CITY OF REDLANDS

PLANNING COMMISSION

A G E N D A

October 27, 2026

KARAH SHAW
CHAIR

EMILY ELLIOTT
COMMISSIONER

RICH SMITH
COMMISSIONER

MARK STANSON
COMMISSIONER

ALICIA GYLLENHAMMER
COMMISSIONER

ROSA DOMINGUEZ
COMMISSIONER

4:00 p.m.
* * *
Suite 2
Civic Center, 35 Cajon Street, Redlands, California

A G E N D A

The following information comprises the agenda for the regular meeting of the Planning Commission of the City of Redlands at the times noted below in the City Council Chambers, Civic Center, 35 Cajon Street, Redlands, California. Although the meeting is open to the public, seating has been reduced to allow for social distancing.

To join via Zoom on a computer, laptop, or smart device
Please visit www.zoom.us, click on Join a Meeting
Enter the **Meeting ID 884 6352 1324 ,** then run the Zoom launcher
To join via Zoom with audio only (cell phone or landline)
Dial **1-877-853-5247**
Enter the **Meeting ID 884 6352 1324**

Should the City lose connectivity on Zoom, we will halt the meeting until it can be restored. To check on the status of remote connectivity in the event of an outage, go to the City's website at www.cityofredlands.org or to the City's Facebook page at @CityofRedlands or the Instagram page at @CityofRedlands_CityHall.

In the event the City cannot reestablish Zoom connectivity in a reasonable amount of time, the Mayor will adjourn the meeting to a future date.

PLEASE NOTE: Anyone desiring to speak on an agendized item at this meeting may do so during the consideration of that time. Due to time constraints and the number of persons who may wish to give oral testimony, public comments will be limited to three (3) minutes.

- **To provide comment while participating from Council Chambers:**
  - Although it is not required, speakers are encouraged to submit a "Speaker Sign Up Sheet" before the meeting is convened. Forms are available in the Office of the City Clerk or in Council Chambers.
  - After the meeting has convened, you may place the speaker form in the basket at the table along the north wall of the Chambers. Please do not disturb the City Clerk while the meeting is in progress.
- **To provide comment through Zoom (on a computer, laptop, or smart device)**
  - Click the "Raise Hand" button and the moderator will unmute you when it is your turn to speak
- **To provide comment via audio only (cell phone or landline)**
  - Dial *9 to "Raise Hand". The moderator will identity you by your area code and last 3 numbers of your telephone number when it is your turn to speak.

PLEASE SILENCE CELL PHONES, PAGERS AND OTHER ELECTRONIC COMMUNICATION DEVICES UPON ENTERING THE CHAMBERS

If you challenge any proposed development entitlement listed on this Agenda in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the Planning Commission at or prior to this public hearing.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact Goutam Dobey of Municipal Utilities & Engineering Department, 909-798-7584 Ex. 2. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting. (28 CFR 35.102-35.104 ADA Title II).

NOTE: Any writings or documents distributed to a majority of the Planning Commission regarding an open session agenda item less than 72 hours before this meeting are available for public inspection at the Development Services Department.

It is the intent of the Commission to evaluate the progress of the meeting occasionally, and depending upon timing, the Commission may adjourn for a dinner hour.

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1. CALL TO ORDER AND PUBLIC COMMENT PERIOD - 3 MINUTES

(At this time, the public has the opportunity to address the Commission on any item of interest within the subject matter jurisdiction of the Commission that does not appear on this agenda. The Commission may not discuss or take any action on any public comment made, except that the Commissioners or staff may briefly respond to statements made or questions posed by members of the public)

2. PRESENTATIONS

None.

3. CONSENT CALENDAR

A. EXTENSION OF TIME NO. 1 FOR COMMISSION REVIEW & APPROVAL NO. 956, CONDITIONAL USE PERMIT NO. 1173, AND TENTATIVE PARCEL MAP NO. 20688.
APPLICANT: DIVERSIFIED PACIFIC DEVELOPMENT GROUP, LLC.
(PROJECT PLANNER: JAZMIN SERRATO, ASSOCIATE PLANNER)

1. Consideration of a request for a one-year Extension of Time for Commission Review & Approval No. 956, Conditional Use Permit No. 1173, and Tentative Parcel Map No. 20688, an approved project to construct a mixed-use project with 18,000 square-feet of commercial space, 460 apartment units, and related on-site improvements including parking lots, landscaping, lighting, and utilities, located on the east side of Tennessee Street approximately 575 feet north of West Lugonia Avenue (APN: 0167-171-15-0000).
2. Consideration of an exemption from environmental review pursuant to Section 15162(a) of the California Environmental Quality Act (CEQA) Guidelines.

B. EXTENSION OF TIME NO. 1 FOR COMMISSION REVIEW & APPROVAL NO. 964
APPLICANT: INVISION COMMUNITY BUILDERS, LLC
(PROJECT PLANNER: JAZMIN SERRATO, ASSOCIATE PLANNER)

1. Consideration of a request for a one-year Extension of Time for Commission Review & Approval No. 964, an approved project to construct a 108-unit market-rate multi-family rental complex for senior housing (55+), which included a density bonus request in accordance with State Density Bonus Law to allow up to a 15% increase in the total project density on a 3.49-acre site. The project is located between Grove Street and Judson Street, south of the Orange Blossom Trail (APNs: 0170-221-53-0000 and 0170-221-55-0000).
2. Consideration of an exemption from environmental review pursuant to Section 15061(b)(3) of the California Environmental Quality Act (CEQA) Guidelines.

4. OLD BUSINESS

None.

5. NEW BUSINESS

A. APPLICANT: REDLANDS PIONEER PARTNERS, LLC
(PROJECT PLANNER: KEVIN BEERY, SENIOR PLANNER)

A PUBLIC HEARING to consider and make a recommendation to the City Council regarding the following matters concerning a proposed residential development encompassing approximately 35.3 acres on the east side of Route 210, north side of West San Bernardino Avenue, south side of West Pioneer Avenue, and west side of Specific Plan No. 62 (APNs: 0167-091-09-0000, 0167-091-10-0000, 0167-091-11-0000, and 0167-091-042-0000):

1. California Environmental Quality Act, a determination whether to adopt a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program prepared for the project in accordance with section 15074 the California Environmental Quality Act Guidelines.

2. General Plan Amendment No. 150, a request to change the land use designation of the site from “Commercial” to “Medium Density Residential.”

3. Specific Plan No. 67, a request to establish the “Pioneer Park Specific Plan” comprising land use regulations, development standards, infrastructure specifications and implementation procedures governing development of the site.

4. Specific Plan No. 40 Amendment No. 56, a request to remove the site from the boundaries of the East Valley Corridor Specific Plan.

5. Change of Zone No. 483, a request to amend the Zoning Map to change the zoning district designation of the site from “East Valley Corridor Special Development District (EV/SD)” to “Specific Plan No. 67”

6. A Socio-Economic Study prepared for the proposed development in accordance with Measure U.

7. Tentative Tract Map No. 20797, a request for authorization to: vacate the existing segment of Tennessee Street traversing the project site; dedicate a new segment of New York Street along the east side of the site; subdivide the site into 255 lots ranging in size from 2,006 to 6,256 square feet (2,737 square feet on average) for single-family residential development, one 0.41-acre lot for multi-family residential development, and 13 lettered lots totaling 4.54 acres for open space and storm water treatment; and dedicate approximately 8.62 acres as public right-of-way for street purposes.

6. ANNOUNCEMENTS/COMMISSIONERS' COMMENTS

7. DIRECTOR'S UPDATES

8. ADJOURN TO THE

November 10, 2026, Planning Commission Meeting.

Date Posted: October 22, 2026

Planning Commission **AGENDA ITEM NO. CA.**

DATE: October 27, 2026

TO: Honorable Chair and Planning Commission

SUBJECT: EXTENSION OF TIME NO. 1 FOR COMMISSION REVIEW & APPROVAL NO. 956, CONDITIONAL USE PERMIT NO. 1173, AND TENTATIVE PARCEL MAP NO. 20688.
APPLICANT: DIVERSIFIED PACIFIC DEVELOPMENT GROUP, LLC.
(PROJECT PLANNER: JAZMIN SERRATO, ASSOCIATE PLANNER)

1. Consideration of a request for a one-year Extension of Time for Commission Review & Approval No. 956, Conditional Use Permit No. 1173, and Tentative Parcel Map No. 20688, an approved project to construct a mixed-use project with 18,000 square-feet of commercial space, 460 apartment units, and related on-site improvements including parking lots, landscaping, lighting, and utilities, located on the east side of Tennessee Street approximately 575 feet north of West Lugonia Avenue (APN: 0167-171-15-0000).
2. Consideration of an exemption from environmental review pursuant to Section 15162(a) of the California Environmental Quality Act (CEQA) Guidelines.

BACKGROUND

On December 3, 2024, the City Council approved the project including:

- Zone Change No. 477 to change the zoning designation to General Commercial (C-3) District;
- Amendment No. 50 to the East Valley Corridor Specific Plan to remove the project site from the boundaries of the Specific Plan area;
- Tentative Parcel Map No. 20688 to subdivide the entire project site into four parcels;
- Conditional Use Permit No. 1173 to construct a mixed-use project;
- Commission Review & Approval No. 956 for site plan approval and architectural design review; and
- Density Bonus Agreement with Declaration of Affordable Housing Covenants and Restrictions to increase the density of the project by 20% and provide 20 units foe Very-Low income households.

The entitlement will expire on December 3, 2026, unless a grading or building permit has been issued, or an extension of time is granted. The developer has requested an extension of time to allow additional time to complete the preparation of construction documents and obtain financing.

The applicant submitted a timely application for the Extension of Time on October 5, 2026, prior to the expiration date for the tentative tract map and related entitlements. Upon submittal of an application to extend a tentative map, the map is automatically extended for 60 days or until the application for the extension is approved, conditionally approved, or denied (per Subdivision Map Act Section 66452.24).

SUMMARY

Project Description:

The approved project is for the development of a vacant property 13.48 acres in size (12.79 acres net) with ten buildings, which include a mix of residential and commercial uses. The site is located on the east side of Tennessee Street and approximately 600 feet north of West Lugonia Avenue (see Attachment A – Location Map and Aerial).

The project will include 460 residential units and approximately 18,000 square feet of commercial space. The mixed-use buildings are placed adjacent to Tennessee Street and include commercial space on the first floor, with the residential units above, and six live/work lofts (consisting of retail/office space on the first floor and the residential unit on the second floor). Commercial uses within the project are located near the southwestern corner of the project site in Building 8 and Building 10. The remainder of the buildings within the project are residential apartments only.

The project will be developed in two phases. Phase 1 is made up of the central, western, and southwestern portions of the site, which includes the commercial buildings and apartments within buildings 8 through 11 (225 units). Phase 1 would also include construction of all project access points. Phase 2 consists of the remaining apartments (235 units) located on the northern and eastern portions of the site (Buildings 1 through 6). See Attachment B – Approved Project Plans, and Attachment C – City Council Staff Report of December 3, 2024.

The project includes a Density Bonus & Inclusionary Housing Agreement (recorded as DOC# 2025-0014937 & 2025-0014129) to provide affordable housing units within the apartment development. A total of 20 units will be designated for Very Low-income households, to be interspersed among the apartment buildings. The required inclusionary units will be split evenly between the two project phases (with ten in each phase). The Inclusionary Housing Agreement and the project's Conditions of Approval require that all inclusionary units within the first phase are constructed prior to issuance of a Certificate of Occupancy for any unit within the second phase. This will help the City meet its affordable housing goals in accordance with the City’s 2021-2029 Housing Element.

Time Extension:

This will be the first request for a one-year extension. If granted, this extension request would extend the life of the project to December 3, 2027. In accordance with RMC Sections 17.07.100 and 17.11.060, an approved tentative map will expire 24 months after approval, unless a Final Map is recorded or an extension of time is granted. In addition, RMC Section 18.12.130 for Commission Review & Approval provides an initial expiration date of two (2) years from the date of approval. It has been the policy of the City to only grant extensions by one-year increments.

The applicant is requesting an extension to allow additional time to complete the preparation of construction documents and obtain financing. Currently, no permits are undergoing review in Plan Check, and no building permits have been issued. The additional time would allow the applicant to prepare building plans, precise grading plans, and resolve conditions regarding Final Map recordation and building permit issuance. The applicant has requested additional time to finish this work and ensure their entitlements do not expire prior to permit issuance.

RMC Section 18.12.130 allows the Planning Commission to extend a Commission Review & Approval permit by one-year increments, not to exceed a total of three (3) extensions. RMC Section 17.11.060 allows the Planning Commission to extend a tentative map for a period not to exceed a total of six (6) years.

FINDINGS

In accordance with RMC Sections 17.11.060 and 17.07.120, before an Extension of Time may be granted for a subdivision map, the Planning Commission shall make findings supporting its decision. This shall include an additional finding with respect to the potential impact of any increases in applicable development fees which have occurred since the date of the approval or conditional approval of the tentative map. The required findings are as follows.

1. The proposed map is consistent with the City’s General Plan, Municipal Code, and Municipal Code.

The original findings remain valid. The proposed map will be consistent with the Redlands General Plan and the Redlands Municipal Code. The proposed subdivision is within the Commercial land use designation of the General Plan. The subdivision is consistent with the development standards of the underlying zoning district in terms require lot size, width and depth and is supported by the General Plan policies outlined in the staff report.

2. The site is physically suitable for the type of development.

The original findings remain valid. The project site is physically suitable for the proposed developments. The existing site is approximately 13.48 gross acres. The site is generally flat and rectangular. All on-site and off-site improvements proposed as part of the project's design will meet all City standards with the approval of a Density Bonus Agreement with Declaration of Affordable Housing Covenants and Restrictions and will provide a safe and efficient environment for the future residents after development.

3. The site is physically suitable for the proposed density of the development.

The original findings remain valid. The property is located within the Commercial land use designation of the General Plan, which allows commercial development and residential development consistent with the project site's proposed C-3 zoning. The C-3 District allows mixed-use and apartment residential development consistent with the density standards of the Multiple Family Residential (R-3) District. The project exceeds this density; however, it is consistent with the allowable density allowed based upon the State Density Bonus Law, while still providing outdoor recreation areas, on-site amenities, required parking, and appropriate access.

4. The design of the subdivision or the proposed improvements is not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

The original findings remain valid. The design of the subdivision and proposed improvements is not likely to cause substantial environmental damage or injure fish or wildlife or their habitat. The project site does not contain any suitable habitat areas and is largely surrounded by existing urbanized development. The design of the subdivision and proposed improvements is not likely to cause substantial environmental damage or injure fish or wildlife or their habitat. The developable portions of the site do not contain any biological resources including fish or wildlife, and based on the Initial Study that has been prepared for the project, there are no environmental factors that cannot be mitigated to a level of less than significant.

5. The design of the subdivision or type of improvements is not likely to cause serious public health problems.

The original findings remain valid. The design of the subdivision or the type of improvements are not likely to cause serious public health problems. The project is located in an area that is adjacent to approved residential uses and potential future commercial development. The project is designed with improvements that meet all City and State building and fire codes, and no offensive emissions or odors will be associated with the residential development.

6. The design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of property within the proposed subdivision.

The original findings remain valid. The design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of the property within the proposed subdivision. The Parcel Map provides the necessary easements for utilities and access, and is responsible for installing or repairing associated street improvements such as curb, gutter, and sidewalk consistent with the City requirements, if necessary, at the time of construction.

7. That pursuant to California Government Code Section 66474.4, of the Subdivision Map Act the land is not subject to a contract entered into pursuant to the California Land Conservation Act of 1965.

The original findings remain valid. The subject property is not under a Williamson Act Contract pursuant to the California Land Conservation Act of 1965 and will not be detrimental or otherwise affect lands in agricultural use.

8. There are no potential impacts of any increases in applicable development fees which have occurred since the date of approval of the tentative map.

There will be no fiscal impacts that would result from an increase in applicable City development fees. The developer has no vested rights to secure fees in effect at the time of original approval (including no incentives or waivers pursuant to the Density Bonus Agreement for the project). Therefore, the subdivider will pay all applicable fees, including development impact fees, currently in effect at the time of building permit issuance.

ENVIRONMENTAL REVIEW

CEQA Guidelines Section 15162(a) indicates that no subsequent Negative Declaration shall be prepared for a project when the following findings can be made:

1) No substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2) Substantial changes did not occur with respect to the circumstances under which the project will be undertaken which will require major revisions of the previous Mitigated Negative Declaration (MND) due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; and

3) No new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous MND was certified as complete shows any of the following:

a. The project will have one or more significant effects not discussed in the previous MND;

b. Significant effects previously examined will be substantially more severe than shown in the previous MND;

c. Mitigation measures previously found not to be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure; or

d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous MND would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure.

Staff has analyzed the existing conditions at the time the tentative map was approved compared to present conditions using Google Earth aerial imagery (2024 to present). The topography and extent of development on the tentative map site remains unchanged. There have not been any changes to environmental conditions in the surrounding area, or the discovery of new significant environmental issues under which the project will be undertaken that would require major revisions of the previously adopted Mitigated Negative Declaration (see Attachment E - Environmental Checklist Form).

The parcels adjacent to the project site have undergone grading in accordance with issued grading permit plans, but the subject site remains unchanged. Considering the lack of significant or substantial change in existing conditions, staff recommends that the Planning Commission find that this project requires no further environmental analysis. There have been no changes to the project or project site, and the project remains within the scope of the Mitigated Negative Declaration originally approved. The project will not have any additional significant impacts not previously analyzed in the Mitigated Negative Declaration. All mitigation measures applied to the approved project will be implemented.

RECOMMENDATION

Staff recommends that the Planning Commission adopt Resolution No. 1766 to approve a one-year Extension of Time for Commission Review & Approval No. 956, Conditional Use Permit No. 1173, and Tentative Parcel Map No. 20688.

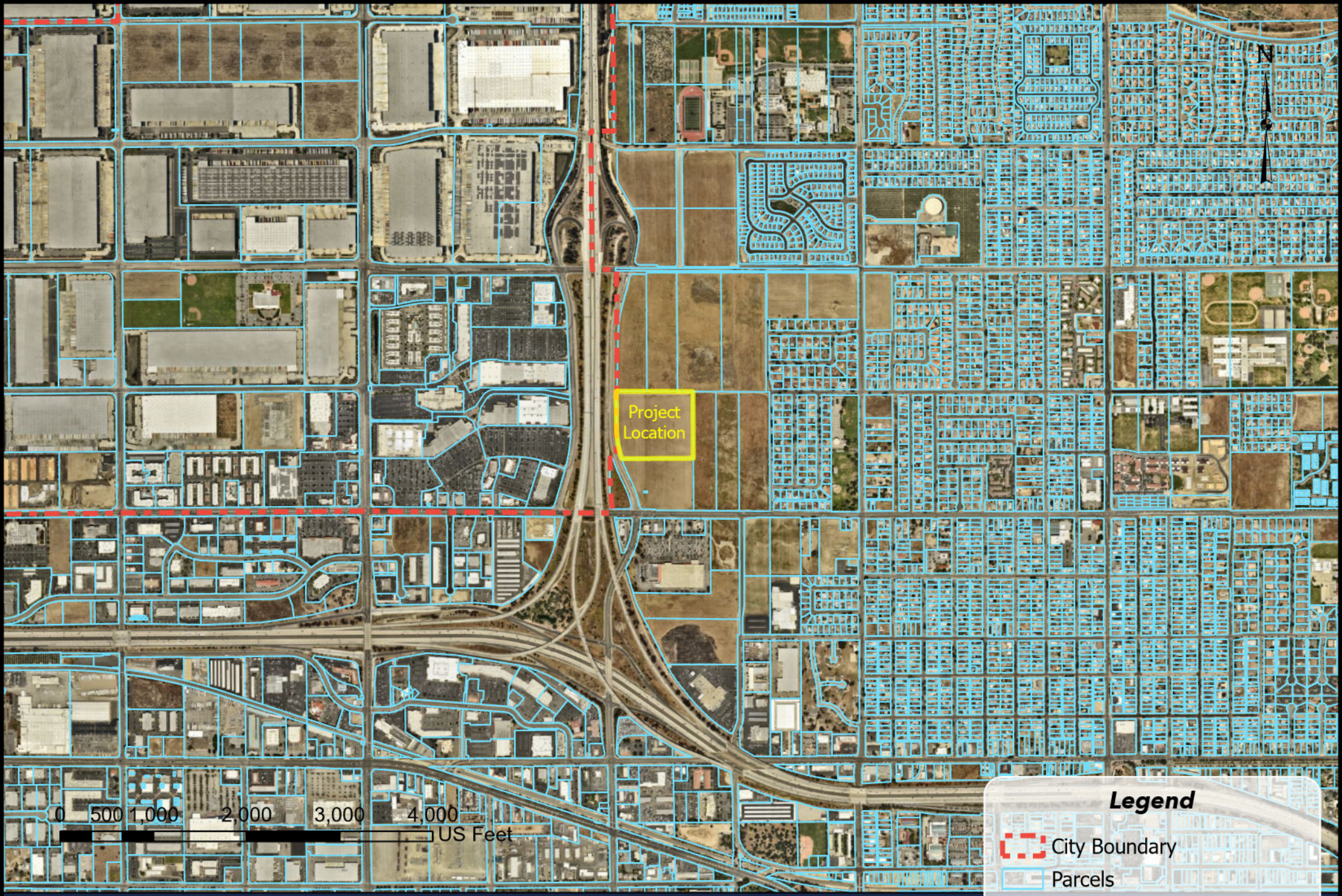
MOTION

If the Planning Commission determines that staff’s recommendation is appropriate, the following motion is provided:

“I move to adopt Resolution No. 1766 to approve a one-year Extension of Time for Commission Review & Approval No. 956, Conditional Use Permit No. 1173, and Tentative Parcel Map No. 20688.”

Attachments

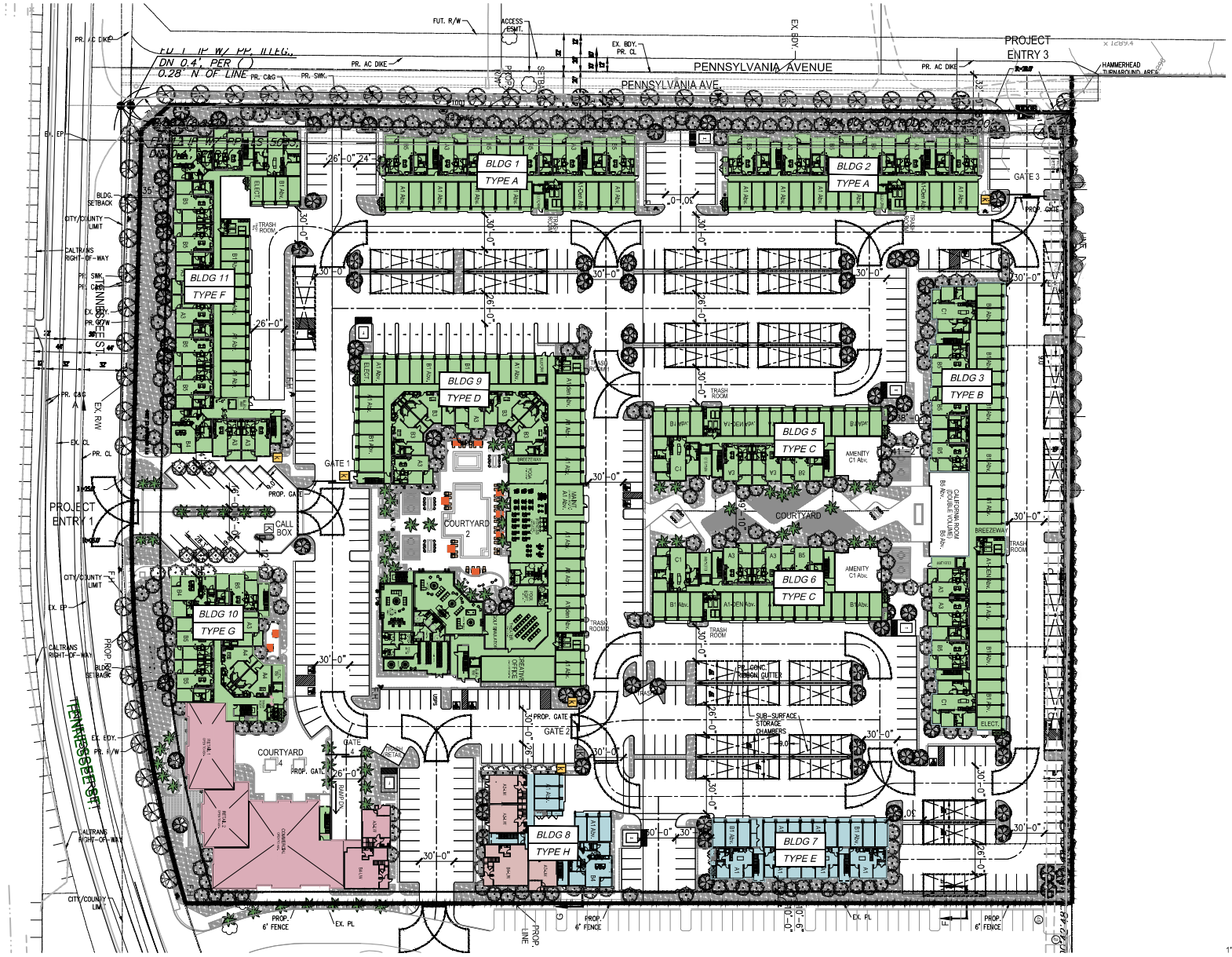
Attachment_A_-_Location_Map_and_Aerial.pdf
Attachment_B_-_Approved_Project_Plans.pdf
Attachment_C_-_City_Council_Staff_Report_of_December_3_2024.pdf
Attachment_D_-_Resolution_No_8641_with_Conditions_of_Approval.pdf
Attachment_E_-_Environmental_Checklist_Form.pdf
Attachment_F_-_Resolution_No_1766_Extension_of_Time.pdf



City of Redlands

Location Map

Author: Redlands GIS **Date:** 8/29/2024



NOTE:
THE MONUMENT WALL/WIGNS ARE UNDER A SEPARATE PERMIT. SEE L-1.0

RETAIL/ COMMERICIAL

3 STORY

4 STORY

NORTH

1"=40'-0" 0 20' 40' 80' 120'

APN: 0167-171-07
0167-171-14
APN: 0167-171-15

A-1.0

TENNESSEE VILLAGE

REDLANDS, CA 92374

CONCEPTUAL SITE PLAN

DATE: 01-10-2024
JOB NO.: 2020-322

DIVERSIFIED PACIFIC
10621 CIVIC CENTER DRIVE, RANCHO CUCAMONGA, CA 91730
(909) 373-2628

AO ARCHITECTS
144 NORTH ORANGE ST., ORANGE, CA 92866
(714) 639-9860

A. PROJECT SUMMARY

	DATA
EXISTING ZONING:	EV/SD
PROPOSED ZONING:	C-3
GENERAL PLAN DESINATION:	COMMERCIAL
PROPOSED GENERAL PLAN DESINATION:	COMMERCIAL
PROPOSED TOTAL # OF DWELLING UNITS:	460
GROSS/NET ACREAGE:	13.48 AC / 12.79 AC
PROPOSED GROSS DENSITY OF UNITS:	34.12 DU/AC / 35.97 DU/AC
PROJECT APNS:	0167-171-15
F.A.R :	1.1
DENSITY CALCULATION	
UNIT COUNT (NO DENSITY BONUS)	384 UNITS
20% DENSITY BONUS	76 UNITS
TOTAL UNIT COUNT (WITH DENSITY BONUS)	460 UNITS

PARKING SUMMARY

1.1: TOTAL RESIDENTIAL PARKING REQUIRED

PER STATE REQUIREMENTS	UNITS	RATIO	QTY.
1 BDRM. UNITS	239	1.0	239
2 BDRM. UNITS	195	1.5	293
3 BDRM. UNITS	26	1.5	39
SUB-TOTAL	460	-	571

1.2: TOTAL RESIDENTIAL PARKING PROVIDED

TOTAL PARKING PROPOSED	QTY.	%
TOTAL OPEN STALL	178	26%
TOTAL GARAGE	178	26%
TOTAL CARPORTS	221	33%
TOTAL TANDEM	13	2%
TOTAL SUBTERRANEAN STANDARD STALL	56	8%
TOTAL SUBTERRANEAN TANDEM	27	4%
TOTAL PARKING	673	100%

PARKING TO UNIT RATIO	1.46 / DU

2.1:TOTAL COMMERCIAL PARKING REQUIRED

1 STALL PER 200 SQ.FT.
RETAIL / COMMERCIAL SQ.FT. = 17,899 SQ.FT /200SQ.FT.= 89 STALLS

2.2: TOTAL COMMERCIAL PARKING PROVIDED

TOTAL PARKING PROPOSED	QTY.	%
TOTAL OPEN STALL	91	100%
TOTAL PARKING	91	100%

C. TOTAL BUILDING / UNIT MIX

BLDG. NO.	TYPE	LEVEL	1 BDRM.					LIVE WORK	2 BDRM.				LIVE WORK	3 BDRM		TOTAL UNITS	TOTAL GARAGES
			A1	A1-DEN	A3	A4	A4-DEN	A3-LW	B1	B3	B4	B5	B4-LW	C1	C1-DEN		
			755 SF.	938 SF.	766 SF	765 SF	925 SF	1,461 SF	1,097 SF	1,111 SF.	1,246 SF.	1,139 SF.	1,559 SF	1,342 SF.	1,599 SF.		
1	A	4 STORY	15	3	8	0	0	0	0	0	0	16	0	0	0	42	18
2	A	4 STORY	15	3	8	0	0	0	0	0	0	16	0	0	0	42	18
3	B	4 STORY	3	3	8	0	0	0	21	0	0	20	0	8	0	63	32
5	C	4 STORY	6	3	8	0	0	0	6	0	0	4	0	4	3	34	17
6	C	4 STORY	6	3	8	0	0	0	6	0	0	4	0	4	3	34	17
7	E	3 STORY	16	0	0	0	0	0	4	0	0	0	0	0	0	20	13
8	H	3 STORY	4	0	3	0	0	3	0	0	4	0	1	0	0	15	6
9	D	4 STORY	35	6	16	0	0	0	10	24	0	2	0	0	0	93	41
10	G	4 STORY	0	0	18	5	3	1	0	0	8	18	1	0	0	54	0
11	F	4 STORY	9	0	20	0	0	0	6	0	8	16	0	4	0	63	16
SUB-TOTAL	-	-	109	21	97	5	3	4	53	24	20	96	2	20	6	460	178
	-	-	235					4	193				2	26			
	-	-	239						195					26			
	-	-	52%						42%					6%		100%	

D. TOTAL RESIDENTIAL BUILDING FOOTPRINT SQ. FT.

BLDG. DEST.	BLDG. TYPE	BASEMENT SQ. FT.	1st FL. SQ. FT.	2nd FL. SQ. FT.	3rd FL. SQ. FT.	4th FL. SQ. FT.	AMENITY	ROOF DECK	1 ST LEVEL OF LIVE-WORK SQ.FT.	2ND LEVEL OF LIVE-WORK SQ.FT.	RETAIL SQ.FT.	TOTAL SQ. FT.
1	A	-	13,949	13,964	14,111	13,864	-	-	-	-	-	55,888
2	A	-	13,949	13,964	14,111	13,864	-	-	-	-	-	55,888
3	B	-	24,633	22,424	25,149	24,890	2,474	-	-	-	-	99,570
4	-	-	-	-	-	-	-	-	-	-	-	-
5	C	-	13,409	12,527	12,759	12,527	1,500	-	-	-	-	52,722
6	C	-	13,409	12,527	12,759	12,527	1,500	-	-	-	-	52,722
7	E	-	7,894	7,809	8,059	-	-	-	-	-	-	23,762
8	H	-	4,427	3,780	8,377	-	-	-	3,914	4,007	-	24,505
9	D	-	24,797	30,405	38,967	38,967	13,502	6,222	-	-	-	152,860
10	G	29,974	10,181	9,629	24,132	23,841	-	-	2,366	2,363	11,619	114,105
11	F	-	21,301	20,867	21,258	20,867	-	-	-	-	-	84,293
TOTAL	-	29,974	147,949	147,896	179,682	161,347	18,976	6,222	6,280	6,370	11,619	716,315

E.UNIT SIZE (RENTABLE):

UNIT TYPE	RENTABLE UNIT SF	QTY	%	TOTAL UNIT SF
A1	755	109	24%	82,295
A1-DEN	938	21	5%	19,698
A3	766	97	21%	74,302
A4	765	5	1%	3,825
A4-DEN	925	3	1%	2,775
A3-LW	1,461	4	1%	5,844
B1	1,097	53	12%	58,141
B3	1,111	24	5%	26,664
B4	1,246	20	4%	24,920
B5	1,139	96	21%	109,344
B4-LW	2,559	2	0%	5,118
C1	1,342	20	4%	26,840
C1-DEN	1,599	6	1%	9,594
TOTAL	-	460	100%	449,360

AVERAGE UNIT SIZE:	977 SF

F. BUILDING DATA

BLDG. NO.	TYPE	LEVEL	CONST. TYPE	OCCUPANCY GROUP	SPRINKLER SYSTEM
	A	4 STORY	V-A	R2/U	NFPA 13-R
	A	4 STORY	V-A	R2/U	NFPA 13-R
	B	4 STORY	V-A	R2/U	NFPA 13-R
	-	-	-	-	-
	C	4 STORY	V-A	R2/U	NFPA 13-R
	C	4 STORY	V-A	R2/U	NFPA 13-R
	E	3 STORY	V-A	R2/U	NFPA 13-R
	H	3 STORY	V-A	R2/U/A/B	NFPA 13-R
	D	4 STORY	V-A	R2/U/S2/M/B	NFPA FULL 13
	G	4 STORY	V-A / I-A	R2/M/A/B/S2	NFPA FULL 13
	F	4 STORY	V-A	R2/U	NFPA FULL 13

G. SITE COVERAGE DATA

	SQ. FT	AC	PROPOSED
BUILDING COVERAGE	184,824	4.24	31%
ROAD & PARKING COVERAGE	241,027	5.53	41%
OPEN/ LANDSCAPE COVERAGE	161,337	3.70	27%
SUB-TOTAL	587,188	13.48	100%

2022 CBC

TOTAL STALLS 673

RESIDENTIAL PARKING PROVIDED

ASSIGNED PARKING 0

GUEST INCLUDED WITHIN THE RESIDENTIAL REQUIREMENT ABOVE 0

ASSIGNED PARKING MIX	STALLS
RESIDENTAIL ASSIGNED	0
GUEST UNASSIGNED	0

ACCESSIBLE STALLS

RESIDENTIAL STALLS	STALLS	FACTOR	STD.		VAN 1/8		TOTAL
RESIDENTIAL	673	2% (CBC 1109A.4)	12	+	2	=	14
RETAIL	91	5% (CBC 1109A.5)	4	+	1	=	5

ELECTRIC VEHICLE STALLS

RESIDENTIAL AND ACCESSARY USE	STALLS	FACTOR	STD.		1/25 - 8' AISLE		TOTAL
ASSIGNED PARKING	673	40%	259	+	11	=	270
EV Chargers		5%	34				
EV Ready - Low Power		25%	169				
EV Capable		10%	67				
RETAIL	91	40%	35	+	2	=	37
EV Chargers		5%	5				
EV Ready - Low Power		25%	23				
EV Capable		10%	9				

*All accessible stalls are provided at initial buildout.
*CGC 4.106.4.2.2

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood storage battery, fuel cell, photovoltaic array or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the California Electrical Code, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats and the like, are not included.

ELECTRIC VEHICLE (EV) CHARGER. Off-board charging equipment used to charge an electric vehicle.

ELECTRIC VEHICLE (EV) READY SPACE. [HCD] A vehicle space which is provided with a branch circuit; any necessary raceways, both underground and/or surface mounted; to accommodate EV charging, terminating in a receptacle or a charger.

ELECTRIC VEHICLE (EV) CAPABLE SPACE. A vehicle space with electrical panel space and load capacity to support a branch circuit and necessary raceways, both underground and/or surface mounted, to support EV charging.

ELECTRIC VEHICLE CHARGING SPACE (EV SPACE). A space intended for future installation of EV charging equipment and charging of electric vehicles.

ELECTRIC VEHICLE CHARGING STATION (EVCS). One or more electric vehicle charging spaces served by electric vehicle charger(s) or other charging equipment allowing charging of electric vehicles. Electric vehicle charging stations are not considered parking spaces.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

APN: 0167-171-15

G-1.0

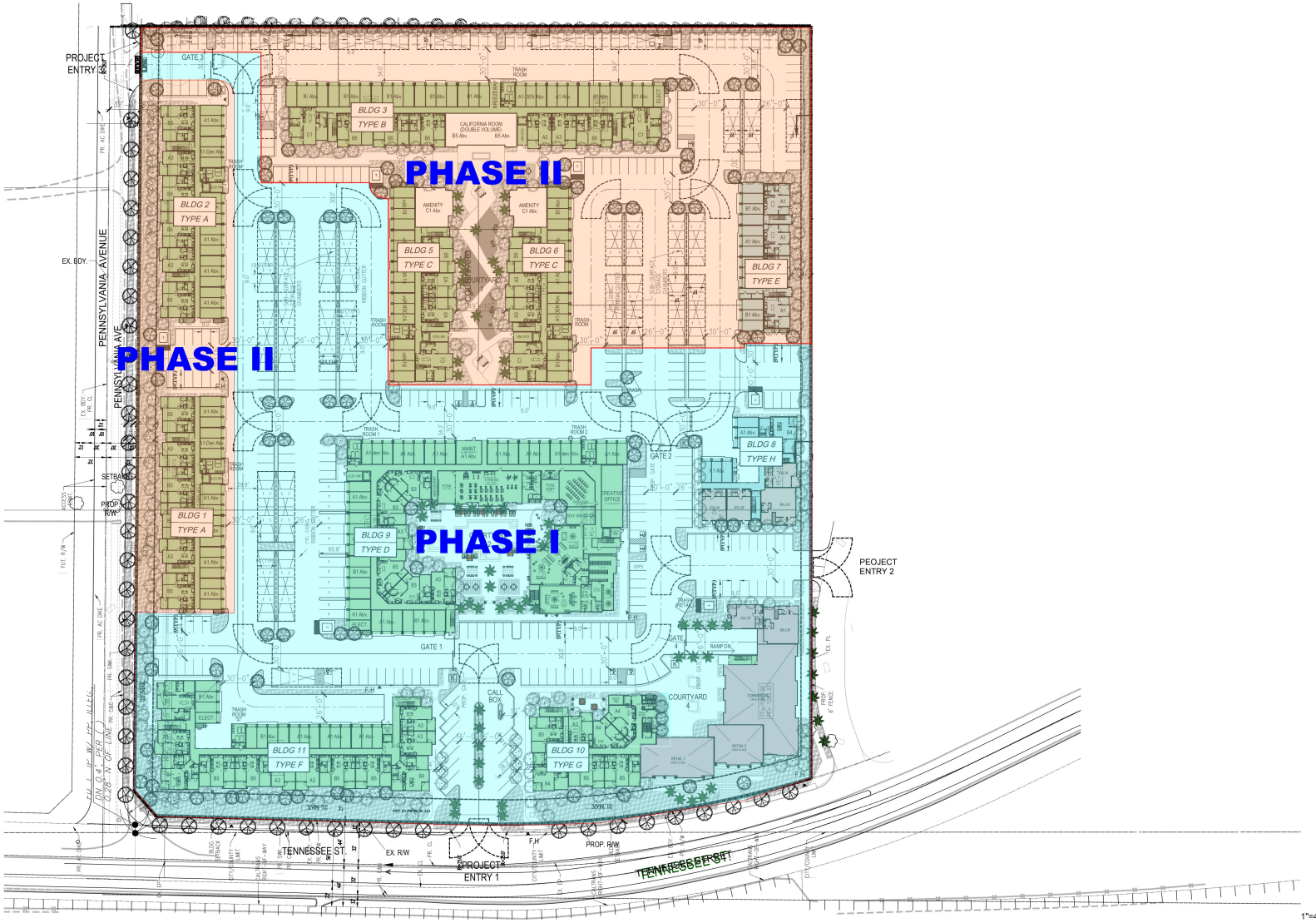
TENNESSEE VILLAGE

REDLANDS, CA 92374

PROJECT DATA DATE: 01-10-2024 JOB NO.: 2020-322

DIVERSIFIED PACIFIC
10621 CIVIC CENTER DRIVE, RANCHO CUCAMONGA, CA 91730
(909) 373-2628

AO ARCHITECTS
144 NORTH ORANGE ST., ORANGE, CA 92866
(714) 639-9860
Architecture. Design. Relationships.



APN: 0167-171-15

P-1

TENNESSEE VILLAGE

REDLANDS, CA 92374

PHASING PLAN

DATE: 01-10-2024
JOB NO.: 2020-322

DIVERSIFIED PACIFIC
10621 CIVIC CENTER DRIVE, RANCHO CUCAMONGA, CA 91730
(909) 373-2628

AO ARCHITECTS
144 NORTH ORANGE ST., ORANGE, CA 92866
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Architecture. Design. Relationships.



PLANT LEGEND: TREES

	BOTANIC NAME	COMMON NAME	SIZE / CALIPER	MATURATION (H x W)	EVERGREEN	QTY.	WUCOLS
PENNSYLVANIA AVENUE	LOPHOSTEMON CONFERTUS	BRISBANE BOX	24" BOX / 1.5"-2.5"	30'-40' x 15'-25'	YES	9	MOD
	MAGNOLIA GRANDIFLORA 'SAINT MARY'	SAINT MARY MAGNOLIA	24" BOX / 1.5"-2.5"	20'-25' x 20'-25'	YES	9	MOD
	PYRUS CALLERYANA 'REDSPIRE'	REDSPIRE PEAR	24" BOX / 1.5"-2.5"	30'-40' x 20'-30'	NO	7	MOD
TENNESSEE STREET	MAGNOLIA GRANDIFLORA 'SAINT MARY'	SAINT MARY MAGNOLIA	24" BOX / 1.5"-2.5"	20'-25' x 20'-25'	YES	14	MOD
PERIMETER & COMMON AREAS	ARBUTUS 'MARINA'	MARINA STRAWBERRY TREE	36" BOX / 2.5"-3.5"	20'-40' x 20'-30'	YES	33	LOW
	CHITALPA TASHKENTENSIS	CHITALPA	24" BOX / 1.5"-2.5"	20'-30' x 20'-30'	NO	23	MOD
	LOPHOSTEMON CONFERTUS	BRISBANE BOX	36" BOX / 1.5"-2.5"	30'-40' x 15'-25'	YES	62	MOD
	MAGNOLIA GRANDIFLORA 'SAINT MARY'	SAINT MARY MAGNOLIA	24" BOX / 1.5"-2.5"	20'-25' x 20'-25'	YES	22	MOD
	OLEA EUROPAEA	FRUITLESS OLIVE	24" BOX / 2.5"-3.5"	25'-30' x 25'-30'	YES	25	LOW
	PINUS ELDARICA	AFGHAN PINE	24" BOX / 1.5"-2.5"	30'-80' x 15'-25'	YES	45	MOD
	PINUS HALEPENSIS	ALEPPO PINE	24" BOX / 1.5"-2.5"	30'-60' x 20'-40'	YES	15	LOW
	QUERCUS ILEX	HOLLY OAK	36" BOX / 1.5"-2.5"	30'-60' x 30'-60'	YES	7	LOW
PALMS	PHOENIX DACTYLIFERA	DATE PALM	12' B.T.H.	50'-80' x 20'-40'	YES	44	LOW
	WASHINGTONIA FILIFERA	CALIFORNIA FAN PALM	12' B.T.H.	50'-60' x 10'-15'	YES	21	LOW

PLANT LEGEND: SHRUBS & GROUNDCOVER

	BOTANIC NAME	COMMON NAME	SIZE / SPACING	MATURATION (H x W)	EVERGREEN	QTY.*	WUCOLS
PERIMETER	ARISTIDA PURPUREA	PURPLE THREE-AWN	1 GAL @ 24" O.C.	1.5'-3' x 2'	YES	879	LOW
	BACCHARIS 'PIGEON POINT'	DWARF COYOTE BRUSH	1 GAL @ 72" O.C.	1'-3' x 8'	YES	290	LOW
	CALLISTEMON 'LITTLE JOHN'	DWARF BOTTLEBRUSH	5 GAL @ 48" O.C.	3'-5' x 4'-6'	YES	220	LOW
	CEANOTHUS 'JOYCE COULTER'	CREEPING MOUNTAIN LILAC	5 GAL @ 72" O.C.	2' x 8'	YES	290	LOW
	ECHIUM CANDICANS	PRIDE OF MADEIRA	15 GAL @ 72" O.C.	5'-6' x 6'-10'	YES	194	LOW
	OLEA EUROPAEA 'LITTLE OLLIE'	DWARF OLIVE	5 GAL @ 72" O.C.	6' x 6'	YES	258	LOW
	PENNISETUM SETACEUM	FOUNTAIN GRASS	1 GAL @ 36" O.C.	3'-5' x 2'-4'	YES	650	LOW
	PRUNUS ILICIFOLIA	HOLLYLEAF CHERRY	15 GAL @ 72" O.C.	15'-20' x 15'-20'	YES	130	LOW
	TECOMA STANS	YELLOW BELLS	15 GAL @ 72" O.C.	10'-20' x 10'-15'	YES	162	LOW
COMMON AREAS	AGAVE 'BLUE GLOW'	BLUE GLOW AGAVE	1 GAL @ 24" O.C.	1'-2' x 2'-3'	YES	79	LOW
	AGAVE DESMETTIANA 'VARIEGATA'	VARIEGATED SMOOTH AGAVE	5 GAL @ 42" O.C.	2'-3' x 3'-4'	YES	81	LOW
	ANIGOZANTHOS 'HARMONY'	KANGAROO PAW	1 GAL @ 30" O.C.	2'-3' x 4'-5'	YES	81	LOW
	ARCTOSTAPHYLOS EDMUNDSII 'CARMEL SUR'	CARMEL SUR MANZANITA	1 GAL @ 72" O.C.	1.5' x 7'-10'	YES	45	LOW
	BOUGAINVILLEA 'ROSENKA'	ROSENKA BOUGAINVILLEA	1 GAL @ 48" O.C.	2'-4' x 4'-6'	YES	52	LOW
	CAESALPINIA PULCHERRIMA	RED BIRD OF PARADISE	5 GAL @ 72" O.C.	10'-20' x 6'-12'	YES	26	LOW
	CAREX DIVULSA	EUROPEAN GRAY SEDGE	1 GAL @ 24" O.C.	1'-2' x 1'-2'	YES	322	LOW
	CEANOTHUS 'JOYCE COULTER'	CREEPING MOUNTAIN LILAC	5 GAL @ 72" O.C.	2' x 8'	YES	20	LOW
	LEYMUS CONDENSATUS	CANYON PRINCE WILD RYE	1 GAL @ 48" O.C.	3'-6' x 3'-6'	YES	143	LOW
	MUHLENBERGIA CAPILLARIS	REGAL MIST PINK MUHLY	5 GAL @ 48" O.C.	2'-3' x 4'-5'	YES	73	LOW
	PENNISETUM SETACEUM	FOUNTAIN GRASS	1 GAL @ 36" O.C.	3'-5' x 2'-4'	YES	150	LOW
	SALVIA 'BEE'S BLISS'	CREEPING SAGE	1 GAL @ 72" O.C.	1'-2' x 6'-8'	YES	65	LOW
PARKWAYS & ISLANDS	DIANELLA REVOLUTA 'LITTLE REV'	LITTLE REV FLAX LILY	1 GAL @ 24" O.C.	2'-4' x 1'-2'	YES	1080	LOW
	HESPERALOE PARVIFLORA	RED YUCCA	5 GAL @ 48" O.C.	3'-5' x 4'-6'	YES	126	LOW
	LANTANA X 'NEW GOLD'	NEW GOLD LANTANA	1 GAL @ 48" O.C.	1'-2' x 2'-4'	YES	352	LOW
	MYOPORUM PARVIFOLIUM	CREEPING MYOPORUM	1 GAL @ 72" O.C.	1' x 6'-12'	YES	120	LOW
	ROSMARINUS OFF. 'PROSTRATUS'	DWARF ROSEMARY	1 GAL @ 48" O.C.	1'-2' x 4'-8'	YES	126	LOW

*NOTE: SHRUB AND GROUNDCOVER QUANTITIES PROVIDED ARE ESTIMATES ONLY, DETERMINED BY THE APPROXIMATE SQUARE FOOTAGE OF PLANTER AREA AND RECOMMENDED PLANT SPACING.

LANDSCAPE CALCULATIONS

TOTAL LANDSCAPE AREA: 84,319 SF
PERCENTAGE OF EVERGREEN PLANT SPECIES: 95%
TOTAL TREE QUANTITY: 265
TOTAL PALM QUANTITY: 65
PERCENTAGE OF 24" BOX TREES: 64% (MIN. 25% REQUIRED)
PERCENTAGE OF 36" BOX TREES: 36% (MIN. 25% REQUIRED)

PARKING COVERAGE

TOTAL PARKING AREA (OPEN STALL & CARPORTS): 83,251 SF
TOTAL COVERED PARKING AREA (INCLUDES TREE & CARPORT COVERAGE): 45,633 SF (55%)

ETAF Calculations

Regular Landscape Areas	
Total ETAF x Area	35,569
Total Area	88,816
Average ETAF	0.40

California Water Efficient Landscape Worksheet

Reference Evapotranspiration (ET_o)		57.14		Project Type		Non-Residential		0.45
Hydrozone # / Planting Description	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Landscape Area (Sq. Ft.)		ETAF x Area	Estimated Total Water Use (ETWU)
Regular Landscape Areas								
Low Water Use Shrubs	0.3	Drip	0.81	0.37	81,525		30,194	1,069,693
Moderate Water Use Shrubs	0.5	Drip	0.81	0.62				
Moderate Water Use Trees	0.5	Bubbler	0.81	0.62	3,430		2,117	75,009
Palms	0.5	Bubbler	0.81	0.62	960		593	20,994
Turf Overhead	0.7	Overhead	0.75	0.93	2,281		2,129	75,421
Turf Drip	0.7	Drip	0.81	0.86	620		536	18,982
Water Features	1		1.00	1.00	4,967		4,967	175,965
				Totals	88,816		40,536	1,436,063
						ETWU Total		1,436,063
						Maximum Allowed Water Allowance (MAWA)		4,562,377

CONCEPTUAL LANDSCAPE PLAN

LUGONIA AVE. & TENNESSEE ST.

REDLANDS, CA

DIVERSIFIED PACIFIC COMMUNITIES

L-1.0

Date: January 17,2024

N 0 50' 100' 200'



LEGEND

1. COVERED DINING AREA
2. BBQ GRILLS
3. FIRE PIT
4. DECORATIVE CONCRETE PAVERS
5. WOOD-LOOK CONCRETE PAVERS
6. SYNTHETIC TURF LAWN
7. NATURAL TURF LAWN
8. WATER FEATURE
9. STRING LIGHTS

REFERENCE PHOTOS








BUILDING 5/6 COURTYARD ENLARGEMENT

LUGONIA AVE. & TENNESSEE ST.

REDLANDS, CA

DIVERSIFIED PACIFIC COMMUNITIES

LICENSED LANDSCAPE ARCHITECT — RICE NO. — STATE OF CALIFORNIA

COMMUNITY WORKS DESIGN GROUP

N 0 20' 40' 80'

L-2.0

Date: January 17,2024



LEGEND

1. POOL (30' x 73')
2. SPA (12' x 20')
3. SYNTHETIC TURF
4. SHADE STRUCTURE WITH DECORATIVE LASER CUT STEEL ROOFING
5. 6' TALL TUBULAR STEEL FENCING
6. FIRE PIT
7. BBQ GRILL
8. CONCRETE PAVERS
9. BENCH SEATING
10. SEAT WALL
11. SITE FURNISHINGS

REFERENCE PHOTOS






BUILDING 9 COURTYARD ENLARGEMENT

LUGONIA AVE. & TENNESSEE ST.

REDLANDS, CA

DIVERSIFIED PACIFIC COMMUNITIES

L-3.0

Date: January 17,2024

N 0 20' 40' 80'



LEGEND

1. DECORATIVE CONCRETE PAVERS
2. DECORATIVE LASER CUT STEEL FENCE PANELS & GATE
3. WATER FEATURE
4. BBQ GRILL
5. RAISED SUCCULENT GARDENS WITH BUILT-IN SEATING
6. SEAT WALL
7. SPECIMEN TREE IN RAISED PLANTER
8. PET RELIEF AREA
9. MONUMENT SIGN
10. CALL BOX

REFERENCE PHOTOS







BUILDING 10 COURTYARD ENLARGEMENT

LUGONIA AVE. & TENNESSEE ST.

REDLANDS, CA

DIVERSIFIED PACIFIC COMMUNITIES

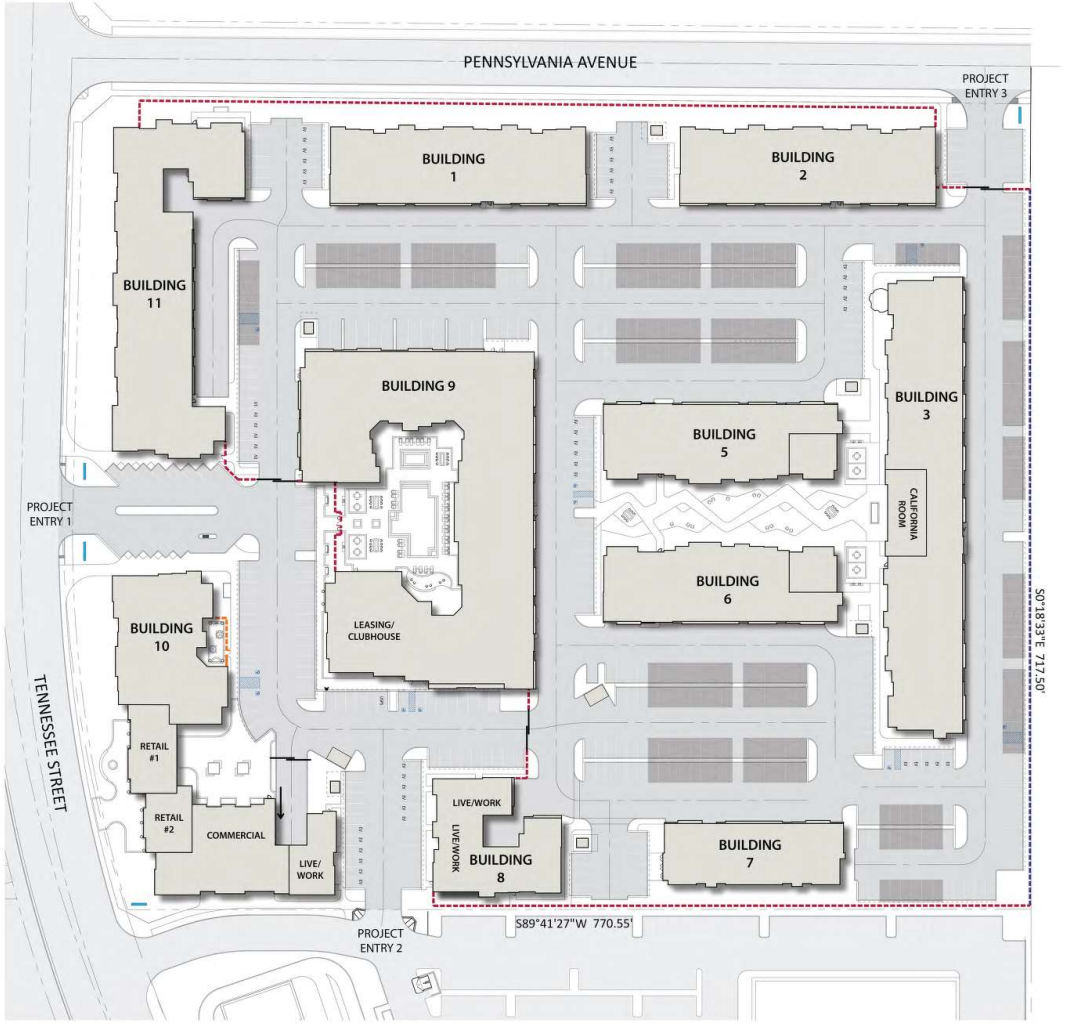
LICENSED LANDSCAPE ARCHITECT — JEFFREY V. RICE NO. 4444 — STATE OF CALIFORNIA

COMMUNITY WORKS DESIGN GROUP

N 0 20' 40' 80'

L-4.0

Date: January 17,2024



LEGEND

- 6' TALL TUBULAR STEEL FENCE
- 6' TALL TUBULAR STEEL FENCE ATOP 2' TALL RETAINING WALL
- 6' LASER-CUT STEEL DECORATIVE FENCING
- MONUMENT WALLS
  (UNDER SEPARATE PERMIT; PLANNING COMMISSION APPROVAL REQUIRED)

REFERENCE PHOTOS









FENCE & WALL PLAN

LUGONIA AVE. & TENNESSEE ST.

REDLANDS, CA

DIVERSIFIED PACIFIC COMMUNITIES

L-5.0

Date: January 17,2024

N 0 50' 100' 200'

TENNESSEE VILLAGE

REDLANDS, CALIFORNIA

DESIGN REVIEW SUBMITTAL

COMMISSION REVIEW & APPROVAL NO. # 956
CUP NO. # 1173
TMP NO. # 20688
JANUARY 10, 2024



SHEET	DESCRIPTION
ARCHITECTURE - RESIDENTIAL	
G-0.0	COVER SHEET
G-1.0	PROJECT DATA
A-1.0	CONCEPTUAL SITE PLAN
A-1.2	FIRE MASTER PLAN
A-1.3	OPEN SPACE EXHIBIT
A-1.4-1	WASTE MANAGEMENT EXHIBIT
A-1.4-2	PATH OF TRAVEL EXHIBIT
A-1.5	SITE / BUILDING SECTION A-A
A-1.6	PERSPECTIVE VIEW 1
A-1.7	PERSPECTIVE VIEW 2
A-1.8	PERSPECTIVE VIEW 3
A-1.9	PERSPECTIVE VIEW 4
A-1.10	PERSPECTIVE VIEW 5
A-1.11	PERSPECTIVE VIEW 6
A-1.12	PERSPECTIVE VIEW 7
A-2.1	TYPE A BUILDING 1&2 - FLOOR PLANS
A-2.1-1	TYPE A BUILDING 1&2 - ELEVATIONS
A-2.2	TYPE B BUILDING 3 - FLOOR PLANS
A-2.2-1	TYPE B BUILDING 3 - ELEVATIONS
A-2.3	TYPE C BUILDING 5 & 6 - FLOOR PLANS
A-2.3-1	TYPE C BUILDING 5 & 6 - ELEVATIONS
A-2.4	TYPE D BUILDING 9 - 1ST FLOOR PLAN
A-2.4-1	TYPE D BUILDING 9 - 2ND FLOOR PLAN
A-2.4-2	TYPE D BUILDING 9 - 3RD FLOOR PLAN
A-2.4-3	TYPE D BUILDING 9 - 4TH FLOOR PLAN
A-2.4-4	TYPE D BUILDING 9 - ROOF PLAN
A-2.4-5	TYPE D BUILDING 9 - ELEVATIONS
A-2.4-6	TYPE D BUILDING 9 - ELEVATIONS
A-2.5	TYPE E BUILDING 7 - FLOOR PLANS
A-2.5-1	TYPE E BUILDING 7 - ELEVATIONS
A-2.6	TYPE F BUILDING 11 - 1 ST FLOOR PLAN
A-2.6-1	TYPE F BUILDING 11 - 2ND, 3RD & 4TH FLOOR PLAN
A-2.6-2	TYPE F - BUILDING 11 - ROOF PLAN
A-2.6-3	TYPE F - BLDG 11 ELEVATIONS 1
A-2.6.4	TYPE F - BLDG 11 ELEVATIONS 2
A-2.7	TYPE G BUILDING 10 - BASEMENT FLOOR PLAN
A-2.7.1	TYPE G BUILDING 10 - 1ST FLOOR PLAN
A-2.7.2	TYPE G BUILDING 10 - 2ND FLOOR PLAN
A-2.7.3	TYPE G BUILDING 10 - 3RD & 4TH FLOOR PLAN
A-2.7.4	TYPE G BUILDING 10 - ROOF PLAN
A-2.7.5	TYPE G BUILDING 10 - ELEVATIONS 1
A-2.7.6	TYPE G BUILDING 10 - ELEVATIONS 2
A-2.8	TYPE H BUILDING 8 - 1ST, 2ND & 3RD FLOOR PLANS
A-2.8.1	TYPE H BUILDING 8 - ELEVATIONS
A-3.1	UNIT FLOOR PLANS
A-3.2	UNIT FLOOR PLANS
A-4.1	AMENITY /FITNESS FLOOR PLAN
A-5.1	PARKING EXHIBIT
A-6.0	MATERIAL BOARD
A-6.1	ENLARGED ELEVATION DETAILS

CIVIL	
C-1	GRADING & DRAINAGE MASTER PLAN
C-2	CROSS SECTIONS
C-3	UTILITY PLAN
LANDSCAPE	
L-1	CONCEPTUAL LANDSCAPE
L-2	COURTYARD 1 ENLARGEMENT
L-3	COURTYARD 2 ENLARGEMENT
L-4	COURTYARD 3 & 4 ENLARGEMENT
L-5	FENCE & WALL PLAN
SHEET	**DESCRIPTION**
PHASE I	
P-1	PHASE I - PHASING EXHIBIT
P-2	PHASE I - NEIGHBORHOOD DATA
P-3	PHASE I - FIRE MASTER PLAN
P-4	PHASE I - WASTE MANAGEMENT EXHIBIT
P-5	PHASE I - CIVIL IMPROVEMENT EXHIBIT

PROJECT TEAM

APPLICANT / OWNER
DIVERSIFIED PACIFIC
10621 CIVIC CENTER DRIVE
RANCHO CUCAMONGA, CA 91730
Contact: NOLAN C. LEGGIO
(909)373-2628

CIVIL ENGINEER
KIMLEY - HORN PLANNING DESIGN
ENGINEERING CONSULTANTS
1100 TOWN AND COUNTRY RD.
SUITE 700, ORANGE, CA 92868
Contact: ROB OTTE
(951)534-5630

LANDSCAPE ARCHITECT
COMMUNITY WORKS DESIGN GROUP
4649 BROCKTON AVE.
RIVERSIDE, CA 92506
Contact: ALLISON RUSH
(951)369-0700

ARCHITECT
AO (ARCHITECTS ORANGE)
144 N. ORANGE ST.
ORANGE, CA 92866
Contact: SERAFIN MARANAN
(714)639-9860

VICINITY MAP



APN: 0167-171-15

G 1.0



BUILDING G ELEVATION



1 VINYL WINDOW WHITE



2 STORE FRONT SYSTEM DARK BRONZE



3 PREBRICATED METAL RAILING TO MATCH PAINT SPECS



4 METAL AWNING



5 LOUVERED SUN SHADES TO MATCH PAINT SPECS



6 JULIET BALCONY RAILING TO MATCH PAINT SPECS



7 FIBERGLASS FRAMING



8 TIE RODS SYSTEMS



9 STUCCO - OMEGA 20/30 FINISH PAINT GRADE TO MATCH COLOR SPECS



10 BRICK VENEER THIN BELDEN BRICK - WINEWOOD BLEND



11 STONE CLADIDNG- WITH LIMESTONE FINISH



12 CERAMIC TILE

Ⓐ SW 7035 AESTHETIC WHITE

Ⓑ SW 7631 CITY LOFT

Ⓒ SW 9603 QUARRY STONE

Ⓓ SW 6074 SOAKDUBG GRAY

Ⓔ SW 9570 IRONCLAD

APN: 0167-171-15

A6.0

LUGONIA AVE. & TENNESSEE ST.

1161 W LUGONIA AVE, REDLANDS, CA 92374

MATERIAL BOARD JOB NO.: 2020-322 DATE: 01-10-2024

DIVERSIFIED PACIFIC
10621 CIVIC CENTER DRIVE, RANCHO CUCAMONGA, CA 91730
(909) 373-2628

AO ARCHITECTS
144 NORTH ORANGE ST., ORANGE, CA 92866
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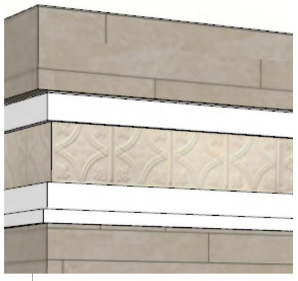
Architecture. Design. Relationships.



DECORTIVE TILE OR HIGH DENSITY EXTERIOR FOAM W/ SMOOTH CEMENTITIOUS FINISH



EXTERIOR JULIET BACONY WITH GALVANIZED METAL LOUVERS



FIBERGLASS FRAMING



TIE RODS SYSTEMS



FAUX WOOD SOFFIT



APN: 0167-171-15

A-6.1

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

TENNESSEE VILLAGE

REDLANDS, CA 92374

ARCHITECTURE DETAILS

DIVERSIFIED PACIFIC
10621 CIVIC CENTER DRIVE, RANCHO CUCAMONGA, CA 91730
(909) 373-2628

AO ARCHITECTS
144 NORTH ORANGE ST., ORANGE, CA 92866
(714) 639-9860

Architecture. Design. Relationships.

EXTERIOR ELEVATION KEYNOTES

1. STUCCO
2. BRICK VENEER
3. VINYL WINDOW
4. SHADE CANOPY
5. GARAGE DOOR
6. VENEER STONE
7. PORCELAIN TILE
8. BALCONY RAILING
9. SUN SHADE LOUVER
10. STORE FRONT SYSTEM
11. EXTERIOR LIGHTING
12. JULIET BALCONY RAILING
13. METAL AWNING



EAST ELEVATION



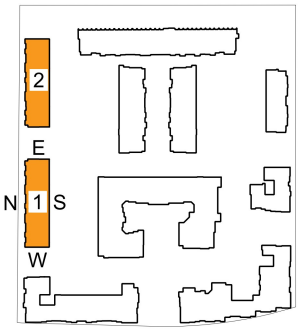
WEST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION



APN: 0167-171-15

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TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE A - BLDG. 1 & 2 ELEVATIONS

SCALE : 3/32"= 1'-0"
DATE: 08-30-2024
JOB NO.: 2020-322

DIVERSIFIED PACIFIC
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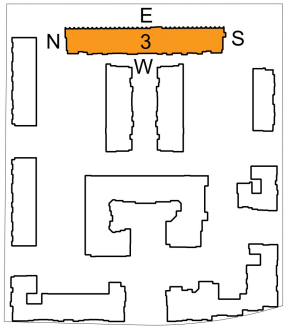
Architecture. Design. Relationships.



SOUTH ELEVATION



NORTH ELEVATION



EXTERIOR ELEVATION KEYNOTES

1. STUCCO
2. BRICK VENEER
3. VINYL WINDOW
4. SHADE CANOPY
5. GARAGE DOOR
6. VENEER STONE
7. PORCELAIN TILE
8. BALCONY RAILING
9. SUN SHADE LOUVER
10. STORE FRONT SYSTEM
11. EXTERIOR LIGHTING
12. JULIET BALCONY RAILING
13. METAL AWNING



WEST ELEVATION



EAST ELEVATION

APN: 0167-171-15

A-2.2-1

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE B - BLDG. 3 ELEVATIONS

SCALE : N.T.S.
DATE: 08-30-2024
JOB NO.: 2020-322

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EXTERIOR ELEVATION KEYNOTES

1. STUCCO
2. BRICK VENEER
3. VINYL WINDOW
4. SHADE CANOPY
5. GARAGE DOOR
6. VENEER STONE
7. PORCELAIN TILE
8. BALCONY RAILING
9. SUN SHADE LOUVER
10. STORE FRONT SYSTEM
11. EXTERIOR LIGHTING
12. JULIET BALCONY RAILING
13. METAL AWNING



EAST ELEVATION



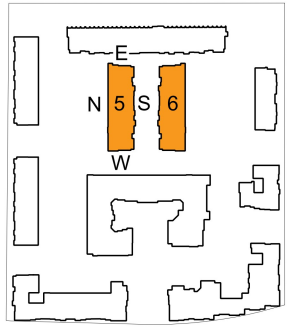
WEST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION



APN: 0167-171-15

A-2.3-1

SCALE : 3/32"= 1'-0"
DATE: 08-30-2024
JOB NO.: 2020-322

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE C - BLDG. 5 & 6 ELEVATIONS

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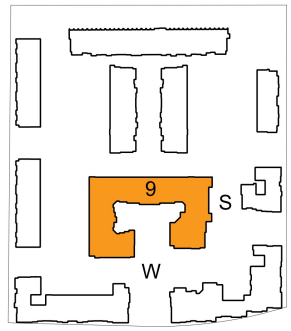
Architecture. Design. Relationships.

EXTERIOR ELEVATION KEYNOTES

1. STUCCO
2. BRICK VENEER
3. VINYL WINDOW
4. SHADE CANOPY
5. GARAGE DOOR
6. VENEER STONE
7. PORCELAIN TILE
8. BALCONY RAILING
9. SUN SHADE LOUVER
10. STORE FRONT SYSTEM
11. EXTERIOR LIGHTING
12. JULIET BALCONY RAILING
13. METAL AWNING



SOUTH ELEVATION





WEST ELEVATION

APN: 0167-171-15

A-2.4-5

SCALE : 3/32"= 1'-0"
DATE: 08-30-2024
JOB NO.: 2020-322

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE D - BLDG. 9 ELEVATIONS

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Architecture. Design. Relationships.

EXTERIOR ELEVATION KEYNOTES

1. STUCCO
2. BRICK VENEER
3. VINYL WINDOW
4. SHADE CANOPY
5. GARAGE DOOR
6. VENEER STONE
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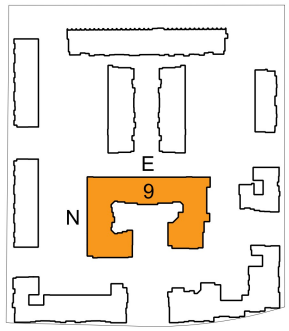
9. SUN SHADE LOUVER
10. STORE FRONT SYSTEM
11. EXTERIOR LIGHTING
12. JULIET BALCONY RAILING
13. METAL AWNING



NORTH ELEVATION





EAST ELEVATION

APN: 0167-171-15

A-2.4-6

SCALE : 3/32"= 1'-0"
DATE: 08-30-2024
JOB NO.: 2020-322

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE D - BLDG. 9 ELEVATIONS

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EXTERIOR ELEVATION KEYNOTES

1. STUCCO
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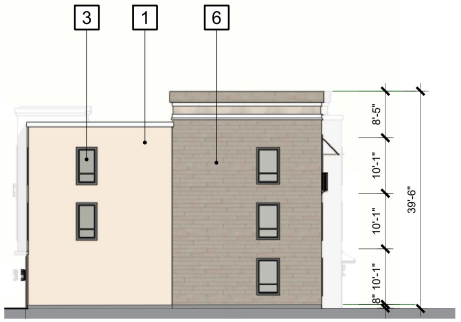
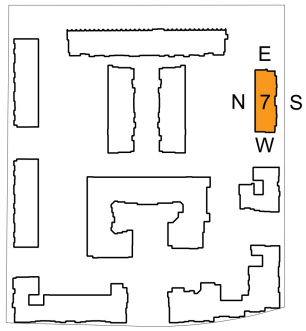
10. STORE FRONT SYSTEM
11. EXTERIOR LIGHTING
12. JULIET BALCONY RAILING
13. METAL AWNING



SOUTH ELEVATION

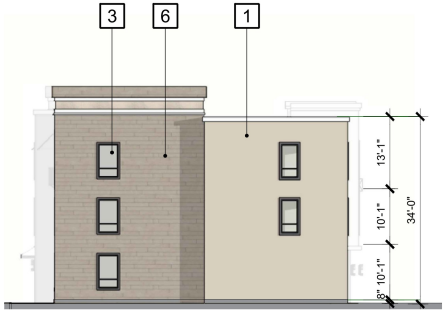


WEST ELEVATION





NORTH ELEVATION



EAST ELEVATION

APN: 0167-171-15

A-2.5-1

SCALE : 3/32"= 1'-0"
DATE: 08-30-2024
JOB NO.: 2020-322

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE E - BLDG. 7 ELEVATIONS

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Architecture. Design. Relationships.

EXTERIOR ELEVATION KEYNOTES

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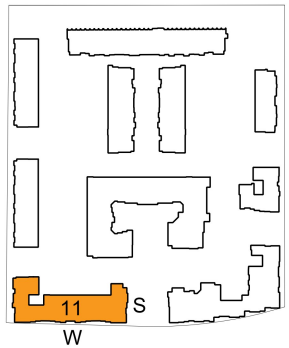
13. METAL AWNING



SOUTH ELEVATION





WEST ELEVATION

APN: 0167-171-15

A-2.6-3

SCALE : 3/32"= 1'-0"
DATE: 08-30-2024
JOB NO.: 2020-322

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE F - BLDG. 11 ELEVATIONS

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EXTERIOR ELEVATION KEYNOTES

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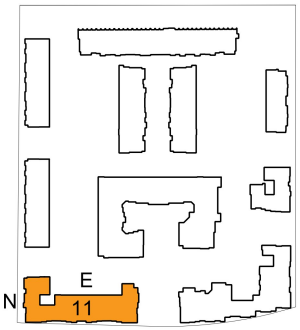
13. METAL AWNING



NORTH ELEVATION





EAST ELEVATION

APN: 0167-171-15

A-2.6-4

SCALE : 3/32"= 1'-0"
DATE: 08-30-2024
JOB NO.: 2020-322

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE F - BLDG. 11 ELEVATIONS

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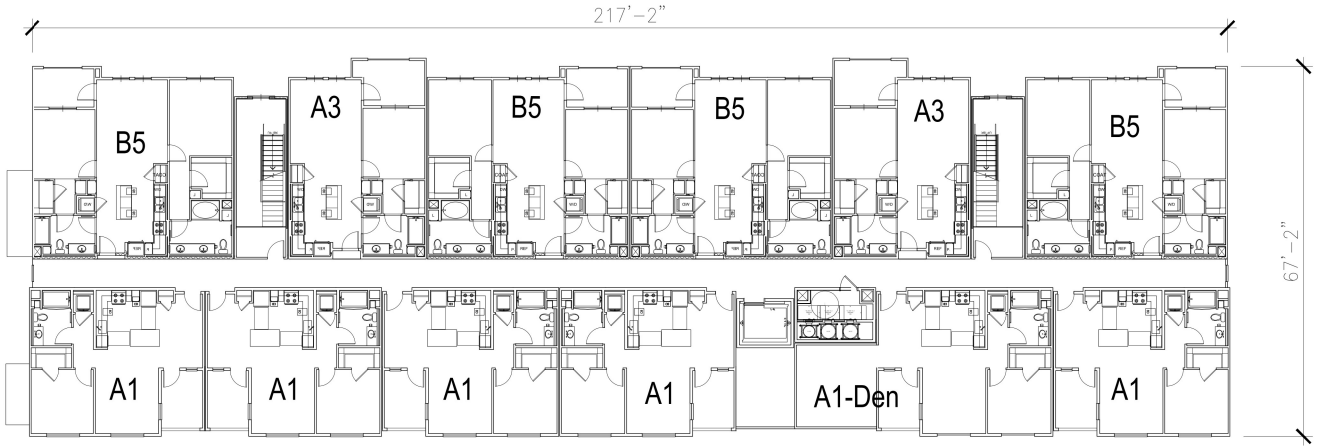
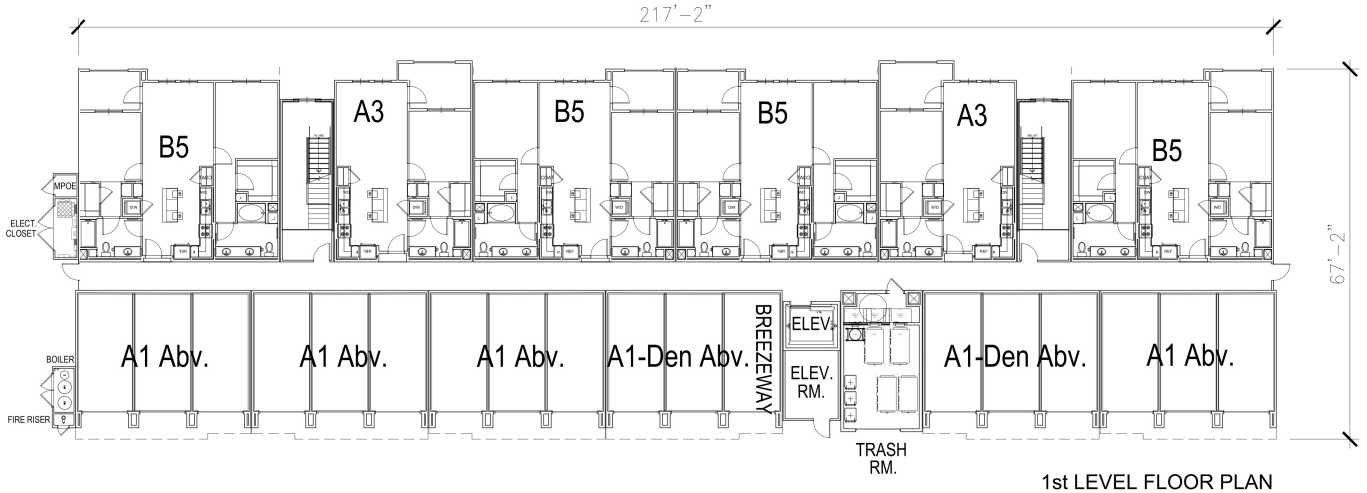


2nd - 4th LEVEL FLOOR PLAN



1st LEVEL FLOOR PLAN

APN: 0167-171-15

A-2.1

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE A BUILDING 1 & 2 - COMPOSITE LEVEL
1, 2, 3 & 4 FLOOR PLANS

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

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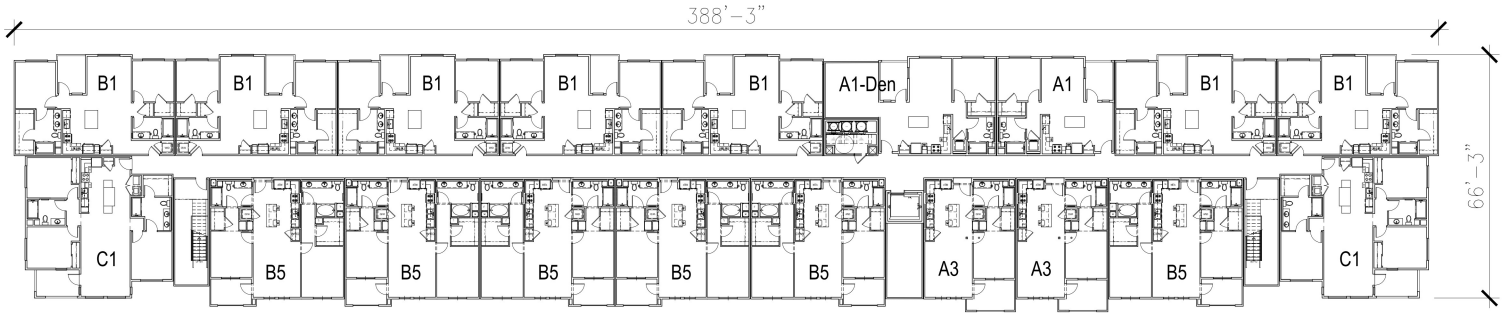
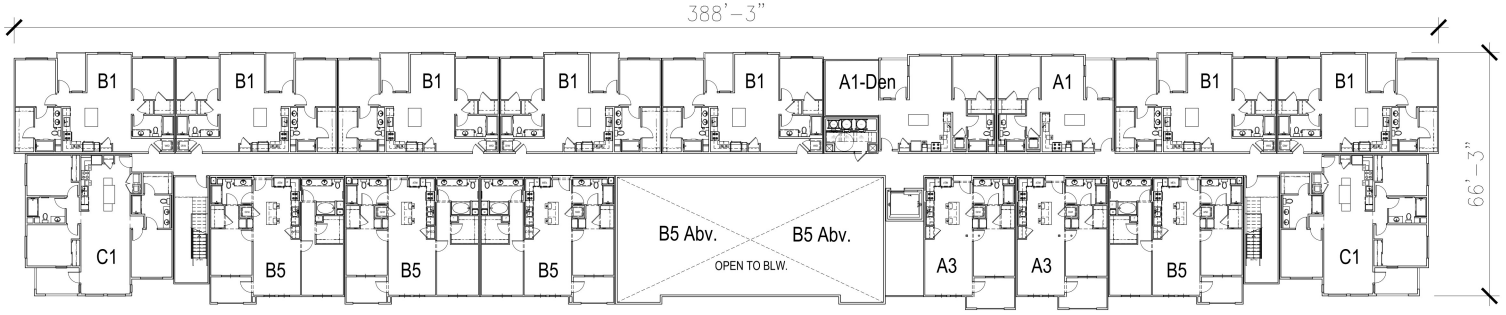
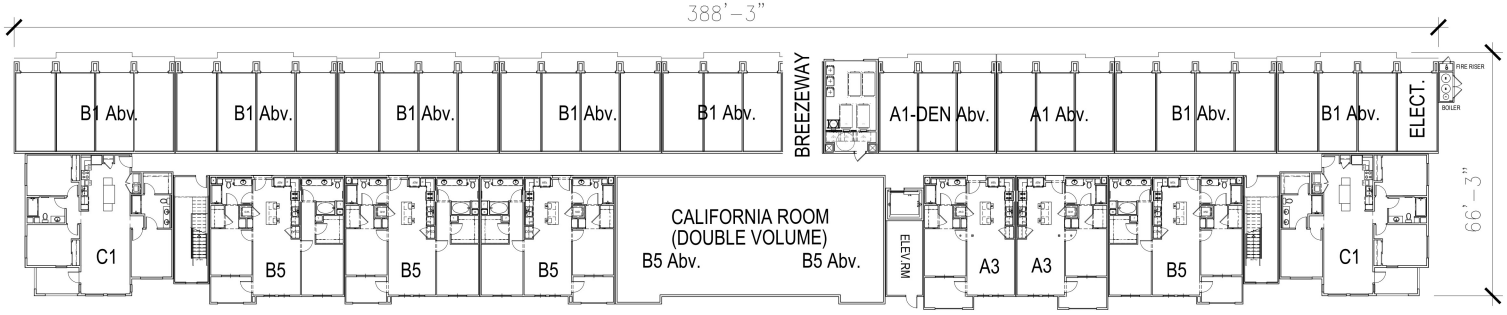


3rd & 4th LEVEL FLOOR PLAN



2nd LEVEL FLOOR PLAN



1st LEVEL FLOOR PLAN

APN: 0167-171-15

A-2.2

TYPE B BUILDING 3 - COMPOSITE LEVEL
1, 2, 3 & 4 FLOOR PLANS

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

TENNESSEE VILLAGE

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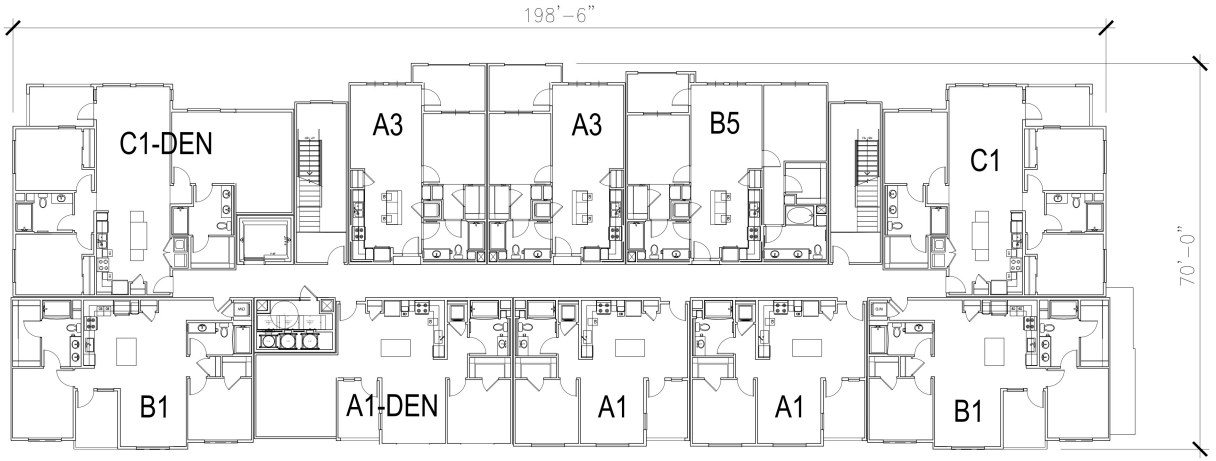
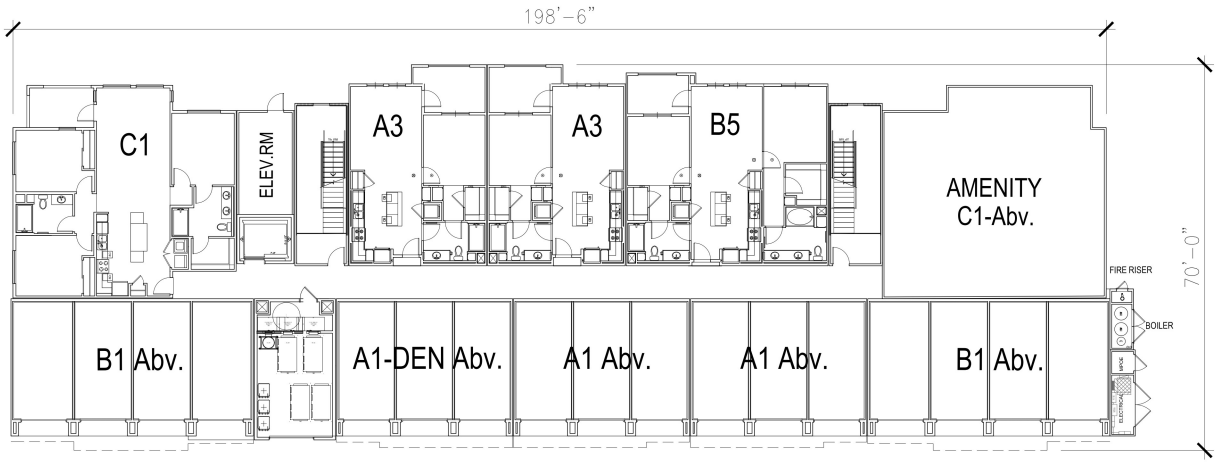


BLDG.5 & 6, 2nd - 4th LEVEL FLOOR PLAN



BLDG. 5 & 6,1st LEVEL FLOOR PLAN

APN: 0167-171-15

A-2.3

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE C (BLDG. 5 &6) - COMPOSITE LEVEL
1st-4th FLOOR PLANS

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

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Architecture. Design. Relationships.



