has no valuable habitat for rare or endangered species; 4) the project will not result in significant effects related to traffic, noise, air quality, or water quality; and 5) the site is adequately served by utilities and public services; and

WHEREAS, at the public hearing, the Planning Commission reviewed and 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 Conditions of Approval Nos.1 through 21.

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 CUP, including, but not limited to, the following:

(a) Moreno Valley General Plan and all other relevant provisions contained therein;
(b) Title 9 (Planning and Zoning) of the Moreno Valley Municipal Code and all other relevant provisions referenced therein;
(c) Specific Plan 204 and all relevant provisions referenced therein;

[1] Public Resources Code §§ 21000-21177
[2] 14 California Code of Regulations §§15000-15387

(d) Application for the approval of Conditional Use Permit (CUP) PEN20-0194 and all documents, records and references contained therein;
(e) Conditions of Approval for CUP PEN20-0194, attached hereto as Exhibit A;
(f) 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;
(g) Staff's determination that the proposed Project is categorically exempt in compliance with the California Environmental Quality Act (CEQA) and CEQA Guidelines;
(h) Testimony and/or comments from Applicant and its representatives during the public hearing; and
(i) Testimony and/or comments from all persons that was provided in written format or correspondence, 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) 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 4. Determination of Categorical Exemption

That the Planning Commission hereby determines that the proposed Project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) under CEQA Guidelines Section 15332 (In-Fill Development Projects).

Section 4. Notice of Exemption

That the Planning Division is hereby directed to prepare, execute, and file a Notice of Exemption as required by Section 5.2 (Noticing Requirements) of the City's Rules and Procedures for the Implementation of the California Environmental Quality Act and CEQA Guidelines Section 15062.

Section 5. Approval

That based on the foregoing Recitals, Administrative Record and Findings, the Planning Commission hereby approves CUP PEN20-0194 subject to the Conditions of Approval for CUP PEN20-0194, 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 _____, 2021.

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

Exhibit A

CONDITIONS OF APPROVAL

CITY OF MORENO VALLEY
CONDITIONS OF APPROVAL Conditional
Use Permit (PEN20-0194)

EFFECTIVE DATE:
EXPIRATION DATE:

COMMUNITY DEVELOPMENT DEPARTMENT

Planning 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. This approval shall expire three years after the approval date of this project unless used or extended as provided for by the City of Moreno Valley Municipal Code; otherwise it shall become null and void and of no effect whatsoever. Use means the beginning of substantial construction contemplated by this approval within the three-year period, which is thereafter pursued to completion, or the beginning of substantial utilization contemplated by this approval. (MC 9.02.230)

4. In the event the use hereby permitted ceases operation for a period of one (1) year or more, or as defined in the current Municipal Code, this permit may be revoked in accordance with provisions of the Municipal Code. (applicable to CUP's)

5. All landscaped areas shall be maintained in a healthy and thriving condition, free from weeds, trash and debris. (MC 9.02.030)

6. This project is located within the Village Specific Plan 204. The provisions of the specific plan, the design manual, their subsequent amendments, and the Conditions of Approval shall prevail unless modified herein. (MC 9.13)

7. 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)

8. The property owner and applicant shall surrender the existing Conditional Use Permit PEN16-0164 via a letter request submitted to the Community Development Director.

Special Conditions

9. The owner or owner's representative shall establish and maintain a relationship with the City of Moreno Valley and cooperate with the Problem Oriented Policing (POP) program, or its successors.

10. The site has been approved for Conditional Use Permit PEN20-0194 for a liquor store in an existing structure at 25045 Sunnymead Boulevard. A change or modification shall require separate approval. Violation may result in revocation of the Conditional Use Permit.

Building Division

11. The proposed non-residential project shall comply with the latest Federal Law, Americans with Disabilities Act, and State Law, California Code of Regulations, Title 24, Chapter 11B for accessibility standards for the disabled including access to the site, exits, bathrooms, work spaces, etc.

12. Contact the Building Safety Division for permit application submittal requirements . A complete set of tenant improvement plans must be submitted to Building & Safety for review of construction documents and subsequent issuance of required building permits.

13. Any construction within the city shall only be completed between the hour of seven a.m. to seven p.m. Monday through Friday, excluding holidays and from eight a.m. to four p.m. on Saturday, unless written approval is obtained from the city building official or city engineer (Municipal Code Section 8.14.040.E).

14. Building plans submitted shall be signed and sealed by a California licensed design professional as required by the State Business and Professions Code.

15. The proposed development is subject to the payment of applicable processing fees as required by the City's current Fee Ordinance at the time a building permit application is submitted or prior to the issuance of permits as determined by the City.

16. 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.

17. 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 California Plumbing Code, Table 422.1. The occupant load and occupancy classification shall be determined in accordance with the California Building Code.

18. All remodeled 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 CBC.

19. 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

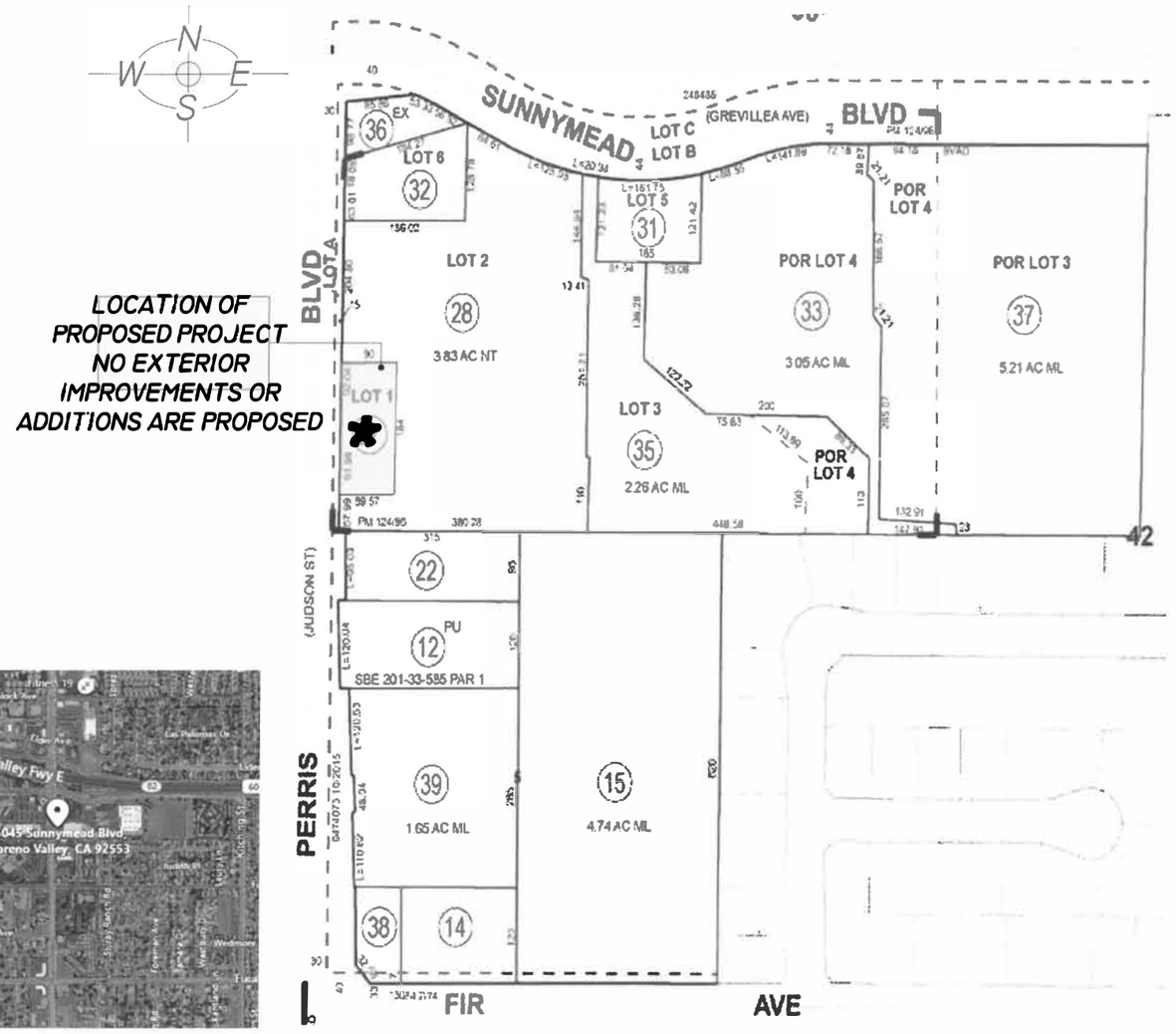
Fire Prevention Bureau

20. Prior to issuance of Certificate of Occupancy or Building Final, all commercial buildings shall display street numbers in a prominent location on the street side and rear access locations. The numerals shall be a minimum of twelve inches in height . (CFC 505.1, MVMC 8.36.060[I])

21. 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.