APN: 0167-171-15

A-2.4

TYPE D BUILDING 9 - COMPOSITE LEVEL
1st FLOOR PLAN

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

TENNESSEE VILLAGE

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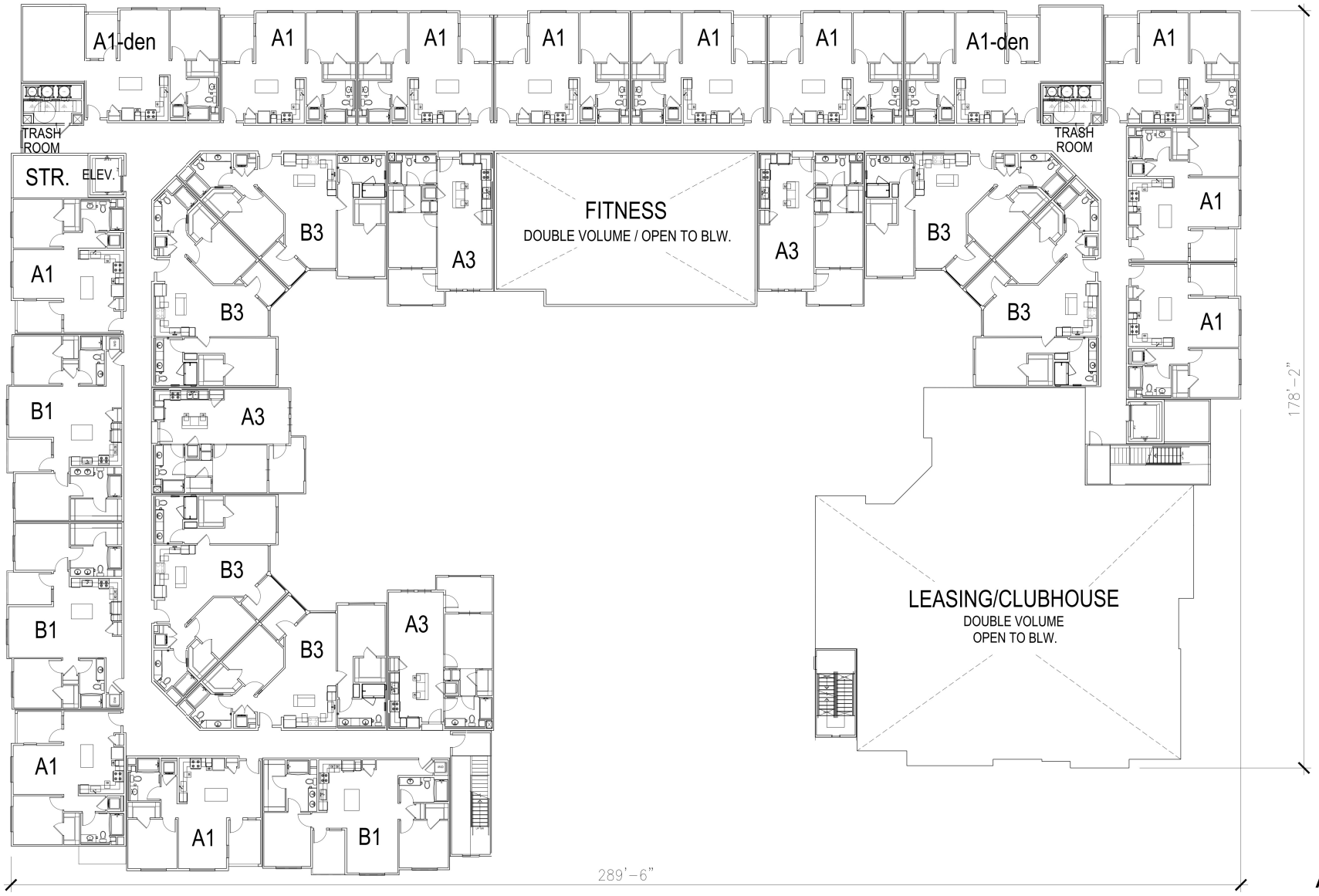

APN: 0167-171-15

A-2.4-1

TYPE D TYPE D BUILDING 9 - COMPOSITE LEVEL
2nd FLOOR PLAN

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

TENNESSEE VILLAGE

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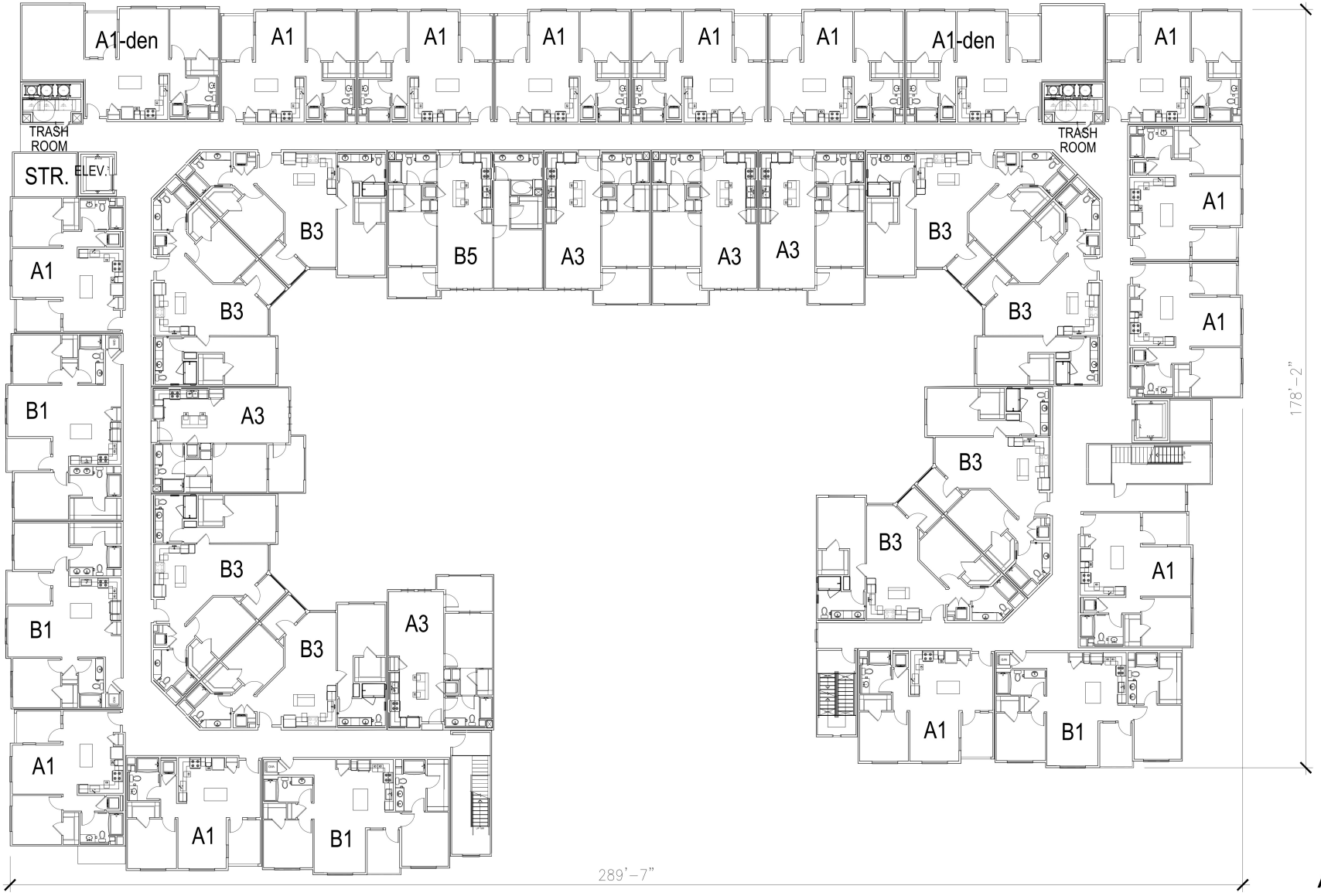

APN: 0167-171-15

A-2.4-2

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE D BUILDING 9 - COMPOSITE LEVEL
3rd FLOOR PLAN

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

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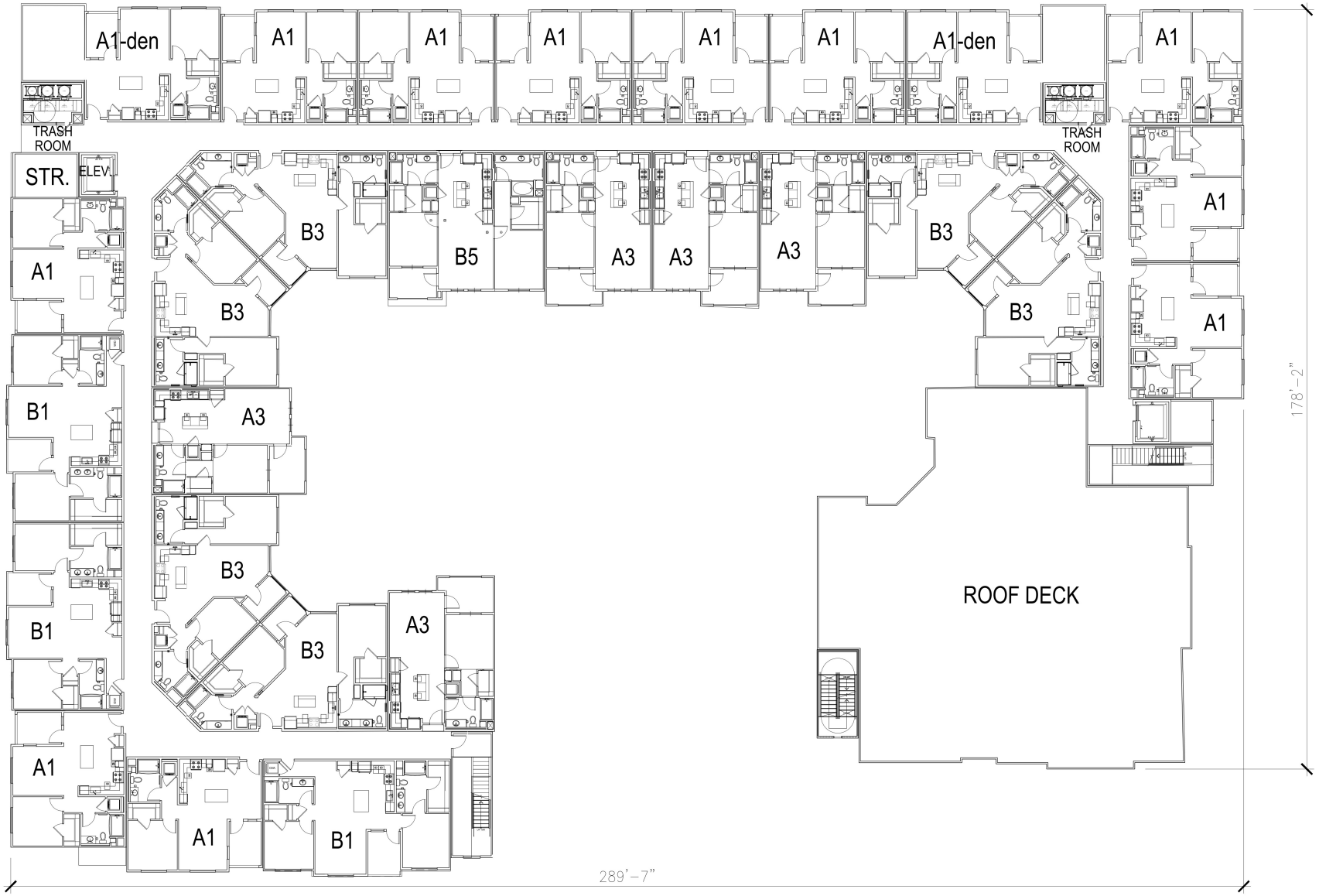

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE D BUILDING 9 - COMPOSITE LEVEL
4th FLOOR PLAN

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

APN: 0167-171-15

A-2.4-3

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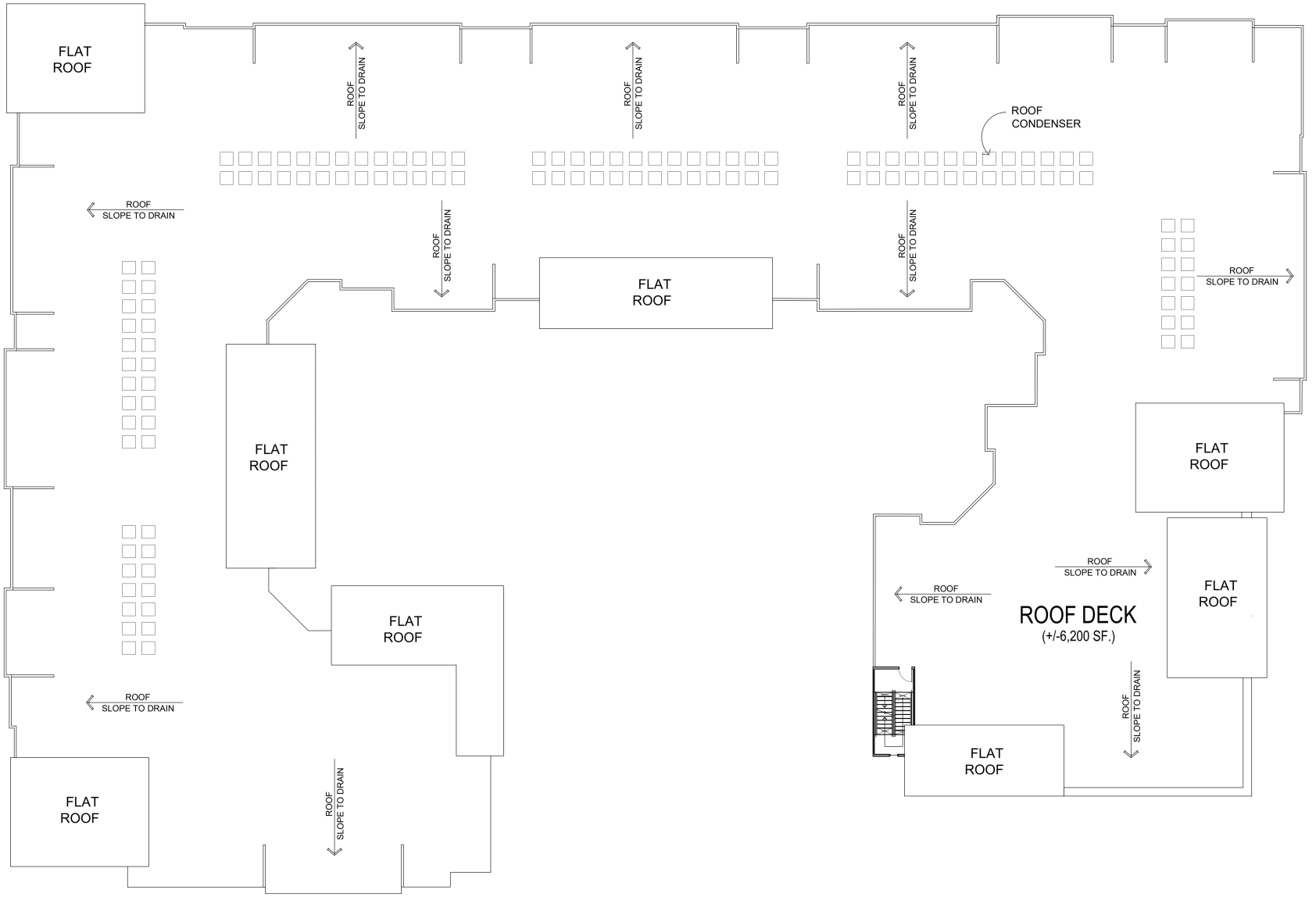

APN: 0167-171-15

A-2.4-4

SCALE : 3/32"= 1'-0"

DATE: 01-10-2024

JOB NO.: 2020-322

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE D BUILDING 9 - ROOF PLAN

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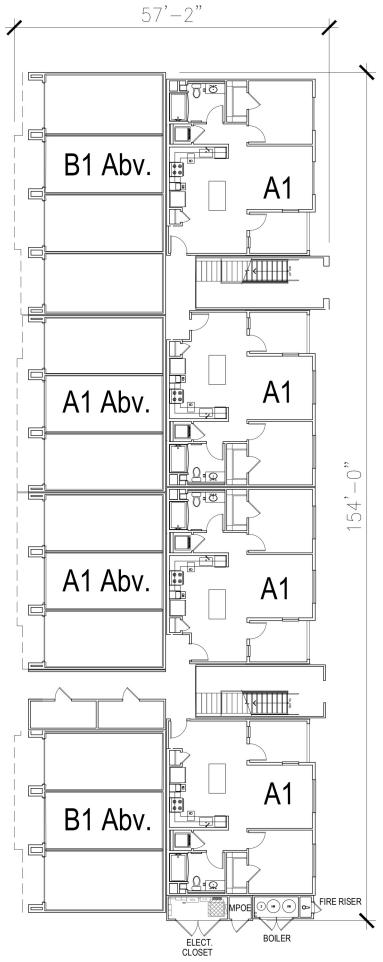
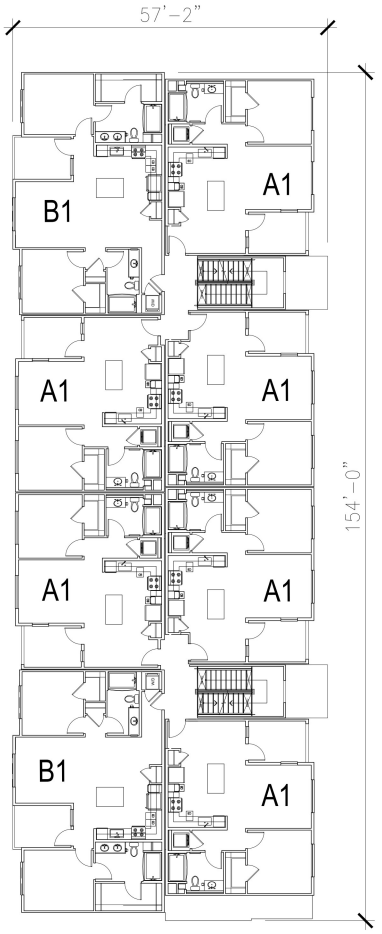


1st LEVEL FLOOR PLAN



2nd - 3rd LEVEL FLOOR PLAN

APN: 0167-171-15

A-2.5

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE E BUILDING 7 - COMPOSITE LEVEL
1, 2 & 3 FLOOR PLANS

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

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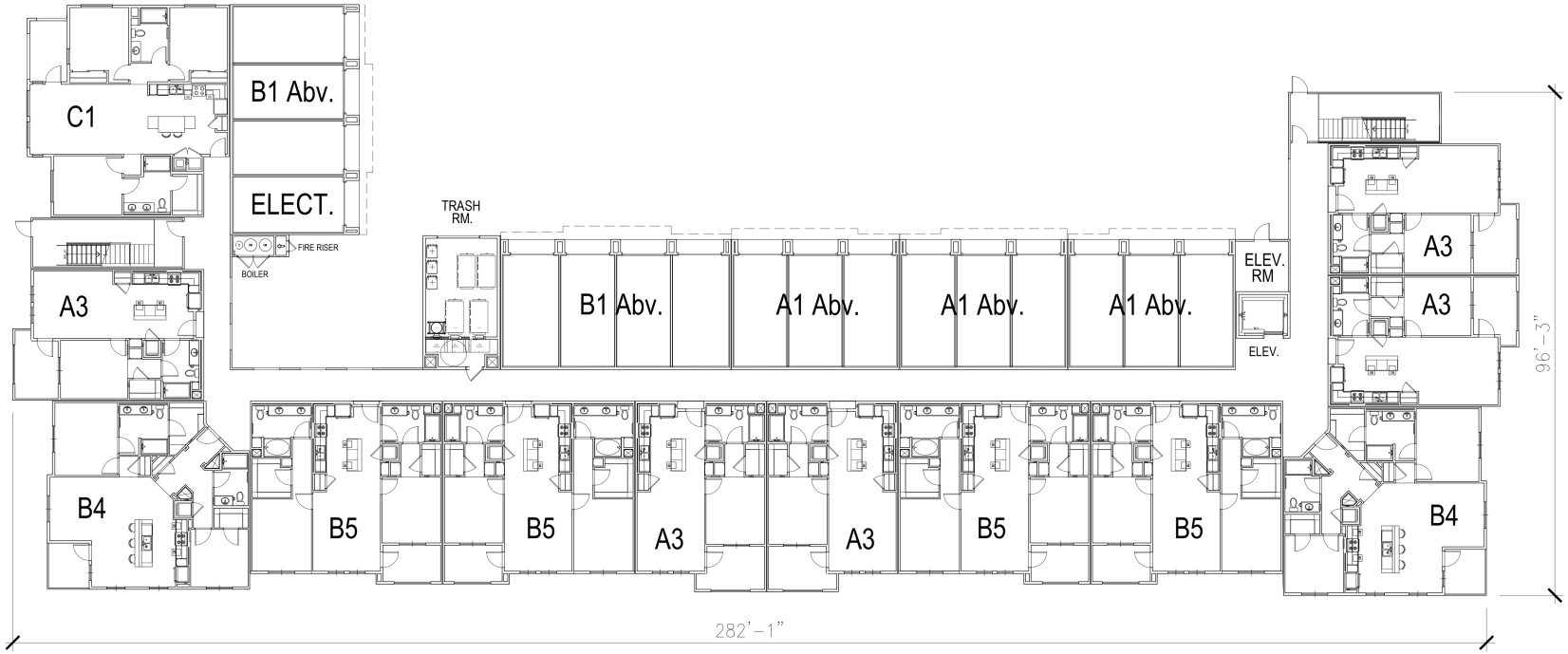

APN: 0167-171-15

A-2.6

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE F(BLDLG. 11) - COMPOSITE LEVEL SCALE : 3/32"= 1'-0"

1st FLOOR PLAN DATE: 01-10-2024 JOB NO.: 2020-322

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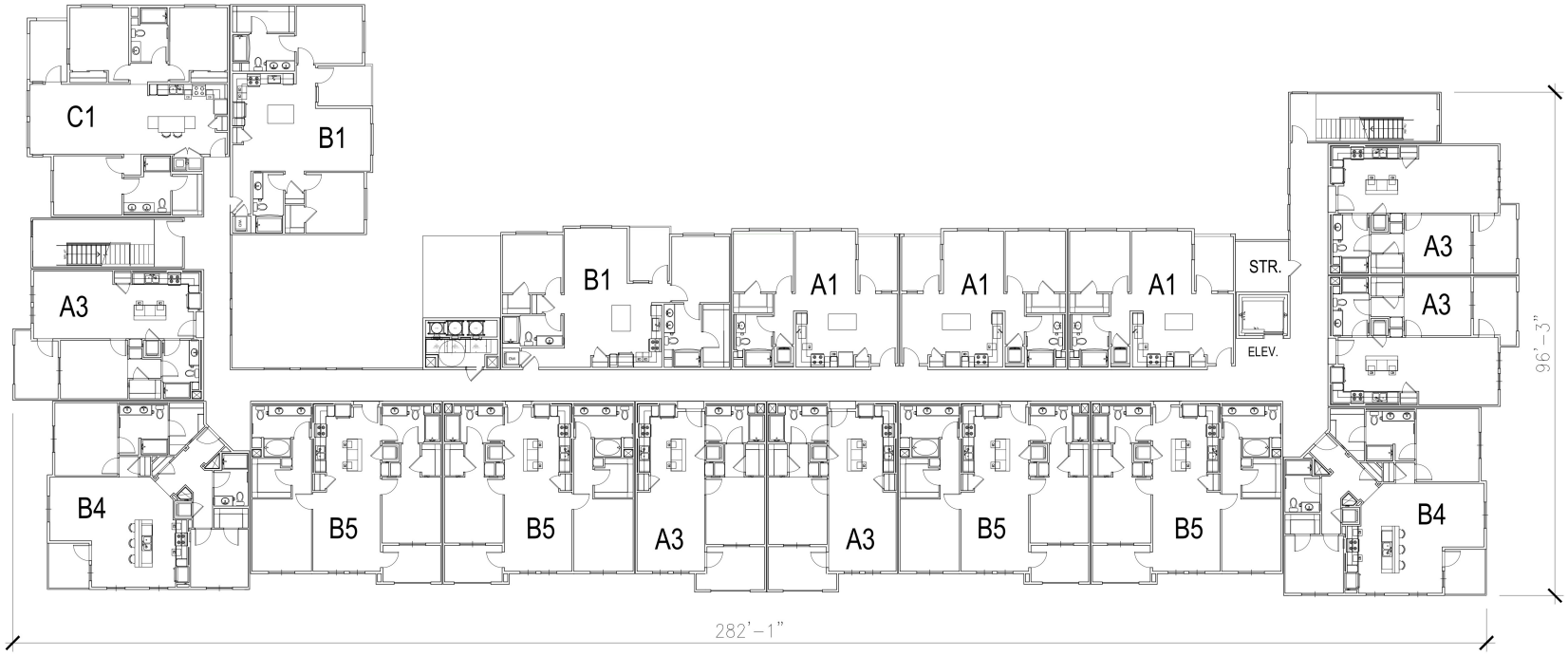

APN: 0167-171-15

A-2.6-1

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE F(BLDLG. 11) - COMPOSITE LEVEL SCALE : 3/32"= 1'-0"

2nd, 3rd & 4th FLOOR PLAN DATE: 01-10-2024 JOB NO.: 2020-322

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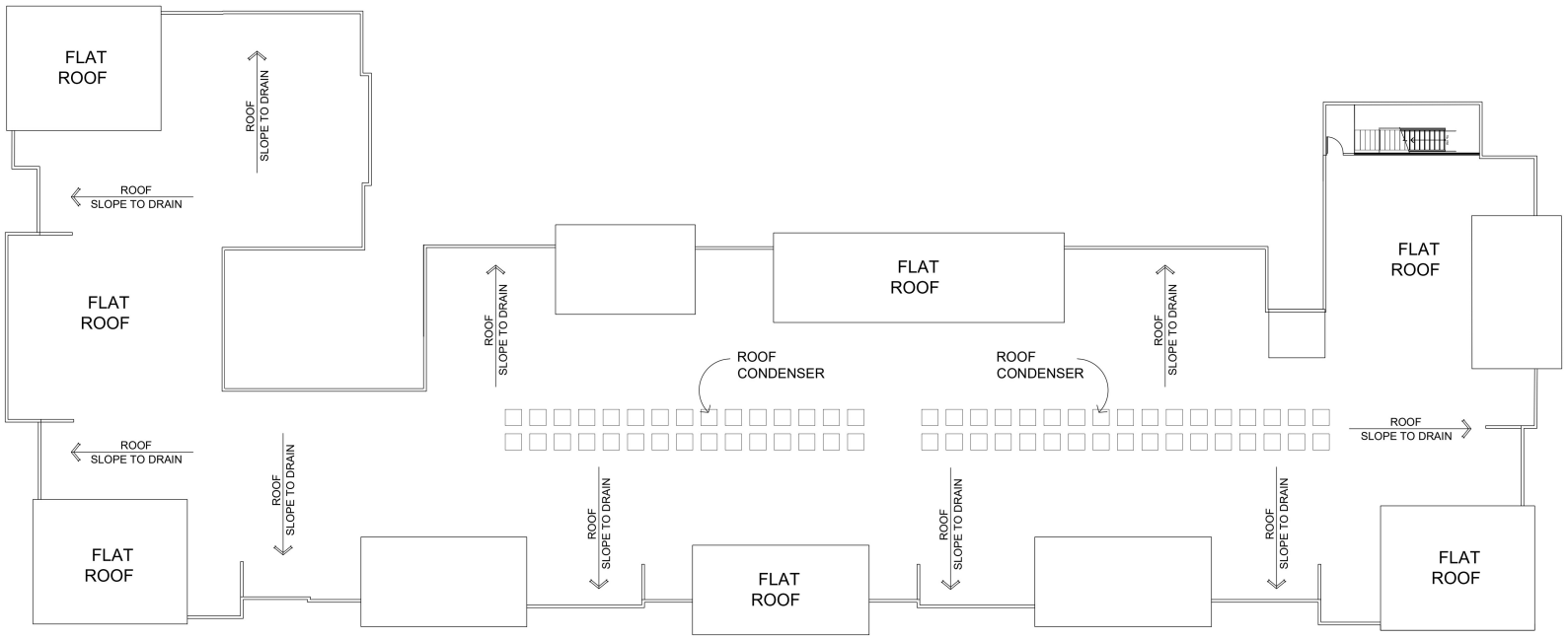

APN: 0167-171-15

A-2.6-2

SCALE : 3/32"= 1'-0"

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE F BLDLG. 11 - ROOF PLAN

DATE: 01-10-2024
JOB NO.: 2020-322

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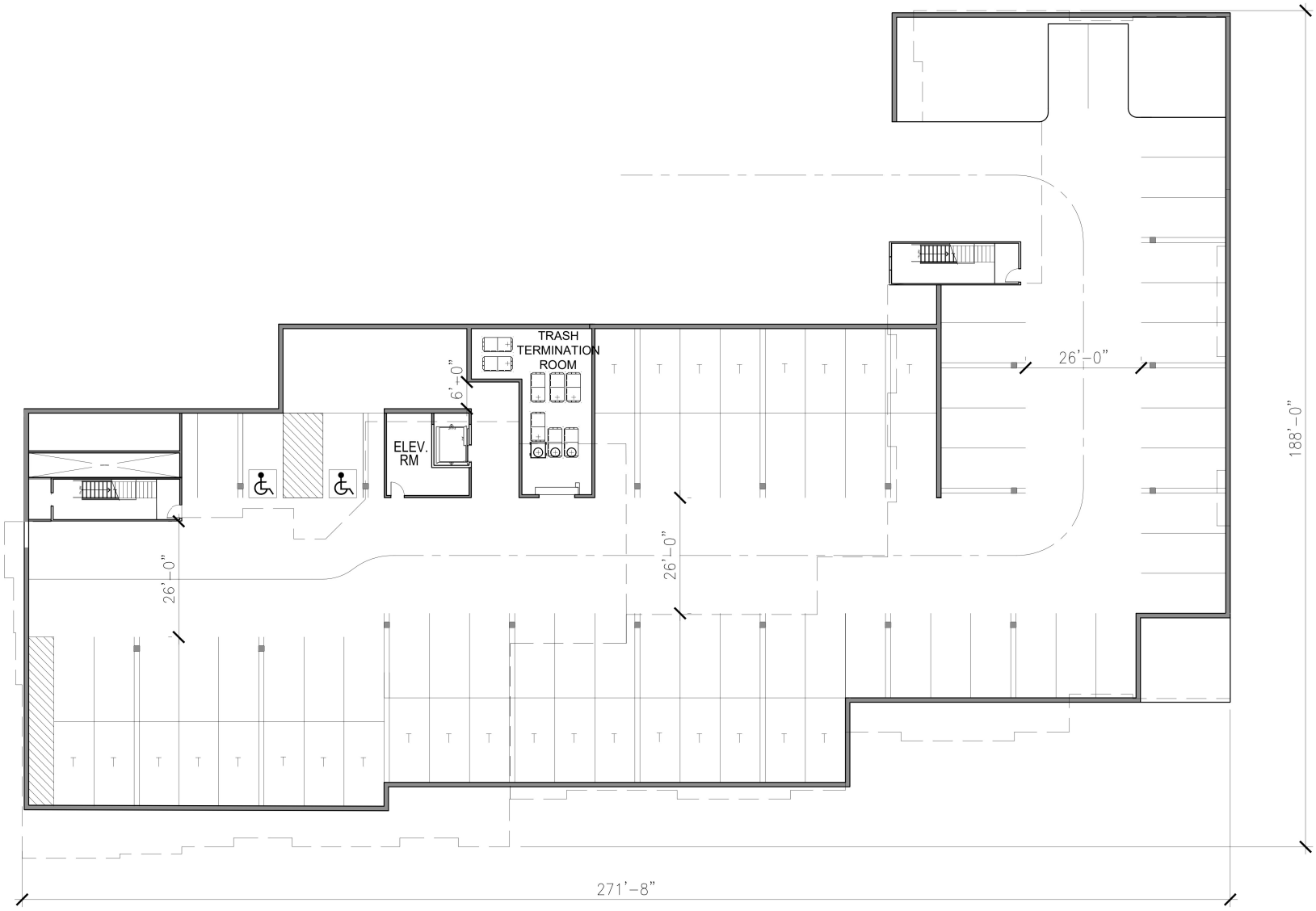

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE G BUILDING 10 - COMPOSITE LEVEL
BASEMENT LEVEL FLOOR PLAN

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

APN: 0167-171-15

A-2.7

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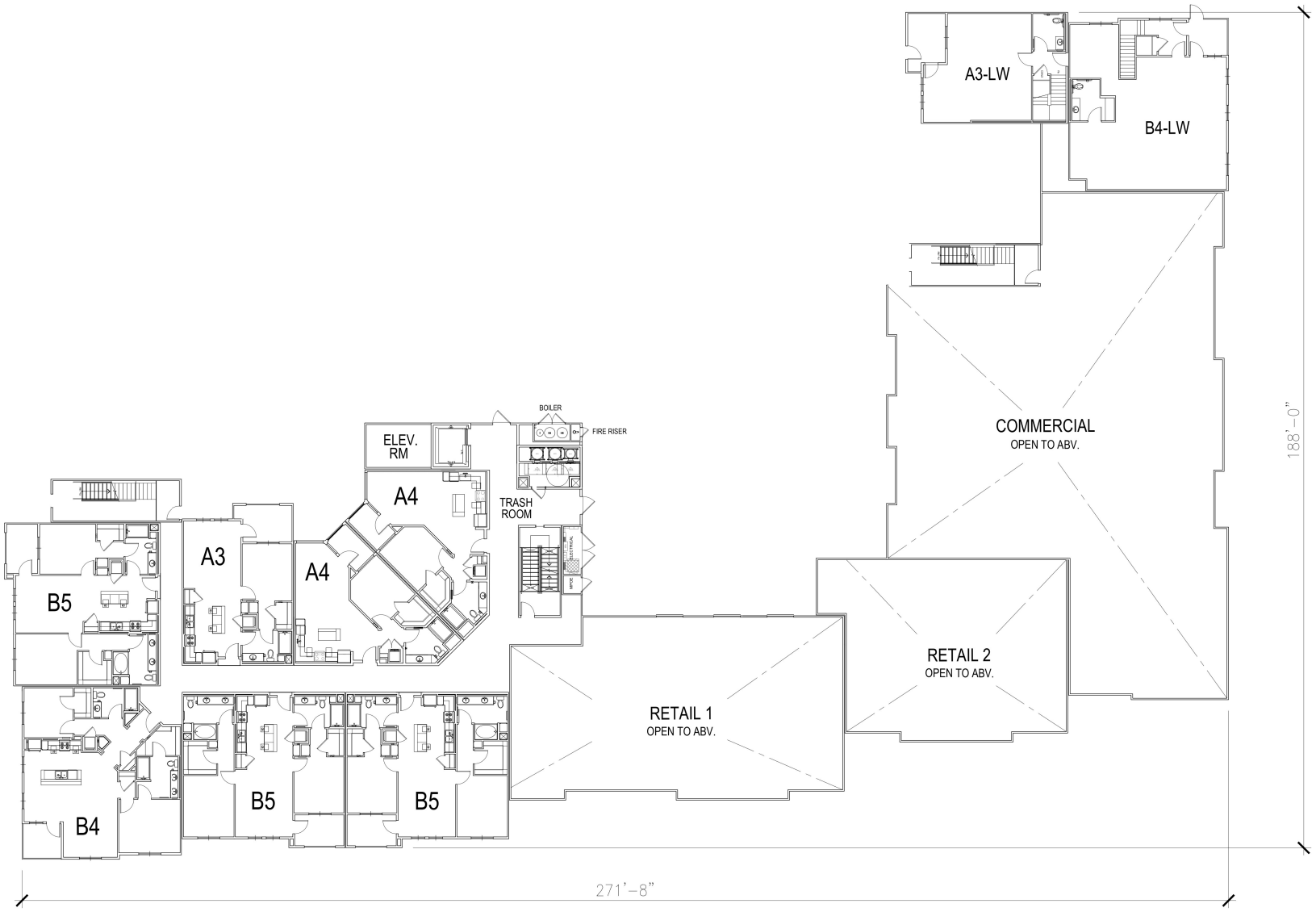

APN: 0167-171-15

A-2.7-1

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE G BUILDING 10 - COMPOSITE LEVEL
1st LEVEL FLOOR PLAN

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

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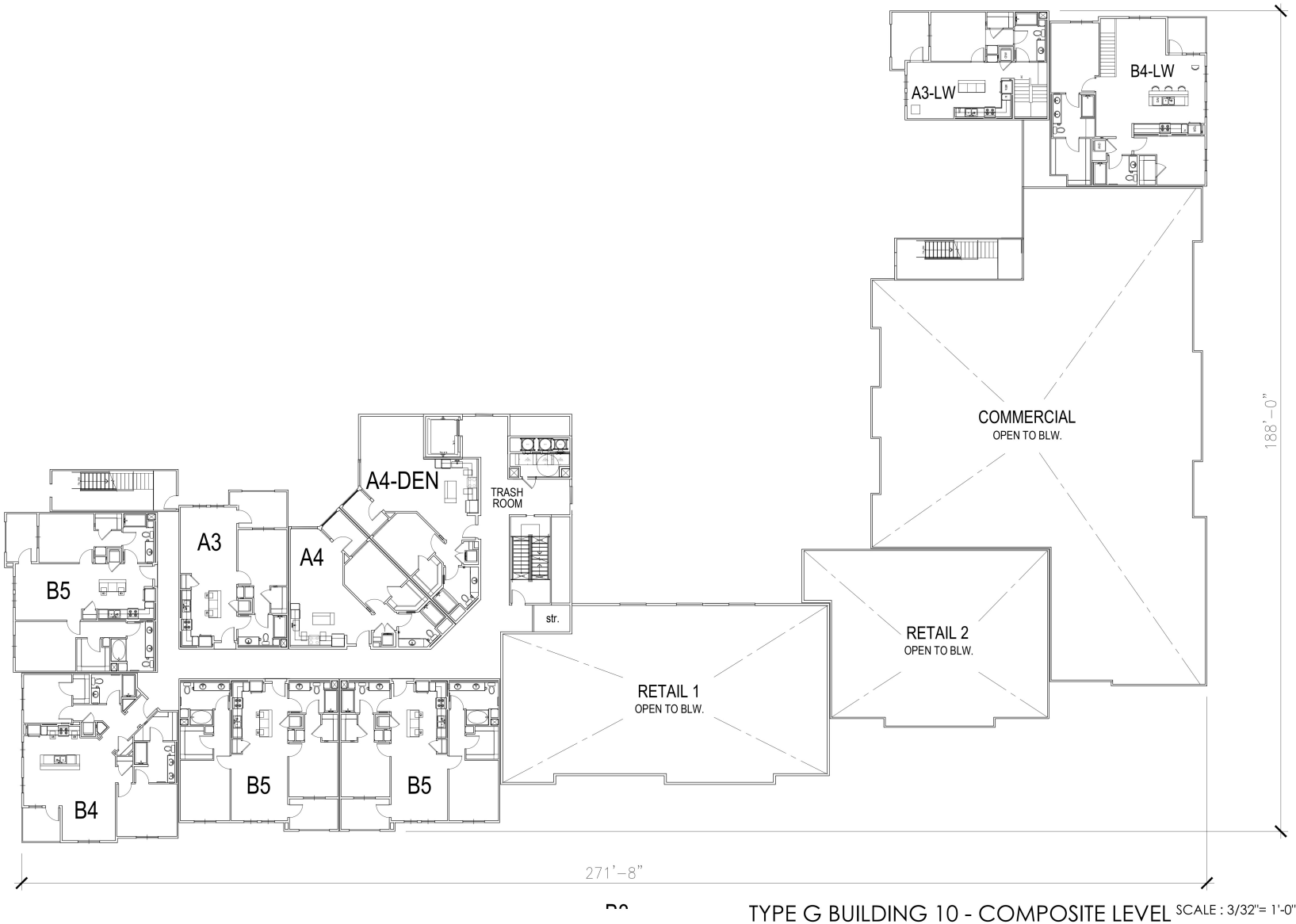

APN: 0167-171-15

A-2.7-2

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE G BUILDING 10 - COMPOSITE LEVEL
2nd LEVEL FLOOR PLAN

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

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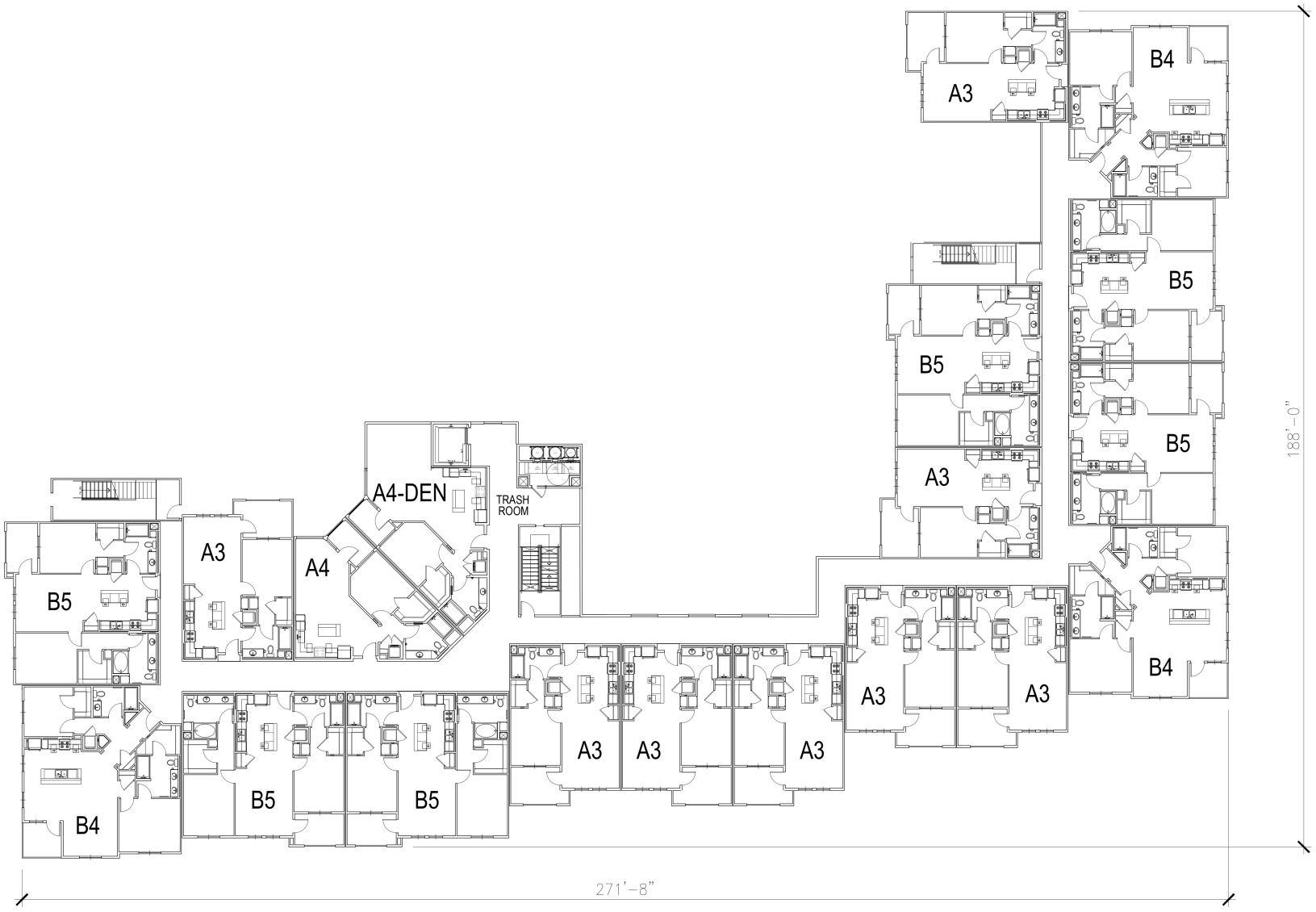

A1 TYPE G BUILDING 10 - COMPOSITE LEVEL
3rd & 4rd LEVEL FLOOR PLAN

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

APN: 0167-171-15

A-2.7-3

TENNESSEE VILLAGE

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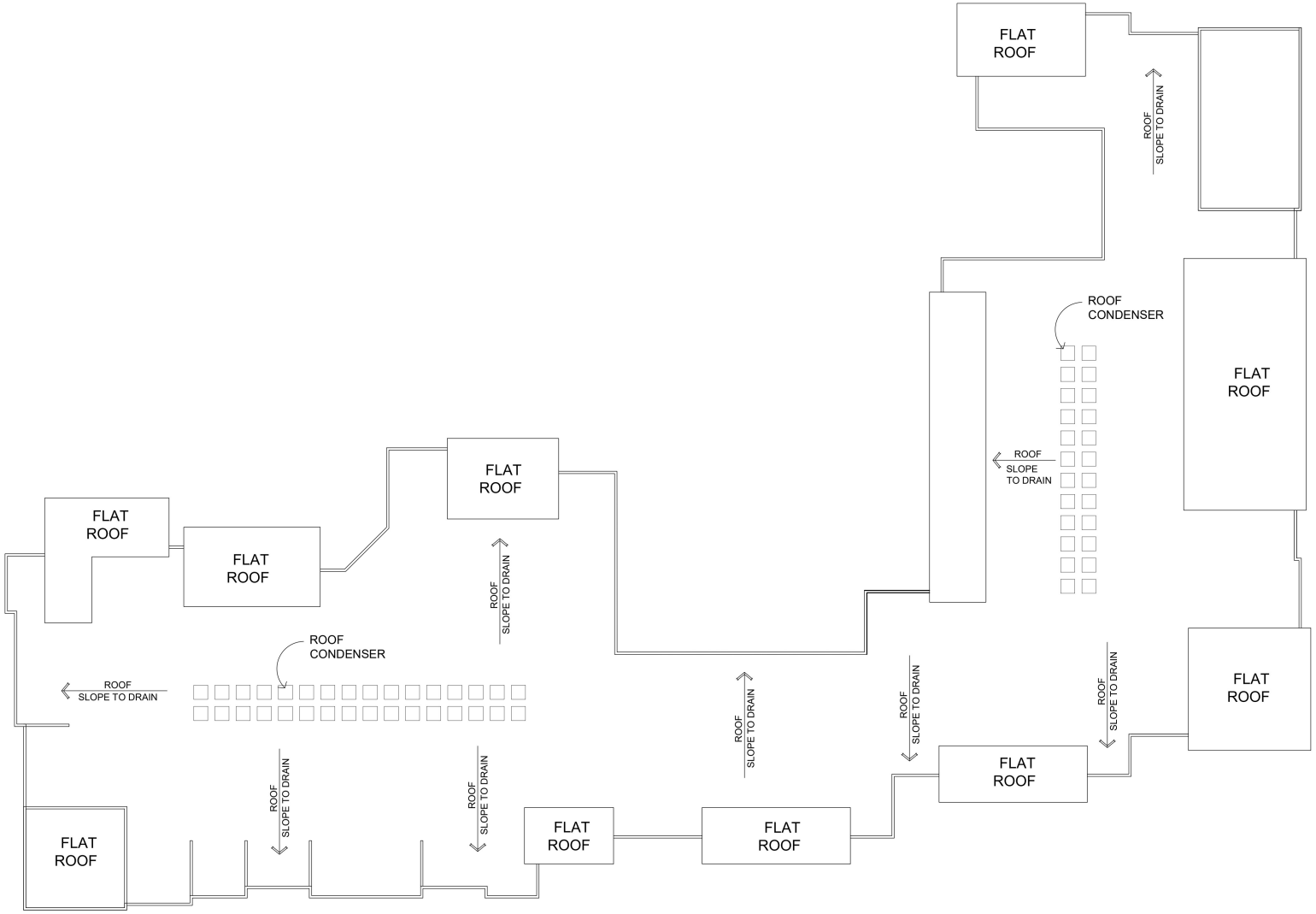

APN: 0167-171-15

A-2.7-4

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE G BUILDING 10 - ROOF PLAN

DATE: 01-10-2024
JOB NO.: 2020-322

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(714) 639-9860

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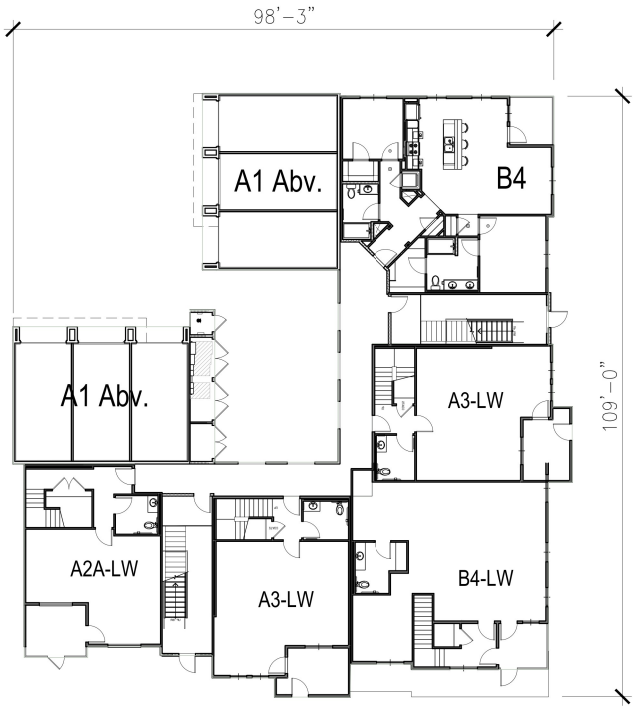
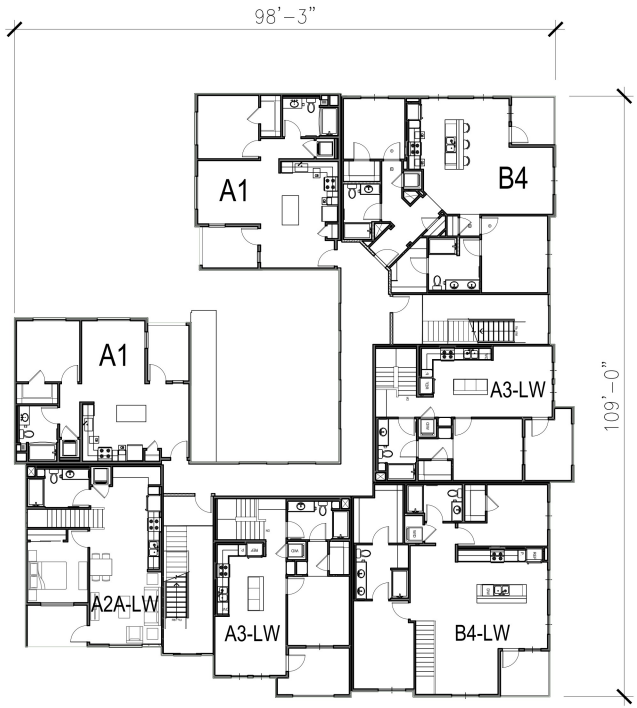
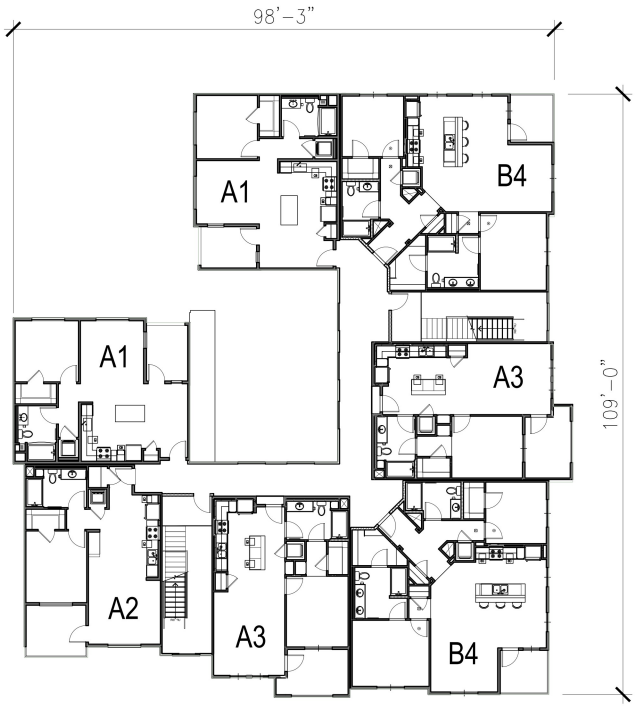


1st LEVEL FLOOR PLAN



2nd LEVEL FLOOR PLAN



3rd LEVEL FLOOR PLAN

APN: 0167-171-15

A-2.8

TENNESSEE VILLAGE

REDLANDS, CA 92374

TYPE H BUILDING 8 - COMPOSITE LEVEL
1, 2 & 3 FLOOR PLANS

SCALE : 3/32"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

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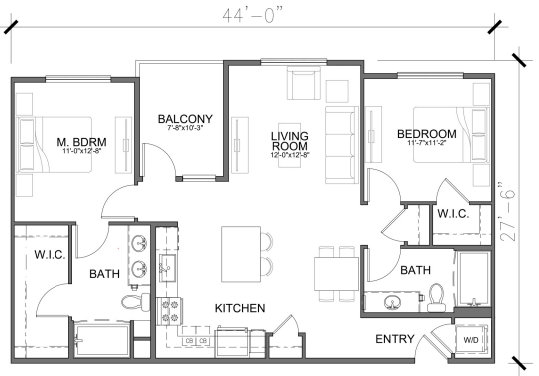
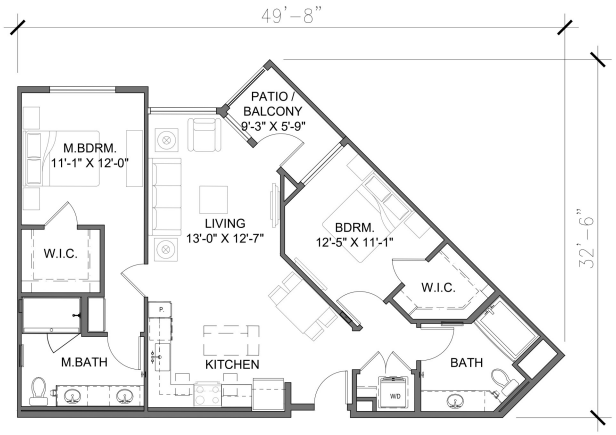
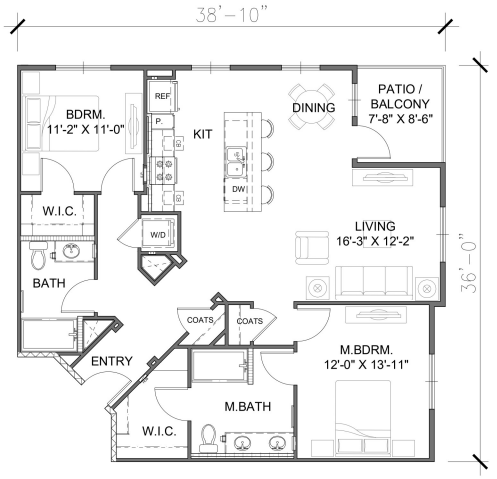


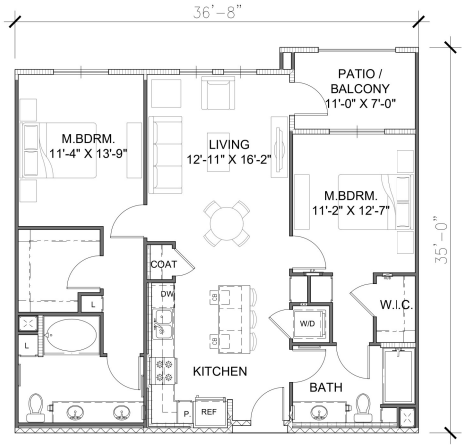
UNIT B1: 2BR/2BA
RENTABLE: 1,097 SQ.FT.
PATIO/BALCONY: 78 SQ.FT.



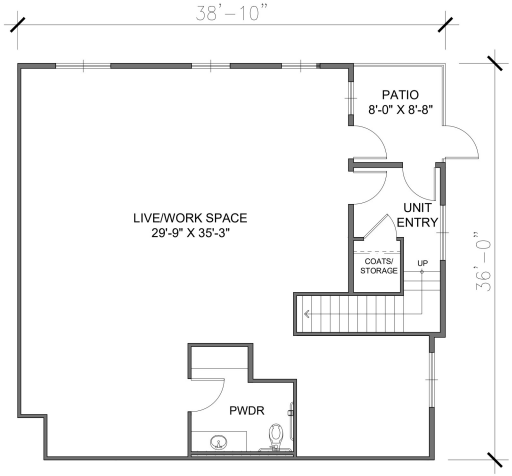
UNIT B3: 2BR/2BA
RENTABLE: 1,111 SQ.FT.
PATIO/BALCONY: 54 SQ.FT.



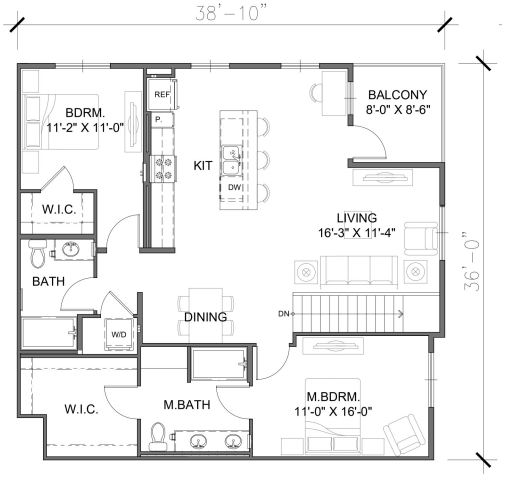
UNIT B4: 2BR/2BA
RENTABLE: 1,246 SQ.FT.
PATIO/BALCONY: 71 SQ.FT.



UNIT B5: 2BR/2BA
RENTABLE: 1,145 SQ.FT.
PATIO/BALCONY: 77 SQ.FT.



UNIT B4 LW: 2BR / 2.5BA/ LW
LEVEL 1 AREA: 1303 SQ. FT.
LEVEL 2 AREA: 1256 SQ. FT.
TOTAL AREA: 2,559 SQ. FT.
BALCONY + PATIO: 75 SQ. FT. + 75 SQ. FT. = 150 SQ. FT.





UNIT C1: 3BR/2BA
RENTABLE: 1,342 SQ.FT.
PATIO/BALCONY: 84 SQ.FT.

APN: 0167-171-15

A-3.2

TENNESSEE VILLAGE

REDLANDS, CA 92374

UNIT PLANS 2

SCALE : 3/16"= 1'-0"
DATE: 01-10-2024
JOB NO.: 2020-322

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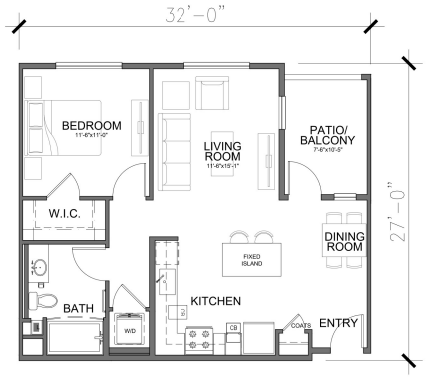
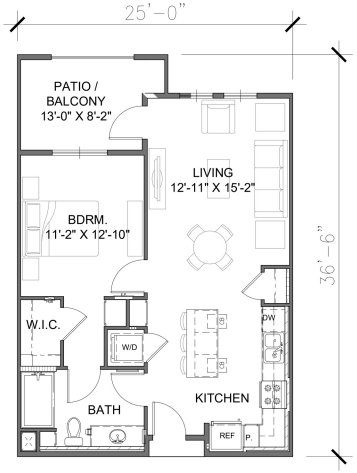
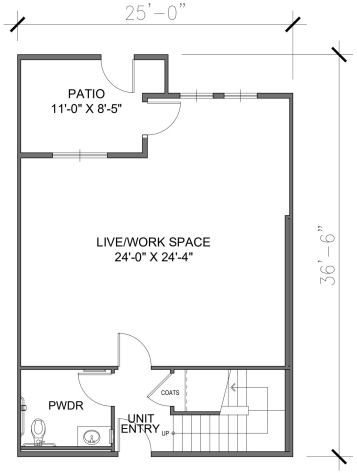


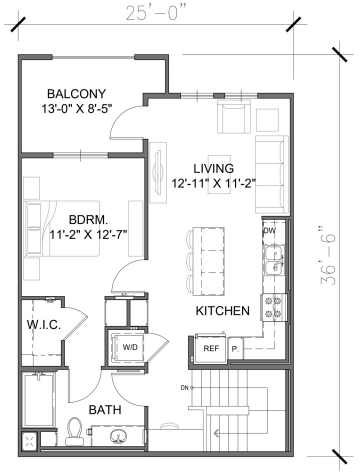
UNIT A1: 1BR/1BA
RENTABLE: 767 SQ.FT.
PATIO/BALCONY: 78 SQ.FT.

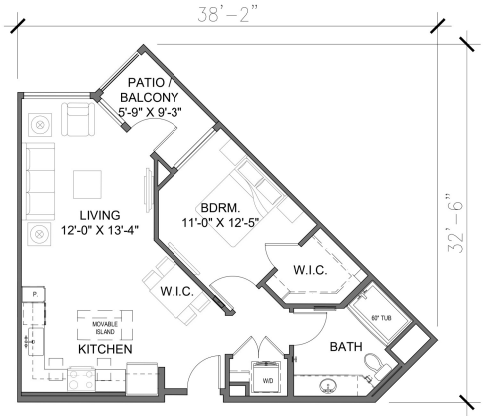


UNIT A3: 1BR/1BA
RENTABLE: 766 SQ.FT.
PATIO/BALCONY: 100 SQ.FT.



UNIT A3 LW: 1BR / 1.5BA/ LW
LEVEL 1 AREA: 764 SQ. FT.
LEVEL 2 AREA: 697 SQ. FT.
TOTAL AREA: 1,461 SQ. FT.
BALCONY + PATIO: 100 SQ. FT. + 100 SQ. FT. = 200 SQ. FT.





UNIT A4: 1BR/1BA
RENTABLE: 765 SQ.FT.
PATIO/BALCONY: 54 SQ.FT.

APN: 0167-171-15

A-3.1

TENNESSEE VILLAGE

REDLANDS, CA 92374

SCALE : 3/16"= 1'-0"
UNIT PLANS 1
DATE: 01-10-2024
JOB NO.: 2020-322

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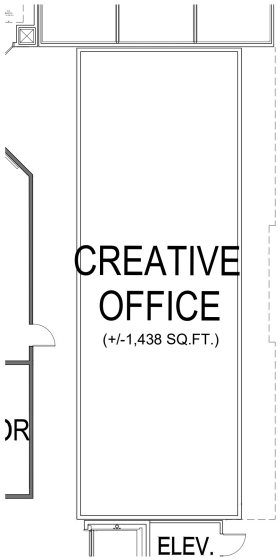

+/-12,064 + +/-1,438 =+/-13,502 SQ.FT.

APN: 0167-171-15

A-4.1

TENNESSEE VILLAGE

REDLANDS, CA 92374

AMENITY FLOOR PLAN

DATE: 01-10-2024
JOB NO.: 2020-322

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Monday, November 20, 2023 1:51:39 PM
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TENNESSEE VILLAGE

REDLANDS, CA 92374

PERSPECTIVE OF PROJECT ENTRY 1
ON TENNESSEE STREET

DATE: 01-10-2024
JOB NO.: 2020-322

A-1.6

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TENNESSEE VILLAGE

REDLANDS, CA 92374

VIEW TO PROJECT FROM TENNESSEE STREET INTERSECTION -1

DATE: 01-10-2024
JOB NO.: 2020-322

A-1.7

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TENNESSEE VILLAGE

REDLANDS, CA 92374

VIEW TO PROJECT FROM
TENNESSEE STREET INTERSECTION - 2

DATE: 01-10-2024
JOB NO.: 2020-322

A-1.8

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APN: 0167-171-15

A-1.9

TENNESSEE VILLAGE

REDLANDS, CA 92374

PROJECT ENTRY 2 STREET SCENE

DATE: 01-10-2024
JOB NO.: 2020-322

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TENNESSEE VILLAGE

REDLANDS, CA 92374

PROJECT ENTRY 2 & BUILDING 8 PERSPECTIVE

DATE: 01-10-2024
JOB NO.: 2020-322

A-1.10

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A-1.11

TENNESSEE VILLAGE

REDLANDS, CA 92374

INTERNAL STREET PERSPECTIVE
at BUILDING 10

DATE: 01-10-2024
JOB NO.: 2020-322

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TENNESSEE VILLAGE

REDLANDS, CA 92374

INTERNAL STREET PERSPECTIVE of BUILDING 8 &10

A-1.12

DATE: 01-10-2024
JOB NO.: 2020-322

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City Council Meeting **AGENDA ITEM NO. K.1.**

DATE: 12/03/2024

TO: Honorable Mayor and City Council Members

SUBJECT: **PUBLIC HEARING** to consider Resolution No. 8641 related to the development applications for the proposed "Tennessee Village" project located on a 13.48-acre site located on the east side of Tennessee Street approximately 600 feet north of West Lugonia Avenue within the Special Development (EV/SD) District of the East Valley Corridor Specific Plan (APN: 0167-171-15-0000):

(Mayor to declare the meeting open as a public hearing)

A. **Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program** prepared for the project in accordance with Section 15074 of the California Environmental Quality Act (CEQA) Guidelines.
B. **Socio-Economic Cost/Benefit Study** prepared for the proposed project as required by Measure U.
C. **Amendment No. 50 to Specific Plan 40** – A request to amend the East Valley Corridor Specific Plan (Specific Plan No. 40) to remove the project site consisting of 13.48 acres (gross) from the boundaries of Specific Plan 40 area.
D. **Zone Change No. 477** – A request to change the zoning designation of the 13.48 (gross) acre project site from Special Development (EV/SD) District to General Commercial (C-3) District.
E. **Tentative Parcel Map No. 20688** – A request to subdivide the entire project site into four parcels consisting of 1.37 net acres, 1.49 net acres, 5.02 net acres, and 4.88 net acres in size for development purposes.
F. **Conditional Use Permit No. 1173** – A request to construct a mixed-use project consisting of 460 apartments and approximately 18,000 square feet of commercial space on a vacant 13.48-acre site as allowed in the C-3, General Commercial District.
G. **Commission Review and Approval No. 956** – A request for site plan approval and architectural design review to construct a mixed used development composed of 460 apartment units within ten buildings and approximately 18,000 square feet of commercial space. The residential units include one-bedroom, two-bedroom, and three-bedroom floor plans ranging from 755 to 1,599 square feet each.
H. **Density Bonus Agreement with Declaration of Affordable Housing Covenants and Restrictions** – A request to approve a Density Bonus Agreement which sets forth the terms and conditions to allow the Density Bonus Units and increased density for the project, the concessions and waivers that the developer is entitled to pursuant to State law, and affordability covenants to ensure the affordability of twenty (20) apartment units for Very Low Income households.
(Development Services Director Desatnik)

PROCEDURE FOR PUBLIC HEARING:

1. Mayor declares the meeting open as a public hearing.
2. Mayor calls upon Department Director for report.
3. Mayor calls for questions/comments from members of the City Council.
4. Mayor calls upon applicant, or his/her representative, for comments and testimony.
5. Mayor calls for comments/questions/testimony from members of the public (3 minutes per speaker).

6. Mayor calls upon City Clerk to note any written comments received.
7. Mayor calls upon the applicant, or representative, for rebuttal comments (5 minutes).
8. Mayor closes the public hearing.
9. City Council considers the motion and votes.

MOTION(S):

If the City Council determines the recommendation is appropriate, the following motion is provided:

I move that the City Council adopt Resolution No. 8641 and approve the Tennessee Village Mixed Use Project.

RECOMMENDATION:

The Planning Commission voted 6-0 (Commission Chair Karah Shaw absent) to adopt Resolution No. 1688 recommending approval of the project entitlements and the Density Bonus Agreement to the City Council.

During the meeting, the Commission discussed site design, the density bonus, requirements for the project to provide electic vehicle charging and the timing of project phasing. The Commission was supportive of the project and its design, and suggested possible improvements related to service for electric vehicles and electric appliance service for residential units. Following the Planning Commission meeting, the applicant agreed to a condition of approval requiring all garage parking spaces to be EV charger ready. This change exceeds the typical building code standards. The current building code requires 169 EV ready spaces which could be placed anywhere on the residential portion of the site, including unenclosed outdoor spaces. This condition of approval includes nine additional spaces (a total of 178) that are all located within garage spaces where they are the most beneficial to the residents.

BACKGROUND:

The project site currently consists of vacant and unimproved land. Historic aerial surveys indicate that the site previously supported agricultural uses (citrus groves); however, agricultural use of the property ceased between 1980 and 1984 based upon historic aerials of the project area.

Recent residential developments in the vicinity have been driven in large part by the construction of Citrus Valley High School founded in 2009 (located one-half mile to the north of the proposed project site), and further residential and commercial construction in the area can be expected.

In 2020, the Heritage Specific Plan (Specific Plan No. 62) located on the northwest corner of San Bernardino Avenue and Texas Street was approved (and now fully constructed). This project allowed the construction of 207 homes on the 37-acre site.

In 2021, the Bergamot Specific Plan (Specific Plan No. 64) located north of Domestic Avenue and west of Texas Street, was approved for the construction of 317 homes on 38 acres within three neighborhoods with lot sizes ranging from 1,900 sf to over 7,200 square feet. This project is currently under construction.

In 2024, the Bergamot Specific Plan was amended to include an additional 14.6 acres located west of Citrus Valley High School and north of Pioneer Avenue, for the construction of an additional 117 single-family homes. This project is currently in the process of obtaining building permits.

In 2024, the Lugonia Village multifamily residential project was approved by the City Council. This project is located north of Lugonia Avenue, South of Pennsylvania Avenue and west of Karon Street (directly to the east of the proposed project). The Lugonia Village project includes a total of 541 residential units in three distinct neighborhoods and includes single-family homes, townhomes, and apartments.

2021-2029 Housing Element: The City's new 2021-2029 Housing Element was certified by the California Department of Housing & Community Development (HCD) on September 26, 2022.

State Law requires it to include housing programs that identify adequate sites to accommodate the jurisdiction's share of the Regional Housing Needs Allocation (RHNA); assist in the approval of housing for Very Low- and Low-income households; and remove or mitigate governmental constraints that inhibit building more affordable housing.

Project Description:

The applicant proposes to develop a vacant property 13.48 acres in size (12.79 acres net) with ten buildings, which include a mix of residential and commercial uses. The site is located on the east side of Tennessee Street and approximately 600 feet north of West Lugonia Avenue (see Attachment A – Location Map and Aerial Photo).

The proposal includes 460 residential units and approximately 18,000 square feet of commercial space. The mixed-use buildings are placed adjacent to Tennessee St. and include commercial space on the first floor, with the residential units above, and six live/work lofts (consisting of retail/office space on the first floor and the residential unit on the second floor). Commercial uses within the project are located near the southwestern corner of the project site in Building 8 and Building 10. The remainder of the buildings within the project are residential apartments only (see Attachment B – Site Plan).

As currently proposed, there are two primary points of entry into the project, one located off Tennessee Street and one from a proposed future extension of Pennsylvania Avenue. A third access point is located on the southern boundary of the site (to the property to the south that is currently vacant), which may provide entry and exit into any future development that may occur on the vacant parcel located to the south (possibly a shopping center).

There are approximately 190,000 square feet of common/private open space proposed. Proposed outdoor amenities include a walk-through linear park leading to a pool area in the Proposed outdoor amenities include a walk-through linear park leading to a pool area in the center of the project, as well as other open space areas. Additionally, Building 9 will hold leasing offices, a foyer, a mail room and other amenities that may include office/meeting spaces, a kitchen, and movie theater.

The apartment units include 1-bedroom, 2-bedroom, and 3-bedroom units in varying floor plans and sizes. The average sizes of the apartments are: 935sq. ft. for the 1-bedroom units; 1,230sq. ft. for the 2-bedroom units; and 1470sq. ft. for the 3-bedroom units. Attachment C: Project Data includes unit square-footage, unit mix per building, and other project data.

The project will be developed in two phases (See Attachment D). Phase 1 is made up of the central, western and southwestern portions of the site, which includes the commercial buildings and apartments within buildings 8 through 11 (225 units). Phase 1 would also include construction of all project access points. Phase 2 consists of the remaining apartments (235 units) located on the northern and eastern portions of the site (Buildings 1 through 6). The required inclusionary units will be split evenly between the two project phases with ten in each phase. The Inclusionary Housing Agreement and the project's Conditions of Approval require that all inclusionary units within the first phase are constructed prior to issuance of a Certificate of Occupancy for any unit within the second phase.

To construct the proposed project, the applicant proposes legislative applications including a Specific Plan Amendment, Zone Change, Density Bonus Agreement, and Inclusionary Housing Agreement.

Specific Plan Amendment: A request to amend the East Valley Corridor Specific Plan (Specific Plan 40) land use map to remove the entire 13.48-acre project site from the Special Development (EV/SD) District.

Zone Change: A request to amend the Zoning Map to designate the project site as “Multiple Family Residential (R-3) District” in accordance with RMC Title 18 (Zoning Regulations).

Density Bonus: A total of 20 residences within the apartment community would be restricted for rental only to Very Low-income households. Therefore, the project is eligible for a Density Bonus and concessions/waivers pursuant to State Density Bonus Law (Gov. Code § 65915 et seq.).

ANALYSIS:

The proposal and project plans were fully evaluated in the staff report prepared for the September 24, 2024, Planning Commission meeting (see Attachment E). Analysis from the previous report is summarized below.

A) General Plan

The General Plan designation of the property is ‘Commercial’ (see Attachment F). The Commercial land use category designates areas for the development of a wide range of commercial uses, including neighborhood-serving stores and convenience centers, regional commercial centers, and commercial recreation. Sites with this designation may be developed with a stand-alone commercial use, two or more commercial uses, or mixed uses. The Commercial land use category may permit residential and mixed uses consistent with the underlying zoning district. The proposed mixed-use project is consistent with the existing General Plan Designation.

B) Specific Plan Amendment and Proposed Zoning

The project is located in the Special Development District (EV/SD) District of the East Valley Corridor Specific Plan, which allows for a wide range of commercial, industrial, and office uses (See Attachment G-1: Existing Zoning Map). Residential uses are not permitted in this district of the Specific Plan. The applicant is proposing a Specific Plan Amendment to remove the subject parcel from the East Valley Corridor Specific Plan, in conjunction with a Zone Change to General Commercial (C-3) in accordance with Title 18 of the Redlands Municipal Code (See Attachment G-2: Proposed Zoning Map).

The C-3, General Commercial District allows a wide variety of commercial retail and service uses. It also allows residential uses subject to approval of a conditional use permit either as a mixed-use development, or as a multifamily-attached residential project. To establish a mixed-use within the General Commercial District, a Conditional Use Permit is required. Under

C-3 zoning (which allows multifamily residential uses based on R-3 density), the base density for this project site would be a maximum of 384 units.

C) Density Bonus

Pursuant to State law, as well as Section 18.228.030(A) of the Redlands Municipal Code, a density bonus granted to a residential development project shall consist of an increase over the otherwise maximum allowable residential density under the applicable zoning ordinance and of the City's General Plan as of the date of application. Projects that deed restrict 5% of the project's base units for rent to very low-income residents are eligible for a density bonus. The allowable density bonus by State law is up to a 20% increase above the base unit count.

A total of 20 units (or 5%) within the project would be restricted for rental only to Very Low-income households and would be distributed throughout the project site. Therefore, the project is eligible for a Density Bonus pursuant to State Density Bonus Law (Gov. Code Section 65915 et seq.). Through a Density Bonus Agreement, as specified by State law, the applicant may request and be entitled to reductions to on-site parking requirements, incentives and/or concessions, and unlimited waivers or reductions to any development standards that would physically preclude the development of a project at the allowable density.

Within the C-3 District, the allowable density of development is one residential unit for every 1,450 square feet of net land area. The project site is 12.76 net acres (or 555,825.6 square feet), which allows up to 384 units. By providing 20 affordable housing units, the allowable density bonus is equivalent to 20% of the allowable base unit count (384 DU x 0.2 = 76 units). Approval of the project and the related density bonus agreement would allow a total of 460 units (384 + 76 = 460).

As shown in Table 1, the applicant is requesting a density bonus that may be approved based on the General Plan density and the allowable density bonus.

Table 1. Proposed Project Density

Project's Net Acreage	*Allowable Density*	*Base Units Allowable*	*Density Bonus Units Allowable*	*Total Units*
12.76 acres or 555,825.6 sq. ft.	One unit per 1,450 sq. ft.	384	76	460

The applicant will be required to enter into a Density Bonus Agreement with the City, which requires that 20 units within the project only be rented to very low-income residents for a minimum period of 55 years. The agreement also includes verification and reporting requirements. The Density Bonus Agreement and Inclusionary Housing Agreements are required to be approved by the City Council, drafts of which have been included as Attachment H-1 and H-2 respectively.

D) Commission Review & Approval and Conditional Use Permit

New construction over 500 square feet is subject to review by the Planning Commission per

Redlands Municipal Code (RMC) Chapter 18.12 and requires Commission Review and Approval for architecture and site plan review. In addition, the project's proposed mixed-use requires a Conditional Use Permit within the C-3 District as specified in RMC Chapter 18.92.080(B). Project design details are discussed below.

Site Design: The project site is a 12.7-acre property located on the east side of Tennessee Street approximately 600 feet north of Lugonia Avenue. The site is approximately 815' wide (east to west) and 720' long (north to south), approximately rectangular, and south of the future extension of Pennsylvania Avenue. Primary vehicular access to the site will be from Tennessee Street and Pennsylvania Avenue. The site plan also includes a potential access point along the south of the project site which may provide access to a future development.

Development Standards: The proposed zoning is C-3 District, and the density standards of the Multiple Family Residential (R-3) District are utilized. While the density standards of the R-3 District apply to the project, the development standards for the C-3 District apply to all other aspects of the project. The project meets the development standards of the C-3 District. Table 3 below summarizes the proposed development's consistency with the development standards (see Attachment I for a complete list of applicable development standards).

Table 2: Summary of Development Standards - C-3 (General Commercial)

Development Standard	*Requirement*	*Proposed*	*Complies?*
Lot area	No Requirement	1.37 acres 1.49 acres 5.02 acres 4.88 acres	Yes
Lot Coverage	No Requirement	31%	Yes
Setbacks	No Requirement	Tennessee St. 25' Pennsylvania Ave. 18' Side (South) 55' Side (East) 10'	Yes
Floor Area Ratio	4.0	1.1	Yes
Building Height	No Maximum Height	4 stories, up to 52'	Yes
Landscaping	No Requirement	15% of the site	Yes
Parking Lot landscaping	7% Minimum	15% of the parking area	Yes
Total Open Space	None Required	152,560 sq. ft.	Yes
Private Open Space	None Required	76-200 sf per unit provided	Yes

Open Space and Amenities: Within the C-3 Zoning district there is no open space requirement. The project includes four open space areas ranging in size from nearly 3,000 square feet to over 22,000 square feet. The two main outdoor open space areas are located in the center of the project, in the courtyard of Building 9 (14,000 square feet) as well as the courtyard between Buildings 3, 5, and 6 (22,499 square feet). Seating areas, barbeques, a pool, spa, and fire pits are located within these larger outdoor open space areas. The project also includes several indoor amenities that include a gym, theater, office space, and golf

simulator.

Site Landscaping: The Landscape Plan (Attachment J) includes a variety of hardscape elements and plant materials which includes trees, shrubs, vines, and groundcover. The project will incorporate 12 tree species, primarily including Brisbane Box, Afghan Pine, Fruitless Olive and Strawberry Trees. Within the C-3 District, there is no minimum overall landscape standard for the site. The project provides over 84,000 square feet of landscaped area, which equates to 15% of the total project area.

A minimum of 7% of the parking lot area is required to be landscaped, which equates to 20,553 square feet. The complete project provides 44,886 square-feet (or 15%) of the parking area as landscaped area, which exceeds the minimum requirement.

Parking: The applicant is providing parking consistent with State Density Bonus Law contained in California Government Code 65915(p)(1), for the residential portion of the project. The project would be required to provide 571 total parking spaces for the 460 units in the residential portion of the project based on what is required by State Density Bonus Law. The project includes 17,899 square feet of neighborhood-serving commercial space, which requires a parking rate of one space per 200 square-feet of floor area (89 commercial spaces). Therefore, the entire project would require a total of 660 spaces, and the proposal provides 764 spaces (exceeding the minimum number by 104 spaces). Page G-1.0 of the project plans provides detailed project data including number of resident parking spaces, commercial spaces, types of spaces (e.g., garage, carport, subterranean), etc.

The applicant is requesting a waiver for parking stall dimensions pursuant to Gov. Code § 65915 et seq. (to reduce the depth by 2 feet). City standard parking spaces are required to be 19 feet deep. In certain locations, the project provides surface parking stalls that are 9 feet wide by 17 feet in clear length. As proposed, the parking stalls include 17 feet of paving plus 2 feet of overhang into planter areas, for a total depth of 19 feet.

Walls, Fences, and Gates: All entry points to the residential portions of the project are proposed to have controlled access for security. Three vehicle gates are proposed: two at the southwest portion of the site (with access from Tennessee St.), and one at the northeast corner (with access from a proposed extension of Pennsylvania Ave.). The commercial portions of the project (the southwest corner of the site) will not have gates. A total of 93 parking spaces are placed on the exterior side of the residential entry gates, and therefore vehicular access would not be limited for the commercial portion of the project site.

Architecture: The proposed building design is inspired by the Modern Industrial architectural theme. Towers and varied roof lines, arches, and various horizonal projections provide significant visual interest on all sides of the buildings. Materials include stone veneer, brick veneer, Limestone cladding, and ceramic tile as well as decorative metal sunshades, awnings, and balcony railings. Stucco colors include varying shades of grey: Aesthetic White (SW 7035), City Loft (SW 7631), Quarry Stone (SW 9603), Soakdubg Gray (SW 6074), and Ironclad (SW 9570). Roofline treatments include squared cornice, such as decorative tile or high-density foam with cementitious finish. Table 4 summarizes the buildings sizes, heights, and treatments.

Proposed architectural elevations are provided as Attachment K-1 (Project Material and Elevations). Floor plans are included as Attachment K-2, and architectural 3-D renderings are provided as Attachment K-3. Analysis of the project's consistency with the City's Architectural Guidelines is included as Attachment K-4, and staff believes the project to be consistent with the architectural guidelines.

E) Tentative Parcel Map

The applicant is proposing to subdivide the 12.76-acre (net) subject site into four new parcels. As proposed, Parcel 1 will be 1.37 gross acres, Parcel 2 will be 1.49 acres, Parcel 3 will be 5.02 acres and Parcel 4 will be 4.88 acres. Within the C-3 District, there are no minimum lot sizes and no required lot dimensions. As proposed the resulting lots will be consistent with the Redlands Municipal Code requirements. A Condition of Approval has been added requiring the applicant to provide shared access across all parcels within the project. A copy of the Tentative Parcel Map is included as Attachment L.

F) Socio-Economic Cost / Benefit Study

In accordance with the Principals of Managed Development Element of the General Plan, a Socio-Economic Cost/Benefit Study (Attachment M) has been completed for the project. Based on the cost/benefit model utilized by the City, the project provides a positive cost/benefit ratio of 1.75 over the period of 2025-2034 (and results in positive net revenue to the City after development). This project will provide the City approximately $564,399 in revenue (exceeding costs to the City of $322,042) which results in revenue of $242,357 annually and the project will not create a physical blight or overburden public services in the community.

ENVIRONMENTAL REVIEW:

The City retained an environmental consultant to fully analyze the project and prepare an Initial Study in accordance with the California Environmental Quality Act (CEQA) (see Attachment N-1– ISMND). In accordance with the CEQA Guidelines, the Initial Study/Mitigated Negative Declaration (IS/MND) was made available for public review and comment for 30 days (State Clearinghouse No. 2024040956). A Notice of Intent was filed with the County Clerk on April 24, 2024, and with the State Clearinghouse. The IS/MND was circulated for 30 days between April 24, 2024, and May 27, 2024. The public review Initial Study and Mitigated Negative Declaration was also made available via the City's website (www.cityofredlands.org/post/environmental-documents).

One public comment letter was received from Lozeau Drury, LLP, an environmental law firm representing Supporters Alliance for Environmental Responsibility ("SAFER"). Comments within the letter focus on Air Quality and Biological Resources. There is no information or evidence identifying any potentially significant impacts as a result of the project, and the city's environmental consultant has provided a written Response to Comments document (see Attachment N-2).

The Initial Study recommends a Mitigated Negative Declaration with 13 mitigation measures that pertain to Biological Resources, Cultural Resources, Geological Resources, Noise, and

Tribal Cultural Resources. All mitigation measures will ensure that any environmental effects are less than significant. After mitigation, no significant effects were identified as a result of the project, and the recommended mitigation measures will be incorporated into the project as mandatory Conditions of Approval. The Mitigation/ Monitoring and Reporting Program details the mitigation measures and is included as Attachment N-3.

ALTERNATIVES:

1. The City Council may continue the public hearing and direct staff to address any issues or bring back additional information; or
2. The City Council may wish to deny the project, continue the public hearing and direct staff to prepare findings supporting denial of the project.

SUBMITTED BY:
Brian Desatnik, Development Services Director

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Christopher Boatman, Assistant City Manager
Danielle Garcia, Management Services /Finance Director

PREPARED BY:
Sean Reilly, Principal Planner

Attachments

Attachment A: Location Map
Attachment B: Site Plan
Attachment C: Project Data Sheet
Attachment D: Phasing Exhibit
Attachment E: September 24, 2024 Planning Commission Staff Report
Attachment F: General Plan Land Use Map
Attachment G-1: Zoning Map (Existing)
Attachment G-2: Zoning Map (Proposed)
Attachment H-1: Density Bonus Agreement
Attachment H-2: Inclusionary Housing Agreement
Attachment I: Table of Development Standards
Attachment J: Landscape Plans
Attachment K-1: Building Materials and Elevations
Attachment K-2: Floor Plans
Attachment K-3: Architectural 3-D Renderings
Attachment K-4: Consistency with Architectural Guidelines
Attachment L: Tentative Parcel Map No. 20688
Attachment M: Socio-Economic Cost/Benefit Study
Attachment N-1: Initial Study/Mitigated Negative Declaration
Attachment N-2: Responses to Comments
Attachment N-3: Mitigation Monitoring and Report Program
Attachment O-1: Resolution No. 8641

RESOLUTION NO. 8641

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS APPROVING LAND USE ENTITLEMENTS FOR A MIXED-USE DEVELOPMENT WITH 460 APARTMENTS AND APPROXIMATELY 18,000 SQUARE FEET OF COMMERCIAL SPACE LOCATED ON THE EAST SIDE OF TENNESSEE STREET AND APPROXIMATELY 600 FEET NORTH OF LUGONIA AVENUE.

WHEREAS, Diversified Pacific Development Group, LLC., (the "Applicant"), has submitted an application for Specific Plan Amendment No. 50 to the East Valley Corridor Specific Plan (Specific Plan No. 40) to amend Specific Plan 40 and its associated land use map to remove a total of 13.48 acres from the Specific Plan area, located on the east side of Tennessee Street, approximately 600 feet north of Lugonia Avenue, and the south side of a proposed extension of Pennsylvania Avenue (APN: 0167-171-15-0000) (the "subject property"); and

WHEREAS, the Applicant has submitted an application for Zone Change No. 477 to rezone the subject property totaling approximately 13.48 acres as "General Commercial (C-3)" district pursuant to RMC Title 18 to be consistent with the existing General Plan land use designation for Commercial land uses including mixed-use developments; and

WHEREAS, the Applicant has submitted an application for Tentative Parcel Map No. 20688 to subdivide the subject property into four parcels with the following acreages for development purposes: 1.37 net acres, 1.49 net acres, 5.02 net acres, and 4.88 net acres; and

WHEREAS, the Applicant has submitted an application for Conditional Use Permit No. 1173 to construct and operate a mixed-use project consisting of 460 apartments and 18,000 square-feet of commercial space on the subject property; and

WHEREAS, the Applicant has submitted an application for Commission Review & Approval No. 956 for site plan and architectural review of the proposed mixed-use project including on-site parking, landscaping, recreation areas, and related site improvements; and

WHEREAS, the Applicant has submitted an Inclusionary Housing Plan in accordance with Redlands Municipal Code Chapter 18.230 (Inclusionary Housing) and proposes to fulfill the inclusionary housing requirement by providing twenty (20) units for Very Low-income households within the project (calculated from a base density of four hundred dwelling units); and

WHEREAS, the Planning Commission has reviewed the proposed project, found the proposal to be consistent with the City's *2021-2029 Housing Element*, and the proposed residential project will provide up to 460 dwelling units that will result in more housing opportunities in Redlands; and

WHEREAS, on September 24, 2024, the Planning Commission held a public hearing and considered the staff report, oral report, the testimony, and the written evidence submitted by and on behalf of the applicant and by members of the public; and

WHEREAS, on September 24, 2024, the Planning Commission recommended approval of the Project to the City Council; and

WHEREAS, the Project is subject to the California Environmental Quality Act (CEQA), the City has prepared an Initial Study for the Project in accordance with the State CEQA Guidelines, exercised its own independent judgment and analysis and there is no substantial evidence that the proposed project may have a significant effect on the environment, the custodian of records is the Planning Division of the Development Services Department, and a Mitigated Negative Declaration has been prepared in accordance with the State CEQA Guidelines; and

WHEREAS, an Initial Study and Mitigated Negative Declaration (IS/MND) was prepared for the Project and circulated for public review for a period of thirty days beginning on April 24, 2024, and ending on May 27, 2024; and

WHEREAS, on or about November 7, 2024, notice of the City Council's public hearing for the Project was published in the Redlands Daily Facts by the City Clerk; and

WHEREAS, on December 3, 2024, the City Council held a public hearing and considered the staff written and oral reports, the recommendation of the Planning Commission, the testimony and written evidence submitted by and on behalf of the applicant, and testimony by members of the public; and

WHEREAS, following the public hearing on December 3, 2024, the City Council determined that approval of the proposal is in the best interests of the public health, safety, and general welfare.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

SECTION 1. ENVIRONMENTAL DETERMINATION. The City Council herby adopts the Mitigated Negative Declaration for the Project in accordance with the California Environmental Quality Act (CEQA). The City as the Lead Agency has prepared an Initial Study in accordance with the State CEQA Guidelines, there is no substantial evidence that the proposed project may have a significant effect on the environment, and a Mitigated Negative Declaration with Mitigation Monitoring/Reporting Program is the appropriate environmental determination pursuant to CEQA Guidelines §15074.

SECTION 2. SOCIO-ECONOMIC COST/BENEFIT STUDY. The Socio-Economic Cost/Benefit Study prepared by City staff found that the proposed project would not create any significant unmitigable physical blight or overburden public services in the community, and is hereby adopted based upon the following findings:

1. *The Project will not create unmitigated physical blight within the City or overburden public services including, without limitation, the sufficiency of Police and Fire Protection services.*

The Project will not create significant unmitigable physical blight in the City of Redlands or overburden public services, including without limitation police and fire protection services. The Project developer will make improvements to facilitate implementation of the Project, including the construction of necessary adjacent roadway improvements along the project frontage (Tennessee Street and Pennsylvania Avenue) and the Project would fund and provide connections to existing City infrastructure. Conditions of approval for the project require the Project developer to fund the project's fair share allocation of any necessary public infrastructure associated with development of the Project.

2. *The benefits to the City resulting from development of the Project outweigh any direct cost to the City that may result.*

The Socio-Economic Cost/Benefit Study demonstrates that the Project will generate "new net" annual revenues of approximately $564,399 and have costs of approximately $322,042 and therefore will result in a positive balance of $242,357 (or positive cost/benefit ratio of +1.87). For every dollar the City spends in providing services to the Project, the City will receive $1.87 in "new net" revenue. The Project would provide for the development of 460 new residential units and 18,000 square feet of neighborhood serving commercial space. The project also provides 20 very-low-income affordable housing units. Schools will be enhanced with the payment of school fees. Further, with the additional revenue provided to the City through increased property tax assessment, indirect funding will be provided for cultural enhancements, downtown district enhancements, public safety (Police and Fire) enhancements, and traffic enhancements.

SECTION 3. APPROVAL OF SPECIFIC PLAN AMENDMENT.

The proposed Specific Plan Amendment No. 50 to the East Valley Corridor Specific Plan (Specific Plan No. 40) will be consistent with the General Plan and is hereby approved. Specific Plan Amendment 50 will become effective for the subject property consisting of 13.48 acres upon adoption of an applicable resolution.

SECTION 4. FINDINGS FOR ZONE CHANGE. The proposed Zone Change No. 477 is hereby approved based upon the following findings.

1. *The proposed change of zone is in conformance with the General Plan.*

The existing General Plan designation of the site is Commercial. The Commercial land use category designates areas for the development of a wide range of commercial uses, including neighborhood-serving stores and convenience centers, regional commercial centers, and commercial recreation. Sites with this designation may be developed with a stand-alone commercial use, two or more commercial uses, or mixed uses. The Commercial land use category may permit residential and mixed uses consistent with the underlying zoning district. The proposed zone change to General Commercial (C-3) is consistent with the General Plan designation of Commercial. The General Commercial District allows a wide variety of commercial retail and service uses. It also allows residential uses subject to approval of a conditional use permit either as a mixed-use development, or as a multifamily-

attached residential project. The proposed zone change to Commercial will allow the future development of a mixed use project that is consistent with the intent of the General Plan designation of Commercial.

2. *The proposed change of zone is related to the public health, safety or general welfare.*

The City's 2035 General Plan represents the most cohesively expressed goals related to the public health, safety, and general welfare within the City of Redlands. As the proposed change of zone directly implements the 2035 General Plan including the 2021-2029 Housing Element, the project will directly further the goals and objectives the City has set forth to protect and preserve the public health, safety, and general welfare.

SECTION 5. FINDINGS FOR TENTATIVE PARCEL MAP NO. 20688. The proposed Tentative Parcel Map No. 20688 is hereby approved based upon the following findings, and subject to the Conditions of Approval attached hereto as Exhibit "A" and Exhibit "B":

1. *The proposed map is consistent with the General Plan or any applicable specific plan, or other applicable provisions of the Redlands Municipal Code.*

The proposed map will be consistent with the Redlands General Plan and the Redlands Municipal Code. The proposed subdivision is within the Commercial land use designation of the General Plan. The subdivision is consistent with the development standards of the underlying zoning district in terms require lot size, width and depth and is supported by the General Plan policies outlined in the staff report.

2. *The site is physically suitable for the proposed type of development.*

The project site is physically suitable for the proposed developments. The existing site is approximately 13.48 gross acres. The site is generally flat and rectangular. All on-site and off-site improvements proposed as part of the project's design will meet all City standards with the approval of a Density Bonus Agreement with Declaration of Affordable Housing Covenants and Restrictions and will provide a safe and efficient environment for the future residents after development.

3. *The site is physically suitable for the density of the development.*

The property is located within the Commercial land use designation of the General Plan, which allows commercial development and residential development consistent with the project site's proposed C-3 zoning. The C-3 District allows mixed-use and apartment residential development consistent with the density standards of the Multiple Family Residential (R-3) District. The project exceeds this density; however, it is consistent with the allowable density allowed based upon the State Density Bonus Law, while still providing outdoor recreation areas, on-site amenities, required parking, and appropriate access.

4. *The design of the subdivision or the proposed improvements is not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.*

The design of the subdivision and proposed improvements is not likely to cause substantial environmental damage or injure fish or wildlife or their habitat. The project site does not contain any suitable habitat areas and is largely surrounded by existing urbanized development. The design of the subdivision and proposed improvements is not likely to cause substantial environmental damage or injure fish or wildlife or their habitat. The developable portions of the site do not contain any biological resources including fish or wildlife, and based on the Initial Study that has been prepared for the project, there are no environmental factors that cannot be mitigated to a level of less than significant.

5. *The design of the subdivision or the type of improvements are not likely to cause serious public health problems.*

The design of the subdivision or the type of improvements are not likely to cause serious public health problems. The project is located in an area that is adjacent to approved residential uses and potential future commercial development. The project is designed with improvements that meet all City and State building and fire codes, and no offensive emissions or odors will be associated with the residential development.

6. *The design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of property within the proposed subdivision.*

The design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of the property within the proposed subdivision. The Parcel Map provides the necessary easements for utilities and access, and is responsible for installing or repairing associated street improvements such as curb, gutter, and sidewalk consistent with the City requirements, if necessary, at the time of construction.

7. *That pursuant to Section 66474.4 of the Subdivision Map Act, the land is not subject to a contract entered into pursuant to the California Land Conservation Act of 1965 (commencing with section 51200 of the Government Code) and that the resulting parcels following a subdivision of the land would be too small to sustain their agricultural use.*

The subject property is not under a Williamson Act Contract pursuant to the California Land Conservation Act of 1965 and will not be detrimental or otherwise affect lands in agricultural use.

SECTION 6. FINDING FOR CONDITIONAL USE PERMIT NO. 1173. The proposed Conditional Use Permit No. 1173 is hereby approved based upon the following findings, and subject to the Conditions of Approval from the Development Services Department (Exhibit "A") and Development Services Land Use Engineering Division (Exhibit "B") attached hereto:

1. That the proposed development will not adversely affect the applicable land use plans of the city.

The property is located within the Commercial land use designation of the General Plan, which allows commercial development and residential development consistent with the project's proposed General Commercial (C-3) zoning. The C-3 District allows mixed-use and apartment residential development consistent with the density standards of the Multiple Family Residential (R-3) District. The project exceeds this density; however, it is consistent with the allowable density allowed based upon the State Density Bonus Law, while still providing outdoor recreation areas amenities, required parking and appropriate access.

2. That the proposed development will not be detrimental to the public health, safety and welfare.

The proposed project will not be detrimental to the public health, safety and welfare. The proposed project will be constructed in compliance with all applicable design and engineering requirements, including the California Building Code, California Fire Code, applicable provisions of the Redlands Municipal Code, and all applicable site design and engineering standards. There will be no anticipated conflicts or hazards in terms of vehicle traffic or pedestrians, or nearby intersections.

3. That the proposed development will comply to the maximum extent feasible with the regulations of the city's general plan, the applicable zoning district and the city's development standards.

The proposed development will comply to the maximum extent feasible with the regulations of the City's 2035 General Plan, the applicable zoning district, and the City's development standards. The existing General Plan designation for the project site is Commercial, and the C-3 zoning permits mixed uses (residential combined with commercial uses) subject to a Conditional Use Permit. The conceptual site plan indicates the proposed development will be in conformance with the applicable development standards of the C-3, General Commercial zone and applicable design and development standards.

4. That the proposed development is appropriate at the proposed location.

The proposed project is in a location that is adjacent to a recently approved high-density multifamily residential development as well as commercial developments. The proposed project includes a mix of high-density residential and commercial uses, which create a transition from lower density residential uses (located to the north and east of the project site) to this proposed higher-density mixed use development nearer the freeway. Similarly, the project's commercial uses will create a transition from the existing and potential future commercial uses with higher intensity of use to the south along Lugonia Avenue. The project is located adjacent to roadways which have been designed to facilitate the type and quantity of traffic anticipated to be generated by this project. Due to the project site's proximity to freeway on-ramps and off-ramps, vehicles traveling to and from the site would not be routed significant distances through other portions of the City where traffic impacts may occur.

SECTION 7. FINDINGS FOR COMMISSION REVIEW & APPROVAL NO. 956. Commission Review & Approval No. 956 is hereby approved based upon the following findings, and subject to the Conditions of Approval attached hereto as Exhibit "A" and Exhibit "B":

1. *The site for the intended use is adequate in size and shape to accommodate the use, and all of the required yards, setbacks, walls or fences, landscaping and other features will adjust the use to those existing or permitted future uses of land in the neighborhood.*

   The proposed project includes the construction of ten multifamily residential buildings (eight buildings with 4 stories and two buildings with 3 stories) with a total of 460 dwelling units, outdoor recreation areas, retail/commercial/office floor area, and related site improvements on approximately 13.48 acres. The subject property is adequate in size and shape to accommodate the proposed use, including setbacks, landscaping, private and common open space, recreation amenities, driveways, on-site parking, lighting, utilities, and other required improvements necessary to serve the proposed use and structures. The proposed project complies with the development standards for the C-3 District to the maximum extent utilizing waivers as allowed by State Density Bonus Law, and will be compatible with the anticipated residential and commercial uses adjacent to the project site.

2. *The site for the proposed use relates to streets and highways which are properly designed and improved to carry the type and quantity of traffic generated or to be generated by the proposed use.*

   The subject property will be accessed from City streets (Tennessee Street and Pennsylvania Avenue), which have been designed and will be constructed to accommodate the expected type and quantity of motor vehicle traffic to and from the proposed project. The roadways are designed to carry the type and quantity of residential traffic to be generated by the proposed use, including existing traffic from the existing portions of the project. The site for the proposed use relates to streets that are properly designed and improved to carry the type and quantity of traffic that will be generated by the proposed residential structures without creating a reduction in the traffic level of service at surrounding intersections.

3. *The conditions set forth in the approval and those shown on the approved site plan are deemed necessary to protect the public health, safety and general welfare.*

   The conditions of approval for the project will protect the public health, safety, and general welfare. Conditions are provided from the Planning Division, Building & Safety Division, and Land Use Engineering Division. The project has been conditioned to comply with the applicable provisions of the Redlands Municipal Code as well as the applicable California Building Code, California Fire Code, and any other applicable regulations.

SECTION 8. APPROVAL OF DENSITY BONUS AGREEMENT. The proposed Density Bonus Agreement for the proposed project is hereby approved based upon the following findings:

1. *The development project would not be a hazard or nuisance to the city at large or establish a use or development inconsistent with the goals and policies of the city's general plan.*

Including the 76 density bonus units, the completed project will include 460 dwelling units, which will not be a hazard or nuisance to the City of Redlands at large. The proposed project and land use will be consistent with several policies and actions contained in the General Plan. The proposed project will also implement several goals and policies contained in the 2021-2029 Housing Element. The proposed project will help the City achieve its housing goal numbers as determined by the Regional Housing Needs Assessment as further explained in the Housing Element.

2. *The number of dwellings can be accommodated by existing and planned infrastructure capacities.*

Including the 76 density bonus units, the proposed project will include 460 apartment units which can be accommodated by existing and planned infrastructure. The City's Development Review Committee (including Land Use Engineering staff and Municipal Utilities & Engineering Department) have reviewed the proposed project plans, and all necessary infrastructure, public and private utilities, and public services will be able to adequately serve the project site and vicinity.

3. Adequate evidence exists to ensure that the development of the property would result in the provision of affordable housing in a manner consistent with the purpose and intent of this chapter;

The proposed project is consistent with the applicable provisions of State density bonus law (Calif. Gov. Code Sections 65915 – 65918) and the project is subject to a Density Bonus Agreement that is included in the project entitlements. The development of the property will result in the provision of 20 affordable housing units for very-low-income households in a manner consistent with the purpose and intent of the Redlands Municipal Code as well as applicable State law.

4. In the event that the city does not grant at least one financial concession or incentive as defined in state law in addition to the density bonus, that additional concessions or incentives are not necessary to ensure affordable housing costs; and

Provisions for any requested density bonus are detailed in State law. A developer who meets the requirement of State Density Bonus Law is entitled to a density bonus as a matter of right. In addition to the density bonus, the City is also required to provide incentives/concessions. The City is required to grant concessions which reduce development standards, or remove other regulatory constraints which result in increased costs to the developer. These concessions must be granted unless the City finds that the proposed concessions do not result in identifiable cost reductions, would cause a public health or safety problem, cause an environmental problem, harm a historical property or would be contrary to law.

The applicant is not requesting any specific financial concessions. However, the applicant is requesting a reduction in parking stall depth as their only concession. Waiving development standards necessary for the construction of compliant density bonus projects is mandatory. Generally, because granting of concessions, incentives and waivers to density bonus projects is mandatory, the City does not have discretion over their approval, except to the extent specific findings are authorized.

5. There are sufficient provisions to guarantee that the lower and very low-income units would remain affordable in the future.

The proposed project includes a Density Bonus Agreement that will ensure the project provides housing for very-low-income households in accordance with the granted density bonus and applicable State law for 55 years. The Density Bonus Agreement includes terms and provisions to ensure that only eligible very-low-income residents may reside in the affordable housing units within the development and have the benefit of affordable rents.

SECTION 9. APPROVAL. The City Council approves of the project entitlements including Amendment No. 50 the Specific Plan No. 40, Zone Change No. 477, Parcel Map No. 20688, Conditional Use Permit No. 1173, Commission Review & Approval No. 956, and the related Density Bonus Agreement and Inclusionary Housing Plan, subject to the attached Conditions of Approval.

SECTION 10. EFFECTIVE DATE. This Resolution shall take effect upon adoption.

ADOPTED, SIGNED AND APPROVED this 3rd day of December, 2024.

Eddie Tejeda, Mayor

ATTEST:

Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, do hereby certify that the foregoing Resolution was duly adopted by the City Council at a regular meeting thereof held on the 3rd day of December, 2024, by the following vote:

AYES: Councilmembers Barich, Davis, Guzman-Lowery, Saucedo; Mayor Tejeda
NOES:
ABSENT:
ABSTAINED:

Jeanne Donaldson, City Clerk

EXHIBIT A
DEVELOPMENT SERVICES DEPARTMENT
CONDITIONS OF APPROVAL
TENNESSEE VILLAGE MIXED-USE PROJECT
(CRA No. 956, CUP No. 1173, and Tentative Parcel Map No. 20688)

Planning Division

1. This permit/approval is for Parcel Map No. 20688, Conditional Use Permit No. 1173 and Commission Review and Approval No. 956 to subdivide a 13.48-acre (gross) site into four parcels for the construction of a mixed-use project comprised of 460-unit multi-family apartments and 18,000 square feet of commercial space located on the east side of Tennessee Street and approximately 600 feet north of Lugonia Avenue (APN: 0167-171-15-0000).

2. This permit/approval shall expire two (2) years from the date of project approval (will expire on September 10, 2026), unless construction has commenced pursuant to a building or engineering permit(s), or a time extension is granted in accordance with the Redlands Municipal Code (RMC Section 18.12.090 for Commission Review & Approval; RMC Section 18.192.090 for Conditional Use Permit; and RMC Sections 17.07.110 and 17.07.120 for Subdivision Regulations).

3. Pursuant to Government Code Section 66020(d), certain fees, dedications, reservations or exactions imposed by the City as a condition of approval of this project are subject to a statutory ninety (90) day protest period. Please be advised that the ninety (90) day protest period for those fees, dedications, reservations and exactions which are subject to Government Code Section 66020(a) has commenced to run on the date this project was approved by the City.

4. The applicant for this permit, and its successors and assigns, shall defend, indemnify and hold harmless the City of Redlands, and its elected officials, officers, agents and employees, from and against any and all claims, actions, and proceedings to attack, set aside, void or annul the approval of this permit by the City, or brought against the City due to acts or omissions in any way connected to the applicant's project that is the subject of this permit. This indemnification shall include, but not be limited to, damages, fees, costs, liabilities, and expenses incurred in such actions or proceedings, including damages for the injury to property or persons, including death of a person, and any award of attorneys' fees. In the event any such action is commenced to attack, set aside, void or annul all, or any, provisions of this permit, or is commenced for any other reason against the City for acts or omissions relating to the applicant's project, within fourteen (14) City business days of the same, the applicant shall file with the City a performance bond or irrevocable letter of credit (together, the "Security") in a form satisfactory to the City and in the amount of Three Hundred Thousand Dollars ($300,000), to ensure applicant's performance of its defense and indemnity obligations under this condition. The failure of the applicant to provide the Security shall be deemed an express acknowledgement and agreement by the applicant that the City shall have the authority and right, without objection by the applicant, to revoke all entitlements granted for the project pursuant to this permit. The City shall have no liability to the applicant for the exercise of City's right to revoke this permit.

5. By signing and/or using this permit, the permittee acknowledges all of the conditions imposed and accepts this permit subject to those conditions and with full awareness of the applicable provisions of the Redlands Municipal Code including Title 15 (Buildings and Construction), Title 16 (General Plan), Title 17 (Subdivision Regulations), and Title 18 (Zoning Regulations). Failure of the permittee to sign these conditions does not affect their enforceability by the City or other responsible entity. These conditions are binding upon all future property owners and occupants of the subject property.