22. The Fire Code Official is authorized to enforce the fire safety during construction requirements of Chapter 33. (CFC Chapter 33 & CBC Chapter 33)

CONDITIONAL USE PERMIT APPLICATION :
PROPOSED TENANT IMPROVEMENT
AT
25045 SUNNYMEAD BLVD.
MORENO VALLEY CA, 92557
FOR:
MR. RAFAEL SHAHID



LOCATION OF PROPOSED PROJECT NO EXTERIOR IMPROVEMENTS OR ADDITIONS ARE PROPOSED

TECHNICAL SITE PLAN

VICINITY MAP

SITE TECHNICAL DATA & SPECIFICATIONS		SITE TECHNICAL DATA & SPECIFICATIONS	
ITEM	DESCRIPTION	ITEM	DESCRIPTION
SCOPE OF : WORK	A PROPOSED TENANT IMPROVEMENT CONSISTING OF CONVERTING A VACANT RETAIL UNIT INTO A LIQUOR RETAIL ESTABLISHMENT. IMPROVEMENTS SHALL CONSIST OF MODIFICATIONS ONLY. NO GREASE TRAP OR GREASE INTERCEPTOR WILL BE PROPOSED. NO UTILITY, PIPING, OR CONDUIT SHALL ALTERED, MODIFIED BEYOND THE PROPOSED THE AREA OF ALTERATION	PERSONNEL:	PROPERTY OWNER: LEE OUYE 3424 CARSON STE#550 TORRANCE CA, 90503 310-370-9727 TENANT: RAFAEL SHAHID 26861 KALMIA AVE MORENO VALLEY CA, 92557 951-453-0806
BUILDING: TYPE	OCCUPANCY: M RETAIL ESTABLISHMENT	ASSESSORS: PARCEL NUMBER	479-040-027
PROXIMITY:	LOTS 6 (32) &(36) (NORTH WEST CORNER OF THE DEVELOPMENT) : SIZZLER, DINING ESTABLISHMENT LOTS 3 (35) & 4 (33) (EAST OF PROPOSED TENANT IMPROVEMENT) : CARDENAS MARKET, GROCERY STORE	LOT AREA & DIMENSIONS	184'X90'= 16560 FT² = .380 ACRES
DEMOLITION:	MINOR INTERIOR ELEMENTS SUCH AS NON-BEARING WALLS AND LIGHT FIXTURES, SWITCHES, OUTLETS	RIGHTS-OF-WAY & EASEMENTS:	ENCLOSED PRELIMINARY TITLE REPORT MAKES REFERENCE TO BOTH RIGHTS-OF-WAY AND EASEMENTS. THE PROPOSED SCOPE OF WORK WILL NOT IMPACT ANY RIGHT-OF-WAY OR EASEMENT.
EXTERIOR: WORK	SIGNAGE OF COMPANY LOGO SHALL BE AFFIXED TO EXTERIOR FACADE	LEGAL DESCRIPTION:	REAL PROPERTY IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS: PARCEL A: PARCEL 1 OF PARCEL MAP 19975, AS SHOWN BY MAP ON FILE IN BOOK 124, PAGES 96 AND 97 OF PARCEL MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA. PARCEL B: A MUTUAL, RECIPROCAL, NONEXCLUSIVE EASEMENT FOR INGRESS AND EGRESS BY VEHICULAR AND PEDESTRIAN TRAFFIC AND VEHICULAR PARKING AS CREATED BY THAT CERTAIN "AMENDED AND RESTATED DECLARATION OF RESTRICTIONS AND GRANT OF EASEMENT", RECORDED OCTOBER 30, 1985, AS INSTRUMENT NO. 245013, OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA
INTERIOR: WORK	TENANT IMPROVEMENT CONSISTING OF MINOR WORK, LIGHTING, CONSTRUCTION OF NON-BEARING WORK ETC		
MAPS/ PARCEL:	TRACT#: 021-364 PAGE: 06 ASSESSOR'S MAP BOOK: 479 RIVERSIDE COUNTY, CALIF. DATA: MB 9/17 SUNNYMEAD ORCHARD TR. C.S. 271-J C.S. 204-148 MAP REFERENCE: MB 11/10 S.B. BEAR VALLEY & ALESSANDRO DEVELOPMENT PM 124/96-97 PARCEL MAP NO. 19975	PROPOSED EARTHWORK:	NONE
		FEMA FLOOD ZONE:	NONE
		UTILITIES.	MORENO VALLEY ELECTRIC (MVU) EASTERN MUNICIPAL WATER DISTRICT MORENO VALLEY PUBLIC WORKS SOCAL GAS

MELEIKA & ASSOCIATES
CONSULTING ENGINEERS
7693 PALMILLA DR, UNIT 2427
SAN DIEGO, CA 92122
951-255-7423
SAMUELMELEIKA@YAHOO.COM

PROJECT NAME:
CONDITIONAL USE PERMIT APPLICATION FOR PROPOSED TENANT IMPROVEMENT

PROJECT ADDRESS:
25045 SUNNYMEAD BLVD.
MORENO VALLEY, CA 92553

SUBMITTALS/ REVISIONS:

	DESCRIPTION	DATE
1	1ST PLAN REVIEW	10/05/20
2		
3		
4		
5		

PROJECT #
INT-0001

E.O.R STAMP/ SIGNATURE

REGISTERED PROFESSIONAL ENGINEER SAMUEL H. MELEIKA NO. C 66040 EXP. 9/20 CIVIL STATE OF CALIFORNIA

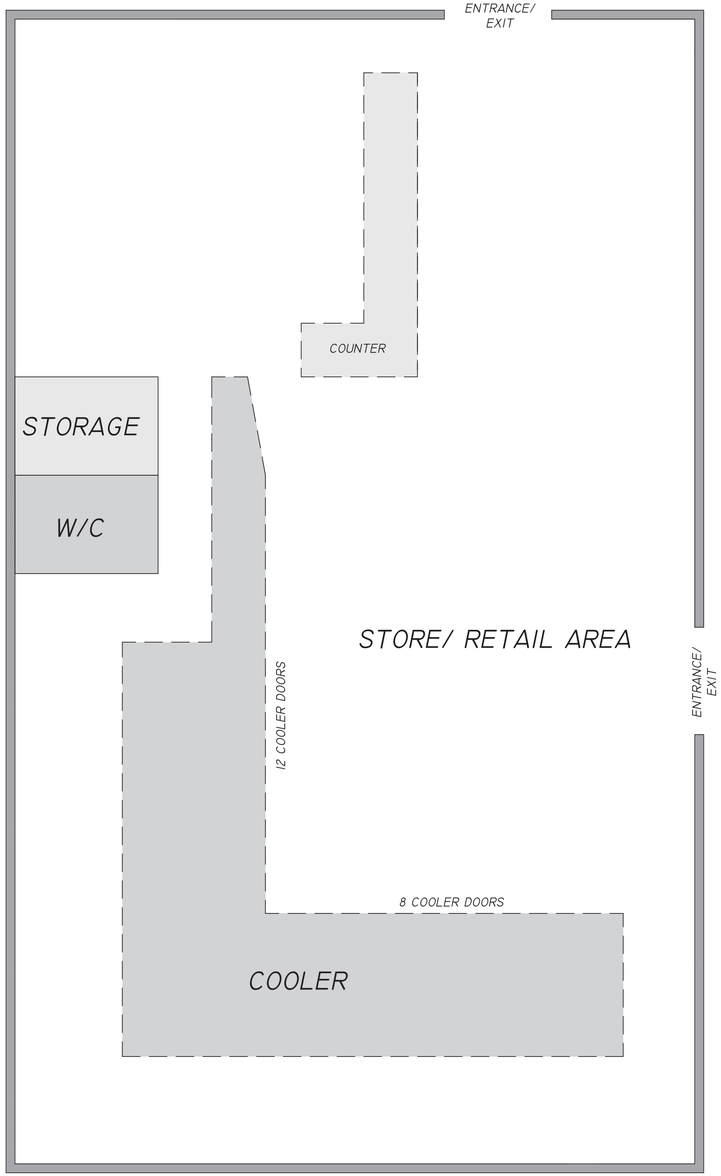
SHEET TITLE:
COVER SHEET & TECHNICAL SITE PLAN

SCALE:
APPROX 1"=100'