6. This permit/approval is granted for the project plans on file with the Development Services Department.

7. Prior to the issuance of building permits for the project, an Affordable Housing Agreement and Density Bonus Agreement, in a form approved by the City, shall be recorded against the Inclusionary Units or the Residential Development in its entirety, as deemed appropriate by the City Manager in consultation with the City Attorney. The Affordable Housing and Density Bonus Agreement(s) shall ensure that the applicant and/or developer develops the required Inclusionary Housing Units and satisfies all other terms of the Inclusionary Housing Plan, State Density Bonus Law, and the Redlands Municipal Code.

8. The issuance of any permits shall comply with all applicable provisions of the Redlands Municipal Code

9. All plans submitted to the City shall reflect all Planning Commission and/or City Council approvals and any other changes required by the Commission, Council and/or staff. This condition applies to site plans, landscape plans, elevations, grading, and all other illustrations, text, or plans submitted to the City in connection with the project. The Development Services Director is authorized to approve minor modifications to the approval project plans or any of the conditions of approval if such modifications shall achieve substantially the same results as would strict compliance with said plans and conditions.

10. No Certificate of Occupancy shall be granted for a building or phase, or building permit shall receive final approval and signature, until all applicable Conditions of Approval have been satisfied for that building or phase.

11. A pro rata share of the rental Inclusionary Units obligation (10 units) must be constructed prior to or concurrently with each phase of the market rate Residential Development. The developer shall not be able to obtain, and the City will not grant, a certificate of occupancy for any units on the subsequent phase of the Residential Development until the required rental Inclusionary Units are completed for the first phase.

12. The final map shall substantially conform to the tentative map as approved by City Council.

13. A copy of the approved Conditions of Approval shall be included on the cover page of the construction plans submitted to the Building Division

14. The applicant shall comply with all applicable federal, state, and local laws. Violations or convictions of any of those laws in connection with the use may be cause for revocation of this approval/permit.

15. All off-site and on-site utilities shall be placed underground. Prior to approval of the final map the applicant shall submit plans to be approved by the Municipal Utilities & Engineering Director and the Development Services Director, that detail undergrounding of all utilities for the project.

16. Transformer cabinets and gas meters shall not be located within required setbacks and/or adjacent to public streets, and shall be screened from public view either by architectural treatment or with landscaping. Multiple electrical meters and panels shall be fully enclosed and incorporated into the overall architectural design of the building(s). Backflow preventers shall be enclosed with landscaping that will provide complete screening upon maturity. The location and method of enclosure or screening of this equipment shall be shown on the construction plans and landscape plans prior to building permit issuance. Location of said equipment shall be coordinated with appropriate utility company (i.e., Southern California Gas Company or Southern California Edison Company). The applicant shall submit plans showing details of screening subject to review and approval by the Development Services Director, prior to issuance of building permits

17. The applicant shall be required to submit a lighting plan to the Development Services Director for review and approval prior to the issuance of any building permits. The plan must include details such as beam spreads and/or photometric calculations that do not exceed the value one-half (0.5) foot candle of illumination at the property lines abutting residential development, location and type of fixtures, exterior colors, details on the foundation, and arrangement of exterior lighting.

18. Prior to issuance of building permits, Developer shall demonstrate that light poles will not conflict with tree locations. Developer shall submit a plan showing both the lighting and landscape on the same sheet. Fixtures on exterior light poles shall direct lighting downward (e.g., contain a flat lens and/or have shielding that directs light downward and contains glare).

19. Prior to the issuance of building permits, the applicant shall submit plans detailing that roof screening is of adequate height to screen any roof-top equipment from public view on all sides, subject to review and approval by the Development Services Director. Screening of air conditioning units and other equipment on the buildings shall be incorporated into or compatible with the architectural design of the buildings. All equipment shall be screened from public view of adjacent roadways and freeways. Plumbing vents, ducts and other appurtenances protruding from the roof of structures shall be placed so that they will not be visible from the front of the property or other major public vantage points. Developer shall include a note on the construction plumbing drawings of exterior elevations to indicate to contractors that roof features shall be grouped and located in the described manner. Roof vents shall be shown on construction drawings and painted to match roof material color.

20. Any gutters, downspouts, pipes, and other drainage appurtenances shall be designed and shall be placed (e.g., internal to the building or inside the exterior walls) so that they will not be

visible from the front of the property (i.e., from public right-of-way) or other major public vantage points.

21. Utility meters shall be fully screened and incorporated into the overall architectural design of the building (e.g., interior room, cabinet with wing wall, or equivalent complete screening). Any enclosures or screening shall be architecturally treated to match the exterior of the attached structure.

22. Telecommunications and television equipment or satellite dishes shall not be located on the exterior of any building (including but not limited to balconies, patios, exterior railings, rooflines, etc.). Dwelling units shall be internally wired for all available utility and telecommunications services, with service devices, panels, or meters located within a centralized equipment room. The equipment room(s) in each building shall be fully enclosed and incorporated into the overall architectural design of the building(s). Any satellite dishes/receivers shall only be located on the roof and shall be completely screened from public view on all sides.

23. Prior to issuance of any building or engineering permit for any building or phase of the project, the Developer shall prepare and submit a Construction Parking Management Plan for all contractors, workers, and deliveries related to the project site. The Construction Parking Management Plan shall identify areas of the project site, surrounding private properties (with property owner's authorization), and surrounding public streets that construction personnel may utilize. Deliveries of construction materials, equipment, trailers, vehicles, etc., shall be performed on the project site to the extent practicable, and avoid the use of public streets and rights-of-way if possible. The Developer and/or on-site primary general contractor (superintendent) shall have responsibility for monitoring and enforcing the approved parking management plan. The plan shall be subject to review and approval by the City Planner or designee, and may be modified by the City after approval to mitigate any unanticipated impacts or public nuisance conditions.

24. Prior to any use of any public street or right-of-way for construction-related activities, the Developer shall submit and receive approval for a Traffic Control Plan. Developer shall be responsible for repairing, replacing, or financially compensating any damages to public rights-of-way (including but not limited to paving, sidewalks, driveways, curbs and gutters, storm drain facilities, parkway landscape, street trees, public utilities, etc.) to the satisfaction of the Director(s) of the Municipal Utilities & Engineering Department and/or the Facilities & Community Services Department, or their designee(s), as applicable.

25. Prior to issuance of a Certificate of Occupancy for a building or phase, Developer shall remove all construction materials and vehicles from the subject property or portion thereof being completed.

26. Developer shall arrange for materials collection during construction, demolition, and occupancy with the City's Solid Waste Division, or Developer shall arrange for self-hauling to an authorized facility.

27. Prior to placing or constructing any signs on the project property, Developer shall obtain a sign permit from the City. Sign locations and illumination are subject to review and approval by the Planning Division under separate permit.

28. Bicycle Facilities: The Developer shall install bicycle racks or secured lockers at a rate of one per thirty (30) parking spaces with a minimum of a three (3) space bicycle rack in accordance with RMC Section 18.224.020(A). Plans submitted to Plan Check shall include information and specifications to verify this requirement has been met.

29. The applicant shall not make any modifications or changes during construction that are in conflict or contrary to the project's approved site design, or building elevations without first consulting with the Development Services Director or designee.

30. Any graded slopes greater in height than three feet (3') shall be provided with irrigation systems and planted with groundcover, shrubs, and trees as approved by the Development Services Department.

31. Project that glazing or reflective surfaces (specular reflectance) shall be limited to a maximum reflectance of 25%.

32. Landscape and Irrigation Plans shall be approved prior to the issuance of building permits. Landscape and Irrigation shall be submitted for plan check to the Development Services Department, Building & Safety Division, for distribution to other departments and for review and approval by the Development Services Director. Plans shall be in compliance with the Water Efficient Landscape Ordinance No. 2724 (Also known as Chapter 15.54 of the RMC).

33. All construction activities shall be limited to the hours between 7:00 a.m. to 6:00 p.m., and no construction activities permitted on Sundays and Federal Holidays.

34. The project site shall be kept in a weed and dust free condition throughout all phases of development.

35. Two loading spaces shall be provided and clearly indicated on the building plans as required by Section 18.164.330 prior to building permit issuance.

36. The applicant shall provide shared access and parking agreements or easements prior to issuance of a building permit.

37. A Minor Exception Permit shall be required for all wall, fences or combinations thereof exceeding 6 feet tall.

38. All (178) garage parking spaces shall be electric vehicle charging ready (EV Ready).

39. **BIO-1: Pre-construction Survey for Nesting Birds.** To the extent feasible, construction activities should be scheduled to avoid the nesting season. If construction activities are scheduled to take place outside the nesting season, all impacts to nesting birds protected under the MBTA and California Fish and Game Code would be avoided. The nesting season

for most birds in San Bernardino County extends from February 1 through September 1.

If it is not possible to schedule construction activities between September 1 and January 31, then pre-construction surveys for nesting birds will be conducted by a qualified biologist to ensure that no nests would be disturbed during project implementation. These surveys will be conducted no more than 5 days prior to the initiation of any site disturbance activities and equipment mobilization, vegetation removal, fence installation, grading, etc. If project activities are delayed by more than 5 days, an additional nesting bird survey will be performed. During this survey, the biologist will inspect all vegetation and other potential nesting habitats (e.g., shrubs) in and immediately adjacent to the impact area for nests. Active nesting is present if a bird is building a nest, sitting in a nest, a nest has eggs or chicks in it, or adults are observed carrying food to the nest. The results of the surveys will be documented.

If an active nest is found sufficiently close to work areas to be disturbed by these activities, the qualified biologist will determine the extent of a construction-free buffer zone to be established around the nest (typically up to 300 feet for raptors and up to 100 feet for other species), to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during project implementation. Within the buffer zone, no site disturbance and mobilization of heavy equipment, including but not limited to equipment staging, fence installation, clearing, grubbing, vegetation removal, demolition, and grading will be permitted until the chicks have fledged.

A qualified biologist is an individual who has a degree in biological sciences or related resource management with a minimum of two seasonal years post-degree experience conducting surveys for nesting birds. During or following academic training, the qualified biologist will have achieved a high level of professional experience and knowledge in biological sciences and special-status species identification, ecology, and habitat requirements.

40. **BIO-2: Pre-construction Survey for Burrowing Owl.** No more than 14 days prior to ground disturbance a focused survey for burrowing owl will be required to ensure take avoidance. Even though burrowing owls were not located as part of the general biological survey, a pre-construction survey for burrowing owl is required because burrowing owls may encroach or migrate to the property at any time, and therefore steps should be taken to ensure avoidance, including reevaluating the locations/presence of burrowing owl or burrows. Pre-construction surveys shall be conducted in accordance with the survey requirements outlined in Appendix D of the CDFW's Staff Report on Burrowing Owl, dated March 7, 2012. If burrowing owl are found on the project site during pre-construction surveys, the biologist conducting surveys shall immediately contact the CDFW to develop a plan for avoidance and/or translocation prior to construction crews initiating any ground disturbance on the project site.

41. **CUL-1:** If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the

significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.

- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify the lead agencies. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a historic property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.

If the find includes human remains, or remains that are potentially human, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the San Bernardino County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the coroner determines the remains are Native American and not the result of a crime scene, the coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

42. **GEO-1 Inadvertent Discovery of Paleontological Resources.** If paleontological materials are uncovered during grading or other earth moving activities, the contractor shall be required to halt work in the immediate area of the find, and to retain a professional paleontologist to examine the materials to determine whether it is a significant paleontological resource. If this determination is positive, the resource shall be left in place, if determined feasible by the project paleontologist. Otherwise, the paleontologist shall fully recover the scientifically consequential information. Work may continue outside of the area of the find; however, no further work shall occur in the immediate location of the find until all information recovery has been completed and a report concerning it filed with the Development Services Director. The applicant shall bear the cost of implementing this mitigation.

43. **NOI-1 Reduce Potential Building 3 HVAC Noise Levels.** To reduce potential noise levels from Building 3 heating, ventilation, and air conditioning (HVAC) equipment:

    1. The installation of HVAC units or systems that generate a noise level greater than 75 dBA (at 3 feet) for units located within 90 lateral feet of the project's eastern property line shall be prohibited; or

    2. Parapet walls for any building with an HVAC unit or system within 90 feet of the project's eastern property line shall be at least 1 foot taller than the top of the tallest installed HVAC unit.

44. **TCR-1 Native American Treatment Agreement.** Prior to the issuance of grading permits, the Applicant shall enter into a Tribal Monitoring Agreement with the Consulting Tribe(s) for the Project. The Tribal Monitor shall be on-site during all ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind). The Tribal Monitor shall have the authority to temporarily divert, redirect, or halt the ground-disturbing activities to allow identification, evaluation, and potential recovery of cultural resources.

45. **TCR-2 Retention of Archaeologist.** Prior to any ground-disturbing activities (including, but not limited to, clearing, grubbing, tree and bush removal, grading, trenching, fence post replacement and removal, construction excavation, excavation for all utility and irrigation lines, and landscaping phases of any kind), and prior to the issuance of grading permits, the Applicant shall retain a qualified archaeologist who meets the U.S. Secretary of the Interior Standards (SOI). The archaeologist shall be present during all ground-disturbing activities to identify any known or suspected archaeological and/or cultural resources. The archaeologist shall conduct a Cultural Resource Sensitivity Training, in conjunction with the Tribe[s] Tribal Historic Preservation Officer (THPO), and/or designated Tribal Representative. The training session shall focus on the archaeological and tribal cultural resources that may be encountered during ground-disturbing activities as well as the procedures to be followed in such an event.

46. **TCR-3 Cultural Resource Management Plan.** Prior to any ground-disturbing activities the Project archaeologist shall develop a Cultural Resource Management Plan (CRMP) and/or Archaeological Monitoring and Treatment Plan (AMTP) to address the details, timing, and responsibilities of all archaeological and cultural resource activities that occur on the Project site. This Plan shall be written in consultation with the Consulting Tribe(s) and shall include the following: approved Mitigation Measures (MM)/Conditions of Approval (COA), contact information for all pertinent parties, parties' responsibilities, procedures for each MM or COA, and an overview of the Project schedule.

47. **TCR-4 Pre-Grade Meeting.** The retained qualified archeologist and Consulting Tribe(s) representative shall attend the pre-grade meeting with the grading contractors to explain and coordinate the requirements of the monitoring plan.

48. **TCR-5 On-Site Monitoring.** During all ground-disturbing activities the qualified archaeologist and the Native American monitor shall be on-site full-time. The frequency of inspections shall depend on the rate of excavation, the materials excavated, and any discoveries of Tribal Cultural Resources as defined in California Public Resources Code Section 21074. Archaeological and Native American monitoring will be discontinued when the depth of grading and the soil conditions no longer retain the potential to contain cultural deposits. The qualified archaeologist, in consultation with the Native American monitor, shall be responsible for determining the duration and frequency of monitoring.

49. **TCR-6 Inadvertent Discovery of Cultural Resources.** In the event that previously unidentified cultural resources are unearthed during construction, the qualified archaeologist and the Native American monitor shall have the authority to temporarily divert and/or temporarily halt ground disturbance operations in the area of discovery to allow for the evaluation of potentially significant cultural resources. Isolates and clearly non-significant deposits shall be minimally documented in the field and collected so the monitored grading can proceed. If a potentially significant cultural resource(s) is discovered, work shall stop within a 60-foot perimeter of the discovery and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. All work shall be diverted away from the vicinity of the find, so that the find can be evaluated by the qualified archaeologist and Tribal Monitor[s]. The archaeologist shall notify the Lead Agency and Consulting Tribe(s) of said discovery. The qualified archaeologist, in consultation with the Lead Agency, the Consulting Tribe(s), and the Native American monitor, shall determine the significance of the discovered resource. A recommendation for the treatment and disposition of the Tribal Cultural Resource shall be made by the qualified archaeologist in consultation with the Tribe[s] and the Native American monitor[s] and be submitted to the Lead Agency for review and approval. Below are the possible treatments and dispositions of significant cultural resources in order of CEQA preference:

- Full avoidance.
- If avoidance is not feasible, Preservation in place.
- If Preservation in place is not feasible, all items shall be reburied in an area away from any future impacts and reside in a permanent conservation easement or Deed Restriction.
- If all other options are proven to be infeasible, data recovery through excavation and then curation in a Curation Facility that meets the Federal Curation Standards (CFR 79.1)

50. **TCR-7 Inadvertent Discovery of Human Remains.** The Consulting Tribe(s) requests the following specific conditions to be imposed in order to protect Native American human remains and/or cremations. No photographs are to be taken except by the coroner, with written approval by the Consulting Tribe(s).

A. Should human remains and/or cremations be encountered on the surface or during any and all ground-disturbing activities (i.e., clearing, grubbing, tree and bush removal, grading, trenching, fence post placement and removal, construction excavation, excavation for all water supply, electrical, and irrigation lines, and landscaping phases of any kind), work in the immediate vicinity of the discovery

shall immediately stop within a 100-foot perimeter of the discovery. The area shall be protected; project personnel/observers will be restricted. The County Coroner is to be contacted within 24 hours of discovery. The County Coroner has 48 hours to make his/her determination pursuant to State and Safety Code §7050.5. and Public Resources Code (PRC) § 5097.98.

B. In the event that the human remains and/or cremations are identified as Native American, the Coroner shall notify the Native American Heritage Commission within 24 hours of determination pursuant to subdivision (c) of HSC §7050.5.

C. The Native American Heritage Commission shall immediately notify the person or persons it believes to be the Most Likely Descendant (MLD). The MLD has 48 hours, upon being granted access to the Project site, to inspect the site of discovery and make his/her recommendation for final treatment and disposition, with appropriate dignity, of the remains and all associated grave goods pursuant to PRC §5097.98.

D. If the Morongo Band of Mission Indians has been named the Most Likely Descendant (MLD), the Tribe may wish to rebury the human remains and/or cremation and sacred items in their place of discovery with no further disturbance where they will reside in perpetuity. The place(s) of reburial shall not be disclosed by any party and is exempt from the California Public Records Act (California Government Code § 6254[r]). Reburial location of human remains and/or cremations shall be determined by the Tribe's Most Likely Descendant (MLD), the landowner, and the City Planning Department.

44. TCR-8Final Report. The final report[s] created as a part of the Project (AMTP, isolate records, site records, survey reports, testing reports, etc.) shall be submitted to the City and Consulting Tribe(s) for review and comment. After approval of all parties, the final reports shall be submitted to the Eastern Information Center, and the Consulting Tribe(s).

Subdivision Conditions (Tentative Parcel Map No. 20688):

51. Tentative Parcel Map No. 20688 authorizes the subdivision of a 13.48-acre (12.76-acre net) site into four parcels 1.37 net acres, 1.49 net acres, 5.02 net acres, and 4.88 net acres, for development purposes located on the east side of Tennessee Street, approximately 600 feet north of Lugonia Avenue (APN: 0167-171-15-0000)

52. This Tentative Parcel Map shall expire two (2) years or 24 months from the date of project approval, unless the Final Map has been recorded or a time extension is granted in accordance with the Redlands Municipal Code pursuant to RMC Sections 17.07.110 and 17.07.120 (Subdivision Regulations).

53. Any application(s) for an extension of time of the above expiration date shall be filed with the Planning Division not less than 90 days prior to the expiration date and shall comply with Title 17 (Subdivision Regulations) of the Redlands Municipal Code. Upon application by the subdivider prior to the expiration of the approved or conditionally approved map, the tentative map shall be automatically extended in accordance with the Subdivision Map Act.

54. The applicant shall record the subdivision by a Final Parcel Map. The Final Parcel Map(s) shall comply with the Subdivision Map Act and the Redlands Municipal Code (RMC).

55. Any conditions of approval determined by the City to not be completed prior to Final Map approval shall be included within the Subdivision Improvement Agreement entered into by the developer with the City.

56. The Final Parcel Map(s) shall be in substantial conformance with the Tentative Parcel Map and plans submitted by the applicant and placed on file in the office of the Planning Division.

Building Division

57. When the Entitlement Review is approved submit complete construction drawings including structural calculations, energy calculations and a soils report to Building and Safety for plan review in accordance with the current edition of the California Building and Fire Codes including all local ordinances and standards which are effective at the time of Plan Check Submittal.

58. Disabled access for the site and building must be in accordance with the State of California and ADA regulations.

59. Accessible EVC parking spaces for future and required EVCS as per the California Green Code is required.

Facilities and Community Services Department

60. The City maintains a list of acceptable street trees by species, by street name, and by tree district, pursuant to RMC 12.52.050. Street trees for public streets adjacent to the project must be selected from this approved list.

61. Prior to issuance of any buildings permits for any building, the Developer shall prepare and submit a Trash Management Plan development. The plan shall provide estimates of trash generation, estimates for the numbers and sizes of containers and facilities, schedule for City services, pertinent instructions for on-site maintenance staff (e.g., bins and containers shall not be placed on public streets and left unattended outdoors for more than two hours before or after trash service pick-up, bins and containers shall not be placed or staged in a manner that obstructs any vehicle travel lanes, etc.), and other necessary information as required by the City. The plan shall be subject to review and approval by the Facilities & Community Services Department and the Development Services Department, and may be modified by the City after approval to mitigate any unanticipated impacts or public nuisance conditions.

    a. Each building and building pad shall be designed to accommodate all necessary refuse storage rooms, bins and containers, hallways, access paths, and other structural elements to be completely screened or enclosed. Refuse and recycling storage rooms and all bins or containers shall be completely screened from view from any streets (when not placed outdoors for scheduled pick-up and hauling).

Fire Department

62. Fire Department Access & Water Supply (Fire Master Plan):

    a. Fire Department Access & Water Supply plan is required to be formally submitted to Redlands Fire Department as a separate permit application prior to grading & building permits.

Review Note: Preliminary Site Fire Master included in project packet accounts for major aspects of the Fire Department Access & Water Supply plan. Details and specifics to be reviewed in the separate permit identified above.

63. Project to coordinate City Staff and adjacent parcel owners to provide emergency personnel access gate(s) along the site's perimeter walls/fences.

    a. Due to the considerable distance from public streets this condition of approval is requests additional emergency pedestrian access for fire, emergency medical, and law enforcement personnel, mutually benefitting all parcels.

    b. Gates are to be secured 24/7 with Knox Box emergency access key box provided on both sides of the gate.

    c. Gate locations are to be selected to provide emergency personnel access without decreasing site parking, landscaping, or similar site designs.

64. Fuels Management and Weed Abatement: From the present time until project construction phase, property owner is responsible to maintain compliance with Redlands Municipal Code Chapter 8.40 regarding Weed Abatement and Fuels Management.

    a. Weeds and annual grasses shall be maintained at a 4 inches of growth or less.

    b. Tumbleweeds and similar uncultivated vegetation shall be removed.

Other City Departments/Divisions:

65. Conditions of Approval from the following City Departments/Divisions are applicable to the project, and are hereby incorporated by reference:

a. Land Use Engineering Division (Exhibit B)

Brian Desatnik
Development Services Director

EXHIBIT B
LAND USE ENGINEERING DIVISION
CONDITIONS OF APPROVAL

[Attached]

REDLANDS DEVELOPMENT SERVICES DEPARTMENT
LAND USE ENGINEERING
DEVELOPMENT REQUIREMENTS
TENTATIVE PARCEL MAP NO. 20688, COMMISSION REVIEW AND APPROVAL NO. 956, AND CONDITIONAL USE PERMIT NO. 1173

Date of P.C. Meeting:	**September 10, 2024**
Applicant:	**Diversified Pacific Development Group, LLC**
Location:	**East Side of Tennessee Street Approximately 550 Feet North of Lugonia Avenue**
Project Description:	**Construct a Mixed-Use Project with 460 Apartments and Approximately 18,000 square Feet of Commercial Space**

The applicant shall comply with the following engineering requirements to allow for the orderly development of the surrounding area and for public health and safety.

All requirements for development shall be consistent with requirements set forth in the General Plan; applicable sections of Redlands Municipal Code; latest edition of "Redlands Standard Specifications and Detail Drawings for Design and Construction of Public Improvements"; latest edition of American Public Works Association "Standard Plans for Public Works" and "Standard Specifications for Public Works Construction – Greenbook"; latest edition of "Redlands Water Systems Standard Specifications"; latest edition of "Redlands Sanitary Sewer Systems Standard Specifications"; and current Redlands policies and guidelines relative to development projects.

A. The following items are required prior to issuance of the GRADING PERMIT.

1. Pay plan check fee as established per resolution. The amount will be determined at plan check submittal.

2. Plans required to be submitted include:
   a. Precise Grading Plan. Grading plans shall be coordinated with the existing and proposed off-site improvements. (RMC 15.04)
   b. SWPPP/Erosion Control Plan. Erosion/Sediment Control Plan shall be submitted for review and approval. A copy of the project's Storm Water Pollution Prevention Plan (SWPPP) shall be submitted for review. SWPPP Best Management Practices (BMPs) to prevent and control discharges to the municipal separate storm sewer (drain) system shall be in effect for the entire duration of project construction to its completion and acceptance by the City. (RMC 13.54)
   c. Water Quality Management Plan. Submit final Water Quality Management Plan (WQMP) for review and approval. WQMP shall consist of post construction Best Management Practices (BMPs) prepared in accordance with the requirements and guidelines of the San Bernardino County Stormwater Program. The requirements of the WQMP shall remain in effect throughout the life of the project. (California State Order No. R8-2010-0036)

All plans used as reference for design shall be listed on title sheet of all plans with reference numbers. All plans shall be submitted on 24" x 36" size sheets. Six (6) copies of each are required. After final review, grading and SWPPP plans shall be submitted on 24" x 36" size, min. 4 mil, mylar sheets for City's approval.

3. Submission of plan sets shall be complete and include all required engineering designs and drawings listed in No. 2 above. All plans submitted shall be substantially complete, and no plan check queue place-holder plans will be accepted. An incomplete plan submittal will not be accepted for plan check.

4. All support documentation shall be submitted with the plans to be checked. Submission shall include:
   a. Hydrology Report and Hydrologic Calculations; (RMC 17.11.020)
   b. Geotechnical Report; (RMC 17.07.040)
   c. Easement Documents. (RMC 17.11.090)

5. The post-construction stormwater discharge rate (Q) from a 100 year storm event shall not be greater than the pre-construction stormwater discharge rate (Q).

6. A final WQMP that is in substantial conformance with the preliminary WQMP and in full conformance with the WQMP Guidance Document shall be submitted and approved prior to the approval of precise grading plans.

7. Cash cleanup deposit shall be submitted ($3,000.00). Deposit will be reimbursed after the work is completed and accepted by the City upon written request. (RMC 12.16.290)

8. For all development requiring coverage under the state of California General Storm Water Permit, in effect at the time of permit issuance, and whom have filed with the State Board a Notice of Intent (NOI), a copy of the Waste Discharge Identification Number (WDID) and NOI shall be submitted for review and file. Call (866) 563-3107. (RMC 13.54)

9. The Final WQMP shall also include a site trash plan detailing the installation, operation, and maintenance of a Full Capture System (FCS) for loose trash. The intent of the FCS is to capture loose trash preventing the trash from entering the site storm drains and basins. BMPs or devices used as FCS devices shall require acceptance by the City Engineer. Full Capture Systems are defined as treatment controls (either a single device or a series of devices) capable of trapping all particles 5 mm or greater. In addition, the FCS shall trap trash from the greater of:

   a. A flow not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm. Precipitation intensity shall be determined using the NOAA ATLAS 14 Point Precipitation Frequency Estimates web site; or
   b. A flow rate equal to the on-site storm water conveyance system including pipes, channels, and swales.

B. The following items are required prior to RECORDATION OF TRACT/PARCEL MAP.

1. Pay plan check fee as established per resolution. The amount will be determined at plan check submittal.

2. Plans required to be submitted shall include (RMC 17.17.060):
   a. Parcel Map;
   b. Street Improvement;
   c. Storm Drain Construction;
   d. Pavement Striping and Signage Plans (including reflectorized pavement markers);
   e. Street Tree Installation – Street trees shall be provided as per the approved Street Tree List;
   f. Street Light Installation – Provide street lighting plan which show approved locations of service pedestal(s), conduits, street lights, appurtenances, and any necessary detail by Southern California Edison Company;
   g. Potable Water Main Installation;
   h. Recycled Water Main Installation;
   i. Sewer Main Installation; and
   j. Approved Onsite Potable and Irrigation Water Line Installation.

   All plans used as reference for design shall be listed on title sheet of all plans with reference numbers. All plans shall be submitted on 24" x 36" size sheets. Three (3) copies of each are required. After final review, plans shall be submitted on 24" x 36" size, min. 4 mil, mylar sheets for City's approval.

3. Submission of plan sets shall be complete and include all required engineering designs and drawings listed in No. 2 above. All plans submitted shall be substantially complete, and no plan check queue place-holder plans will be accepted. An incomplete plan submittal will not be accepted for plan check.

4. All support documentation shall be submitted with the plans to be checked. Submission shall include (RMC 17.11.020 and RMC 17.11.090):
   a. Title Reports and backup documents for the property;
   b. All record maps and deeds referenced on the Tract/Parcel Map;
   c. Easement Documents;
   d. Boundary and Lot Closure Calculations; and
   e. Record plans, maps and documents.

5. Finalize and obtain all necessary onsite and offsite permissions, permits, easements, right-of-way, and properties in order to satisfy the conditions of approval for this project. Such items shall include:
   a. Encroachment Permits from Caltrans and the County

6. Pay the required development impact fees per ordinance in effect at time of approval of Final Parcel Map. The exact amount will be determined based upon the review of the final building plans and project information. Development Impact Fees shall include;
    - Water Source Acquisition Charge (RMC 13.40);
    - Remaining Development Impact Fees will be due at time of building permit issuance or water meter installation (RMC 13.48.030 and Redlands Ordinance No. 2830).

7. All off-site improvements shall be designed by a Civil Engineer licensed in the State of California. All existing utilities shall be pot-holed to determine the actual depth if no signed plan is available. Field notes will be submitted at time of submitting the plan for review and plan checking (RMC 17.17.060).

8. The approximate locations of existing underground utilities shall be shown on the improvement/site/grading plans. The utilities shall be plotted from record and field data. The City of Redlands and the design Engineer assume no liability as to the exact location of said lines where locations are not shown.

9. Submission of approved onsite potable and irrigations plans is required prior to connection to recycled water system. All onsite improvements shall be done in accordance with the Water Resources Control Board, Division of Drinking Water requirements for recycled water. City shall submit plans to Division of Drinking Water for approval prior to final approval and installation of irrigation meters.

10. Final City approved mylars for all public improvements shall be on file with the Development Services Department, Land Use Engineering Division.

11. Requirements for Tennessee Street (RMC 17.15 and 17.17):

    a. Dedicate to provide for an 88-foot street right-of-way width including a corner cutoff at the property line return to accommodate a 30 foot radius curb return and pedestrian ramp;
    b. Construct standard curb and gutter 32 feet on both sides of proposed street centerline;
    c. Provide full depth construction/reconstruction consistent with the City standard or alternative method of street rehabilitation as accepted by the City Engineer between the new curb and gutter verified through a geotechnical report;
    d. Construct standard 6-foot wide curb adjacent sidewalk along the entire street frontage and ramps at all curb returns;
    e. Install LED ornamental streetlight(s) with the equivalent illumination of a 150-watt sodium vapor streetlight. Streetlight spacing shall be determined by the City of Redlands design specifications. Location of the lights will be determined at time of plan preparation. Coordinate with City staff for

guidance. Prepare and submit a separate street lighting plan for City approval;

f. Construct standard pavement transition based on design speed of the street from north of Pennsylvania Street to the proposed west side curb and gutter, and from south of the southerly parcel map boundary to the proposed east side curb;
g. Construct underwalk drain, if necessary;
h. Use traffic index of 9.0;
i. Install a minimum 12-inch diameter potable water main including necessary valves and appurtenances;
j. Install a minimum 12-inch diameter recycled water main including necessary valves and appurtenances;
k. Install residential/commercial fire hydrants as required by the Redlands Fire Department.
l. Install a minimum 15-inch diameter sewer main with manholes and appurtenances from Pennsylvania Avenue to San Bernardino Avenue.

12. Requirements for Pennsylvania Avenue (RMC 17.15 and 17.17):

a. Provide for a 32-foot half street right-of-way width both north and south of the street centerline including acquisition of all necessary property/ies outside of tract boundary. In the event the applicant lacks sufficient title or interest, including easement or license, at the time the final map is filed with the City, to construct the required improvements for Pennsylvania Avenue, the applicant has requested the City accept its voluntary waiver of any rights it may have pursuant to Government Code Section 66462.5 and agrees that the City shall have no obligation pursuant to such section to take any action with respect to the final map, unless and until the City determines in its sole and absolute, but reasonable, discretion that the applicant has such sufficient title or interest. Through the imposition of this condition, the City's accepts and relies upon the applicant's aforementioned request and waiver in approving this tentative map;
b. Construct standard curb and gutter 20 feet south side of street centerline;
c. Construct asphalt berm a min. 10 feet north side of street centerline;
d. Provide full depth construction/reconstruction consistent with the City standard or alternative method of street rehabilitation as accepted by the City Engineer between the new curb and gutter, asphalt berm verified through a geotechnical report;
e. Construct standard property line adjacent sidewalk along the entire southerly street frontage and ramps at all curb returns;
f. Install LED ornamental streetlight(s) with the equivalent illumination of a 100-watt sodium vapor streetlight. Streetlight spacing shall be determined by the City of Redlands design specifications.. Location of the lights will be determined at time of plan preparation. Coordinate with City staff for guidance. Prepare and submit a separate street lighting plan for City approval;

g. Provide street trees spaced every 40 feet avoiding sewer and water laterals. Prepare and submit a separate street tree plan for City approval.
h. Construct temporary public turn-around at the easterly street terminus in the event Pennsylvania Avenue is not constructed with a connection to Karon Street prior to project opening;
i. Construct underwalk drain, if necessary;
j. Use traffic index of 8.0;
k. Install a minimum 12-inch diameter potable water main including necessary valves and appurtenances;
l. Install a minimum 8-inch diameter recycled water main including necessary valves and appurtenances;
m. Install residential/commercial fire hydrants as required by the Redlands Fire Department. Provide fire flow calculations;
n. Install a minimum 12-inch diameter sewer main with manholes and appurtenances from the manhole east of Tennessee Street to Tennessee Street. The transition location for changing diameters from 12-inch to 8-inch east of the manhole east of Tennessee Street will be dependent on the points of connection from the various projects;

13. Provide adequate drainage facilities, including but not limited to, installation of an adequately sized reinforced concrete storm drain along Pennsylvania Avenue to the Caltrans I-210 channel as required by the City Engineer. The applicant shall provide and submit all necessary hydrology/hydraulic studies and calculations in accordance with the San Bernardino County Hydrology Manual to adequately size the storm drain facility (RMC 17.17).

14. Install reduced pressure principle backflow devices as required by City Engineer. (RMC 13.20)

15. Install onsite fire line with double detector check valve backflow devices at service connection satisfactory to the City Fire Department. (RMC 13.20)

16. Dedication documents shall be prepared by a licensed land surveyor or registered civil engineer (registered prior to January 1982) in the State of California and must be submitted for review and approval before recordation. (California B&P Code 8761 and CCR 4411)

17. Improvement bonds must be posted for the total estimated cost of off-site improvements as follows (RMC 17.17.080):

Performance	100% security (due prior to final map approval)
(Warranty)	10% security (due at time of acceptance of improvements)
Labor and Materials	50% security (due prior to final map approval)

Acceptable security forms: Surety Bond(s), Letter of Credit from a qualified bank or institution, Cash Deposits, or Set Aside Letter (savings account) in

City's name subject to approval of the City Attorney and Finance Director.

18. Survey and Monumentation cash bond must be posted.

19. The 10% warranty security will be retained for one year after acceptance of public improvements by the City for warranty of off-site work.

20. Execute Subdivision Improvement Agreement (RMC 17.17.070).

C. The following items are required prior to issuance of the BUILDING PERMIT

1. Pay plan check fee as established per resolution. The amount is to be determined at plan check submittal.

2. Provide pad certification and compaction report to the Building and Safety Department.

3. Pay the required development impact fees per ordinance in effect at time of issuing the building permit. The exact amount will be determined based upon the review of the final building plan or project information. Development Impact Fees shall include:
   - Transportation Facilities; (RMC 3.54)
   - Fire Facilities; (RMC 3.60)
   - General Government Facilities; (RMC 3.60)
   - Library Facilities; (RMC 3.60)
   - Open Space/Park; (RMC 3.32)
   - Police Facilities; (RMC 3.60)
   - Storm Drain Facilities; (RMC 3.56)
   - Water Capital Improvement Charge; (RMC 3.48)
   - Recycled Water Capital Improvement Charge; (RMC 3.53)
   - Water Source Acquisition Charge *; (RMC 13.40)
   - Sewer Capital Improvement Charge; (RMC 3.44) and
   - Solid Waste Capital Improvement Charge. (RMC 3.70)

   * These charges are required for building permit issuance if Final or Parcel Map was not required for the project or charges were not paid with the Final or Parcel Map approval.

4. Although this project will have an on-going inspection throughout construction, a final inspection for all off-site improvements must be scheduled by developer to certify that these improvements comply with City specifications. (RMC 12.16.090)

5. Comply with City of Redlands Landscape Ordinance No. 2724 and submit a landscape/irrigation plan prepared by a licensed landscape architect for review and approval. The irrigation system shall be designed and constructed to make use of future non-potable and/or recycled water systems.

6. Comply with the Solid Waste Recycling Access Act of 1991 (AB 1327) and install double solid waste bin enclosure(s). Submit a plan prepared by a licensed engineer showing bin enclosure(s) location on the site plan with solid waste truck turning and/or turnaround track template superimposed.

7. Submit recycling plans for site demolition/construction for review and approval in accordance with Chapter 13.66 of the Redlands Municipal Code.

8. Parcel map shall be recorded and proof of recordation provided.

D. The following items are required prior to approval of APPLICATION FOR WATER SERVICE CONNECTION and prior to WATER METER INSTALLATION.

Separate water service laterals will be provided for both domestic and commercial use as approved by the City engineer.

1. Pay the Water Capital Improvement Charge; (RMC 3.48.030)

2. Pay the Water Source Acquisition Charge *; (RMC 13.40)

3. Pay the Recycled Water Capital Improvement Charge; (RMC 3.53.050) and

4. Pay the Water Meter Charge. (Redlands Ordinance No. 2830)

E. The following items are required prior to issuance of the ENCROACHMENT PERMIT.

1. Cash cleanup deposit shall be submitted ($3,000.00). Deposit will be reimbursed after the work is completed and accepted by the City upon written request. (Required unless previously submitted under Sections A, B or C.) (RMC 12.16.290)

2. Section 4216/4217 of the Government Code requires a Dig Alert Identification Number be issued before a "Permit to Excavate" will be valid. For your Dig Alert Identification Number, call Underground Service Alert toll free, 1-800-227-2600, two (2) working days prior to conducting any excavation. (RMC 12.20.120)

3. Encroachment Permit application and two (2) sets of City approved plans must be submitted for all off-site improvements. Encroachment Permit fees shall be paid prior to issuance of Encroachment Permit. (RMC 12.16.010)

4. A California OSHA Permit Number for all work that is 5 feet deep or deeper shall be provided. Call (909)383-4321. (RMC 12.16.040)

5. A copy of soils report is required with recommendation for the final pavement structural section to be submitted prior to placing of the street pavement. The report shall include test results and boring/sampling locations.

6. A traffic control plan shall be prepared in accordance with the latest revision of CA MUTCD or W.A.T.C.H. manual, submitted and accepted by the City Engineer prior to issuance of an encroachment permit. The plan shall show all required construction signage, warning devices, road closures, detours, delineation, phasing schedules and anticipated durations of closures and detours for any work within the public right-of-way. The plans shall provide names and 24-hour phone numbers of individuals who can be contacted regarding traffic control measures.

7. Improvement bonds must be posted for the total estimated cost of off-site improvements as follows:

Performance	100% security (due prior to final map approval)
(Warranty)	10% security (due at time of acceptance of improvements)
Labor and Materials	50% security (due prior to final map approval)

Acceptable security forms: Surety Bond(s), Letter of Credit from a qualified bank or institution, Cash Deposits, or Set Aside Letter (savings account) in City's name subject to approval of the City Attorney and Finance Director.

8. Execute Subdivision Improvement Agreement. (RMC 17.17.070).

9. The 10% warranty security will be retained for one year after acceptance of public improvements by the City for warranty of off-site work.

F. The following items are required prior to issuance of CERTIFICATE OF OCCUPANCY.

1. All requirements as described in Sections A, B, C, D and E of these conditions of approval shall be met.

2. All work shall be completed to the satisfaction of the City Engineer. All as-built plans shall be delivered to the Development Services Department, Land Use Engineering Division for review and approval.

3. The Engineer of Record shall file a Final Grading Certification for all grading and improvements relating to the project development.

4. Owner's Licensed Land Surveyor shall reset survey points, monuments, record corners, and centerline ties that were destroyed during construction and shall file Corner Records for those points prior to completion of the project with San Bernardino County Surveyor. Copies of information shall be furnished to the Development Services Department, Land Use Engineering Division. [California B&P Code 8762, 8767, 8768, 8771, and 8773(b)]

5. One mylar copy of recorded parcel map shall be furnished to the Development Services Department, Land Use Engineering Division.

6. A list of as-built infrastructure improvement quantities shall be provided in the Excel format provided by the City showing quantities for each street segment (i.e. pavement, curb and gutter, sidewalk, etc.)

7. Streets may be required to have a seal coat applied at the option of the City Engineer. Type of seal coat is to be determined by the City Engineer.

8. Resurface existing roadway as directed by the City Engineer due to utility installations and construction damage.

9. Existing striping shall be removed and replaced as necessary. New striping and pavement markings shall be installed as required by the City Engineer.

10. Contractors will be required to pave new streets in two (2) phases with last phase being delayed until 95 percent of construction has been completed, or on approval of the City Engineer.

11. Owner/Developer shall provide recycling receipts as required by the recycling plan.

G. The following items are required prior to release of SECURITIES/WARRANTIES/DEPOSITS.

1. Prior to the release of the securities for the project, all improvements shall be reviewed and accepted by the City Engineer.

2. A recorded mylar copy of the Parcel map shall be submitted, if a part of a lot-sale subdivision and not included in Item E.

3. Tie sheets shall be submitted for all monuments found and/or set in the public right-of-way.

4. The release of securities/warranties/deposits must be requested in writing to the City Engineer. Allow 30-45 days for processing.

Donald Young

DONALD YOUNG, P.E., P.M.P.
One Stop Permit Center Manager

AC
Initial

ENVIRONMENTAL CHECKLIST FORM

BACKGROUND

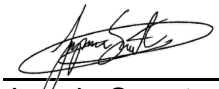
1. **Project Title:** Extension of time for Commission Review & Approval No. 956, Conditional Use Permit No. 1173, and Tentative Parcel Map No. 20688.

2. **Project Location:** East side of Tennessee Street approximately 575 feet north of West Lugonia Avenue (APN: 0167-171-15-0000).

DETERMINATION

On the basis of this initial evaluation:

X I find that there are no substantial changes associated with this project, pursuant to Section 15162 of the California Environmental Quality Act (CEQA) Guidelines, to warrant further analysis and certification of a subsequent Negative Declaration because all potentially significant effects associated with this project have been: (a) analyzed adequately in the Mitigated Negative Declaration adopted and certified on December 3, 2024; and, (b) avoided or mitigated pursuant to that earlier Mitigated Negative Declaration, including mitigation measures that are imposed as conditions of approval upon the project.

Signed: 

Jazmin Serrato
Associate Planner
October 27, 2026

EVALUATION OF ENVIRONMENTAL IMPACTS

Issues and Supportive Information Sources	YES	NO
1. AESTHETICS. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x

Issues and Supportive Information Sources	YES	NO
2. AGRICULTURAL & FOREST RESOURCES. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
3. AIR QUALITY; GREENHOUSE GASES; AND ENERGY. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
4. BIOLOGICAL RESOURCES. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
5. CULTURAL RESOURCES. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
6. GEOLOGY & SOILS; HYDROLOGY & WATER QUALITY. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
7. HAZARDS & HAZARDOUS MATERIALS. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
8. LAND USE & PLANNING; MINERAL RESOURCES. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
9. NOISE. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x

Issues and Supportive Information Sources	YES	NO
10. POPULATION & HOUSING. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
11. PUBLIC SERVICES. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
12. RECREATION. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
13. TRANSPORTATION. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
14. TRIBAL CULTURAL RESOURCES. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
15. UTILITIES AND SERVICE SYSTEMS. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
16. WILDFIRE. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x
17. MANDATORY FINDINGS OF SIGNIFICANCE. Have any substantial changes occurred in the project or the surrounding area that may alter potential impacts since the last review.		x

CONCLUSION

Based on the above analysis and findings and pursuant to Section 15162 of the California Environmental Quality Act Guidelines, the following conclusions are made for the request for time extension:

1. No substantial changes are proposed in the project which will require major revisions of the previously certified Mitigated Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2. No substantial changes have occurred with respect to circumstances under which the project was undertaken which will require major revisions of the previously certified Mitigated Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. No new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous Mitigated Negative Declaration was certified, has been identified.

Therefore, no further environmental analysis or environmental review is required for the proposed extension of time.

RESOLUTION NO. 1766

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF REDLANDS APPROVING A ONE-YEAR EXTENSION OF TIME TO THE EXPIRATION DATE FOR COMMISSION REVIEW & APPROVAL NO. 956 TO CONSTRUCT A MIXED-USE AND MULTIFAMILY RESIDENTIAL PROJECT LOCATED ON THE EAST SIDE OF TENNESSEE STREET, NORTH OF LUGONIA AVENUE.

WHEREAS, the applicant has submitted an application for Extension of Time No. 1 for Commission Review & Approval No. 956, Conditional Use Permit No. 1173, and Tentative Parcel Map No. 20688, an approved project to construct a mixed-use project with 18,000 square-feet of commercial space, 460 apartment units, and related on-site improvements including parking lots, landscaping, lighting, and utilities, located on the east side of Tennessee Street approximately 575 feet north of West Lugonia Avenue (APN: 0167-171-15-0000); and

WHEREAS, on December 3, 2024, the Redlands City Council held a public hearing and adopted Resolution No. 8641 to approve Commission Review & Approval No. 956, Conditional Use Permit No. 1173, Tentative Parcel Map No. 20688, and related actions; and

WHEREAS, the approved project includes a Density Bonus Agreement and an Affordable Housing Agreement for inclusionary dwelling units; and

WHEREAS, Redlands Municipal Code Section 18.12.130 permits an applicant to request a one-year extension of time to extend the expiration date for a Commission Review & Approval; and

WHEREAS, Redlands Municipal Code Section 18.192.090 permits an applicant to request a one-year extension of time to extend the expiration date for a Conditional Use Permit; and

WHEREAS, Redlands Municipal Code Section 17.11.060 permits an applicant to request a one-year extension of time to extend the expiration date for a Tentative Parcel Map; and

WHEREAS, the applicant intends to develop the project and requests the extension to allow additional time to complete the preparation of construction documents and obtain financing; and

WHEREAS, following the consideration for the extension of time to Commission Review and Approval No. 956, the Planning Commission determined that approval of the requested one-year extension of time is in the best interests of the public health, safety, and general welfare.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF REDLANDS AS FOLLOWS:

SECTION 1. California Environmental Quality Act. The proposed Extension of Time is exempt from further environmental review in accordance with the California Environmental Quality Act Section §15162(a).

SECTION 2. Findings. The proposed Extension of Time is hereby approved based upon the original findings of fact, including the following findings for Tentative Parcel Map No. 20688, and subject to the original Conditions of Approval (City Council Resolution No. 8641).

1. The proposed map is consistent with the City's General Plan, Municipal Code, and Municipal Code.

The original findings remain valid. The proposed map will be consistent with the Redlands General Plan and the Redlands Municipal Code. The proposed subdivision is within the Commercial land use designation of the General Plan. The subdivision is consistent with the development standards of the underlying zoning district in terms of the required lot size, width and depth and is supported by the General Plan policies outlined in the staff report.

2. The site is physically suitable for the type of development.

The original findings remain valid. The project site is physically suitable for the proposed developments. The existing site is approximately 13.48 gross acres. The site is generally flat and rectangular. All on-site and off-site improvements proposed as part of the project's design will meet all City standards with the approval of a Density Bonus Agreement with Declaration of Affordable Housing Covenants and Restrictions and will provide a safe and efficient environment for the future residents after development.

3. The site is physically suitable for the proposed density of the development.

The original findings remain valid. The property is located within the Commercial land use designation of the General Plan, which allows commercial development and residential development consistent with the project site's proposed C-3 zoning. The C-3 District allows mixed-use and apartment residential development consistent with the density standards of the Multiple Family Residential (R-3) District. The project exceeds this density; however, it is consistent with the allowable density allowed based upon the State Density Bonus Law, while still providing outdoor recreation areas, on-site amenities, required parking, and appropriate access.

4. The design of the subdivision or the proposed improvements is not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

The original findings remain valid. The design of the subdivision and proposed improvements is not likely to cause substantial environmental damage or injure fish or wildlife or their habitat. The project site does not contain any suitable habitat areas and is largely surrounded by existing urbanized development. The design of the subdivision and proposed improvements is not likely to cause substantial environmental damage or injure fish or wildlife or their habitat. The developable portions of the site do not contain any biological resources including fish or wildlife, and based on the Initial Study that has been prepared for the project, there are no environmental factors that cannot be mitigated to a

level of less than significant.

5. The design of the subdivision or type of improvements is not likely to cause serious public health problems.

The original findings remain valid. The design of the subdivision or the type of improvements are not likely to cause serious public health problems. The project is located in an area that is adjacent to approved residential uses and potential future commercial development. The project is designed with improvements that meet all City and State building and fire codes, and no offensive emissions or odors will be associated with the residential development.

6. The design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of property within the proposed subdivision.

The original findings remain valid. The design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of the property within the proposed subdivision. The Parcel Map provides the necessary easements for utilities and access, and is responsible for installing or repairing associated street improvements such as curb, gutter, and sidewalk consistent with the City requirements, if necessary, at the time of construction.

7. That pursuant to California Government Code Section 66474.4, of the Subdivision Map Act the land is not subject to a contract entered into pursuant to the California Land Conservation Act of 1965.

The original findings remain valid. The subject property is not under a Williamson Act Contract pursuant to the California Land Conservation Act of 1965 and will not be detrimental or otherwise affect lands in agricultural use.

8. There are no potential impacts of any increases in applicable development fees which have occurred since the date of approval of the tentative map.

There will be no fiscal impacts that would result from an increase in applicable City development fees. The developer has no vested rights to secure fees in effect at the time of original approval (including no incentives or waivers pursuant to the Density Bonus Agreement for the project). Therefore, the subdivider will pay all applicable fees, including development impact fees, currently in effect at the time of building permit issuance.

SECTION 3. Approval of Extension of Time. The findings for the original approval of Commission Review & Approval No. 956, Conditional Use Permit No. 1173, and Tentative Parcel Map No. 20688 remain valid, and therefore, the proposed one-year extension of time is hereby approved.

SECTION 4. Expiration Date. The new expiration date for the project shall be December 3, 2027. The project shall remain subject to all original Conditions of Approval contained in City Council Resolution No. 8641 as well as the applicable Density Bonus Agreement.

SECTION 5. Effective Date. This Resolution shall become effective upon adoption.

ADOPTED, SIGNED, AND APPROVED this 27th day of October, 2026.

_____
Karah Shaw, Chair
Planning Commission

ATTEST:

_____
Katherine Coleson,
Secretary to the Planning Commission

I, Katherine Coleson, Secretary to the Planning Commission of the City of Redlands, hereby certify that the foregoing resolution was duly adopted by the Planning Commission at a regular meeting thereof held on the 27th day of October, 2026, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Katherine Coleson
Secretary to the Planning Commission

Planning Commission **AGENDA ITEM NO. CB.**

DATE: October 27, 2026

TO: Honorable Chair and Planning Commission

SUBJECT: EXTENSION OF TIME NO. 1 FOR COMMISSION REVIEW & APPROVAL NO. 964
APPLICANT: INVISION COMMUNITY BUILDERS, LLC
(PROJECT PLANNER: JAZMIN SERRATO, ASSOCIATE PLANNER)

1. Consideration of a request for a one-year Extension of Time for Commission Review & Approval No. 964, an approved project to construct a 108-unit market-rate multi-family rental complex for senior housing (55+), which included a density bonus request in accordance with State Density Bonus Law to allow up to a 15% increase in the total project density on a 3.49-acre site. The project is located between Grove Street and Judson Street, south of the Orange Blossom Trail (APNs: 0170-221-53-0000 and 0170-221-55-0000).
2. Consideration of an exemption from environmental review pursuant to Section 15061(b)(3) of the California Environmental Quality Act (CEQA) Guidelines.

BACKGROUND:

On June 13, 2023, the Planning Commission adopted Resolution No. 1621 and approved Commission Review & Approval No. 964 as well as Lot Line Adjustment No. 674 to merge the two lots. A Density Bonus Agreement which allowed a 15% increase in density for senior housing (55+) was approved separately by the City Council on July 18, 2023. Assembly Bill 2729 (2024) granted an automatic 18-month extension for housing projects meeting certain eligibility criteria, which extended the entitlements to December 13, 2026. An application requesting an extension of time was submitted on September 23, 2026.

SUMMARY:

The approved project includes the construction of a 108-unit market-rate multi-family residential project that is deed-restricted for senior housing (55+) with a Density Bonus Agreement (recorded as DOC#2023-0182495) to allow up to a 15% increase in the total project density. The project site is comprised of two contiguous parcels totaling 3.49 acres that will be merged prior to construction through the recording of Lot Line Adjustment No. 674. Four residential buildings are proposed that are two stories tall. Three of the buildings will include 28 units each and the fourth building will include 26 units. A mixture of one-and two-bedroom units are proposed (32 two-bedroom one bath units and 76 one-bedroom one bath units) which range from 615 to 821 square feet in size. A single-story community building and other amenities including a pool, fitness room, and outdoor open space area are also included in the proposal. The project will be gated with the main entrance on N. Grove Street and a secondary entrance is on Judson Street (see Attachment A – Location Map, Attachment B – Approved Project Plans, and Attachment C – Planning Commission Staff Report of June 13, 2023).

Under plan check review in November 2025, the applicant has proposed to adjust the approved site layout so that the buildings will now be arranged along the northerly side of the project site (mirror image from the approved site plan). The originally approved entitlement placed the buildings along the south property line, whereas now the buildings will be along the northern property line (see Attachment E - Updated Project Plans). The proposed change was deemed to be in substantial conformance with the approved entitlement by the Development Services Director, and therefore, no revision to the entitlement was deemed necessary. Although market rate, the development of deed-restricted senior housing is generally a lower cost than traditional market rate housing and serves as a benefit to the community by increasing the housing supply for senior residents within the general area. This allows the facilitation of the City to meet its housing goals in accordance with the City's 2021-2029 Housing Element. Approval of the Extension of Time would provide a new expiration date of December 13, 2027, for the entitled project subject to the original conditions of approval. No substantial changes to the project are proposed (108 units and subject to a Senior Housing Density Bonus Agreement), and the original conditions of approval remain applicable for the project. The applicant has indicated the approval of a one-year time extension will provide additional time to complete the permit review process in plan check and coordinate with consultants.

Pursuant to Redlands Municipal Code Section 18.12.130 (Commission Review and Approval), the developer may request a one-year extension of time prior to expiration, not to exceed a total of three (3) extensions. This is the first request for an extension for CRA No. 964.

ENVIRONMENTAL REVIEW

Approval of this Extension of Time request is exempt from further environmental review pursuant to Section 15061(b)(3) as there is no possibility of any potentially significant environmental effects as a result of the Extension of Time. The project was originally approved with an exemption pursuant to Section 15332 (In-Fill Development Projects) of the California Environmental Quality Act (CEQA) Guidelines.

RECOMMENDATION:

Staff recommends that the Planning Commission adopt Resolution No. 1767 to approve a one-year Extension of Time for Commission Review & Approval No. 964.

MOTION(S):

If the Planning Commission determines that staff's recommendation is appropriate, the following motion is provided:

"I move to adopt Resolution No. 1767 and approve a one-year Extension of Time for Commission Review and Approval No. 964."

Attachments

Attachment_A_-_Location_Map_and_Aerial.pdf
Attachment_B_-_Approved_Project_Plans.pdf
Attachment_C_Planning_Commission_Staff_Report_of_June_13_2023.pdf
Attachment_D_-_Resolution_No_1621_with_Conditions_of_Approval.pdf
Attachment_E_-_Updated_Project_Plans.pdf
Attachment_F_-_Resolution_No_1767_Extension_of_Time.pdf



City of Redlands

Location Map and Aerial

Author: Redlands GIS **Date:** October 2026

VILLAGES AT ORANGE BLOSSOM SENIOR APARTMENTS

REDLANDS, CA



VICINITY MAP



SHEET INDEX

A01 - ARCHITECTURAL SITE PLAN
A02 - PRELIMINARY FIRE MASTER PLAN
A03 - BLDG 1 MASTER FLOOR PLAN
A04 - BLDG 1 LOWER LEVEL FLOOR PLAN
A05 - BLDG 1 UPPER LEVEL FLOOR PLAN
A06 - BLDG 1 MASTER ROOF & ELEVATIONS
A07 - BLDG 1 ENLARGED ELEVATIONS
A08 - BLDG 1 ENLARGED ELEVATIONS
A09 - BLDG 1 ROOF PLAN
A10 - BLDG 2 MASTER FLOOR PLAN
A11 - BLDG 2 LOWER LEVEL FLOOR PLAN
A12 - BLDG 2 UPPER LEVEL FLOOR PLAN
A13 - BLDG 2 MASTER ROOF & ELEVATIONS
A14 - BLDG 2 ENLARGED ELEVATIONS
A15 - BLDG 2 ENLARGED ELEVATIONS
A16 - BLDG 2 ROOF PLAN
A17 - BLDG SECTIONS
A18 - UNIT PLANS
A19 - COMMUNITY ROOM / LEASING PLAN
A20 - FITNESS / POOL BATH PLAN
A21 - TRASH ENCLOSURE
A22 - CARPORT PLAN

NOVEMBER 04, 2022

ARCHITECT	OWNER'S REPRESENTATIVE	CIVIL ENGINEER	LANDSCAPE ARCHITECT
VANCE GRAHAM IDEArc 17848 SKY PARK CIRCLE, SUITE D IRVINE, CA 92614 949.336.6056	MOHAMAD YOUNES INVISION COMMUNITY BUILDERS, LLC 690 EAST GREEN STREET, SUITE 200 PASADENA, CA 91101 951.300.8268 mohamad.y@inlandcorp.com	CEAZAR AGUILAR AGUILAR CONSULTING INC 231 E. ALLESSANDRO BLVD #6A393 RIVERSIDE, CA 92508 951.300.1431 caguilar@aguilarconsulting.com	SHAWN BURCH STB LANDSCAPE ARCHITECTS, INC. 15 SOUTH 5TH ST. REDLANDS, CA 92373 909.798.7490 shawn@stblandarch.com

VILLAGES AT ORANGE BLOSSOM

LEGEND:

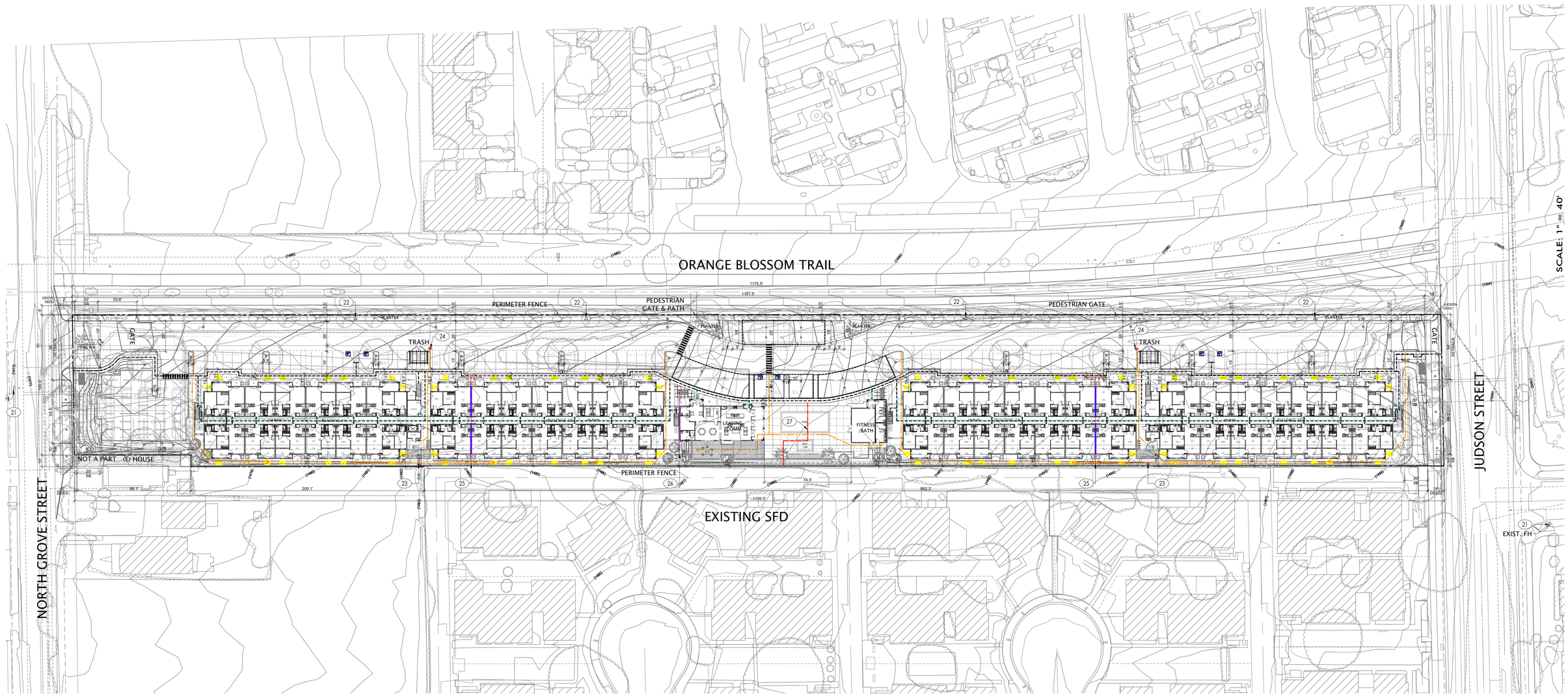
- ACCESSIBLE PATH OF TRAVEL
- ASSEMBLY AREA EXITING PATH OF TRAVEL
- LADDER PADS
- 2 HOUR FIREWALL (FSD) AND HORIZONTAL EXIT
- 2 HOUR OCCUPANCY SEPARATION
- 150' HOSE PULL
- FIRE HYDRANT
- STANDPIPE
- PAINTED STANDPIPE LOCATOR SYMBOL

KEYNOTES

SYMBOL	DESCRIPTION
21	EXISTING FIRE HYDRANT
22	PROPOSED FIRE HYDRANT
23	STANDPIPE LOCATION
24	STREET PAINTED STANDPIPE LOCATOR SYMBOL
25	2 HOUR FIRE WALL & FSD LINE
26	2 HOUR OCCUPANCY SEPARATION LINE
27	IMAGINARY FSD LINE

NOTE:

- EACH BUILDING IS COVERED BY NFPA 13R
- ALL CORRIDORS AND UNIT DEMISING WALLS TO BE 1-HOUR FIRE PARTITIONS
- LEASING AREA EAST OF OCCUPANCY SEPARATION WALL IN BUILDING 1B IS COVERED BY NFPA 13



VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

PRELIMINARY FIRE MASTER PLAN

November 4, 2022

A02

IDEArc ARCHITECTURE + PLANNING
17848 SKY PARK CIRCLE, SUITE D
IRVINE, CA 92614
949.336.6056

VILLAGES AT ORANGE BLOOSOM PROJECT SUMMARY

USE	SIZE		BEDS	BATHS	UNIT MIX	PARKING (1) REQ'D/UNIT	PARKING (1) TOTAL REQ'D	PARKING UNCOVERED	PARKING COVERED	TOTAL UNIT AREA	TOTAL BEDS/ UNIT TYPE	TOTAL BATHS/ UNIT TYPE
PLAN 1	615	SQFT	1	1	76	1.0	76	60	16	46,740	76	76
PLAN 2	821	SQFT	2	1	32	1.5	48	41	7	26,272	64	32
TOTAL					108		124	101	23	73,012	140	108
FITNESS												
COMM./LEAS	1,842	SQFT					-	0				
							Total Parking (1)	124				

(1) PER STATE DENSITY BONUS LAW

TOTAL SITE AREA:	152,058.70	SQFT	3.49	ACRES
			30.94	DU/AC
SITE COVERAGE:	56.66%			

TOTAL BUILDING AREA		
LIVING:	72,971	sq.ft.
CIRCULATION:	13,180	sq.ft.
GARAGE:	0	sq.ft.
TOTAL:	86,151	sq.ft.
LEAS/COMM.	1,842	sq.ft.
FITNESS/BATH	1,035	sq.ft.

REQUIRED OUTDOOR LIVING AREA*	18,242.7	12%	18.60.170 (A)
PROVIDED COMMON OUTDOOR LIVING SPACE:	7,945.5	5.2%	18.60.170 A.1.b*
PROVIDED PRIVATE OUTDOOR LIVING SPACE:	10,800.0	7.1%	
TOTAL PROVIDED OUTDOOR LIVING SPACE:	18,745.5	12.3%	

NOTE:

18.60.170 (A) - THE OUTDOOR LIVING SPACE MAY BE PROVIDED IN THE FORM OF COMMON OPEN SPACE AREAS, PRIVATE OPEN SPACE AREAS, OR A COMBINATION THEREOF, EXCEPT THAT THERE SHALL BE AT LEAST ONE HUNDRED (100) SQUARE FEET OF COMMON OPEN SPACE FOR EACH DWELLING UNIT.
18.60.170 A.1.b - RECREATION BUILDINGS MAY BE LOCATED WITHIN THE COMMON OUTDOOR LIVING SPACE; PROVIDED, HOWEVER, THAT NOT MORE THAN TEN PERCENT (10%) OF THE SPACE MAY BE UTILIZED FOR RECREATIONAL BUILDING PURPOSES. THE SPACE BETWEEN BUILDINGS SHALL BE INCREASED BY THE DIMENSIONS OF THE RECREATIONAL BUILDING(S).

N

UNIT 1

UNIT 2

COMMUNITY / LEASING

FITNESS / BATH

OUTDOOR LIVING

PROJECT INFO:

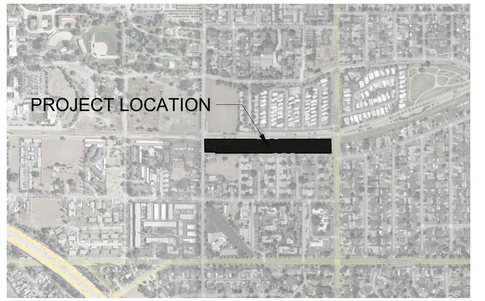
APN:	0170-221-53-0000 & 0170-221-55-0000
EXISTING ZONING:	R-2
EXISTING DENSITY:	14 DUA
CONSTRUCTION TYPE:	V-A
ALLOWABLE DENSITY:	30 DU/AC (27 DU/AC PER MEASURE U)
PROPOSED DENSITY:	25.78 DU/AC (30.94 DU/AC WITH 20% DENSITY BONUS)
PROPOSED DENSITY BONUS:	90 X 1.20 = 108 DU/AC (76 ONE-BEDROOM & 32 TWO-BEDROOM)
PARKING:	1 PARKING STALL PER DU FOR ONE-BEDROOM AND 1.5 PARKING STALLS FOR TWO-BEDROOM
REQUIRED PARKING:	124 PARKING STALLS
PROVIDED PARKING:	124 PARKING STALLS PROVIDED
PROPOSED AMENITIES:	COMMUNITY ROOM & LEASING OFFICE (1,842 SQ.FT.) SWIMMING POOL & HOT TUB FITNESS ROOM & POOL BATH (1,035 SQ.FT.)
EXISTING FLOOD AREA:	AO-1
PROPOSED FLOOD AREA:	ZONE X (PER FEMA MAP REVISION FOR REGION 9)
SETBACKS:	
SIDE:	56 FT (ORANGE BLOSSOM TRAIL)
FRONT:	20 FT (JUDSON & GROVE STREET)
SIDE:	10 FT (SOUTH BOUNDARY)
REAR:	20 FT

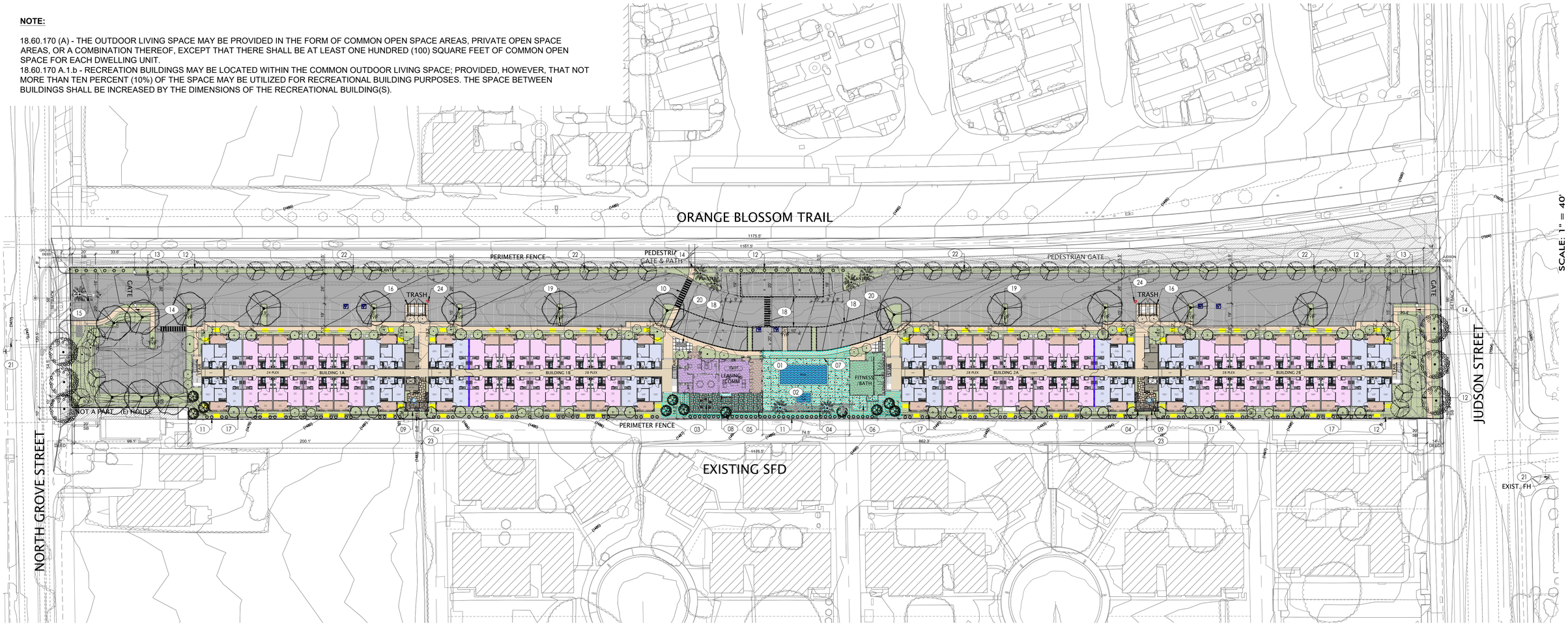
PLANTING AREAS

PROJECT LANDSCAPE AREA	PROVIDED
PERIMETER PLANTER	7,090.3 SQFT
SOUTH & SIDES PLANTING	14,409.7 SQFT
ISLANDS	9,310.6 SQFT
TOTAL	30,810.6 SQFT
% OF SITE AREA	20%

PARKING LOT LANDSCAPING

PARKING AREA	52,245.3 SQFT
REQUIRED PLANTING (7%)	3,657.2 SQFT
PERIMETER PLANTER	6,040.6 SQFT
LANDSCAPE ISLAND 1	215.1 SQFT
LANDSCAPE ISLAND 2	107.7 SQFT
TOTAL	6,363.4 SQFT
% OF PARKING AREA	12%





SYMBOL	DESCRIPTION
01	16'X40' POOL
02	8'X12' SPA RAISED 24" ABOVE POOL DECK FOR EASIER ENTRY
03	GAS FIREPIT
04	STEEL TRELLIS WITH DECORATIVE METAL PANELS BETWEEN POSTS TO MATCH DECORATIVE POOL FENCING PANELS
05	ALUMAWOOD OR EQUAL SHADE TRELLIS OVER FIRE PIT AND ADJACENT PATIO
06	POOL EQUIPMENT PAD
07	DECORATIVE FENCING WITH GREEN SCREEN AND METAL PANELS PER LANDSCAPE PLANS
08	24" HIGH SEAT WALL-TYPICAL
09	BBQ AND RECREATION AREA PER LANDSCAPE PLANS
10	APPX. LOCATION OF 5' WIDE WALKWAY CONNECTION TO THE ORANGE BLOSSOM TRAIL
11	6' HIGH SPLIT FACE BLOCK WALL ALONG SOUTHERLY PROPERTY LINE
12	DECORATIVE TUBULAR STEEL FENCE WITH COLUMNS PER LANDSCAPE PLANS
13	VEHICULAR ACCESS GATES TO MATCH PERIMETER TUBULAR STEEL FENCING
14	PEDESTRIAN ACCESS GATES TO MATCH PERIMETER TUBULAR STEEL FENCING
15	GATE KEYPAD
16	TRASH ENCLOSURE
17	DRAINAGE SWALE PER CIVIL PLANS
18	CARPORT
19	EV CHARGING STATION SINGLE POST W/ DUAL PORTS
20	MAILBOX - TO BE LOCATED WHERE PERMITTED
21	EXISTING FIRE HYDRANT
22	PROPOSED FIRE HYDRANT
23	STANDPIPE LOCATION
24	STREET PAINTED STAND PIPE LOCATOR SYMBOL
	DECORATIVE PAVING
	CONCRETE POOL DECKING

SCALE: 1" = 40'

VILLAGES AT ORANGE BLOSSOM

November 4, 2022

ARCHITECTURAL SITE PLAN

A01

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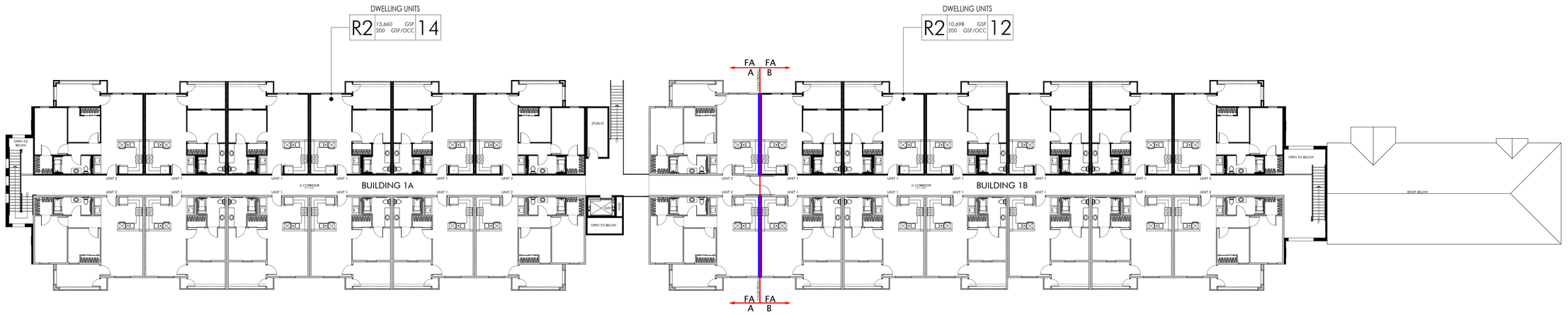
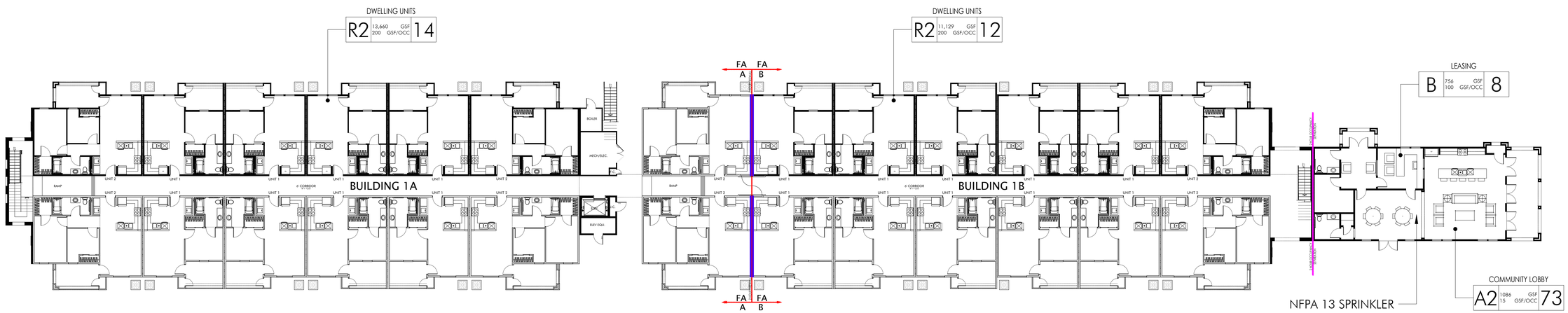
949.336.6056



SECOND FLOOR



FIRST FLOOR

NOTE:

- ENTIRE BUILDING IS COVERED BY NFPA 13R
- ALL CORRIDORS AND UNIT DEMISING WALLS TO BE 1-HOUR FIRE PARTITIONS
- LEASING AREA EAST OF OCCUPANCY SEPARATION WALL IN BUILDING 1B IS COVERED BY NFPA 13

LEGEND:

2-HOUR FIREWALL (FSD)
2-HOUR OCCUPANCY SEPARATION

BLDG 1 MASTER FLOOR PLAN
VILLAGES AT ORANGE BLOSSOM

SCALE: 1/8" = 1'-0"

REDLANDS, CA

DESIGN DEVELOPMENT

November 4, 2022

A03

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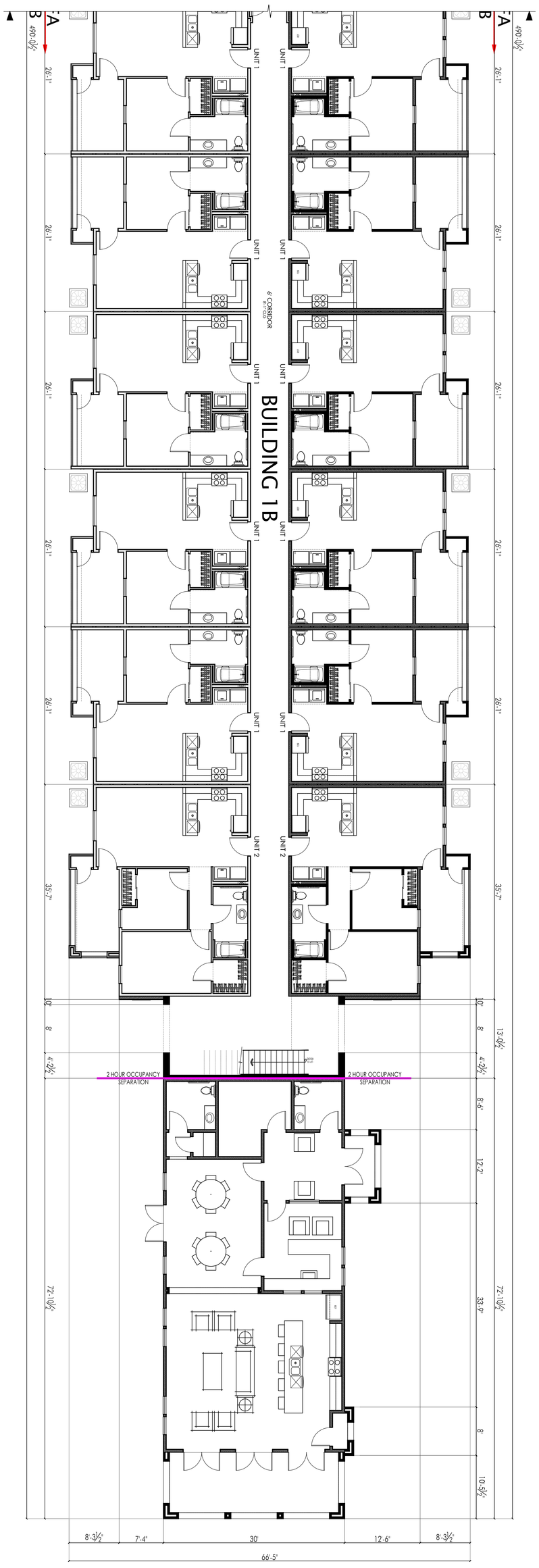
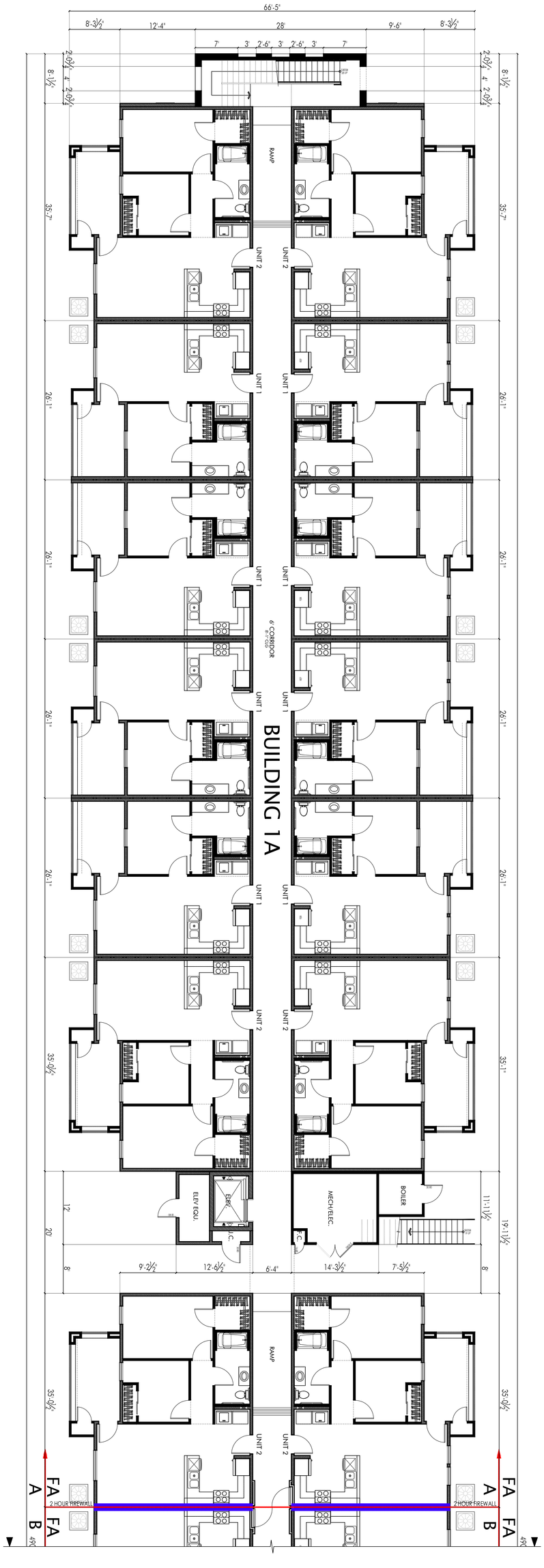


*ALL UNITS ARE ADA ACCESSIBLE



BLDG 1 FIRST FLOOR

SCALE: 1/8" = 1'-0"

VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

November 4, 2022

DESIGN DEVELOPMENT FLOOR PLAN

A04

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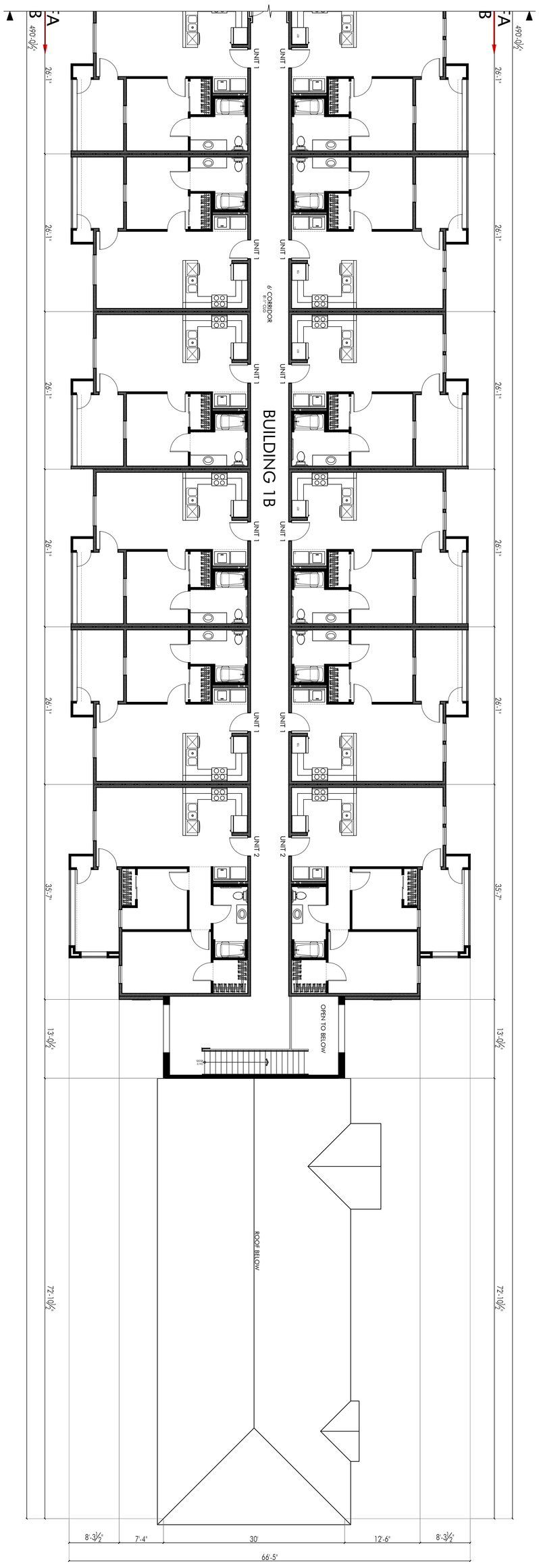
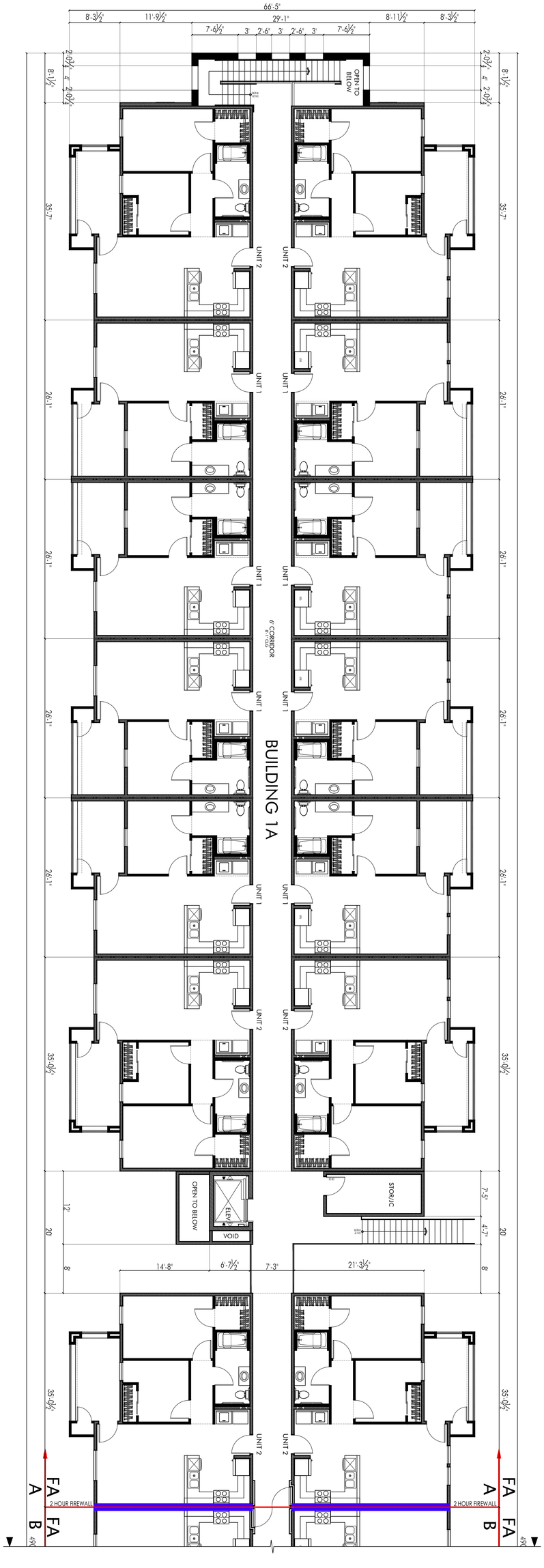


*ALL UNITS ARE
ADA ACCESSIBLE



SCALE: 1/8" = 1'-0"

BLDG 1 SECOND FLOOR
VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

November 4, 2022

DESIGN DEVELOPMENT FLOOR PLAN

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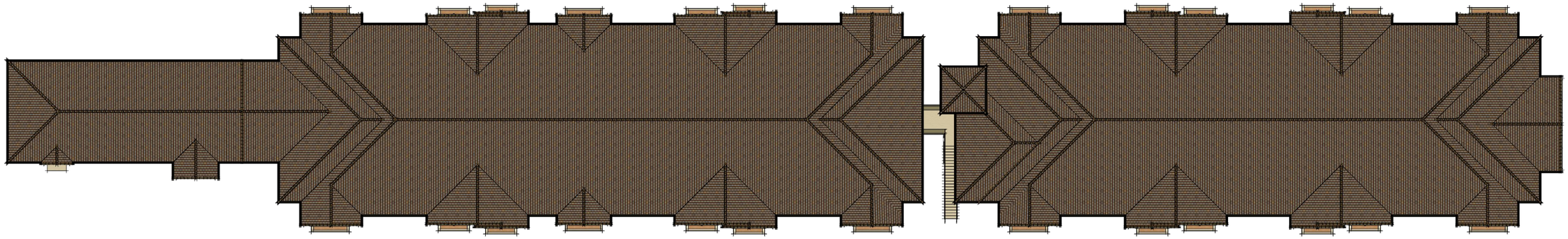
A05



ROOF PLAN



FRONT (NORTH)



LEFT (WEST)



RIGHT (EAST)



REAR (SOUTH)

BLDG 1 MASTER ELEVATIONS & ROOF PLAN
VILLAGES AT ORANGE BLOSSOM

SCALE: 1/16" = 1'-0"

A06

November 4, 2022

DESIGN DEVELOPMENT ELEVATIONS

REDLANDS, CA

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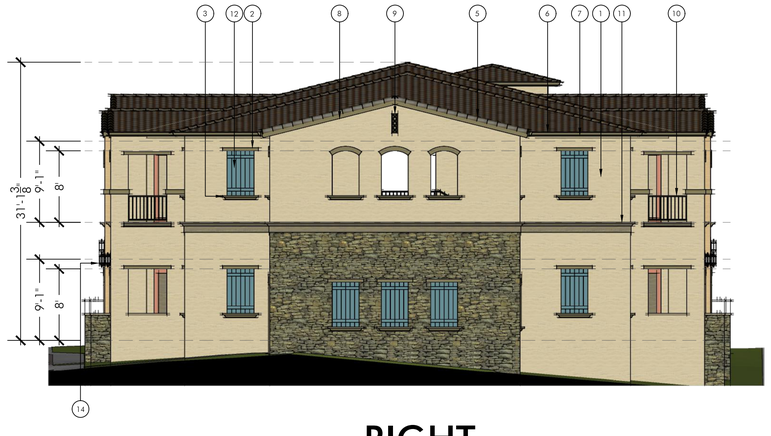
FRONT (RIGHT)



FRONT (LEFT)



RIGHT

1. STUCCO
2. STUCCO FINISH FOAM LINTELS
3. STUCCO FINISH FOAM SILLS
4. WINDOWS WITH TAN FRAMES AND MUTTONS
5. BARREL CONCRETE ROOF TILES
6. 2X6 CONTINUOUS FACIA
7. GUTTER OVER FASCIA
8. 2X WOOD BARGE
9. PRE MANUFACTURED TERRA COTTA "CLAY" ROUND OR X-VENTS
10. METAL RAILING
11. SHAPED FOAM TRIM W/ STUCCO FINISH
12. FAUX SHUTTER
13. STONE VENEER
14. EXTERIOR LIGHTING

BLDG 1 ENLARGED ELEVATIONS
VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

DESIGN DEVELOPMENT

November 4, 2022

BUILDING ELEVATIONS

A07

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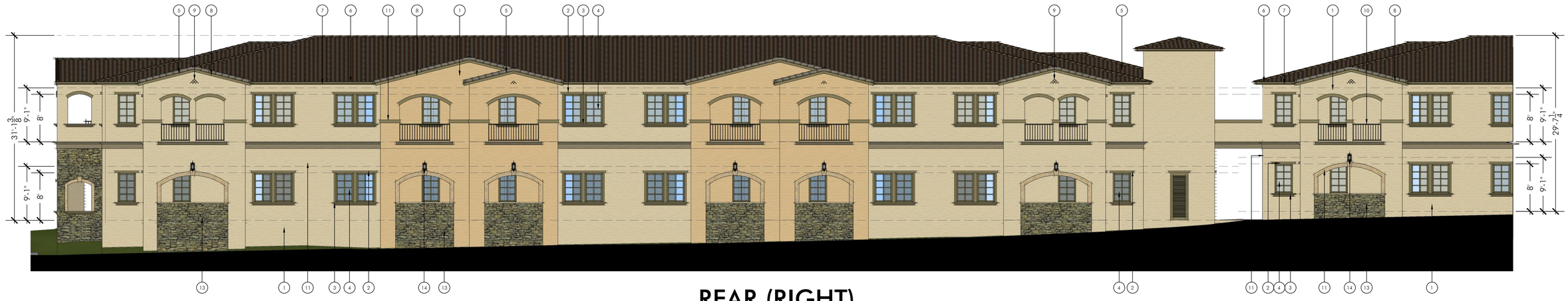
REAR (LEFT)



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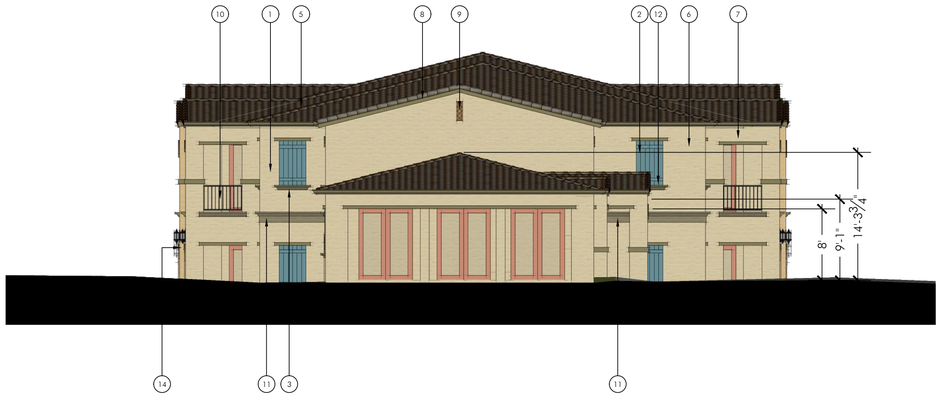

LEFT

1. STUCCO
2. STUCCO FINISH FOAM LINTELS
3. STUCCO FINISH FOAM SILLS
4. WINDOWS WITH TAN FRAMES AND MUTTONS
5. BARREL CONCRETE ROOF TILES
6. 2X6 CONTINUOUS FACIA
7. GUTTER OVER FASCIA
8. 2X WOOD BARGE
9. PRE MANUFACTURED TERRA COTTA "CLAY" ROUND OR X-VENTS
10. METAL RAILING
11. SHAPED FOAM TRIM W/ STUCCO FINISH
12. FAUX SHUTTER
13. STONE VENEER
14. EXTERIOR LIGHTING

BLDG 1 ENLARGED ELEVATIONS
VILLAGES AT ORANGE BLOSSOM

SCALE: 1/8" = 1'-0"

REDLANDS, CA

DESIGN DEVELOPMENT ELEVATIONS

November 4, 2022

A08

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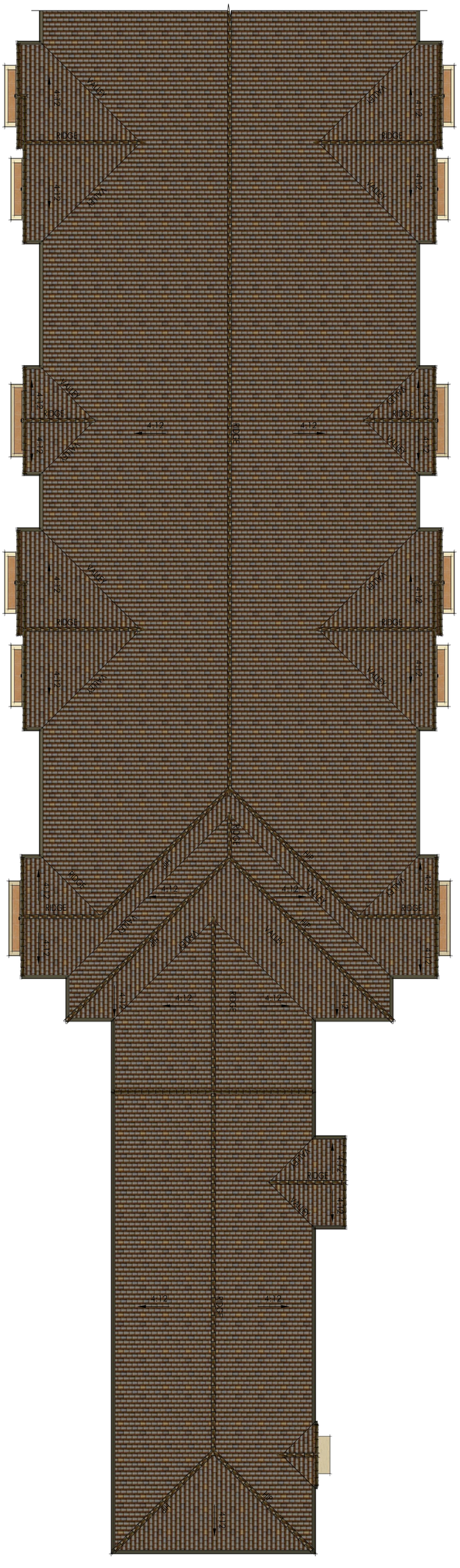
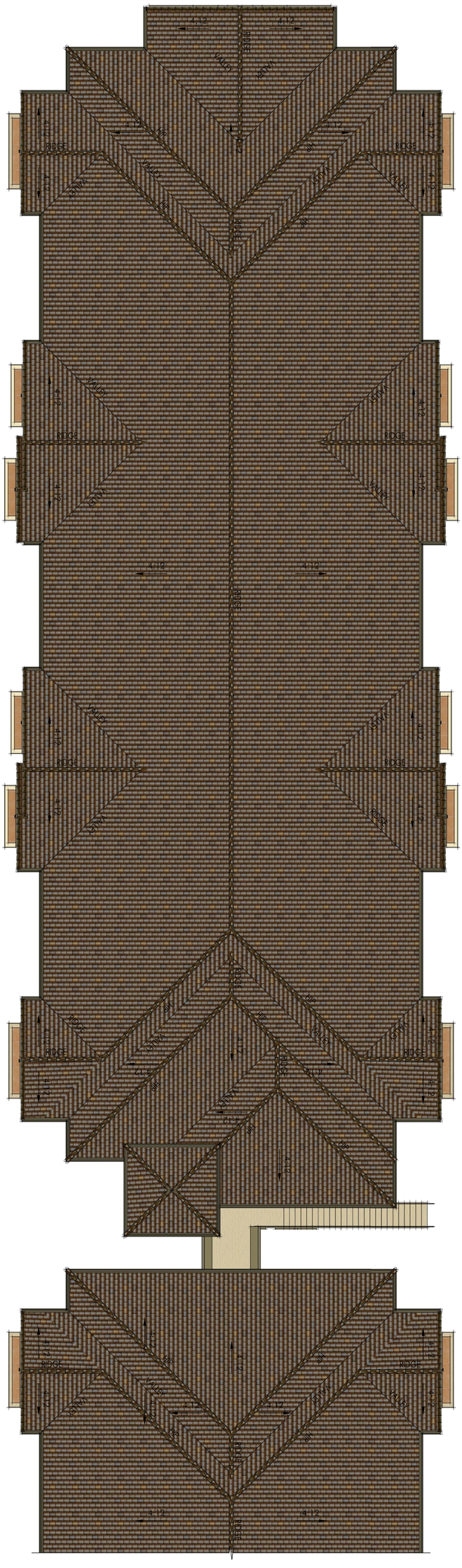
BLDG 1 ROOF (RIGHT)



BLDG 1 ROOF (LEFT)



ROOF PLAN

SCALE: 1/8" = 1'-0"

VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

November 4, 2022

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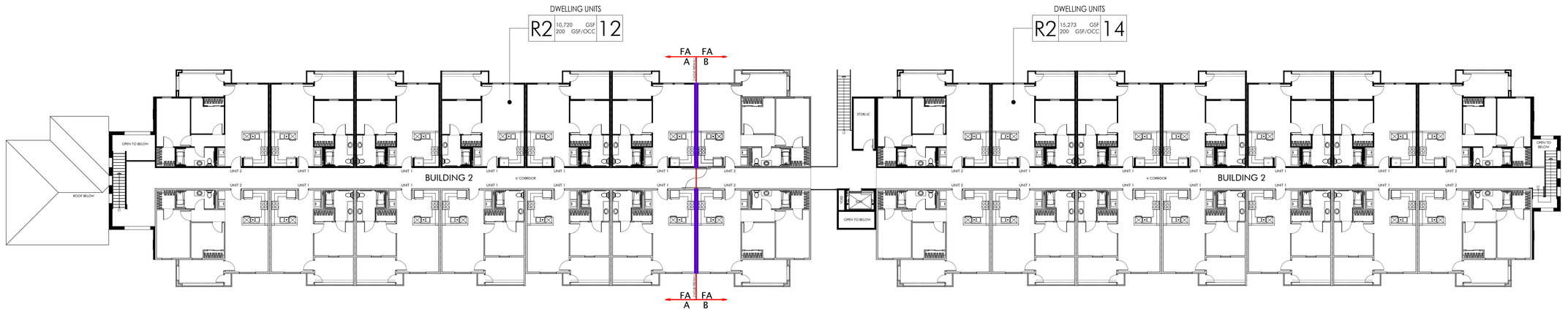
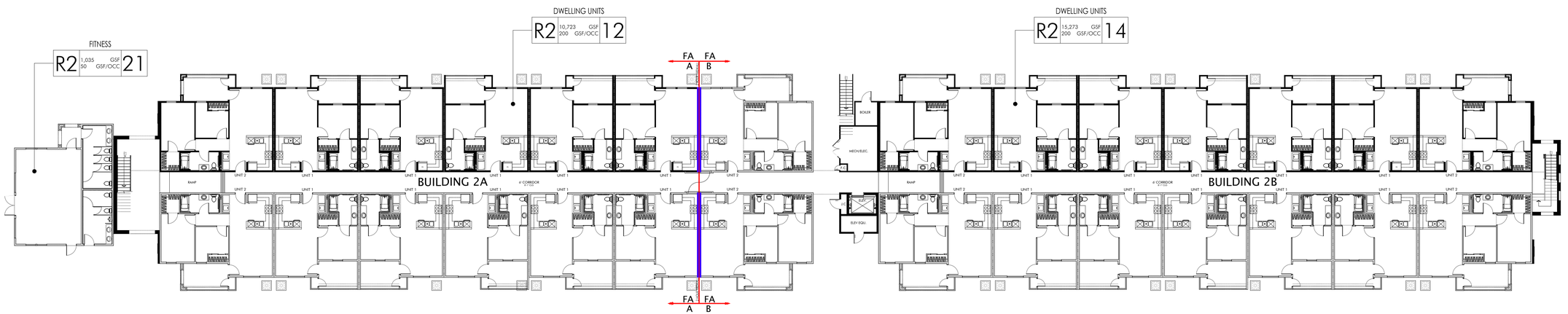
DESIGN DEVELOPMENT ROOF PLAN



SECOND FLOOR



FIRST FLOOR

NOTE:

- ENTIRE BUILDING IS COVERED BY NFPA 13R
- ALL CORRIDORS AND UNIT DEMISING WALLS TO BE 1-HOUR FIRE PARTITIONS

LEGEND:

2-HOUR FIREWALL (FSD)

BLDG 2 MASTER FLOOR PLAN
VILLAGES AT ORANGE BLOSSOM

SCALE: 1/8" = 1'-0"

REDLANDS, CA

DESIGN DEVELOPMENT FLOOR PLAN

November 4, 2022

A10

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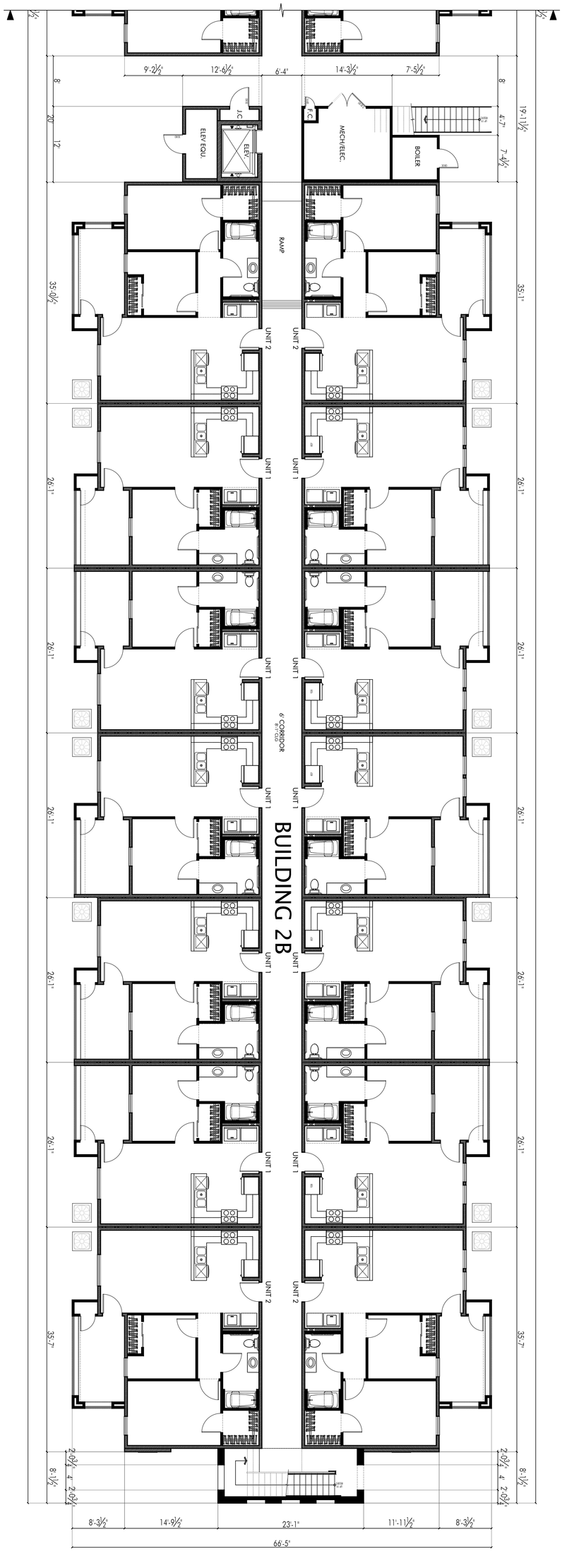
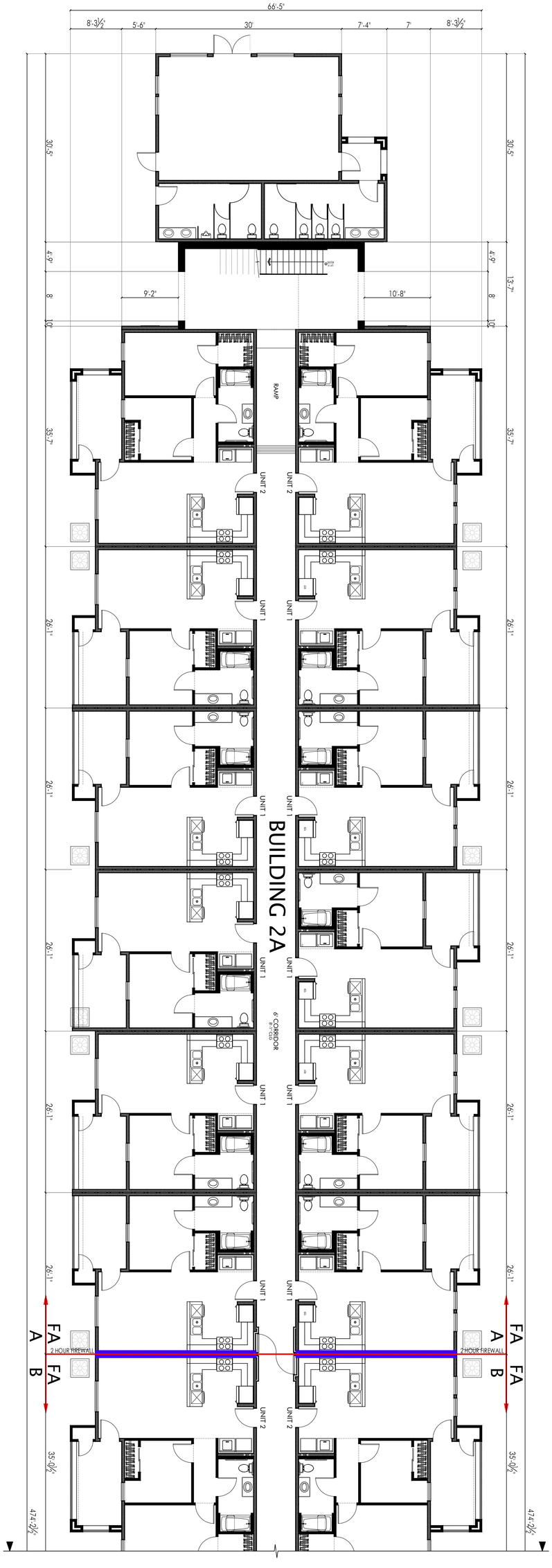


*ALL UNITS ARE
ADA ACCESSIBLE



SCALE: 1/8" = 1'-0"

BLDG 2 FIRST FLOOR
VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

November 4, 2022

DESIGN DEVELOPMENT FLOOR PLAN

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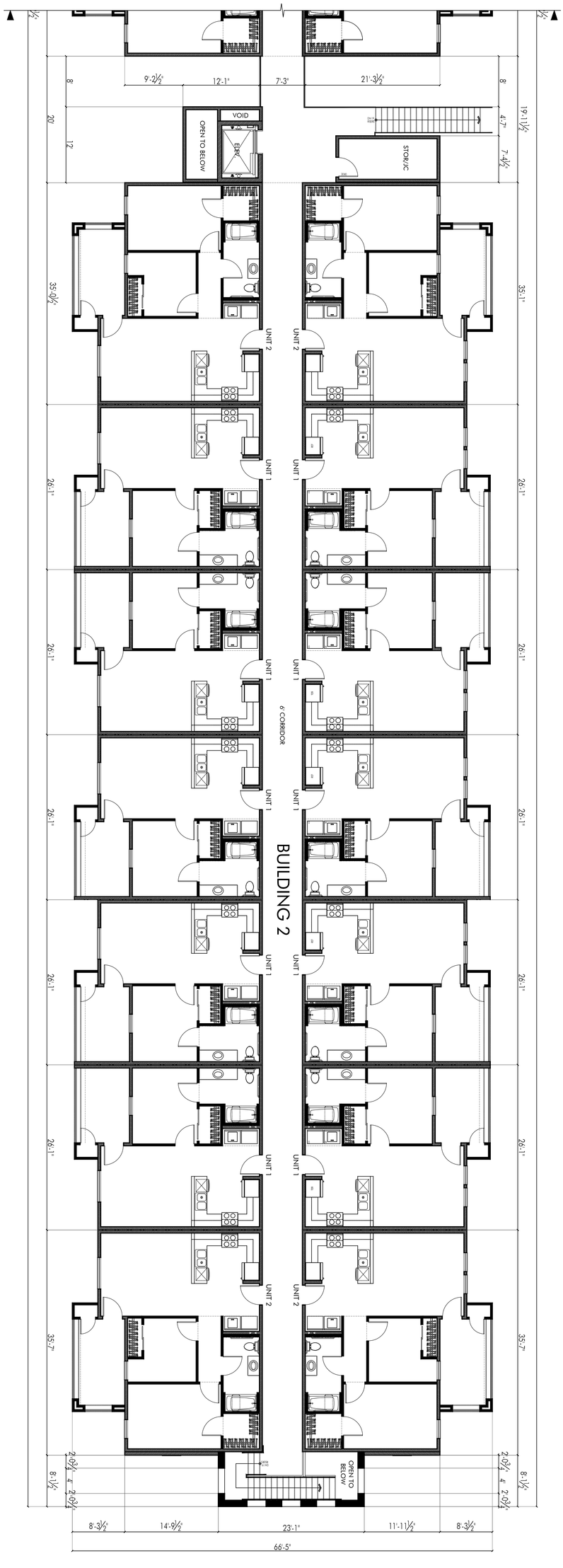
IRVINE, CA 92614
949.336.6056

A11



*ALL UNITS ARE
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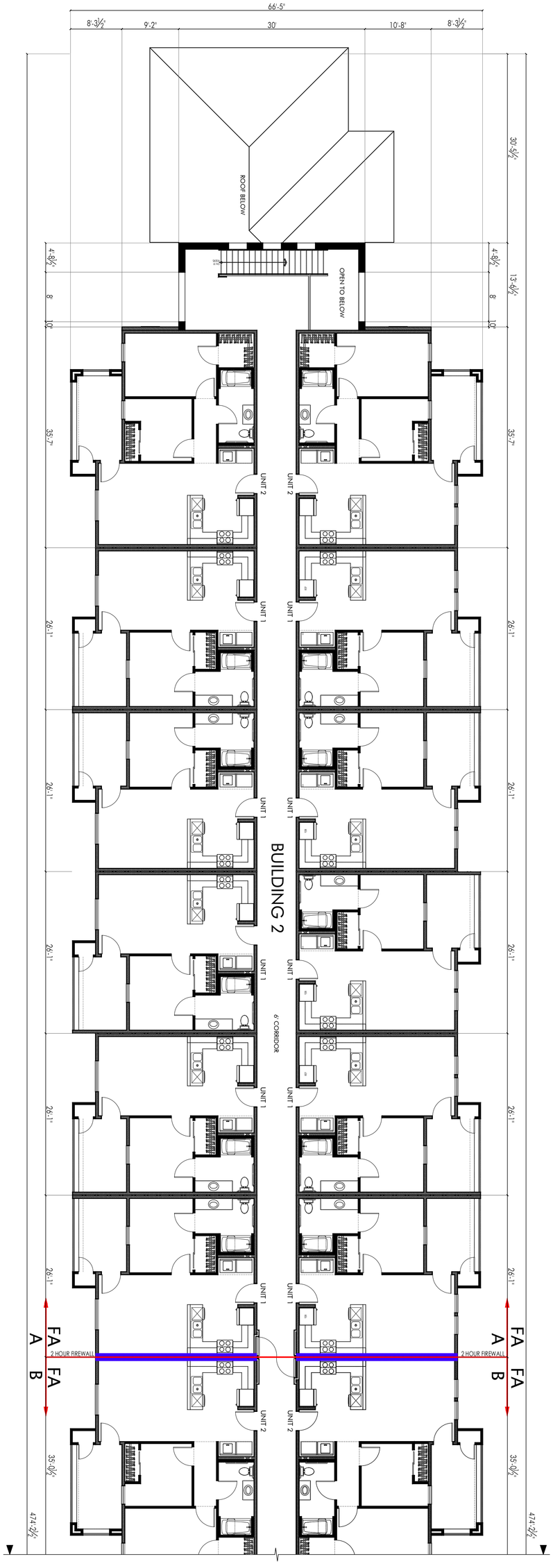

SCALE: 1/8" = 1'-0"

BLDG 2 SECOND FLOOR
VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

November 4, 2022

DESIGN DEVELOPMENT FLOOR PLAN

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IRVINE, CA 92614
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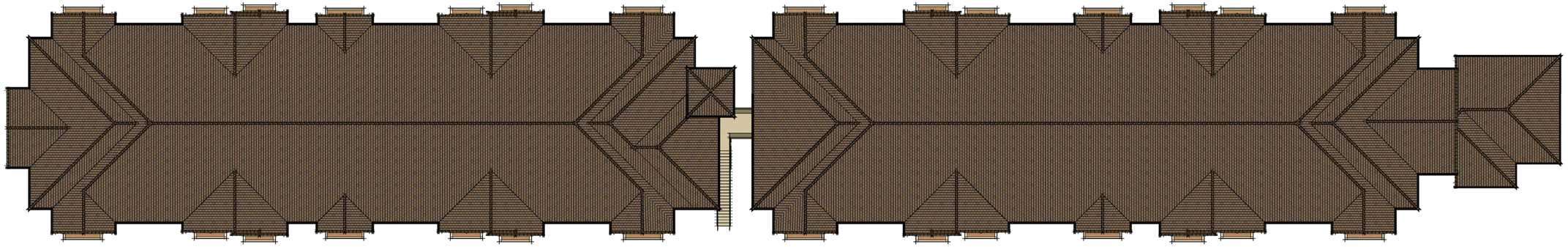
A12



ROOF PLAN



FRONT (NORTH)



LEFT (EAST)



RIGHT (WEST)



REAR (SOUTH)

BLDG 2 MASTER ELEVATIONS & ROOF PLAN
VILLAGES AT ORANGE BLOSSOM

SCALE: 1/16" = 1'-0"

November 4, 2022

DESIGN DEVELOPMENT ELEVATIONS

REDLANDS, CA

A13

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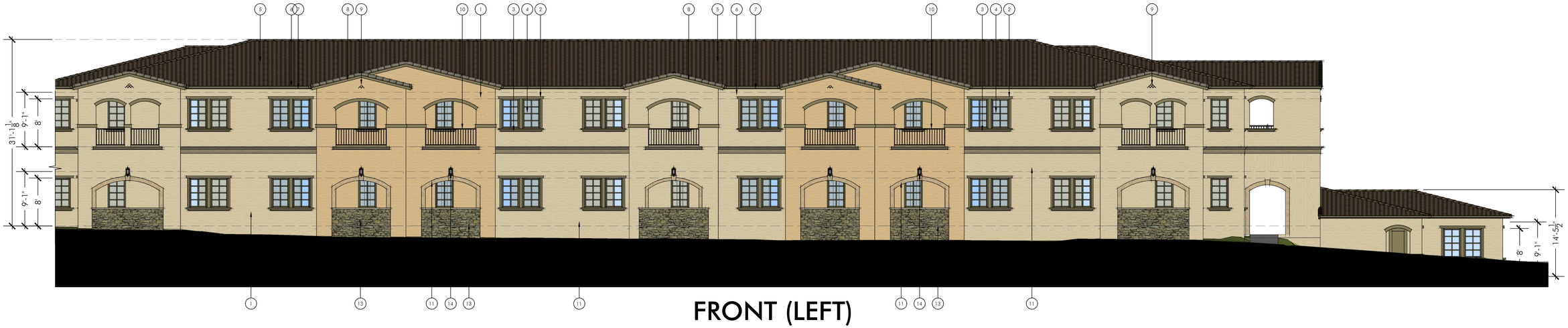
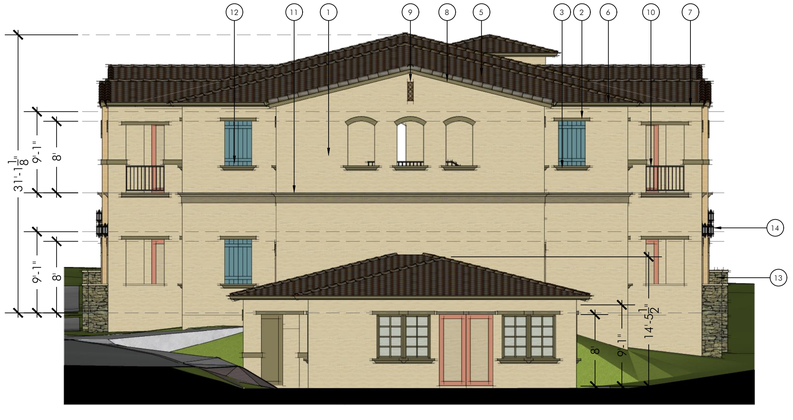
FRONT (RIGHT)



FRONT (LEFT)



RIGHT

1. STUCCO
2. STUCCO FINISH FOAM LINTELS
3. STUCCO FINISH FOAM SILLS
4. WINDOWS WITH TAN FRAMES AND MUTTONS
5. BARREL CONCRETE ROOF TILES
6. 2X6 CONTINUOUS FACIA
7. GUTTER OVER FASCIA
8. 2X WOOD BARGE
9. PRE MANUFACTURED TERRA COTTA "CLAY" ROUND OR X-VENTS
10. METAL RAILING
11. SHAPED FOAM TRIM W/ STUCCO FINISH
12. FAUX SHUTTER
13. STONE VENEER
14. EXTERIOR LIGHTING

BLDG 2 ENLARGED ELEVATIONS
VILLAGES AT ORANGE BLOSSOM

SCALE: 1/8" = 1'-0"

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DESIGN DEVELOPMENT ELEVATIONS

November 4, 2022

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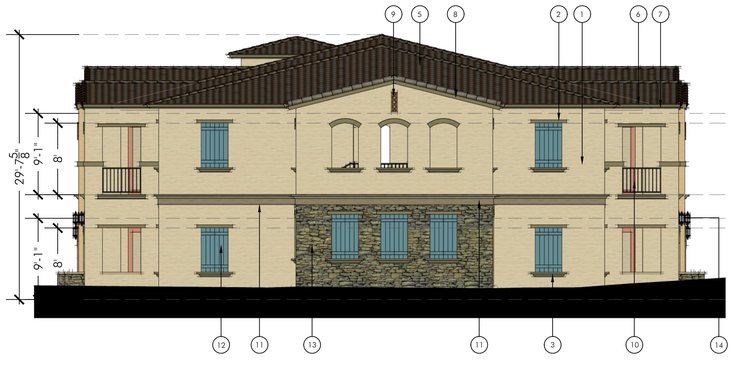
REAR (LEFT)



REAR (RIGHT)



LEFT

1. STUCCO
2. STUCCO FINISH FOAM LINTELS
3. STUCCO FINISH FOAM SILLS
4. WINDOWS WITH TAN FRAMES AND MUTTONS
5. BARREL CONCRETE ROOF TILES
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11. SHAPED FOAM TRIM W/ STUCCO FINISH
12. FAUX SHUTTER
13. STONE VENEER
14. EXTERIOR LIGHTING

SCALE: 1/8" = 1'-0"

BLDG 2 ENLARGED ELEVATIONS
VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

DESIGN DEVELOPMENT ELEVATIONS

November 4, 2022

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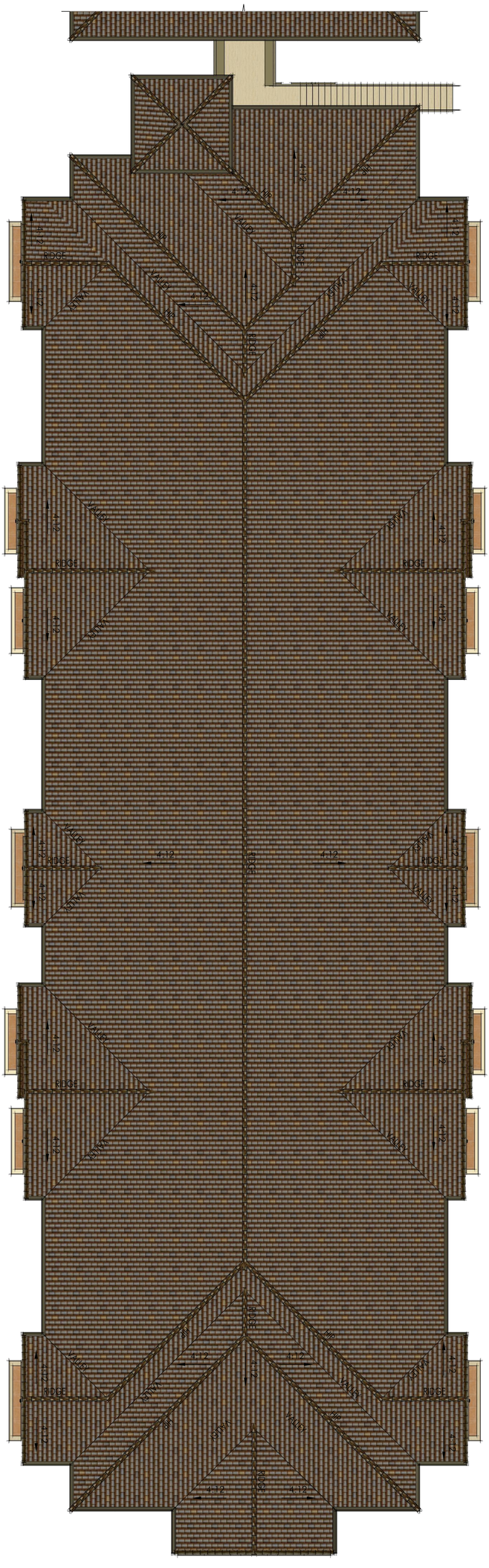
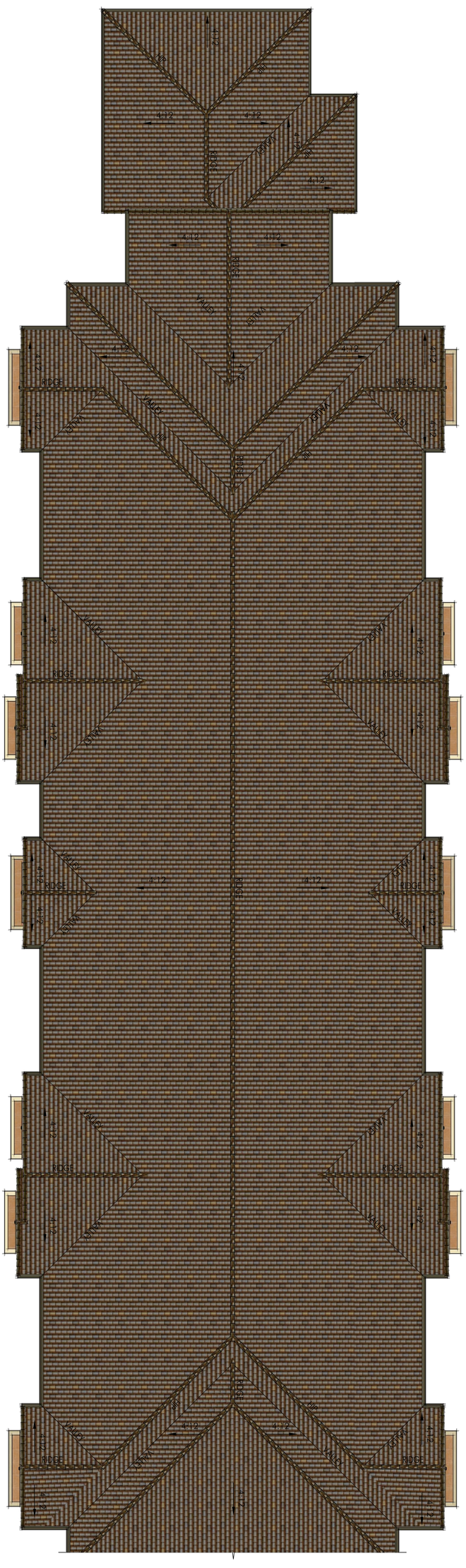
A15

BLDG 2 ROOF (RIGHT)



BLDG 2 ROOF (LEFT)



ROOF PLAN

SCALE: 1/8" = 1'-0"

VILLAGES AT ORANGE BLOSSOM

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DESIGN DEVELOPMENT ROOF PLAN

A16

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SECTION 1 (TYP. CENTER STAIR)



SECTION 2 (TYP. END STAIR)



SECTION 3 (TYP. UNITS)

SECTIONS

VILLAGES AT ORANGE BLOSSOM

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DESIGN DEVELOPMENT SECTIONS

SCALE: 1/8" = 1'-0"

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A17

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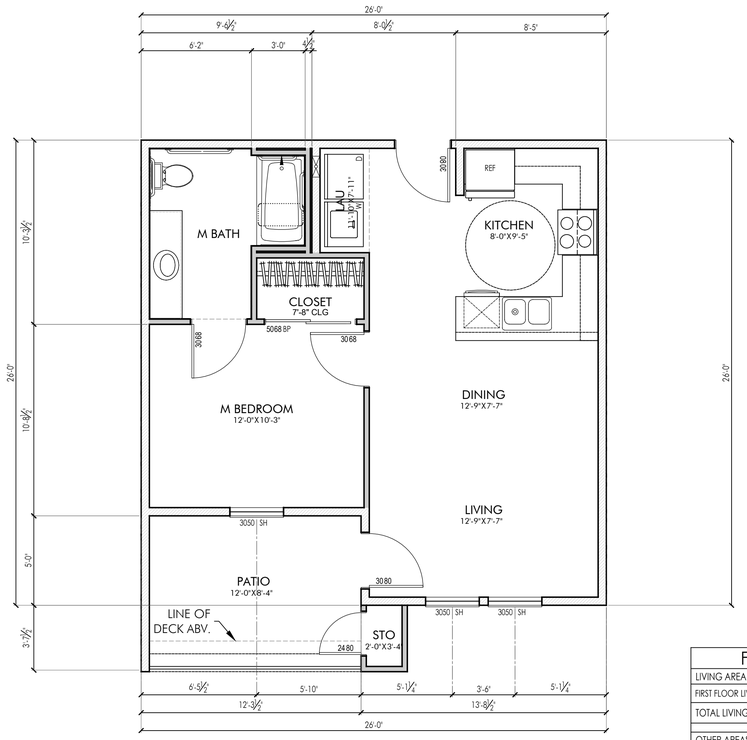
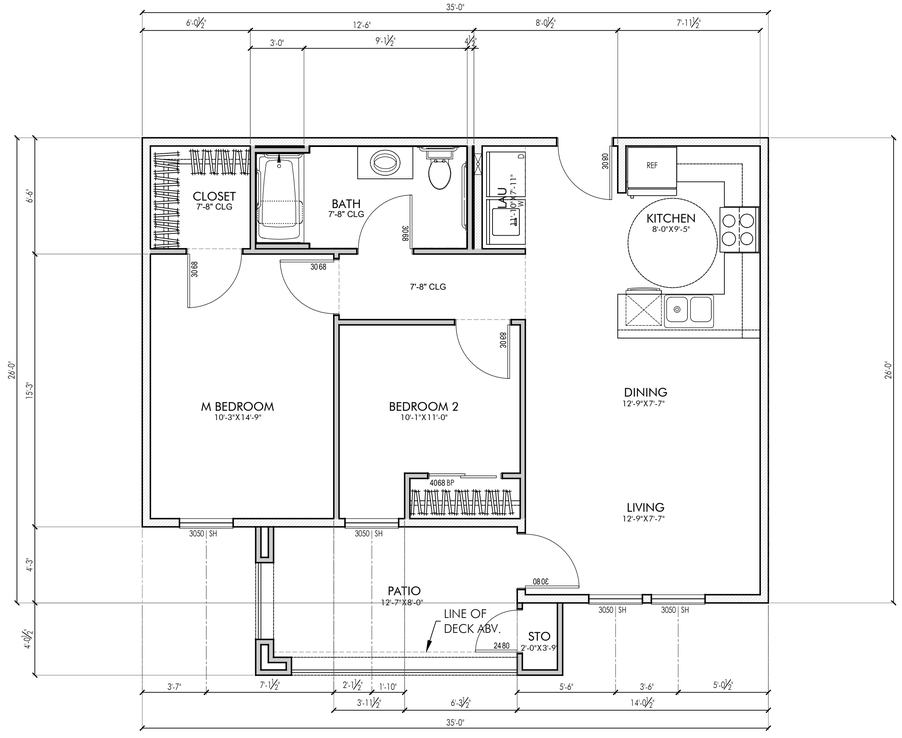


FLOOR PLAN - PLAN 1

1/4" = 1'

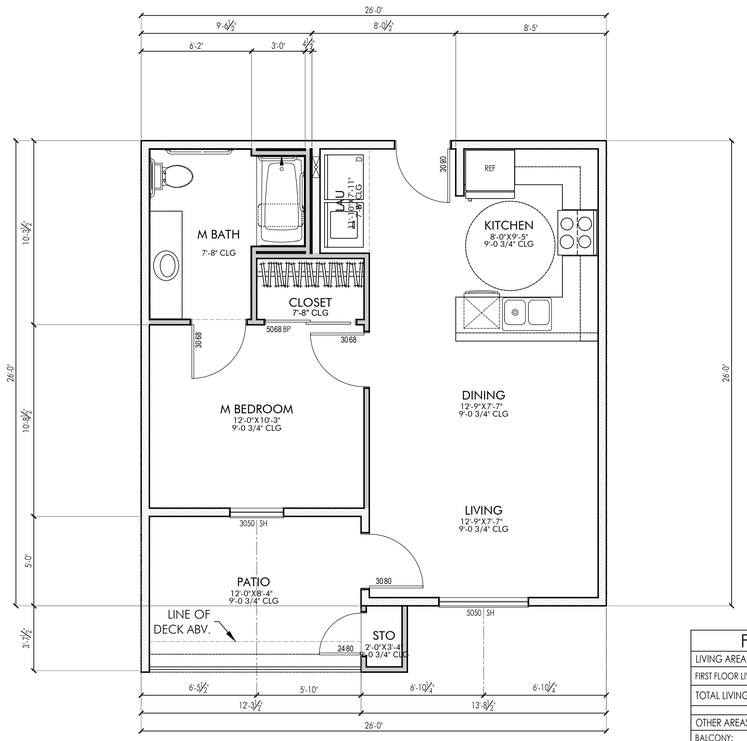
Floor Area	
LIVING AREA:	
FIRST FLOOR LIVING:	614.5 SQ. FT.
TOTAL LIVING AREA:	615 SQ. FT.
OTHER AREAS:	
BALCONY:	100 SQ. FT.
STORAGE:	53.3 CU. FT.



FLOOR PLAN - PLAN 2

1/4" = 1'

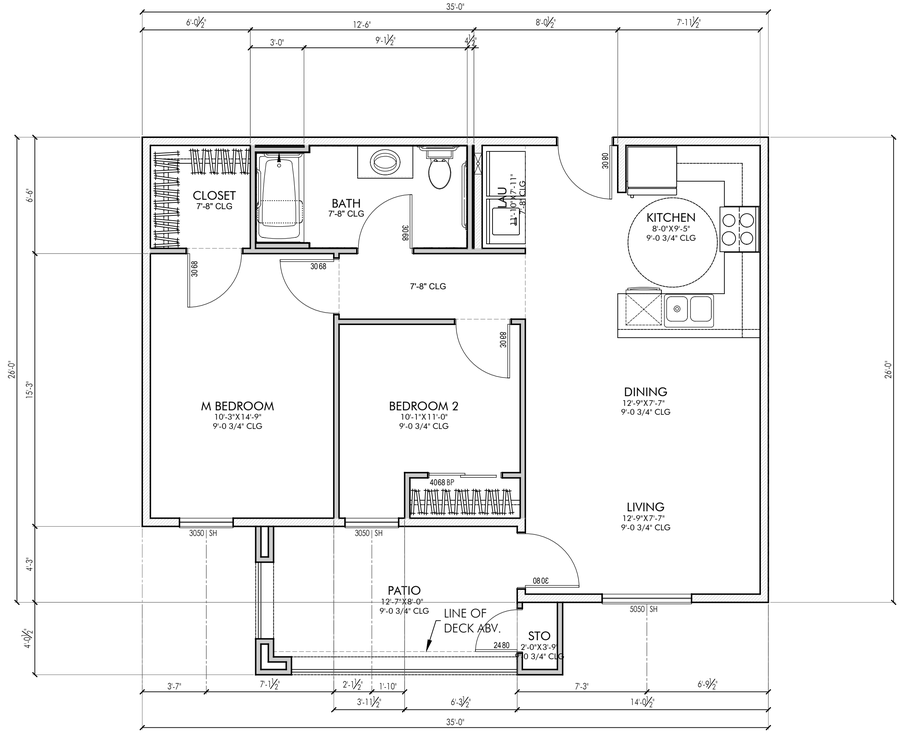
Floor Area	
LIVING AREA:	
FIRST FLOOR LIVING:	820.9 SQ. FT.
TOTAL LIVING AREA:	821 SQ. FT.
OTHER AREAS:	
BALCONY:	101 SQ. FT.
STORAGE:	58.7 CU. FT.



FLOOR PLAN - PLAN 1 REAR

1/4" = 1'

Floor Area	
LIVING AREA:	
FIRST FLOOR LIVING:	614.5 SQ. FT.
TOTAL LIVING AREA:	615 SQ. FT.
OTHER AREAS:	
BALCONY:	100 SQ. FT.
STORAGE:	53.3 CU. FT.



FLOOR PLAN - PLAN 2 REAR

1/4" = 1'

Floor Area	
LIVING AREA:	
FIRST FLOOR LIVING:	820.9 SQ. FT.
TOTAL LIVING AREA:	821 SQ. FT.
OTHER AREAS:	
BALCONY:	101 SQ. FT.
STORAGE:	58.7 CU. FT.

UNIT FLOOR PLANS
VILLAGES AT ORANGE BLOSSOM

SCALE: 3/16" = 1'-0"

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SCHEMATIC DESIGN FLOOR PLAN

A18

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COMMUNITY ROOM / LEASING BLDG.

1/4" = 1'-0"

SCALE: 1/4" = 1'-0"

VILLAGES AT ORANGE BLOSSOM
COMMUNITY & LEASING

November 4, 2022

DESIGN DEVELOPMENT

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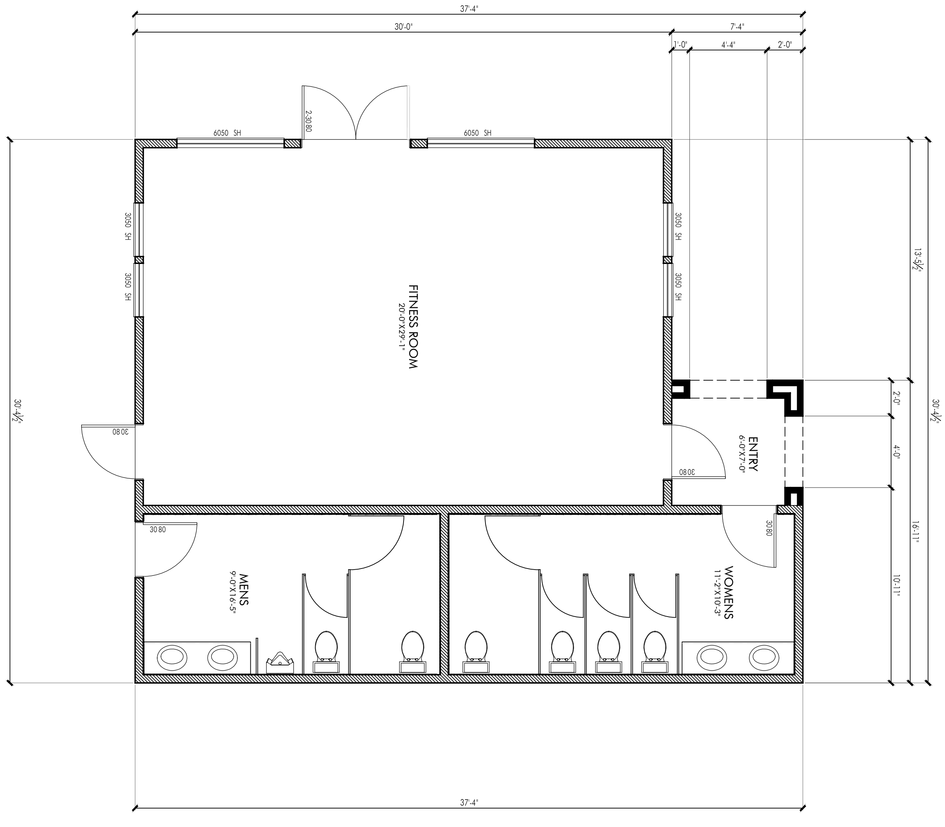
A19

FITNESS / POOL BUILDING

1/4" = 1'-0"



SCALE: 1/4" = 1'-0"

FITNESS & BATH
VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

November 4, 2022

DESIGN DEVELOPMENT FLOOR PLAN

A20

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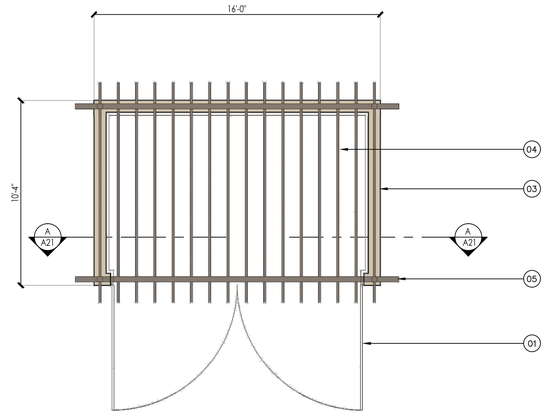
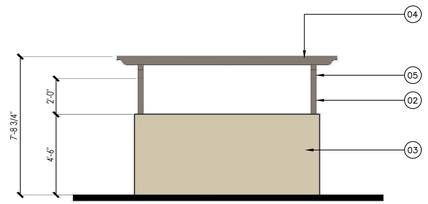
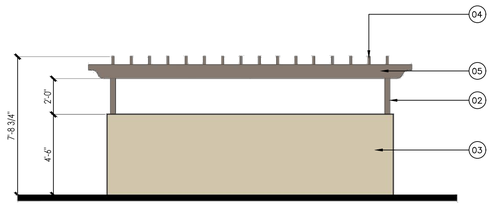


TRASH ENCLOSURE - PLAN

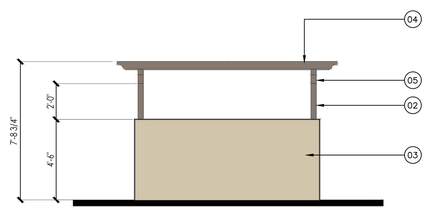
1. DECORATIVE SOLID HEAVY GAUGE METAL GATES WITH DESIGN CAN BOLTS
2. 4X4 WOOD POST
3. 8" SPLIT FACE CMU WALL
4. 2X6 WOOD TRELLIS
5. 4X10 WOOD BEAM



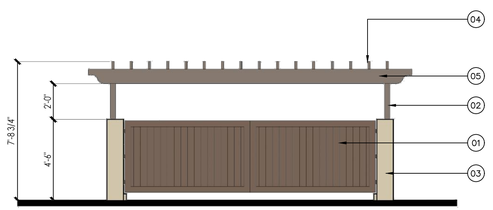
TRASH ENCLOSURE - SIDE



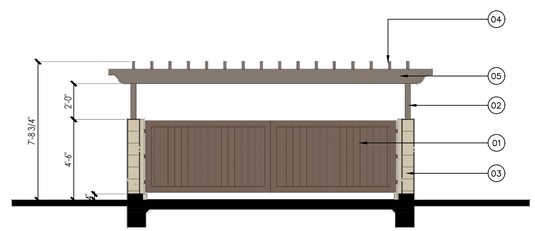
TRASH ENCLOSURE - REAR



TRASH ENCLOSURE - SIDE



TRASH ENCLOSURE - FRONT



TRASH ENCLOSURE - SECTION A

SCALE: 1/4" = 1'-0"

VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

DESIGN DEVELOPMENT TRASH ENCLOSURE

November 4, 2022

A21

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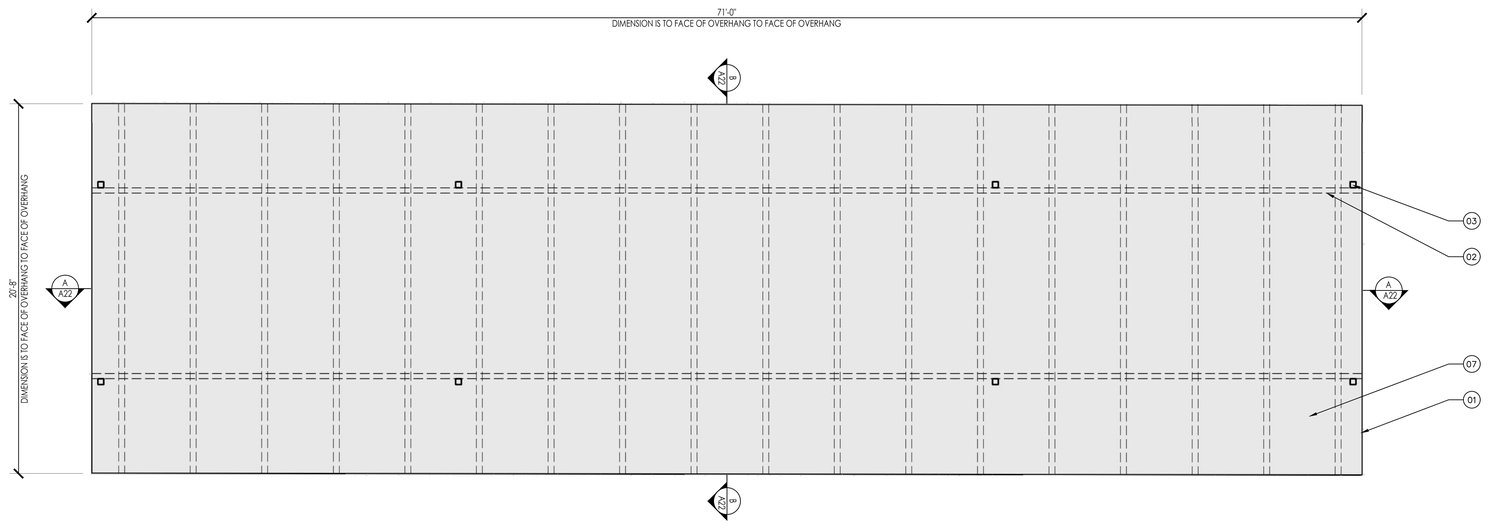
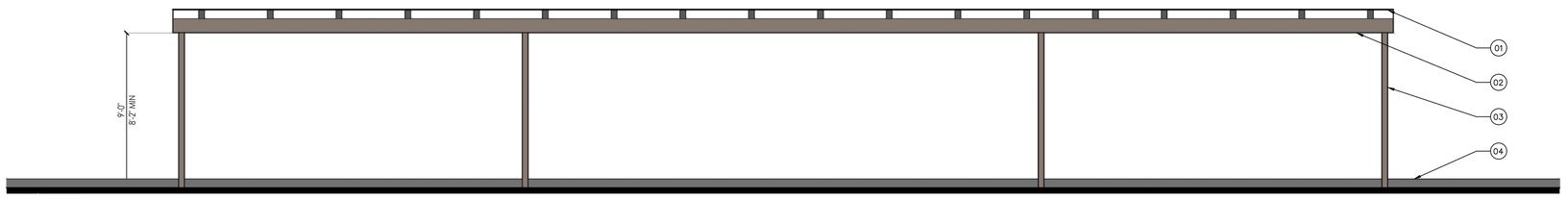
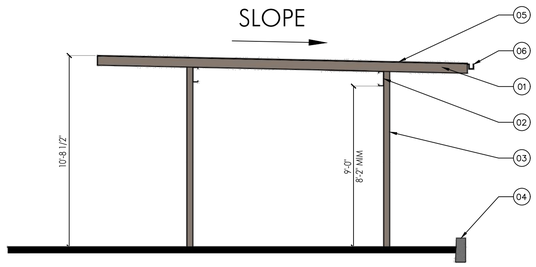


TYPICAL CARPORT - PLAN



TYPICAL CARPORT - SECTION 'A'



TYPICAL CARPORT - SECTION 'B'

1. STEEL CANOPY STRUCTURE. MEMBER SIZE AND ENGINEERING BY FABRICATOR
2. STEEL C CHANNEL
3. STEEL POST
4. 6" CURB
5. POSITIVE SLOPE TO GUTTER BACK SIDE
6. GUTTER
7. COLOR TBD

SCALE: 1/4" = 1'-0"

VILLAGES AT ORANGE BLOSSOM

REDLANDS, CA

DESIGN DEVELOPMENT CARPORT

November 4, 2022

A22

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City of Redlands
REQUEST FOR PLANNING COMMISSION ACTION

Planning Commission **5. B.**

Meeting Date: 06/13/2023

APPLICANT:
INVISION COMMUNITY BUILDERS, LLC, APPLICANT
(PROJECT PLANNER: SEAN REILLY, PRINCIPAL PLANNER)

PUBLIC HEARING to consider the following:

1. Consideration of a **Socio-Economic Cost/Benefit Study** prepared for the proposed project in accordance with Measure U.

2. **Commission Review and Approval No. 964** - A proposal to construct a 108-unit market-rate multi-family rental complex that is deed restricted for senior housing (55+), and a request for a density bonus in accordance with State Density Bonus Law to allow up to a 15% increase in the total project density on a 3.49-acre site. The project is located between Grove Street and Judson Street, south of the Orange Blossom Trail (APNs: 0170-221-53-0000 and 0170-221-55-0000). The proposal qualifies for an exemption from environmental review in accordance with Section 15332 (Infill Development Projects) of the California Environmental Quality Act (CEQA) Guidelines.

3. **Lot Line Adjustment No. 674** – A request to merge two parcels into one single 3.49-acre parcel for the construction of a 108-unit multi-family apartment complex. The project is located on the east side of Grove Street and on the west side of Judson Street, south of Orange Blossom Trail (APNs: 0170-221-53-0000 and 0170-221-55-0000). The proposal qualifies for an exemption from environmental review in accordance with Section 15305 (Minor Alterations in Land Use Limitations) of the California Environmental Quality Act (CEQA) Guidelines.

SYNOPSIS

1. General Plan Designation:	The General Plan land use designation is Transit Village.
2. Existing Zoning:	The project site is located within the Village General and Civic Space Districts of the Transit Villages Specific Plan (TVSP-VG and TVSP-CS).
3. Surrounding Zoning:	North: Civic Space District of the Transit Villages Specific Plan (TVSP-CS) South: Village General District of the Transit Village Specific Plan (TVSP-VG) East: Single Family Residential (R-1) District West: Village General District of the Transit Village Specific Plan (TVSP-VG)
4. Existing Land Use:	The project site is currently vacant and unimproved.

5. Surrounding Land Use:	North: Orange Blossom Trail South: Single-Family Residential East: Single-Family Residential West: Multiple-Family Residential	
6. Area / Topography:	The site consists of two parcels totaling 3.49 acres and with generally flat terrain.	
7. Environmental Determination:	The proposal qualifies for an exemption from environmental review in accordance with Section 15332 (Infill Development Projects) and Section 15305 (Minor Alterations in Land Use Limitations) of the California Environmental Quality Act (CEQA) Guidelines.	
8. Socio-Economic Cost / Benefit Study:	A Socio-Economic Cost/Benefit Study was prepared for the project and the project has a positive cost/revenue ratio of +1.42 and determined that the project would not create significant unmitigable physical blight or overburden public services in the community.	
9. Planning Commission Submittal Dates:	(A) Date Submitted: (B) Date Accepted As Complete: (C) Planning Commission Meeting:	May 5, 2022 September 8, 2022 June 13, 2023

PROPOSAL

The applicant proposes to construct a 108-unit market-rate multi-family residential project that is deed restricted for senior housing (55+). The proposal includes a request for a density bonus consistent with State law to allow up to a 15% increase in the total project density. The project site is comprised of two contiguous parcels totaling 3.49 acres that will be merged prior to construction. Four residential buildings are proposed that are two stories tall. Three of the buildings will include 28 units each and the fourth building will include 26 units. A mixture of one- and two-bedroom units are proposed (32 two-bedroom one bath units and 76 one-bedroom one bath units) which range from 615 to 821 square feet in size. A single-story community building and other amenities including a pool, fitness room, and outdoor open space area are also included in the proposal. The project will be gated with the main entrance on N. Grove Street and a secondary entrance is on Judson Street (Attachment A – Location Map and Aerial Photo).

BACKGROUND

Senate Bill 330 (Housing Crisis Act of 2019) became effective on January 1, 2020. Senate Bill 330 is intended to remove barriers for housing developments to alleviate the continued housing shortage crisis in California. It made many changes to the entitlement process for housing developments, including prohibiting jurisdictions from making decisions on housing projects based on subjective standards (not objective standards). It also “locks in” the development regulations that were adopted and in effect when the development application was deemed complete. Additionally, if there is an inconsistency between a site’s zoning and General Plan designation, a project must be allowed to develop at the allowable density of the General Plan even if that density is higher than what is allowed by the zoning.

The proposed project was submitted in May 2022 and deemed complete in September 2022. At that time, the project site’s zoning was Multiple Family Residential (R-2) which allows up to 15 units per acre, and the General Plan designation was High Density Residential which allows up to 27 units per acre. Based upon the development standards of the R-2 District, the project

would not have been able to achieve the maximum allowable density based upon the site's General Plan Designation. However, State law requires that the land use designation with the highest density potential (in this case, the High Density Residential land use designation) to be applied to the project.

Senate Bill 330 requires the City to allow the applicant to utilize those development standards that would allow development of the site consistent with the allowable General Plan density. In this case, the Multiple-Family Residential (R-3) development standards are applicable to achieve the High Density Residential density without the need for a Zone Change.

The Transit Villages Specific Plan (TVSP) was adopted in October 2022 and became effective in December 2022. With the approval of the TVSP, a General Plan Amendment to the "Transit Village" designation was also approved by the City Council. The site's General Plan designation and zoning were changed by these approvals. Based upon the date that the project application was deemed complete (September 2022), and the provisions in Senate Bill 330 which lock in or vest applications that have been deemed complete, the project is not subject to the requirements of the TVSP. The project can be developed in a manner consistent with the High Density Residential General Plan designation and the Multiple Family Residential (R-3) development standards to achieve the density allowed by the General Plan.

ANALYSIS

A) General Plan

The applicable land use designation for the project is High Density Residential. Pursuant to the General Plan, the High Density Residential allows 0-27 units per acre, plus State-mandated density bonuses where applicable. A density bonus as allowed by State law means a density increase over the otherwise maximum allowable gross residential density as of the date of application to the City.

The intent of the High-Density Residential land use category is to provide for the development of attached, detached, and/or mixed residential uses with a range of densities and housing types. The project proposes high density attached residential which is consistent with the intent of this land use designation.

In addition, there are several General Plan policies and Actions that are relevant to this proposal. These are as follow:

4-P.16: Promote a variety of housing types to serve the diverse needs of the community.

4-P.6: Provide for a balance among a variety of different land uses and their distribution among the city's neighborhoods.

4-P.9: Locate medium- and high-density development near regional access routes, transit stations, employment centers, shopping areas, and public services.

4-A.8: Promote the development of a greater variety of housing types, including single-family homes on small lots, accessory dwelling units, townhomes, lofts, live-work spaces, and senior and student housing to meet the needs of future demographics and changing family sizes.

4-A.10: Promote availability of senior and independent assisted living facilities to meet the needs of the community's aging population, distributed equitably throughout the Community.

Density Bonus

The applicant has requested a density bonus in accordance with State law, which as a result, affects the design of the project. Pursuant to State law, as well as Section 18.228.030(A) of the Redlands Municipal Code, a density bonus granted to a residential development project shall consist of an increase over the otherwise maximum allowable residential density under the applicable zoning ordinance and of the City's General Plan as of the date of application. Projects that are deed restricted to only allow tenants that are senior citizens, are eligible for a density bonus of up to 20% by both State law and the Municipal Code. The applicant is requesting a density bonus of 3.7 units per gross acre, an increase in density of approximately 15%. As such, the density bonus would be consistent with the provisions of the Municipal Code and State law. As shown in Table A, the applicant is proposing fewer units than is allowed based on the General Plan density and the allowable density bonus.

Table A. Proposed Project Density

Site Acreage	*General Plan Density*	*Base Units Allowable*	*Density Bonus Units Allowable*	*Proposed Units*
3.49	27 units per acre	94	112	108

The applicant will be required to sign a Density Bonus Agreement with the City, which includes requirements stating that the project shall only be made available to senior citizens who are 55 years of age or older for a minimum period of 55 years, as well as verification and reporting requirements. The Density Bonus Agreement is required to be approved by the City Council. A Condition of Approval has been added to the project requiring that prior to the issuance of a building permit, the applicant shall provide evidence of a fully executed Density Bonus Agreement signed by both the City and the Applicant. A draft of the Density Bonus Agreement has been included as Attachment B.

B) Zoning

To achieve densities consistent with the High-Density Residential land use designation, the project utilizes the provisions of the R-3 District. The table below summarizes the proposed development's consistency with the development standards. A complete list of applicable development standards is included in Attachment C.

Table B. Summary of Development Standards

Development Standard	*Requirement*	*Proposed*
Front Setback	15 feet for one- and two-story buildings.	Judson St: 20 feet Grove St: 110 ft.
Rear Setback	25 feet	N/A
Side Setback	7.5 feet (2 story buildings)	North: 48 ft. South: 10 ft.
Accessory Building Setback	5 feet from side and rear property lines	5 feet from side and rear property lines
Lot Coverage	60.0%	56.6%
Building Height	4 stories	2 stories and 31'2"
Total Open Space	18,253 sf	18,745 sf
Private Open Space	100 sf per unit (10,800 sf)	100 sf per unit (10,800 s

C) Commission Review and Approval

Site Design: The project site is approximately 130' wide (north to south) and 1,665' long (east to west and spans between Grove Street and Judson Street. It is a relatively long and narrow piece of property located just to the south of the Orange Blossom Trail. Primary access to the site will be from Grove Street and secondary access will be from Judson Street. Due to the site's linear nature, a single main drive aisle is proposed along the northern portion of the site running east to west. The residential buildings are located near the center of the site on the southern side and amenities are centrally located between the main buildings. Amenities proposed include a single-story community building, a pool, fitness room, and outdoor open space areas. Project Plans are included as Attachment D.

Parking: The applicant is providing parking consistent with State Density Bonus Law contained in California Government Code 65915(p)(1), which states that upon the request of the developer, a city, county, or city and county shall not require a vehicular parking ratio, inclusive of handicapped and guest parking, of a development meeting the criteria…that exceeds the following ratios:

Unit type	*Parking Requirement*
Studio	1 Space
1 Bedroom	1 Space
2 Bedroom	1.5 Spaces
3 Bedroom	1.5 Spaces
4 Bedroom	2.5 Spaces

According to the above ratios, the project would be required to provide 124 total parking spaces and 124 parking spaces are provided. Most cities have separate parking standards for senior housing that range from .6 to .8 spaces per unit for studio and one-bedroom units. It should be noted that the project is located within a half-mile of a transit station. The Arrow rail University Station is located 1,500 feet to the west of the project. Assembly Bill 2097 prohibits Cities from

enforcing minimum parking requirements on development projects located within a half-mile of a major transit station. Therefore, while the applicant has provided parking that is consistent with the requirements of State law, the applicant is not required to do so.

The applicant has expressed a desire to potentially reduce the parking on the western side of the project. The existing parking area located on the southwest side of the project would then be replaced with landscaping as an open space amenity. Any reduction in the parking on-site would remain consistent with State law based on AB 2097 and would assist with the provision of common outdoor open space as discussed below.

Open Space and Landscaping: The Multiple Family Residential (R-3) District requires 0.25 square feet of outdoor living area for each square foot of gross floor area of living space. The project includes 73,012 square feet of living space and would be required to provide 18,253 square feet total outdoor living area. This outdoor living space may be provided as common open space, private open space, or a combination of both. The project exceeds the square footage requirement and provides 18,745 square feet of outdoor living area composed of 7,945 square feet of common outdoor living space and 10,800 square feet of private outdoor living space. Private outdoor living space is provided in the form of 100 square feet of private patio space attached to each apartment unit. Proposed amenities within the common areas include a pool, hot tub, gas fire pits, community room and fitness center.

For multifamily projects within the R-3 district, 30% of the project site is required to be landscaped. The project plans do not clearly indicate the amount of landscaped common open space within the project. As shown on the project plans, a total of 7,945 square feet of common outdoor open space is proposed; based on this square footage, a minimum of 2,248 square feet of landscaped space is required. A Condition of Approval has been added requiring the applicant to clearly demonstrate compliance with the landscaping requirements for common outdoor open space.

The proposed project includes landscaped setbacks along Grove Street and Judson Street, as well as landscaping throughout the parking lot area and in common outdoor living area. The project includes a total of 30,810 square feet of landscaped surface (or 20% of the total project area). The conceptual landscaping plan utilizes primarily Ginko Biloba, Brisbane Box, and Drake Chinese Elm as parking lot trees, with Mayten Tree, Dwarf Southern Magnolia and Sweetshade accent trees. Landscaping plans are included as Attachment E.

Walls and Fencing: The complex has been designed as a gated community, with controlled vehicular access gates at both driveways. The applicant has provided plans, which include a six-foot decorative split-face perimeter wall along the south property line and decorative tubular steel fencing surrounding the north, east and west sides of the project. Near the center of the project on the north side, a five-foot-wide pedestrian gate providing access to the Orange Blossom Trail is proposed. As previously mentioned, the project is designed with gated access. Vehicle gates on both sides of the project are proposed to be decorative tubular steel.

Fence heights are not clearly indicated on the project plans. Staff has provided a condition of approval stating that any open fences or gates within the front setback shall not exceed 4’0” in height, or fences exceeding 6’0” in height outside of the front setback, unless approval of a separate Minor Exception Permit is obtained prior to issuance of a building permit.

A Condition of Approval has been added requiring wall and fence heights to be clearly called out on the project plans. Where walls or fences exceed maximum heights, a Minor Exception Permit

will be required.

Architecture and Design: The project proposes a Mediterranean style architecture with barrel concrete roof tiles, tan stucco, and dark brown accents wood and dimensional window frames. Stone/brick veneer and steel balcony railings provide interest through a variety of materials and treatments. The horizontal and vertical planes of the building provide articulation through pitched rooflines, wall surface projection, and tower elements near the center of each building. Decorative shutters, decorative window trim elements, style appropriate lighting, arched patio openings, faux shutters and shaped corbels are also provided. Proposed architectural elevations are provided as Attachment F.

D) Architectural Review Criteria

Although the proposed building and use is permitted within the zone, new construction over 500 square-feet is subject to review by the Planning Commission per Redlands Municipal Code (RMC) Chapter 18.12 and requires Commission Review and Approval. The Planning Commission reviews the project to determine whether the proposed development is in conformity with RMC Section 18.12.170, Architectural Review Criteria, and if approval of the site plan is in the best interest of the public health, safety, and general welfare. It is intended that design submittals be compatible with the character of adjacent and surrounding developments, and that they be of comparable composition, materials, textures and colors. Conformance is evaluated based on the following seven criteria.

1. Site layout, orientation, location of structures and relationship to one another, as well as open spaces and topography.

The proposed site layout, building orientation, location of structures and relationship to one another are physically suitable in size and shape to support the development. The site is narrow and long. The buildings and parking layout have been designed to include four buildings on the south side of the site and open space, parking and amenities are appropriately included. The site will be accessed via two gated access points (one on Grove Street and one on Judson Street), with a drive aisle extending through the northern portion of the site. The site is generally flat and with appropriate conditions of approval, meets all applicable development standards.

2. Harmonious relationship of building with existing and proposed adjoining developments.

The project site is surrounded by existing residential development on three sides and an existing open space/trails system to the north (Orange Blossoms Trail). The proposed building and use are compatible with the context of the area which is primarily composed of residential uses.

3. Maximum height, area, setbacks and overall mass of building, as well as other structures such as walls, screens, towers or signs, and effective concealment of all mechanical equipment.

The proposed project meets all applicable development standards of the R-3 (Multiple-Family Residential) District including, setbacks, building height, and lot coverage. The proposed building will have an overall height of approximately 31 feet and no roof-mounted mechanical equipment is proposed. Parking will be screened from the public right-of-way through the incorporation of 36" walls and landscaping.

4. Harmony of construction materials and colors in relation to all exterior elevations.

The proposed architectural design of the building is consistent with the surrounding development in terms of material, color, and overall use. The design of the buildings provide variation in building surfaces including wall popouts, covered walkways, balconies and pitched rooflines. A neutral color palette was selected consisting of medium tan and darker brown accent colors. Decorative shutters, decorative window trim elements, style appropriate lighting, arched patio openings, faux shutters and shaped corbels are also provided.

5. Location and type of planting, with due regard for the preservation of specimen trees upon a site.

The proposal meets the landscaping requirements of the Municipal Code in terms of the site, parking lot and overall landscaping requirements. No specimen trees are located on site. The project provides 20% of the site as landscaped surface (30,810 square feet) within the project site and exceeds the minimum parking lot landscaping requirement by providing 12% of the parking area as landscaped surface.

6. Design and appropriateness of signs in relation to the architectural style of the building.

No signs are proposed as part of this application.

7. Glazing or image reflective surfaces (specular reflectance) shall be limited to a maximum reflectance value of twenty five percent (25%). "Specular reflectance" means any mirror like reflection, as contrasted to diffused reflection from such surfaces as concrete or vegetation.

The project proposes clear anodized aluminum windows. A condition of approval has been added to the project that glazing or image reflective surfaces (specular reflectance) shall be limited to a maximum reflectance of 25%.

E) Lot Line Adjustment

A Lot Line Adjustment is required since the project site currently consists of two separate parcels. RMC Section 17.05.030 requires a Lot Line Adjustment that is being processed concurrently with other land use applications to be acted upon by the same approving body. The project includes merging two lots into one totaling 3.49 acres. The merging of the lots will be consistent with the RMC and the new lot meets the minimum width, depth, and lot area requirements for the R-3 District. A Condition of Approval has been added requiring the recordation of the Lot Line Adjustment prior to the issuance of a building permit.

F) Socio-Economic Cost / Benefit Study

In accordance with the Principals of Managed Development Element of the General Plan, a Socio-Economic Cost/Benefit Study (Attachment G) has been completed for the project. Based on the cost/benefit model utilized by the City, the project provides a positive cost/benefit ratio of 1.42 over the period of 2025-2034 (and results in positive net revenue to the City after development). This project will provide the City approximately $103,327 in revenue exceeding costs to the City of $72,585 which results in revenue of $30,742.

ENVIRONMENTAL REVIEW

In accordance with the provisions of the California Environmental Quality Act (CEQA), the proposed project qualifies for exemption from environmental review pursuant to Section 15332 of the CEQA Guidelines. Section 15332 (Class 32) pertains to infill development sites and the proposal meets all criteria for this exemption as listed below.

a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations;
b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses;
c) The project site has no value as habitat for endangered, rare, or threatened species;
d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and
e) The site can be adequately served by all required utilities and public services.

The proposed project will not have any potentially significant effect on the environment and is eligible for exemption from CEQA.

FINDINGS

RMC Chapter 18.12.080 (Site Plan Approval Procedures) establishes three findings that must be made to either recommend or approve an application for site plan approval, as follows:

1. The site for the intended use is adequate in size and shape to accommodate the use, and all of the required yards, setbacks, walls or fences, landscaping and other features will adjust the use to those existing or permitted future uses of land in the neighborhood;

The proposed project includes the construction of four multifamily residential buildings with a total of 108 dwelling units for senior, two ancillary office and recreation buildings, and related site improvements on approximately 2.65 acres. The subject property has sufficient size and shape to accommodate the development standards of the applicable zoning requirements. The subject property is adequate in size and shape to accommodate the proposed use, including setbacks, landscaping, private and common open space, recreation amenities, driveways, on-site parking, lighting, utilities, and other required improvements necessary to serve the proposed use and structures. The proposed project complies with the development standards for the Multiple Family Residential (R-3) zone (as consistent with the previous General Plan land use designation as High Density Residential) and will be compatible with the adjacent residential uses that surround the project site.

2. The site for the proposed use relates to streets and highways which are properly designed and improved to carry the type and quantity of traffic generated or to be generated by the proposed use;

The subject property will take access from City streets (Judson Street and Grove Street) that provide direct access to the project site, and new driveways will be constructed to serve the proposed use and accommodate the expected type and quantity of motor vehicle traffic to and from the proposed project. The existing roadways are designed to carry the type and quantity of residential traffic to be generated by the proposed use, including existing traffic from the existing single-family residential dwellings along Judson Street and Grove Street. The site for the proposed use relates to streets that are properly designed and improved to carry the type and quantity of traffic that will be generated by the proposed residential structures.

3. The conditions set forth in the approval and those shown on the approved site plan are deemed necessary to protect the public health, safety and general welfare.

The conditions of approval for the project will protect the public health, safety, and general welfare. Conditions are provided from the Planning Division, Building & Safety Division, and Land Use Engineering Division. The project has been conditioned to comply with the applicable provisions of the Redlands Municipal Code as well as the applicable California Building Code, California Fire Code, and any other applicable regulations.

RECOMMENDATIONS

Based on the above analysis and the following findings, staff recommends that the Planning Commission approve Commission Review and Approval No. 964 and Lot Line Adjustment No. 674, subject to the attached conditions of approval.

MOTIONS

Should the Planning Commission concur with staff's recommendation, the following motion is suggested:

"I move that the Planning Commission adopt Resolution No. 1621 approving Commission Review & Approval No. 964 and Lot Line Adjustment No. 674 based on the findings listed in this staff report, and subject to the attached Conditions of Approval."

Attachments

Attachment A: Location Map and Aerial Photograph
Attachment B: Density Bonus Agreement
Attachment C: Table of R-3 Development Standards
Attachment D: Site Plan
Attachment E: Landscape Plan
Attachment F: Elevations
Attachment G: Socio-Economic Cost/Benefit Study
Attachment H-1: Resolution No. 1621
Attachment H-2: Engineering Conditions of Approval
Attachment H-3: Building & Safety Conditions of Approval

RESOLUTION NO. 1621

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF REDLANDS APPROVING COMMISSION REVIEW & APPROVAL NO. 964 TO CONSTRUCT A MULTIFAMILY APARTMENT PROJECT WITH 108 UNITS FOR MARKET-RATE SENIOR HOUSING (55+), DENSITY BONUS AGREEMENT, LOT LINE ADJUSTMENT AND RELATED ON-SITE IMPROVEMENTS, AND ADOPTION OF A SOCIO-ECONOMIC COST/BENEFIT STUDY. THE PROJECT SITE IS LOCATED BETWEEN GROVE STREET AND JUDSON STREET IN THE VILLAGE GENERAL (VG) DISTRICT OF THE TRANSIT VILLAGES SPECIFIC PLAN.

WHEREAS, Invision Community Builders, LLC ("Applicant"), has submitted an application for Commission Review & Approval No. 964 to construct a multifamily apartment project for senior housing (age 55 or older), a lot line adjustment, and related on-site improvements including driveways, parking lot, landscaping, and lighting on an approximately 3.5-acre site. The project site is located between Grove Street and Judson Street on the south side of the Orange Blossom Trail within the Village General (VG) district of the Transit Villages Specific Plan (APNs: 0170-221-53-0000 and 0170-221-55-0000); and

WHEREAS, the Applicant has submitted an application for a density bonus in accordance with State Density Bonus law and a Density Bonus Agreement in accordance with Chapter 18.228 of the Redlands Municipal Code; and

WHEREAS, the Applicant has submitted an application for a Socio-Economic Cost/Benefit Study as required by Measure "U" and the Redlands Municipal Code; and

WHEREAS, notice of the Planning Commission's public hearing for Commission Review & Approval No. 964 and related project entitlements was published in a newspaper of general circulation; and

WHEREAS, on June 13, 2023, the Planning Commission held a public hearing and considered the staff report, oral report, the testimony and the written evidence submitted by and on behalf of the applicant and by members of the public; and

WHEREAS, the proposed project qualifies for exemption from environmental review pursuant to California Environmental Quality Act Guidelines Section 15332 (In-Fill Development Projects); and

WHEREAS, following the hearing for Commission Review & Approval No. 964, the Planning Commission determined that approval of the requested entitlement is in the best interests of the public health, safety and general welfare.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF REDLANDS AS FOLLOWS:

SECTION 1. CALIFORNIA ENVIRONMENTAL QUALITY ACT. The proposed project is

exempt from environmental review in accordance with the California Environmental Quality Act, Section 15332 (In-Fill Development Projects) of the CEQA Guidelines. There is no information or evidence that the proposed project may result in any potentially significant environmental effects, and the proposal satisfies all applicable criteria for exemption in accordance with CEQA Guidelines Section 15332.

SECTION 2. APPROVAL OF COMMISSION REVIEW & APPROVAL NO. 964. Commission Review & Approval No. 964 is hereby approved based upon the following findings, and subject to the Conditions of Approval attached hereto as Exhibit "A", Exhibit "B" and Exhibit "C".

1. The site for the intended use is adequate in size and shape to accommodate the use, and all of the required yards, setbacks, walls or fences, landscaping and other features will adjust the use to those existing or permitted future uses of land in the neighborhood.

The proposed project includes the construction of four multifamily residential buildings with a total of 108 dwelling units for senior, two ancillary office and recreation buildings, and related site improvements on approximately 2.65 acres. The subject property has sufficient size and shape to accommodate the development standards of the applicable zoning requirements. The subject property is adequate in size and shape to accommodate the proposed use, including setbacks, landscaping, private and common open space, recreation amenities, driveways, on-site parking, lighting, utilities, and other required improvements necessary to serve the proposed use and structures. The proposed project complies with the development standards for the Multiple Family Residential (R-3) zone (as consistent with the previous General Plan land use designation as High Density Residential) and will be compatible with the adjacent residential uses that surround the project site.

2. The site for the proposed use relates to streets and highways which are properly designed and improved to carry the type and quantity of traffic generated or to be generated by the proposed use.

The subject property will take access from City streets (Judson Street and Grove Street) that provide direct access to the project site, and new driveways will be constructed to serve the proposed use and accommodate the expected type and quantity of motor vehicle traffic to and from the proposed project. The existing roadways are designed to carry the type and quantity of residential traffic to be generated by the proposed use, including existing traffic from the existing single-family residential dwellings along Judson Street and Grove Street. The site for the proposed use relates to streets that are properly designed and improved to carry the type and quantity of traffic that will be generated by the proposed residential structures.

3. The conditions set forth in the approval and those shown on the approved site plan are deemed necessary to protect the public health, safety and general welfare.

The conditions of approval for the project will protect the public health, safety, and general welfare. Conditions are provided from the Planning Division, Building & Safety Division,

and Land Use Engineering Division. The project has been conditioned to comply with the applicable provisions of the Redlands Municipal Code as well as the applicable California Building Code, California Fire Code, and any other applicable regulations.

SECTION 3. SOCIO-ECONOMIC COST/BENEFIT STUDY The Socio-Economic Cost/Benefit Study prepared for the proposed project is hereby approved based upon the following findings.

A. The project will not create unmitigated physical blight within the City or overburden public services including, without limitation, the sufficiency of police and fire protection services.

The Project will not create significant unmitigatable physical blight in the City of Redlands or overburden public services, including without limitation police and fire protection services. The project includes a density bonus for the construction of senior housing to allow for a density increase of 4.3 dwelling units per acre for a total of 31.3 dwelling units per acre, and no development concessions or incentives are required. The project will not create physical blight. The project site is adjacent to or abuts established residential developments on all sides, and is located within an area designated in the General Plan for residential development.

B. The benefits to the City resulting from development of the project outweigh any direct cost to the City that may result.

The Socio-Economic Cost/Benefit Study demonstrates that the project will generate annual revenues of approximately $103,327 and have approximately $72,585 in costs; therefore, the project will result a positive balance of $30,742 (or a positive cost/benefit ratio of 1.42). For every one dollar the City will spend in providing services to the project, the City will receive $1.42 in revenue (or $0.42 "net new" revenue). The project would provide for the development of 108 affordable senior apartments and on-site amenities for residents. Schools will be enhanced with the payment of school fees. Further, with the additional revenue provided to the City through increased property tax assessment and the payment of development impact fees, both direct and indirect funding will be provided for cultural enhancements, downtown district enhancements, park enhancements, public safety (Police and Fire) enhancements, and traffic enhancements.

SECTION 4. EFFECTIVE DATE. This Resolution shall become effective upon adoption.

ADOPTED, SIGNED AND APPROVED this 13th day of June, 2023.

Steven Frasher, Chair
Planning Commission

ATTEST:

Linda McCasland, Secretary to the Planning Commission

I, Linda McCasland, Secretary to the Planning Commission of the City of Redlands, hereby certify that the foregoing resolution was duly adopted by the Planning Commission at a regular meeting thereof held on the 13th day of June, 2023, by the following vote:

AYES: 5
NOES: 0
ABSENT: 2
ABSTAIN: 0

Linda McCasland
Secretary to the Planning Commission

EXHIBIT A
PLANNING CONDITIONS OF APPROVAL
COMMISSION REVIEW & APPROVAL NO. 964

Planning Division:

1. This permit/approval is for the construction of a senior housing project with 108 dwelling units (totaling approximately 86,151 square-foot in four buildings), a 1,842 square-feet leasing/community building, a 1,035 square-foot fitness building, and related on-site improvements including driveways, parking lot, landscaping, and lighting on a 2.65 acre site. One development incentive/concession is permitted for the required amount of landscaping within the on-site open space area to be less than 30% landscape. The project site is a vacant lot located on the south side of the Orange Blossom Trail between Judson and Grove Streets, in the High Density Residential land use designation of the General Plan (APNs: 0170-221-53-0000 and 0170-221-55-0000). Approval of a Density Bonus Agreement is required in conjunction with this permit/approval.

2. Prior to the issuance of a building permit, the project applicant shall provide evidence of a fully executed Density Bonus Agreement approved by the City of Redlands City Council.

3. Unless construction has commenced pursuant to the issuance of a building permit, or a time extension is granted in accordance with the Redlands Municipal Code, this permit/approval shall expire two (2) years from the date of approval (will expire on **June 13, 2025**).

4. Any application(s) for Extension of Time for this entitlement shall be filed not less than **ninety (90) days** prior to the applicable expiration date.

5. Pursuant to Government Code Section 66020(d), certain fees, dedications, reservations or exactions imposed by the City as a condition of approval of this project are subject to a statutory ninety (90) day protest period. Please be advised that the ninety (90) day protest period for those fees, dedications, reservations and exactions which are subject to Government Code Section 66020(a) has commenced to run on the date this project was approved by the City.

6. The property owner and applicant and their successors and assigns, shall defend, by paying for the defense costs of the City of Redlands (for counsel retained by the City), indemnify and hold harmless the City of Redlands, and its elected officials, officers, employees, and agents, from and against any and all claims, actions, and proceedings (collectively "Claims") to attack, set aside, void or annul the approval of this Conditional Use Permit by the City, or Claims brought against the City due to acts or omissions in any way connected to the applicant's project that is the subject of this permit. This indemnification shall include, but not be limited to, damages, fees, costs, liabilities, and expenses incurred in such actions or proceedings, including damages for the injury to property or persons, including death of a person, and any award of costs or attorneys' fees. In the event any such action is commenced

to attack, set aside, void or annul all, or any, provisions of this permit, or is commenced for any other reason against the City for acts or omissions relating to the applicant's project, within fourteen (14) City business days following notice of such action from the City, the applicant shall file with the City a performance bond or irrevocable letter of credit, or other form of security satisfactory to the City (the "Security") in a form satisfactory to the City, and in the amount of three hundred thousand dollars ($300,000.00), to ensure applicant's performance of its defense and indemnity obligations under this condition. The Security amount shall not limit the total indemnity obligation of the applicant pursuant to this condition. The failure of the applicant to provide the Security shall be deemed an express acknowledgement and agreement by the applicant that the City shall have the authority and right, without objection by the applicant, to revoke all entitlements granted for the project pursuant to this permit. The City shall have no liability to the applicant for the exercise of City's right to revoke this permit.

7. The issuance of any permits shall comply with all applicable provisions of the Redlands Municipal Code, California Building Code, and California Fire Code currently in effect.

8. All plans submitted to the City shall reflect the Planning Commission approval and any other changes required by the Commission and/or staff. This condition applies to the site plan, landscape plans, building elevations and materials, and all other illustrations, text, or plans submitted to the City in connection with this project.

9. The applicant shall not make any modifications or changes during construction that are in conflict or contrary to the project's approved site design, grading plan, landscaping plan, or building elevations without first consulting with the Development Services Director or designee.

10. A copy of the approved Conditions of Approval shall be included on the cover page of the construction plans submitted to the Building Division.

11. No Certificate of Occupancy shall be approved or issued until all applicable Conditions of Approval have been satisfied.

12. All plans submitted to the City shall reflect Planning Commission approval and any other changes required by the Commission and/or staff. The Development Services Director is authorized to approve minor modifications to the approved project plans or any of the conditions of approval if such modifications shall achieve substantially the same results as would strict compliance with said plans and conditions.

13. Wall and fence heights shall be clearly called out on the project plans. Where walls or fences exceed maximum heights, a Minor Exception Permit will be required prior to the issuance of a building permit.

14. Prior to the issuance of a building permit, the applicant shall indicate the location and number of bike racks as required by Section 18.224.020 on the project plans.

15. To provide screening of the parking areas, a 3' wall shall be provided along the west side of the parking area along Grove Street. The wall shall be indicated on the project plans prior to the issuance of a building permit.

16. Prior to the issuance of a building permit, the project plans shall be revised to demonstrate that a minimum of thirty percent (30%) of the common open space area is landscaped.

17. Plans submitted by Developer with building permit applications shall show on the building elevation sheets all exterior building materials and colors, including product and finish manufacturer name, color name and number, and surface finish type (such as: stucco with sand finish, plaster with smooth finish) to be used in construction.

18. Transformer cabinets and commercial gas meters shall not be located within required setbacks and shall be screened from public view either by architectural treatment or with landscaping. Multiple electrical meters and panels shall be fully enclosed and incorporated into the overall architectural design of the building(s). Backflow preventers shall be enclosed with landscaping that will provide complete screening upon maturity. The location and method of enclosure or screening of this equipment shall be shown on the construction plans and landscape plans prior to building permit issuance. Location of said equipment shall be coordinated with appropriate utility company (e.g., Southern California Gas Company or Southern California Edison Company). The applicant shall submit plans showing details of screening subject to review and approval by the Development Services Director, prior to issuance of building permits.

19. Ground-mounted equipment shall be screened from public view on all sides subject to review and approval by the Development Services Director or designee, prior to issuance of building permits.

20. During the plan check review process, the Developer shall provide a lighting plan that provides design details (light standards, bollards, wall mounted packs, etc.) and illumination site information within pathways, streetscapes, and open spaces proposed throughout the development. An electrical engineer shall prepare the site lighting and/or photometric plan demonstrating that adequate lighting ranges will be provided throughout the development without creating light spillover, light pollution, or conflicts with surrounding factors such as tree locations, off-site or adjacent lighting. The illumination within the parking lot shall be a minimum of 0.5-foot candle and illumination along all property lines of the project site shall not exceed 0.5-foot candle. Walkway lighting shall have a maximum height of 10 feet, all parking lot lighting shall have a maximum height of 20 feet, and such light fixtures shall include shielding permanently attached to fixtures to contain illumination and prevent glare overspill onto abutting or nearby residential properties.

21. Plans submitted for plan check shall include an exterior lighting plan, including fixture and pole designs, for review and approval by the Development Services Director or designee.

22. All lighting shall be shielded, and no light or glare shall impact the surrounding properties.

23. Prior to issuance of building permits, Developer shall demonstrate that light standards will not conflict with tree locations. Developer shall submit a plan showing both the lighting and landscape on the same sheet.

24. The project shall be operated to comply with the City's Noise Ordinance as contained in RMC Chapter 8.06 (Community Noise Control).

25. Prior to issuance of a building permit and/or landscape permit, Developer shall demonstrate on the construction plans that a minimum of thirty percent (30%) of the Common Outdoor Living Space area shall be landscaped as required by RMC Section 18.60.170(A)(1)(c). Parking spaces abutting the central on-site recreation area may be converted, if necessary, to usable recreation space with landscaping (i.e., connected and contiguous to the Common Outdoor Living Space area).

26. All landscaped areas noted on the site plan shall be permanently maintained with healthy planting material, and whenever necessary shall be replanted with suitable vegetation.

27. Landscape and Irrigation Plans shall provide water use calculations on the submitted plans, and Developer shall demonstrate compliance with the Model Water Efficient Landscape Ordinance prior to permit issuance. The plans shall be prepared by a California-licensed landscape architect.

28. The Final Landscape Plans shall incorporate the following:

    a. The landscape plan shall comply with all requirements for landscaping in pursuant to the Redlands Municipal Code.
    b. The landscape plans shall be detailed and show the specific distribution, size, and amount of each species of trees, shrubs, and groundcover;
    c. All plant material shall be sized so that the landscaping has an attractive appearance at the time of installation and a mature appearance within three (3) years;
    d. Trees with a trunk height of not less than six feet (6') shall be installed in the planters at each end of an aisle, at three (3) space intervals throughout the parking area, and at twenty-foot (20') intervals along the periphery of the parking area. Within parking areas, trees may be clustered in groups to achieve a more natural setting provided the total number of trees meets the previous planting requirements;
    e. At least fifty percent (50%) of the trees shall be an evergreen variety and shall be evenly distributed throughout the parking area;
    f. At least fifty percent (50%) of the trees shall be fifteen (15) gallon in size, twenty five percent (25%) shall be twenty-four-inch (24") box size, and twenty five percent (25%) shall be thirty-six-inch (36") box in size. All trees shall meet the following minimum caliper sizes. If the caliper size cannot be met at the container size, then the developer shall increase the container size to meet the required caliper;
    g. All trees identified on the landscape plan are to be maintained and the trimming or maintenance of them shall serve the purpose to bring them into a full canopy type configuration. If applicant/developer fails to maintain and trim said trees to allow for full canopy type configuration, applicant/developer shall be in violation of its

conditions of approval and subject to enforcement as allowed by law;

h. All landscape planters that are ten feet (10') or less in width shall utilize measures such as root barriers or other deep watering system to minimize heaving of parking area pavement and curbs by tree roots; and

i. An automatic irrigation system shall be utilized to irrigate the site's approved landscape design;

j. Where automobile bumpers overhang landscaped planters, two feet (2') of clear areas unobstructed by trees or shrubs shall be provided for vehicle overhang.

29. The landscape architect responsible for the design of the project's landscape plan shall review and certify, prior to a request by the applicant for a final occupancy inspection, that the installed landscaping meets the specifications of the approved landscape plan, except as modified in the conditions of approval.

30. Before placing or constructing any signs on the project property, Developer shall obtain a sign permit from the City and comply with the applicable sign code criteria. Sign locations and illumination are subject to review and approval by the Planning Division under separate permit.

31. Prior to the issuance of building permits, the applicant shall submit plans detailing that roof screening is of adequate height to screen any rooftop equipment from public view on all sides, subject to review and approval by the Development Services Director. Screening of air conditioning units and other equipment on the buildings and/or ground level shall be incorporated into or compatible with the architectural design of the buildings. All equipment shall be screened from public view of adjacent roadways, trails, and right-of-way.

32. Prior to issuance of any building permits, ground-mounted equipment shall be screened from public view on all sides subject to review and approval by the Development Services Director.

33. In the event of an accidental discovery or recognition of any human remains or funerary objects, Public Resource Code Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

    a. There shall be no further excavation or disturbance of the site or any nearby area (within a 100-foot buffer of the find), as reasonably suspected to overlie adjacent human remains, until the City of Redlands Police Department and San Bernardino County Coroner are contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the California Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any

associated grave goods as provided in Public Resource Code Section 11 5097.98; or

b. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:

- The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
- The descendent identified fails to make a recommendation; or
- The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

34. Prior to issuance of a building permit, the applicant shall be required to obtain approval of a construction site safety plan by the Redlands Police Department providing adequate security measures such as lights, video cameras, vehicle transponders, locks, alarms, trained security personnel, fencing, etc. The nature of the measures will depend on the specific requirements of the site and may vary with the different stages of construction. The applicant shall be responsible for the compliance of all subcontractors working on the site.

35. The project site shall be kept in a weed and dust free condition throughout all periods of development. Developer and contractors shall comply with applicable South Coast Air Quality Management District (AQMD) regulations and standard requirements pertaining to grading, dust control, construction site maintenance, and construction equipment emissions controls.

36. Prior to the issuance of a building permit, Lot Line Adjustment No. 674 shall be recorded.

Building & Safety Division:

37. When the Entitlement Review is approved submit complete construction drawings including structural calculations, energy calculations and a soils report to Building and Safety for plan review in accordance with the current edition of the California Building and Fire Codes including all local ordinances and standards which are effective at the time of Plan Check Submittal.

38. The new structures are required to be equipped with automatic fire sprinklers and fire alarm per the CBC/CFC NFPA 13, NFPA 72 and the current Redlands Municipal Code.

39. Allowable building areas, based on type of construction and occupancy shall be based on the latest edition of the California Building Code.

40. Disabled access for the site and buildings must be in accordance to the State of California and ADA regulations.

41. A FEMA Letter of Map Revision is required prior to issuance of a building permit, or the building foundation shall be raised for the Base Flood Depth of one (+1) foot, plus two (2) foot free board, and a FEMA "No Rise" Certificate provided.

Other City Departments/Divisions

42. Conditions of Approval from the following City Departments/Divisions are applicable to the project, and are hereby incorporated by reference:

    a. Land Use Engineering Division (Exhibit B)
    b. Building and Safety Conditions of Approval (Exhibit C)

Brian Desatnik
Development Services Director

EXHIBIT B

Land Use Engineering Division
Conditions of Approval

[Attached]

REDLANDS DEVELOPMENT SERVICES DEPARTMENT
LAND USE ENGINEERING
DEVELOPMENT REQUIREMENTS
COMMISSION REVIEW AND APPROVAL NO. 964
*****As revised at Planning Commission meeting on 6/13/2023*****
Revisions to conditions shown in ***bold italics***

Date of P.C. Meeting:	**June 13, 2023**
Applicant:	**Invision Community Builders, LLC**
Location:	**East Side of Grove Street and on West Side of Judson Street, and South of Orange Blossom Trail**
Project Description:	**Construct 108 Unit Multi-Family Rental Complex Restricted for Senior Housing (55+)**

The applicant shall comply with the following engineering requirements to allow for the orderly development of the surrounding area and for public health and safety.

All requirements for development shall be consistent with requirements set forth in the General Plan; applicable sections of Redlands Municipal Code; latest edition of "Redlands Standard Specifications and Detail Drawings for Design and Construction of Public Improvements"; latest edition of American Public Works Association "Standard Plans for Public Works" and "Standard Specifications for Public Works Construction – Greenbook"; latest edition of "Redlands Water Systems Standard Specifications"; latest edition of "Redlands Sanitary Sewer Systems Standard Specifications"; and current Redlands policies and guidelines relative to development projects.

A. The following items are required prior to issuance of the GRADING PERMIT.

1. Pay plan check fee as established per resolution. The amount will be determined at plan check submittal.

2. Plans required to be submitted include:
   a. Precise Grading Plan. Grading plans shall be coordinated with the existing and proposed off-site improvements. (RMC 15.04)
   b. SWPPP/Erosion Control Plan. Erosion/Sediment Control Plan shall be submitted for review and approval. A copy of the project's Storm Water Pollution Prevention Plan (SWPPP) shall be submitted for review. SWPPP Best Management Practices (BMPs) to prevent and control discharges to the municipal separate storm sewer (drain) system shall be in effect for the entire duration of project construction to its completion and acceptance by the City. (RMC 13.54)
   c. Water Quality Management Plan. Submit preliminary/final Water Quality Management Plan (WQMP) for review and approval. WQMP shall consist of post construction Best Management Practices (BMPs) prepared in accordance with the requirements and guidelines of the San Bernardino County Stormwater Program. The requirements of the WQMP shall remain in effect throughout the life of the project. (California State Order No. R8-2010-0036)

All plans used as reference for design shall be listed on title sheet of all plans with reference numbers. All plans shall be submitted on 24" x 36" size sheets. Six (6) copies of each are required. After final review, grading and SWPPP plans shall be submitted on 24" x 36" size, min. 4 mil, mylar sheets for City's approval.

3. Submission of plan sets shall be complete and include all required engineering designs and drawings listed in No. 2 above. All plans submitted shall be substantially complete, and no plan check queue place-holder plans will be accepted. An incomplete plan submittal will not be accepted for plan check.

4. All support documentation shall be submitted with the plans to be checked. Submission shall include:
   a. Hydrology Report and Hydrologic Calculations; (RMC 18.12.080)
   b. Geotechnical Report; (RMC 15.04)
   c. Easement Documents. (RMC 18.12.080)

5. A final WQMP that is in substantial conformance with the preliminary WQMP and in full conformance with the WQMP Guidance Document shall be submitted and approved prior to the approval of precise grading plans.

6. Cash cleanup deposit shall be submitted ($1,000.00). Deposit will be reimbursed after the work is completed and accepted by the City upon written request. (RMC 12.16.290)

7. Truck route permit is required for all construction vehicles 5 tons and over gross vehicular weight (e.g. concrete trucks) using streets other than established truck routes. (RMC 10.54)

NOTE: Cash cleanup deposit and truck route permit submitted during the grading process could be transferred to be used during building construction or off-site improvement construction if it is within the time limit specified in the truck route permit, otherwise a new truck route permit must be issued.

8. For all development requiring coverage under the state of California General Storm Water Permit, in effect at the time of permit issuance, and whom have filed with the State Board a Notice of Intent (NOI), a copy of the Waste Discharge Identification Number (WDID) and NOI shall be submitted for review and file. Call (866) 563-3107. (RMC 13.54)

9. The Final WQMP shall also include a site trash plan detailing the installation, operation, and maintenance of a Full Capture System (FCS) for loose trash. The intent of the FCS is to capture loose trash preventing the trash from entering the site storm drains and basins. BMPs or devices used as FCS devices shall require acceptance by the City Engineer. Full Capture Systems are defined as treatment controls (either a single device or a series of devices) capable of trapping all particles 5 mm or greater. In addition, the FCS shall trap trash from the greater of:

   a. A flow not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm. Precipitation intensity shall be determined using the NOAA ATLAS 14 Point Precipitation Frequency Estimates web site; or
   b. A flow rate equal to the on-site storm water conveyance system including pipes, channels, and swales.