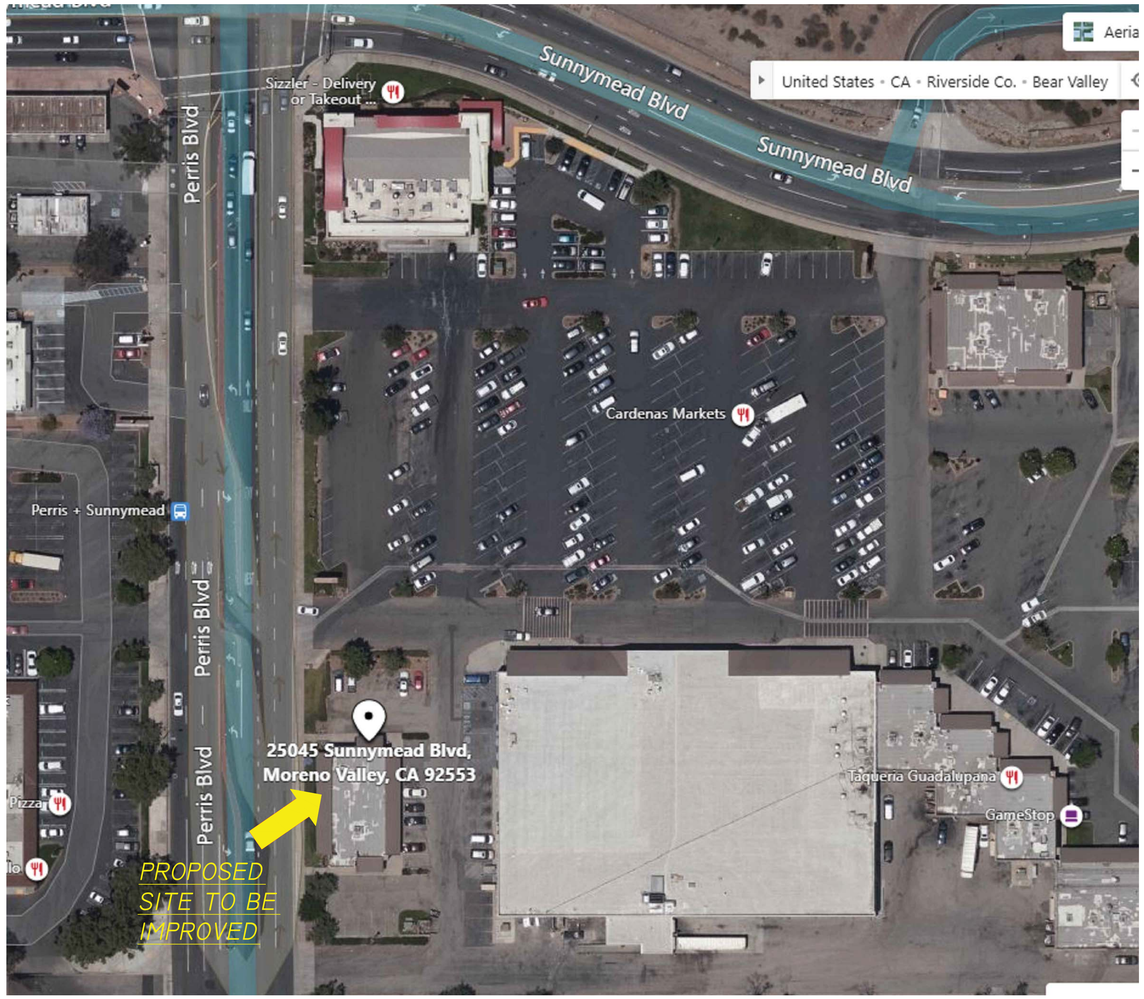
GEOTECHNICAL REVIEW/ APPROVAL:

SHEET #:
CS

Attachment: Site Plans and Elevation Photos (4239 : PEN20-0194 Conditional Use Permit)



GENERAL FLOOR PLAN



GENERAL SITE PLAN (NO SCALE)

MELEIKA & ASSOCIATES
CONSULTING ENGINEERS
7693 PALMILLA DR, UNIT 2427
SAN DIEGO, CA 92122
951-255-7423
SAMUELMELEIKA@YAHOO.COM

PROJECT NAME:

CONDITIONAL USE PERMIT APPLICATION FOR PROPOSED TENANT IMPROVEMENT

PROJECT ADDRESS:

25045 SUNNYMEAD BLVD. MORENO VALLEY, CA 92557

SUBMITTALS/ REVISIONS:

	DESCRIPTION	DATE
1	1ST PLAN REVIEW	10/05/20
2		
3		
4		
5		

PROJECT #

INT-0001

E.O.R STAMP/ SIGNATURE

REGISTERED PROFESSIONAL ENGINEER
SAMUEL H. MELEIKA
NO. C 86049
EXP. 9/20
CIVIL
STATE OF CALIFORNIA

SHEET TITLE:

GENERAL FLOOR PLAN & SITE PLAN

SCALE:

1/4"=1'-0" U.N.O

GEOTECHNICAL REVIEW/ APPROVAL:

SHEET #:

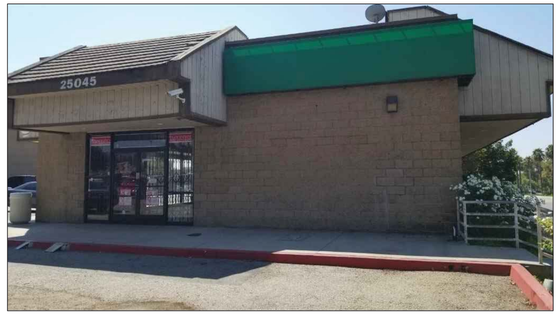
A-1

Attachment: Site Plans and Elevation Photos (4239 : PEN20-0194 Conditional Use Permit)

PHOTOGRAPH-5

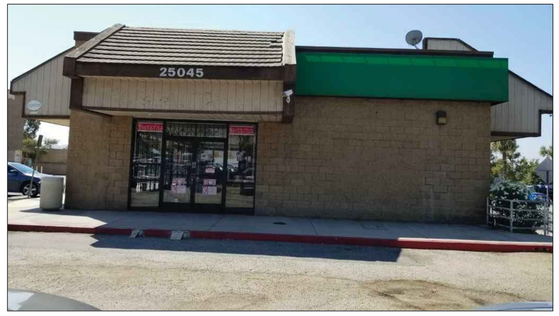
PHOTOGRAPH-1

PHOTOGRAPH-6



PHOTOGRAPH-2

PHOTOGRAPH-7



PHOTOGRAPH-3

PHOTOGRAPH-8

PHOTOGRAPH-4

MELEIKA & ASSOCIATES
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951-255-7423
SAMUELMELEIKA@YAHOO.COM

PROJECT NAME:

CONDITIONAL USE PERMIT APPLICATION FOR PROPOSED TENANT IMPROVEMENT

PROJECT ADDRESS:

25045 SUNNYMEAD BLVD.
MORENO VALLEY, CA 92557

SUBMITTALS/ REVISIONS:

	DESCRIPTION	DATE
1	1ST PLAN REVIEW	10/05/20
2		
3		
4		
5		

PROJECT #

INT-0001

E.O.R STAMP/ SIGNATURE

REGISTERED PROFESSIONAL ENGINEER
SAMUEL H. MELEIKA
NO. C 86049
EXP. 9/20
CIVIL
STATE OF CALIFORNIA

SHEET TITLE:

EXTERIOR PHOTOS OF PROPOSED SITE

SCALE:

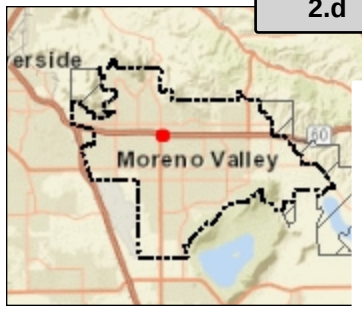
NONE

GEOTECHNICAL REVIEW/ APPROVAL:

SHEET #:

P-1

PEN20-0194
Aerial Photograph



Legend

- Parcels
- Proposed New Location
- Existing Location

Image Source: Nearmap

Notes:

Conditional Use Permit (CUP) for an existing structure at 25045 Sunnymeac Blvd.

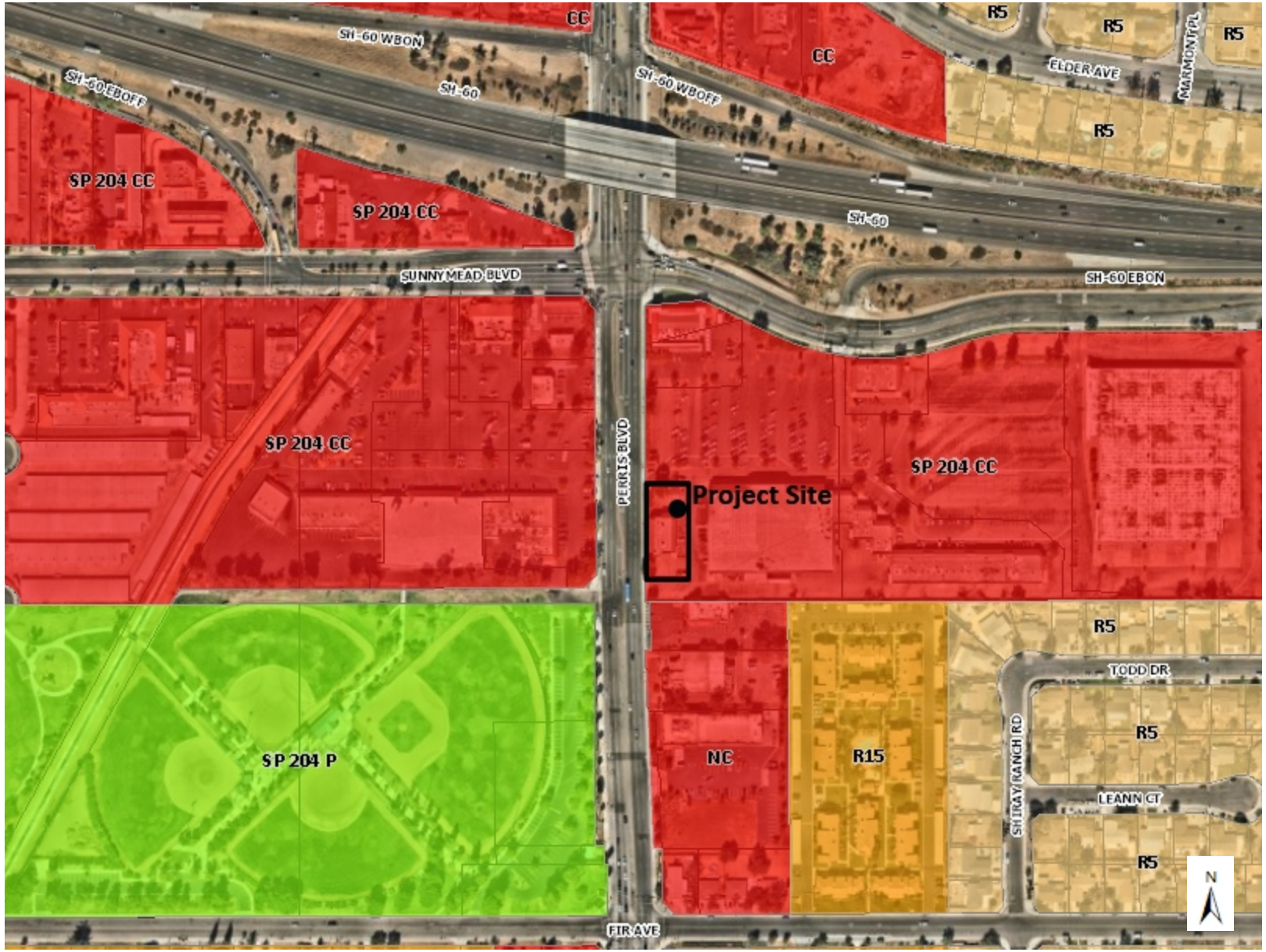
315.5 0 157.74 315.5 Feet

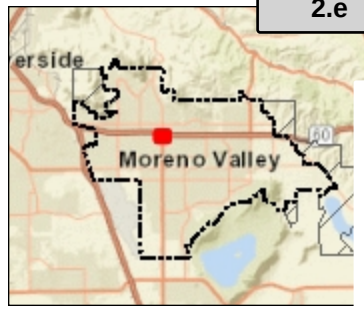
WGS_1984_Web_Mercator_Auxiliary_Sphere

Print Date: 11/12/2020

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.

PEN20-0194
Zoning





Legend

Zoning

- Commercial
- Industrial/Business Park
- Public Facilities
- Office
- Planned Development
- Large Lot Residential
- Residential Agriculture 2 DU/AC
- Residential 2 DU/AC
- Suburban Residential
- Multi-family
- Open Space/Park

Road Labels

Parcels

Image Source: Nearmap

Notes:

Sunnymead Village Specific Plan (SP 204) Community Commercial (CC)

616.0 0 308.02 616.0 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere

Print Date: 12/17/2020

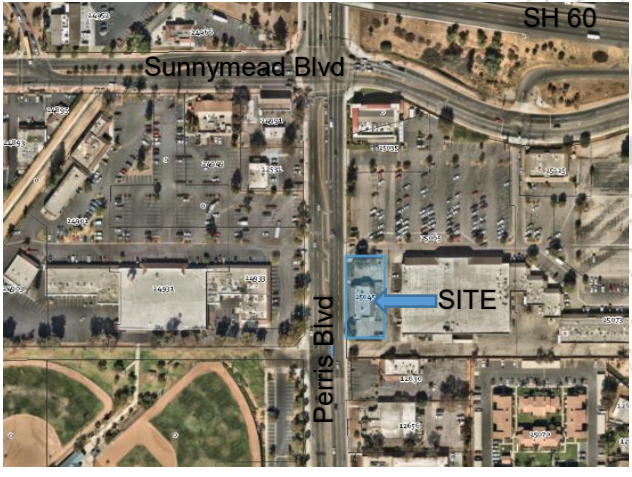
DISCLAIMER: The information shown on this map was compiled from the City of Moreno Valley GIS and Riverside County GIS. The land base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and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

Attachment: Zoning (4239 : PEN20-0194 Conditional Use Permit)

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 Commissio the City of Moreno Valley:

DATE & TIME: January 28, 2021 at 7:00 P.M. **VIA TELECONFEREN ONLY**

COVID-19 TELECONFERENCE INSTRUCTIONS:
For Teleconference Meeting public participation instructions please agenda at **http://morenovalleyca.iqm2.com/Citizens/default.aspx**

PROJECT LOCATION: 25045 Sunnymead Boulevard, Butterfield V Village Shopping Center.

CASE NUMBER(s): PEN20-0194

CASE PLANNER: Claudia Manrique, Associate Planner (951) 413 322 claudiam@moval.org

<APN>
<Property Owner>
<Street Address>
<City, State, Zip>

NOTICE OF PUBLIC HEARING

PROPOSAL: Conditional Use Permit for a liquor store within an existing tenant space in the Butterfield Valley Village Shopping Center The project is in the Sunnymead Village Specific Plan (SP 204) Community Commercial (CC) zoning district.

ENVIRONMENTAL DETERMINATION: The project has been completed in compliance with the California Environmental Quality Ac and the CEQA Guidelines and it has been determined the project will not result in any significant effect on the environment and qualifie for an exemption under the provisions of CEQA as a Class 1 Categorical Exemption, CEQA Guidelines, Section 15301 (Existin Facilities).