10. FEMA Elevation Certificate (Pre-Construction). All new construction or substantial improvements within a Special Flood Hazard Area (designated floodplain) shown on the FEMA flood map (FIRM) shall comply with the City's floodplain management regulations (Chapter 15.32, Redlands Municipal Code). For proposed developments within a floodplain, the applicant must submit a FEMA Elevation Certificate (EC) for review and acceptance by the Municipal Utilities and Engineering Department prior to issuance of the grading permit. This certification shall be made by a registered professional engineer or land surveyor in the State of California. The latest EC form and instructions can be downloaded from the FEMA website at www.fema.gov.

In lieu of the FEMA Elevation Certificate, a Letter of Map Revision (LOMR) shall be submitted to FEMA for review and approval.

B. The following items are required prior to RECORDATION OF TRACT/PARCEL MAP.

No map is required for this application.

C. The following items are required prior to issuance of the BUILDING PERMIT

1. Pay plan check fee as established per resolution. The amount is to be determined at plan check submittal.

2. Plans required to be submitted shall include:
   a. Street Improvement;
   b. Storm Drain Construction;
   c. Pavement Striping Plans (including reflectorized pavement markers); and
   d. Street Tree Installation – Street trees shall be provided as per the approved Street Tree List.

All plans used as reference for design shall be listed on title sheet of all plans with reference numbers. All plans shall be submitted on 24" x 36" size sheets. Three (3) copies of each are required. After final review, plans shall be submitted on 24" x 36" size, min. 4 mil, mylar sheets for City's approval.

3. Submission of plan sets shall be complete and include all required engineering designs and drawings listed in No. 2 above. All plans submitted shall be substantially complete, and no plan check queue place-holder plans will be accepted. An incomplete plan submittal will not be accepted for plan check.

4. All support documentation shall be submitted with the plans to be checked. Submission shall include:
   a. Hydrology Report and Hydrologic Calculations; (RMC 18.12.080)
   b. Geotechnical Report; (RMC 15.04)
   c. Easement Documents. (RMC 18.12.080)

5. Finalize and obtain all necessary onsite and offsite permissions, permits, easements, right-of-way, and properties in order to satisfy the conditions of approval for this project. Such items shall include:
   a. City of Redlands Municipal Utilities and Engineering Department to update License Agreement with SBCTA for proposed City storm drain on SBTCA property.

6. All off-site improvements shall be designed by owner's Civil Engineer in accordance with City Standard Specifications and Detail Drawings and Standard Specifications for Public Works Construction (Green Book) latest revision thereof. All existing utilities shall be pot-holed to determine the actual depth if no signed plan is available. Field notes will be submitted at time of submitting the plan for review and plan checking.

7. The approximate locations of existing underground utilities shall be shown on the improvement/site/grading plans. The utilities shall be plotted from record and field data. The City of Redlands and the Engineer assume no liability as to the exact location of said lines where locations are not shown.

8. Provide pad certification and compaction report to the Building and Safety Department.

9. Pay the required development impact fees per ordinance in effect at time of issuing the building permit. The exact amount will be determined based upon the review of the final building plan or project information. Development Impact Fees shall include:
    - Transportation Facilities; (RMC 3.54)
    - Fire Facilities; (RMC 3.60)
    - General Government Facilities; (RMC 3.60)
    - Library Facilities; (RMC 3.60)
    - Open Space/Park; (RMC 3.32)
    - Police Facilities; (RMC 3.60)
    - Storm Drain Facilities; (RMC 3.56)
    - Water Capital Improvement Charge; (RMC 3.48)
    - Water Source Acquisition Charge; (RMC 13.40)
    - Sewer Capital Improvement Charge; (RMC 3.44)
    - Solid Waste Capital Improvement Charge; (RMC 3.70) and
    - Water/Sewer Frontage Charges. (RMC 13.44 and 13.12.)

10. Final City approved mylars for all public improvements shall be on file with the Municipal Utilities and Engineering Department.

11. Although this project will have an on-going inspection throughout construction, a final inspection for all off-site improvements must be scheduled by developer to certify that these improvements comply with City specifications. (RMC 12.16.090)

12. Requirements for Judson Street (RMC 18.12.080):

    a. Dedicate to provide for 44 foot half street right-of-way;
    b. Construct standard curb and gutter 32 feet west side of street centerline;
    c. Provide full depth construction/reconstruction consistent with the City standard or alternative method of street rehabilitation as accepted by the City Engineer between the curb and gutter to the street centerline verified through a geotechnical report;
    d. Construct standard sidewalk along the entire street frontage and ramps at all curb returns;
    e. Provide street trees spaced every 40 feet avoiding sewer and water laterals. Prepare and submit a separate street tree plan for City approval;
    f. Construct underwalk drain, if necessary;
    g. Use traffic index of 9.0; and
    h. Install residential/commercial fire hydrants as required by the Redlands Fire Department.

13. Requirements for Grove Street (RMC 18.12.080):

    a. Dedicate to provide for a 32 foot half street right-of-way width;
    b. Construct standard curb and gutter 20 feet east side of street centerline;
    c. Provide full depth construction/reconstruction consistent with the City standard or alternative method of street rehabilitation as accepted by the City Engineer between the curb and gutter to the street centerline verified through a geotechnical report;
    d. Construct standard sidewalk along the entire street frontage and ramps at all curb returns;
    e. Provide street trees spaced every 40 feet avoiding sewer and water laterals. Prepare and submit a separate street tree plan for City approval;
    f. Construct standard pavement transition based on design speed of the street from the northerly property line to the north as accepted by the City Engineer;
    g. Construct underwalk drain, if necessary;
    e. Use traffic index of 6.0; and
    f. Install residential/commercial fire hydrants as required by the Redlands Fire Department.

14. Provide adequate drainage facilities, including ***construction an adequately reinforced concrete storm drain across the SBCTA property as required by the City Engineer originating from Judson Street and connecting into the existing 24-inch storm drain in Grove Avenue. The reinforced concrete storm drain will be sized to maintain and not exacerbate the existing drainage condition in Judson Street and Grove Avenue prior to the development of this project.*** ~~but not limited to, installation of an adequately sized reinforced concrete storm drain across the SBCTA property as required by the City Engineer.~~ The applicant shall provide and submit all necessary hydrology/hydraulic studies and calculations in accordance with the San Bernardino County Hydrology Manual. (RMC 18.12.080)

15 Conditions, Covenants and Restrictions ("CC&Rs") shall be prepared by the applicant and approved by the City for the project which address cross lot drainage, Water Quality Management Plan requirements, sewer usage, water service, and solid waste disposal, which are shared by the property owners. The CC&Rs shall contain the following:

a. A provision which reads substantially as follows: "The City shall have the right to review and approve any proposed amendment or termination of [the CC&Rs] when such termination or amendment would alter, amend, terminate or otherwise impair the rights of the City under those provisions of [the CC&Rs] which satisfy the conditions of approval imposed by the City for the project. All proposed amendments shall be submitted to the City's Development Services Director and shall be approved in writing by the City Attorney as a precondition of and prior to the recordation of such amendment."

b. A provision which reads substantially as follows: "[The CC&Rs] shall be covenants running with the land, and shall, in any event, and without regard to technical classification or designation, legal or otherwise, be, to the fullest extent permitted by law and equity, binding for the benefit and the favor of, and enforceable by the City of Redlands. Although the City of Redlands shall be a beneficiary of [the CC&Rs], and shall have a right to enforce [them], the City of Redlands shall not be obligated hereunder to exercise such rights of enforcement."

16. The CC&Rs shall be subject to a joint review by all affected City Department Directors and the City Attorney's Office. The applicant shall be required to pay for the review of the CC&Rs by the affected Department Directors and the City Attorney's Office at such persons' hourly billing rates.

17. The CC&Rs shall be submitted to the City at least thirty (30) days prior to the submission of any request for approval of the final map. The CC&Rs shall subsequently be recorded, in the form approved by the City, prior to or at the same time as the final map.

18. All off-site utilities shall be placed underground. The undergrounding shall include power poles located along the project site's street frontage(s) and may include power poles beyond the site's boundary as determined by Southern California Edison. Those overhead utility lines that are 66KV or greater will not be required to be undergrounded. Any power pole(s) that contain a streetlight may be required to install a standard streetlight, in accordance with the Municipal Utilities and Engineering Department's standards. Plans shall be submitted that detail the undergrounding of all off-site utilities, subject to review and approval by the City Engineer (RMC 18.12.080). This requirement may be waived per RMC Section 17.17.020 G(2) through payment of an in lieu fee provided that the approving body makes the finding described in RMC Section 17.17.20 G(3).

19. Install reduced pressure principle backflow devices as required by City Engineer. (RMC 13.20)

20. Install onsite fire line with double detector check valve backflow devices at service connection satisfactory to the City Fire Department. (RMC 13.20)

21. Comply with the Solid Waste Recycling Access Act of 1991 (AB 1327) and install double solid waste bin enclosure(s). Submit a plan prepared by a licensed engineer showing bin enclosure(s) location on the site plan with solid waste truck turning and/or turnaround track template superimposed.

22. Submit recycling plans for site demolition/construction for review and approval in accordance with Chapter 13.66 of the Redlands Municipal Code.

23. Dedication documents shall be prepared by a licensed Land Surveyor or registered Civil Engineer (registered prior to January 1982) and must be submitted for review and approval before recordation. (California B&P Code 8761 and CCR 4411)

24. FEMA Elevation Certificate (Pre-Construction). All new construction or substantial improvements within a Special Flood Hazard Area (designated floodplain) shown on the FEMA flood map (FIRM) shall comply with the City's floodplain management regulations (Chapter 15.32, Redlands Municipal Code). For proposed developments within a floodplain, the applicant must submit a FEMA Elevation Certificate (EC) for review and acceptance by the Municipal Utilities and Engineering Department prior to issuance of the building permit. This certification shall be made by a registered professional engineer or land surveyor in the State of California. The latest EC form and instructions can be downloaded from the FEMA website at www.fema.gov.

25. Improvement bonds must be posted for the total estimated cost of off-site improvements as follows (RMC 18.12.080):

Performance	100% security (due prior to building permit issuance)
(Warranty)	10% security (due at acceptance of improvements)
Labor and Materials	50% security (due prior to building permit issuance)

Acceptable security forms: Surety Bond(s), Letter of Credit from a qualified bank or institution, Cash Deposits, or Set Aside Letter (savings account) in City's name subject to approval of the City Attorney and Finance Director.

26. The 10% warranty security will be retained for one year after acceptance of public improvements by the City for warranty of off-site work. (RMC 18.12.080) and 12.20.100)

27. Execute Public Improvement Agreement. (RMC 12.22.060)

D. The following items are required prior to approval of APPLICATION FOR WATER SERVICE CONNECTION and prior to WATER METER INSTALLATION.

1. Pay the Water Capital Improvement Charge; (RMC 3.48.030)

2. Pay the Water Source Acquisition Charge; (RMC 13.40)

3. Pay the Water Frontage Charges; (RMC 13.44) and

4. Pay the Water Meter Installation Charge. (Redlands Ordinance No. 2830)

E. The following items are required prior to issuance of the ENCROACHMENT PERMIT.

1. Cash cleanup deposit shall be submitted ($1,000.00). Deposit will be reimbursed after the work is completed and accepted by the City upon written request. (Required unless previously submitted under Sections A, B or C.) (RMC 12.16.290)

2. Truck route permit is required for all construction vehicles 5 tons and over gross vehicular weight (e.g. concrete trucks) using streets other than established truck routes. (RMC 10.54)

3. Section 4216/4217 of the Government Code requires a Dig Alert Identification Number be issued before a "Permit to Excavate" will be valid. For your Dig Alert Identification Number, call Underground Service Alert toll free, 1-800-227-2600, two (2) working days prior to conducting any excavation. (RMC 12.20.120)

4. Encroachment Permit application and two (2) sets of City approved plans must be submitted for all off-site improvements. Encroachment Permit fees shall be paid prior to issuance of Encroachment Permit. (RMC 12.16.010)

5. A California OSHA Permit Number for all work that is 5 feet deep or deeper shall be provided. Call (909)383-4321. (RMC 12.16.040)

6. A copy of soils report is required with recommendation for the final pavement structural section to be submitted prior to placing of the street pavement. The report shall include test results and boring/sampling locations.

7. A traffic control plan shall be prepared in accordance with the latest revision of CA MUTCD or W.A.T.C.H. manual, submitted and accepted by the City Engineer prior to issuance of an encroachment permit. The plan shall show all required construction signage, warning devices, road closures, detours, delineation, phasing schedules and anticipated durations of closures and detours for any work within the public right-of-way. The plans shall provide names and 24-hour phone numbers of individuals who can be contacted regarding traffic control measures.

8. Improvement bonds must be posted for the total estimated cost of off-site improvements as follows:

Performance	100% security (due prior to building permit issuance)
(Warranty)	10% security (due at acceptance of improvements)
Labor and Materials	50% security (due prior to building permit issuance)

Acceptable security forms: Surety Bond(s), Letter of Credit from a qualified bank or institution, Cash Deposits, or Set Aside Letter (savings account) in City's name subject to approval of the City Attorney and Finance Director.

9. Execute Public Improvement Agreement.

10. The 10% warranty security will be retained for one year after acceptance of public improvements by the City for warranty of off-site work.

F. The following items are required prior to issuance of CERTIFICATE OF OCCUPANCY.

1. All requirements as described in Sections A, B, C, D and E of these conditions of approval shall be met.

2. All work shall be completed to the satisfaction of the City Engineer. All as-built plans shall be delivered to the Municipal Utilities and Engineering Department for review and approval.

3. The Engineer of Record shall file a Certification for all grading and improvements relating to the project development.

4. Owner's Licensed Land Surveyor shall reset survey points, monuments, record corners, and centerline ties that were destroyed during construction and shall file Corner Records for those points prior to completion of the project with San Bernardino County Surveyor. Copies of information shall be furnished to the Municipal Utilities and Engineering Department. [California B&P Code 8762, 8767, 8768, 8771, and 8773(b)]

5. FEMA Elevation Certificate (Finished Construction). A post-construction Elevation Certificate (EC) shall be submitted for all new construction or substantial improvements within a Special Flood Hazard Area (designated floodplain) shown on the FEMA flood map (FIRM). This certification shall provide as-built survey elevations to verify compliance with the City's floodplain management regulations (Chapter 15.32, Redlands Municipal Code). This certification shall be made by a registered professional engineer or land surveyor in the State of California and submitted to the Municipal Utilities and Engineering Department for review and acceptance prior to issuance of the Certificate of Occupancy. The latest EC form and instructions can be downloaded from the FEMA website at www.fema.gov.

   In lieu of the FEMA Elevation Certificate, a Letter of Map Revision (LOMR) shall be submitted to FEMA for review and approval.

6. A list of as-built infrastructure improvement quantities shall be provided in the Excel format provided by the City showing quantities for each street segment (i.e. pavement, curb and gutter, sidewalk, etc.)

7. Streets may be required to have a seal coat applied at the option of the City Engineer. Type of seal coat is to be determined by the City Engineer.

8. Resurface existing roadway as directed by the City Engineer due to utility installations and construction damage.

9. Existing striping shall be removed and replaced as necessary. New striping and pavement markings shall be installed as required by the City Engineer.

10. Owner/Developer shall provide recycling receipts as required by the recycling plan.

G. The following items are required prior to release of SECURITIES/WARRANTIES/DEPOSITS.

1. Prior to the release of the securities for the project, all improvements shall be reviewed and accepted by the City Engineer.

2. Tie sheets shall be submitted for all monuments found in the public right-of-way.

3. The release of securities/warranties/deposits must be requested in writing to the City Engineer. Allow 30 days for processing.

Donald P Young

DONALD YOUNG, P.E., P.M.P.
One Stop Permit Center Manager

FILE: CRA 964

EXHIBIT C

Building and Safety
Conditions of Approval

[Attached]

City of Redlands

Building & Safety Division
35 Cajon St., Suite 20 Redlands, Ca 92373

BUILDING AND SAFETY CONDITIONS OF APPROVAL

CUP #	1169	**Review Date**	12/19/2022
Project Address	APN 0170-221-53-0000, 0170-221-55-0000		
Project Description	Villages at Orange Blossom		
Occupancy Type	B, A-3, E	**Square Footage**	102,547 SF
Construction Type			

Reviewed By:	John Thompson	
Phone#	909-798-7536 x7	jthompson@cityofredlands.org

- When the Entitlement Review is approved submit complete construction drawings including structural calculations, energy calculations and a soils report to Building and Safety for plan review in accordance with the current edition of the California Building and Fire Codes including all local ordinances and standards which are effective at the time of Plan Check Submittal.

- The new structures are required to be equipped with automatic fire sprinklers and fire alarm per the CBC/CFC NFPA 13, NFPA 72 and the current Redlands Municipal Code.

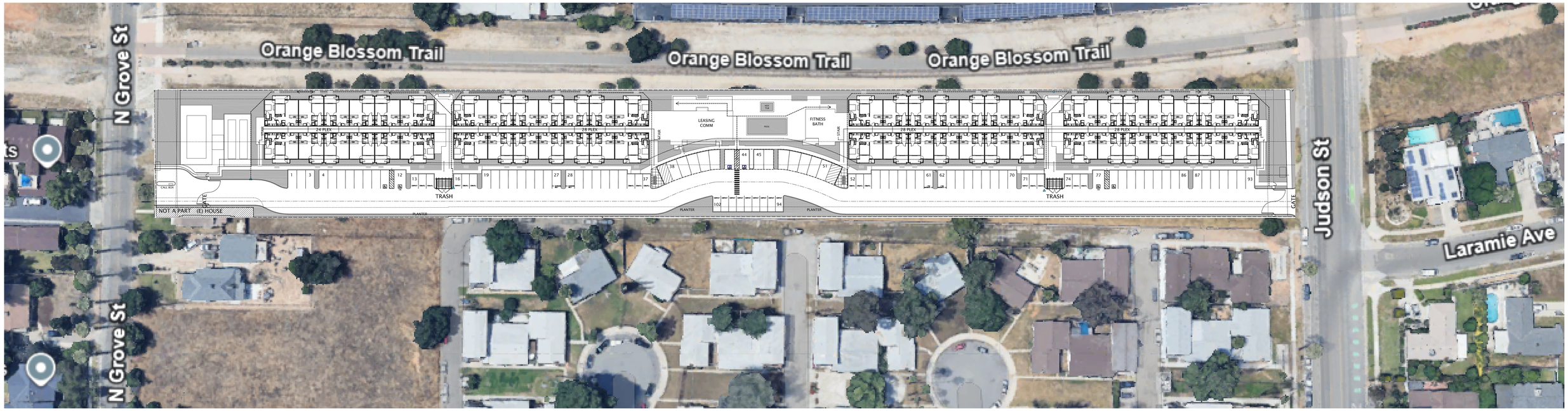
- Allowable building areas, based on type of construction and occupancy shall be based on the latest edition of the California Building Code.

- Disabled access for the site and buildings must be in accordance to the State of California and ADA regulations.

- A FEMA Letter of Map Revision is required prior to issuance of a building permit, or the building foundation shall be raised for the Base Flood Depth of +1 foot, plus 2 foot free board, and a FEMA "No Rise" Certificate provided.

Sincerely,

John Thompson
Building Official



PROPOSED CHANGE TO
SITE DESIGN

SCALE 1" = 40' - 0"

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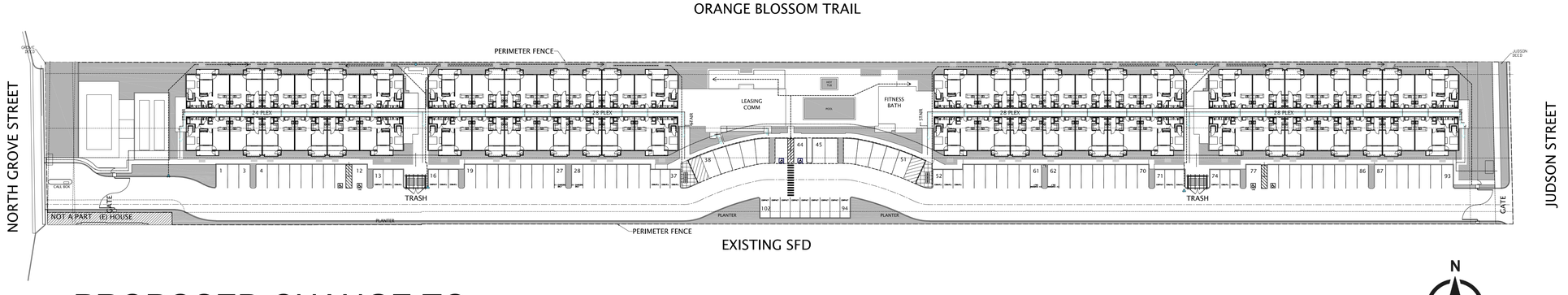
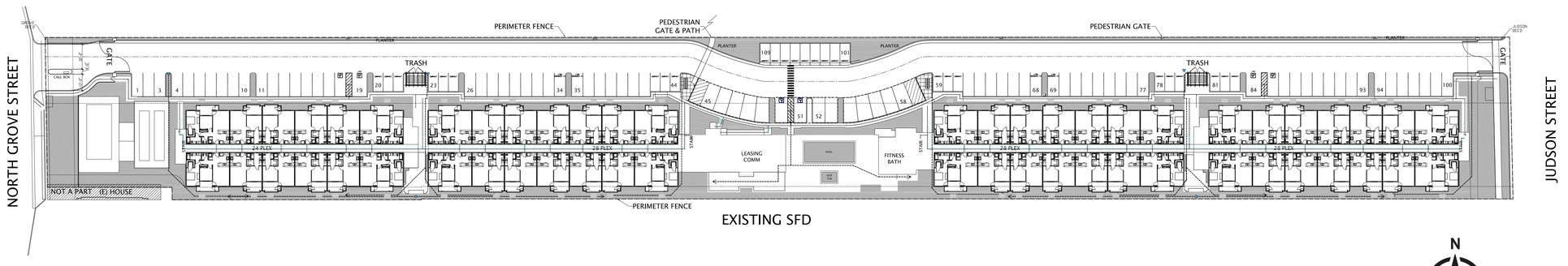


PROPOSED CHANGE TO SITE DESIGN



ORIGINAL ENTITLED SITE DESIGN

MILLER AIP

RESOLUTION NO. 1767

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF REDLANDS APPROVING A ONE-YEAR EXTENSION OF TIME TO THE EXPIRATION DATE FOR COMMISSION REVIEW & APPROVAL NO. 964 TO CONSTRUCT A MULTIFAMILY RESIDENTIAL PROJECT LOCATED BETWEEN JUDSON STREET AND GROVE STREET, ON THE SOUTH SIDE OF THE ORANGE BLOSSOM TRAIL.

WHEREAS, the applicant has submitted an application for Extension of Time No. 1 for Commission Review and Approval No. 964, an approved project to construct a senior (age 55+) apartments project with 108 units and related on-site improvements including parking lot, landscape, lighting, and utilities, located between Judson Street and Grove Street, on the south side of the Orange Blossom Trail (APNs: 0170-221-53-0000 and 0170-221-55-0000); and

WHEREAS, on June 13, 2023, the Redlands Planning Commission held a public hearing and adopted Resolution No. 1621 to approve Commission Review & Approval No. 964; and

WHEREAS, on July 25, 2023, the Redlands City Council adopted Resolution No. 8503 to approve the Senior Housing Density Bonus Agreement for the project; and

WHEREAS, Assembly Bill 2729 (2024) provided an automatic 18-month extension for qualifying housing development projects, for which the entitled project met all criteria, and extended the expiration date for Commission Review & Approval No. 964 to December 13, 2026; and

WHEREAS, Redlands Municipal Code Section 18.12.130 permits an applicant to request a one-year extension of time to extend the expiration date for a Commission Review and Approval, provided the total number of such one-year extensions do not exceed three; and

WHEREAS, the applicant intends to develop the project and requests the extension to allow additional time to complete the plan check process for building permits to construct the project; and

WHEREAS, following the consideration for the extension of time to Commission Review and Approval No. 964, the Planning Commission determined that approval of the requested one-year extension of time is in the best interests of the public health, safety, and general welfare.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF REDLANDS AS FOLLOWS:

SECTION 1. California Environmental Quality Act. Approval of this Resolution is exempt from further environmental review pursuant to Section 15061(b)(3) of the State Guidelines implementing the California Environmental Quality Act, as there is no possibility of any potentially significant environmental effects as a result of the Extension of Time. Planning Commission Resolution No. 1621 was adopted on June 13, 2023, and determined the project to be exempt from environmental review in accordance with Section 15332 (In-Fill Development Projects) of the California Environmental Quality Act. There are no substantial changes proposed to the approved

project description as part of the Extension of Time.

SECTION 2. Approval of Extension of Time. The findings for the original approval of Commission Review and Approval No. 964 remain valid, and therefore, the proposed one-year extension of time for Commission Review and Approval No. 964 is hereby approved in accordance with Redlands Municipal Code Section 18.12.130.

SECTION 3. Expiration Date. The new expiration date for Commission Review and Approval No. 964 shall be December 13, 2027. The project shall remain subject to all original Conditions of Approval contained in Planning Commission Resolution No. 1621 as well as the applicable Senior Housing Density Bonus Agreement.

SECTION 4. Effective Date. This Resolution shall become effective upon adoption.

ADOPTED, SIGNED, AND APPROVED this 27th day of October, 2026.

_____
Karah Shaw, Chair
Planning Commission

ATTEST:

_____
Katherine Coleson,
Secretary to the Planning Commission

I, Katherine Coleson, Secretary to the Planning Commission of the City of Redlands, hereby certify that the foregoing resolution was duly adopted by the Planning Commission at a regular meeting thereof held on the 27th day of October, 2026, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Katherine Coleson
Secretary to the Planning Commission

Planning Commission **AGENDA ITEM NO. EA.**

DATE: October 27, 2026

TO: Honorable Chair and Planning Commission

SUBJECT: APPLICANT: REDLANDS PIONEER PARTNERS, LLC
(PROJECT PLANNER: KEVIN BEERY, SENIOR PLANNER)

A PUBLIC HEARING to consider and make a recommendation to the City Council regarding the following matters concerning a proposed residential development encompassing approximately 35.3 acres on the east side of Route 210, north side of West San Bernardino Avenue, south side of West Pioneer Avenue, and west side of Specific Plan No. 62 (APNs: 0167-091-09-0000, 0167-091-10-0000, 0167-091-11-0000, and 0167-091-042-0000):

1. California Environmental Quality Act, a determination whether to adopt a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program prepared for the project in accordance with section 15074 the California Environmental Quality Act Guidelines.

2. General Plan Amendment No. 150, a request to change the land use designation of the site from “Commercial” to “Medium Density Residential.”

3. Specific Plan No. 67, a request to establish the “Pioneer Park Specific Plan” comprising land use regulations, development standards, infrastructure specifications and implementation procedures governing development of the site.

4. Specific Plan No. 40 Amendment No. 56, a request to remove the site from the boundaries of the East Valley Corridor Specific Plan.

5. Change of Zone No. 483, a request to amend the Zoning Map to change the zoning district designation of the site from “East Valley Corridor Special Development District (EV/SD)” to “Specific Plan No. 67”

6. A Socio-Economic Study prepared for the proposed development in accordance with Measure U.

7. Tentative Tract Map No. 20797, a request for authorization to: vacate the existing segment of Tennessee Street traversing the project site; dedicate a new segment of New York Street along the east side of the site; subdivide the site into 255 lots ranging in size from 2,006 to 6,256 square feet (2,737 square feet on average) for single-family residential development, one 0.41-acre lot for multi-family residential development, and 13 lettered lots totaling 4.54 acres for open space and storm water treatment; and dedicate approximately 8.62 acres as public right-of-way for street purposes. (Development Services Director Reilly)

SYNOPSIS:

1. General Plan Designation	Commercial
2. Existing Zoning	Special Development (EV/SD) District of the East Valley Corridor Specific Plan
3. Surrounding Zoning	North: Science Research Park (EV/SRP) district of the East Valley Corridor Specific Plan; Bergamot Specific Plan (Specific Plan No. 64) South: Concept Plan No. 4, East Valley Corridor Specific Plan East: Heritage Specific Plan (Specific Plan No. 62) West: Route 210
4. Existing Land Use	Vacant (presently, Tennessee Street bisects the project site)
5. Surrounding Land Use	North: Single-family residential; Citrus Valley High School South: Vacant parcels East: Single-family residential West: Route 210
6. Area / Topography	36.3 acres and flat topography
7. Environmental Determination	A Mitigated Negative Declaration has been prepared for the project in accordance with section 15074 of the CEQA Guidelines.
8. Socio-Economic Cost / Benefit Study	A Socio-Economic Cost/Benefit Study has been prepared, and it concludes that the project would neither create unmitigated physical blight within the City nor overburden public services. The cost/benefit model returns an annual revenue-to-cost ratio of 1.97, with approximately $398,315 in annual residential revenues to the City and $202,486 in annual recurring costs, resulting in an estimated annual surplus of $195,829. These fiscal estimates are based on the City's currently approved cost/benefit model, which has not been updated to reflect citywide revenue and cost projections for the current fiscal year.
9. Planning Commission Submittal Dates	Date Submitted: June 23, 2025 Date Accepted as Complete: July 23, 2025 Planning Commission Meetings: October 13, 2026 October 27, 2026

PROPOSAL:

The applicant requests approval to subdivide approximately 35.3 acres located east of Route 210, north of West San Bernardino Avenue, south of West Pioneer Avenue and west of Tract 20257 (see Attachment A) for the development of 255 single-family residences, one seven-unit multifamily (townhouse) residence, and related improvements.

The project site is currently zoned for nonresidential use under the East Valley Corridor Specific Plan. To enable the proposed residential development, the applicant seeks various legislative approvals to rezone the project site for residential use under a proposed specific plan entitled "Pioneer Park Specific Plan."

BACKGROUND:

The site is currently vacant and in a disturbed state as a result of past agricultural activities and recurrent weed removal. Until the early 2000s, the site was historically used for commercial citrus production as evidenced by historical aerial photographs. The segment of Tennessee Street presently passing through the site was built circa the early 1980s.

ANALYSIS:

A) General Plan Consistency

According to the General Plan Land Use Map, the project site is designated "Commercial" (see Attachment B). The project proposes to change the site designation to "Medium Density Residential" which allows up to 15 dwelling units per gross acre. Under the proposed specific plan, buildout would be 282 dwelling units (275 single-family plus seven multi-family) across 35.31 gross acres, resulting in an area-wide density of approximately eight dwelling units per gross acre; the actual density proposed by the tentative map is slightly less at 255 single-family lots. This density and the proportion of housing types is consistent with the Medium Density Residential designation, as well as the citywide Measure U policy to plan proportionally for a housing mix of 75 percent single-family and 25 percent multi-family. In addition, Measure U necessitates special findings to be made by the City Council because the affected land was in active agricultural production in November 1986. Staff believes these findings can be made; refer to the "Findings" section of this report for the full analysis regarding farmland conversion.

Furthermore, the proposed residential designation is compatible with the surrounding uses, which include "Medium Density Residential" to the north and southeast, "Commercial" to the south, and "Low Density Residential" to the east. With approval of the proposed land use map amendment, the project would be consistent with applicable General Plan objectives and policies, particularly those concerning small-lot residential development as follow:

> Action 2-A.14: Use development standards to ensure smooth transitions for neighborhoods that border one another so that neighborhoods maintain their unique qualities while being compatible with one another.
>
> Action 2-A.17: Establish meeting areas in new neighborhoods, and ensure a safe and secure environment.
>
> Action 2-A.19: Develop entryways and gateways that define Redlands’ major points of entry.
>
> Action 2-A.67: Permit densities, design, and uses that will help preserve the character and amenities of existing older neighborhoods.
>
> Policy 2-P.18: Reinforce Redlands’ identify as a “Tree City” through cohesive streetscapes that enhance its sense of place and its heritage, and that promote pedestrian comfort.
>
> Action 4-A.7: Promote a range of residential densities to encourage a mix of housing types in varying price ranges and rental rates.
>
> Policy 4-P.16: Promote a variety of housing types to serve the diverse needs of the community.
>
> Action 4-A.8: Promote the development of a greater variety of housing types, including single-family homes on small lots, accessory dwelling units, townhomes, lofts, live-work spaces, and senior and student housing to meet the needs of future demographics and changing family sizes.

Finally, the segments of San Bernardino Avenue and Pioneer Avenue adjacent to the project site are classified as a Major Arterial and a Collector (respectively) according to the General Plan circulation element. Based on review of the General Plan land use amendment and a project-specific traffic study prepared by the City's traffic consultant, staff determined that reclassification of General Plan roadways is not necessary. The roadway specifications under the Pioneer Park Specific Plan are consistent with those in the General Plan.

B) East Valley Corridor Specific Plan Amendment and Rezoning

The project site is currently located in the Special Development (EV/SD) district of the East Valley Corridor Specific Plan which allows for a variety of nonresidential uses including commercial, institutional, and open space. Under the proposal, the project site would be removed from the East Valley Corridor Specific Plan and placed into the Pioneer Park Specific Plan (if approved), as described in the following section.

The Pioneer Park Specific Plan would divide the site into two land use (zoning) districts: a 30.56-acre single-family residential district in which up to nine dwelling units per acre would be permitted (275 units overall), and a 0.42-acre multi-family residential district in which up to 17 dwelling units per acre would be permitted (seven dwelling units overall) for an overall net residential density of approximately 9.1 units per acre. The proposed residential land use districts are compatible with the surrounding zoning districts, which include commercial and single-family residential to the north (East Valley Corridor and Bergamot Specific Plans), single-family residential to the east (Heritage Specific Plan), and commercial across the right-of-way to the south (East Valley Corridor Specific Plan). The proposed density is comparable to previously approved small-lot residential developments throughout the City including Specific Plan No. 56 "Orangewood Classics" (7.6 d.u./acre), Specific Plan No. 57 (8.5 d.u./acre), Specific Plan No. 55 "Citrus Collection (9.6 d.u./acre), Heritage Specific Plan (5.7 d.u./acre), and Bergamot Specific Plan (5.4 d.u./acre).

C) Pioneer Park Specific Plan

The applicant has prepared a new specific plan ("Pioneer Park Specific Plan" or "the Specific Plan") to implement the proposed General Plan land use designation for the site and to enable subdivision of the site for residential development purposes. The Specific Plan envisions the project area as a well-designed residential neighborhood with a variety of housing options and connections to open space and recreational areas. As the proposed planning framework for the area, it would establish a special set of policies and development standards for the project area.

As mentioned above, the Specific Plan would reserve most of the project area for single-family residential development. Multi-family residential development would be allowed in a small portion of the northeast corner of the project area, east of the proposed New York Street right-of-way. In terms of circulation, the Specific Plan envisions a backbone road network consisting of San Bernardino Avenue to the south (existing east-west arterial), Pioneer Avenue to the north (existing east-west collector) and New York Street to the east (proposed north-south collector). New local streets would serve the new single-family residential development, and one point of full access would be provided to each backbone street. A new bus stop would be provided on the north side of San Bernardino Avenue according to the proposed circulation plan.

The Specific Plan is structured to accommodate a variety of single-family housing product types including conventional lots as well as clustered lots on shared private courts and alleyways. A summary of the development standards proposed by the Specific Plan, including lot size and dimensions, building setbacks, maximum coverage and building height is provided below.

Table 1: Summary of proposed Specific Plan development standards.

Development Standard	Single-Family	Multi-Family
Min./Max. Residential Density	8-9 units per acre	16-17 units per acre
Minimum Lot Area	2,000 sq. ft.	18,000 sq. ft.
Maximum Lot Coverage	65 percent	35 percent
Minimum Lot Depth	50 ft	N/A
Minimum Lot Width	30 ft	N/A
Maximum Building Height	2.5 stories or 35 ft	2.5 stories or 35 ft

Minimum Building Setbacks		
Front	3 ft	15 ft
Side	4 ft	10 ft
Street Side	3 ft	10 ft
Rear	10 ft	10 ft
Garage/Carport	3 ft or 18 ft	20 ft
Minimum Off-Street Parking	2 covered spaces per unit	1.5 spaces per unit; plus 1 guest space per 2 units (can be uncovered)
Minimum Private Outdoor Living Space	N/A	50 sq. ft. per unit
Minimum Common Outdoor Living Space	200 sq. ft. per unit	200 sq. ft. per unit

In addition, the Specific Plan establishes a comprehensive set of guidelines regarding site planning, architecture, fencing and landscaping to ensure that new development in the area is cohesive. The Specific Plan provides photograph examples of preferred architectural styles including Craftsman, Farmhouse, Monterey, Regency and Spanish. Single-family floor plans and architectural styles would be varied throughout the subdivision to avoid repetitive architecture, and the proposed architectural guidelines discourage boxy, monotonous buildings.

Regarding implementation, the Specific Plan would authorize the Development Services Director to conduct site plan approval and architectural review for new development in the plan area. This ministerial procedure is consistent with the current provisions of the zoning code, which allow administrative review and approval of detached residential construction on existing lots. By extension, however, development in the multi-family residential district would also be administratively reviewed under the proposed procedural framework.

D) Tentative Tract Map 20797

The legislative requests (i.e., the general plan amendment, specific plan adoption and rezoning) are accompanied by a development application seeking approval of Tentative Tract Map No. 20797, a proposed major residential subdivision that is designed in conformance with the proposed Specific Plan. Specifically, the subdivision would consist of 255 single-family residential lots ranging in size from 2,006 to 6,256 square feet with an average lot size of 2,737 square feet; one 0.41-acre multi-family residential lot; and 13 open space lettered lots all to be maintained by a property owners' association, including three lots (C, E and H) for use as private parks, two lots (A and D) for use as storm water detention basins, multiple lots for use as private driveways and alleys, and multiple lots for use as street perimeter landscaping. The tract map would vacate the segment of Tennessee Street that currently traverses the project site and would replace it with a new segment of New York Street (that includes an 11-foot-wide multi-use trail) running north-south along the east edge of the tract. Furthermore, the tract map would dedicate additional right-of-way along Pioneer and San Bernardino Avenues to meet the planned ultimate roadway widths specified in the General and Specific Plans.

Land Use and Circulation

The single-family residential area of the subdivision would be accessed by three entrances, one each on Pioneer Avenue, San Bernardino Avenue and New York Street. Individual single-family lots would be accessed by new, dedicated local streets arranged in a curvilinear grid and shared private driveways. Overall, the north half of the single-family area would consist of lots in a clustered arrangement, whereas the south half would reflect a more conventional detached residential development pattern.

The multi-family lot of the subdivision is located on the southeast corner of Pioneer Avenue and New York Street. Although there is no immediate development plan for the multi-family lot, the tentative map shows the layout of a conceptual town home development including a parking area accessed by a single driveway on New York Street. According to the multi-family density standards of the Specific Plan, the proposed lot could accommodate up seven dwelling units overall.

Single-family lots on the west side of the tract would immediately abut the northbound on-ramp to Route 210. Although the tentative map does not reserve an open space buffer between the residential lots and the freeway right-of-way, it features a block wall (ranging in height from 9'-6" to 11'-6" measured on the freeway side) to serve as a noise barrier along its west edge . Moreover, the distance between the freeway surface and the nearest proposed residential lot (Lot 74) is roughly 200 feet, and there is a grade difference and existing vegetation (e.g., pepper trees) within the Caltrans right-of-way that would help attenuate noise generated from freeway traffic. To study this land use adjacency issue with respect to pollution impacts, the department commissioned EPD Solutions, Inc., to prepare an operational Health Risk Assessment (HRA) (see Attachment G) to evaluate the potential for health impacts on future residents of the subdivision resulting from freeway-related diesel emissions. The HRA concludes that emissions from Route 210 would not result in cancer or non-cancer health risks exceeding public health thresholds set by the South Coast Air Quality Management District.

Landscaping, Open Space, and Fencing

The subdivision would include approximately 3.83 acres of open space (excluding storm water detention basins), or 12.4 percent of the net tract area, including an approximately 1.1-acre central park west of the tract entrance from New York Street, an approximately 12,000 square-foot park at the southeast corner of Pioneer Avenue and New York Street, and an approximately 2,242 square-foot pocket park south of the tract entrance from Pioneer Avenue. Other open space lots would be provided throughout the single-family area and serve as landscaped buffers between residential lots and internal streets, as well as along the tract perimeter between the residential lots and adjacent right-of-way at the following widths: 13 feet on Pioneer Avenue, 25 feet on San Bernardino Avenue, and 10 feet on New York Street.

The Specific Plan outlines development standards and guidelines for fencing and landscaping. According to the tentative map, decorative block walls will be provided along the tract perimeter. Furthermore, the Specific Plan calls for decorative block walls to be provided to separate areas of public and private use, as well as aluminum or block wall fencing between private parcels if desired. While open space areas (excluding storm water facilities) would be fully landscaped with drought-resistant plantings from a common plant palette, the central park (Lot E) would feature functional amenities including play structures and seating to support recreational use. Tract tree species consist of Dwarf Strawberry, Western Redbud, Camphor, Chinese Flame tree, Brisbane box, Sycamores, Coast Live Oak and Pink Dawn Chitalpa.

According to the Specific Plan phasing guidelines, landscaping and related improvements for the common open space areas (i.e., Lots C, E and H) are expected to be installed prior to issuance of certificates of occupancy for 50 percent of the total residential units. In particular, the proposed design guidelines call for the central park to feature amenities, such as play structures, seating or bicycle racks, to support active use by residents.

Inclusionary Housing

As a residential development including more than 10 dwelling units, the project is subject to the inclusionary housing requirements under chapter 18.230 of the Redlands Municipal Code (RMC). As allowed by-right for for-sale developments to fulfill the inclusionary obligation pursuant to RMC section 18.23.110(A)(1), the applicant is opting to pay an in-lieu fee that is based on "saleable" floor area (per Council Resolution 8528) according to the submitted inclusionary housing plan (Attachment I).

Traffic Study and Off-Site Improvements

A traffic study (Attachment H) was prepared to fulfill Measure U requirements applicable to new development projects. Specifically, Measure U requires new developments to study and mitigate adverse impacts on traffic levels of service (LOS) on affected roadways. The traffic study, which assesses the expected impacts of the proposed development on surrounding roadways including eleven intersections, concludes that the project would not adversely affect LOS upon implementation of the following recommended improvements:

- Install new traffic signals at the following intersections:
  - W. Pioneer Avenue/New York Street (planned)/Citrus Valley High School entrance driveway
  - W. San Bernardino Ave/New York Street (planned)

- Optimize existing traffic signals at the following intersections:
  - W. San Bernardino Avenue/210 Eastbound Ramps/Citrus Plaza Drive
  - W. San Bernardino Avenue/210 Westbound Ramps/Tennessee Street
  - W. Lugonia Avenue/Tennessee Street

- Implement lane configurations striping at affected intersections, per traffic study

The funding and completion of these improvements have been added as conditions of approval on the tentative map and will be the responsibility of the subdivider.

Socio-Economic Cost/Benefit Analysis

Staff has prepared a socio-economic cost/benefit study (Attachment J) in accordance with Measure "U." The study concludes that the proposed development would neither create unmitigable physical blight nor overburden public services. The cost/benefit model returns an annual revenue-to-cost ratio of 1.97, with approximately $398,315 in estimated annual residential revenues to the City and $202,486 in estimated annual recurring costs, resulting in an estimated annual surplus of $195,829. These fiscal estimates are based on the City's currently approved cost/benefit model, which has not been updated to reflect citywide revenue and cost projections for the current fiscal year. The City has retained a consultant to comprehensively update the cost/benefit model. Additionally, the cost/benefit model does not account for revenues generated by Measure T, the local one-percent sales tax increase that has been in effect since 2021. The developer will also be required to pay all applicable Development Impact Fees (DIF) currently in effect at the time of permit issuance, as well as current Plan Check fees and other permitting fees, as a standard requirement on the project. Notwithstanding these factors, the broader regional social and economic benefits of increasing the housing supply are considered to outweigh the potential fiscal impacts of the proposed development, and the necessary findings for approval can be supported.

ENVIRONMENTAL REVIEW:

The City retained an environmental consultant (EPD Solutions, Inc.) to analyze the project and prepare an Initial Study in accordance with CEQA. In accordance with CEQA Guidelines, the Initial Study/Mitigated Negative Declaration ("IS/MND" or "CEQA Document") was made available for public review and comment for 30 days (State Clearinghouse Number 2026060272) following the filing of a Notice of Intent to Adopt a Mitigated Negative Declaration with the County Clerk and State Clearinghouse on June 9, 2026. The public review period was June 9, 2026 to July 9, 2026. The CEQA document was also made available on the City's website at https://www.redlands.gov/environmental-review/.

Mitigation Measures

The CEQA Document concludes that, upon implementation of seven mitigation measures regarding Biological Resources, Cultural Resources, Geology/Soils, and Tribal Cultural Resources, effects caused by the project would be less-than-significant. The identified measures have been added as recommended conditions of approval (i.e., requirements) upon the tentative map.

CEQA Comments

Three written comments were received during the CEQA Document review period. One letter, from the State Department of Toxic Substances Control, recommends that the City as Lead Agency identify potential contamination of the site due to its historic agricultural use. Two other letters were received from Native American Tribes; one from Yuhaaviatum of San Manuel Nation expressing agreement with the document's prescribed mitigation measures regarding tribal cultural resources, and one from Twenty-Nine Palms Band of Mission Indians stating the project site is located outside their traditional use area.

EPD Solutions, Inc. prepared an itemized response to the comments as well as errata to the CEQA Document in response to the comments received. Because the comments did not warrant changes to the analysis or conclusions of the CEQA Document, re-circulation of the document was not necessary.

FINDINGS:

Below are the necessary findings for the various project approvals, including the rezoning, farmland conversion, socioeconomic evaluation, and tentative subdivision map in accordance with the General Plan, Measure U, and the Municipal Code.

Findings for Rezoning and Farmland Conversion

Section 18.200.060 of the Redlands Municipal Code states, "in considering any request for a change of zone, the commission shall satisfy itself, before recommending to the city council that the change be granted, that the proposed change of zone is in conformity with the general plan of the city, and that the proposed change of zone is rescinded related to the public health, safety or general welfare." These following suggested determinations are provided for these findings.

1. The proposed change of zone is in conformity with the general plan of the city because the applicable General Plan land use designation (as proposed for amendment) area to be rezoned is "Medium Density Residential" which designates areas intended to be developed at up to 15 dwelling units per acre for the development of attached, detached and/or mixed residential uses with a range of densities and housing types. Therefore, the change of zone from the existing commercial zone (East Valley Corridor Special District EV/SD) to residential (Pioneer Park Specific Plan) conforms to the General Plan

2. The enactment of the proposed change of zone is for the betterment of the public health, safety and general welfare because the Pioneer Park Specific Plan establishes development standards, land use regulations, and community design guidelines that ensure residential development is appropriately scaled, located, and designed in relation to surrounding uses. These provisions minimize the potential for land use conflicts and promote compatibility with adjacent development. Additionally, features of the proposed zoning district include lot size minimums, roadway layout and buffering requirements that are aimed at supporting safe and efficient circulation, functional site planning and an orderly residential neighborhood, void of haphazard development.

Furthermore, Section 4.40s of Measure U prohibits the rezoning of land to greater residential densities than that permitted in the R-E, Residential Estate zoning district for any land that was in active agricultural production on November 3, 1986, regardless of zoning, unless specified findings are made. The R-E zoning district has a minimum lot size of 14,000 square feet, and a maximum density of approximately 3.1 units per acre. The City Council is authorized to approve rezoning to higher densities with a 4/5 vote of the total authorized membership of the City Council upon making specified findings. The following findings are accompanied by a suggested determination.

1. *There are substantial and overriding economic or social benefits to the City and its residents and taxpayers from the proposed density increase.*

   Under the current zoning designation, it is a policy of the East Valley Corridor Specific Plan to preserve existing viable agricultural activities as long as feasible while the area transitions to more intensive uses. Continued agricultural production within the area is constrained, as evidenced by aerials showing that the total removal of citrus groves from the site having occurred by 2005, the conversion of the site to development would be consistent with the intent of the East Valley Corridor Specific Plan which ultimately

envisions urban development.

The additional housing units would increase city revenues, primarily through real property tax, to fund infrastructure and public services and would serve as a direct economic benefit, particularly because the development would connect to existing infrastructure in the project area and would significantly improve the infrastructure through roadway improvements. As part of the project, the builder(s) would also pay development impact fees to offset the costs of infrastructure and public services including police, fire, parks and library. In addition, the broader regional social and economic benefits of increasing the housing supply are considered to outweigh the potential fiscal impacts of the proposed development.

The proposed development would effect social benefits by providing private common open space including three parks for residents to use for gathering and recreation. In addition, the proposed small-lot development would be consistent with General Plan policies and is aimed at expanding the citywide housing supply to serve a mix of household income levels.

2. *The proposed density increase will not cause adverse environmental impacts, either individually or cumulatively, directly or indirectly.*

   According to the initial study and mitigated negative declaration prepared for the project pursuant to CEQA, the environmental analysis concludes that density increase would not cause significant adverse environmental impacts upon implementation of seven mitigation measures which are included as conditions of approval on the tentative map.

3. *The proposed density increase will not convert viable agricultural land to non-agricultural uses.*

   The proposed density increase will not convert viable agricultural land to non-agricultural uses because sustained agricultural use of the land is constrained due to economic factors. Firstly, the subject property is vacant and unimproved, and currently has no active agricultural use. Additionally, the area surrounding the project site is urbanizing, with development to the north, east and west, as well as an approved Concept Plan for commercial development to the south. Aerial images indicate that citrus farmland was previously converted to development which in turns creates further development pressure to develop since scaled production and harvest efficiency are compromised by the cumulative reductions in available farmland acreage. According to the initial study and mitigated negative declaration, the project site is not designated as prime farmland, unique farmland, farmland of statewide importance or farmland of local importance by the California Department of Conversation, and is only identified as grazing land. For these reasons, sustained agricultural production on the project site is nonviable.

4. *The proposed density increase will not have a growth-inducing effect on other property.*

   The proposed density increase will not induce growth on other property because, as an infill site, the site of the proposed density increase is surrounded on all sides by existing development except for the property to the immediate south, which is vacant and zoned for nonresidential, commercial uses. The site of the proposed density increase is currently zoned for urban (commercial) use and is partially developed with a dedicated public street (Tennessee Street) which bisects the project site.

5. *The resulting use will be compatible with uses on adjacent land.*

   The proposed use is compatible with the existing residential use to the east, the high school and residences to the north, and the freeway to the west because it will feature a similar building scale, neighborhood character and density as neighboring uses, and the development will feature a perimeter wall to attenuate noise caused by freeway traffic.

6. *The proposed density increase will not require substantial expansion of public infrastructure, facilities or services.*

The proposed density increase will not require substantial expansion of public infrastructure, facilities or services because, as an in-fill site, the site is located within an area that is presently served by infrastructure, wet and dry utilities and general public services including police, fire, and schools. The builder would be required to pay development impact fees for transportation and infrastructure improvements, public service facilities, and school district fees. Furthermore, the proposed development is located on an in-fill development site and thus no major infrastructure expansions are necessary to serve it.

Findings for Socio-Economic Cost/Benefit Study

According to Section 2-A of Measure U, unless otherwise approved by at least a four-fifths vote of the City Council, a development project may be approved only if the socioeconomic study finds and determines that:

1. *The development project will not create unmitigated physical blight within the City or overburden public services, including without limitation the sufficiency of police and fire protection; and*

   The proposed development would neither create unmitigated physical blight within the City nor overburden public services, including sufficient police and fire protection services. The proposed residential development would be compatible with surrounding residential developments to the north and east, and all necessary on-site and off-site improvements will be constructed in accordance with City standards, to include undergrounding of utilities pursuant to the City of Redlands subdivision regulations. The developer will pay their fair share of development impact fees (including applicable Police and Fire fees), and the project would not result in physical blight. The benefits of the proposed development to the City outweigh any direct cost to the City that may result, based on the information and conclusions of the socio-economic study prepared for the project.

2. *The benefit of the development project to the City outweighs any direct cost to the City that may result.*

   The cost/benefit model returns an annual revenue-to-cost ratio of 1.97, with approximately $398,315 in annual residential revenues to the City and $202,486 in annual recurring costs, resulting in an estimated annual surplus of $195,829. These fiscal estimates are based on the City's currently approved cost/benefit model, which has not been updated to reflect citywide revenue and cost projections for the current fiscal year. The City has retained a consultant to comprehensively update the cost/benefit model. Additionally, the cost/benefit model does not account for revenues generated by Measure T, the local one-percent sales tax increase that has been in effect since 2021. Notwithstanding these factors, the broader regional social and economic benefits of increasing the housing supply are considered to outweigh the potential fiscal impacts of the proposed development, and the necessary findings for approval may be made.

Finding for Tentative Tract Map No. 20797

According to RMC section 17.07.070(C), a tentative map may be approved or conditionally approved by the approving body if it finds that the proposed subdivision, together with the provisions for its design and improvement, is consistent with the general plan, any applicable specific plan, and all applicable provisions of the Municipal Code. The tentative tract map is consistent with the general plan and the proposed Pioneer Park Specific Plan. Furthermore, upon adoption of the proposed specific plan, none of the denial findings under RMC Section 17.07.070(D) can be made as indicated by the following suggested determinations put forth by staff.

1. *The proposed map is consistent with the general plan or any applicable specific plan, or other applicable provisions of this code.*

   The proposed map is consistent with the General Plan, as proposed for amendment. The proposed “Medium Density Residential” land use designation allows for up to 15 dwelling units per acre and the proposed development features a net residential density of approximately 8.5 dwelling units per acre.

The tentative tract map is also consistent with the policies contained within the General Plan, as analyzed in the staff report. The proposed map will be consistent with the Pioneer Park Specific Plan (Specific Plan No. 67), which is being processed concurrently, and the Specific Plan's design guidelines and development standards will support development of the project. The proposed map will also be consistent with the applicable provisions of the Redlands municipal code.

2. *The site is physically suitable for the type of development.*

   The project site is physically suitable for the type of development. The site has a relatively flat grade with a very gradual slope (approximately 2%) towards the west over distance, the design of the subdivision and residential lots will generally follow the grade of the site, and will not require excessive grading or land forming. All off-site and on-site improvements proposed as part of the project's design will meet all City standards and provide a safe environment for existing and future residents, and is large enough at 35 acres to be subdivided into 256 residential lots (one multi-family, 255 single-family), with construction of the necessary on-site circulation, on-site landscaping, and private on-site recreational space. On-site and off-site improvements proposed as part of the project's design will ensure the property is compatible with adjacent developments and mitigate potential impacts on traffic and other environmental factors to a level that is less than significant.

3. *The site is physically suitable for the proposed density of development.*

   The maximum density allowed within the "Medium Density Residential" land use designation is fifteen units per acre. The proposed development features a net residential density of approximately 8.5 dwelling units per acre. The project site is relatively flat in topography, and the design of the subdivision will generally follow the grade of the site without the need for excessive grading. All on-site and off-site improvements proposed as part of the project's design will meet all City standards and provide a safe environment for existing and future residents. The Pioneer Park Specific Plan is designed with approximately 4.6% of the land area for common, recreational open space, and Coyazo Park is located 1,350 feet to the north of the subject property. The City's current population is approximately 74,000 residents and the ratio of existing parkland acres per 1,000 residents is 5.7, which exceeds the General Plan's parkland/recreational space goal for 5.0 acres per 1,000 residents, and the developer will pay applicable development impact fees (including fees for parks). As such, the site is physically suitable for the density of development proposed.

4. *The design of the subdivision or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.*

   The design of the subdivision and proposed improvements is not likely to cause substantial environmental damage or injure fish or wildlife or their habitat. Based on the initial study that has been prepared for the project, there are no environmental factors that cannot be mitigated to a level that is less than significant. The initial study/mitigated negative declaration lists mitigation measures for biological resources including pre-construction surveys for sensitive species. As such, the project is not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

5. *The design of the subdivision or the type of improvements are not likely to cause serious public health problems.*

   The design of the subdivision and the type of improvements are not likely to cause any serious public health problems. An air quality analysis including health risk assessment was prepared for project, and the project will be required to comply with all local, state, and federal laws addressing air quality impacts. The analysis found that the project would have a less than significant impact on air quality and health risks, and will be required to comply with standard rules and regulations of the South Coast Air Quality Management District. The nature of the residential use does not involve any substantial amounts of hazardous materials, and would not cause serious public health problems.

6. *The design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision.*

The project will improve access in the immediate vicinity by installing public improvements such as sidewalks along West San Bernardino Avenue, West Pioneer Avenue, and a new segment of New York Street (project site frontages). Improvements and sidewalks will also be installed throughout the interior of the development as a standard requirement. Additionally, private streets, drive aisles or driveways, and pedestrian access points will be provided throughout the project site. The design of the subdivision will not conflict with any easements on or through the proposed subdivision, and the related street vacation of a portion of Tennessee Street right-of-way is being processed concurrently.

7. *That pursuant to California Government Code Section 66474.4, of the Subdivision Map Act, the land is not subject to a contract entered into pursuant to the California Land Conservation Act of 1965 ("Williamson Act").*

   The subject property is not under a Williamson Act Contract pursuant to the California Land Conservation Act of 1965, and will not be detrimental or otherwise affect lands in agricultural use.

RECOMMENDATIONS:

Based on the above analysis and findings, staff recommends that the Planning Commission adopts Resolutions Nos. 1761 and 1762 recommending that the City Council: adopt a Mitigated Negative Declaration with a mitigation monitoring and reporting program; approve the legislative applications including the Specific Plan Amendment, rezoning, and new Specific Plan No. 67; make socioeconomic findings and adopt the socio-economic cost/benefit study for Tentative Tract Map No. 20797; and approve Tentative Tract Map No. 20797.

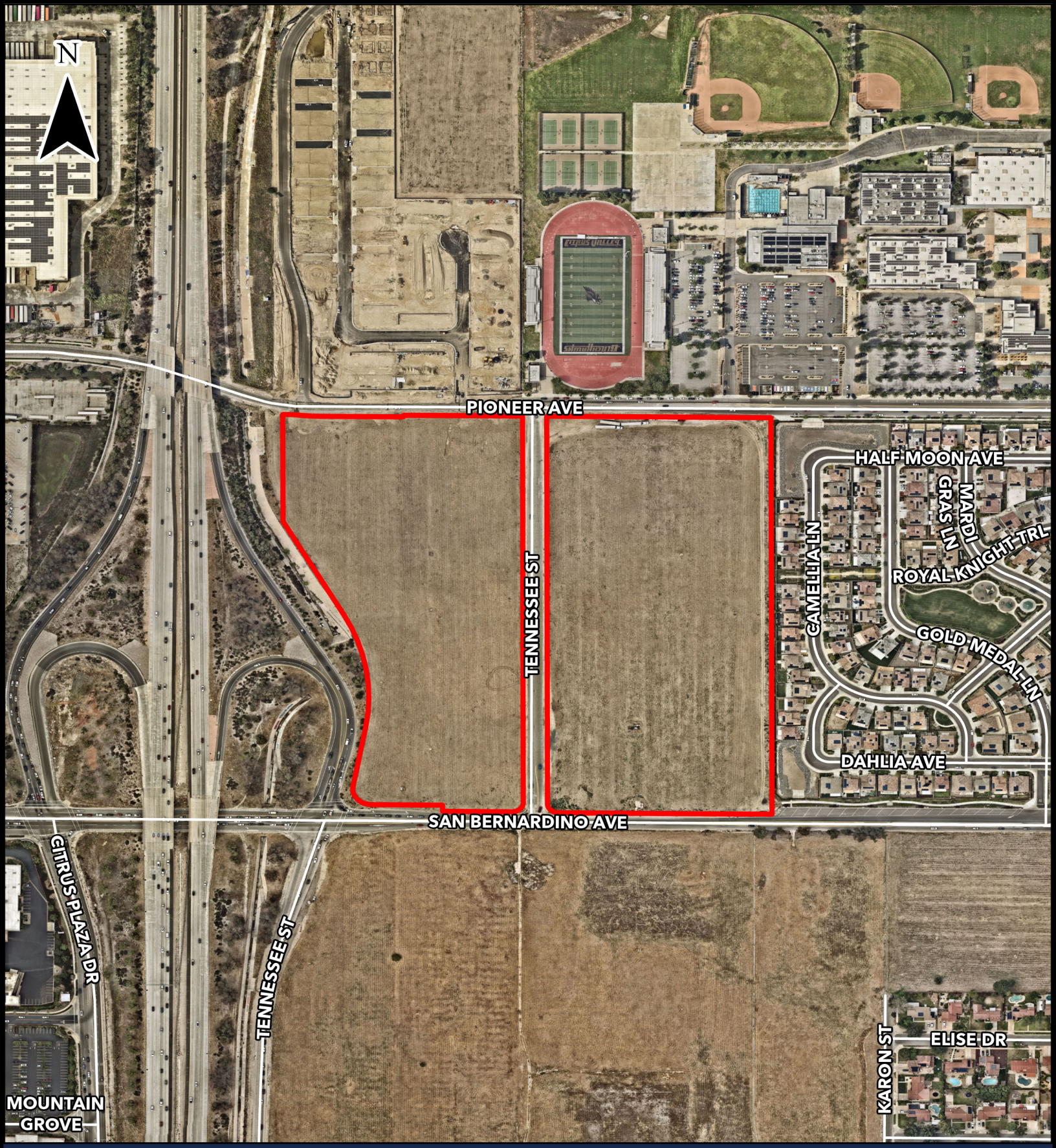
MOTION:

If the Planning Commission deems it appropriate, staff recommends the following motions:

"I move that the Planning Commission adopt Resolution No. 1761 and recommend that the City Council adopt a Mitigated Negative Declaration with a Mitigation Monitoring and Reporting Program for the project, and recommend approval for General Plan Amendment No. 150, Specific Plan No. 67, Amendment No. 56 to Specific Plan No. 40, and Zone Change No. 483; and,

I move that the Planning Commission adopt Resolution No. 1762 and recommend that the City Council adopt the socio-economic cost/benefit study and approve Tentative Tract Map No. 20797, based on the findings contained in the staff report and subject to the attached conditions of approval."

Attachments



City of Redlands

Project Site Aerial View

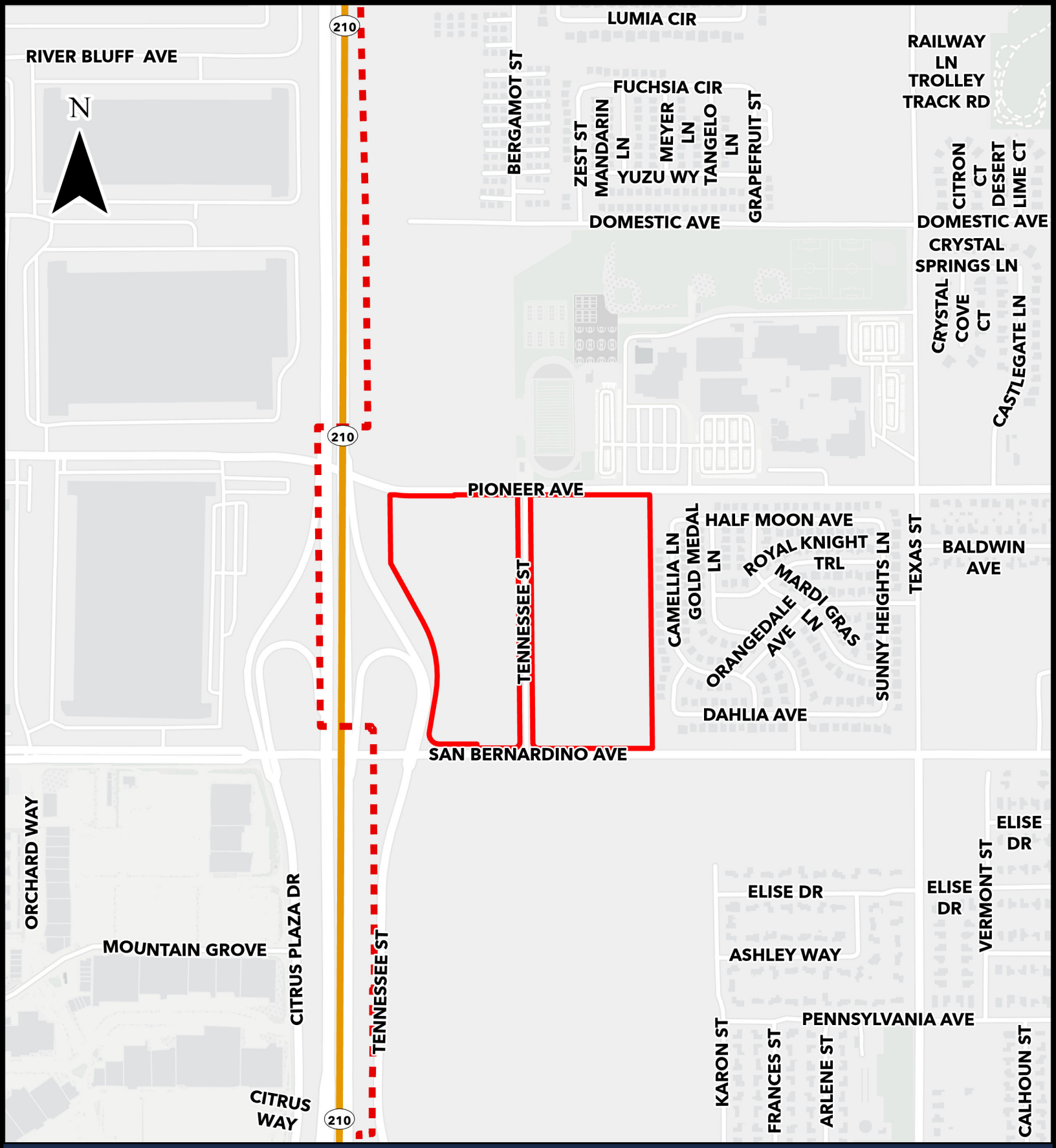
San Bernardino Avenue/Tennessee Street

Author: Redlands GIS *Date:* June 2026

0 400 800 Feet

Legend

Project site boundary



City of Redlands

Project Site Vicinity Map

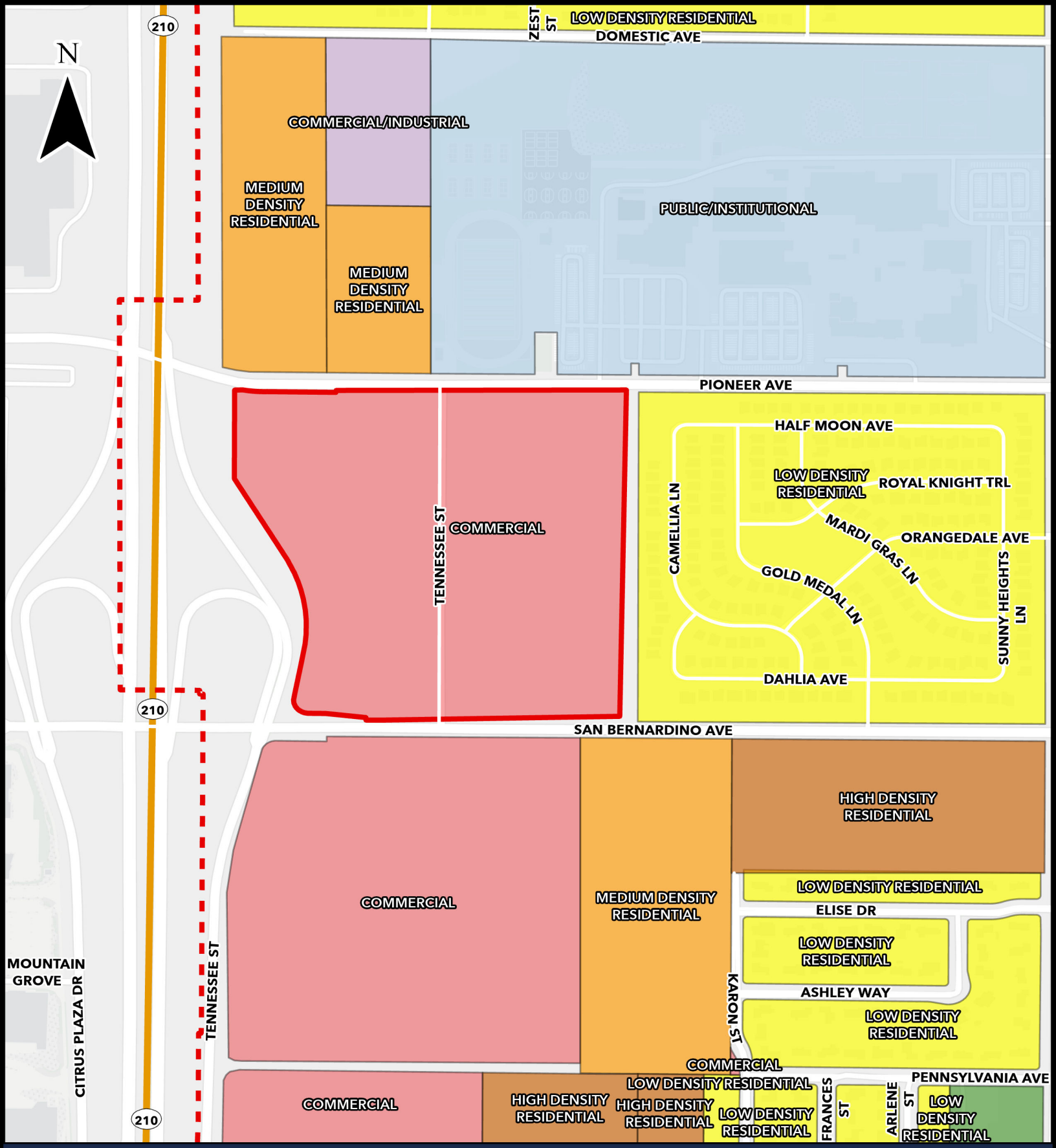
San Bernardino Avenue/Tennessee Street

Author: Redlands GIS *Date:* June 2026

0 600 1,200 Feet

Legend

- Freeways
- Project site boundary
- Redlands boundary



City of Redlands

Existing General Plan Map

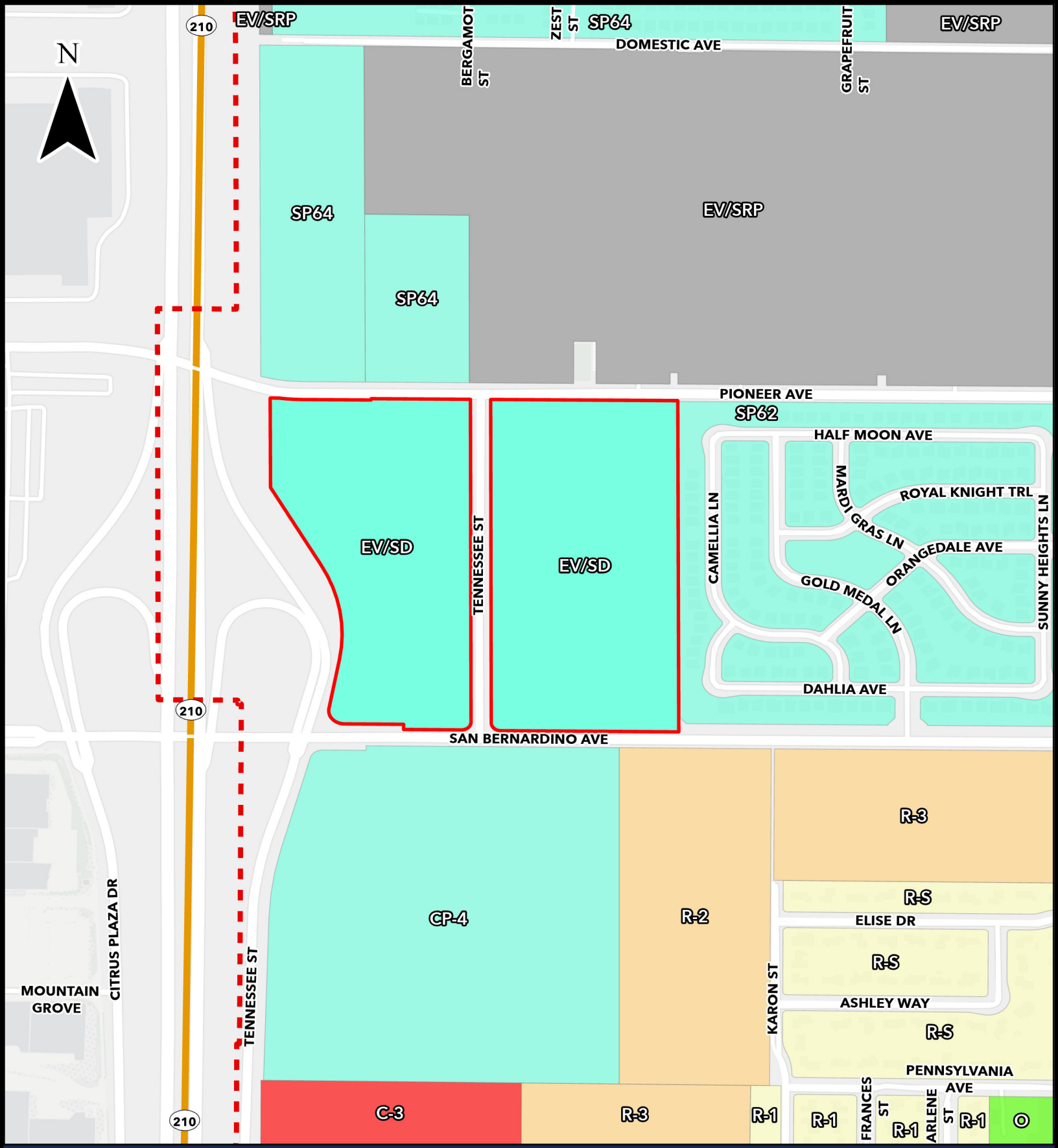
San Bernardino Avenue/Tennessee Street

Author: Redlands GIS *Date:* June 2026

Legend

General Plan Districts

- Commercial
- Commercial/Industrial
- High Density Residential
- Medium Density Residential
- Low Density Residential
- Public/Institutional
- Parks/Golf Courses
- Freeways
- Project site boundary
- Redlands boundary



City of Redlands

Existing Zoning Map (ZC 483)

San Bernardino Avenue/Tennessee Street

Author: Redlands GIS *Date:* June 2026

0 500 1,000 Feet

Legend

Zoning Districts

- Commercial (C-3)
- Industrial (EV-SRP)
- Multi-Family Residential (R-2, R-3)
- Open Space (O)
- Single-Family Residential (R-1, R-S)
- Specific Plan (CP-4, EV/SD, SP62, SP64)
- Freeways
- Redlands boundary

Pioneer Park Specific Plan

CITY OF REDLANDS, CA

PUBLIC REVIEW DRAFT | SEPTEMBER 2026



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Acknowledgments

City Council

Mario Saucedo, Mayor

Marc Shaw, Mayor Pro Tem

Paul Barich, Council Member

Eddie Tejeda, Council Member

Denise Davis, Council Member

Planning Commission

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Matthew Endsley, Vice Chair

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Maryn Wells, Commissioner

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1. Introduction

1. Introduction

1.1 Purpose and Intent

The Pioneer Park Specific Plan (PPSP) outlines a vision for the development of the Pioneer Park property, with a focus on land uses, development standards, and associated infrastructure improvements. The PPSP plans for a cohesive residential neighborhood with a variety of recreational features by customizing planning standards while remaining consistent with the City of Redlands General Plan goals for this area of the community. Under California Law (Govt. Code Sections 65450-65457), this Specific Plan provides a framework to apply regulations to achieve the desired community vision.

A. A Specific Plan shall include text and exhibits which specify all of the following in detail:
   1. The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.
   2. The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support land uses described in the plan.
   3. Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable.
   4. A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).
   5. The specific plan shall include a statement of the relationship of the specific plan to the general plan.

The PPSP has been prepared based on Specific Plan content requirements of the California Government Code Section 65451.

1.2 General Plan Consistency

A detailed analysis of the relationship of the PPSP to the City of Redlands General Plan is included in *Appendix B: General Plan Consistency*. The analysis discusses how the PPSP is consistent with goals and policies of the General Plan and its respective elements.

1.3 Relationship to Other City Policy Documents

The Redlands General Plan functions as a comprehensive guide that captures the City's long-term vision, outlining goals, policies, and strategies to direct its future development. This framework equips City staff and decision-makers with the tools to direct growth and transformation in a way that aligns with the City's overarching objectives. The Plan takes a multi-faceted approach to planning, addressing areas such as land use and urban design, housing, circulation and mobility, parks and open space, public safety, and infrastructure.

Adopted in 2017, the City of Redlands General Plan Land Use Element presents a vision for future development within the Specific Plan Area. The Specific Plan serves as a targeted framework to provide detailed guidance and regulation for development, ensuring that future projects adhere to the land use vision and established General Plan goals and policies.

The Pioneer Park property encompasses sites located within the East Valley Corridor Specific Plan (SP 40), which will be amended to remove this area from the existing specific plan in order to be placed into the PPSP. Upon adoption, the property will have a Medium Density Residential (MDR) General Plan land use designation and a Specific Plan (SP 67) Zoning Map Designation. Refer to *Exhibit 2-1: General Plan Land Use Designation* and *Exhibit 2-2*: *Zoning Map Designation*.



View looking east across the PPSP site

1.4 City Adoption Process

A specific plan is adopted by the City Council following review and recommendation from the Planning Commission. Both the Planning Commission, in an advisory capacity, and the City Council, in an approval role, have the authority to approve, deny, or modify a specific plan. Once approved, the specific plan implements the project site's land use designation.

1.5 Specific Plan Area

The PPSP consists of 35.31 gross acres of land and is located immediately to the east of Interstate 210 between West Pioneer Avenue and West San Bernardino Avenue, and to the west of Tract No. 20257, in the northwestern area of the City. The PPSP includes the following Assessor's Parcel Numbers (APNs): 016709109, 016709110, 016709111, and 016709112. Refer to Exhibit 1-1: Regional Map and Exhibit 1-2: Specific Plan Boundary.

Exhibit 1-1: Regional Map

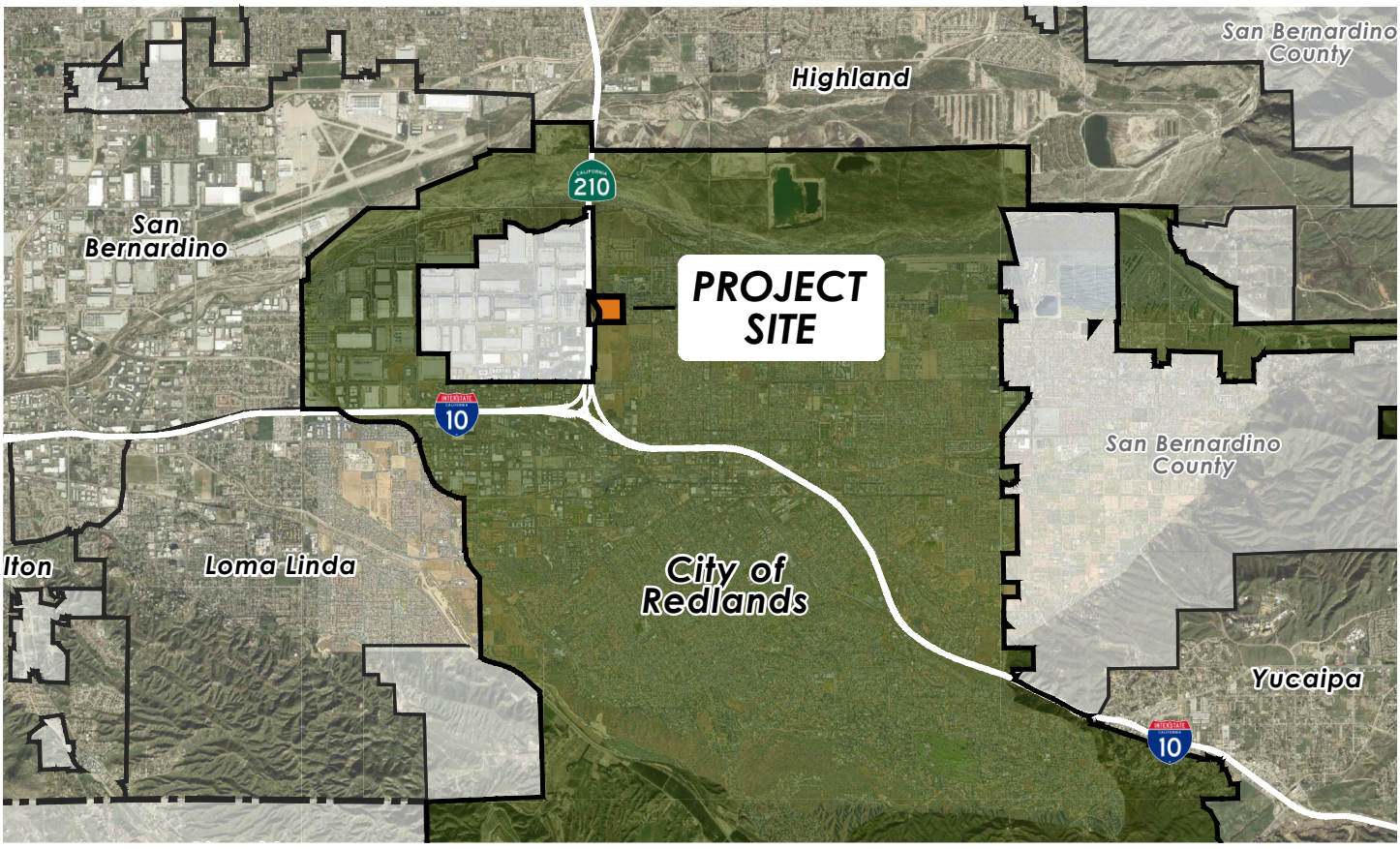


Exhibit 1-2: Specific Plan Boundary



1.6 Vision and Objectives

The vision for the PPSP is to create a thoughtfully designed residential neighborhood, offering a variety of housing options that seamlessly connect to open space and recreational areas. The site design arranges homes around private drives and motor courts with connections to common open space and recreational areas. Residential lots within the PPSP area are arranged in conventional small lot and motor court configurations with varying sizes and layouts. Each home includes private open space and connections to the sidewalk network and greater open space network. Parking is provided within individual garages, with on-street parking also available. Primary access to the project is through entries on West Pioneer Avenue, the proposed New York Street, and West San Bernardino Avenue. Refer to Exhibit 1-3: Conceptual Illustrative Site Plan.

The primary goal of the PPSP is to develop the Specific Plan area with complementary residential uses, aligning with the City's goal of enhancing the balance between jobs and housing by increasing the number of homes in the area. The following objectives will guide the design and character of the PPSP:

- ***Diverse Housing Options.*** *Provide a range of single-family and multiple-family homes to help meet the City's housing needs while also integrating a variety of product types to create a visually appealing neighborhood, offering diverse home options accommodating a wide range of lifestyles and needs.*
- ***Sense of Arrival.*** *Design entry drives to terminate into parks to create a strong visual focus and welcoming sense of arrival.*
- ***Site Design and Orientation of Homes.*** *Orient homes so that front porches face streets or open spaces when practical, creating enhanced streetscape presence or connection to open spaces.*
- ***Walkability and Connectivity.*** *Design pedestrian-friendly streets with sidewalks and closely connected blocks to encourage walking and make it easy for residents to navigate the neighborhood and adjacent community on foot.*
- ***Neighborhood Amenities.*** *Integrate neighborhood amenities including a centrally located recreational area, green belts, and two pocket parks to provide accessible and enjoyable outdoor spaces that promote healthy, active lifestyles for residents and visitors.*

Exhibit 1-3: Conceptual Illustrative Site Plan



1.7 Specific Plan Format

The PPSP is organized into five chapters and two appendices as follows:

Chapter 1: Introduction

This chapter provides an introduction and overview to the PPSP area and defines the legal authority provided under Government Code Section 65450-65457. The chapter also describes the project background, vision, and objectives.

Chapter 2: Land Use and Development Standards

This chapter stipulates permitted land uses and development standards applicable to the PPSP.

Chapter 3: Circulation and Mobility

This section focuses on the circulation and mobility networks that will support the future development within the PPSP.

Chapter 4: Infrastructure

This section describes the infrastructure systems and public services that will serve the future development within the PPSP.

Chapter 5: Administration and Implementation

This section describes the PPSP authority, implementation, development review process, and administrative procedures.

Appendix A: Design Guidelines

Appendix A provides guidance for the design of future homes to ensure consistency with the vision and objectives of the PPSP.

Appendix B: General Plan Consistency

Appendix B provides a detailed analysis demonstrating the relationship of the PPSP and how it achieves the goals and policies of the City of Redlands General Plan.

2. Land Use and Development Standards



2. Land Use and Development Standards

This chapter provides the permitted uses, development standards, and other zoning regulations that apply within the PPSP. All development with the Specific Plan boundary must comply with the requirements of the PPSP. If there is any conflict between the PPSP and the Redlands Municipal Code, the PPSP standards shall prevail. When the PPSP is silent on a particular matter, the relevant Redlands Municipal Code provisions shall apply. Where the language in this Specific Plan is undefined, the final interpretation and determination shall be made by the City's Director of Development Services; refer to *Chapter 5 - Administration and Implementation* for additional information.

2.1 General Plan Land Use Designation

The General Plan land use designation for the PPSP is Medium Density Residential (MDR), which allows for a range of single- and multiple-family housing types up to 15 dwelling units per acre (du/ac). Refer to *Exhibit 2-1: General Plan Land Use Designation*.

2.2 Specific Plan Zoning

The Zoning Map designation for the PPSP is Specific Plan (SP 67). Refer to *Exhibit 2-2: Zoning Map Designation*.

The PPSP zoning designations are depicted in *Exhibit 2-3: Pioneer Park Specific Plan Zoning Designations* and shall act as the implementing zoning for the PPSP area. It contains Single-Family Residential (PP-SFR) and Multiple-Family Residential (PP-MFR), as described further below.

Single-Family Residential (PP-SFR)

The purpose of the PP-SFR zone is to allow for the development of detached single-family residences, offering flexibility in accommodating traditional, small lot, and alley-loaded product types. Allowed density range of the PP-SFR zone is 8-9 du/ac.

Multiple-Family Residential (PP-MFR)

The purpose of the PP-MFR zone is to allow for the development of multiple-family apartments. Allowed density range of the PP-MFR zone is 16-17 du/ac.

Exhibit 2-1: General Plan Land Use Designation

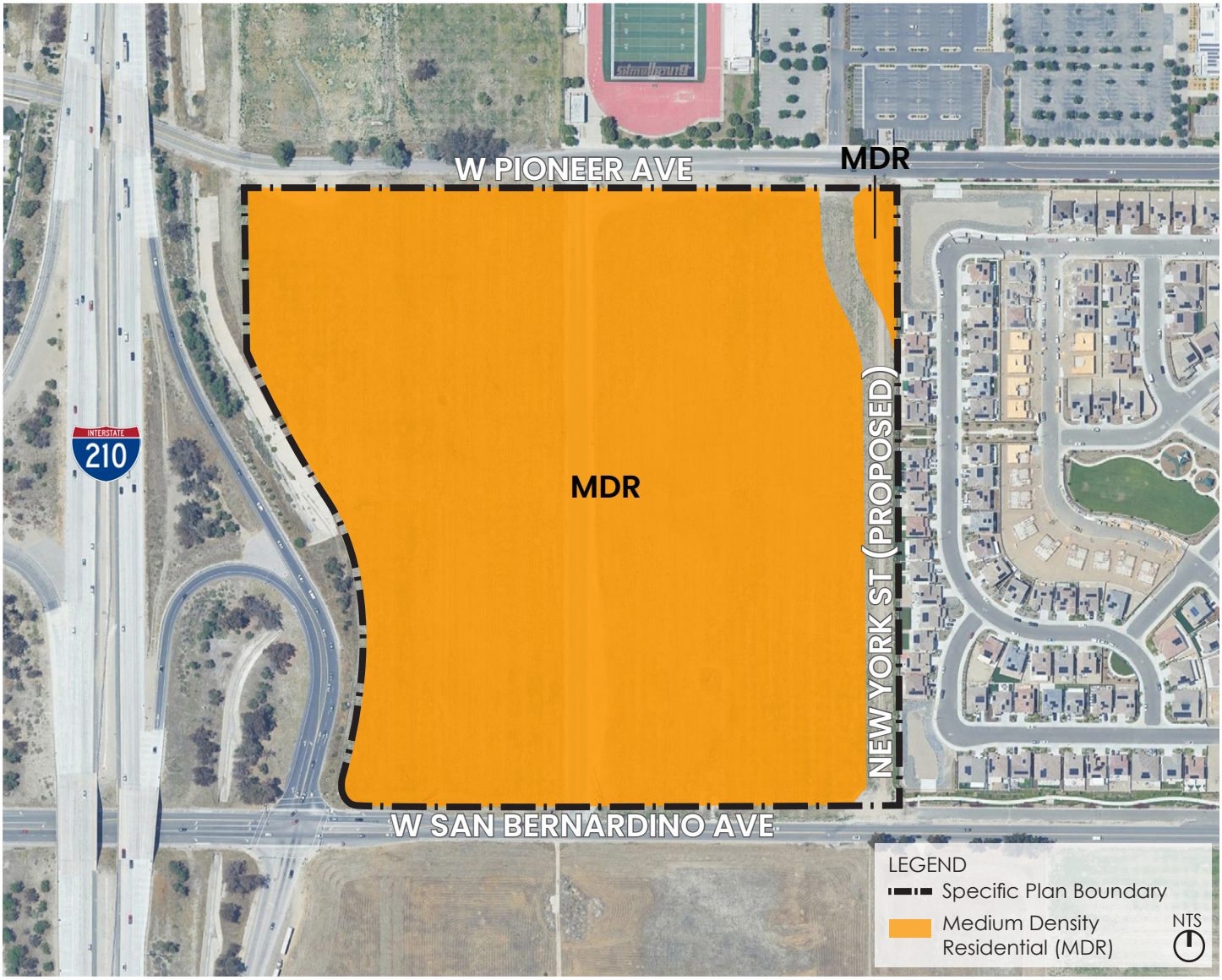


Exhibit 2-2: Zoning Map Designation

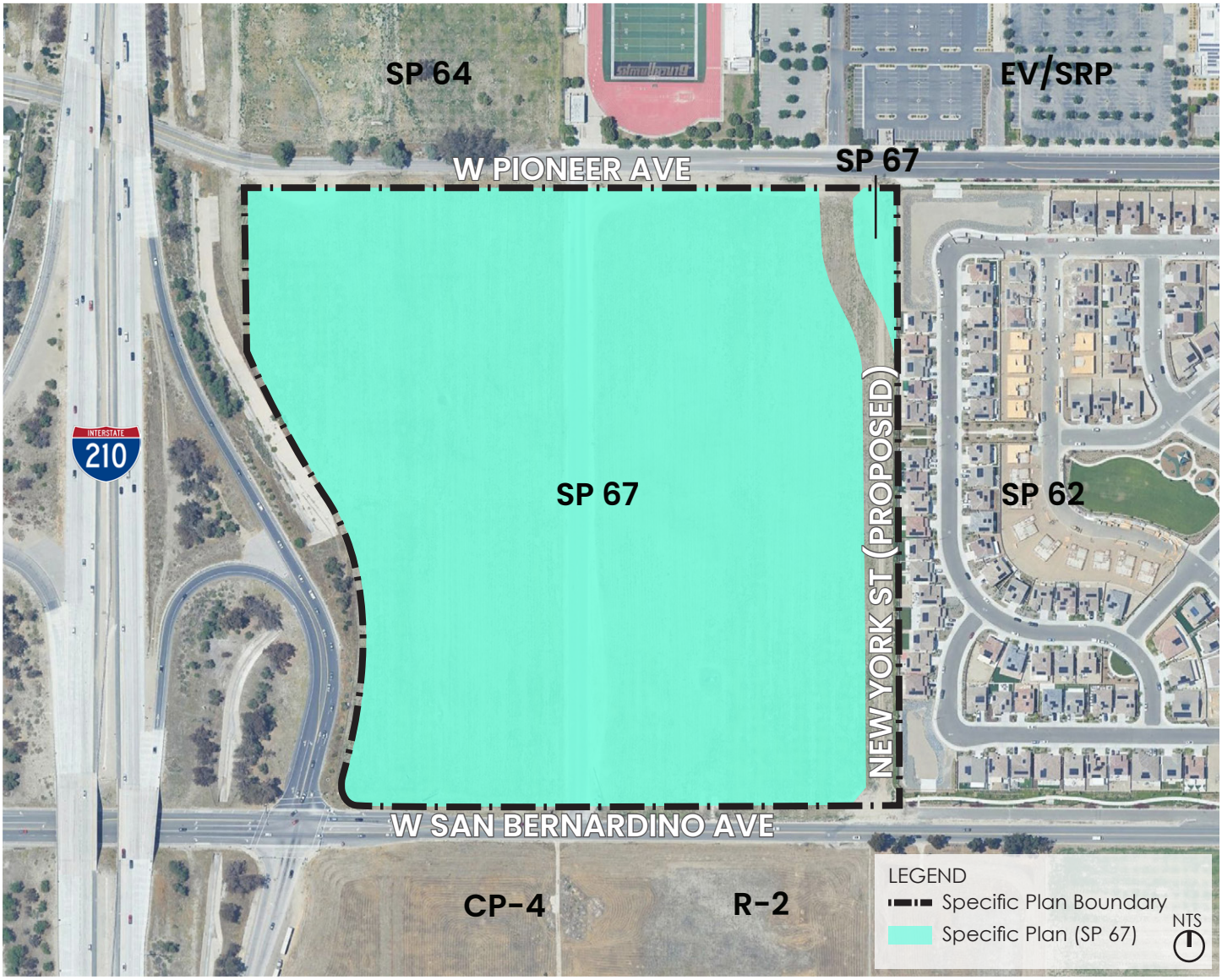
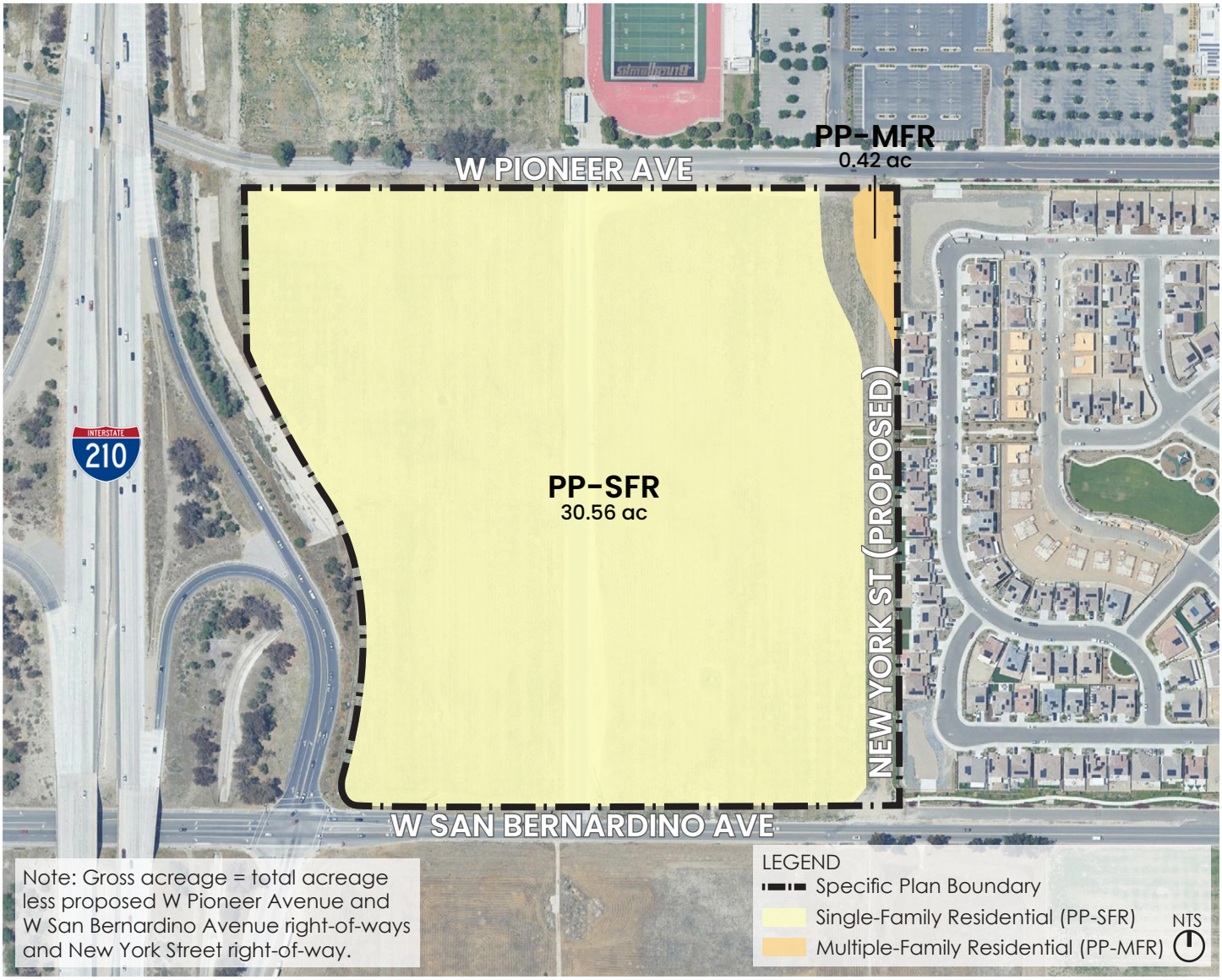


Exhibit 2-3: Pioneer Park Specific Plan Zoning Designations



2.3 Permitted Uses

Permitted uses by zone are identified in *Table 2.1a: Permitted Uses* and *Table 2.1b: Other Permitted Uses*.

Table 2.1a: Permitted Uses

	PP-SFR	PP-MFR	Notes
Principal Use			
Multiple-Family Dwellings	-	P	Of three (3) units or more, in either one (1) structure or a group of structures
Single-Family Dwellings	P	-	Not to exceed one (1) dwelling unit per parcel
Accessory Use			
Accessory Building	A	A	Such as a bathhouse, cabana, and storage shed
Accessory Dwelling Unit (ADU) or Guest House	A	A	Consistent with applicable State law or City ordinance
Garage or Carport	A	A	
Home Occupation	A	A	As defined in and subject to the requirements of the Redlands Municipal Code
Private Greenhouse or Horticultural Collection	A	A	Incidental to the residential use of the premises
Private Residential Recreation Court	A	A	Subject to Chapter 18.156 of the City of Redlands Municipal Code
Private Swimming Pool	A	A	As defined by the Uniform Building Code
Recreational Facilities[1]	A	A	Intended for use by the residents of a residential development and their guests, including playgrounds, tennis courts, athletic fields, equestrian facilities (subject to Chapter 18.156, Article XII for Private Residential Recreation Courts, of Title 18 in the Redlands Municipal Code, if applicable)
Small Family Day-Care Home, as an accessory use to a principal residential use[1]	A	A	Provided that the use complies with all of the standards defined in Section 18.156.610 of Title 18 of the Redlands Municipal Code.

P = Principal permitted use
A = Accessory permitted use

Table 2.1b: Other Permitted Uses

	PP-SFR	PP-MFR	Notes
Principal Use[1]			
Community Care Facility, Licensed, for up to six (6) persons	P	P	As defined in Title 18 (Chapter 18.08) of the Redlands Municipal Code
Employee Housing for up to six (6) persons	P	-	As defined in Title 18 (Chapter 18.08) of the Redlands Municipal Code
Employee Housing	-	P	As defined in Title 18 (Chapter 18.08) of the Redlands Municipal Code
Large Family Day-Care Home	CUP	CUP	Serving seven (7) to fourteen (14) children
Supportive and transitional housing for up to six (6) people intended to serve the target population	P	-	As defined in Title 18 (Chapter 18.08) of the Redlands Municipal Code
Supportive and transitional housing intended to serve the target population	-	P	As defined in Title 18 (Chapter 18.08) of the Redlands Municipal Code

P = Principal permitted use
CUP = Conditionally permitted use

[1] Per City of Redlands Resolution No. 8700

2.4 Development Standards

Table 2.2: Development Standards identifies development standards by zone related to lot design, building height, setbacks, parking, private/common outdoor living space, and fence and wall height that apply to all development within the PPSP. Refer to *Exhibits 2-4* through *2-8* for Conceptual Lot Layouts.

Table 2.2: Development Standards

	PP-SFR[6]	PP-MFR
Dwelling Units per Gross Acre[1]	Min. 8 - Max. 9 du/ac	Min. 16 - Max. 17 du/ac
Min. Lot Area	2,000 sf per dwelling unit	18,000 sf
Max. Lot Coverage	65%	35%
Min. Lot Depth	50 ft	No Minimum
Min. Lot Width	30 ft	No Minimum
Max. Building Height	2 1/2 stories or 35 ft	2 1/2 stories or 35 ft
Min. Setbacks[2,3]		
Front Yard[4]	SFR: 10 ft Court Cluster: *3 ft*	15 ft
Side Yard	4 ft	10 ft
Street Side Yard[4]	3 ft	10 ft
Rear Yard	10 ft	10 ft
Garage/Carport	3 ft or 18 ft	20 ft
Min. Off-Street Parking[5]	2 covered spaces per unit	1.5 spaces per unit; plus 1 guest space per 2 units
Min. Private Outdoor Living Space	-	50 sf/unit
Min. Common Outdoor Living Space	200 sf/unit	200 sf/unit
Max. Fence and Wall Height		
Front Yard	3 ft	3 ft
Street Side Yard	6 ft	3 ft
Side/Rear Yard	6 ft; 8 ft allowed where required for fire protection	6 ft
Signage	Signage shall be permitted as per the provisions of the Redlands Sign Code	
Accessory Building	Accessory building development standards shall be as required by Chapter 18.20.160 (Accessory Buildings) of the Redlands Municipal Code. Except minimum separation distances from other buildings on the same site shall be per the building code.	

Notes:
[1] Gross acreage = total acreage less proposed W Pioneer Avenue and W San Bernardino Avenue right-of-ways and New York Street right-of-way.
[2] Uncovered parking in PP-MFR allowed within required yard setbacks.
[3] Roof eaves/overhangs may encroach up to 2 ft into a required yard. Separation between eaves/overhangs between buildings shall be a minimum of 4 ft.
[4] Porches may encroach up to 2-ft in the required front yard for Single-Family Plan 1-3 in the PP-SFR zone. Patios, porches, and balconies may encroach up to 3-ft in the required front yard and street side yards in the PP-MFR zone.
[5] Required off-street parking for PP-MFR may be uncovered.
[6] Standards apply to both SFR and Court Cluster unless explicitly noted.

Exhibit 2-4: Single-Family Plan 1
Conceptual Lot Layout

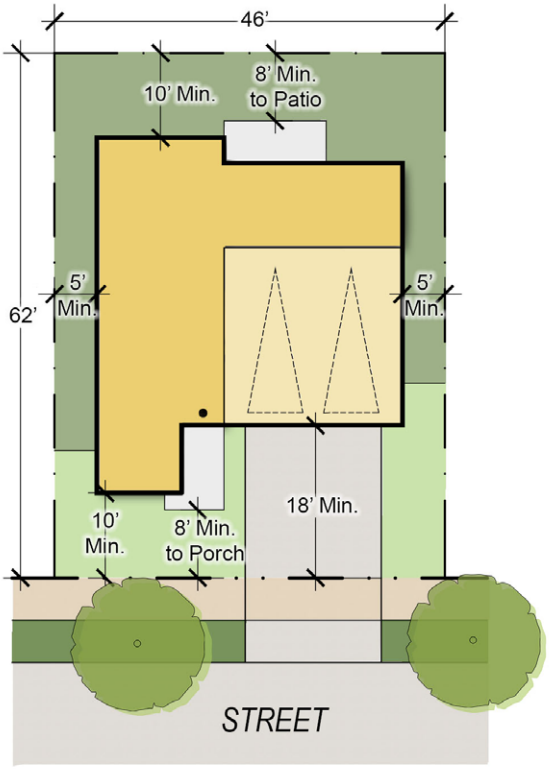


Exhibit 2-5: Single-Family Plan 2
Conceptual Lot Layout

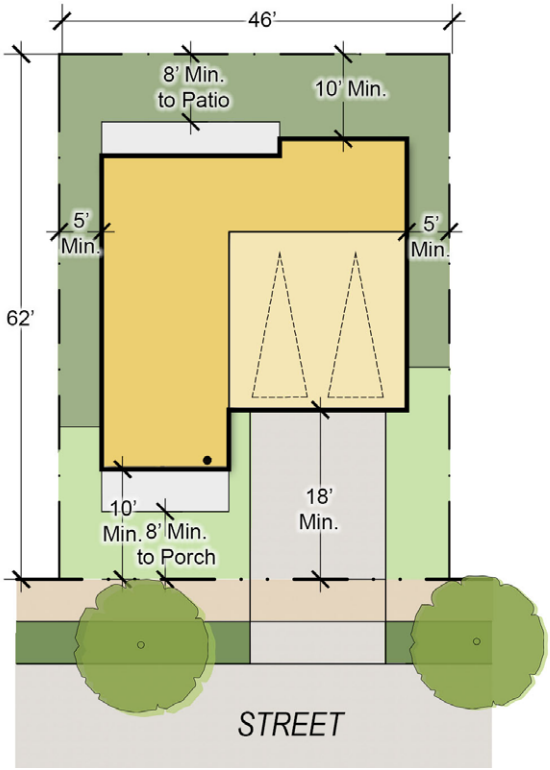


Exhibit 2-6: Single-Family Plan 3
Conceptual Lot Layout

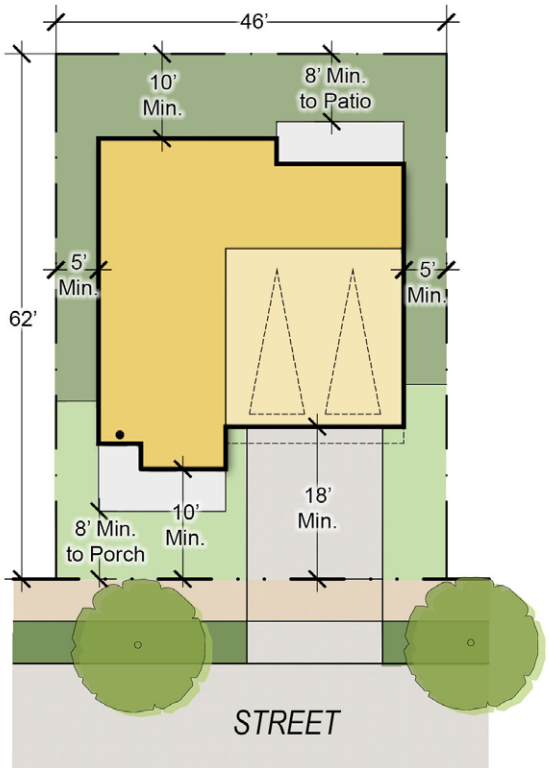


Exhibit 2-7: Court Cluster Conceptual Lot Layout

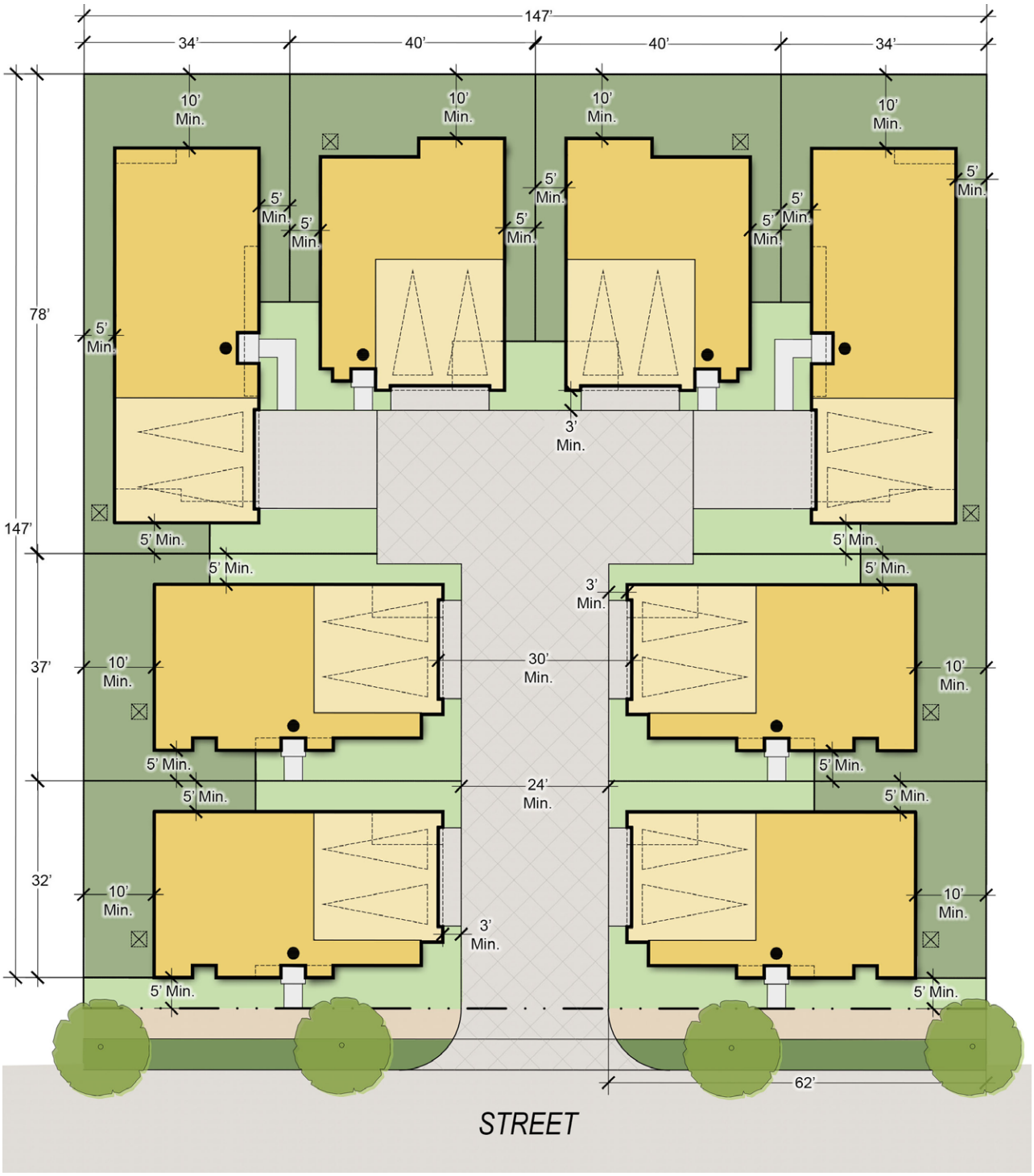
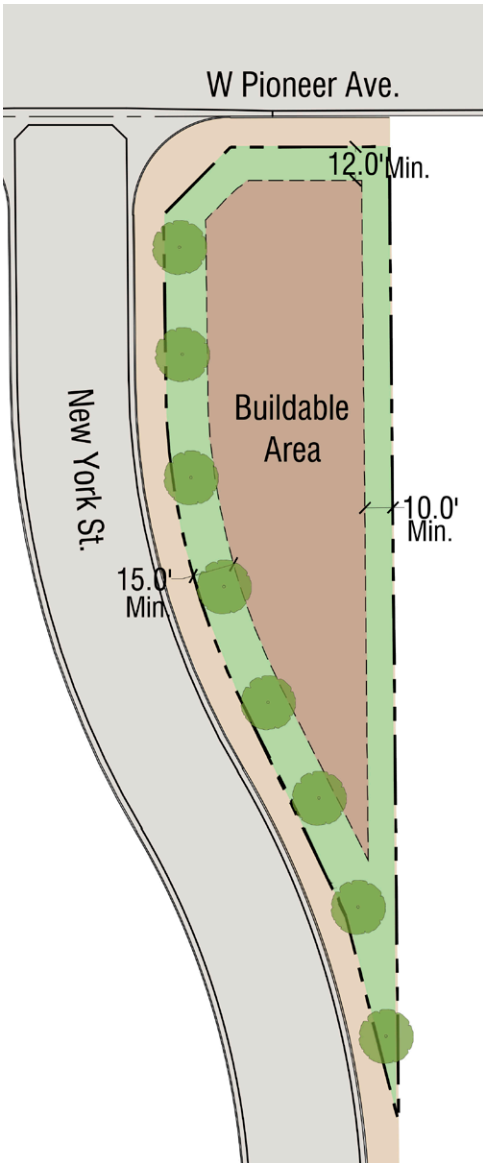


Exhibit 2-8: Court Cluster Conceptual Lot Layout

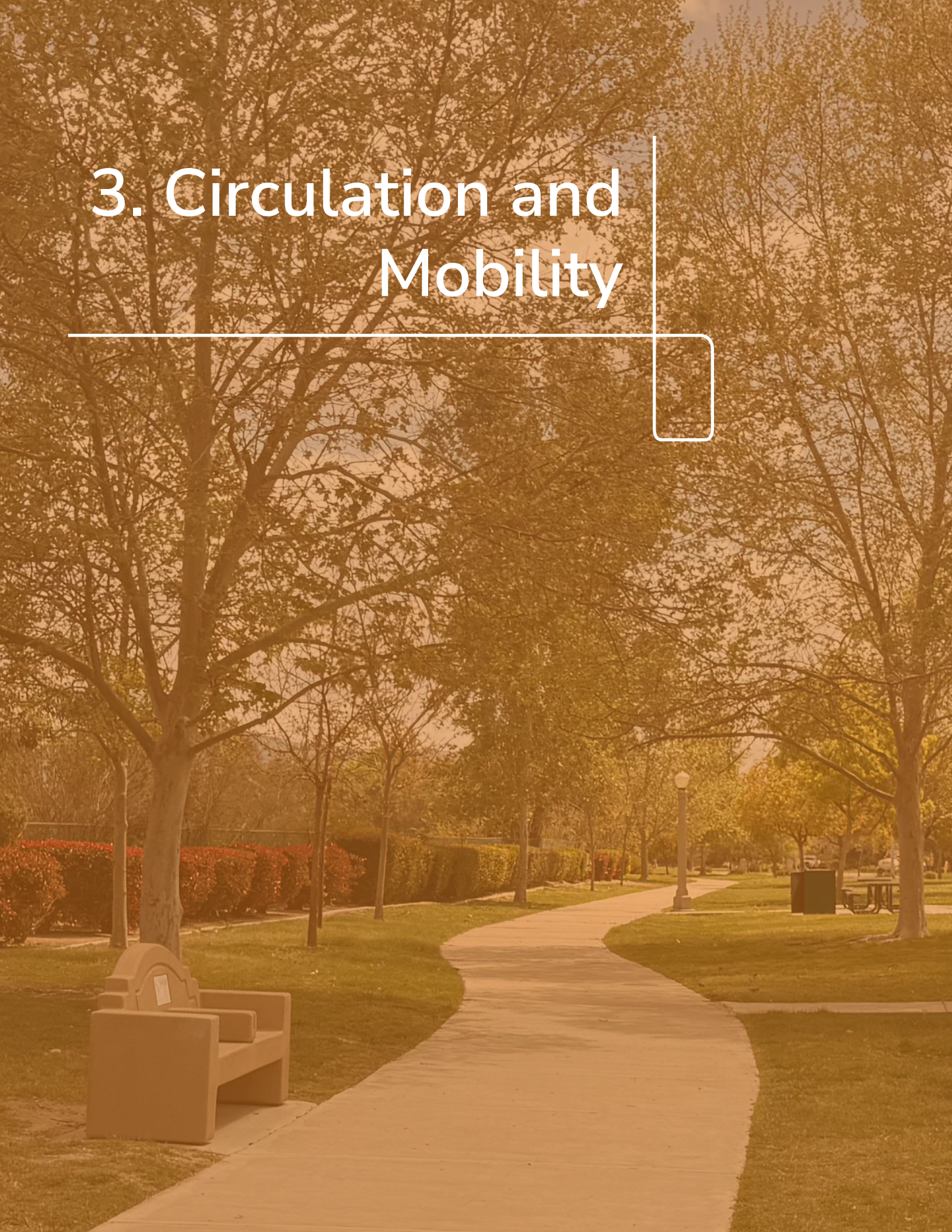


Exhibit 2-9: Multiple-Family Conceptual Layout



2.5 Inclusionary Housing Requirements

Pursuant to Chapter 18.230 of the City Municipal Code, the PPSP project will satisfy the City's Inclusionary Housing Requirements through payment of applicable in-lieu fees, as stipulated in City Municipal Code Section 18.230.110.



3. Circulation and Mobility

3. Circulation and Mobility

This chapter details the street network and layout within the PPSP area, aiming to create an integrated circulation system for the efficient movement of pedestrians, bicycles, and automobiles. The PPSP circulation will enhance connectivity within the project and the community by linking to and expanding circulation and mobility infrastructure options.

3.1 Pedestrian Circulation

The PPSP is designed as a pedestrian-oriented neighborhood featuring both improved on-site and off-site pedestrian circulation systems. Offsite pedestrian sidewalks currently exist along portions of West Pioneer Avenue and West San Bernardino Avenue, with no on-site pedestrian circulation systems existing. As part of the PPSP, the pedestrian circulation system will be improved along West Pioneer Avenue, West San Bernardino Avenue, and the proposed New York Street, while on-site pedestrian sidewalks will be provided internal to the neighborhood, connecting homes and common outdoor living spaces. The on-site pathways will also link to the offsite routes along West Pioneer Avenue and West San Bernardino Avenue, enhancing overall connectivity and ensuring convenient access throughout the area. The proposed New York Street bordering the project to the east will also include sidewalks that connect to on- and off-site sidewalks.

3.2 Bicycle Circulation

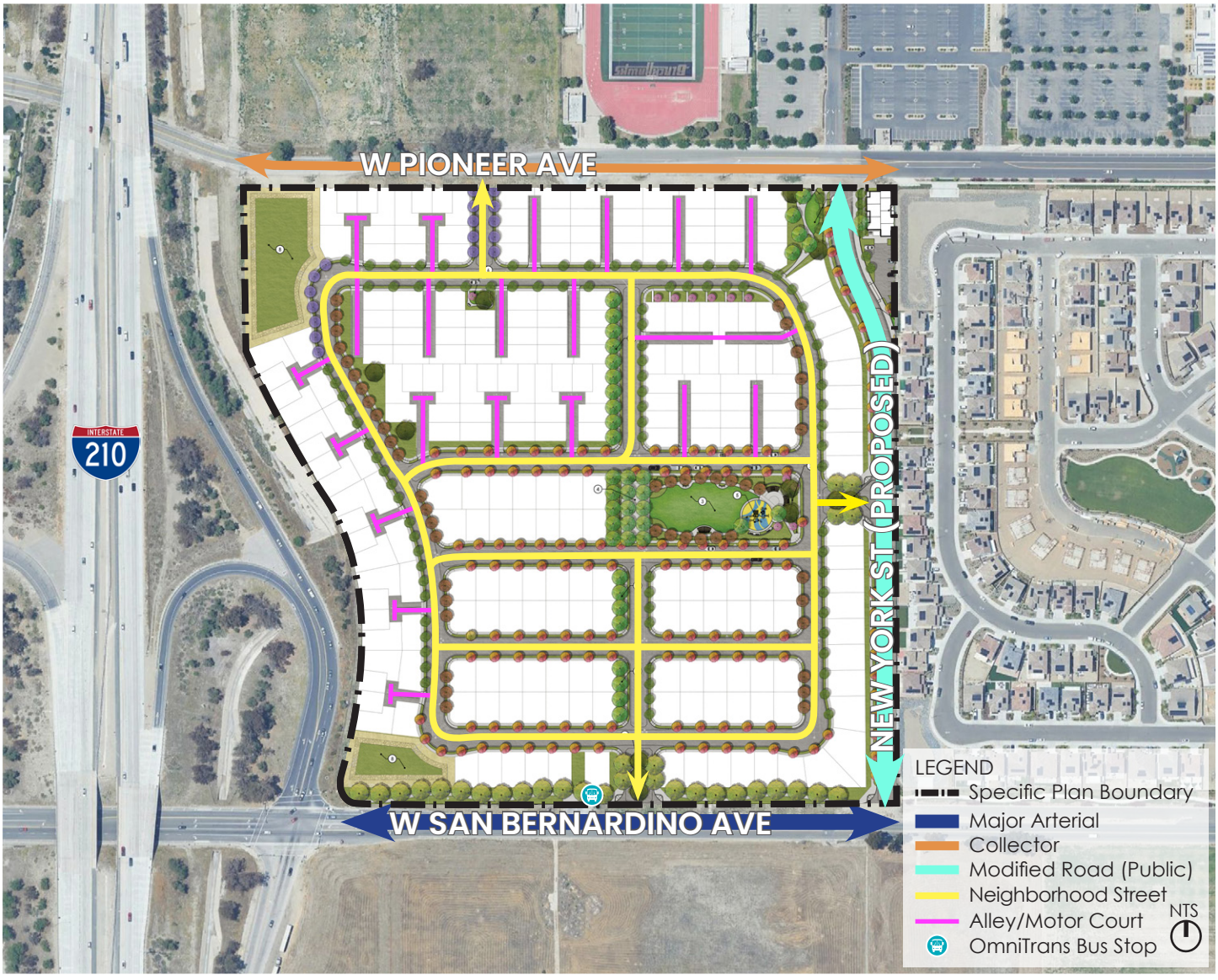
The City of Redlands General Plan Chapter, Connected City Element, identifies proposed bicycle routes near to the PPSP area along West Pioneer Avenue, the proposed New York Street, and West San Bernardino Avenue as shown on *Exhibit 3-1: Circulation*. Additionally, the General Plan Chapter, Health Community Element, identifies the multi-use Lugonia Trail along the proposed New York Street (refer to *Exhibit 3-2: New York Street Section)*, connecting to the Emerald Necklace Trail and Scenic Route that travels along West Pioneer Avenue and elsewhere within the City. The Emerald Necklace Trail and Scenic Route is a network of scenic routes and trails envisioned to provide paths for joggers, cyclists, and equestrians that connect to the City's open spaces.

3.3 Vehicular Circulation

The PPSP is located directly east of the 210 Freeway and is easily accessible via the West San Bernardino Avenue on- and off-ramps. Vehicular access to the PPSP will connect to existing perimeter streets to the north and south as well as the proposed New York Street to the east. The main neighborhood entry will be from the proposed New York Street, with secondary entries from West San Bernardino Avenue and West Pioneer Avenue.

The internal street network has been thoughtfully designed to effectively serve pedestrians and vehicles within the proposed residential development. Refer to *Exhibit 3-1*: *Circulation Plan* for more information. Details regarding project-related on- and off-site roadway circulation and improvements are outlined below.

Exhibit 3-1: Circulation Plan



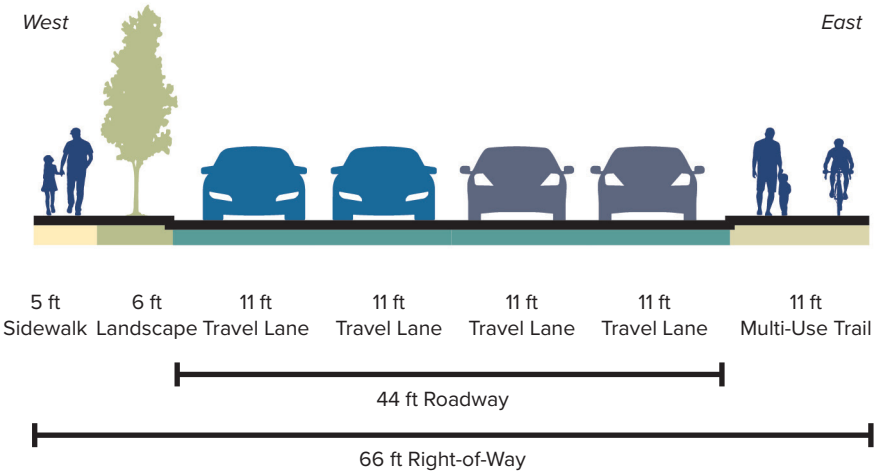
Tennessee Street

Tennessee Street is an existing street that runs north-south and bisects the PPSP area. It is designated as a local road in the City of Redlands General Plan - Connected City Element. As part of the PPSP, the segment of Tennessee Street within the Specific Plan area is proposed to be abandoned and replaced by New York Street. Refer to the New York Street description below for more details.

New York Street

New York Street is a planned street running north-south along the eastern edge of the PPSP area and is identified as a modified road in the City of Redlands General Plan - Connected City Element. The PPSP includes a modified design standard for this public collector street consisting of a 66-foot right-of-way, 44-foot curb-to-curb width, a five (5) foot sidewalk on the west side, and an 11-foot multi-use trail on the east side. Curb and gutter designs are consistent with the City's standard. Vehicular access to the project via New York Street will be provided via a two-way access road located midway between West Pioneer Avenue and West San Bernardino Avenue, which will connect to the internal neighborhood street network of the PPSP. Refer to *Exhibit 3-2: New York Street Section* below.

Exhibit 3-2: New York Street Section

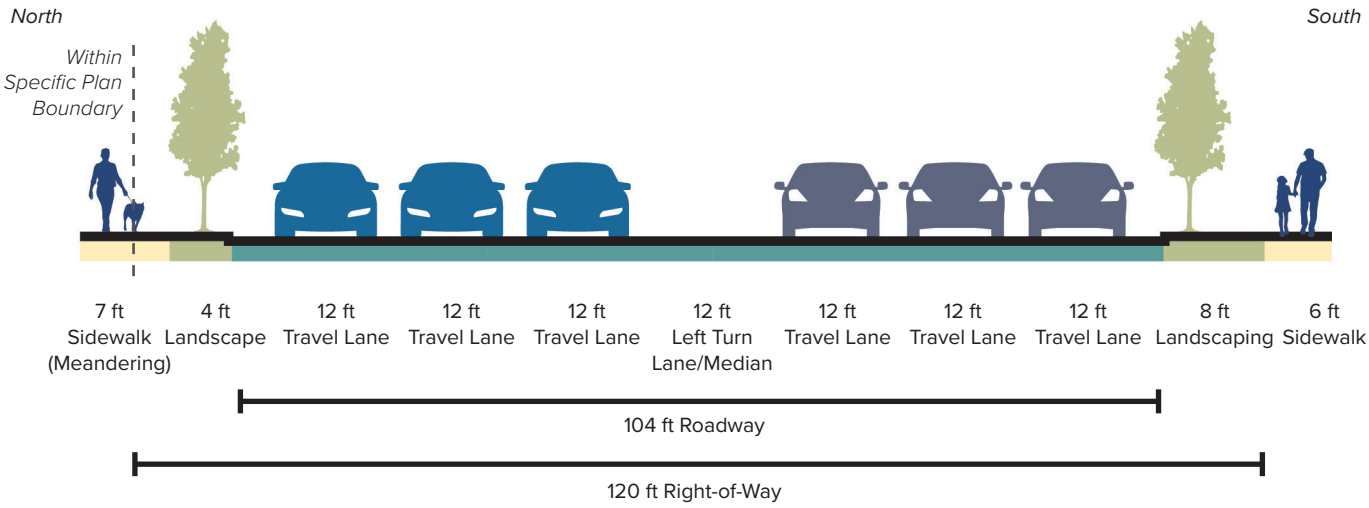


West San Bernardino Avenue

West San Bernardino Avenue runs east-west along the southern edge of the PPSP area and is designated as a major arterial in the City of Redlands General Plan - Connected City Element. The six-lane (6) divided major arterial has a modified design standard with a 120-foot right-of-way, 104-foot curb-to-curb width, six (6) foot wide sidewalk on the south side, and seven (7) foot wide sidewalk on the north side. Curb and gutter designs are consistent with the City's standard. Refer to *Exhibit 3-3: West San Bernardino Avenue Section* below.

Additional right-of-way dedication and street improvements may be required along the southern frontage of the PPSP area (north side of West San Bernardino Avenue). Vehicular access to the PPSP area via West San Bernardino will be provided through a two-way access road located approximately midway between the existing Interstate 210 freeway on-/off-ramps and New York Street and will connect to the internal neighborhood street network of the PPSP.

Exhibit 3-3: West San Bernardino Avenue Section

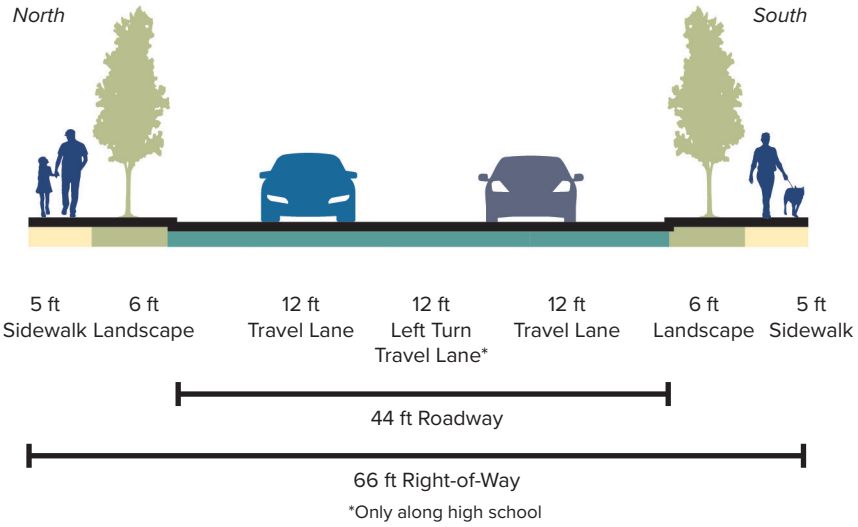


West Pioneer Avenue

West Pioneer Avenue runs east-west along the northern edge of the property PPSP area and is a designated collector street in the City of Redlands General Plan - Connected City Element. The PPSP includes a modified design standard for this collector street consisting of a 66-foot right-of-way width, 44-foot curb-to-curb width, and five (5) foot sidewalks on the north and south sides. Curb and gutter designs are consistent with the City's standard. Refer to *Exhibit 3-4: West Pioneer Avenue Section* below.

Additional right-of-way dedication and street improvements may be required along the property frontage on the northern frontage of the PPSP area (south side of West Pioneer Avenue). Vehicular access to the PPSP area via West Pioneer Avenue will be provided through a two-way access road located in the northwest portion and will connect to the internal neighborhood street network of the PPSP.

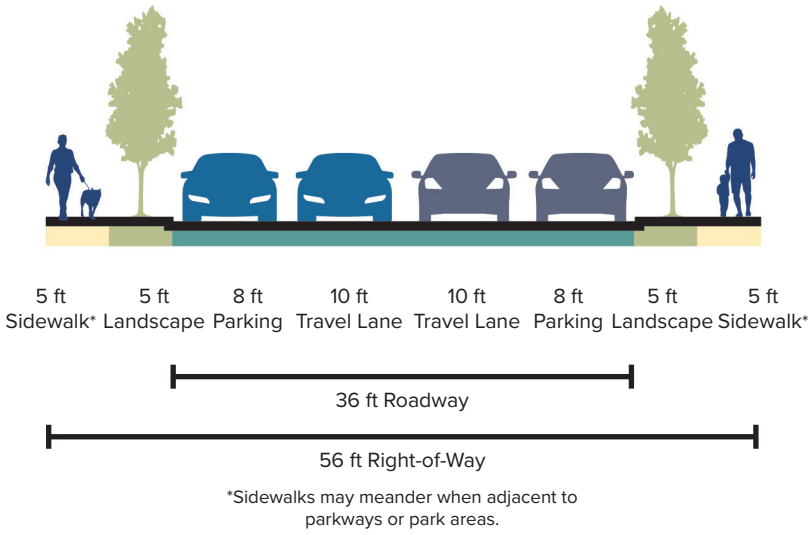
Exhibit 3-4: West Pioneer Avenue Section



Neighborhood Street

Private internal neighborhood streets provide access to residences and parks planned for the neighborhood. The neighborhood street design proposed is a modified design standard for local residential streets including a 56-foot right-of-way width, with 36-foot curb-to-curb separation and five (5) foot sidewalks on either side of the street. Curb and gutter designs are consistent with the City's standard. Refer to *Exhibit 3-5: Neighborhood Street Section* below.

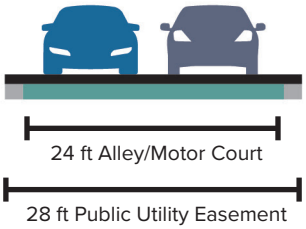
Exhibit 3-5: Neighborhood Street Section



Alleys and Motor Courts

The private neighborhood alleys and motor courts proposed include 24-foot roadways from the face of curb on either side of the roadway and three-foot (3) setbacks on either side. Both the alleys and motor courts include a 28-foot public utility easement (PUE), which includes the 24-foot roadway and 2-feet on either side. Refer to *Exhibit 3-6: Alley and Motor Court Section* below.

Exhibit 3-6: Alley and Motor Court Section



3.4 Transit

The PPSP is situated adjacent to Omnitrans Route 15 which serves the Cities of Fontana and Redlands. The Omnitrans Route 15 has a stop located within a half mile of the PPSP area to the west at the intersection of West San Bernardino Avenue and Orchard Way. Additionally, a new Omnitrans bus stop is proposed on West San Bernadino Avenue on the west side of the project entry drive to the neighborhood.

In addition to Omnitrans, Metrolink, in partnership with the San Bernardino County Transportation Authority (SBCTA) operates and provides service via the Metrolink Arrow train. The Metrolink Arrow train travels east-to-west between the Cities of San Bernardino and Redlands. The Arrow line can be accessed at the Redlands ESRI Station located approximately two (2) miles from the PPSP. Additionally, there is a San Bernardino Line train connecting the Redlands Downtown Station to Los Angeles Union Station.

3.5 Parking

Each single-family residence within the PPSP includes parking within a two-car garage or carport, with multiple-family residences within the PPSP parked based on unit size in either a garage, carport, and/or unenclosed parking configuration. In addition to the specific single-family and multiple-family spaces, unassigned and uncovered guest spaces in designated parking areas as well as on-street parking spaces on the on-site neighborhood streets are available throughout the PPSP area.

4. Infrastructure



4. Infrastructure

This chapter sets forth the plan for infrastructure improvements for the PPSP. *Exhibit 4-1: Infrastructure Plan* identifies the location and size of water, sewer, and stormwater infrastructure throughout the PPSP area, connecting to off-site infrastructure. It also identifies applicable services including electricity, natural gas, communications, as well as trash/refuse, recycling, and green waste. The City of Redlands has adopted development impact fees that offset the effects of new development on its water, sewer, and storm drain systems. These fees are considered sufficient to mitigate the direct and cumulative impact of the project on City infrastructure.

4.1 Water and Sewer Service

The City of Redlands Municipal Utilities and Engineering Department (MUED) provides both water and sewer service to the PPSP area. There is an existing 21-inch sewer line in West San Bernardino Avenue and an 8-inch sewer line along West Pioneer Avenue, located west of Highway 210. The southern half of the PPSP area will connect to the existing sewer line off West San Bernardino Avenue, while the northern half of the PPSP area will connect to the existing sewer line off West Pioneer Avenue.

There is currently an existing 16-inch potable water line in West Pioneer Avenue, and two existing potable water lines in West San Bernardino Avenue, including a 16-inch transmission main (1350 zone) and a second main (1570 zone) that varies in size along the PPSP frontage (2-inch or 8-inch). A third water main (12-inch - 1570 zone) was recently installed in West San Bernardino Avenue east of the project boundary that terminates at the proposed New York Street and West San Bernardino Avenue intersection. The City requires new residential uses to provide 8-inch potable water lines, where practical. The PPSP area will be served by an 8-inch looped water system with connection to the water main lines in West Pioneer Avenue and West San Bernardino Avenue. Refer to *Exhibit 4-1: Infrastructure Plan* for more information.

Existing recycled/non-potable water lines include an 8-inch non-potable line east of PPSP boundary in West San Bernardino Avenue that terminates at the proposed New York Street and an 8-inch non-potable line east of the PPSP boundary in Pioneer Avenue that terminates at the proposed New York Street. A future 8-inch recycled water line is planned in West Pioneer Avenue between the 210 Freeway and the proposed New York Street as part of an adjacent ongoing project to the north.

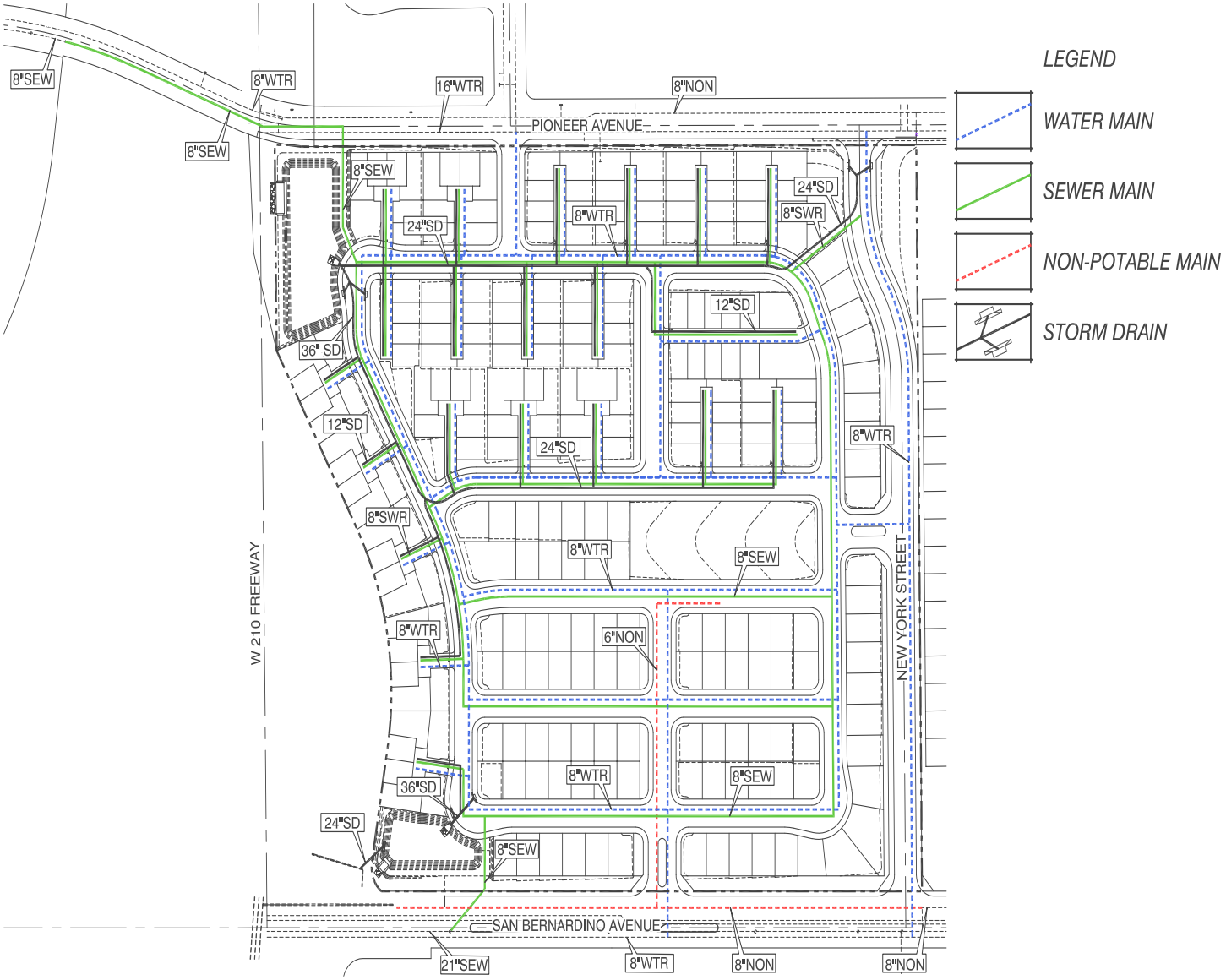
4.2 Storm Water Drainage

Runoff from the PPSP area generally drains from east to west across the property in a sheet flow pattern. The easterly half of the site drainage is diverted either north or south to adjacent streets by the existing Tennessee Avenue that bisects the property between West Pioneer Avenue and West San Bernardino Avenue. Drainage west of Tennessee Avenue and street flow in West Pioneer Avenue and West San Bernardino Avenue outlet into a trapezoidal concrete open channel running parallel to and along the east side of I-210. The channel, which is in Caltrans right-of-way, was constructed with the freeway in 1984 and drains to Reach 5 of the Santa Ana River.

The City of Redlands Drainage Master Plan (DMP) completed by RBF Consulting in 2014 and predecessor area drainage report CSDP#4 updated by the County of San Bernardino in 2013 provide the planned hydrology for the watershed where the PPSP is located. Both studies utilize current General Plan land use designations to determine run-off values for the areas being analyzed. For PPSP, the future developed condition run-off values were based on a 'Commercial' land use designation. Based on the lower density residential development proposed for the PPSP area, the drainage runoff from the site will be less than the values determined in the DMP.

The City's DMP also provides recommended storm drain improvements for the different subwatersheds included in the study. This project is in the "North City" subwatershed of the report that includes a recommendation for the installation of a storm drain system in West San Bernardino Avenue extending from the 210 Freeway channel to Texas Street along the project's southerly boundary. Although there are no current plans to construct this master planned facility, it is anticipated that adequate capacity will be provided in the storm drain system for the relatively small area of the PPSP that is proposed to drain directly to West San Bernardino Avenue. A majority of the PPSP will drain through two proposed on-site detention/storm water quality basins before connecting to the 210 Freeway channel as previously described. Refer to *Exhibit 4-1: Infrastructure Plan* for more information.

Exhibit 4-1: Infrastructure Plan



4.3 Grading

Grading will take place in a single phase and will involve clearing surface and subsurface features, grading, and preparing the site for construction in accordance with the City-approved grading permit for the project. Cut/fill slopes within the PPSP area will have a maximum slope ratio of 2:1.

The property owner, project team, contractors, and/or Qualified SWPPP Practitioner (QSP) will determine the frequency and placement of any necessary temporary erosion control measures. These grading-related components will be temporary and maintained until permanent improvements are in place. Standard SWPPP measures will be applied throughout the PPSP area.

4.4 Utility and Solid Waste Services

Electricity

Southern California Edison (SCE) will supply electricity to the PPSP area. Any new electricity lines needed will be installed underground; however, the existing utility lines along West San Bernardino Avenue will remain above ground. The alignment of the electrical service lines and their connection to existing infrastructure will be determined in accordance with SCE requirements. Any surface-mounted equipment will comply with the building setback standards established SCE.

Natural Gas

Southern California Gas Company (SoCalGas) will provide natural gas service to the PPSP area. Existing gas lines will be extended to serve the proposed facilities in accordance with SoCalGas requirements.

Communications

Wired and wireless telephone and internet services are available throughout the City via various private providers and will be extended to the PPSP area as needed. New telecommunication infrastructure within the PPSP will be installed underground. Any required surface-mounted equipment will comply with applicable building setback requirements established by the relevant service provider.

Solid Waste

Solid waste services for the PPSP area will be provided by the City of Redlands. Services provided include refuse/trash, recycling, and green waste. For single-family residential uses, refuse/trash, recycling, and green waste will be collected via curbside services. For multiple-family residential uses, refuse/trash, recycling, and green waste will be collected at centralized trash enclosure(s).

4.5 Easements

The project will require the establishment of easements to support the overall development of the PPSP area. Existing easements will be preserved for planned infrastructure and utilities, as needed.

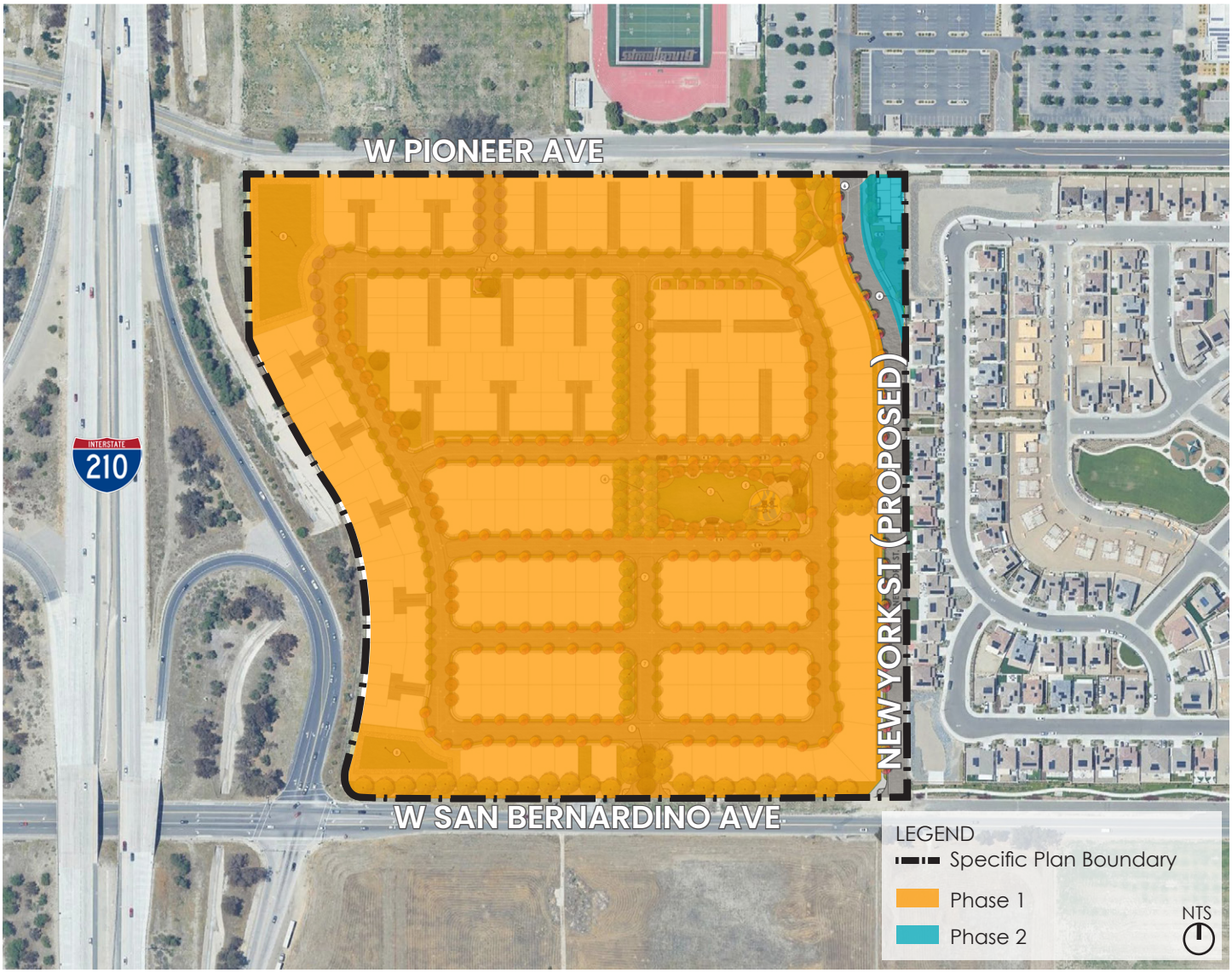
4.6 Phasing

Exhibit 4-2: Phasing Plan identifies the areas anticipated in the conceptual phasing to make up the PPSP development phases. These phases address goals to accommodate orderly development and provision of services. They represent a reasonable approach to extending services and infrastructure throughout the PPSP. In some cases, property owners may wish to develop in phases concurrently or in a different order than anticipated in *Exhibit 4-2*. This will be permitted provided all public improvements needed to support proposed development are completed, and that circulation is provided for secondary access.

Central Recreational Area

The central recreational area (private park) will be completed prior to issuance of certificate of occupancy at 50% of the total primary residential units to be developed.

Exhibit 4-2: Phasing Plan



4.7 Police and Fire Protection Services

The Redlands Police Department is located at 1270 West Park Avenue, approximately 2.5 miles south of the PPSP. It provides patrol, investigations, traffic safety, and other services through its Patrol Services, Special Services, and Support Services Bureaus.

The City of Redlands Fire Department provides fire services throughout the City, including community risk reduction, emergency management, and fire suppression and operations. The closest fire station to the PPSP area is Redlands Fire Station 263, located at 10 West Pennsylvania Avenue, approximately 1.2 miles southeast of the site PPSP.

4.8 Libraries, Schools, and Other Public Services

Library services for the PPSP area will be provided by the existing A.K. Smiley Public Library located at 125 West Vine Street. The library offers collections for children, young readers, teen, and adults, along with access to online collections and special collections. Wi-Fi internet access is also available.

Public education for the PPSP will be offered by the Redlands Unified School District. The PPSP falls within the boundary area for Kingsbury Elementary School, Clement Middle School, and Citrus Valley High School. Additionally, several private schools are also within proximity of the PPSP, including Redlands Christian School, Valley Preparatory, Redlands Adventist Academy, and Arrowhead Christian Academy, among others.

4.9 Energy Efficiency and Sustainability

All development within the PPSP will comply with the applicable Building Code requirements for energy efficiencies and water savings in effect at the time of permitting.



Redlands Fire Station 263



A.K. Smiley Public Library



Citrus Valley High School

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5. Administration and Implementation



5. Administration and Implementation

The PPSP is designed to implement the City of Redlands General Plan policies that apply to the project site and ensure the orderly development of the area.

Upon adoption, this Specific Plan will serve as the planning and zoning implementation tool for the PPSP area. The Land Use and Development Standards under Chapter 2 address general provisions, land use regulations, and development standards. Additional design guidance related to site planning, architectural design, and landscape design are located within *Appendix A: Design Guidelines*. The application of these regulations and design guidelines are intended to encourage the most appropriate and high-quality use and design of the land to ensure a distinguished development that protects and promotes the health, safety, and general welfare of the community.

Whenever the provisions and standards contained herein conflict with those of the Redlands Municipal Code, the provisions and standards of the PPSP shall prevail.

5.1 Development Review Process

Review and Approval Process

The Director of Development Services shall review development plans, grading plans, landscape and signage plans, infrastructure plans, and final and tentative parcel maps for consistency with the PPSP. Upon approval of this Specific Plan and any associated maps and plans, subsequent reviews may be ministerial. Unless the Director's decision is appealed, no Planning Commission or City Council approval of site plans, architecture, landscape, or signage will be required.

Subdivision Maps

Approval of a tentative subdivision map may occur concurrently with the adoption of the Specific Plan. All Tentative and Final Subdivision Maps shall be reviewed and approved pursuant to the provisions of the City of Redlands Title 17 Subdivision Ordinance for consistency with this Specific Plan.

Development Agreement

No Development Agreement is currently proposed as part of the PPSP. However, if deemed necessary, approval of a statutory Development Agreement authorized pursuant to California Government Code Sections 65864 et seq., may be used as part of the Specific Plan approval and prior to the approval of the Final Subdivision Map.

Specific Plan Modifications

As the PPSP is implemented, it may be necessary to revise or modify the approved development project to accommodate changing market conditions and ensure design consistency within the PPSP area. The Director of Development Services will assess the scope of the requested modification and determine the level of review necessary based on alignment with the overall intent of the PPSP. The review process may involve either administrative approval for minor modifications or a more formal review and approval by the Planning Commission and/or City Council for major modifications.

Minor modifications to the PPSP or associated TTM and plan set may include the following:

- Up to 10% adjustments to product types and conceptual plotting;
- Minor changes to development standards or design guidelines;
- Changes to the design guidelines, which are intended to be conceptual in nature, and are intended to be flexible in implementation;
- Minor changes to landscape materials, wall and fence materials, wall and fence alignment, entry design, and streetscape design which are consistent with the conceptual design set forth in the design guidelines contained within the Specific Plan; and/or
- Other similar modifications consistent with the purpose and intent of the approved Specific Plan and in conformance with the General Plan.

Adjustments in Project Phasing

Project features may be advanced to an earlier phase provided all required infrastructure is in place, all necessary mitigation measures are completed or will be completed with the project, and the action will not significantly defer a project feature that is anticipated in a preceding phase. The determination to advance a project feature shall be made by the Director or his/her designee. Any adjustments in project phasing needs to be consistent with the Section 5.2 of the PPSP and the findings of the environmental document.

Specific Plan Amendments

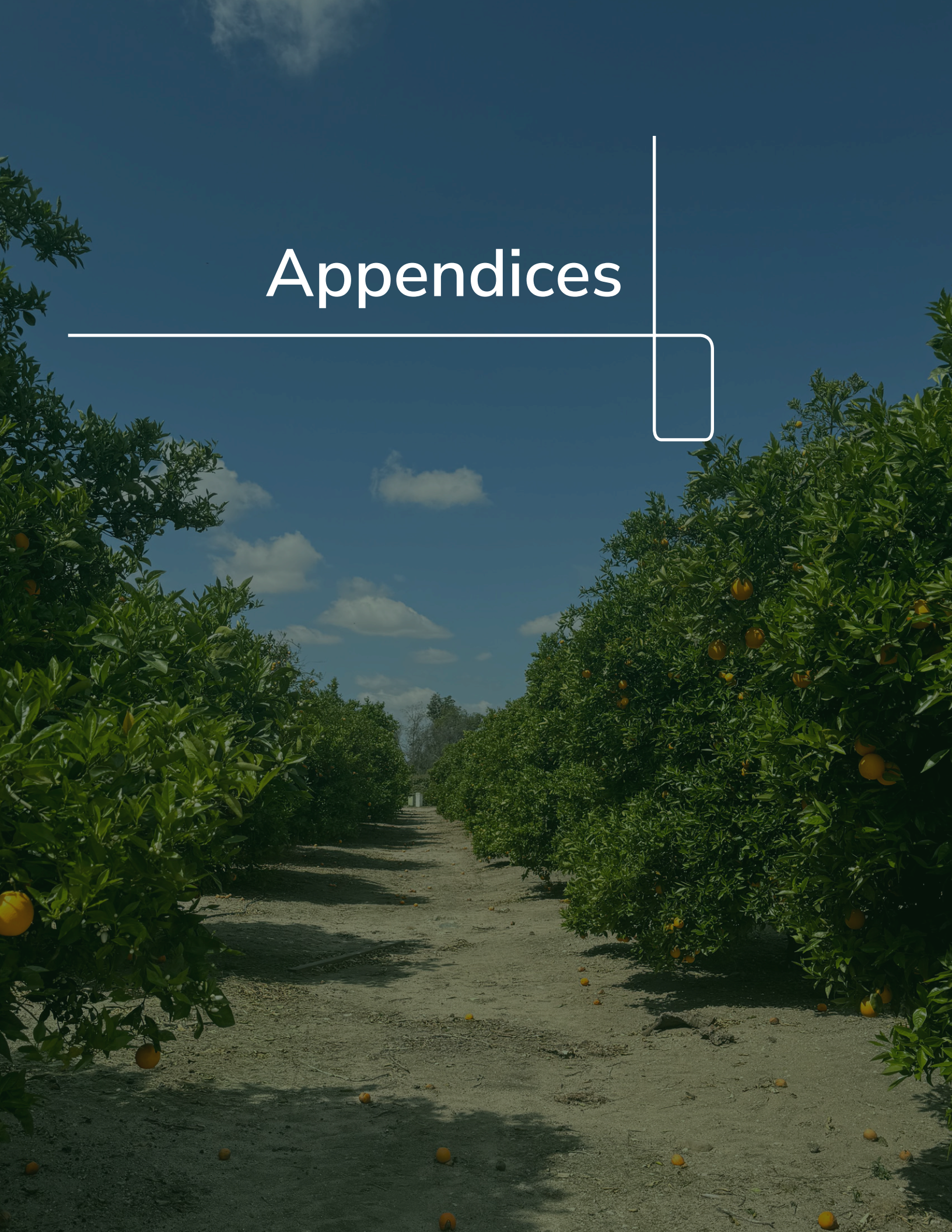
California Government Code Section 65453 (a) provides that a Specific Plan "may be amended as often as deemed necessary by the legislative body". Amendments to the PPSP may be initiated by City Council, Planning Commission, Developer, or any interested person in accordance with the same City procedures required for the adoption of a Specific Plan. In the event that the proposed amendment requires supplemental environmental analysis pursuant to the California Environmental Quality Act (CEQA), an applicant is responsible for preparing the necessary CEQA documentation.

Financing

Financing associated with the development of the PPSP will be provided by the property owners. No public financing is associated with the project.

5.2 Environmental Review

Environmental review for the PPSP was addressed through an Initial Study that assessesed potential environmental impacts in accordance with the California Environmental Quality Act (CEQA). Based on the findings, a Mitigated Negative Declaration (MND) was prepared, and all effects were reduced to a less-than-significant level through mitigation measures employed by the project.



Appendices

Appendix A: Design Guidelines

The *Appendix A: Design Guidelines* have been established to ensure that future development aligns with the PPSP overarching vision and objectives. The guidelines aim to encourage design creativity while ensuring quality site planning, architecture, landscape, and signage design that will ultimately enhance the character of the area. The design guidelines are intended to serve as a tool to assist City staff and review bodies to evaluate design direction for projects within the PPSP.

The following design principles have guided the site design, layout, and configuration of the PPSP.

Design Principles

- Provide a fully integrated residential neighborhood with intentionally designed homes, amenities, and open spaces that create a distinct and connected neighborhood environment.
- Intentional site design to encourage a strong sense of place and neighborhood identity with meaningful orientation of homes, amenity spaces, pedestrian and vehicular circulation supported by high-quality architecture.
- Promote walkability and neighborhood connectivity through the integration of short blocks, a connected sidewalk network, and strategically orienting buildings towards internal streets and open spaces.
- Enhance architectural character and diversity by allowing a range of architectural styles while ensuring consistency in design elements such as roof forms and materials to create visual harmony.
- Centrally locate one attractive recreational area visible from most main entries into the neighborhood with supportive smaller pocket parks to encourage active lifestyles and promote neighborhood interactions.

1. Site Planning

a) Establish clearly identifiable vehicular entry and exit points that include low-level monument signage to guide pedestrians and vehicles into and out of the neighborhood.

b) Create a sense of arrival to the neighborhood by aligning the main entry road with the centralized park space and through integrating design features such as accent paving, lighting, decorative walls, or other elements that reflect the character of the development.

c) Orient the front of homes towards streets and open space to strengthen neighborhood connections and provide passive surveillance when feasible.

d) Incorporate short block lengths and a well-connected sidewalk network to encourage walkability and support a friendly pedestrian environment, as practical.

e) Provide a centralized park space and smaller neighborhood pocket parks.



Low-level monument signage guides pedestrians and vehicles on and off the site



Fronts of home oriented towards adjacent open space areas



Smaller neighborhood pocket park is provided in addition to centralized park space



Functional and inviting seating area supports social interaction



Light fixtures align with architectural theme



Centralized mail box accessory structure designed to complement the character of the development

f) Provide functional and inviting amenities within the central park (Lot E) and smaller neighborhood pocket parks (Lot C, H, I) such as play area, plaza, lawn area, pedestrian pathways, seating, shade trellis, and signage. The final design and amenities of Lots E, C, H, and I will be reviewed in Plan Check (prior to Final Map approval or issuance of the 120th building permit for the phase of development). Lot E shall include features such as a play area, plaza, lawn area, pedestrian pathways, seating, shade trellis, monument signage, accent wall and pilaster, and split rail fence. Lots C and H shall include features such as pedestrian pathways, lawn area, seating, accent pilaster, and split rail fence. Lot I shall include features such as seating and lawn area.

g) Select light fixtures that align with the architectural theme of the development to ensure visual harmony throughout the site.

h) Utility and mechanical equipment should be installed underground or effectively screened in accordance with the requirements of the applicable utility provider.

i) Accessory structures, such as centralized mail boxes, should be designed to complement the overall architectural character of the development, using consistent styles, materials, and colors.

2. Architectural Styles

a) These guidelines do not mandate a specific architectural style; however, applicants should clearly identify the selected architectural style and its defining characteristics as part of the permit application process. Preferred architectural styles for the neighborhood include Craftsman, Farmhouse, Monterey, Regency, and Spanish. Contemporary interpretations of these styles are considered appropriate.

b) Single-family residential elevations shall not be repeated more frequently than every fourth home. This variation may be achieved by not repeating both a color scheme and an elevation style or through the use of reverse plans.

Inspirational Imagery for Single-Family Architectural Style Options

Craftsman





Farmhouse





Monterey





Regency





Spanish





Inspirational Imagery for Multiple-Family Architectural Style Options

Spanish



Craftsman



3. Massing

a) Integrate massing variations in wall planes and roofline heights through projections, recesses, and changes in roof heights.

b) Avoid unarticulated, boxy, or monotonous wall planes.

4. Roofing

a) Roof forms, materials, and detailing should be consistent with the selected architectural style.

b) Incorporate a variety of roof planes and pitches to enhance visual quality, reduce building bulk, and add character.

5. Articulation and Detailing

a) Building facades should be articulated with elements such as varied wall planes, windows/doors with trim, pilasters, and material or color changes, among other potential design interventions to enhance visual interest.

b) Homes on corner lots should be designed with architectural detailing that continues and enhances all street-facing elevations.

c) Front porches should clearly define the main entrance and create a welcoming transition between the street and the private residence.



Varied massing helps minimize monotonous, unarticulated wall planes



Varied roof forms enhance the visual quality of a home



A clearly defined primary entry to the home through use of a front porch



Architectural detailing and balconies reinforce design approach for a home



Authentic colors and materials aide in reinforcing selected architectural style



Integration of quality materials, such as board and batten siding, enhance visual quality of home design

d) Architectural elements and detailing, such as balconies, porches, and shutters, among others, should be integrated to enhance visual character and reinforce the chosen architectural style.

e) Windows and doors should be consistent with and further evoke the selected architectural style.

f) Stagger windows on side elevations to prevent direct alignment with windows on neighboring buildings, to the extent feasible.

6. Colors and Materials

a) Use materials and colors authentically to reinforce the chosen architectural style and overall design intent.

b) Apply colors and materials consistently to maintain a cohesive aesthetic and avoid a piecemeal appearance.

c) Transition color and material changes at interior corners to prevent a faux or unfinished look.

d) Preferred materials include stucco, brick, stone, board and batten siding, and composite wood siding.

e) Use subdued tones for primary building colors, while reserving bolder accent colors for trim, doors, windows, and/or other key architectural features.

7. Walls and Fencing

a) Block walls should be provided to separate areas of public and private use. Block to be colored with decorative finish (e.g. sand-colored slumpstone with matching capstone).

b) Long stretches of block wall should be varied through the introduction of a pilaster of contrasting material, and walls with terminations or corners in prominent locations should be terminated with a pilaster.

c) Fencing between private parcels to be aluminum or block wall, consistent with fire protection requirements. Yard gates may be aluminum or vinyl construction.

d) Where visibility is desired from the street to parks and open spaces, provide 36-inch high split-rail fencing. Fencing around parks and open spaces will prevent cut-through, direct circulation, and protect planting.

e) Where visibility and a sense of privacy is desired in yards, provide half block and half tubular steel walls.

8. Landscape

a) Landscape should be provided adjacent to street-facing areas of the neighborhood perimeter to provide a visual buffer around the neighborhoods.

b) Utilize landscape area within the neighborhood to provide separation between public and private spaces. Define spaces such as common areas and articulate individual units.



Block wall enhanced with decorative finish



Landscape adjacent to street-facing area provides visual buffer to neighborhood



Landscaping provides separation between public and private spaces



Mix of foliage textures, colors, and sizes creates a layered planting effect



Plant materials are low water use and native

c) Integrate a mix of evergreen and deciduous trees around the perimeter of the neighborhood. Give priority to existing and adjacent City street tree selections when selecting species.

d) Provide a mix of foliage textures, colors, and sizes to create a layered effect in the planting palette.

e) Plant material should consist of low water use, native, or adapted vegetation that will thrive in the City's climate zone, while adhering to the Redlands Fire Department Landscape and Vegetation Management Development Plan Guideline.

9. Plant Palette

It is the intent of these guidelines to provide flexibility and diversity in plant material selection, while maintaining a cohesive plant palette to establish greater unity and thematic identity in the neighborhood. The plant materials listed in *Table A.1: Plant Palette* have been selected for their appropriateness to the project character, climatic conditions, soil conditions, water requirements, ongoing and low maintenance. Additional plant materials not listed in *Table A.1: Plant Palette* may be allowed by the City on a case-by-case basis during review of neighborhood project proposals.

Table A.1: Plant Palette

	Botanical Name	Common Name
Trees		
	Arbutus x 'Marina'	Strawberry tree
	Cercis occidentalis	Western redbud
	Cinnamomum camphora	Camphor tree
	Koelreutaria bipinatta	Chinese flame tree
	Lophostemon confertus	*Brisbane box*
	Platanus racemosa	California sycamore
	Quercus agrifolia	Coast live oak
	X Chitalpa tashkentensis 'Pink Dawn'	Pink dawn chitalpa
Shrubs / Groundcover		
	Achillea 'Moonshine'	Moonshine yarrow
	Agave attenuata	Foxtail agave
	Aristida purpurea	Purple three awn grass
	Baccharis pilularis 'Pigeon Point'	Pigeon point coyote bush
	Callistemon 'Little John'	Bottlebrush little John
	Carex tumulicola	Foothill sedge
	Ceanothus 'Concha'	Concha California lilac
	Chondropetalum tectorum	Cape rush
	Cistus skanbergii	Pink rockrose
	Dianella caerulea 'Cassa Blue'	Cassa blue dianella
	Elaeagnus pungens	Thorny olive
	Epilobium canum	California fuchsia
	Hesperaloe parviflora	Red yucca
	Heteromeles arbutifolia	Toyon
	Juncus patens 'Elk blue'	Elk blue gray rush
	Lavatera maritima	Tree mallow
	Leonitis leonurus	Lion's ear
	Leymus condensatus 'Canyon Prince'	Canyon Prince wild rye
	Muhlenbergia rigens	Deer grass
	Pennisetum 'Rubrum'	Purple fountain grass
	Phlomis fruticosa	Jerusalem sage
	Prunus ilicifolia ssp. 'Lyonii'	Catalina cherry
	Rhamnus californica 'Mound San Bruno'	Coffeeberry
	Rosmarinus officinalis	Rosemary
	Salvia clevelandii 'Allen chickering'	Allen Chickering sage

Note: Planting to conform with the Redlands Fire Department Landscape and Vegetation Management Development Plan Guideline - Undesirable Plant Species and Redlands Resource Plant List.

Appendix B: General Plan Consistency

This Appendix B: General Plan Consistency discusses how the principles and actions of the City of Redlands General Plan policies are relevant to the PPSP. The City of Redlands General Plan includes the following elements with policies related to the PPSP:

- Distinctive City
- Prosperous City
- Livable City (Land Use Element)
- Connected City (Circulation Element)
- Vital Environment (Conservation and Open Space Elements)
- Healthy Community (Safety and Noise Elements)
- Sustainable Community
- Housing Element

Distinctive City

Principles

2-P.1: Embrace the unique identities of individual neighborhoods in Redlands and encourage the celebration and enhancement of characteristics that make each neighborhood distinct.

2-P.3: Promote planning practices that mitigate the presence of physical barriers between communities (i.e., freeways) and foster greater connections between neighborhoods and uses.

2-P.7: Promote a physical and cultural environment, building upon a mature and varied landscape, that creates opportunities for meeting and gathering and encourages face-to-face interactions between people.

Actions

2-A.4: Maintain continuity in streetscape design along major streets and avenues that traverse north and south – California, Nevada, Alabama, Tennessee, Orange, Church, University, Judson, and Wabash; and those that traverse east and west – Pioneer, San Bernardino, Lugonia, Redlands Boulevard, and Citrus.

2-A.13: Maintain continuity in land uses, including commercial and residential uses, across barriers such as I-10 and Highway 210. These barriers should not be seen as "walls" that define completely different neighborhoods or divide the city by land use.

2-A.14: Use development standards to ensure smooth transitions for neighborhoods that border one another so that neighborhoods maintain their unique qualities while being compatible with one another.

2-A.17: Establish meeting areas in new neighborhoods and ensure a safe and secure environment.

2-A.30: Identify historic design features characteristic of the city and its individual neighborhoods that can be used to establish themes and design guidelines.

2-A.51: Encourage new construction that ties the new with the old in a harmonious fashion, enhancing the historic pattern

Consistency Discussion: Homes within the PPSP will establish a new neighborhood identity centered around a neighborhood gathering place. Pedestrian walkways within the PPSP will create an internal network that connects pocket parks, a central recreational area, and green belts, fostering opportunities for social interaction and neighborhood engagement. Internal sidewalks will link to the proposed New York Street and support connectivity to surrounding homes. Neighborhood entrances and homes are oriented to face sidewalks, reinforcing a walkable, neighborhood-focused environment. The Pioneer Park neighborhood maintains continuity with the adjacent residential neighborhood as well as the West Pioneer Avenue and West San Bernadino Avenue streetscape design.

Prosperous City

Principles

3-P.5: Seek to improve the balance of jobs and housing so that more residents can find gainful employment within the city, especially in the job centers of the East Valley Corridor.

Consistency Discussion: The PPSP will provide new housing in the East Valley Corridor, supporting the improvement of the jobs and housing balance and enabling more residents to live near local employment opportunities.

Livable City (Land Use Element)

Principles

4-P.2: Provide for the expansion of housing and employment opportunities while ensuring that a high quality of life is maintained in Redlands.

4-P.5: Maintain a land use pattern of various uses designed and arranged to protect and enhance Redlands' unique character.

4-P.6: Provide for a balance among a variety of different land uses and their distribution among the city's neighborhoods.

4-P.7: Promote a diversity of compatible land uses throughout the city, providing opportunities for the development of a range of businesses, services, residential types, and public facilities to meet the needs of the community.

4-P.8: Provide for buffers and transitions between low- and high-intensity land uses.

4-P.9: Locate medium- and high-density development near regional access routes, transit stations, employment centers, shopping areas, and public services.

4-P.10: Ensure that the scale and character of new development is appropriate for surrounding terrain and the character of existing development.

4-P.16: Promote a variety of housing types to serve the diverse needs of the community.

4-P.57: Provide for the equitable distribution of public facilities and amenities, such as sidewalks, street lighting, and parks throughout Redlands.

4-P.59: Ensure a safe community.

Actions

4-A.7: Promote a range of residential densities to encourage a mix of housing types in varying price ranges and rental rates.

4-A.8: Promote the development of a greater variety of housing types, including single-family homes on small lots, accessory dwelling units, townhomes, lofts, live-work spaces, and senior and student housing to meet the needs of future demographics and changing family sizes.

Measure U Policies

4.40s: No land undeveloped as of March 1, 1997 and designated in whole or in part as "Urban Reserve" or "Urban Reserve (Agricultural)" in the Redlands General Plan in effect as of June 1, 1987, and/or any land parcel that was in active agricultural production on November 3, 1986 regardless of zoning, shall be re-designated or rezoned to permit residential density greater than the Estate Residential (R-E) classification, as the same existed on June 1, 1987, in the Redlands City Zoning Ordinance, unless the following mandatory findings are made and the re-designation or rezoning is approved by four-fifths (4/5) vote of the total authorized membership of the City Council. Land designated

by the General Plan as Urban Reserve as of June 1, 1987, shall not exceed a density higher than permitted by the R-E zone designation unless otherwise approved by a 4/5 vote of the City Council.

1. There are substantial and overriding economic or social benefits to the City and its residents and taxpayers from the proposed density increase.
2. The proposed density increase will not cause adverse environmental impacts, either individually or cumulatively, directly or indirectly.
3. The proposed density increase will not convert viable agricultural land to non-agricultural uses.
4. The proposed density increase will not have a growth-inducing effect on other property.
5. The resulting use will be compatible with uses on adjacent land.
6. The proposed density increase will not require substantial expansion of public infrastructure, facilities, or services.

Consistency Discussion: The PPSP allows for much-needed housing that helps improve the job and housing balance in the area while enhancing the overall character of the Redlands community through a thoughtful variety of home types. The project creates a transition from commercial uses to the west of Interstate 210 to existing residential neighborhoods to the east by providing medium-density housing options. Located near key employment centers and shopping areas, the PPSP area offers convenient access to daily needs and job opportunities. Development is appropriately scaled to fit the surrounding context and includes neighborhood features such as sidewalks, park spaces, and other amenities. By bringing new residents to this part of the City, the PPSP facilitates a greater sense of activity, safety, and community connection. The proposed density increase is appropriately scaled, provides substantial neighborhood benefits, and is compatible with surrounding uses, supporting a responsible and balanced approach to growth.

Connected City (Circulation Element)

Principles

5-P.6: Support public health by promoting active living and supporting safe walking and biking throughout the city.

5-A.7: Add new streets to create a finer grained, pedestrian-scaled road network where the roadway network is characterized by particularly long blocks, connecting residential areas to parks and Transit Village cores. Ensure the street systems in Transit Villages

support development of connected and accessible communities.

Consistency Discussion: The PPSP promotes active living by incorporating pedestrian-scaled streets and sidewalks that connect homes to parks and nearby trails, creating a walkable, accessible, and well-connected neighborhood.

Vital Environment (Conservation and Open Space Elements)

Actions

6-A.35: Promote the use of Low Impact Development strategies, BMPs, pervious paving materials, and onsite infiltration for treating and reducing stormwater runoff before it reaches the municipal stormwater system.

6-A.38: Encourage development that reflects an integrated approach to building design, civil engineering, and landscape architecture that maximizes rainwater harvesting and stormwater retention for landscape irrigation.

6-A.39: Require that new development provides landscaping and re-vegetation of graded or disturbed areas with drought-tolerant native or non-invasive plants.

6-A.43: Ensure that post-development peak stormwater runoff discharge rates do not exceed the estimated pre-development rate. Dry weather runoff from new development must not exceed the pre-development baseline flow rate to receiving waterbodies.

Consistency Discussion: The PPSP area utilizes Low Impact Development strategies, best management practices (BMPs), and pervious paving materials to reduce stormwater runoff. New development will consist of drought-tolerant native or non-invasive plant selection. Post-development peak stormwater and dry weather runoff rates will not exceed the estimated pre-development levels.

Healthy Community (Safety and Noise Elements)

Principles

7-P.1: Promote active lifestyles and community health by furthering access to trails, parks, public open space, and other recreational opportunities.

7-P.5: Provide parkland for a comprehensive range of active recreational needs, including sports fields and facilities, playgrounds, and open spaces for passive recreation per a Parks and Recreation Master Plan.

7-P.17: Achieve more walkable, livable neighborhoods by expanding the multimodal transportation system and creating a safe, pedestrian-oriented environment.

Actions

7-A.4: Provide all residential areas with a neighborhood/community park (of 8 or more acres where available) where suitable land is available at acceptable cost.

7-A.135: Use the noise and land use compatibility matrix (Table 7-10) and Future Noise Contours map (Figure 7-9) as criteria to determine the acceptability of a given land use, including the improvement/construction of streets, railroads, freeways, and highways. Do not permit new noise-sensitive uses—including schools, hospitals, places of worship, and homes—where noise levels are "normally unacceptable" or higher if alternative locations are available for the uses in the city.

7-A.136: Require a noise analysis be conducted for all development proposals located where projected noise exposure would be other than "clearly" or "normally compatible" as specified in Table 7-10.

Consistency Discussion: The PPSP promotes healthy lifestyles by providing open space, including a green belt, pocket parks, and central recreation area on-site as well as a multi-use trail along the proposed New York Street. The neighborhood is designed to be walkable and livable by featuring a safe, pedestrian-oriented environment with small blocks and sidewalks that encourage walking.

Sustainable Community

Actions

8-A.10: Integrate trees and shade into the built environment to mitigate issues such as stormwater runoff and the urban heat island effect.

8-A.37: Promote design in new development that incorporates space for recycling containers and other waste diversion facilities.

Consistency Discussion: Trees and thus shade are incorporated into the site design to reduce stormwater runoff and minimize urban heat island effects. Each home will include space to store recycling and other waste diversion facilities, including green curbside bins for green and food waste, as required by the waste provider.

Housing Element

Goals

5.1: A housing stock comprising of a variety of housing and tenancy types at a range of prices, within close proximity to services and opportunity, which meets the varied needs of existing and future City residents, who represent a full spectrum of age, income, and other demographic characteristics.

Policies

1.1: Provide adequate capacity to meet the Sites Inventory for Regional Housing Needs Assessment (RHNA).

Consistency Discussion: The PPSP includes three small-lot single-family home product types as well as a multi-family product type, offering a variety of housing options that address the needs of current and future residents while also contributing to the City's RHNA goals.

TENTATIVE TRACT No. 20797
PRELIMINARY GRADING PLAN
A PORTION OF THE S 1/2 , SE 1/4 OF SECTION 16, TOWNSHIP 1S, RANGE 3W SAN BERNARDINO BASE AND MERIDIAN, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA

APPLICANT
REDLANDS PIONEER PARTNERS, LLC
ATTN: GANTAS CORMAN/MICHAEL MOSSMAN
4350 VON KARMAN AVENUE, SUITE 200
NEWPORT BEACH, CA 92660

OWNER
TROJAN GROVES, A PARTNERSHIP
ATTN: JOHN M. THOMAS
21202 KROLL LANE
HUNTINGTON BEACH, CA 92646

CIVIL ENGINEER
HICKS & HARTWICK, INC.
37 EAST OLIVE AVE, SUITE C
REDLANDS, CA 92373
PH: (909) 793-2257

SOILS ENGINEER
GEOTEK, INC.
1548 NORTH MAPLE STREET
CORONA, CA 92660
PH: (951) 710-1160
FAX: (951) 710-1167

TENTATIVE MAP PREPARED BY:

Hicks & Hartwick, Inc.
37 East Olive Ave. Ste C
Redlands, CA. 92373
909.793.2257

REGISTERED PROFESSIONAL ENGINEER — MATTHEW C. HICKS — No. 63494 — CIVIL — STATE OF CALIFORNIA

REQUIREMENTS FOR TRACT MAPS
PER CITY OF REDLANDS DEVELOPMENT APPLICATION (JANUARY, 2019)
1A. DATE OF MAP PREPARATION: 06-21-2025
1B. NORTH ARROW DELINEATED ON MAP AS REQUIRED
1C. SCALE USED: 1"=70'
1D. ADJACENT SUBDIVISION INFO: DELINEATED ON MAP AS REQUIRED
2. INFORMATION DELINEATED ON MAP AS REQUIRED
3. EASEMENTS AND RIGHTS OF RECORD PER PRELIMINARY REPORT PREPARED BY FIRST AMERICAN TITLE COMPANY, ORDER NO.: 989-30120880-A-BAM DATED 09-23-2024
4-10. DELINEATED ON MAP AS REQUIRED
11. STATEMENT AS TO THE INTENTION IN REGARD TO SLOPE PLANTING AND EROSION CONTROL: DELINEATED ON MAP
12. VICINITY MAP: DELINEATED ON MAP
13. CONTOUR INTERVAL: 1' CONTOURS
14. ALL EXISTING STRUCTURES AND TREES TO BE REMOVED: DELINEATED ON MAP AS REQUIRED
15A. LOCATION OF ALL AREAS OF POTENTIAL STORMWATER OVERFLOW, THE LOCATION, WIDTH AND DIRECTION OF FLOW: DELINEATED ON MAP
15B. FEMA PANEL: PANEL 8704 OF 9400 PER FLOOD INSURANCE RATE MAP: 06071C8704H, JANUARY 14, 2018
AREA DESIGNATION: ZONE X
(AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN)

EXHIBIT REQUIREMENTS - PART ONE
PER CITY OF REDLANDS DEVELOPMENT APPLICATION (JANUARY, 2019)
1. INDEX MAP ON ALL SHEETS: DOES NOT APPLY
2. NAME AND ADDRESS OF OWNER/APPLICANT/MAP PREPARER: DELINEATED ON MAP AS REQUIRED
3. ACREAGE, NORTH ARROW, VICINITY MAP, DATE OF PREPARATION: DELINEATED ON MAP AS REQUIRED
4. EXISTING STRUCTURES AND FEATURES SUCH AS WALLS, BUILDING, AND TREES: DELINEATED ON MAP AS REQUIRED
5. DIMENSIONS AND PROPERTY LINES FOR EACH LOT: DELINEATED ON MAP AS REQUIRED
6. NAMES OF ADJOINING SUBDIVISIONS AND LANDOWNERS AND ABUTTING LAND USES: DELINEATED ON MAP AS REQUIRED
7. LANDS DEDICATED FOR PUBLIC USE: DELINEATED ON MAP AS REQUIRED
8. POINTS OF INGRESS AND EGRESS: SAN BERNARDINO AVE., NEW YORK ST., AND PIONEER AVE.
9. PRELIMINARY GRADING, INCLUDING PAD ELEVATIONS AND FLOW LINES WITH LOCATION OF ALL CUT AND FILL SLOPES IDENTIFIED: DELINEATED ON MAP AS REQUIRED

EXHIBIT REQUIREMENTS - PART TWO
PER CITY OF REDLANDS DEVELOPMENT APPLICATION (JANUARY, 2019)
PUBLIC WORKS REQUIREMENTS FOR SITE PLANS
1. LOCATIONS, NAME, AND WIDTH OF STREETS AND ADJACENT STREETS ALSO SHOW WIDTH OF ALLEYS IF APPLICABLE: DELINEATED ON MAP AS REQUIRED
2. PROPOSED STREET GRADES AND GRADES FOR SAN BERNARDINO AVE., NEW YORK ST., AND PIONEER AVE.: DELINEATED ON MAP AS REQUIRED.
3. CROSS SECTION OF PROPOSED STREET IMPROVEMENTS IF DIFFERENT FROM STANDARD: DELINEATED ON MAP AS REQUIRED.
4. LOCATION, DIMENSION, AND PURPOSE OF ANY EASEMENT ON AND ADJACENT TO PROJECT SITE: DELINEATED ON MAP AS REQUIRED
5. LOCATION OF EXISTING PUBLIC UTILITIES, CULVERTS, DRAIN PIPES, AND WATER COURSES: DELINEATED ON MAP AS REQUIRED.
6. APPROXIMATE RADIUS OF CURVES: DELINEATED ON MAP AS REQUIRED.
7. TOPOGRAPHICAL DATA TO MAKE CLEAR THE EFFECT OF THE PROPOSAL. 2' CONTOURS AT GRADES 5% OR LESS., 5' CONTOURS AT GRADES OF MORE THAN 5%. SOURCE OF THE CONTOURS SHALL BE STATED ON MAP: DELINEATED ON MAP AS REQUIRED

ADDITIONAL GENERAL NOTES
1. TOTAL PROJECT GROSS AREA: 1,538,320 SF(35.31 AC) - INCLUDES PUBLIC R/W
2. TOTAL NUMBER OF LOTS: 256
3. SPECIFIC PLAN DEVELOPMENT AREA: 1,349,495 SF(30.98 AC) - EXCLUDES NEW YORK, SAN BERNARDINO AND PIONEER AVES PUBLIC R/W
4. NET DEVELOPMENT AREA: 974,167 SF(22.36 AC) - EXCLUDES NEW YORK, SAN BERNARDINO, PIONEER, AND INTERNAL STREETS PUBLIC R/W
5. TOTAL OPEN SPACE (LOTS A-M): 197,877 SF (4.54 AC) - 20.31%
6. EXISTING LAND USE DISTRICT: COMMERCIAL

PROJECT PHASING NOTE
THIS PROJECT MAY HAVE PHASED MULTIPLE FINAL MAP PER SUBDIVISION MAP ACT - LATEST REVISION.

BENCH MARK
CITY OF REDLANDS BM R-19: BRASS DISK IN TOP OF CURB AT THE SE CORNER OF TEXAS AND SAN BERNARDINO AVENUE, 6'± EAST OF EAST END OF RETURN.
ELEVATION = 1317.581

BASIS OF BEARINGS
THE BASIS OF BEARINGS FOR THIS MAP IS THE CALIFORNIA STATE PLANE COORDINATE SYSTEM OF 1983 (CCS83), ZONE 5, AS DETERMINED BY THE LINE BETWEEN NGS CORS "GSA" (PID DN5820) AND NGS CORS "EMPY" (PID DN7046), BOTH AS PUBLISHED ON NGS DATA SHEETS, BEING N82°35'11"W.

TOPOGRAPHIC MAP NOTE
TOPOGRAPHIC MAP PREPARED BY: INLAND AERIAL SURVEYS, INC.

SOILS ENGINEER / GEOLOGIST
GEOTECHNICAL AND INFILTRATION EVALUATION PREPARED BY: GEOTEK, INC.
GEOTEK PROJECT NO. 4212-CR, DATED APRIL 8, 2024

PRELIMINARY EARTHWORK

	CUT (C.Y.)	FILL (C.Y.)
RAW	47,700	39,300
SUBSIDENCE (0.2')	-5,100	
SHRINKAGE (7%)	-3,300	
ADJUSTED VOLUME	39,300	39,300

PUBLIC UTILITY COMPANIES

GAS:
SOUTHERN CALIFORNIA GAS CO.
1981 W. LUGONIA AVENUE
REDLANDS, CA 92374-9720
(800) 427-2200

SEWER:
CITY OF REDLANDS
P.O. BOX 6905
REDLANDS, CA 92375-0903
(909) 798-7516

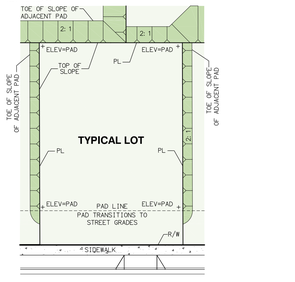
WATER:
CITY OF REDLANDS
P.O. BOX 6905
REDLANDS, CA 92375-0903
(909) 798-7516

CABLE:
TIME WARNER CABLE
1722 ORANGE TREE LANE
REDLANDS, CA 92373
(909) 793-2321

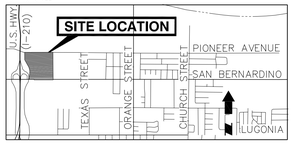
ELECTRIC:
SOUTHERN CALIFORNIA EDISON CO.
287 TENNESSEE STREET
REDLANDS, CA 92373
(909) 307-6731

TELEPHONE:
VERIZON INC.
1500 CRAFTON AVENUE
MENTONE, CA 92359
(909) 794-8210

TYPICAL LOT DETAIL FOR INTERIOR STREETS (PUBLIC)
NOT TO SCALE



VICINITY MAP
NOT TO SCALE



EASEMENTS OF RECORD
EASEMENTS AND RESTRICTIONS OF RECORD UNDER TITLE REPORT PREPARED BY FIDELITY NATIONAL TITLE COMPANY DATED SEPTEMBER 23, 2024. ORDER NO. 989-30120880-A-BAM

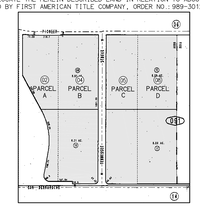
1. REDLANDS WATER COMPANY,THE HOLDER OF AN EASEMENT FOR CONSTRUCTION AND MAINTENANCE PURPOSES AS DISCLOSED BY DOCUMENT RECORDED FEBRUARY 24, 1882 IN BOOK 28, PAGE 233 OF DEEDS AND RECORDED MAY 2, 1882 IN BOOK 29, PAGE 65 OF DEEDS, OFFICIAL RECORDS OF SAN BERNARDINO COUNTY. SAID EASEMENT CANNOT BE LOCATED FROM RECORD
2. AN EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY FOR UNDERGROUND ELECTRICAL SYSTEMS AND COMMUNICATION SYSTEMS AS DISCLOSED BY FINAL ORDER OF CONDEMNATION DOCUMENT RECORDED SEPTEMBER 22, 1999 AS DOCUMENT NO. 1999-0398589, OFFICIAL RECORDS OF SAN BERNARDINO COUNTY, SAID EASEMENT IS DELINEATED HEREON.
3. SOUTHERN CALIFORNIA EDISON COMPANY, THE HOLDER OR AN EASEMENT FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES AS DISCLOSED BY DOCUMENT RECORDED SEPTEMBER 22, 2022 AS DOCUMENT NO. 2022-0328229, OFFICIAL RECORDS OF SAN BERNARDINO COUNTY. SAID EASEMENT IS DELINEATED HEREON.

LEGAL DESCRIPTION
A PORTION OF THE S 1/2, SE 1/4 OF SECTION 16, TOWNSHIP 1S, RANGE 3W SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA
SEE APN INDEX MAP

APN INDEX MAP
THIS MAP IS BEING FURNISHED AS A CONVENIENCE TO LOCATE THE HEREIN DESCRIBED LAND IN RELATION TO ADJOINING STREETS AND OTHER LANDS PER PRELIMINARY TITLE REPORT PREPARED BY FIRST AMERICAN TITLE COMPANY, ORDER NO.: 989-30120880-A-BAM DATED SEPTEMBER 23, 2024

A.P.N. 0167-091-09, -10, -11 & -12

PARCEL A: 0167-091-09
PARCEL B: 0167-091-10
PARCEL C: 0167-091-11
PARCEL D: 0167-091-12



SCALE: NTS

ADJACENT PROPERTY OWNERS

01. 0167-061-01 MERITAGE HOMES OF CA, INC.
02. 0167-061-03 MERITAGE HOMES OF CA, INC.
03. 0167-061-05 REDLANDS UNIFIED SCHOOL DISTRICT.
04. 0167-061-19 REDLANDS UNIFIED SCHOOL DISTRICT.
05. 0167-061-06 REDLANDS UNIFIED SCHOOL DISTRICT.
06. 0167-061-19 REDLANDS UNIFIED SCHOOL DISTRICT.
07. 0167-061-18 REDLANDS UNIFIED SCHOOL DISTRICT.
08. 0167-061-15 REDLANDS UNIFIED SCHOOL DISTRICT.
09. 0167-061-22 REDLANDS UNIFIED SCHOOL DISTRICT.
10. 0167-061-09 REDLANDS UNIFIED SCHOOL DISTRICT.
11. 0167-061-22 REDLANDS UNIFIED SCHOOL DISTRICT.
12. 0167-061-09 REDLANDS UNIFIED SCHOOL DISTRICT.
13. 0167-462-32 TRADITIONS COMMUNITY ASSOC.
14. 0167-462-14 RAMBO, DOMINIC DESHAWN
15. 0167-462-13 SIMBOLON, JHONY SIERA GRENDY
16. 0167-462-12 DAGUD, JIYANA
17. 0167-462-11 CAIN, JESREL STA IGLESIA
18. 0167-462-10 CHADIVE, PRANITHA REDDY
19. 0167-462-33 LENNAR HOMES OF CA
20. 0167-462-09 PACHECO, TARALYNN E.
21. 0167-474-38 NEWSOM, RITA ANN
22. 0167-474-37 TRUONG, ANDREW TUAN
23. 0167-474-36 GOPALAN, NEENA
24. 0167-474-35 STOWE, ROBERT JAMES II
25. 0167-474-34 IBRAHIM, REMON
26. 0167-474-33 YIP, ROBIN SHINE
27. 0167-474-32 GLOUDEMAN, TIMOTHY JOHN
28. 0167-474-31 TUMANGDAY, MELBA B.
29. 0167-474-30 GHAFFACARN, YASODHA A.
30. 0167-474-29 MA, DANIEL
31. 0167-462-32 TRADITIONS COMMUNITY ASSOC.
32. 0167-141-03 WAL-MART STORES, INC.
33. 0167-141-02 WAL-MART STORES, INC.
34. 0167-141-01 WAL-MART STORES, INC.
35. 0167-141-02 WAL-MART STORES, INC.