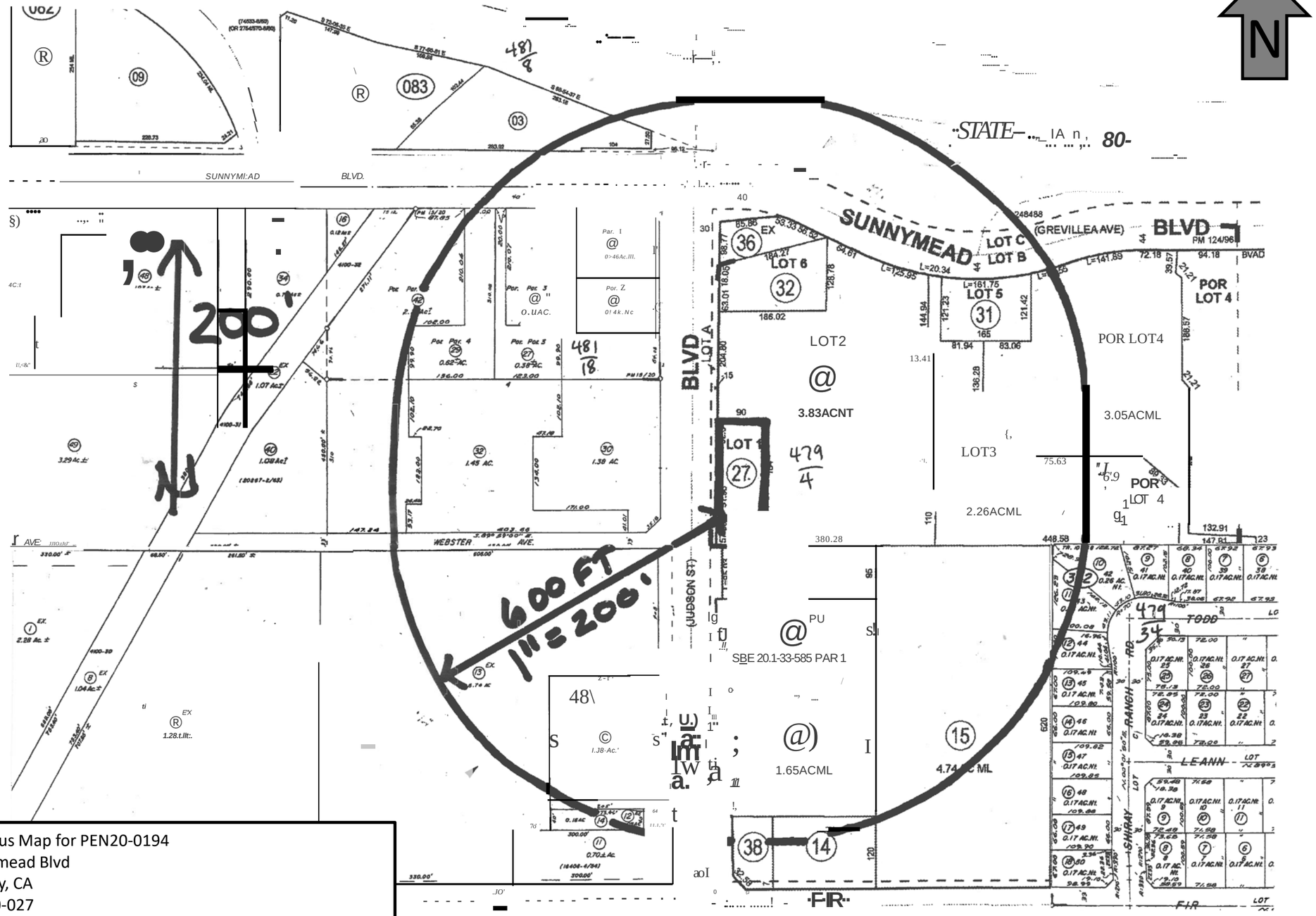
PUBLIC HEARING: All interested parties will be provided an opportunity to submit oral testimony during the teleconferenced Publi Hearing and/or provide written testimony during or prior to the teleconferenced Public Hearing. The application file and relate environmental documents may be inspected by appointment at the Community Development Department at 14177 Frederick Stree 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 the COVID-19 pandemic situation, staff will attempt to make reasonabl arrangements to ensure accessibility to inspect the aforementioned records. **In addition, special instructions on how to effectivel participate in the teleconferenced Public Hearing, as approved by Governor Executive Order N-25-20, will be posted a http://morenovalleyca.iqm2.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 t teleconferenced Public Hearing.

GOVERNMENT CODE § 65009 NOTICE: If you challenge any of the proposed actions taken by the Planning Commission in court, y may be limited to raising only those issues you or someone else raised during the teleconferenced Public Hearing described in t notice, or in written correspondence delivered to the Planning Division of the City of Moreno Valley during or prior to, the teleconferenc Public Hearing.

Upon request and in compliance with the Americans with Disabilities Act of 1990, any person with a disability who requires a modification o 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 accessib



600 foot Radius Map for PEN20-0194
25045 Sunnymead Blvd
Moreno Valley, CA
APN: 479-040-027
Prepared by DataPro Mapping Solutions, LLC on December 9, 2020