CURVE TABLE

	BEARING/DELTA	RADIUS	LENGTH
(1)	a=90°32'39"	25.00'	39.51'
(2)	a=90°00'00"	35.00'	54.98'
(3)	a=90°00'00"	25.00'	39.27'
(4)	a=90°00'00"	25.00'	39.27'
(5)	a=90°00'00"	25.00'	39.27'
(6)	a=90°00'00"	25.00'	39.27'
(7)	a=10°42'10"	100.00'	18.68'
(8)	a=111°56'39"	58.00'	113.33'
(9)	a=90°32'39"	43.00'	67.95'
(10)	a=90°32'39"	25.00'	39.51'
(11)	a=10°42'10"	100.00'	18.68'
(12)	a=89°27'21"	25.00'	39.03'
(13)	a=90°32'39"	25.00'	39.51'
(14)	a=90°00'00"	25.00'	39.27'
(15)	a=90°00'00"	25.00'	39.27'
(16)	a=90°00'00"	25.00'	39.27'
(17)	a=90°00'00"	25.00'	39.27'
(18)	a=90°00'00"	25.00'	39.27'
(19)	a=90°00'00"	25.00'	39.27'
(20)	a=90°00'00"	25.00'	39.27'
(21)	a=90°00'00"	25.00'	39.27'
(22)	a=90°00'00"	25.00'	39.27'
(23)	a=90°00'00"	25.00'	39.27'
(24)	a=90°00'00"	25.00'	39.27'
(25)	a=90°00'00"	25.00'	39.27'
(26)	a=90°00'00"	25.00'	39.27'
(27)	a=90°00'00"	25.00'	39.27'
(28)	a=89°27'21"	25.00'	39.03'
(29)	a=90°32'39"	25.00'	39.51'
(30)	a=21°23'04"	149.00'	55.61'
(31)	a=21°23'04"	183.00'	68.30'
(32)	a=68°04'17"	82.00'	97.42'
(33)	a=68°04'17"	100.00'	118.81'
(34)	a=68°04'17"	118.00'	140.19'
(35)	a=90°00'00"	25.00'	39.27'
(36)	a=90°00'00"	25.00'	39.27'
(37)	a=90°00'00"	25.00'	39.27'
(38)	a=90°00'00"	25.00'	39.27'
(39)	a=28°58'22"	82.00'	41.46'
(40)	a=21°23'04"	147.00'	54.86'
(41)	a=10°42'10"	100.00'	18.68'
(42)	a=90°00'00"	25.00'	39.27'

	BEARING/DELTA	RADIUS	LENGTH
(43)	a=90°00'00"	43.00'	67.54'
(44)	a=111°24'20"	58.00'	112.77'
(45)	a=10°42'10"	100.00'	18.68'
(46)	a=90°00'00"	25.00'	39.27'
(47)	a=90°00'00"	25.00'	39.27'
(48)	a=10°51'11"	350.00'	66.30'
(49)	a=86°29'24"	25.00'	37.74'
(50)	a=84°39'02"	25.00'	36.94'
(51)	a=28°58'22"	100.00'	50.57'
(52)	a=86°49'27"	25.00'	37.88'
(53)	a=90°00'00"	25.00'	39.27'
(54)	a=28°58'22"	100.00'	50.57'
(55)	a=10°42'10"	100.00'	18.68'
(56)	a=111°24'20"	58.00'	112.77'
(57)	a=10°42'10"	100.00'	18.68'
(58)	a=90°00'00"	25.00'	39.27'
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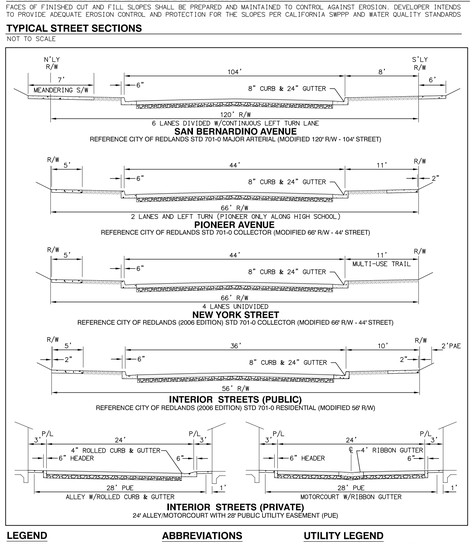
(60)	a=89°52'21"	25.00'	39.27'
(61)	a=90°00'00"	25.00'	39.27'
(62)	a=90°00'00"	25.00'	39.27'
(63)	a=90°00'00"	43.00'	67.54'

SLOPE PLANTING AND EROSION CONTROL NOTE
FACES OF FINISHED CUT AND FILL SLOPES SHALL BE PREPARED AND MAINTAINED TO CONTROL AGAINST EROSION. DEVELOPER INTENDS TO PROVIDE ADEQUATE EROSION CONTROL AND PROTECTION FOR THE SLOPES PER CALIFORNIA SWPPP AND WATER QUALITY STANDARDS

TYPICAL STREET SECTIONS
NOT TO SCALE



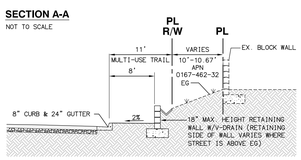
LEGEND
- EX. 5' CONTOUR
- EX. 1' CONTOUR
- PROP. 5' CONTOUR
- PROP. 1' CONTOUR
- DAYLIGHT LINE
- PROP. WALL
- ASPHALT PAVEMENT
- CONCRETE
- XX LOT NUMBER
- X,XXX SF LOT AREA
- 00.0 PAD ELEVATION
- OPEN SPACE & LANDSCAPING
- 2: 1 SLOPE OR LESS
- EXISTING TENNESSEE STREET R/W TO BE VACATED & IMPROVEMENTS REMOVED

ABBREVIATIONS

DWY	DRIVEWAY
ELEV	ELEVATION
EG	EXISTING GRADE
EX	EXISTING
FG	FINISH GRADE
FL	FLOWLINE
HP	HIGH POINT
INV	INVERT
MIN	MINIMUM
MAX	MAXIMUM
NG	NATURAL GROUND
RW	RIGHT OF WAY
PAE	PUBLIC ACCESS EASEMENT
PL	PROPERTY LINE
TF	TOP OF FOOTING
TFE	TOP OF FENCE ELEVATION
CONSTR	CONSTRUCTION
GB	GRADE BREAK
NTS	NOT TO SCALE
HP	HIGH POINT
REF	REFERENCE
REV	REVISED
S'LY	SOUTHERLY
ST	STREET
TC	TOP OF CURB
TD	TOP OF DIKE
TG	TOP OF GRATE
TW	TOP OF WALL
TRW	TOP OF RETAINING WALL
O.C.	ON CENTER
W'LY	WESTERLY
W/	WITH

UTILITY LEGEND
ALL PROPOSED UTILITIES SUBJECT TO CHANGE PER IMPROVEMENT PLANS
- WTR PROPOSED WATER MAIN
- SEW PROPOSED SEWER
- N-P WTR PROPOSED NON-POTABLE WATER
- (WTR) EXISTING WATER MAIN (SIZE AS SHOWN)
- (SEW) EXISTING SEWER (SIZE AS SHOWN)
- (N-P WTR) EXISTING NON-POTABLE WATER (SIZE AS SHOWN)
- EXISTING STORM DRAIN (SIZE AS SHOWN)
- EXISTING UNDERGROUND UTILITY AS SHOWN
- (PP) EXISTING POWER POLE
- (OH) OVERHEAD UTILITY LINES
- PROPOSED FIRE HYDRANT
- PROPOSED STORM DRAIN PIPE
- DIRECTION OF FLOW
- WATER VALVE

SECTION A-A
NOT TO SCALE



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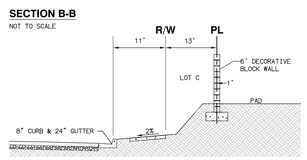

SECTION C-C
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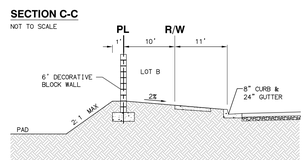

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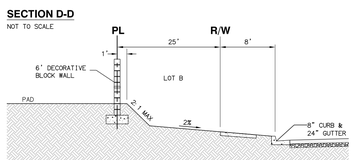

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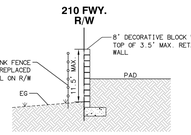

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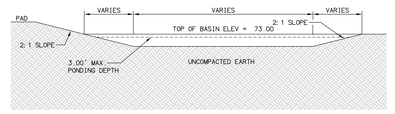

INFILTRATION BASIN 'B'
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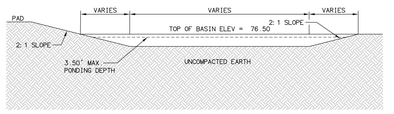

GRAPHIC SCALE
0 35 70 140 210 280
(IN FEET)
1 INCH = 70 FT

\\17\acadinfo\...\Folge Grenz\...\20651TM...\20651TM01.dwg 11:13am Feb 18, 2026

Pioneer Park Specific Plan

Operational Health Risk Assessment

Prepared For

The City of Redlands

July 2026

Prepared by

Maryam Javanmardi,
Assistant Transportation Planner

Elaina Chambers,
Air Quality Specialist

Alex J. Garber,
Technical Manager

EPD SOLUTIONS, INC

949.794.1180
3333 Michelson Drive, Suite 500
Irvine, CA 92612

EPDSolutions.com

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APPENDIX D – ESTIMATION OF OPERATIONAL HEALTH RISK

1 INTRODUCTION

This Health Risk Assessment (HRA) evaluates the potential impacts of State Route 210 (SR-210) on the residences of the proposed Pioneer Park Specific Plan Project ("Project", or "proposed Project"). The Project site is situated east of State Route 210 (SR-210), north of West San Bernardino Avenue, south of West Pioneer Avenue, and is bisected by Tennessee Avenue. Regional access to the site is provided via SR-210 and Interstate 10 (I-10). Local access to the Project site is provided via West San Bernardino Avenue and West Pioneer Avenue. The proposed Project is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Project site location is shown in Figure 1, *Project Aerial*.

The Project site encompasses approximately 35.31 gross acres, inclusive of four parcels identified by Assessor's Parcel Numbers (APN) 0167-091-09, -10, -11, and -042.

The proposed Specific Plan would include two zoning designations: Single-Family Residential (SFR), covering a 30.56-acre portion of the Project site with an allowed density range of 8 to 9 dwelling units per acre (du/ac), and Multiple-Family Residential (MFR), covering approximately 0.42-acre portion of the Project site with an allowed density range of 16 to 17 du/ac. The proposed Specific plan zoning would allow for a maximum of 275 single-family residences and 7 multifamily units, for a total of 282 residences. The site plan is shown in Figure 2, *Project Tentative Tract Map*.

Figure 1: Project Location



Figure 2: Project Tentative Tract Map



1.1 Access and Parking

Each single-family residence within the Specific Plan Area (SPA) would include parking within a two-car garage or carport, with multiple-family residences within the SPA parked based on unit size in either a garage, carport, and/or unenclosed parking configuration. In addition to the specific single-family and multiple-family spaces, unassigned and uncovered guest spaces in designated parking areas as well as on-street parking spaces on the on-site neighborhood streets would be available throughout the SPA.

Proposed on-site roadways within the SPA would connect to existing perimeter streets to the north and south as well as the proposed New York Street to the east. The main neighborhood entry would be from the proposed New York Street, with secondary entries from West San Bernardino Avenue and West Pioneer Avenue. Internal circulation would be provided via internal streets designed to meet local circulation, safety, and access standards. The internal street layouts offer a variety of configurations, with roadway widths of 36 feet to accommodate two-way vehicle travel and emergency vehicle movements. Several street sections would include parallel parking lanes on both sides to provide on-street guest parking. Sidewalks would be provided throughout the Project site, with landscaped parkways included in select sections to enhance the streetscape and pedestrian environment. Curb and gutter improvements would also be constructed along both sides of the internal streets to manage stormwater runoff and define vehicular and pedestrian space. See Figure 2, *Conceptual Site Plan*.

1.2 Operational Characteristics

The Project would operate as a residential community, with an expected opening year of 2028. The adjacent SR-210 was assumed to have vehicle activity for 24 hours a day, 7 days a week.

1.3 Purpose of the Report

For informational purposes, this report evaluates the potential health impacts to sensitive receptors of the Project. This HRA focuses on the emissions of diesel particulate matter (DPM) from the SR-210, which is within 200 feet west of the Project site. DPM has been identified by the California Air Resources Board (CARB) as a carcinogenic substance responsible for nearly 70 percent of the airborne cancer risk in California (California Air Resources Board, 2017). The estimated health risk impacts from the Project construction were compared to the health risk significance thresholds recommended by the South Coast Air Quality Management District (SCAQMD) for use in CEQA assessments.

This HRA employed the following tools to estimate the health impacts of the Project:

- The United States Environmental Protection Agency (USEPA) AMS/EPA Regulatory Model (AERMOD Version 24142) air dispersion model to estimate DPM impacts to sensitive receptors.
- Cancer Risk Methodology from the California Office of Environmental Health Hazards Assessment (OEHHA) (California Office of Environmental Health Hazards Assessment, 2015), and the SCAQMD (South Coast Air Quality Management District, 2024).
- The Emissions Factor project-level model (EMFAC, 2021 Version) calculates 40 mph exhaust emissions from diesel trucks during the operation of the Project.

1.4 Summary of the Results

The emissions from the Project's operation would not result in cancer health risks that exceed the lifetime cancer risk threshold of 10 in one million at the maximum impacted sensitive receptors. The Project's operational emissions would not result in a non-cancer risk greater than the 1.0 non-cancer hazard index (HI) threshold. The Project's maximum operational health risk results are summarized below.

Maximum Health Risk Results:

- Sensitive/residential receptor for the 30-year lifetime exposure duration: 4.86 in one million
- Sensitive receptor chronic non-cancer HI: <0.01

Thus, thresholds for cancer and non-cancer health risks would not be exceeded for any receptor group. Therefore, the vehicle traffic along SR-210 would result in a less-than-significant health risk impact to the Project.

2 HEALTH RISK ASSESSMENT

An HRA is a guide that helps determine whether the risks from current or future exposures to a toxic chemical or substance in the environment could affect the health of a population. In general, the quantification of risk from the development of a project depends on the following factors:

- Identification of the toxic air contaminants (TACs) that may be present in the air;
- Estimation of the amount of TACs released from all emission sources using emission models;
- Estimation of the airborne concentrations of TACs in the geographic area of concern using air dispersion models with information about emissions, source locations, weather, and other factors;
- Estimation of the level of exposure to different concentrations of the TACs at different geographic locations and their consequential health impacts.

Thus, an HRA identifies the TACs that could affect public health, identifies the sources and quantities of the TAC emissions, estimates where the emissions are transported by prevailing meteorological conditions, and assesses the consequential health impacts due to the identified exposures.

The State of California OEHHA has developed methods for conducting HRAs. As defined under the Air Toxics "Hot Spots" Information and Assessment Act:

> "*A health risk assessment means a detailed, comprehensive analysis prepared pursuant to Section 44361 to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure.*" *(California Health and Safety Code, 1987)*

The methodology used to estimate health risks and hazards that could potentially affect nearby sensitive receptors from the emissions of TACs is described below. The methodology includes assumptions regarding emission source quantification, configurations and locations, receptor locations, air dispersion modeling, and health risk modeling. As noted above, this HRA focused on DPM emissions that the CARB has identified as the principal airborne carcinogenic substance in California. For purposes of this HRA, DPM was assumed to be comprised of PM_{10} vehicle exhaust emissions, which measures particulate with a diameter of 10 microns or less (California Air Resources Board, n.d.)

2.1 SCAQMD Significance Thresholds

Project-Level

The City of Redlands has not adopted a numerical significance threshold for cancer risk or non-cancer chronic health risk impacts. Therefore, the significance thresholds recommended by the SCAQMD were used for this assessment. The relevant significance thresholds for cancer risk and non-cancer hazard index are provided below:

- Cancer Risk: ten (10) persons per million population as the maximum acceptable incremental cancer risk due to exposure to TACs.
- Non-Cancer Hazard Index (HI): 1.0.

These thresholds are discussed further in Section 2.2, *Health Risk Estimation Methodology*.

Cumulative

The SCAQMD conducted an analysis of the cumulative effects of TACs within the South Coast Air Basin (SCAB) as part of its *Multiple Air Toxics Exposure Study in the South Coast Air Basin* (MATES-V, the draft version of this MATES study series) (South Coast Air Quality Management District, 2021). The MATES-V study expresses cumulative TAC impacts in terms of potential increased cancer risks. Cumulative impact thresholds derive from this study, since the Project site is within the MATES-V study area. The MATES-V study estimates that the cumulative TAC-source cancer risk for the localized area encompassing the Project site ranges from 300 to 400 in one million. DPM-source cancer risks are reflected in the area's ambient cumulative cancer risk along with all other TAC-source risks and account for the predominance (68 percent) of the total risk. A cancer risk upper limit of 400 in a million was assumed to comprise the impact from existing TAC emission sources in the region without the impacts from the Project.

The TAC emissions inventory used in the MATES-V study to estimate health impacts was representative of emissions for the year 2018. In addition to the MATES-V cumulative TAC-source cancer risk noted above, other new or proposed potential TAC-generating projects (related projects) in the Project area not included in the MATES V study could contribute to cumulative TAC impacts. The SCAQMD has published a white paper addressing cumulative impacts from air pollution (South Coast Air Quality Management District, 2003). The white paper recommends a 1,000-foot distance from a proposed project to identify other development projects that could contribute to cumulative impacts (South Coast Air Quality Management District, 2019). The 1,000-foot evaluation distance is supported by research-based findings concerning TAC emission dispersion rates from roadways and large sources, showing that emissions diminish substantially between 500 and 1,000 feet from emission sources. While the cumulative analysis incorporates future emissions within 1,000 feet of the source, the project-specific and cumulative significance thresholds of 10 in one million remain the same.

Section 3.2, *Cumulative Analysis,* discusses the cumulative analysis of the Project further.

2.2 Health Risk Estimation Methodology

Cancer Risk

Cancer risks are estimated as the upper-bound incremental probability that an individual would develop cancer due to exposure to potential carcinogens over a specified exposure duration. The estimated risk is expressed as a probability since there is no level below which some level of impact may occur. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake, or dose, at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of 10 persons per million as the maximum acceptable incremental cancer risk due to DPM exposure. This threshold serves to determine whether a given project has a potentially significant project-level and cumulative-level impact. The threshold of 10 in one million implies a likelihood that up to 10 persons out of one million, equally exposed, would develop cancer if exposed continuously to the levels of toxic air contaminants over a specified duration of time. This risk is an excess cancer risk in addition to any environmental cancer risk borne by a person not exposed to these air toxins.

The exposure dose is the amount of a chemical taken into the body at a given time. In particular, the exposure dose through inhalation ($Dose_{air}$) is a function of the breathing rate, the exposure frequency, and the concentration of exposures. Breathing rates change over time for different age groups and are determined for specific age groups. The $Dose_{air}$ is calculated for each of the following age groups: third trimester to birth, and 0 to 2, 2 to 16, and 16 to 30 years of age. The OEHHA recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans. The risks for each age group are summed together to provide a total estimate of lifetime cancer risks for sensitive receptors. To estimate the cancer risk, the $Dose_{air}$ is estimated by applying the following equation to the DPM concentration at each receptor as calculated by the air dispersion model:

$$Dose_{air} = C_{DPM} \times DBR_i \times A \times EF_i \qquad \text{(EQ-1)}$$

Where:

$Dose_{air}$ = dose through inhalation (mg/kg/day)

C_{DPM} = period average concentration of DPM as estimated by the air dispersion model ($\mu g/m^3$)

DBR = daily breathing rate for each age group (liters/kg-day)—see Table 2

A = Inhalation absorption factor (unitless = 1)

EF = exposure frequency (days per year)

i – number of age groups

The dose is multiplied by the cancer potency factor, the age sensitivity factors (ASF), the exposure duration (ED), and the fraction of time spent at home (FAH, for sensitive/residential receptors only) divided by averaging time (AT) to arrive at an estimate of cancer risk:

$$\text{Cancer Risk} = Dose_{air,i} \times CPF \times ASF_i \times ED_i \times FAH_i/AT \qquad \text{(EQ-2)}$$

Where:

Cancer Risk = Total individual excess inhalation cancer risk, defined as the cancer risk a hypothetical individual faces if exposed to carcinogenic emissions from a particular source for specified exposure durations; this risk is summed over all age groups; cancer risk is expressed in terms of risk per million exposed individuals.

$Dose_{air,i}$ = inhalation dose through inhalation (mg/kg-day)

CPF = inhalation cancer potency factor $(mg/kg\text{-}day)^{-1}$

ASF_i = age sensitivity factors (see Table 1)

ED_i = exposure duration (years)—see Table 1

AT = averaging time of lifetime cancer risk (70 years or 25550 days)

FAH_i = fraction of time spent at home—see Table 1

n = number of age groups

For the purposes of this HRA, the operational 30-year exposure duration for sensitive/residential receptors, consistent with the OEHHA guidance, as well as the adopted SCAQMD methodology, was assumed to span the time period of the third trimester pre-birth in 2028 (the Project's opening year) to the year 2058. The OEHHA recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans. Estimates of cancer risk were also provided for informational purposes for adult exposure (30 years) using the maximum operational DPM emissions. Analysis of the Project's operation utilizes utilize the OEHHA recommended 30-year exposure.

Table 1, *Exposure Assumptions for Cancer Risk–OEHHA/SCAQMD Guidance*, provides the values for the various cancer risk parameters shown in equations EQ-1 and EQ-2 for the receptor groups examined in this assessment for both construction and operation of the Project. For DPM, the value of the CPF is 1.1 milligrams per kilogram per day.

Table 1: Exposure Assumptions for Cancer Risk-OEHHA/SCAQMD Guidance

Age Group	Exposure Frequency (EF) (Hours/Day)	Days/Year	Exposure Duration (ED) (Years)	Age Sensitivity Factors (ASF)	Time at Home (TAH)	Daily Breathing Rate[1] (DBR) (L/kg-day)
Sensitive/Residential Receptor – Pre-birth to Adult (30-year duration)						
3rd Trimester to Birth	24	365	0.25	10	0.85	361
0 to 2 years	24	365	2	10	0.85	1,090
2 to 16 years	24	365	14	3	0.72	745
16 to 30 years	24	365	14	1	0.73	335

Notes:
[1] Daily breathing rates are representative of the 95th percentile for sensitive/residential receptors.
(L/kg-day) = liters per kilogram body weight per day
Source: (South Coast Air Quality Management District, 2024)

Chronic Non-Cancer Hazard

TACs can also cause chronic (long-term) effects on non-cancer illnesses such as reproductive effects, birth defects, or adverse environmental effects. Non-cancer health risks are conveyed in terms of the Hazard Index (HI), which is a ratio of the predicted concentration of the facility's reported TAC emissions to a concentration is considered acceptable to public health professionals. A significant risk is defined as an HI of 1.0 or greater. An HI of less than 1.0 indicates that no significant health risks are expected from the facility's TAC emissions. The following equation gives the relationship for the non-cancer hazards for TACs:

$$HI = C_{ann}/REL \quad \text{(EQ-3)}$$

Where:

HI = Hazard Index: an expression of the potential for chronic non-cancer health risks

C_{ann} = Annual average TAC concentration ($\mu g/m^3$)

REL = Reference Exposure Level: the DPM concentration at which no adverse health effects are anticipated

Annual concentrations of DPM, which are estimated by the air dispersion model, are used to estimate chronic non-cancer hazards. The OEHHA has defined an REL for DPM of 5 $\mu g/m^3$.

EMFAC 2021 Adjustment Factors

The EMFAC model version utilized for the assessment, EMFAC 2021, currently accounts for emissions reductions attributed to compliance with several regulations: the Advanced Clean Trucks (ACT) Regulation, Zero-Emission Airport Shuttle Regulation, Heavy-Duty Warranty Amendments (Phase 1), and the Heavy-Duty Omnibus Regulation. In June 2025, three congressional resolutions were signed into law to disapprove previously approved preemption waivers which allowed the enforcement of these regulations. Therefore, CARB released the EMFAC 2021 Off-Model Adjustment Factors ("Adjustment Factors"), which negates the accounted for emissions reductions attributed to these regulations. On November 21, 2025, the USEPA approved use of the Adjustment Factors (USEPA, 2025). These factors are provided for each vehicle under EMFAC2021's vehicle categories, for every year from 2022 to 2050.

Adjustment Factors were applied to the mobile-source on-road emissions retrieved from EMFAC 2021. Operational mobile on-road sources including: light-heavy-duty trucks (LHDT1 & LHDT2), medium-heavy-duty trucks (MHDT), and heavy-heavy-duty trucks (HHDT) emission rates for PM_{10} vehicle exhaust were adjusted using the Adjustment Factors provided by CARB, for the years of 2028 to 2050, utilizing 2050 emission rates and Adjustment Factors for the remainder of the exposure duration. Supporting calculations are provided in Appendix C, *Estimation of DPM Emissions*.

2.3 Estimation of DPM Emissions

Estimation of Mobile Source Emissions

The predominant sources of DPM emissions which would affect the Proposed Project would be derived from the diesel trucks that would travel along the adjacent SR-210. Estimates of mobile source emissions are based on an emission factor and an activity level. An emission factor quantifies the amount of air emission for a

specific activity, such as a gram of DPM (as PM_{10} exhaust) emitted per vehicle mile traveled or per hour of idling, while the activity level is defined as the vehicle trip, number of miles traveled, or the amount of time a vehicle spends idling.

Combustion emissions (grams/mile or grams/hour for idling) resulting from the combustion of diesel fuel from heavy-duty trucks are the primary source of DPM emissions. The CARB EMFAC 2021 mobile source emission model provides emission rates for user-defined heavy-duty truck speeds, fuel type, vehicle class, and model year.

The emissions of DPM from mobile sources are calculated as follows for running exhaust emissions and idling emissions:

$$\text{Running Exhaust Emissions}_{RE} = \sum_{i=1}^{n} (VMT_i \times EF_i)$$

$$\text{Idling Emissions}_{ID} = \sum_{i=1}^{n} (IdNum_i \times T_i \times EF_i)$$

Where:

Emissions_{RE} = Running exhaust emissions summed over all vehicle classes

Emissions_{ID} = Idling emissions summed over all vehicle classes

EF_i = Running exhaust emission factor for each vehicle type at a specific vehicle speed (g/mi)

EF_{idling} = Idling emission factor for each vehicle class (g/idle-hour)

VMT_i = Total number of vehicle miles summed over all vehicle classes (miles per day)

$IdNum_i$ = Number of idling vehicles by vehicle class

T_i = Idling hours summed over all vehicle classes (hours per day)

n = Number of vehicle classes

i = Vehicle class

2.4 Mobile Source Activity Levels

The motor vehicle activity levels were estimated using annual average daily traffic count information from Caltrans, included as Appendix A (Caltrans, 2026). A daily trip count is estimated by dividing the annual sum of traffic by 365 days. This data also provides the percentage of vehicles comprising each weight class, shown below in Table 2, *Estimated Daily Vehicle Trips*. The trip estimates shown refer to both gasoline and diesel-fueled vehicles. The percentage of truck trips were obtained from the Caltrans Annual Average Daily Truck data (Caltrans, 2026).

Table 3, *Diesel Heavy-Duty Truck Vehicle Fleet* presents the percentage of diesel vehicle trips by heavy-duty vehicle class for the San Bernardino (SC) County sub-area in 2028, as derived from the EMFAC2021 mobile source emission model and applied to the Caltrans count data. Calculation details can be found in the data attachment in Appendix C.

Table 2: Estimated Daily Vehicle Trips

Fleet Mix	Percentage of Fleet (%)	Vehicle Trips per Day
Passenger Cars (LDA, LDT1, LDT2, MDV)	95.39	89,667
2-axle Trucks (LHDT1, LHDT2)	0.016	1,471
3-axle Trucks (MHDT)	0.003	301
4+-axle Trucks (HHDT)	0.027	2,561
Total Proposed Project Trips	**100.00**	**94,000**

Notes: LDA: light duty automobile, LDT1/LDT2: light duty trucks, MDV: medium duty vehicle, LHDT1/LHDT2: light heavy-duty trucks, MHDT: medium heavy-duty trucks, HHDT: heavy heavy-duty trucks
Source: See Data Attachment in Appendix C.

Table 3: Diesel Heavy-Duty Truck Vehicle Fleet

Type of Vehicle	Diesel Fuel Vehicles (% of Vehicle Trips)	Daily Diesel Vehicle Trips
Light heavy-duty truck (LHDT1)	78.5	1,155
Light heavy-duty truck (LHDT2)	21.5	316
Medium heavy-duty truck (MHDT)	100[1]	301
Heavy heavy-duty truck (HHDT)	100[1]	2,561

Notes:
[1]Trip percentages for MHDT, and HHDT were assumed to be 100% diesel fleets to provide a conservative analysis of the DPM impacts.
Source: See Data Attachment in Appendix C

DPM Truck Emission Factors

The DPM (as PM_{10} exhaust) emission factors were derived from the CARB EMFAC2021 model within the San Berardino (SC) County sub-area beginning with the Proposed Project's opening year of 2028 (California Air Resources Board, 2021). With the EMFAC Adjustment Factors applied, emissions were conservatively applied to the projected 30-year operational exposure duration per OEHHA guidance. The model retrieved mobile

source emissions in terms of grams per mile (grams/VMT) for the running exhaust emissions at 40 miles per hour (mph), which is reported to be the average speed along SR-210 (Caltrans, 2026).

The DPM truck emissions for LHDT1, LHDT2, MMHDT, and HHDT for running exhaust and the respective Adjustment Factors applied in this HRA can be found in data attachment Appendix C. The Proposed Project's operational heavy-duty diesel truck emissions were estimated for on-site and off-site vehicle travel. Figure 3, *Locations of Project's Operational On-Site and Off-Site DPM Emission Sources,* provides the locations of the operational on-site and off-site DPM emission sources.

Figure 3: Locations of DPM Emission Sources



2.5 Atmospheric Dispersion Methodology

Atmospheric dispersion modeling is the mathematical simulation of how air pollutants disperse in the ambient atmosphere. The modeling is performed with computer algorithms simulating the movement and dispersion of air pollutants. The air dispersion model uses emissions from various emission sources and meteorological data such as wind speed and direction, air temperature, and atmospheric mixing rates to estimate the air pollutant impacts at various geographic locations (referred to as receptor locations).

Table 4, *General Modeling Assumptions,* and Table 5, Operational *Emissions Source Configuration,* provide the general assumptions applied in the AERMOD model (Version 23132). The AERMOD output sheets can be found in Appendices B for operation.

Table 4: General Modeling Assumptions

Feature	Assumption
Terrain Processing	Complex terrain; elevations were obtained for the Project site using the USGS DEM/CDED terrain data; Data sets: 9033_75m.dem (30m)
Land Use	Urban based on land use patterns surrounding the Project site
Meteorological Data	Ontario International Airport for the years 2012-2016
Receptor Locations	A uniform receptor grid network was used to include all existing residences and worker locations surrounding the Project site and along SR-210. Discrete receptors were placed at the Project's proposed residential units. Receptors placed a ground-level.
Population	San Bernardino County Population: ~ 2,207,424
Building Profile Heights	In consistency with the Project site plan, the maximum height allowance of 35 feet was assumed as the Project building height for a conservative analysis. Surrounding building profile heights were also included in the modeling.

Source: See Data Attachment in Appendix B

Table 5: Operational Emissions Source Configuration

Emission Source Type	Geometric Configuration	Relevant Assumptions
Operational On-Site Vehicle Traffic	Line Area Source	• Stack release height: 3.11 meters (10.2 feet) with a plume height of 5.29 meters (17.4 feet) (EPA Haul Roads Calculator) • Emission factor: CARB EMFAC 2021; DPM (as PM_{10} exhaust) emission factors at 40 mph for heavy-duty diesel trucks for 2028 to 2058 for the San Bernardino (SC) County sub area. • Vehicle type: all heavy-duty trucks. • On-Site Truck Routes: o **On-Site Route 1:** Two-way travel along SR-210, between Caltrans data collection points "E/O Santa Aa River Bridge" to "JCT. RTE. 10" (Caltrans, 2026) • Operations: 24 hours, 7 days a week.

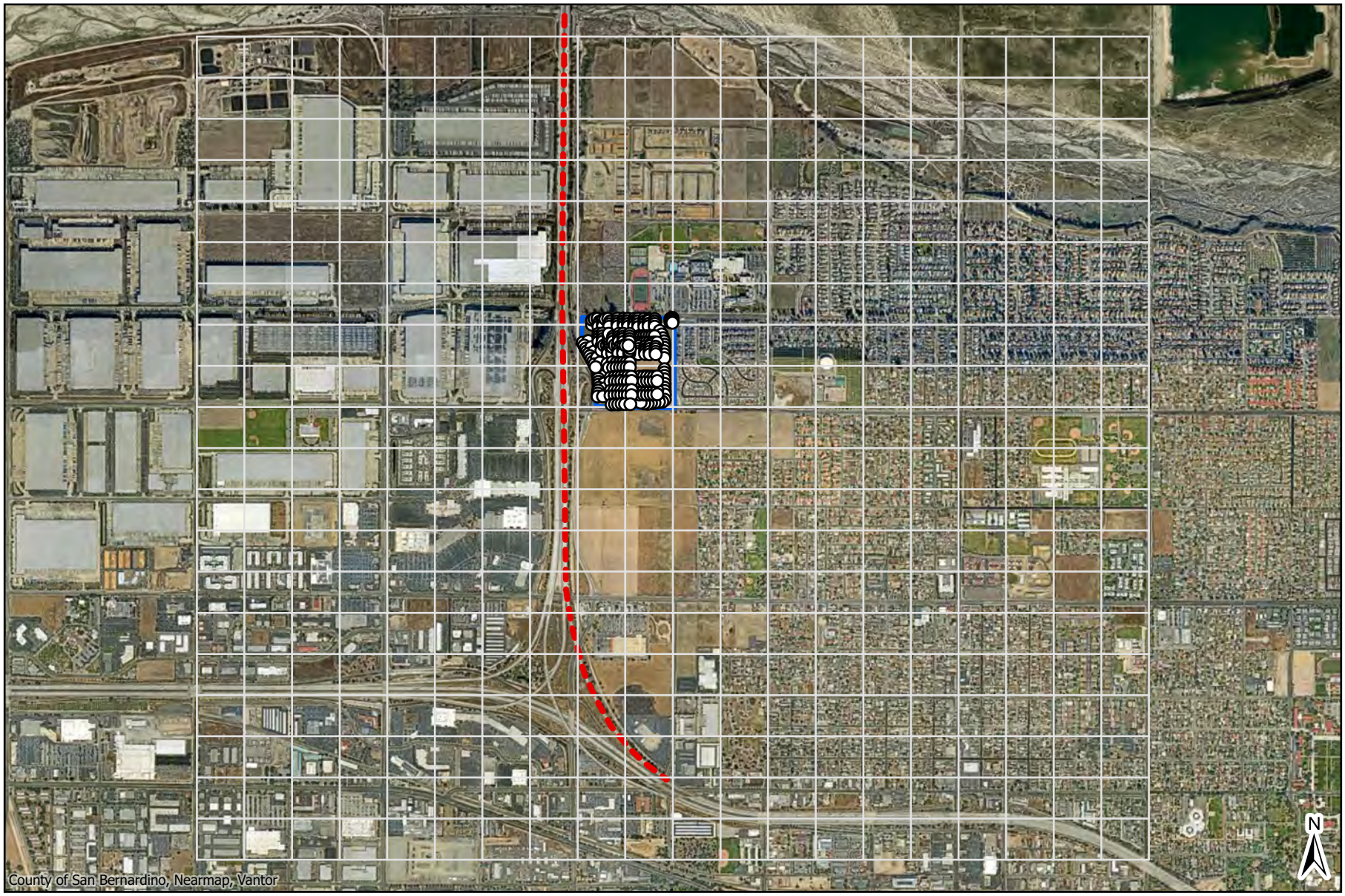
Source: See Data Attachment in Appendix B

[1] Truck trip percent splits were derived from the Caltrans Annual Average Daily Trip Data (Caltrans, 2026)

2.6 Receptors

The SCAQMD defines a sensitive receptor as any residence, including private homes, condominiums, apartments, and living quarters, schools, preschools, daycare centers, and health facilities such as hospitals or retirement and nursing homes (South Coast Air Quality Management District, 2024). For the purpose of this HRA, sensitive receptors were placed within the air dispersion model at the locations of the proposed Project residential units. In addition, a uniform grid network of receptors was placed over the Project site to complete the receptor network. These receptors were used to evaluate the health risk of the residences of the Project site, due to the proximity of the freeway. The closest residential units approximate yield the highest cancer risk values. Figure 4, *Locations of Air Dispersion Operational Model Receptors,* shows the receptor locations for the Project modeling.

Figure 4: Locations of Air Dispersion Model Receptors



Results of the Health Risk Assessment

2.7 Project-Level Risk Results

Table 6, *Proposed Project Operational Health Risk* present a summary of the cancer risks resulting from the Project's operation, along with the adopted SCAQMD health risk significance thresholds. As shown in Table 6, the estimated maximum cancer risks for operation would be 4.86 in one million, for the maximally impacted sensitive/residential receptors. The operational risk for sensitive receptors would be below the SCAQMD threshold of 10 in one million.

The Proposed Project's estimated results for non-cancer health risk of the maximally impacted sensitive receptors during operation would be <0.01. The operational non-cancer health risk for sensitive receptors would be below the significance threshold of 1.0. Therefore, the Project would have a less-than-significant result related to both cancer and non-cancer health risks, and no mitigation is required.

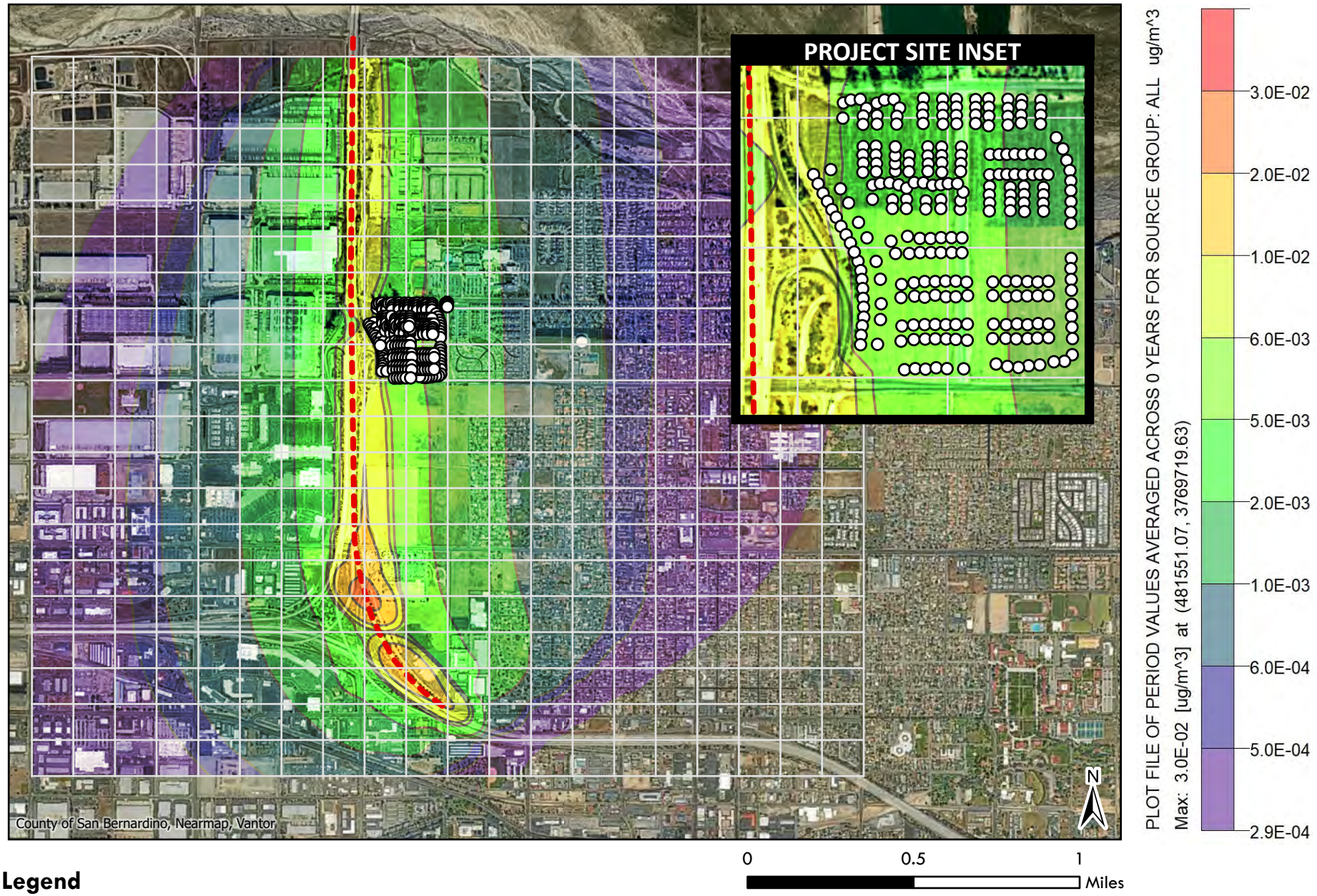
See Figure 5, *Operational Model Output,* for the operational model output.

Table 6: Proposed Project Operational Health Risk

Receptor	Cancer Risk (per million)		Exceeds Significance Threshold?
	Maximum Lifetime Proposed Project Risk	Significance Threshold	
Maximum Impacted Sensitive Receptor Prebirth to 30 years	4.86	10	No
Maximum Impacted Sensitive Receptor Adult (30 years)	0.03	10	No
Receptor	**Chronic Non-Cancer Hazard Index**		**Exceeds Significance Threshold?**
	Maximum Lifetime Proposed Project Risk	**Significance Threshold**	
Maximum Impacted Sensitive Receptor	<0.01	1.0	No

Source: See Data Attachment in Appendix D.2.

Figure 5: Construction Model Output



3 CONCLUSION

The emissions from the nearby freeway onto the Proposed Project would not result in cancer health risks that exceed the lifetime cancer risk threshold of 10 in one million at the maximum impacted sensitive receptors. In addition, the emissions from vehicle traffic on SR-210would not result in a non-cancer risk greater than the 1.0 non-cancer HI threshold. The Project's maximum operational health risk results are summarized below.

Maximum Proposed Project Operational Health Risk Results:

- Sensitive/residential receptor for the 30-year lifetime exposure duration: 4.86 in one million
- Sensitive receptor chronic non-cancer HI: <0.01

Thresholds for cancer and non-cancer health risks would not be exceeded for any receptor group. Therefore, vehicle traffic from SR-210 would result in less-than-significant health risks to the Project.

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APPENDIX A – CALTRANS ANNUAL AVERAGE DAILY TRUCK TRIPS

X	Y	OBJECTID	RTE	RTE_SUFFIX	DIST	CNTY	PM_PFX	POSTMILE	PM_SUFFIX	LEG	DESCRIPTION	VEHICLE_AADT_TOTAL	TOT_TRK_AADT	TRK_PERCENT_TOT	TRK_2_AXLE	TRK_2_AXLE_PCT	TRK_3_AXLE	TRK_3_AXLE_PCT	TRK_4_AXLE	TRK_4_AXLE_PCT	TRK_5_AXLE	TRK_5_AXLE_PCT	EAL	EST_YEAR	EST_CODE
6273770.29	2340356.54	2640	210		8	SBD	R	31.7		A	E/O SANTA ANA RIVER BRIDGE	94000	4333	4.61	1471	33.95	301	6.94	119	2.74	2443	56.37	940	17	V
6273854.78	2340380.07	2641	210		8	SBD	R	31.7		A	E/O SANTA ANA RIVER BRIDGE	94000	4333	4.61	1471	33.95	301	6.94	119	2.74	2443	56.37	940	17	V
6273767.06	2332681.24	2642	210		8	SBD	R	33.18		B	JCT. RTE. 10	79000	4108	5.2	2000	48.68	290	7.06	108	2.62	1710	41.62	703	11	V
6273186.6	2332936.91	2643	210		8	SBD	R	33.18		B	JCT. RTE. 10	79000	4108	5.2	2000	48.68	290	7.06	108	2.62	1710	41.62	703	11	V

APPENDIX B– AERMOD OPERATIONAL MODEL OUTPUT

```
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** Lakes Environmental Software Inc.
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   AVERTIME 1 PERIOD
   URBANOPT 2207424 County_of_San_Bernardino
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL 25_124_Pioneer_Park_Op_Freeway.err
CO FINISHED
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** AERMOD Source Pathway
**************************************
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SO STARTING
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** Source ID - Type - X Coord. - Y Coord. **
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** PREFIX
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** ----------------------------------------------------------------
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   LOCATION A0000002     AREA     481489.454 3772331.613 372.05
   LOCATION A0000003     AREA     481488.671 3772242.359 378.00
   LOCATION A0000004     AREA     481487.888 3772153.105 378.00
   LOCATION A0000005     AREA     481487.104 3772063.851 378.06
   LOCATION A0000006     AREA     481486.321 3771974.597 379.04
   LOCATION A0000007     AREA     481485.538 3771885.343 381.21
   LOCATION A0000008     AREA     481484.755 3771796.089 382.17
   LOCATION A0000009     AREA     481483.972 3771706.835 383.13
   LOCATION A0000010     AREA     481483.189 3771617.581 384.00
   LOCATION A0000011     AREA     481482.406 3771528.327 384.00
   LOCATION A0000012     AREA     481481.623 3771439.073 384.06
   LOCATION A0000013     AREA     481480.840 3771349.819 385.03
   LOCATION A0000014     AREA     481480.057 3771260.457 386.00
   LOCATION A0000015     AREA     481481.304 3771169.835 386.00
   LOCATION A0000016     AREA     481482.552 3771079.212 386.08
   LOCATION A0000017     AREA     481483.799 3770988.590 386.13
   LOCATION A0000018     AREA     481485.046 3770897.967 386.01
   LOCATION A0000019     AREA     481486.293 3770807.344 386.00
   LOCATION A0000020     AREA     481487.541 3770716.722 386.00
   LOCATION A0000021     AREA     481488.788 3770626.099 386.00
   LOCATION A0000022     AREA     481490.035 3770535.476 386.34
   LOCATION A0000023     AREA     481491.282 3770444.854 387.00
   LOCATION A0000024     AREA     481492.530 3770354.231 387.42
   LOCATION A0000025     AREA     481493.777 3770263.608 387.51
   LOCATION A0000026     AREA     481495.024 3770172.986 388.00
   LOCATION A0000027     AREA     481496.272 3770082.363 388.00
   LOCATION A0000028     AREA     481497.571 3769991.102 388.00
   LOCATION A0000029     AREA     481508.969 3769915.060 388.00
   LOCATION A0000030     AREA     481520.472 3769838.506 388.35
   LOCATION A0000031     AREA     481543.341 3769752.196 389.00
   LOCATION A0000032     AREA     481566.264 3769665.694 389.88
   LOCATION A0000033     AREA     481579.780 3769622.296 391.23
   LOCATION A0000034     AREA     481602.649 3769573.608 396.49
   LOCATION A0000035     AREA     481625.657 3769524.646 391.89
   LOCATION A0000036     AREA     481657.378 3769467.106 390.36
   LOCATION A0000037     AREA     481689.619 3769408.806 392.40
   LOCATION A0000038     AREA     481727.980 3769363.069 395.27
   LOCATION A0000039     AREA     481766.669 3769316.978 396.00
   LOCATION A0000040     AREA     481830.533 3769254.965 396.00
```

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   LOCATION A0000041     AREA     481901.409 3769201.808 396.00
   LOCATION A0000042     AREA     481931.474 3769191.267 396.00
** End of LINE AREA Source ID = ARLN1
** Source Parameters **
** LINE AREA Source ID = ARLN1
   SRCPARAM A0000001     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000002     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000003     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000004     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000005     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000006     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000007     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000008     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000009     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000010     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000011     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000012     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000013     2.4267E-08     0.000    89.257     9.500    90.503
2.459
   SRCPARAM A0000014     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000015     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000016     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000017     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000018     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000019     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000020     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000021     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000022     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000023     2.4267E-08     0.000    90.631     9.500    89.211
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2.459
   SRCPARAM A0000024     2.4267E-08     0.000    90.631     9.500    89.211
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   SRCPARAM A0000025     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000026     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000027     2.4267E-08     0.000    90.631     9.500    89.211
2.459
   SRCPARAM A0000028     2.4267E-08     0.000    76.891     9.500    81.476
2.459
   SRCPARAM A0000029     2.4267E-08     0.000    76.891     9.500    81.476
2.459
   SRCPARAM A0000030     2.4267E-08     0.000    89.289     9.500    75.160
2.459
   SRCPARAM A0000031     2.4267E-08     0.000    89.289     9.500    75.160
2.459
   SRCPARAM A0000032     2.4267E-08     0.000    44.800     9.500    72.759
2.459
   SRCPARAM A0000033     2.4267E-08     0.000    53.791     9.500    64.841
2.459
   SRCPARAM A0000034     2.4267E-08     0.000    53.791     9.500    64.841
2.459
   SRCPARAM A0000035     2.4267E-08     0.000    65.705     9.500    61.133
2.459
   SRCPARAM A0000036     2.4267E-08     0.000    65.705     9.500    61.133
2.459
   SRCPARAM A0000037     2.4267E-08     0.000    59.694     9.500    50.013
2.459
   SRCPARAM A0000038     2.4267E-08     0.000    59.694     9.500    50.013
2.459
   SRCPARAM A0000039     2.4267E-08     0.000    88.414     9.500    44.182
2.459
   SRCPARAM A0000040     2.4267E-08     0.000    88.570     9.500    36.870
2.459
   SRCPARAM A0000041     2.4267E-08     0.000    29.729     9.500    36.573
2.459
   SRCPARAM A0000042     2.4267E-08     0.000     7.624     9.500  -135.000
2.459
** ------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
```

```
   INCLUDED 25_124_Pioneer_Park_Op_Freeway.rou
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE "..\..\Met Files\OntarioIntlAirportADJU\KONT_V9_ADJU\KONT_v9.SFC"
   PROFFILE "..\..\Met Files\OntarioIntlAirportADJU\KONT_V9_ADJU\KONT_v9.PFL"
   SURFDATA 3190 2012
   UAIRDATA 3190 2012
   PROFBASE 287.8 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST 25_124_PIONEER_PARK_OP_FREEWAY.AD\01H1GALL.PLT 31
   PLOTFILE PERIOD ALL 25_124_PIONEER_PARK_OP_FREEWAY.AD\PE00GALL.PLT 32
   SUMMFILE 25_124_Pioneer_Park_Op_Freeway.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            3 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186     172       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187     172       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 ME W530     172       MEOPEN: CAUTION! Met Station ID Mismatch with SURFFILE for
```

```
 SURFDATA

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                       ***        12:31:13

                                  PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY
 ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for    42 Source(s),
        for Total of    1 Urban Area(s):
   Urban Population =   2207424.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: PM_10

 **Model Calculates  1 Short Term Average(s) of:   1-HR
     and Calculates PERIOD Averages

 **This Run Includes:     42 Source(s);       1 Source Group(s); and     703
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:      0 VOLUME source(s)
```

```
                and:     42 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 RLINE/RLINEXT source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
          Model Outputs Tables of PERIOD Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and
Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   287.80 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                    ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   25_124_Pioneer_Park_Op_Freeway.err

 **File for Summary of Results:   25_124_Pioneer_Park_Op_Freeway.sum

 *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                       ***        12:31:13

                                  PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	COORD (SW CORNER) X (METERS)	COORD (SW CORNER) Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. (DEG.)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY	AIRCRAFT
A0000001	0	0.24267E-07	481490.2	3772420.9	371.0	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000002	0	0.24267E-07	481489.5	3772331.6	372.1	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000003	0	0.24267E-07	481488.7	3772242.4	378.0	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000004	0	0.24267E-07	481487.9	3772153.1	378.0	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000005	0	0.24267E-07	481487.1	3772063.9	378.1	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000006	0	0.24267E-07	481486.3	3771974.6	379.0	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000007	0	0.24267E-07	481485.5	3771885.3	381.2	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000008	0	0.24267E-07	481484.8	3771796.1	382.2	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000009	0	0.24267E-07	481484.0	3771706.8	383.1	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000010	0	0.24267E-07	481483.2	3771617.6	384.0	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000011	0	0.24267E-07	481482.4	3771528.3	384.0	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000012	0	0.24267E-07	481481.6	3771439.1	384.1	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000013	0	0.24267E-07	481480.8	3771349.8	385.0	0.00	89.26	9.50	90.50	2.46	YES		NO
A0000014	0	0.24267E-07	481480.1	3771260.5	386.0	0.00	90.63	9.50	89.21	2.46	YES		NO
A0000015	0	0.24267E-07	481481.3	3771169.8	386.0	0.00	90.63	9.50	89.21	2.46	YES		NO
A0000016	0	0.24267E-07	481482.6	3771079.2	386.1	0.00	90.63	9.50	89.21	2.46	YES		NO
A0000017	0	0.24267E-07	481483.8	3770988.6	386.1	0.00	90.63	9.50	89.21	2.46	YES		NO
A0000018	0	0.24267E-07	481485.0	3770898.0	386.0	0.00	90.63	9.50	89.21	2.46	YES		NO
A0000019	0	0.24267E-07	481486.3	3770807.3	386.0	0.00	90.63						

```
 9.50     89.21     2.46     YES                    NO
 A0000020         0   0.24267E-07  481487.5 3770716.7   386.0     0.00     90.63
 9.50     89.21     2.46     YES                    NO
 A0000021         0   0.24267E-07  481488.8 3770626.1   386.0     0.00     90.63
 9.50     89.21     2.46     YES                    NO
 A0000022         0   0.24267E-07  481490.0 3770535.5   386.3     0.00     90.63
 9.50     89.21     2.46     YES                    NO
 A0000023         0   0.24267E-07  481491.3 3770444.9   387.0     0.00     90.63
 9.50     89.21     2.46     YES                    NO
 A0000024         0   0.24267E-07  481492.5 3770354.2   387.4     0.00     90.63
 9.50     89.21     2.46     YES                    NO
 A0000025         0   0.24267E-07  481493.8 3770263.6   387.5     0.00     90.63
 9.50     89.21     2.46     YES                    NO
 A0000026         0   0.24267E-07  481495.0 3770173.0   388.0     0.00     90.63
 9.50     89.21     2.46     YES                    NO
 A0000027         0   0.24267E-07  481496.3 3770082.4   388.0     0.00     90.63
 9.50     89.21     2.46     YES                    NO
 A0000028         0   0.24267E-07  481497.6 3769991.1   388.0     0.00     76.89
 9.50     81.48     2.46     YES                    NO
 A0000029         0   0.24267E-07  481509.0 3769915.1   388.0     0.00     76.89
 9.50     81.48     2.46     YES                    NO
 A0000030         0   0.24267E-07  481520.5 3769838.5   388.4     0.00     89.29
 9.50     75.16     2.46     YES                    NO
 A0000031         0   0.24267E-07  481543.3 3769752.2   389.0     0.00     89.29
 9.50     75.16     2.46     YES                    NO
 A0000032         0   0.24267E-07  481566.3 3769665.7   389.9     0.00     44.80
 9.50     72.76     2.46     YES                    NO
 A0000033         0   0.24267E-07  481579.8 3769622.3   391.2     0.00     53.79
 9.50     64.84     2.46     YES                    NO
 A0000034         0   0.24267E-07  481602.6 3769573.6   396.5     0.00     53.79
 9.50     64.84     2.46     YES                    NO
 A0000035         0   0.24267E-07  481625.7 3769524.6   391.9     0.00     65.70
 9.50     61.13     2.46     YES                    NO
 A0000036         0   0.24267E-07  481657.4 3769467.1   390.4     0.00     65.70
 9.50     61.13     2.46     YES                    NO
 A0000037         0   0.24267E-07  481689.6 3769408.8   392.4     0.00     59.69
 9.50     50.01     2.46     YES                    NO
 A0000038         0   0.24267E-07  481728.0 3769363.1   395.3     0.00     59.69
 9.50     50.01     2.46     YES                    NO
 A0000039         0   0.24267E-07  481766.7 3769317.0   396.0     0.00     88.41
 9.50     44.18     2.46     YES                    NO
 A0000040         0   0.24267E-07  481830.5 3769255.0   396.0     0.00     88.57
 9.50     36.87     2.46     YES                    NO
*** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                      ***        12:31:13

                                  PAGE   3
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. (DEG.)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
A0000041	0	0.24267E-07	481901.4	3769201.8	396.0	0.00	29.73	9.50	36.57	2.46	YES	NO	
A0000042	0	0.24267E-07	481931.5	3769191.3	396.0	0.00	7.62	9.50	-135.00	2.46	YES	NO	

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 , A0000020 , A0000021 , A0000022 , A0000023 , A0000024 , A0000025 , A0000026 , A0000027 , A0000028 , A0000029 , A0000030 , A0000031 , A0000032 , A0000033 , A0000034 , A0000035 , A0000036 , A0000037 , A0000038 , A0000039 , A0000040 , A0000041 , A0000042 ,

*** SOURCE IDs DEFINED AS URBAN SOURCES
***

URBAN ID	URBAN POP	SOURCE IDs
	2207424.	A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 ,
		A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 ,
		A0000017 , A0000018 , A0000019 , A0000020 , A0000021 , A0000022 , A0000023 , A0000024 ,
		A0000025 , A0000026 , A0000027 , A0000028 , A0000029 , A0000030 , A0000031 , A0000032 ,
		A0000033 , A0000034 , A0000035 , A0000036 , A0000037 , A0000038 , A0000039 , A0000040 ,
		A0000041 , A0000042 ,

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART
***

*** X-COORDINATES OF GRID ***
(METERS)

479939.3, 480140.8, 480342.2, 480543.7, 480745.2, 480946.7, 481148.1, 481349.6, 481551.1, 481752.5,
481954.0, 482155.5, 482357.0, 482558.4, 482759.9, 482961.4, 483162.8,

```
483364.3,  483565.8,  483767.2,
       483968.7,

                                          *** Y-COORDINATES OF GRID ***
                                                    (METERS)

      3768848.4, 3769022.6, 3769196.9, 3769371.1, 3769545.4, 3769719.6, 3769893.9,
3770068.1, 3770242.4, 3770416.6,
      3770590.9, 3770765.1, 3770939.4, 3771113.6, 3771287.9, 3771462.1, 3771636.4,
3771810.6, 3771984.9, 3772159.1,
      3772333.4,
🡅 *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                       ***        12:31:13

                                  PAGE   7
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                                * ELEVATION HEIGHTS IN METERS *

    Y-COORD  |                                                X-COORD (METERS)
    (METERS) |     479939.31    480140.78    480342.25    480543.72    480745.19
480946.66    481148.13    481349.60    481551.07
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3772333.38 |        353.00       353.00       357.00       360.00       362.00
  365.00       366.90       370.10       372.20
  3772159.13 |        353.90       359.90       361.00       363.30       364.00
  367.30       372.80       377.50       378.00
  3771984.88 |        359.30       362.30       365.70       367.60       370.10
  373.20       376.70       379.00       378.00
  3771810.63 |        360.80       363.40       366.10       368.90       371.50
  374.20       378.00       380.70       384.00
  3771636.38 |        361.20       364.00       367.00       369.80       372.70
  375.20       378.00       381.70       384.00
  3771462.13 |        362.00       364.00       367.00       370.00       373.50
  376.30       379.10       382.10       385.50
  3771287.88 |        362.00       364.40       367.10       370.80       374.00
  378.00       380.00       383.70       386.40
  3771113.63 |        362.60       365.00       368.00       370.80       374.00
  377.40       380.90       384.00       387.30
  3770939.38 |        363.00       366.00       368.00       370.80       374.00
  377.20       380.90       384.00       387.40
  3770765.13 |        363.00       366.00       368.10       371.30       374.00
  377.20       380.00       383.70       387.00
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)									
	481752.54	481954.01	482155.48	482356.95	482558.42	482759.89	482961.36	483162.83	483364.30	
3772333.38	378.20	383.90	382.20	382.10	384.00	386.70	389.00	391.20	395.80	
3772159.13	384.10	386.70	390.00	384.00	384.90	388.00	390.00	392.00	396.00	
3771984.88	385.10	388.00	391.00	392.90	393.30	389.00	390.40	392.50	395.00	
3771810.63	386.10	389.80	392.50	395.20	398.00	397.70	394.00	396.00	401.70	
3771636.38	387.40	390.30	393.70	397.00	399.30					
3770590.88	363.00	366.00	368.10	371.00	374.50	378.00	380.90	383.70	387.40	
3770416.63	363.00	365.40	369.00	371.80	375.00	378.20	381.00	384.60	388.00	
3770242.38	363.60	366.00	369.00	372.00	375.50	379.00	382.00	385.50	388.90	
3770068.13	364.00	367.00	369.10	372.00	375.50	379.00	382.00	385.70	389.00	
3769893.88	364.00	367.00	369.10	371.80	375.70	378.20	382.00	385.00	389.00	
3769719.63	364.70	367.00	370.00	371.80	378.00	379.10	382.00	385.70	389.00	
3769545.38	365.60	367.40	371.10	373.80	377.00	379.20	383.90	386.70	396.50	
3769371.13	364.00	366.50	370.10	373.80	378.00	380.00	382.90	386.70	390.10	
3769196.88	364.00	366.40	370.00	373.00	376.50	379.50	382.90	386.70	390.00	
3769022.63	364.00	366.20	370.00	372.00	376.00	379.00	383.50	385.40	388.00	
3768848.38	364.20	366.50	370.00	372.00	375.50	378.20	381.70	384.00	387.40	

```
  402.00       404.30       407.10       409.30
  3771462.13 |        389.00       392.00       395.10       398.00       401.10
  404.00       406.50       409.20       412.00
  3771287.88 |        390.00       393.00       396.50       399.20       402.90
  405.60       408.00       411.00       413.80
  3771113.63 |        390.80       393.80       397.00       400.20       403.90
  406.90       409.80       412.10       415.00
  3770939.38 |        391.00       394.00       397.30       401.20       404.00
  407.70       410.40       413.60       416.00
  3770765.13 |        390.10       394.00       398.00       401.10       404.40
  407.70       411.00       414.00       417.00
  3770590.88 |        390.10       394.80       398.50       402.00       405.20
  408.70       412.00       415.10       418.00
  3770416.63 |        391.10       395.00       399.00       403.00       406.00
  409.70       413.00       416.00       419.00
  3770242.38 |        392.10       395.80       399.00       403.00       406.00
  409.70       413.40       416.10       419.80
  3770068.13 |        392.10       395.80       399.00       402.20       406.00
  409.70       413.40       416.10       419.90
  3769893.88 |        392.10       395.80       399.00       402.20       405.90
  409.00       412.70       416.00       419.80
  3769719.63 |        392.10       395.80       399.50       402.40       405.90
  408.00       412.00       415.00       418.80
  3769545.38 |        393.10       396.80       400.00       403.00       406.00
  409.00       412.00       415.10       418.00
  3769371.13 |        396.00       396.80       400.00       403.20       406.90
  410.00       413.40       416.10       419.70
  3769196.88 |        395.40       396.00       400.80       403.10       407.00
  410.40       413.80       418.10       420.60
  3769022.63 |        391.10       395.40       402.30       403.40       408.00
  409.40       413.80       415.60       420.60
  3768848.38 |        391.00       394.00       398.00       400.20       403.00
  406.00       408.10       412.10       415.90
 *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                      ***        12:31:13

                                PAGE   9
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                          * ELEVATION HEIGHTS IN METERS *

    Y-COORD  |                                          X-COORD (METERS)
    (METERS) |     483565.77    483767.24    483968.71
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
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  3772333.38 |        398.50       402.90       408.00
  3772159.13 |        399.50       402.10       406.20
  3771984.88 |        398.70       403.00       407.00
  3771810.63 |        399.50       402.00       406.00
  3771636.38 |        402.30       406.90       409.60
  3771462.13 |        415.50       416.40       421.00
  3771287.88 |        416.50       420.00       422.90
  3771113.63 |        418.00       421.00       424.00
  3770939.38 |        419.00       422.00       425.00
  3770765.13 |        420.00       423.00       426.00
  3770590.88 |        421.00       424.00       426.00
  3770416.63 |        422.00       425.00       428.00
  3770242.38 |        422.50       425.20       428.00
  3770068.13 |        422.80       426.00       429.00
  3769893.88 |        422.50       426.00       429.00
  3769719.63 |        421.50       425.20       428.00
  3769545.38 |        421.00       425.00       428.00
  3769371.13 |        422.40       425.20       428.80
  3769196.88 |        424.00       426.00       429.00
  3769022.63 |        426.00       427.00       428.50
  3768848.38 |        420.00       425.80       433.00
↑ *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                       ***        12:31:13

                                  PAGE  10
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                                 * HILL HEIGHT SCALES IN METERS *

    Y-COORD  |                                                X-COORD (METERS)
    (METERS) |     479939.31    480140.78    480342.25    480543.72    480745.19
480946.66    481148.13    481349.60    481551.07
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3772333.38 |        353.00       353.00       357.00       360.00       362.00
  365.00       366.90       370.10       372.20
  3772159.13 |        353.90       359.90       361.00       363.30       364.00
  367.30       372.80       377.50       378.00
  3771984.88 |        359.30       362.30       365.70       367.60       370.10
  373.20       376.70       379.00       378.00
  3771810.63 |        360.80       363.40       366.10       368.90       371.50
  374.20       378.00       380.70       384.00
  3771636.38 |        361.20       364.00       367.00       369.80       372.70
```

```
  375.20       378.00       381.70       384.00
  3771462.13 |        362.00       364.00       367.00       370.00       373.50
  376.30       379.10       382.10       385.50
  3771287.88 |        362.00       364.40       367.10       370.80       374.00
  378.00       380.00       383.70       386.40
  3771113.63 |        362.60       365.00       368.00       370.80       374.00
  377.40       380.90       384.00       387.30
  3770939.38 |        363.00       366.00       368.00       370.80       374.00
  377.20       380.90       384.00       387.40
  3770765.13 |        363.00       366.00       368.10       371.30       374.00
  377.20       380.00       383.70       387.00
  3770590.88 |        363.00       366.00       368.10       371.00       374.50
  378.00       380.90       383.70       387.40
  3770416.63 |        363.00       365.40       369.00       371.80       375.00
  378.20       381.00       384.60       388.00
  3770242.38 |        363.60       366.00       369.00       372.00       375.50
  379.00       382.00       385.50       388.90
  3770068.13 |        364.00       367.00       369.10       372.00       375.50
  379.00       382.00       385.70       389.00
  3769893.88 |        364.00       367.00       369.10       371.80       375.70
  378.20       382.00       385.00       389.00
  3769719.63 |        364.70       367.00       370.00       371.80       378.00
  379.10       382.00       385.70       389.00
  3769545.38 |        365.60       367.40       371.10       373.80       377.00
  379.20       383.90       386.70       398.00
  3769371.13 |        364.00       366.50       370.10       373.80       378.00
  380.00       382.90       386.70       390.10
  3769196.88 |        364.00       366.40       370.00       373.00       376.50
  379.50       382.90       386.70       390.00
  3769022.63 |        364.00       366.20       370.00       372.00       376.00
  379.00       383.50       385.40       388.00
  3768848.38 |        364.20       366.50       370.00       372.00       375.50
  378.20       381.70       384.00       387.40
 *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                      ***        12:31:13

                                PAGE  11
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                          * HILL HEIGHT SCALES IN METERS *

    Y-COORD  |                                          X-COORD (METERS)
    (METERS) |     481752.54    481954.01    482155.48    482356.95    482558.42
482759.89    482961.36    483162.83    483364.30
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - - - - - -

  3772333.38 |        378.20       383.90       382.20       382.10       384.00
  386.70       389.00       391.20       395.80
  3772159.13 |        384.10       386.70       390.00       391.00       384.90
  388.00       390.00       392.00       396.00
  3771984.88 |        385.10       388.00       391.00       392.90       395.00
  389.00       390.40       392.50       395.00
  3771810.63 |        386.10       389.80       392.50       395.20       398.00
  397.70       403.00       396.00       401.70
  3771636.38 |        387.40       390.30       393.70       397.00       399.30
  402.00       404.30       407.10       409.30
  3771462.13 |        389.00       392.00       395.10       398.00       401.10
  404.00       406.50       409.20       412.00
  3771287.88 |        390.00       393.00       396.50       399.20       402.90
  405.60       408.00       411.00       413.80
  3771113.63 |        390.80       393.80       397.00       400.20       403.90
  406.90       409.80       412.10       415.00
  3770939.38 |        391.00       394.00       397.30       401.20       404.00
  407.70       410.40       413.60       416.00
  3770765.13 |        390.10       394.00       398.00       401.10       404.40
  407.70       411.00       414.00       417.00
  3770590.88 |        390.10       394.80       398.50       402.00       405.20
  408.70       412.00       415.10       418.00
  3770416.63 |        391.10       395.00       399.00       403.00       406.00
  409.70       413.00       416.00       419.00
  3770242.38 |        392.10       395.80       399.00       403.00       406.00
  409.70       413.40       416.10       419.80
  3770068.13 |        392.10       395.80       399.00       402.20       406.00
  409.70       413.40       416.10       419.90
  3769893.88 |        392.10       395.80       399.00       402.20       405.90
  409.00       412.70       416.00       419.80
  3769719.63 |        392.10       395.80       399.50       402.40       405.90
  408.00       412.00       415.00       418.80
  3769545.38 |        393.10       396.80       400.00       403.00       406.00
  409.00       412.00       415.10       418.00
  3769371.13 |        396.00       396.80       400.00       403.20       406.90
  410.00       413.40       416.10       419.70
  3769196.88 |        395.40       396.00       400.80       403.10       407.00
  410.40       413.80       418.10       420.60
  3769022.63 |        391.10       395.40       402.30       409.00       408.00
  414.00       413.80       421.00       420.60
  3768848.38 |        391.00       394.00       398.00       400.20       403.00
  406.00       408.10       412.10       415.90
```

Y-COORD (METERS)	X-COORD (METERS)		
	483565.77	483767.24	483968.71
3772333.38	398.50	402.90	408.00
3772159.13	399.50	402.10	406.20
3771984.88	398.70	403.00	407.00
3771810.63	399.50	402.00	406.00
3771636.38	415.00	406.90	409.60
3771462.13	415.50	416.40	421.00
3771287.88	416.50	420.00	422.90
3771113.63	418.00	421.00	424.00
3770939.38	419.00	422.00	425.00
3770765.13	420.00	423.00	426.00
3770590.88	421.00	424.00	426.00
3770416.63	422.00	425.00	428.00
3770242.38	422.50	425.20	428.00
3770068.13	422.80	426.00	429.00
3769893.88	422.50	426.00	429.00
3769719.63	421.50	425.20	428.00
3769545.38	421.00	425.00	428.00
3769371.13	422.40	425.20	428.80
3769196.88	424.00	426.00	429.00
3769022.63	426.00	427.00	428.50
3768848.38	420.00	435.00	433.00

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(481572.5, 3771037.6, 388.0, 388.0, 0.0); (481595.8, 3771044.1, 388.0, 388.0, 0.0);
(481578.8, 3771025.2, 388.0, 388.0, 0.0); (481585.3, 3771012.4, 388.0, 388.0, 0.0);
(481591.3, 3771001.5, 388.0, 388.0, 0.0); (481608.7,

```
3771018.4,     388.3,     388.3,       0.0);
     ( 481597.3, 3770990.4,     388.0,     388.0,       0.0);         ( 481619.6,
3770999.5,     388.7,     388.7,       0.0);
     ( 481603.0, 3770980.3,     388.1,     388.1,       0.0);         ( 481609.4,
3770968.1,     388.3,     388.3,       0.0);
     ( 481616.2, 3770956.8,     388.5,     388.5,       0.0);         ( 481632.9,
3770973.3,     389.0,     389.0,       0.0);
     ( 481622.0, 3770945.7,     388.7,     388.7,       0.0);         ( 481644.2,
3770952.6,     389.0,     389.0,       0.0);
     ( 481632.2, 3770921.2,     389.0,     389.0,       0.0);         ( 481635.9,
3770908.7,     389.0,     389.0,       0.0);
     ( 481637.4, 3770896.8,     389.0,     389.0,       0.0);         ( 481656.5,
3770921.0,     389.0,     389.0,       0.0);
     ( 481662.2, 3770897.0,     389.1,     389.1,       0.0);         ( 481638.5,
3770884.5,     389.0,     389.0,       0.0);
     ( 481639.1, 3770871.3,     389.0,     389.0,       0.0);         ( 481639.8,
3770859.5,     388.9,     388.9,       0.0);
     ( 481663.3, 3770864.1,     389.1,     389.1,       0.0);         ( 481640.0,
3770846.2,     388.6,     388.6,       0.0);
     ( 481662.4, 3770842.9,     389.1,     389.1,       0.0);         ( 481638.0,
3770834.6,     388.3,     388.3,       0.0);
     ( 481636.5, 3770821.9,     388.2,     388.2,       0.0);         ( 481635.7,
3770809.2,     388.2,     388.2,       0.0);
     ( 481658.4, 3770809.8,     388.9,     388.9,       0.0);         ( 481611.9,
3771113.2,     388.3,     388.3,       0.0);
     ( 481612.6, 3771133.8,     388.0,     388.0,       0.0);         ( 481622.7,
3771137.6,     388.0,     388.0,       0.0);
     ( 481635.3, 3771138.5,     388.2,     388.2,       0.0);         ( 481643.6,
3771126.4,     388.6,     388.6,       0.0);
     ( 481639.2, 3771116.1,     388.8,     388.8,       0.0);         ( 481639.0,
3771104.9,     389.0,     389.0,       0.0);
     ( 481657.7, 3771133.4,     388.9,     388.9,       0.0);         ( 481657.8,
3771116.8,     389.0,     389.0,       0.0);
     ( 481657.8, 3771105.3,     389.0,     389.0,       0.0);         ( 481667.9,
3771137.6,     389.2,     389.2,       0.0);
     ( 481680.5, 3771138.3,     389.6,     389.6,       0.0);         ( 481688.1,
3771126.8,     389.9,     389.9,       0.0);
     ( 481684.4, 3771115.8,     389.8,     389.8,       0.0);         ( 481684.2,
3771105.3,     389.8,     389.8,       0.0);
     ( 481720.2, 3771139.5,     390.0,     390.0,       0.0);         ( 481719.2,
3771127.3,     390.0,     390.0,       0.0);
     ( 481719.0, 3771117.3,     390.0,     390.0,       0.0);         ( 481719.6,
3771106.1,     390.0,     390.0,       0.0);
     ( 481745.8, 3771138.5,     390.0,     390.0,       0.0);         ( 481746.0,
3771127.6,     390.2,     390.2,       0.0);
     ( 481746.0, 3771116.9,     390.6,     390.6,       0.0);         ( 481746.2,
3771105.2,     390.9,     390.9,       0.0);
     ( 481764.2, 3771138.5,     390.5,     390.5,       0.0);         ( 481764.4,
3771128.0,     390.6,     390.6,       0.0);
     ( 481764.2, 3771116.9,     390.8,     390.8,       0.0);         ( 481764.7,
```

3771105.7,   391.0,   391.0,   0.0);
     (481790.2, 3771138.1,   391.0,   391.0,   0.0);   (481790.2,
3771127.6,   391.1,   391.1,   0.0);
     (481790.1, 3771117.5,   391.2,   391.2,   0.0);   (481790.1,
3771106.0,   391.3,   391.3,   0.0);
     (481807.5, 3771139.1,   391.0,   391.0,   0.0);   (481807.8,
3771127.9,   391.3,   391.3,   0.0);
     (481807.8, 3771115.9,   391.6,   391.6,   0.0);   (481807.5,
3771103.0,   391.9,   391.9,   0.0);
     (481833.5, 3771138.4,   391.8,   391.8,   0.0);   (481833.5,
3771126.4,   391.9,   391.9,   0.0);
     (481833.5, 3771115.6,   391.9,   391.9,   0.0);   (481833.5,
3771104.1,   392.0,   392.0,   0.0);
     (481851.9, 3771137.7,   392.0,   392.0,   0.0);   (481851.6,
3771130.1,   392.0,   392.0,   0.0);
     (481851.2, 3771117.0,   392.0,   392.0,   0.0);   (481851.2,
3771106.7,   392.0,   392.0,   0.0);
     (481877.7, 3771137.2,   392.3,   392.3,   0.0);   (481877.5,
3771127.0,   392.2,   392.2,   0.0);
     (481877.5, 3771117.2,   392.2,   392.2,   0.0);   (481877.2,
3771105.3,   392.2,   392.2,   0.0);
     (481898.4, 3771087.1,   392.9,   392.9,   0.0);   (481907.2,
3771072.0,   393.0,   393.0,   0.0);
     (481912.3, 3771056.5,   393.0,   393.0,   0.0);   (481916.6,
3771043.0,   393.0,   393.0,   0.0);
     (481917.8, 3771029.0,   393.0,   393.0,   0.0);   (481917.8,
3771016.1,   393.0,   393.0,   0.0);
     (481918.0, 3771001.1,   393.0,   393.0,   0.0);   (481917.8,
3770987.2,   393.0,   393.0,   0.0);
     (481917.8, 3770972.1,   393.3,   393.3,   0.0);   (481918.4,
3770924.9,   393.6,   393.6,   0.0);
     (481917.9, 3770911.3,   393.6,   393.6,   0.0);   (481918.4,
3770896.8,   393.6,   393.6,   0.0);
     (481918.7, 3770882.3,   393.6,   393.6,   0.0);   (481919.1,
3770863.4,   393.6,   393.6,   0.0);

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                         (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                    (METERS)

     (481918.7, 3770847.0,   393.6,   393.6,   0.0);   (481919.3,
3770832.7,   393.7,   393.7,   0.0);
     (481920.0, 3770817.4,   393.7,   393.7,   0.0);   (481919.8,

3770795.8,   393.7,   393.7,   0.0);
     (481909.4, 3770787.0,   393.3,   393.3,   0.0);   (481895.1,
3770786.3,   393.0,   393.0,   0.0);
     (481876.2, 3770782.1,   393.0,   393.0,   0.0);   (481861.2,
3770781.0,   392.7,   392.7,   0.0);
     (481847.6, 3770778.7,   392.3,   392.3,   0.0);   (481832.8,
3770780.1,   391.8,   391.8,   0.0);
     (481817.6, 3770783.3,   391.4,   391.4,   0.0);   (481814.1,
3770836.8,   392.0,   392.0,   0.0);
     (481813.0, 3770817.4,   392.0,   392.0,   0.0);   (481831.2,
3770836.1,   392.0,   392.0,   0.0);
     (481830.5, 3770817.7,   392.0,   392.0,   0.0);   (481845.7,
3770837.1,   392.2,   392.2,   0.0);
     (481844.6, 3770817.0,   392.2,   392.2,   0.0);   (481859.8,
3770836.1,   392.7,   392.7,   0.0);
     (481859.8, 3770817.4,   392.7,   392.7,   0.0);   (481873.9,
3770837.5,   393.0,   393.0,   0.0);
     (481873.0, 3770818.1,   393.0,   393.0,   0.0);   (481888.0,
3770836.8,   393.0,   393.0,   0.0);
     (481888.0, 3770818.6,   393.0,   393.0,   0.0);   (481813.2,
3770893.3,   392.0,   392.0,   0.0);
     (481813.2, 3770875.3,   392.0,   392.0,   0.0);   (481830.8,
3770894.3,   392.0,   392.0,   0.0);
     (481831.2, 3770873.7,   392.0,   392.0,   0.0);   (481844.8,
3770894.3,   392.2,   392.2,   0.0);
     (481845.1, 3770874.7,   392.2,   392.2,   0.0);   (481859.7,
3770893.9,   392.7,   392.7,   0.0);
     (481859.3, 3770874.7,   392.7,   392.7,   0.0);   (481873.4,
3770893.3,   393.0,   393.0,   0.0);
     (481873.4, 3770874.9,   393.0,   393.0,   0.0);   (481887.7,
3770894.3,   393.0,   393.0,   0.0);
     (481887.7, 3770874.9,   393.0,   393.0,   0.0);   (481809.4,
3771064.5,   392.0,   392.0,   0.0);
     (481821.6, 3771064.5,   392.0,   392.0,   0.0);   (481832.0,
3771064.7,   392.0,   392.0,   0.0);
     (481842.6, 3771065.0,   392.0,   392.0,   0.0);   (481854.1,
3771064.5,   392.0,   392.0,   0.0);
     (481866.0, 3771065.5,   392.0,   392.0,   0.0);   (481877.0,
3771064.7,   392.2,   392.2,   0.0);
     (481808.9, 3771037.3,   392.0,   392.0,   0.0);   (481821.8,
3771037.8,   392.0,   392.0,   0.0);
     (481832.0, 3771037.8,   392.0,   392.0,   0.0);   (481842.6,
3771037.8,   392.0,   392.0,   0.0);
     (481854.5, 3771037.5,   392.0,   392.0,   0.0);   (481866.8,
3771037.3,   392.0,   392.0,   0.0);
     (481876.5, 3771037.8,   392.2,   392.2,   0.0);   (481887.1,
3771037.5,   392.6,   392.6,   0.0);
     (481808.9, 3771021.7,   392.0,   392.0,   0.0);   (481808.4,
3771010.3,   391.9,   391.9,   0.0);
     (481808.9, 3770999.3,   392.0,   392.0,   0.0);   (481808.4,

3770988.7,   391.9,   391.9,   0.0);
     (481836.6, 3771020.5,   392.0,   392.0,   0.0);   (481837.1,
3771009.8,   392.0,   392.0,   0.0);
     (481836.6, 3771000.0,   392.0,   392.0,   0.0);   (481836.6,
3770989.0,   392.0,   392.0,   0.0);
     (481855.0, 3771021.7,   392.0,   392.0,   0.0);   (481855.3,
3771010.7,   392.0,   392.0,   0.0);
     (481855.0, 3770999.3,   392.0,   392.0,   0.0);   (481855.6,
3770987.8,   392.0,   392.0,   0.0);
     (481881.1, 3771020.2,   392.4,   392.4,   0.0);   (481881.1,
3771010.3,   392.4,   392.4,   0.0);
     (481880.8, 3770998.8,   392.4,   392.4,   0.0);   (481881.3,
3770988.3,   392.4,   392.4,   0.0);
     (481639.3, 3771075.2,   389.0,   389.0,   0.0);   (481638.8,
3771063.9,   389.0,   389.0,   0.0);
     (481639.3, 3771052.7,   389.0,   389.0,   0.0);   (481638.8,
3771040.5,   389.0,   389.0,   0.0);
     (481652.0, 3771023.5,   389.0,   389.0,   0.0);   (481651.6,
3771004.3,   389.0,   389.0,   0.0);
     (481656.3, 3771075.7,   389.0,   389.0,   0.0);   (481656.3,
3771063.9,   389.0,   389.0,   0.0);
     (481657.1, 3771052.3,   389.0,   389.0,   0.0);   (481656.8,
3771041.3,   389.0,   389.0,   0.0);
     (481662.3, 3771025.7,   389.1,   389.1,   0.0);   (481674.6,
3771026.3,   389.5,   389.5,   0.0);
     (481678.5, 3771003.5,   389.6,   389.6,   0.0);   (481678.3,
3770992.0,   389.6,   389.6,   0.0);
     (481697.5, 3771004.3,   390.0,   390.0,   0.0);   (481697.1,
3770992.0,   390.0,   390.0,   0.0);
     (481686.8, 3771023.8,   389.9,   389.9,   0.0);   (481697.5,
3771019.3,   390.0,   390.0,   0.0);
     (481682.3, 3771042.2,   389.8,   389.8,   0.0);   (481682.1,
3771052.3,   389.7,   389.7,   0.0);
     (481682.1, 3771063.0,   389.7,   389.7,   0.0);   (481682.3,
3771074.9,   389.8,   389.8,   0.0);
     (481701.0, 3771063.0,   390.0,   390.0,   0.0);   (481700.5,
3771052.8,   390.0,   390.0,   0.0);

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                  (METERS)

     (481700.5, 3771041.3,   390.0,   390.0,   0.0);   (481707.7,

3771026.8,   390.0,   390.0,   0.0);
     (481720.0, 3771026.5,   390.0,   390.0,   0.0);   (481726.0,
3771074.9,   390.2,   390.2,   0.0);
     (481726.0, 3771062.5,   390.2,   390.2,   0.0);   (481726.5,
3771051.8,   390.2,   390.2,   0.0);
     (481726.0, 3771041.8,   390.2,   390.2,   0.0);   (481732.3,
3771023.2,   390.4,   390.4,   0.0);
     (481723.5, 3771002.2,   390.1,   390.1,   0.0);   (481723.2,
3770991.3,   390.1,   390.1,   0.0);
     (481744.5, 3771074.5,   390.8,   390.8,   0.0);   (481744.5,
3771062.9,   390.8,   390.8,   0.0);
     (481744.7, 3771053.2,   390.8,   390.8,   0.0);   (481744.7,
3771040.5,   390.8,   390.8,   0.0);
     (481771.0, 3771074.5,   391.0,   391.0,   0.0);   (481770.5,
3771063.4,   391.0,   391.0,   0.0);
     (481770.3, 3771052.3,   391.0,   391.0,   0.0);   (481769.8,
3771041.7,   391.0,   391.0,   0.0);
     (481743.3, 3771023.9,   390.8,   390.8,   0.0);   (481743.3,
3771003.6,   390.8,   390.8,   0.0);
     (481743.3, 3770991.8,   390.8,   390.8,   0.0);   (481769.4,
3770991.1,   391.0,   391.0,   0.0);
     (481769.8, 3771002.5,   391.0,   391.0,   0.0);   (481773.3,
3771014.0,   391.0,   391.0,   0.0);
     (481753.2, 3771025.3,   391.0,   391.0,   0.0);   (481765.7,
3771025.3,   391.0,   391.0,   0.0);
     (481676.6, 3770948.1,   389.6,   389.6,   0.0);   (481698.8,
3770954.6,   390.0,   390.0,   0.0);
     (481715.2, 3770951.9,   390.0,   390.0,   0.0);   (481729.6,
3770951.7,   390.3,   390.3,   0.0);
     (481743.7, 3770952.8,   390.8,   390.8,   0.0);   (481757.6,
3770952.8,   391.0,   391.0,   0.0);
     (481771.8, 3770952.6,   391.0,   391.0,   0.0);   (481682.7,
3770931.6,   389.8,   389.8,   0.0);
     (481701.1, 3770931.6,   390.0,   390.0,   0.0);   (481715.6,
3770932.8,   390.0,   390.0,   0.0);
     (481730.2, 3770932.8,   390.3,   390.3,   0.0);   (481743.5,
3770932.8,   390.8,   390.8,   0.0);
     (481758.0, 3770932.8,   391.0,   391.0,   0.0);   (481771.8,
3770932.6,   391.0,   391.0,   0.0);
     (481690.8, 3770890.1,   390.0,   390.0,   0.0);   (481707.3,
3770892.3,   390.0,   390.0,   0.0);
     (481721.7, 3770893.9,   390.1,   390.1,   0.0);   (481735.8,
3770893.9,   390.5,   390.5,   0.0);
     (481749.7, 3770894.4,   390.9,   390.9,   0.0);   (481763.5,
3770894.4,   391.0,   391.0,   0.0);
     (481777.9, 3770893.1,   391.0,   391.0,   0.0);   (481689.9,
3770872.4,   390.0,   390.0,   0.0);
     (481708.1, 3770874.3,   390.0,   390.0,   0.0);   (481721.7,
3770873.0,   390.0,   390.0,   0.0);
     (481735.8, 3770875.7,   390.2,   390.2,   0.0);   (481750.2,

3770873.5,   390.2,   390.2,   0.0);
     (481763.5, 3770873.5,   390.6,   390.6,   0.0);   (481779.3,
3770875.2,   391.0,   391.0,   0.0);
     (481691.2, 3770834.3,   389.9,   389.9,   0.0);   (481690.1,
3770814.0,   389.3,   389.3,   0.0);
     (481706.7, 3770835.7,   390.0,   390.0,   0.0);   (481707.1,
3770816.1,   389.7,   389.7,   0.0);
     (481721.7, 3770836.2,   390.0,   390.0,   0.0);   (481722.4,
3770816.8,   390.0,   390.0,   0.0);
     (481735.8, 3770836.4,   390.0,   390.0,   0.0);   (481736.0,
3770817.0,   390.0,   390.0,   0.0);
     (481750.1, 3770836.2,   390.0,   390.0,   0.0);   (481750.5,
3770817.0,   390.0,   390.0,   0.0);
     (481763.5, 3770836.4,   390.4,   390.4,   0.0);   (481763.5,
3770816.3,   390.4,   390.4,   0.0);
     (481779.0, 3770836.9,   391.0,   391.0,   0.0);   (481778.7,
3770815.2,   391.0,   391.0,   0.0);
     (481694.7, 3770775.7,   389.2,   389.2,   0.0);   (481709.0,
3770777.1,   389.6,   389.6,   0.0);
     (481722.8, 3770776.4,   390.0,   390.0,   0.0);   (481737.2,
3770778.2,   390.0,   390.0,   0.0);
     (481751.7, 3770777.1,   390.1,   390.1,   0.0);   (481774.1,
3770776.8,   390.8,   390.8,   0.0);
     (481943.8, 3771138.8,   393.5,   393.5,   0.0);   (481943.7,
3771134.4,   393.5,   393.5,   0.0);
     (481944.2, 3771123.0,   393.5,   393.5,   0.0);   (481952.3,
3771142.2,   393.8,   393.8,   0.0);
     (481951.8, 3771136.0,   393.7,   393.7,   0.0);   (481952.1,
3771127.8,   393.7,   393.7,   0.0);
     (481952.0, 3771121.3,   393.7,   393.7,   0.0);   (481627.2,
3770933.6,   388.9,   388.9,   0.0);

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                                *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                                    (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1

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1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.



                                    *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
CATEGORIES ***
                                                          (METERS/SEC)

                                                 1.54,   3.09,   5.14,   8.23,
10.80,
 *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                       ***        12:31:13

                                    PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                      *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL
DATA ***

   Surface file:   ..\..\Met Files\OntarioIntlAirportADJU\KONT_V9_ADJU\KONT_v9.SFC
                Met Version:  16216
   Profile file:   ..\..\Met Files\OntarioIntlAirportADJU\KONT_V9_ADJU\KONT_v9.PFL

   Surface format: FREE

   Profile format: FREE

   Surface station no.:     3190                 Upper air station no.:     3190
                  Name: UNKNOWN                                    Name: UNKNOWN

                  Year:   2012                                     Year:   2012

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN
ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
 12 01 01   1 01  -16.4  0.171 -9.000 -9.000 -999.  170.     32.3  0.09   1.12
```

```
1.00    2.03   43.    7.9  285.9    2.0
 12 01 01   1 02  -18.8  0.194 -9.000 -9.000 -999.  205.     41.3  0.09   1.12
1.00    2.28   34.    7.9  285.4    2.0
 12 01 01   1 03  -17.8  0.182 -9.000 -9.000 -999.  187.     36.5  0.09   1.12
1.00    2.15   24.    7.9  282.0    2.0
 12 01 01   1 04   -9.4  0.128 -9.000 -9.000 -999.  110.     19.6  0.09   1.12
1.00    1.55   41.    7.9  283.1    2.0
 12 01 01   1 05  -16.9  0.173 -9.000 -9.000 -999.  173.     33.0  0.09   1.12
1.00    2.05   39.    7.9  280.4    2.0
 12 01 01   1 06   -8.0  0.117 -9.000 -9.000 -999.   97.     17.8  0.09   1.12
1.00    1.43   21.    7.9  282.0    2.0
 12 01 01   1 07   -7.6  0.115 -9.000 -9.000 -999.   93.     17.4  0.09   1.12
1.00    1.40   31.    7.9  282.5    2.0
 12 01 01   1 08  -13.6  0.184 -9.000 -9.000 -999.  190.     40.5  0.09   1.12
0.54    2.16   34.    7.9  284.2    2.0
 12 01 01   1 09   28.4  0.126  0.300  0.011   33.  108.     -6.2  0.09   1.12
0.32    1.03   29.    7.9  289.2    2.0
 12 01 01   1 10   79.8  0.133  0.607  0.010   99.  116.     -2.6  0.09   1.12
0.25    0.94  173.    7.9  292.5    2.0
 12 01 01   1 11  115.8  0.137  0.932  0.006  246.  121.     -2.0  0.09   1.12
0.22    0.92  172.    7.9  295.4    2.0
 12 01 01   1 12  133.7  0.139  1.197  0.005  453.  125.     -1.8  0.09   1.12
0.21    0.92  146.    7.9  297.5    2.0
 12 01 01   1 13  133.2  0.160  1.354  0.005  657.  153.     -2.7  0.09   1.12
0.21    1.14  117.    7.9  299.9    2.0
 12 01 01   1 14  113.5  0.159  1.454  0.005  955.  151.     -3.1  0.09   1.12
0.23    1.16  285.    7.9  300.9    2.0
 12 01 01   1 15   76.2  0.166  1.350  0.005 1138.  163.     -5.3  0.09   1.12
0.26    1.33   72.    7.9  302.0    2.0
 12 01 01   1 16   23.5  0.175  0.925  0.005 1183.  175.    -19.9  0.09   1.12
0.35    1.65  107.    7.9  301.4    2.0
 12 01 01   1 17   -6.1  0.107 -9.000 -9.000 -999.   86.     18.0  0.09   1.12
0.63    1.31  107.    7.9  298.1    2.0
 12 01 01   1 18  -11.1  0.141 -9.000 -9.000 -999.  127.     22.1  0.09   1.12
1.00    1.69   86.    7.9  293.1    2.0
 12 01 01   1 19   -3.2  0.076 -9.000 -9.000 -999.   51.     11.8  0.09   1.12
1.00    0.91   64.    7.9  292.0    2.0
 12 01 01   1 20   -2.3  0.066 -9.000 -9.000 -999.   41.     11.2  0.09   1.12
1.00    0.74   73.    7.9  288.8    2.0
 12 01 01   1 21  -10.0  0.133 -9.000 -9.000 -999.  116.     20.5  0.09   1.12
1.00    1.60   14.    7.9  288.1    2.0
 12 01 01   1 22  -19.4  0.201 -9.000 -9.000 -999.  216.     44.5  0.09   1.12
1.00    2.36   22.    7.9  287.5    2.0
 12 01 01   1 23  -23.7  0.246 -9.000 -9.000 -999.  293.     66.5  0.09   1.12
1.00    2.86   40.    7.9  287.0    2.0
 12 01 01   1 24  -12.3  0.147 -9.000 -9.000 -999.  139.     23.8  0.09   1.12
1.00    1.76   40.    7.9  283.8    2.0


 First hour of profile data
```

```
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 12 01 01 01    7.9 1   43.    2.03   286.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
↟ *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                      ***        12:31:13

                                 PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL       ***
                                   INCLUDING SOURCE(S):     A0000001    , A0000002
, A0000003    , A0000004    , A0000005    ,
                  A0000006    , A0000007    , A0000008    , A0000009    , A0000010
, A0000011    , A0000012    , A0000013    ,
                  A0000014    , A0000015    , A0000016    , A0000017    , A0000018
, A0000019    , A0000020    , A0000021    ,
                  A0000022    , A0000023    , A0000024    , A0000025    , A0000026
, A0000027    , A0000028    ,  . . .      ,

                                    *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

    Y-COORD  |                                              X-COORD (METERS)
    (METERS) |     479939.31    480140.78    480342.25    480543.72    480745.19
480946.66    481148.13    481349.60    481551.07
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

  3772333.38 |       0.00013      0.00014      0.00017      0.00021      0.00026
 0.00035      0.00056      0.00148      0.00853
  3772159.13 |       0.00014      0.00017      0.00020      0.00025      0.00033
 0.00047      0.00084      0.00241      0.00897
  3771984.88 |       0.00016      0.00019      0.00024      0.00030      0.00040
 0.00061      0.00109      0.00278      0.00897
  3771810.63 |       0.00018      0.00022      0.00027      0.00035      0.00048
 0.00072      0.00125      0.00296      0.00868
  3771636.38 |       0.00020      0.00024      0.00030      0.00040      0.00055
 0.00081      0.00135      0.00307      0.00875
  3771462.13 |       0.00022      0.00027      0.00034      0.00044      0.00060
 0.00088      0.00142      0.00315      0.00855
  3771287.88 |       0.00024      0.00029      0.00037      0.00048      0.00065
 0.00093      0.00147      0.00321      0.00844
  3771113.63 |       0.00026      0.00031      0.00039      0.00051      0.00068
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 0.00096      0.00150      0.00322      0.00864
  3770939.38 |       0.00027      0.00033      0.00042      0.00053      0.00071
 0.00098      0.00152      0.00319      0.00893
  3770765.13 |       0.00029      0.00035      0.00043      0.00055      0.00072
 0.00100      0.00152      0.00315      0.00927
  3770590.88 |       0.00030      0.00036      0.00045      0.00057      0.00074
 0.00101      0.00152      0.00312      0.00957
  3770416.63 |       0.00031      0.00037      0.00046      0.00058      0.00074
 0.00101      0.00152      0.00309      0.00996
  3770242.38 |       0.00032      0.00038      0.00047      0.00058      0.00075
 0.00101      0.00151      0.00305      0.01029
  3770068.13 |       0.00033      0.00039      0.00047      0.00058      0.00074
 0.00100      0.00148      0.00299      0.01072
  3769893.88 |       0.00033      0.00039      0.00047      0.00058      0.00073
 0.00097      0.00144      0.00281      0.01452
  3769719.63 |       0.00033      0.00039      0.00046      0.00057      0.00072
 0.00094      0.00136      0.00244      0.02996
  3769545.38 |       0.00033      0.00038      0.00046      0.00055      0.00069
 0.00089      0.00125      0.00202      0.00579
  3769371.13 |       0.00032      0.00037      0.00044      0.00053      0.00065
 0.00082      0.00109      0.00161      0.00308
  3769196.88 |       0.00031      0.00036      0.00042      0.00050      0.00060
 0.00073      0.00093      0.00125      0.00187
  3769022.63 |       0.00030      0.00034      0.00040      0.00046      0.00054
 0.00064      0.00077      0.00094      0.00116
  3768848.38 |       0.00029      0.00032      0.00037      0.00042      0.00048
 0.00055      0.00063      0.00070      0.00075
 *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                      ***        12:31:13

                                 PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                              *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     A0000001    , A0000002
, A0000003    , A0000004    , A0000005    ,
                  A0000006    , A0000007    , A0000008    , A0000009    , A0000010
, A0000011    , A0000012    , A0000013    ,
                  A0000014    , A0000015    , A0000016    , A0000017    , A0000018
, A0000019    , A0000020    , A0000021    ,
                  A0000022    , A0000023    , A0000024    , A0000025    , A0000026
, A0000027    , A0000028    ,  . . .      ,

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                      ** CONC OF PM_10    IN MICROGRAMS/M**3
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**

Y-COORD (METERS)	X-COORD (METERS)				
	481752.54	481954.01	482155.48	482356.95	482558.42
482759.89	482961.36	483162.83	483364.30		
3772333.38	0.00207	0.00122	0.00091	0.00073	0.00061
0.00053	0.00046	0.00042	0.00037		
3772159.13	0.00222	0.00133	0.00096	0.00078	0.00065
0.00055	0.00049	0.00043	0.00039		
3771984.88	0.00232	0.00138	0.00100	0.00079	0.00066
0.00057	0.00050	0.00044	0.00040		
3771810.63	0.00240	0.00142	0.00102	0.00081	0.00066
0.00057	0.00051	0.00045	0.00040		
3771636.38	0.00244	0.00146	0.00104	0.00082	0.00067
0.00057	0.00050	0.00044	0.00039		
3771462.13	0.00245	0.00147	0.00106	0.00083	0.00068
0.00057	0.00050	0.00044	0.00039		
3771287.88	0.00246	0.00149	0.00107	0.00083	0.00068
0.00058	0.00050	0.00044	0.00039		
3771113.63	0.00249	0.00150	0.00108	0.00084	0.00068
0.00058	0.00050	0.00044	0.00038		
3770939.38	0.00252	0.00152	0.00109	0.00084	0.00069
0.00057	0.00050	0.00043	0.00038		
3770765.13	0.00256	0.00153	0.00109	0.00085	0.00069
0.00058	0.00049	0.00043	0.00038		
3770590.88	0.00258	0.00154	0.00110	0.00085	0.00069
0.00057	0.00049	0.00042	0.00037		
3770416.63	0.00260	0.00155	0.00110	0.00085	0.00068
0.00057	0.00048	0.00042	0.00037		
3770242.38	0.00261	0.00155	0.00110	0.00085	0.00069
0.00057	0.00048	0.00042	0.00036		
3770068.13	0.00264	0.00156	0.00112	0.00086	0.00069
0.00057	0.00048	0.00041	0.00036		
3769893.88	0.00283	0.00164	0.00116	0.00089	0.00071
0.00058	0.00049	0.00041	0.00034		
3769719.63	0.00336	0.00181	0.00124	0.00094	0.00074
0.00059	0.00047	0.00038	0.00031		
3769545.38	0.00498	0.00221	0.00142	0.00101	0.00074
0.00055	0.00041	0.00032	0.00026		
3769371.13	0.02008	0.00339	0.00171	0.00097	0.00060
0.00041	0.00031	0.00024	0.00020		
3769196.88	0.00378	0.01152	0.00098	0.00053	0.00036
0.00027	0.00022	0.00018	0.00015		
3769022.63	0.00132	0.00084	0.00045	0.00032	0.00025
0.00021	0.00017	0.00015	0.00013		
3768848.38	0.00066	0.00048	0.00035	0.00026	0.00021
0.00017	0.00015	0.00013	0.00011		

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 , A0000020 , A0000021 , A0000022 , A0000023 , A0000024 , A0000025 , A0000026 , A0000027 , A0000028 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)		
	483565.77	483767.24	483968.71
3772333.38	0.00034	0.00031	0.00028
3772159.13	0.00035	0.00032	0.00029
3771984.88	0.00036	0.00033	0.00030
3771810.63	0.00037	0.00033	0.00030
3771636.38	0.00037	0.00033	0.00030
3771462.13	0.00035	0.00032	0.00029
3771287.88	0.00035	0.00031	0.00028
3771113.63	0.00034	0.00031	0.00028
3770939.38	0.00034	0.00031	0.00028
3770765.13	0.00034	0.00030	0.00027
3770590.88	0.00033	0.00030	0.00027
3770416.63	0.00032	0.00029	0.00026
3770242.38	0.00032	0.00028	0.00025
3770068.13	0.00031	0.00027	0.00023
3769893.88	0.00029	0.00024	0.00021
3769719.63	0.00025	0.00021	0.00018
3769545.38	0.00021	0.00017	0.00015
3769371.13	0.00016	0.00014	0.00012
3769196.88	0.00013	0.00011	0.00010
3769022.63	0.00011	0.00010	0.00009

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  3768848.38 |       0.00010      0.00009      0.00007
↑ *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                       ***        12:31:13

                                  PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                              *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     A0000001    , A0000002
, A0000003    , A0000004    , A0000005    ,
                A0000006    , A0000007    , A0000008    , A0000009    , A0000010
, A0000011    , A0000012    , A0000013    ,
                A0000014    , A0000015    , A0000016    , A0000017    , A0000018
, A0000019    , A0000020    , A0000021    ,
                A0000022    , A0000023    , A0000024    , A0000025    , A0000026
, A0000027    , A0000028    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                   **

       X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
         481572.53    3771037.59        0.00679                       481595.75
3771044.14        0.00551
         481578.75    3771025.21        0.00640                       481585.33
3771012.42        0.00604
         481591.29    3771001.54        0.00574                       481608.71
3771018.39        0.00500
         481597.29    3770990.43        0.00548                       481619.63
3770999.50        0.00464
         481603.03    3770980.27        0.00524                       481609.43
3770968.09        0.00500
         481616.23    3770956.81        0.00477                       481632.93
3770973.34        0.00427
         481622.00    3770945.66        0.00459                       481644.24
3770952.65        0.00401
         481632.25    3770921.20        0.00431                       481635.94
3770908.68        0.00422
         481637.41    3770896.77        0.00419                       481656.55
3770920.97        0.00376
         481662.20    3770897.02        0.00366                       481638.55
3770884.53        0.00416
```

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         481639.13    3770871.35        0.00416                    481639.77
3770859.53        0.00415
         481663.30    3770864.14        0.00365                    481639.99
3770846.23        0.00416
         481662.37    3770842.91        0.00368                    481637.95
3770834.56        0.00422
         481636.48    3770821.88        0.00426                    481635.66
3770809.24        0.00429
         481658.40    3770809.77        0.00376                    481611.91
3771113.24        0.00483
         481612.62    3771133.78        0.00481                    481622.67
3771137.61        0.00450
         481635.28    3771138.46        0.00416                    481643.64
3771126.41        0.00396
         481639.25    3771116.07        0.00406                    481638.97
3771104.88        0.00407
         481657.66    3771133.36        0.00367                    481657.81
3771116.78        0.00368
         481657.81    3771105.31        0.00368                    481667.86
3771137.61        0.00349
         481680.47    3771138.31        0.00328                    481688.12
3771126.84        0.00317
         481684.44    3771115.79        0.00323                    481684.16
3771105.31        0.00324
         481720.17    3771139.53        0.00279                    481719.18
3771127.35        0.00280
         481719.04    3771117.29        0.00281                    481719.61
3771106.09        0.00280
         481745.82    3771138.54        0.00255                    481745.96
3771127.63        0.00255
         481745.96    3771116.86        0.00255                    481746.24
3771105.24        0.00254
         481764.23    3771138.54        0.00240                    481764.38
3771128.05        0.00240
         481764.23    3771116.86        0.00240                    481764.66
3771105.67        0.00240
         481790.16    3771138.11        0.00222                    481790.16
3771127.63        0.00222
         481790.12    3771117.47        0.00222                    481790.12
3771105.99        0.00222
         481807.55    3771139.14        0.00211                    481807.83
3771127.95        0.00211
         481807.83    3771115.91        0.00211                    481807.55
3771103.02        0.00211
         481833.48    3771138.44        0.00197                    481833.48
3771126.39        0.00197
         481833.48    3771115.62        0.00197                    481833.48
3771104.15        0.00197
         481851.90    3771137.73        0.00188                    481851.61
3771130.08        0.00188
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): A0000001 , A0000002 , A0000003 , A0000004 , A0000005 ,
A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 ,
A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 , A0000020 , A0000021 ,
A0000022 , A0000023 , A0000024 , A0000025 , A0000026 , A0000027 , A0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
481917.85	3771029.00	0.00163	481917.85	3771016.06	0.00163
481918.04	3771001.15	0.00163	481917.85	3770987.22	0.00163
481917.85	3770972.12	0.00163	481918.39	3770924.92	0.00163
481917.93	3770911.30	0.00163	481918.39	3770896.77	0.00163
481918.66	3770882.29	0.00163	481919.12	3770863.36	0.00163
481918.66	3770846.98	0.00164	481919.35		

3770832.67 0.00164
481920.05 3770817.44 0.00164 481919.81
3770795.75 0.00164
481909.43 3770786.98 0.00168 481895.12
3770786.29 0.00173
481876.20 3770782.13 0.00180 481861.20
3770780.98 0.00187
481847.58 3770778.67 0.00194 481832.82
3770780.06 0.00201
481817.59 3770783.29 0.00210 481814.12
3770836.82 0.00210
481812.97 3770817.44 0.00211 481831.20
3770836.13 0.00201
481830.51 3770817.67 0.00202 481845.74
3770837.06 0.00194
481844.58 3770816.98 0.00195 481859.82
3770836.13 0.00187
481859.82 3770817.44 0.00187 481873.89
3770837.52 0.00181
481872.97 3770818.13 0.00181 481887.97
3770836.82 0.00175
481887.97 3770818.59 0.00175 481813.18
3770893.33 0.00210
481813.18 3770875.28 0.00210 481830.83
3770894.31 0.00201
481831.23 3770873.71 0.00201 481844.76
3770894.31 0.00194
481845.15 3770874.69 0.00194 481859.67
3770893.92 0.00187
481859.28 3770874.69 0.00187 481873.40
3770893.33 0.00180
481873.40 3770874.89 0.00181 481887.72
3770894.31 0.00175
481887.72 3770874.89 0.00175 481809.44
3771064.53 0.00210
481821.61 3771064.53 0.00203 481831.95
3771064.70 0.00198
481842.62 3771065.03 0.00193 481854.13
3771064.53 0.00188
481865.97 3771065.54 0.00183 481876.97
3771064.70 0.00178
481808.94 3771037.35 0.00211 481821.78
3771037.85 0.00204
481831.95 3771037.85 0.00198 481842.62
3771037.85 0.00193
481854.46 3771037.52 0.00188 481866.80
3771037.35 0.00183
481876.47 3771037.85 0.00178 481887.15
3771037.52 0.00174
481808.94 3771021.68 0.00211 481808.44

3771010.34   0.00211
         481808.94   3770999.33   0.00211   481808.44
3770988.66   0.00212
         481836.62   3771020.51   0.00196   481837.12
3771009.84   0.00196
         481836.62   3771000.00   0.00197   481836.62
3770989.00   0.00197
         481854.96   3771021.68   0.00188   481855.30
3771010.67   0.00188
         481854.96   3770999.33   0.00188   481855.63
3770987.83   0.00188
         481881.14   3771020.18   0.00177   481881.14
3771010.34   0.00177
         481880.81   3770998.83   0.00177   481881.31
3770988.33   0.00177
         481639.29   3771075.20   0.00407   481638.79
3771063.86   0.00409
         481639.29   3771052.69   0.00408   481638.79
3771040.51   0.00410

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                              *** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                                 INCLUDING SOURCE(S):   A0000001   , A0000002
, A0000003   , A0000004   , A0000005   ,
                  A0000006   , A0000007   , A0000008   , A0000009   , A0000010
, A0000011   , A0000012   , A0000013   ,
                  A0000014   , A0000015   , A0000016   , A0000017   , A0000018
, A0000019   , A0000020   , A0000021   ,
                  A0000022   , A0000023   , A0000024   , A0000025   , A0000026
, A0000027   , A0000028   , . . .   ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                             ** CONC OF PM_10   IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)   CONC   X-COORD (M)
Y-COORD (M)   CONC
 -
- -
         481651.96   3771023.50   0.00382   481651.63
3771004.32   0.00383

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         481656.30    3771075.70        0.00372                    481656.30
3771063.86        0.00372
         481657.13    3771052.35        0.00371                    481656.80
3771041.35        0.00372
         481662.30    3771025.67        0.00362                    481674.64
3771026.34        0.00341
         481678.48    3771003.49        0.00335                    481678.31
3770991.98        0.00336
         481697.49    3771004.32        0.00308                    481697.15
3770991.98        0.00309
         481686.82    3771023.83        0.00322                    481697.49
3771019.33        0.00308
         481682.31    3771042.18        0.00328                    481682.15
3771052.35        0.00328
         481682.15    3771063.03        0.00328                    481682.31
3771074.87        0.00327
         481700.99    3771063.03        0.00302                    481700.49
3771052.85        0.00303
         481700.49    3771041.35        0.00304                    481707.66
3771026.84        0.00295
         481720.00    3771026.50        0.00282                    481726.01
3771074.87        0.00274
         481726.01    3771062.52        0.00275                    481726.51
3771051.85        0.00274
         481726.01    3771041.85        0.00275                    481732.34
3771023.17        0.00269
         481723.50    3771002.16        0.00279                    481723.17
3770991.32        0.00279
         481744.46    3771074.49        0.00257                    481744.46
3771062.94        0.00257
         481744.69    3771053.25        0.00257                    481744.69
3771040.55        0.00257
         481771.01    3771074.49        0.00236                    481770.55
3771063.41        0.00236
         481770.32    3771052.33        0.00236                    481769.85
3771041.71        0.00237
         481743.31    3771023.93        0.00259                    481743.31
3771003.62        0.00259
         481743.31    3770991.84        0.00259                    481769.39
3770991.15        0.00238
         481769.85    3771002.46        0.00238                    481773.32
3771014.00        0.00235
         481753.23    3771025.32        0.00250                    481765.70
3771025.32        0.00240
         481676.58    3770948.13        0.00340                    481698.76
3770954.60        0.00308
         481715.24    3770951.86        0.00288                    481729.57
3770951.66        0.00273
         481743.70    3770952.84        0.00259                    481757.63
3770952.84        0.00248
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         481771.76    3770952.64        0.00237                       481682.67
3770931.64        0.00331
         481701.11    3770931.64        0.00305                       481715.63
3770932.82        0.00288
         481730.16    3770932.82        0.00273                       481743.50
3770932.82        0.00260
         481758.02    3770932.82        0.00248                       481771.76
3770932.63        0.00237
         481690.75    3770890.10        0.00320                       481707.32
3770892.28        0.00299
         481721.72    3770893.91        0.00283                       481735.84
3770893.91        0.00268
         481749.69    3770894.45        0.00255                       481763.55
3770894.45        0.00244
         481777.94    3770893.09        0.00233                       481689.94
3770872.45        0.00321
         481708.14    3770874.35        0.00298                       481721.72
3770872.99        0.00283
         481735.84    3770875.71        0.00269                       481750.24
3770873.54        0.00256
         481763.55    3770873.54        0.00245                       481779.30
3770875.17        0.00233
         481691.22    3770834.33        0.00320                       481690.06
3770814.01        0.00324
         481706.69    3770835.71        0.00301                       481707.15
3770816.09        0.00301
         481721.69    3770836.17        0.00284                       481722.38
3770816.78        0.00283
 *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                       ***        12:31:13

                                  PAGE  24
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                              *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     A0000001    , A0000002
, A0000003    , A0000004    , A0000005    ,
                  A0000006    , A0000007    , A0000008    , A0000009    , A0000010
, A0000011    , A0000012    , A0000013    ,
                  A0000014    , A0000015    , A0000016    , A0000017    , A0000018
, A0000019    , A0000020    , A0000021    ,
                  A0000022    , A0000023    , A0000024    , A0000025    , A0000026
, A0000027    , A0000028    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***
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X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
481735.78	3770836.40	0.00270	481736.01	3770817.01	0.00270
481750.09	3770836.17	0.00257	481750.55	3770817.01	0.00257
481763.48	3770836.40	0.00245	481763.48	3770816.32	0.00246
481778.95	3770836.87	0.00234	481778.72	3770815.16	0.00234
481694.68	3770775.68	0.00318	481708.99	3770777.07	0.00300
481722.85	3770776.38	0.00284	481737.16	3770778.22	0.00269
481751.71	3770777.07	0.00256	481774.10	3770776.84	0.00238
481943.81	3771138.85	0.00153	481943.66	3771134.36	0.00153
481944.19	3771122.96	0.00153	481952.33	3771142.19	0.00151
481951.79	3771135.96	0.00151	481952.10	3771127.83	0.00151
481951.95	3771121.29	0.00151	481627.23	3770933.56	0.00444

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): A0000001 , A0000002 , A0000003 , A0000004 , A0000005 ,
A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 ,
A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 , A0000020 , A0000021 ,
A0000022 , A0000023 , A0000024 , A0000025 , A0000026 , A0000027 , A0000028 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)				
	479939.31	480140.78	480342.25	480543.72	480745.19
3772333.4	0.00501 (13070803)	0.00623 (12062506)	0.00642 (13091524)	0.00748 (13082204)	0.00913 (15042906)
3772159.1	0.00503 (13071603)	0.00617 (12062506)	0.00681 (12062506)	0.00750 (14101206)	0.00908 (15042906)
3771984.9	0.00514 (16050206)	0.00569 (13070803)	0.00721 (12062506)	0.00750 (13081704)	0.00912 (13071902)
3771810.6	0.00532 (16050206)	0.00572 (13071603)	0.00718 (12062506)	0.00786 (12062506)	0.00919 (13082204)
3771636.4	0.00503 (16082902)	0.00594 (16050206)	0.00658 (13070803)	0.00850 (12062506)	0.00922 (14101206)
3771462.1	0.00509 (12081003)	0.00592 (16050206)	0.00658 (13071603)	0.00857 (12062506)	0.00929 (13062102)
3771287.9	0.00524 (12050606)	0.00577 (12081003)	0.00696 (16050206)	0.00781 (13070803)	0.01034 (12062506)
3771113.6	0.00501 (12050606)	0.00585 (12050606)	0.00659 (16082902)	0.00797 (16050206)	0.01064 (12062506)
3770939.4	0.00498 (12090906)	0.00578 (12050606)	0.00658 (14091101)	0.00813 (16050206)	0.00965 (13070803)
3770765.1	0.00492 (12052706)	0.00560 (12090906)	0.00674 (12050606)	0.00783 (12081003)	0.01012 (16050206)
3770590.9	0.00483 (12052706)	0.00558 (12052706)	0.00639 (12090906)	0.00801 (12050606)	0.00959 (12081003)
3770416.6	0.00475 (12080906)	0.00536 (12071906)	0.00642 (12052706)	0.00747 (12090906)	0.00978 (12050606)
3770242.4	0.00482 (12071806)	0.00534 (16072706)	0.00614 (12071906)	0.00747 (12052706)	0.00900 (12090906)
3770068.1	0.00475 (12100707)	0.00544 (12100707)	0.00596 (12071806)	0.00694 (12071906)	0.00885 (12052706)
3769893.9	0.00415 (13081106)	0.00487 (13120808)	0.00588 (12100707)	0.00701 (12071806)	0.00823 (16072706)
3769719.6	0.00430 (12062806)	0.00501 (13120808)	0.00564 (13120808)	0.00634 (13120808)	0.00783 (12100707)
3769545.4	0.00444 (13120808)	0.00505 (13120808)	0.00560 (13120808)	0.00631 (13120808)	0.00755 (12010217)
3769371.1	0.00455 (13120808)	0.00504 (13120808)	0.00556 (13120808)	0.00628 (13120808)	0.00778 (12010217)
3769196.9	0.00458 (13120808)	0.00501 (13120808)	0.00553 (13120808)	0.00627 (13091601)	0.00794 (12010217)
3769022.6	0.00457 (13120808)	0.00498 (13120808)	0.00551 (13120808)	0.00626 (13032403)	0.00803 (12010217)

                               *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                                  INCLUDING SOURCE(S):   A0000001   , A0000002
, A0000003   , A0000004   , A0000005   ,
                  A0000006   , A0000007   , A0000008   , A0000009   , A0000010
, A0000011   , A0000012   , A0000013   ,
                  A0000014   , A0000015   , A0000016   , A0000017   , A0000018
, A0000019   , A0000020   , A0000021   ,
                  A0000022   , A0000023   , A0000024   , A0000025   , A0000026
, A0000027   , A0000028   , . . .   ,

                                   *** NETWORK ID: UCART1   ; NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10   IN MICROGRAMS/M**3
                  **

  Y-COORD | X-COORD (METERS)
  (METERS) | 480946.66   481148.13   481349.60
      481551.07   481752.54
 -
- -

 3772333.4 | 0.01139 (12120419)   0.01631 (12081202)   0.03021 (13051224)
     0.05315 (12080805)   0.01731 (13082706)
 3772159.1 | 0.01141 (12101903)   0.01633 (12081202)   0.03081 (13051224)
     0.05232 (12080805)   0.01706 (13082706)
 3771984.9 | 0.01149 (12101903)   0.01618 (12081803)   0.03118 (13051224)
     0.05069 (12080805)   0.01677 (13082706)
 3771810.6 | 0.01172 (15042906)   0.01627 (12120407)   0.03147 (13051224)
     0.04939 (12080805)   0.01652 (13082706)
 3771636.4 | 0.01190 (15042906)   0.01632 (12120419)   0.03172 (12081205)
     0.04772 (12080805)   0.01636 (13082706)
 3771462.1 | 0.01177 (13071902)   0.01625 (12120419)   0.03150 (12081205)
     0.04665 (12071206)   0.01619 (13082706)
 3771287.9 | 0.01200 (13082204)   0.01648 (12101903)   0.03126 (13062606)
     0.04683 (12071206)   0.01621 (15033007)
 3771113.6 | 0.01210 (15082504)   0.01705 (15042906)   0.03108 (12081202)
     0.04697 (12071206)   0.01628 (15033007)
 3770939.4 | 0.01319 (12062506)   0.01725 (15042906)   0.03058 (12081202)

Y-COORD (METERS)	X-COORD (METERS)				
	481954.01	482155.48	482356.95	482558.42	482759.89
3772333.4	0.01127 (15033007)	0.00865 (15033007)	0.00710 (15033007)	0.00568 (15033007)	0.00460 (13081701)
3772159.1	0.01112 (15033007)	0.00860 (15033007)	0.00696 (15033007)	0.00536 (15033007)	0.00456 (13081701)
3771984.9	0.01101 (15033007)	0.00857 (15033007)	0.00665 (15033007)	0.00526 (13081701)	0.00449 (13081701)
3771810.6	0.01099 (15033007)	0.00851 (15033007)	0.00643 (15033007)	0.00517 (13081701)	0.00452 (13093022)
3771636.4	0.01101 (15033007)	0.00828 (15033007)	0.00604 (15033007)	0.00506 (13081701)	0.00448 (13093022)
3771462.1	0.01102 (15033007)	0.00796 (15033007)	0.00591 (13081701)	0.00504 (13093022)	0.00445 (13111217)
3771287.9	0.01083 (15033007)	0.00749 (15033007)	0.00581 (13093022)	0.00500 (13111217)	0.00442 (13111217)
3771113.6	0.01047 (15033007)	0.00715 (12092704)	0.00577 (13111217)	0.00497 (13111217)	0.00438 (13111217)
3770939.4	0.00996 (12111904)	0.00739 (12092704)	0.00579 (12120106)	0.00493 (13111217)	0.00429 (14101107)
3770765.1	0.01016 (15063005)	0.00762 (15092322)	0.00601 (12092704)	0.00494 (12120106)	0.00432 (14101107)
3770590.9	0.01043 (14102307)	0.00777 (15092322)	0.00614 (12092704)	0.00502 (12120301)	0.00432 (14101107)
3770416.6	0.01051 (14102307)	0.00776 (12111904)	0.00621 (13092506)	0.00522 (12092704)	0.00441 (12120106)
3770242.4	0.01078 (13091205)	0.00793 (12111904)	0.00644 (15092322)	0.00530 (12092704)	0.00450 (12120301)
3770068.1	0.01095 (13091205)	0.00802 (12111904)	0.00649 (15092322)	0.00537 (13092506)	0.00465 (12092704)
3769893.9	0.01119 (12081304)	0.00820 (14102307)	0.00654 (15092322)	0.00552 (15092322)	0.00471 (12092704)
3769719.6	0.01147 (14102507)	0.00832 (14102307)	0.00665 (12111904)	0.00562 (15092322)	0.00491 (13061806)
3769545.4	0.01205 (15033007)	0.00873 (12091706)	0.00713 (12091706)	0.00622 (13061806)	0.00530 (12091706)
3769371.1	0.01799 (15033007)	0.01177 (12101207)	0.00892 (12101207)	0.00710 (12101207)	0.00591 (12101207)
3769196.9	0.09634 (14101107)	0.01964 (14101107)	0.01213 (14101107)	0.00902 (12101207)	0.00750 (12101207)
3769022.6	0.04432 (16072506)	0.02705 (16042706)	0.01446 (12011608)	0.01034 (12091924)	0.00841 (14101107)
3768848.4	0.03094 (14102307)	0.02537 (16120608)	0.01555 (12100901)	0.01105 (13090303)	0.00866 (12011608)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                            *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                            INCLUDING SOURCE(S):   A0000001   , A0000002
, A0000003   , A0000004   , A0000005   ,
                 A0000006   , A0000007   , A0000008   , A0000009   , A0000010
, A0000011   , A0000012   , A0000013   ,
                 A0000014   , A0000015   , A0000016   , A0000017   , A0000018
, A0000019   , A0000020   , A0000021   ,
                 A0000022   , A0000023   , A0000024   , A0000025   , A0000026
, A0000027   , A0000028   , . . .   ,

                             *** NETWORK ID: UCART1   ; NETWORK TYPE:
GRIDCART ***

                                  ** CONC OF PM_10   IN MICROGRAMS/M**3
                **

  Y-COORD | X-COORD (METERS)
  (METERS) | 482961.36   483162.83   483364.30
      483565.77   483767.24
 -
- -

 3772333.4 | 0.00408 (13081701)   0.00368 (14081701)   0.00349 (13093022)
     0.00323 (13111217)   0.00304 (13111217)
 3772159.1 | 0.00403 (13093022)   0.00373 (13093022)   0.00347 (13111217)
     0.00324 (13111217)   0.00302 (13111217)
 3771984.9 | 0.00404 (13093022)   0.00377 (13111217)   0.00349 (13111217)
     0.00322 (13111217)   0.00299 (13111217)
 3771810.6 | 0.00410 (13111217)   0.00376 (13111217)   0.00344 (13111217)
     0.00318 (13111217)   0.00294 (13111217)
 3771636.4 | 0.00404 (13111217)   0.00368 (13111217)   0.00338 (13111217)
     0.00312 (13111217)   0.00286 (12101207)
 3771462.1 | 0.00400 (13111217)   0.00364 (13111217)   0.00329 (13111217)
     0.00301 (14101107)   0.00282 (14101107)
 3771287.9 | 0.00397 (13111217)   0.00354 (13111217)   0.00325 (14101107)
     0.00302 (14101107)   0.00281 (14101107)
 3771113.6 | 0.00386 (14101107)   0.00352 (14101107)   0.00325 (14101107)
     0.00302 (14101107)   0.00282 (14101107)
 3770939.4 | 0.00388 (14101107)   0.00353 (14101107)   0.00326 (14101107)
     0.00302 (14101107)   0.00282 (14101107)
 3770765.1 | 0.00388 (14101107)   0.00353 (14101107)   0.00326 (14101107)
     0.00303 (14101107)   0.00283 (14101107)
 3770590.9 | 0.00389 (14101107)   0.00354 (14101107)   0.00327 (14101107)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                               *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
                                  INCLUDING SOURCE(S):   A0000001   , A0000002 , A0000003   , A0000004   , A0000005   ,
                                     A0000006   , A0000007   , A0000008   , A0000009   , A0000010 , A0000011   , A0000012   , A0000013   ,
                                     A0000014   , A0000015   , A0000016   , A0000017   , A0000018 , A0000019   , A0000020   , A0000021   ,
                                     A0000022   , A0000023   , A0000024   , A0000025   , A0000026 , A0000027   , A0000028   , . . .   ,

                                      *** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

                                           ** CONC OF PM_10   IN MICROGRAMS/M**3
                    **

  Y-COORD | X-COORD (METERS)
  (METERS) | 483968.71
 - - -

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 3772333.4 |      0.00284 (13111217)
 3772159.1 |      0.00282 (13111217)
 3771984.9 |      0.00277 (13111217)
 3771810.6 |      0.00271 (12101207)
 3771636.4 |      0.00269 (12101207)
 3771462.1 |      0.00262 (14101107)
 3771287.9 |      0.00264 (14101107)
 3771113.6 |      0.00265 (14101107)
 3770939.4 |      0.00265 (14101107)
 3770765.1 |      0.00266 (14101107)
 3770590.9 |      0.00267 (14101107)
 3770416.6 |      0.00266 (14101107)
 3770242.4 |      0.00269 (12082904)
 3770068.1 |      0.00283 (13061806)
 3769893.9 |      0.00287 (12091706)
 3769719.6 |      0.00295 (14011020)
 3769545.4 |      0.00310 (12100806)
 3769371.1 |      0.00329 (15011908)
 3769196.9 |      0.00377 (12101207)
 3769022.6 |      0.00369 (16091006)
 3768848.4 |      0.00402 (14101107)
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     A0000001    , A0000002
, A0000003    , A0000004    , A0000005    ,
                  A0000006    , A0000007    , A0000008    , A0000009    , A0000010
, A0000011    , A0000012    , A0000013    ,
                  A0000014    , A0000015    , A0000016    , A0000017    , A0000018
, A0000019    , A0000020    , A0000021    ,
                  A0000022    , A0000023    , A0000024    , A0000025    , A0000026
, A0000027    , A0000028    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                             ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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481572.53	3771037.59	0.03838	(12071206)	481595.75	3771044.14	0.03202 (12071206)
481578.75	3771025.21	0.03646	(12071206)	481585.33	3771012.42	0.03465 (12071206)
481591.29	3771001.54	0.03315	(12071206)	481608.71	3771018.39	0.02947 (12071206)
481597.29	3770990.43	0.03178	(12071206)	481619.63	3770999.50	0.02768 (12071206)
481603.03	3770980.27	0.03059	(12071206)	481609.43	3770968.09	0.02944 (12071206)
481616.23	3770956.81	0.02830	(12071206)	481632.93	3770973.34	0.02570 (12071206)
481622.00	3770945.66	0.02741	(12071206)	481644.24	3770952.65	0.02404 (12071206)
481632.25	3770921.20	0.02593	(12071206)	481635.94	3770908.68	0.02540 (12071206)
481637.41	3770896.77	0.02522	(12071206)	481656.55	3770920.97	0.02241 (12071206)
481662.20	3770897.02	0.02186	(15033007)	481638.55	3770884.53	0.02508 (12071206)
481639.13	3770871.35	0.02503	(12071206)	481639.77	3770859.53	0.02491 (12071206)
481663.30	3770864.14	0.02180	(12071206)	481639.99	3770846.23	0.02481 (12071206)
481662.37	3770842.91	0.02201	(12071206)	481637.95	3770834.56	0.02502 (12071206)
481636.48	3770821.88	0.02527	(12071206)	481635.66	3770809.24	0.02543 (12071206)
481658.40	3770809.77	0.02260	(12071206)	481611.91	3771113.24	0.02873 (12071206)
481612.62	3771133.78	0.02840	(12071206)	481622.67	3771137.61	0.02643 (12071206)
481635.28	3771138.46	0.02478	(13082706)	481643.64	3771126.41	0.02381 (13082706)
481639.25	3771116.07	0.02431	(13082706)	481638.97	3771104.88	0.02433 (13082706)
481657.66	3771133.36	0.02261	(14102507)	481657.81	3771116.78	0.02258 (14102507)
481657.81	3771105.31	0.02255	(14102507)	481667.86	3771137.61	0.02177 (14102507)
481680.47	3771138.31	0.02070	(14102507)	481688.12	3771126.84	0.02008 (14102507)
481684.44	3771115.79	0.02040	(14102507)	481684.16	3771105.31	0.02043 (14102507)
481720.17	3771139.53	0.01778	(15033007)	481719.18	3771127.35	0.01783 (15033007)
481719.04	3771117.29	0.01785	(15033007)	481719.61	3771106.09	0.01782 (15033007)
481745.82	3771138.54	0.01656	(15033007)	481745.96		

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3771127.63        0.01656  (15033007)
        481745.96   3771116.86        0.01656  (15033007)                481746.24
3771105.24        0.01655  (15033007)
        481764.23   3771138.54        0.01580  (15033007)                481764.38
3771128.05        0.01579  (15033007)
        481764.23   3771116.86        0.01580  (15033007)                481764.66
3771105.67        0.01578  (15033007)
        481790.16   3771138.11        0.01485  (15033007)                481790.16
3771127.63        0.01485  (15033007)
        481790.12   3771117.47        0.01485  (15033007)                481790.12
3771105.99        0.01483  (15033007)
        481807.55   3771139.14        0.01429  (15033007)                481807.83
3771127.95        0.01426  (15033007)
        481807.83   3771115.91        0.01426  (15033007)                481807.55
3771103.02        0.01425  (15033007)
        481833.48   3771138.44        0.01347  (15033007)                481833.48
3771126.39        0.01346  (15033007)
        481833.48   3771115.62        0.01344  (15033007)                481833.48
3771104.15        0.01342  (15033007)
        481851.90   3771137.73        0.01292  (15033007)                481851.61
3771130.08        0.01292  (15033007)
        481851.19   3771117.04        0.01291  (15033007)                481851.19
3771106.70        0.01290  (15033007)
        481877.72   3771137.17        0.01223  (15033007)                481877.55
3771127.01        0.01221  (15033007)
        481877.55   3771117.17        0.01220  (15033007)                481877.22
3771105.34        0.01218  (15033007)
        481898.38   3771087.12        0.01165  (15033007)                481907.21
3771072.02        0.01139  (15033007)
        481912.31   3771056.52        0.01122  (15033007)                481916.62
3771042.99        0.01107  (15033007)
↟ *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                      ***        12:31:13

                                   PAGE  31
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     A0000001    , A0000002
, A0000003    , A0000004    , A0000005    ,
                  A0000006    , A0000007    , A0000008    , A0000009    , A0000010
, A0000011    , A0000012    , A0000013    ,
                  A0000014    , A0000015    , A0000016    , A0000017    , A0000018
, A0000019    , A0000020    , A0000021    ,
                  A0000022    , A0000023    , A0000024    , A0000025    , A0000026
, A0000027    , A0000028    ,  . . .      ,
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*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
481917.85	3771029.00	0.01100	(15033007)	481917.85	3771016.06	0.01096	(15033007)
481918.04	3771001.15	0.01090	(15033007)	481917.85	3770987.22	0.01086	(15033007)
481917.85	3770972.12	0.01085	(15033007)	481918.39	3770924.92	0.01068	(15033007)
481917.93	3770911.30	0.01070	(12111904)	481918.39	3770896.77	0.01070	(15063005)
481918.66	3770882.29	0.01072	(15063005)	481919.12	3770863.36	0.01073	(15063005)
481918.66	3770846.98	0.01076	(15063005)	481919.35	3770832.67	0.01077	(14102307)
481920.05	3770817.44	0.01080	(14102307)	481919.81	3770795.75	0.01086	(14102307)
481909.43	3770786.98	0.01113	(14102307)	481895.12	3770786.29	0.01146	(14102307)
481876.20	3770782.13	0.01188	(14102307)	481861.20	3770780.98	0.01221	(14102307)
481847.58	3770778.67	0.01256	(13091205)	481832.82	3770780.06	0.01303	(13091205)
481817.59	3770783.29	0.01351	(13091205)	481814.12	3770836.82	0.01365	(15033007)
481812.97	3770817.44	0.01365	(15033007)	481831.20	3770836.13	0.01305	(15033007)
481830.51	3770817.67	0.01304	(13091205)	481845.74	3770837.06	0.01258	(14102307)
481844.58	3770816.98	0.01260	(14102307)	481859.82	3770836.13	0.01225	(14102307)
481859.82	3770817.44	0.01225	(14102307)	481873.89	3770837.52	0.01192	(14102307)
481872.97	3770818.13	0.01195	(14102307)	481887.97	3770836.82	0.01158	(14102307)
481887.97	3770818.59	0.01160	(14102307)	481813.18	3770893.33	0.01378	(15033007)
481813.18	3770875.28	0.01376	(15033007)	481830.83	3770894.31	0.01320	(15033007)
481831.23	3770873.71	0.01314	(15033007)	481844.76	3770894.31	0.01273	(15033007)
481845.15	3770874.69	0.01266	(15033007)	481859.67	3770893.92	0.01223	(14102307)

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        481859.28   3770874.69        0.01225  (14102307)                481873.40
3770893.33        0.01186  (14102307)
        481873.40   3770874.89        0.01189  (14102307)                481887.72
3770894.31        0.01147  (14102307)
        481887.72   3770874.89        0.01152  (14102307)                481809.44
3771064.53        0.01414  (15033007)
        481821.61   3771064.53        0.01372  (15033007)                481831.95
3771064.70        0.01340  (15033007)
        481842.62   3771065.03        0.01307  (15033007)                481854.13
3771064.53        0.01275  (15033007)
        481865.97   3771065.54        0.01242  (15033007)                481876.97
3771064.70        0.01212  (15033007)
        481808.94   3771037.35        0.01411  (15033007)                481821.78
3771037.85        0.01368  (15033007)
        481831.95   3771037.85        0.01335  (15033007)                481842.62
3771037.85        0.01304  (15033007)
        481854.46   3771037.52        0.01269  (15033007)                481866.80
3771037.35        0.01236  (15033007)
        481876.47   3771037.85        0.01208  (15033007)                481887.15
3771037.52        0.01179  (15033007)
        481808.94   3771021.68        0.01408  (15033007)                481808.44
3771010.34        0.01408  (15033007)
        481808.94   3770999.33        0.01405  (15033007)                481808.44
3770988.66        0.01406  (15033007)
        481836.62   3771020.51        0.01319  (15033007)                481837.12
3771009.84        0.01316  (15033007)
        481836.62   3771000.00        0.01317  (15033007)                481836.62
3770989.00        0.01315  (15033007)
        481854.96   3771021.68        0.01266  (15033007)                481855.30
3771010.67        0.01264  (15033007)
        481854.96   3770999.33        0.01263  (15033007)                481855.63
3770987.83        0.01260  (15033007)
        481881.14   3771020.18        0.01191  (15033007)                481881.14
3771010.34        0.01189  (15033007)
        481880.81   3770998.83        0.01188  (15033007)                481881.31
3770988.33        0.01184  (15033007)
        481639.29   3771075.20        0.02429  (13082706)                481638.79
3771063.86        0.02440  (12071206)
        481639.29   3771052.69        0.02437  (12071206)                481638.79
3771040.51        0.02452  (12071206)
 *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
View\25_124_Pioneer_Park_Op_Freeway\25_124_Pioneer_P ***        07/22/26
 *** AERMET - VERSION  16216 ***   ***
                      ***        12:31:13

                                 PAGE  32
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
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INCLUDING SOURCE(S): A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 , A0000020 , A0000021 , A0000022 , A0000023 , A0000024 , A0000025 , A0000026 , A0000027 , A0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
481651.96	3771023.50	0.02284	(14102507)	481651.63	3771004.32	0.02284	(13082706)
481656.30	3771075.70	0.02260	(14102507)	481656.30	3771063.86	0.02257	(14102507)
481657.13	3771052.35	0.02247	(14102507)	481656.80	3771041.35	0.02247	(14102507)
481662.30	3771025.67	0.02200	(14102507)	481674.64	3771026.34	0.02112	(14102507)
481678.48	3771003.49	0.02083	(14102507)	481678.31	3770991.98	0.02083	(14102507)
481697.49	3771004.32	0.01950	(14102507)	481697.15	3770991.98	0.01953	(14102507)
481686.82	3771023.83	0.02025	(14102507)	481697.49	3771019.33	0.01949	(14102507)
481682.31	3771042.18	0.02058	(14102507)	481682.15	3771052.35	0.02060	(14102507)
481682.15	3771063.03	0.02060	(14102507)	481682.31	3771074.87	0.02059	(14102507)
481700.99	3771063.03	0.01918	(14102507)	481700.49	3771052.85	0.01924	(14102507)
481700.49	3771041.35	0.01925	(14102507)	481707.66	3771026.84	0.01876	(14102507)
481720.00	3771026.50	0.01788	(14102507)	481726.01	3771074.87	0.01752	(15033007)
481726.01	3771062.52	0.01752	(15033007)	481726.51	3771051.85	0.01750	(15033007)
481726.01	3771041.85	0.01754	(15033007)	481732.34	3771023.17	0.01723	(15033007)
481723.50	3771002.16	0.01771	(14102507)	481723.17	3770991.32	0.01776	(14102507)
481744.46	3771074.49	0.01665	(15033007)	481744.46			

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3771062.94        0.01665  (15033007)
        481744.69   3771053.25        0.01665  (15033007)                481744.69
3771040.55        0.01665  (15033007)
        481771.01   3771074.49        0.01556  (15033007)                481770.55
3771063.41        0.01558  (15033007)
        481770.32   3771052.33        0.01559  (15033007)                481769.85
3771041.71        0.01560  (15033007)
        481743.31   3771023.93        0.01671  (15033007)                481743.31
3771003.62        0.01673  (15033007)
        481743.31   3770991.84        0.01673  (15033007)                481769.39
3770991.15        0.01562  (15033007)
        481769.85   3771002.46        0.01560  (15033007)                481773.32
3771014.00        0.01546  (15033007)
        481753.23   3771025.32        0.01628  (15033007)                481765.70
3771025.32        0.01576  (15033007)
        481676.58   3770948.13        0.02091  (14102507)                481698.76
3770954.60        0.01944  (14102507)
        481715.24   3770951.86        0.01836  (14102507)                481729.57
3770951.66        0.01744  (14102507)
        481743.70   3770952.84        0.01671  (15033007)                481757.63
3770952.84        0.01609  (15033007)
        481771.76   3770952.64        0.01551  (15033007)                481682.67
3770931.64        0.02050  (14102507)
        481701.11   3770931.64        0.01929  (14102507)                481715.63
3770932.82        0.01835  (14102507)
        481730.16   3770932.82        0.01745  (14102507)                481743.50
3770932.82        0.01672  (15033007)
        481758.02   3770932.82        0.01607  (15033007)                481771.76
3770932.63        0.01550  (15033007)
        481690.75   3770890.10        0.02000  (14102507)                481707.32
3770892.28        0.01891  (14102507)
        481721.72   3770893.91        0.01802  (14102507)                481735.84
3770893.91        0.01719  (14102507)
        481749.69   3770894.45        0.01642  (15033007)                481763.55
3770894.45        0.01581  (15033007)
        481777.94   3770893.09        0.01522  (15033007)                481689.94
3770872.45        0.02006  (14102507)
        481708.14   3770874.35        0.01886  (14102507)                481721.72
3770872.99        0.01804  (14102507)
        481735.84   3770875.71        0.01721  (14102507)                481750.24
3770873.54        0.01640  (15033007)
        481763.55   3770873.54        0.01580  (15033007)                481779.30
3770875.17        0.01514  (15033007)
        481691.22   3770834.33        0.01995  (14102507)                481690.06
3770814.01        0.01978  (15033007)
        481706.69   3770835.71        0.01897  (14102507)                481707.15
3770816.09        0.01886  (14102507)
        481721.69   3770836.17        0.01807  (14102507)                481722.38
3770816.78        0.01804  (14102507)
 *** AERMOD - VERSION 24142  ***   *** C:\Lakes\AERMOD
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 , A0000020 , A0000021 , A0000022 , A0000023 , A0000024 , A0000025 , A0000026 , A0000027 , A0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
481735.78	3770836.40	0.01726	(14102507)	481736.01	3770817.01	0.01728	(14102507)
481750.09	3770836.17	0.01647	(14102507)	481750.55	3770817.01	0.01648	(14102507)
481763.48	3770836.40	0.01576	(15033007)	481763.48	3770816.32	0.01580	(14102507)
481778.95	3770836.87	0.01510	(15033007)	481778.72	3770815.16	0.01506	(15033007)
481694.68	3770775.68	0.01947	(15033007)	481708.99	3770777.07	0.01872	(14102507)
481722.85	3770776.38	0.01803	(14102507)	481737.16	3770778.22	0.01725	(14102507)
481751.71	3770777.07	0.01649	(14102507)	481774.10	3770776.84	0.01536	(14102507)
481943.81	3771138.85	0.01074	(15033007)	481943.66	3771134.36	0.01073	(15033007)
481944.19	3771122.96	0.01069	(15033007)	481952.33	3771142.19	0.01058	(15033007)
481951.79	3771135.96	0.01058	(15033007)	481952.10	3771127.83	0.01055	(15033007)
481951.95	3771121.29	0.01054	(15033007)	481627.23	3770933.56	0.02665	(12071206)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	NETWORK	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.02996	AT (481551.07, 3769719.63, 389.00, 389.00, 0.00)	GC	UCART1
	2ND HIGHEST VALUE IS	0.02008	AT (481752.54, 3769371.13, 396.00, 396.00, 0.00)	GC	UCART1
	3RD HIGHEST VALUE IS	0.01452	AT (481551.07, 3769893.88, 389.00, 389.00, 0.00)	GC	UCART1
	4TH HIGHEST VALUE IS	0.01152	AT (481954.01, 3769196.88, 396.00, 396.00, 0.00)	GC	UCART1
	5TH HIGHEST VALUE IS	0.01072	AT (481551.07, 3770068.13, 389.00, 389.00, 0.00)	GC	UCART1
	6TH HIGHEST VALUE IS	0.01029	AT (481551.07, 3770242.38, 388.90, 388.90, 0.00)	GC	UCART1
	7TH HIGHEST VALUE IS	0.00996	AT (481551.07, 3770416.63, 388.00, 388.00, 0.00)	GC	UCART1
	8TH HIGHEST VALUE IS	0.00957	AT (481551.07, 3770590.88, 387.40, 387.40, 0.00)	GC	UCART1
	9TH HIGHEST VALUE IS	0.00927	AT (481551.07, 3770765.13, 387.00, 387.00, 0.00)	GC	UCART1
	10TH HIGHEST VALUE IS	0.00897	AT (481551.07, 3772159.13, 378.00, 378.00, 0.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE	CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH	1ST HIGH VALUE IS	0.30176	ON 12071106: AT (481551.07, 3769719.63, 389.00, 389.00, 0.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   3 Warning Message(s)
A Total of   1628 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   1278 Calm Hours Identified

A Total of   350 Missing Hours Identified (0.80 Percent)

```
   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
ME W186     172       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
    0.50
ME W187     172       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

ME W530     172       MEOPEN: CAUTION! Met Station ID Mismatch with SURFFILE for
SURFDATA

   ***********************************
   *** AERMOD Finishes Successfully ***
   ***********************************
```

APPENDIX C – ESTIMATION OF DPM EMISSIONS

25-124 **Pioneer Park**
Emission Assumptions

2028 Operational Start Year
DPM Emissions

1) Basic Assumptions

1- EMFAC Area:	San Bernadino (SC)
2- Emission factors for:	2028
3- AQ Jurisdiction:	SCAQMD EMFAC2021
4- Hours of operation	24 hrs
5- Days per week	7 days

4) Emission Source Configuration

1) All vehicle traffic represented by a line source

5) Vehicle Trip Lengths

Construction Travel Links	*AERMOD INPUT*		
	Travel Distance (m)	**Travel Distance (mi)**	**% of Truck Travel**
I-210	3379	2.099613259	100%
		0.00	100%
		0.00	20%
		0.00	80%



Pioneer Park **2028**

Vehicle Fleet Mix from Caltrans data

210 @ E/O SANTA ANA RIVER BRIDGE

	Vehicle Distribution	Daily Trips
Total	100.00%	**94000**
LDA (Passenger Vehicles)	95.39%	89667
Total trucks	4.61%	4333
LHDT (2 axle truck)	33.95%	1471
MHDT(3 axle truck)	6.94%	301
HHDT (4+ axle truck)	59.11%	2561
Total	100.0%	94000

Light Heavy Duty Fleet Mix ***from EMFAC on-road**

	% Total*	Daily Trips	% Diesel	Number of Daily Diesel Trips	210 @ E/O SANTA ANA RIVER BRIDGE
LHDT1	78.5%	1155	40.40%	467	467
LHDT2	21.5%	316	64.10%	203	203
Total	100.0%	1471	**Total**	**669**	

Fleet Mix	Total Trips	%Total	Daily Trip Rate (Trips/TSF)	% Diesel	Number of Daily Diesel Trips	210 @ E/O SANTA ANA RIVER BRIDGE
MHDT	301	**10.5%**	**0.37**	100.00%	301	301
HHDT	2561	**89.5%**	**3.11**	100.00%	2561	2561
Total	2862	**100.0%**	**3.48**	**Total**	2862	2862

Composite Fleet Mix	Number of Daily Trips	% Total
Passenger	89667	**95.4%**
LHDT1	1155	**1.2%**
LHDT2	316	**0.3%**
MHDT	301	**0.3%**
HHDT	2561	**2.7%**
Total	94000	**100.0%**

	Total Diesel Trips	Non-Cold
LHDT1	467	467
LHDT2	203	203
MHDT	301	301
HHDT	2561	2561
Total	3532	

Pioneer Park **Year:** **2028**

Operation Days = 365

Emissions from Onsite Delivery and TRU Travel

Truck Hours (hrs/day) = 24

DPM Emissions

Truck Operations Same Trip length/Route used, analyzed over both trip rate types

Assumption: Number of TRUs = % Cold Storage x Number of DSL LHDT1+LHDT2+MHDT + HHDT

		Trip		Number of	Number of	Number of	Number of	Number of	Total	Total
		Length	Operations	HHDT Trips	MHDT	LHDT1	LHDT2	TRU Trips	Truck+TRU	Truck+TRU
AERMOD ID	Trip Description	(mi)	(hr)	(trips/day)	(trips/day)	(trips/day)	(trips/day)	(number)	g/sec	lb/day
OFFSITE1	I-210	2.100	24	2561	301	467	203	0	7.79E-04	1.48E-01
Total										
				2561	301	467	203	0		

Notes:
Emission factor derived from CARB EMFAC2021 model as the fleet average for SCAQMD

Daily Truck Emissions = Emission Factor (g/mi) * (Truck trips/day) * (miles/Truck Trip)

EMFAC AND ADJFACTORS	PM10_RUNEX per year (40mph)				Adjustment Factors			
	HHDT	MHDT	LHDT1	LHDT2	HHDT	MHDT	LHDT1	LHDT2
2028	0.009	0.004	0.021	0.021	1.0390439	1.0637495	1.047839	1.0518795
2029	0.009	0.004	0.020	0.020	1.053549	1.0944335	1.0670284	1.0716985
2030	0.009	0.003	0.019	0.020	1.0701924	1.1338448	1.0902885	1.0953496
2031	0.009	0.003	0.019	0.019	1.0886616	1.17818	1.1177407	1.1231017
2032	0.009	0.003	0.018	0.019	1.1080701	1.2280636	1.1499849	1.1552123
2033	0.009	0.003	0.018	0.019	1.1282827	1.2843583	1.1872817	1.1921015
2034	0.008	0.003	0.017	0.019	1.1491426	1.3466504	1.2310145	1.2348427
2035	0.008	0.002	0.017	0.018	1.1697444	1.4109009	1.2764642	1.2785138
2036	0.008	0.002	0.016	0.018	1.1897353	1.4757317	1.3232061	1.3228863
2037	0.008	0.002	0.016	0.018	1.2092655	1.5412411	1.3708711	1.3679815
2038	0.008	0.002	0.016	0.018	1.2285224	1.606269	1.4190672	1.4133945
2039	0.008	0.002	0.015	0.018	1.2474618	1.6717643	1.4679653	1.4580842
2040	0.008	0.002	0.015	0.017	1.2658032	1.7374651	1.5167081	1.5019643
2041	0.008	0.002	0.015	0.017	1.2832079	1.8030547	1.5660185	1.54488
2042	0.008	0.002	0.014	0.017	1.299485	1.8660892	1.6137247	1.5858567
2043	0.008	0.002	0.014	0.017	1.3147738	1.9267267	1.6615362	1.6277636
2044	0.008	0.002	0.014	0.017	1.3288968	1.9824997	1.7074252	1.667857
2045	0.008	0.002	0.013	0.017	1.3421151	2.033886	1.7526548	1.7076973
2046	0.008	0.002	0.013	0.017	1.3544502	2.0804785	1.7959569	1.7454595
2047	0.008	0.002	0.013	0.017	1.3658994	2.1222001	1.8378373	1.7823167
2048	0.008	0.002	0.013	0.017	1.3764715	2.1590576	1.8794307	1.8204722
2049	0.008	0.002	0.012	0.016	1.3867419	2.1916012	1.9178893	1.8618319
2050	0.008	0.002	0.012	0.015	1.279176	2.2044719	1.9178893	1.8618319
2051	0.008	0.002	0.012	0.015	1.279176	2.2044719	1.9178893	1.8618319
2052	0.008	0.002	0.012	0.015	1.279176	2.2044719	1.9178893	1.8618319
2053	0.008	0.002	0.012	0.015	1.279176	2.2044719	1.9178893	1.8618319
2054	0.008	0.002	0.012	0.015	1.279176	2.2044719	1.9178893	1.8618319
2055	0.008	0.002	0.012	0.015	1.279176	2.2044719	1.9178893	1.8618319
2056	0.008	0.002	0.012	0.015	1.279176	2.2044719	1.9178893	1.8618319
2057	0.008	0.002	0.012	0.015	1.279176	2.2044719	1.9178893	1.8618319
2058	0.008	0.002	0.012	0.015	1.279176	2.2044719	1.9178893	1.8618319

OFFSITE 1

DSL Daily	DSL Daily	DSL Daily	DSL Daily	Total	DSL Daily	Total	Total	Total
HHDT	MHDT	LHDT1	LHDT2	Trucks	TRU	Truck+TRU	Truck+TRU	Truck+TRU
(g/day)	(g/day)	(g/day)	(g/day)	(g/day)	(g/day)	(g/day)	(lb/day)	(g/sec)
5.17E+01	2.77E+00	2.20E+01	9.49E+00	6.44E+01	0.00E+00	6.44E+01	1.42E-01	7.46E-04
5.16E+01	2.58E+00	2.13E+01	9.34E+00	6.36E+01	0.00E+00	6.36E+01	1.40E-01	7.36E-04
5.16E+01	2.45E+00	2.08E+01	9.27E+00	6.31E+01	0.00E+00	6.31E+01	1.39E-01	7.30E-04
5.16E+01	2.35E+00	2.04E+01	9.26E+00	6.28E+01	0.00E+00	6.28E+01	1.38E-01	7.26E-04

5.18E+01	2.28E+00	2.03E+01	9.33E+00	6.28E+01	0.00E+00	6.28E+01	1.38E-01	7.27E-04
5.20E+01	2.23E+00	2.04E+01	9.51E+00	6.31E+01	0.00E+00	6.31E+01	1.39E-01	7.30E-04
5.21E+01	2.21E+00	2.08E+01	9.77E+00	6.36E+01	0.00E+00	6.36E+01	1.40E-01	7.37E-04
5.23E+01	2.19E+00	2.11E+01	1.00E+01	6.42E+01	0.00E+00	6.42E+01	1.41E-01	7.43E-04
5.26E+01	2.20E+00	2.14E+01	1.03E+01	6.49E+01	0.00E+00	6.49E+01	1.43E-01	7.51E-04
5.30E+01	2.23E+00	2.16E+01	1.05E+01	6.55E+01	0.00E+00	6.55E+01	1.44E-01	7.58E-04
5.34E+01	2.25E+00	2.17E+01	1.07E+01	6.61E+01	0.00E+00	6.61E+01	1.46E-01	7.65E-04
5.38E+01	2.29E+00	2.19E+01	1.09E+01	6.67E+01	0.00E+00	6.67E+01	1.47E-01	7.72E-04
5.43E+01	2.32E+00	2.21E+01	1.11E+01	6.74E+01	0.00E+00	6.74E+01	1.48E-01	7.80E-04
5.48E+01	2.36E+00	2.23E+01	1.14E+01	6.81E+01	0.00E+00	6.81E+01	1.50E-01	7.88E-04
5.53E+01	2.39E+00	2.24E+01	1.16E+01	6.87E+01	0.00E+00	6.87E+01	1.51E-01	7.96E-04
5.58E+01	2.41E+00	2.26E+01	1.19E+01	6.95E+01	0.00E+00	6.95E+01	1.53E-01	8.04E-04
5.62E+01	2.43E+00	2.26E+01	1.21E+01	7.00E+01	0.00E+00	7.00E+01	1.54E-01	8.11E-04
5.67E+01	2.46E+00	2.28E+01	1.23E+01	7.07E+01	0.00E+00	7.07E+01	1.56E-01	8.18E-04
5.71E+01	2.49E+00	2.28E+01	1.25E+01	7.12E+01	0.00E+00	7.12E+01	1.57E-01	8.24E-04
5.75E+01	2.51E+00	2.30E+01	1.27E+01	7.18E+01	0.00E+00	7.18E+01	1.58E-01	8.30E-04
5.79E+01	2.53E+00	2.31E+01	1.28E+01	7.23E+01	0.00E+00	7.23E+01	1.59E-01	8.36E-04
5.83E+01	2.55E+00	2.30E+01	1.28E+01	7.25E+01	0.00E+00	7.25E+01	1.60E-01	8.39E-04
5.37E+01	2.54E+00	2.26E+01	1.22E+01	6.83E+01	0.00E+00	6.83E+01	1.50E-01	7.91E-04
5.37E+01	2.54E+00	2.26E+01	1.22E+01	6.83E+01	0.00E+00	6.83E+01	1.50E-01	7.91E-04
5.37E+01	2.54E+00	2.26E+01	1.22E+01	6.83E+01	0.00E+00	6.83E+01	1.50E-01	7.91E-04
5.37E+01	2.54E+00	2.26E+01	1.22E+01	6.83E+01	0.00E+00	6.83E+01	1.50E-01	7.91E-04
5.37E+01	2.54E+00	2.26E+01	1.22E+01	6.83E+01	0.00E+00	6.83E+01	1.50E-01	7.91E-04
5.37E+01	2.54E+00	2.26E+01	1.22E+01	6.83E+01	0.00E+00	6.83E+01	1.50E-01	7.91E-04
5.37E+01	2.54E+00	2.26E+01	1.22E+01	6.83E+01	0.00E+00	6.83E+01	1.50E-01	7.91E-04
5.37E+01	2.54E+00	2.26E+01	1.22E+01	6.83E+01	0.00E+00	6.83E+01	1.50E-01	7.91E-04
5.37E+01	2.54E+00	2.26E+01	1.22E+01	6.83E+01	0.00E+00	6.83E+01	1.50E-01	7.91E-04
			OFFSITE1		AVERAGE TOTAL		1.48E-01	7.79E-04

APPENDIX D – ESTIMATION OF OPERATIONAL HEALTH RISK

25-124 Pioneer Park

Annual DPM Concentrations at Maximum Impacted Sensitive and Worker Receptor

Onsite Unit Emission Source Rate

Results:

Max School=	
Max Residential=	0.00679
Max Sensitive Receptor=	0.00679
Max Worker=	0

Receptor	Cancer Risk (per million)		Exceeds Significance Threshold?
	Maximum Lifetime Proposed Project Risk	Significance Threshold	
Maximum Impacted Sensitive Receptor – Infant to Adult	4.86	10	No
Receptor	**Chronic Non-Cancer Hazard Index**		**Exceeds Significance Threshold?**
	Maximum Lifetime Proposed Project Risk	**Significance Threshold**	
Maximum Impacted Sensitive Receptor – Infant to Adult	0.00	1	No

25-124 Pioneer Park No Mitigation

Cancer Risk Calculation - Location of Max Risk

SCAQMD Guidance	**Residential**	**30-year Exposure**	**Total Cancer risk**	**HI**
			4.8610	0.0014

Maximum Period DPM Concentration **6.79E-03** ug/m3

Year	**Year**	**Maximum DPM (ug/m3)**	**CPF (mg/kg-day)^-1**	**DBR (l/kg-day)**	**ED (years)**	**EF (days)**	**AT (years)**	**TAH (%)**	**ASF**	**Operational Risk (risk/million)**
3rd Trimester (2028)	2028	0.00679	1.1	361	0.25	365	25550	0.85	10	0.081628
0-1 (2028)	2028	0.00679	1.1	1,090	0.75	365	25550	0.85	10	0.742109
0-1 (2029)	2029	0.00679	1.1	1,090	0.25	365	25550	0.85	10	0.243758
1-2 (2029)	2029	0.00679	1.1	1,090	0.75	365	25550	0.85	10	0.742109
1-2 (2030)	2030	0.00679	1.1	1,090	0.25	365	25550	0.85	10	0.243758
3	2030	0.00679	1.1	745	0.75	365	25550	0.72	3	0.129364
4	2031	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
5	2032	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
6	2033	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
7	2034	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
8	2035	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
9	2036	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
10	2037	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
11	2038	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
12	2039	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
13	2040	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
14	2041	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
15	2042	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
16	2043	0.00679	1.1	745	1.00	365	25550	0.72	3	0.171702
16	2044	0.00679	2.1	745	0.25	365	25550	0.72	3	0.080826
17	2044	0.00679	1.1	335	0.75	365	25550	0.73	1	0.019659
18	2045	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
19	2046	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
20	2047	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
21	2048	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
22	2049	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
23	2050	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
24	2051	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
25	2052	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
26	2053	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
27	2054	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
28	2055	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
29	2056	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
30	2057	0.00679	1.1	335	1.00	365	25550	0.73	1	0.026093
30	2058	0.00679	1.1	335	0.25	365	25550	0.73	1	0.006434

Traffic Impact Analysis

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Pioneer Park Specific Plan

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1 EXECUTIVE SUMMARY

This Traffic Impact Analysis (TIA) has been prepared by EPD Solutions, Inc. (EPD) to analyze the potential traffic impacts of the Pioneer Park Specific Plan Project (proposed Project).

This TIA has been prepared in conformance with the City of Redlands Measure U, a voter-approved initiative that establishes minimum traffic Level of Service (LOS) standards for development review. The Measure U Policies applicable to this analysis — Policies 5.20a, 5.20b, 5.20c, and 5.20f — are codified in the Connected City Element of the City of Redlands 2035 General Plan and require that LOS C or better be maintained at all study intersections presently operating at LOS C or better under Existing and Existing Plus Project scenarios. Where an intersection is already operating below LOS C, no project may be approved unless it does not further worsen existing conditions under the Existing Plus Project scenario, except as provided by Policy 5.20b. The significance thresholds and LOS criteria used throughout this analysis are based directly on these Measure U standards. The Project would be fully responsible for the improvements recommended for the Existing Plus Project scenario per Measure U standards. Cumulative Year without Project and Cumulative Year Plus Project scenarios were also analyzed for informative planning purposes only; therefore, no improvements were recommended for the Cumulative Year Plus Project scenario.

This TIA was also prepared using methodologies and significance criteria consistent with the County of San Bernardino Congestion Management Program (CMP) (2016), and the San Bernardino County Transportation Authority (SBCTA) Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (2020).

Consistent with Senate Bill 743 (SB 743), vehicle miles traveled (VMT) is the metric used for CEQA transportation impact analysis; however, the City of Redlands' Measure U standards independently require LOS-based analysis for project approval under local land use authority. This TIA addresses the Measure U LOS requirements; a separate VMT analysis will address CEQA compliance.

Project Description

The Project is bounded by Pioneer Avenue to the north, W. San Bernardino Avenue to the south, New York Avenue to the east, and the SR-210 West on-ramp in the west in the City of Redlands. Regional access to the Project site is provided by Interstate 10 Freeway (I-10) located approximately 0.9 miles south, and State Route 210 (SR-210) located approximately 0.1 miles west. Project location is identified by Assessor's Parcel Numbers (APNs) 0167-091-09, -10, -11, and -12, totaling an area of 35.31 gross acres.

The Project site is currently vacant and undeveloped, except for Tennessee Street which currently runs north-south through the center of the Project site. The Project proposes a residential Specific Plan removing Tennessee Street resulting in a maximum buildout of up to 275 single-family homes and seven townhomes. The Project has four proposed driveways: one driveway on W. Pioneer Avenue

aligns with the Citrus Valley High School driveway; one driveway on W. San Bernardino Avenue at Tennessee Street; and two driveways along New York Street, which would be constructed between W. San Bernardino Avenue and W. Pioneer Avenue along the eastern boundary of the Project. The three Project driveways on W. Pioneer Avenue and New York Street would be full-access, while the one driveway on W. San Bernardino Avenue would be full-access ingress and right-out (RO) only egress.

Intersection Analysis

The following study area intersections were evaluated during the AM and PM peak hours:

1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance (two-way stop control [TWSC])
2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive (Signalized)
3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street (Signalized)
4. W. San Bernardino Ave/New York Street (Future Intersection) (TWSC)
5. W. Lugonia Avenue/Tennessee Street (Signalized)
6. Tennessee Street/I-10 WB Ramps (Signalized)
7. Tennessee Street/I-10 EB Ramps (Signalized)
8. W. Pioneer Avenue/Project Driveway 1 (TWSC)
9. New York Street/Project Driveway 2 (TWSC)
10. New York Street/Project Driveway 3 (TWSC)
11. W. San Bernardino Avenue/Driveway 4 (TWSC)

AM and PM peak hour traffic operations were evaluated for the following scenarios:

- **Existing (2026) Conditions:** Defined as existing conditions under year 2026.
- **Existing (2026) Plus Project Conditions:** Defined as Existing Conditions with the addition of Project traffic.
- **Cumulative Year (General Plan 2035) Without Project Conditions:** Based on the City of Redlands General Plan horizon year, developed using the San Bernardino Transportation Analysis Model (SBTAM+) regional travel demand model.
- **Cumulative Year (General Plan 2035) Plus Project Conditions:** Defined as Cumulative Year 2035 Conditions with the addition of Project traffic.

Existing (2026) Intersection Analysis Results

All intersections currently operate at a satisfactory LOS during AM and PM peak hours under Existing Conditions except for the following intersections:

- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance: **LOS F** during the AM peak hour and **LOS D** during the PM peak hour.
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive: **LOS E** during the PM peak hours.
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street: **LOS D** during the AM peak hour.

- 5. W. Lugonia Avenue/Tennessee Street: **LOS D** during the PM peak hour.

Cumulative Year (General Plan 2035) Without Project Intersection Analysis Results

All intersections are anticipated to operate at a satisfactory LOS during AM and PM peak hours under Cumulative Year 2035 Conditions except for the following intersections:

- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance: **LOS F** during the AM peak hour and **LOS E** during the PM peak hour.
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive: **LOS E** during the AM and PM peak hours.
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street: **LOS E** during the AM peak hour and **LOS F** during the PM peak hour.
- 5. W. Lugonia Avenue/Tennessee Street: **LOS D** during the PM peak hour.
- 7. Tennessee Street/I-10 EB Ramps: **LOS F** during the AM and PM peak hours.

Existing (2026) Plus Project Intersection Analysis Results

All intersections are anticipated to operate at a satisfactory LOS during AM and PM peak hours under Existing (2026) Plus Project Conditions except for the following intersections:

- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance: **LOS F** during the AM and PM peak hour.
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive: **LOS E** during the PM peak hours.
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street: **LOS E** during the AM peak hour and **LOS D** during the PM peak hour.
- 4. W. San Bernardino Ave/New York Street: **LOS F** during the AM and PM peak hours.
- 5. W. Lugonia Avenue/Tennessee Street: **LOS E** during the PM peak hour.

Cumulative Year (General Plan 2035) Plus Project Intersection Analysis Results

All intersections are anticipated to operate at a satisfactory LOS during AM and PM peak hours under Cumulative Year (General Plan 2035) Plus Project Conditions except for the following intersections:

- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance: **LOS F** during the AM and PM peak hours.
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive: **LOS E** during the AM peak hour and **LOS F** during the PM peak hours.
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street: **LOS E** during the AM peak hour and **LOS F** during the PM peak hour.
- 4. W. San Bernardino Ave/New York Street: **LOS F** during the AM and PM peak hours.
- 5. W. Lugonia Avenue/Tennessee Street: **LOS D** during the PM peak hour.
- 7. Tennessee Street/I-10 EB Ramps: **LOS F** during the AM and PM peak hours.

Peak Hour Signal Warrant Analysis

A Warrant 3 peak hour signal warrant analysis was conducted to evaluate whether existing stop-controlled intersections should be modified to signalized control. A traffic signal is warranted for study Intersections 1 and 4 under Existing (2026) Plus Project Conditions and Cumulative Year (General Plan 2035) Plus Project Conditions.

Existing (2026) Plus Project Improvements

Table 1-1 shows the Existing (2026) Plus Project peak hour LOS with the recommended improvements, and Figure 1-1 shows the lane geometry at the study intersections with the recommended improvements. The Project would be responsible for the following improvements, which would improve the LOS for the intersections with an unsatisfactory LOS under Existing (2026) Plus Project Conditions to a satisfactory level per Measure U standards:

- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance: Install a traffic signal with protected/permissive phasing for northbound, southbound, and eastbound left-turn lanes. See Figure 1-1 for the lane geometry with the recommended improvements.
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive: Optimize the existing signal.
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street: Optimize the existing signal.
- 4. W. San Bernardino Ave/New York Street: Install a traffic signal with protected/permissive phasing for the eastbound left-turn lane. Change the eastbound approach from shared left-turn/through lane to left-turn lane and a through lane. See Figure 1-1 for the lane geometry with the recommended improvements.
- 5. W. Lugonia Avenue/Tennessee Street: Optimize the existing signal.

Table 1-1: Existing (2026) Plus Project Peak Hour LOS With Improvements

Intersection	Control Type	Existing (2026) Conditions				Existing (2026) With Project				Delay Difference Between PC & CC		LOS Standard[1]	Existing (2026) With Project Conditions Satisfactory?	Project Deficiency?[2]	Existing (2026) With Project With Improvements				Less Than Baseline?[3]	Improvements
		AM Peak		PM Peak		AM Peak		PM Peak							AM Peak		PM Peak			
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM Peak	PM Peak				Delay	LOS	Delay	LOS		
1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	TWSC	**246.7**	**F**	**31.4**	**D**	**10000**	**F**	**62.6**	**F**	9753.3	31.2	C	No	Yes	21.2	C	18.7	B	Yes	Install a traffic signal with protected/permissive phasing for northbound, southbound, and eastbound. See Figure 1-1 for lane geometry with recommended improvements.
2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	23.1	C	**64.9**	**E**	24.6	C	**70.0**	**E**	1.5	5.1	C	No	Yes	18.0	B	25.1	C	Yes	Optimize the signal.
3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	**51.7**	**D**	33.4	C	**73.4**	**E**	**44.5**	**D**	21.7	11.1	C	No	Yes	26.2	B	32.7	C	No	Optimize the signal.
4. W. San Bernardino Ave/New York Street (Future Intersection)	TWSC	-	-	-	-	**193.1**	**F**	**80.2**	**F**	193.1	80.2	C	No	Yes	29.0	B	14.1	A	-	Install a traffic signal with protected/permissive phasing for the eastbound left-turn lane. Change the eastbound approach from shared left-turn/through lane to left-turn lane and a through lane. See Figure 1-1 for lane geometry with recommended improvements.
5. W. Lugonia Avenue/Tennessee Street	Signalized	19.8	B	**59.6**	**D**	20.4	C	**63.5**	**E**	20.4	63.5	C	No	Yes	18.8	B	24.7	C	Yes	Optimize the signal.

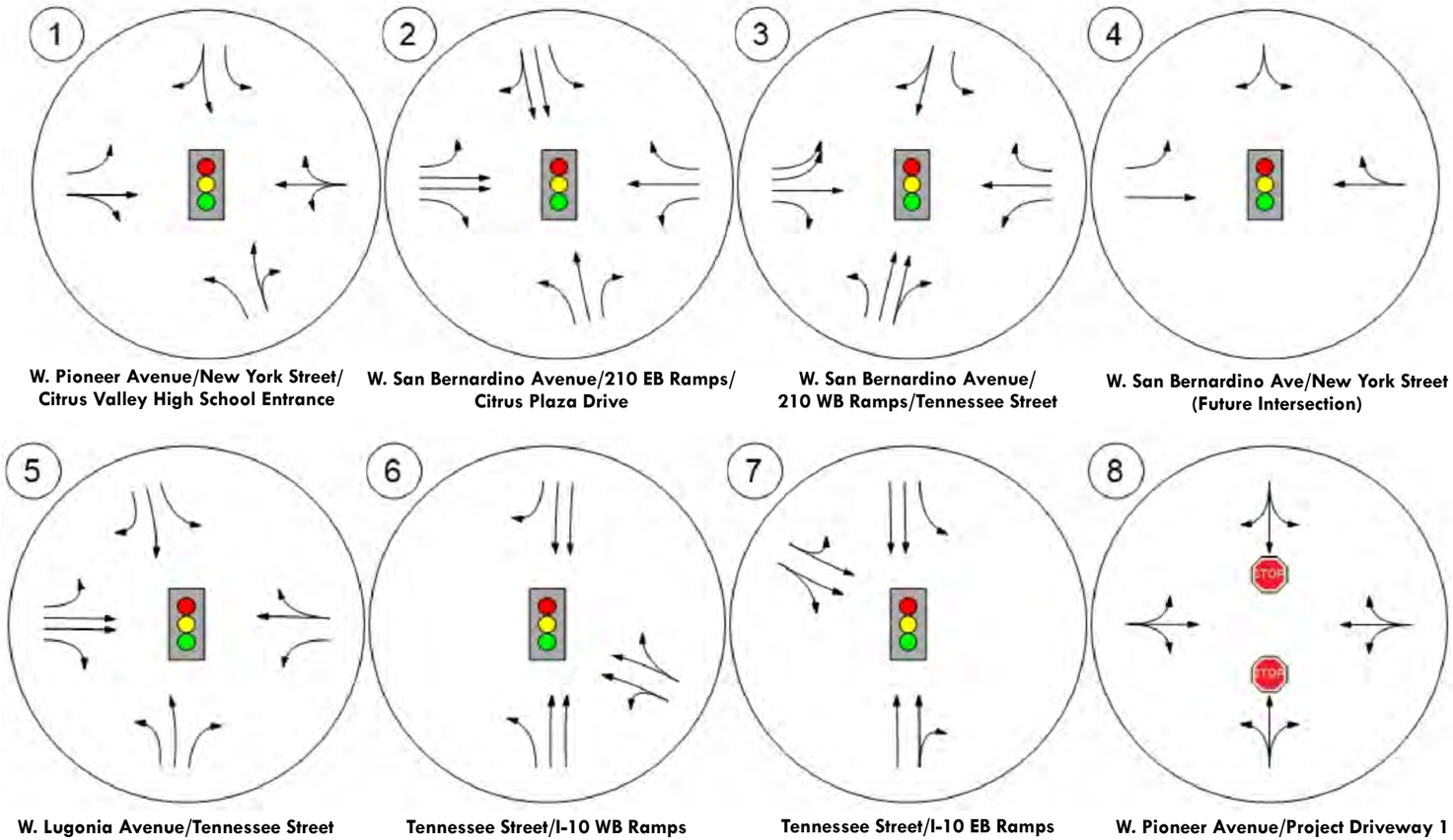
AWSC = All Way Stop Control
TWSC = Two Way Stop Control
Delay Reported in Seconds per Vehicle
LOS = Level of Service
Unsatisfactory Level of Service

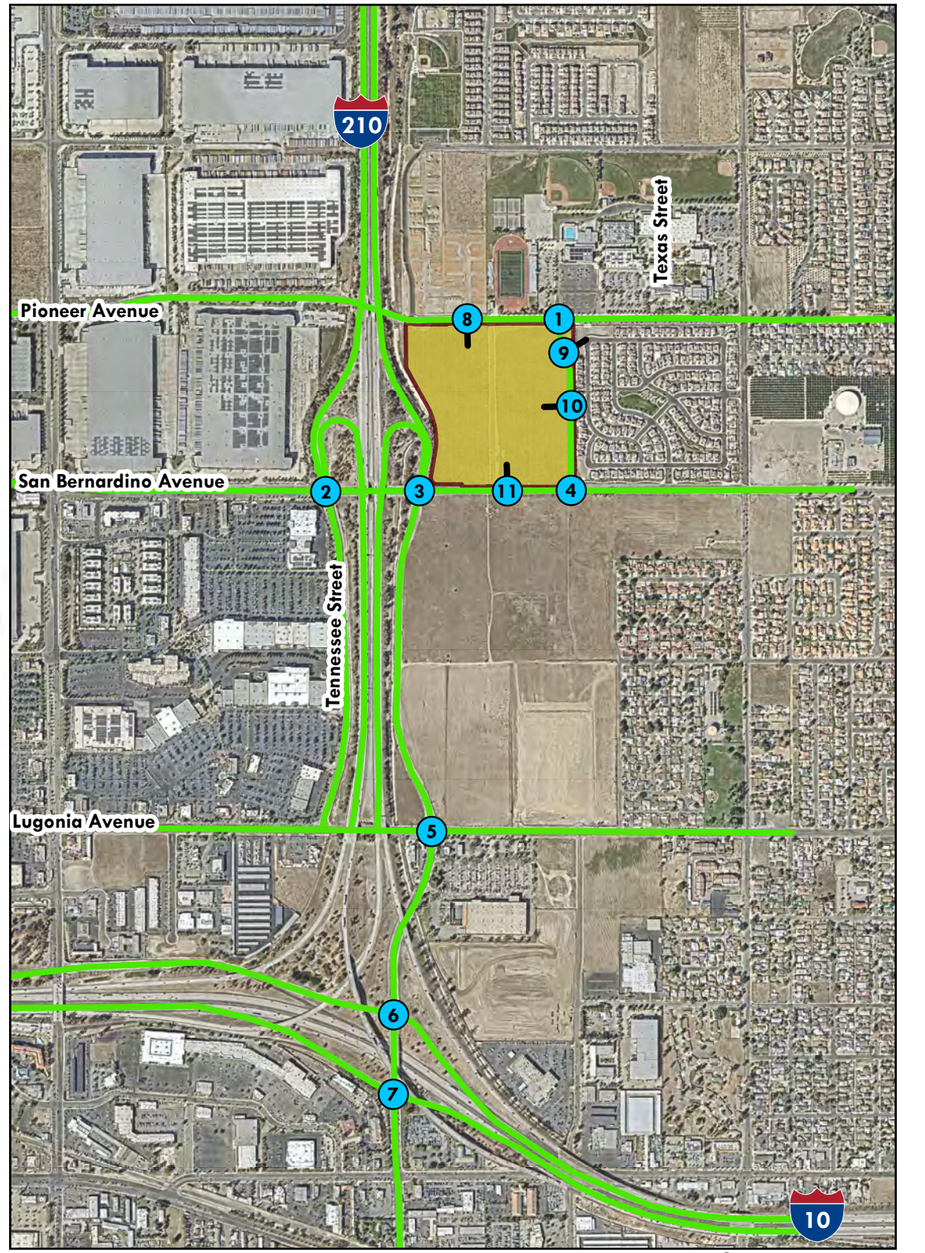
[1]LOS Standard per Jurisdiction's Guidelines

[2]Project would cause a deficiency if project trips or cumulative trips cause an intersection to deteriorate from satisfactory LOS to unsatisfactory LOS or if project trips adds delay to an intersection operating at unsatisfactory LOS under baseline conditions.

[3]Baseline in this context refers to Existing (2026) conditions.

Figure 1-1: Existing (2026) Plus Project With Improvements Lane Configuration and Traffic Control





PTV VISTRO

2 INTRODUCTION

The scope of work for this Traffic Impact Analysis (TIA) was reviewed and approved by the City of Redlands on February 20, 2026, and is provided in Appendix A. The project description and proposed scope of work are discussed in detail below.

This TIA has been prepared in conformance with the City of Redlands Measure U, a voter-approved initiative that establishes minimum traffic Level of Service (LOS) standards for development review. The Measure U Policies applicable to this analysis — Policies 5.20a, 5.20b, 5.20c, and 5.20f — are codified in the Connected City Element of the City of Redlands 2035 General Plan and require that LOS C or better be maintained at all study intersections presently operating at LOS C or better under Existing and Existing Plus Project scenarios. Where an intersection is already operating below LOS C, no project may be approved unless it does not further worsen existing conditions under the Existing Plus Project scenario, except as provided by Policy 5.20b. The significance thresholds and LOS criteria used throughout this analysis are based directly on these Measure U standards. The Project would be fully responsible for the improvements recommended for the Existing Plus Project scenario per Measure U standards. Cumulative Year without Project and Cumulative Year Plus Project scenarios were also analyzed for informative planning purposes only; therefore, no improvements were recommended for the Cumulative Year Plus Project scenario.

This TIA was also prepared using methodologies and significance criteria consistent with the County of San Bernardino Congestion Management Program (CMP) (2016), and the San Bernardino County Transportation Authority (SBCTA) Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (2020).

Consistent with Senate Bill 743 (SB 743), vehicle miles traveled (VMT) is the metric used for CEQA transportation impact analysis; however, the City of Redlands' Measure U standards independently require LOS-based analysis for project approval under local land use authority. This TIA addresses the Measure U LOS requirements; a separate VMT analysis will address CEQA compliance.

2.1 Project Description

The Project is bounded by Pioneer Avenue to the north, W. San Bernardino Avenue to the south, New York Avenue to the east, and the SR-210 West On-Ramp to the west in the City of Redlands. Regional access to the project site is provided by the Interstate 10 Freeway (I-10) located approximately 0.9 miles south, and State Route 210 (SR-210) located approximately 0.1 miles west. It is identified by Assessor’s Parcel Numbers (APNs) 0167-091-09, -10, -11, and -12, totaling an area of 35.31 gross acres.

The Project site is currently vacant and undeveloped, except for Tennessee Street which currently runs north-south through the center of the Project site. The Project proposes a residential Specific

Plan which would remove Tennessee Street and result in a maximum buildout of up to 275 single-family homes and seven townhomes. The proposed Project is accessible via four driveways: one driveway on W. Pioneer Avenue aligned with the Citrus Valley High School driveway; another driveway on W. San Bernardino Avenue east of the existing Tennessee Street; and two driveways along New York Street, which would be constructed to run north-south between W. San Bernardino Avenue and W. Pioneer Avenue along the eastern boundary of the Project. The three Project driveways on W. Pioneer Avenue and New York Street would be full-access, while the one driveway on W. San Bernardino Avenue would be full-access ingress and right-out (RO) only egress.

The Project location is shown in Figure 2-1.

Figure 2-1: Project Location



2.2 Study Area and Analysis Scenarios

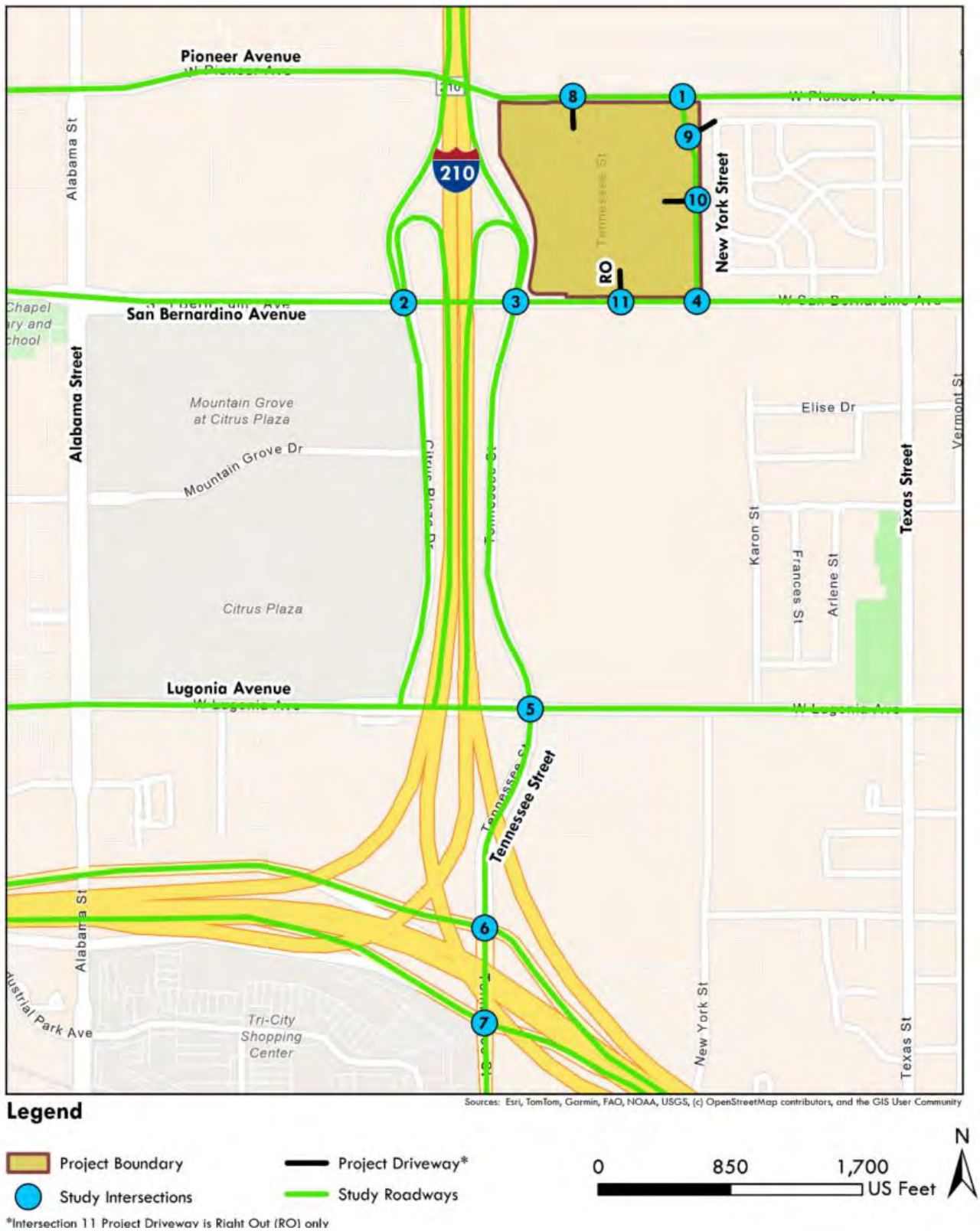
The study area was established based on the scope of work. This TIA includes the analysis of the following intersections:

1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance (two-way stop control (TWSC)
2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive (Signalized)
3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street (Signalized)
4. W. San Bernardino Ave/New York Street (Future Intersection) (TWSC)
5. W. Lugonia Avenue/Tennessee Street (Signalized)
6. Tennessee Street/I-10 WB Ramps (Signalized)
7. Tennessee Street/I-10 EB Ramps (Signalized)
8. W. Pioneer Avenue/Project Driveway 1 (TWSC)
9. New York Street/Project Driveway 2 (TWSC)
10. New York Street/Project Driveway 3 (TWSC)
11. W. San Bernardino Avenue/Driveway 4 (TWSC)

The location of the study intersections are shown in Figure 2-2. The study intersections were evaluated during the AM and PM peak hours, which are defined as the hours with the highest traffic volumes between 7 AM and 9 AM, and 4 PM and 6 PM, respectively. AM and PM peak hour traffic operations were evaluated for the following scenarios:

- **Existing (2026) Conditions:** Defined as existing conditions under year 2026.
- **Existing (2026) Plus Project:** Defined as Existing Conditions under year 2026 with the addition of Project traffic.
- **Cumulative Year (General Plan 2035) Without Project Conditions:** Defined as Cumulative Year (General Plan 2035) Conditions.
- **Cumulative Year (General Plan 2035) Plus Project Conditions:** Defined as Cumulative Year (General Plan 2035) Conditions with the addition of Project traffic.

Figure 2-2: Project Study Intersections



2.3 Methodology

Intersection operations are evaluated using level of service (LOS), which is a measure of the delay experienced by drivers on a roadway facility. LOS A indicates free-flow traffic conditions and generally the best operating conditions. LOS F indicates extremely congested conditions and the worst operating conditions from the driver's perspective. In this report, LOS at signalized and unsignalized intersections was calculated using the *Highway Capacity Manual (HCM), 7th Edition*, methodology.

LOS at signalized intersections is defined in terms of the weighted average control delay for the intersection. Control delay is a measure of the increase in travel time that is experienced due to traffic signal control and is expressed in terms of average control delay per vehicle (in seconds). Control delay is determined based on the intersection geometry and volume, signal cycle length, phasing, and coordination along the arterial corridor. Table 2-1 shows the relationship between control delay and LOS.

Table 2-1: Relationship between Delay and LOS at Signalized Intersections

LOS	Delay (Seconds per Vehicle)
A	≤ 10
B	>10 – 20
C	>20 – 35
D	>35 – 55
E	>55 – 80
F	>80

Unsignalized intersections are categorized as either all-way stop control (AWSC) or two-way stop control (TWSC). LOS at AWSC intersections is determined by the weighted average control delay of the overall intersection. The HCM TWSC intersection methodology calculates LOS based on the delay experienced by drivers on the minor (stop-controlled) approaches to the intersection. For TWSC intersections, LOS is determined for each minor-street movement, as well as the major-street left turns. The relationship between delay and LOS at unsignalized intersections is shown in Table 2-2, *Relationship Between Delay and LOS at an Unsignalized Intersection*.

Table 2-2: Relationship Between Delay and LOS at an Unsignalized Intersection

LOS	Delay (seconds)
A	0-10
B	>10 – 15
C	>15 – 25

LOS	Delay (seconds)
D	>25 – 35
E	>35 – 50
F	>50

2.4 LOS Analysis Assumptions and Significance Criteria

City of Redlands LOS Significance Criteria - Measure U Policies (Standards for Traffic Service):

5.20a Maintain LOS C or better as the standard at all intersections presently at LOS C or better.

5.20b Within the area identified in GP Figure 5-1, including that unincorporated County area identified on GP Figure 5-1 as the "donut hole", maintain LOS C or better; however, accept a reduced LOS on a case-by-case basis upon approval by a four-fifths (4/5ths) vote of the total authorized membership of the City Council.

5.20c Where the current level of service at a location within the City of Redlands is below the Level of Service (LOS) C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing level of service at that location except as provided in Section 5.20b.

5.20f If monitoring of conditions at intersections within the East Valley Corridor Specific Plan area and intersections affected by EVC development indicates that peak hour LOS will drop below the standards set by Policies 5.20a, 5.20b, 5.20c revise the EVC Specific Plan. Revisions necessary may include additional roadway improvements, mandated higher TDM (Travel Demand Management, See Section 5.40) reductions in single-occupant vehicle trip share, reduction of intensity of development, or changes in use of undeveloped sites.

The City of Redlands has established LOS C as the minimum level of service for its intersections. To determine whether the addition of Project traffic at an intersection would result in a project-related deficiency, the following thresholds of significance were utilized:

- If the addition of project-generated trips reduces the peak hour level of service of the intersection from acceptable operation (e.g., LOS A, B or C) to deficient operation (e.g., LOS D, E or F); or
- If the addition of project-generated trips worsens the pre-project level of service at an intersection at a deficient LOS (e.g., LOS D, E or F) and, if unsignalized, cause an unsignalized intersection to satisfy a CAMUTCD signal warrant.

The following assumptions were applied to the intersection analysis consistent with recommendations in the *SBCTA Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (February 2020):

- Peak hour factors (PHF) were developed based on traffic counts collected in the field on Thursday, January 29, 2026, and were applied to the Existing (2026) Conditions.
- Existing counts incorporate truck classifications (Class 1 – passenger vehicles; Class 2 – two-axle work vehicles/trucks; Class 3 – three-axle trucks; Class 4 – four or more axle trucks; Class 5 – recreational vehicles; and Class 6 – busses). Passenger car equivalent (PCE) factors from the County of San Bernardino CMP were applied to truck and bus trips to account for the fact that trucks and buses utilize more roadway capacity due to their size, reduced maneuverability and slower acceleration. The adjusted PCE volumes were used for all analysis scenarios.
- Signal timing plans provided by the City of Redlands and Caltrans were used for the signalized study intersections under the No Project and Plus Project Conditions. The signal timing plans for all signalized intersections are included in **Appendix C**.

3 BASELINE CONDITIONS

This section discusses the Baseline (without Project) traffic conditions. Baseline conditions are those conditions that exist within the study area under existing conditions as well as future estimated conditions without the traffic from the proposed Project.

3.1 Existing Transportation System and Access

As described in Section 2.1, Project Description, regional access to the Project site is provided by the Interstate 10 freeway (I-10) and State Route 210 (SR-210), and local access is provided by Pioneer Avenue, W. San Bernardino Avenue, and New York Street (future street). The characteristics of each roadway within the study area per the roadway classifications in the Connected City chapter of the City of Redlands General Plan are discussed below:

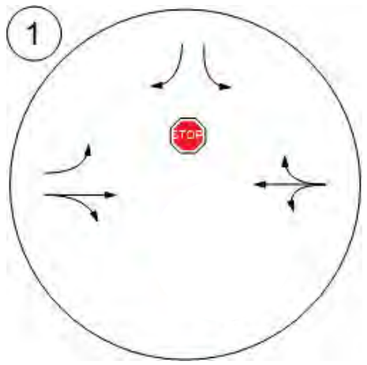
- **State Route 210** (SR-210) is a six-lane divided state highway that runs north-south through the City of Redlands. It is classified as a freeway according to the City of Redlands General Plan. The posted speed limit on SR-210 is 65 miles per hour (mph). There is no street parking, and there are no sidewalks or bike lanes on either the east or west sides on SR-210.
- **Interstate 10** (I-10) is a twelve-lane divided interstate that runs east-west through the City of Redlands. It is classified as a freeway according to the City of Redlands General Plan. The posted speed limit on I-10 is 65 mph. There is no street parking, and there are no sidewalks or bike lanes on either the north or south sides on I-10.
- **W. Pioneer Avenue** is a two-lane road that alternates between being divided and undivided and runs east-west. It is classified as a collector road according to the City of Redlands General Plan. The posted speed limit on W. Pioneer Avenue is 35 mph. There are segments of street parking on the north and south sides of W. Pioneer Avenue east of Texas Street. There are sidewalks on both the north and south sides along most of W. Pioneer Avenue. There are no bike lanes on W. Pioneer Avenue.
- **San Bernardino Avenue** is a two-lane undivided road that runs east-west and becomes a six-lane undivided road west of SR-210. It is classified as a major arterial west of Orange Street and classified as a minor arterial east of Orange Street according to the City of Redlands General Plan. The posted speed limit on San Bernardino Avenue is 50 mph west of SR-210 and 45 mph east of SR-210. There is street parking on both the north and south sides of San Bernardino Avenue east of Orange street. There are sidewalks on both the north and south sides of San Bernardino Avenue west of Tennessee Street and east of Texas Street. There are bike lanes on both the north and south sides of San Bernardino Avenue between Texas Street and North Grove Street.
- **Tennessee Street** is a four-lane road that alternates between being divided and undivided and runs north-south. It becomes a two-lane undivided road north of Lugonia Avenue. It is classified as a minor arterial between San Bernardino Avenue and Lugonia Avenue and south of I-10, according to the City of Redlands General Plan. The posted speed limit on Tennessee Street is 40

mph south of I-10. There is street parking on both the east and west sides of Tennessee Street south of West State Street. There are sidewalks along both the east and west sides of Tennessee Street south of I-10, and on the east side between Lugonia Avenue and I-10. There are bike lanes on both the east and west sides of Tennessee Street south of West State Street.

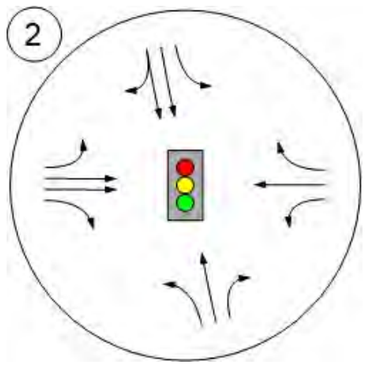
- **Lugonia Avenue** is a four-lane divided road that runs east-west and becomes a three-lane divided road between Tennessee Street and Texas Street. It is classified as a minor arterial east of Orange Street and between California Street and SR-210 and is classified as a major arterial west of California Street and between SR-210 and Orange Street according to the City of Redlands General Plan. The posted speed limit on Lugonia Avenue is 40 mph. There is street parking on the south side of Lugonia Avenue between Tribune Street and North Grove Street and on the north side between Karon Street and Texas Street. There are sidewalks on both the north and south sides of Lugonia Avenue. There are no bike lanes on either the north or south sides of Lugonia Avenue.

The existing intersection lane configuration and traffic control at study area intersections are shown in Figure 3-1.

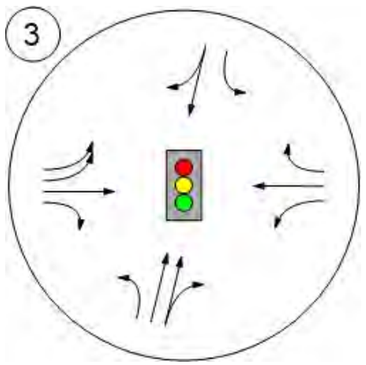
Figure 3-1: Existing Lane Configuration and Traffic Control



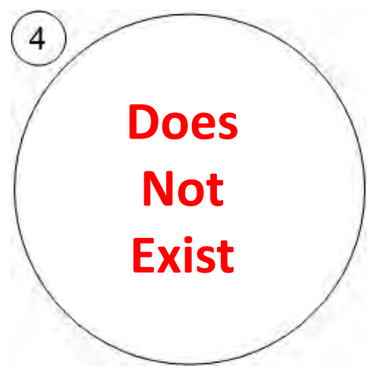
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



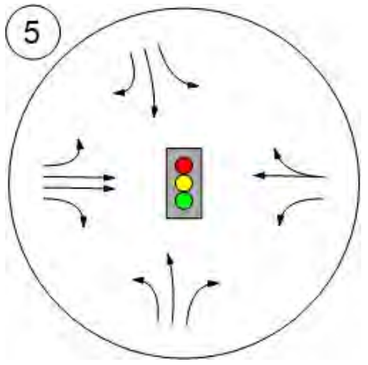
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



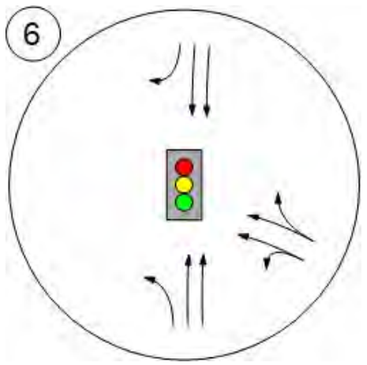
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



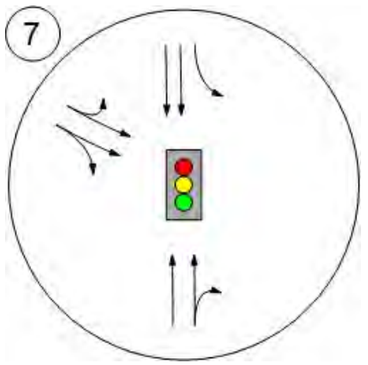
W. San Bernardino Ave/New York Street
(Future Intersection)



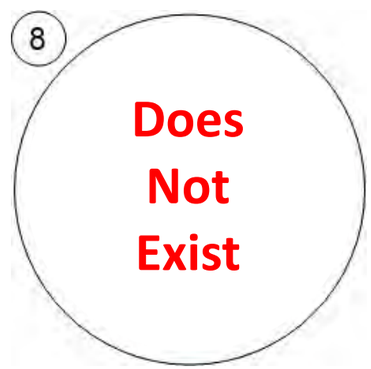
W. Lugonia Avenue/Tennessee Street



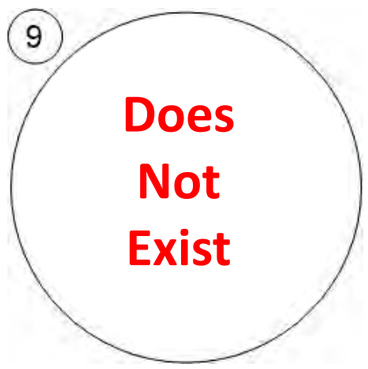
Tennessee Street/I-10 WB Ramps



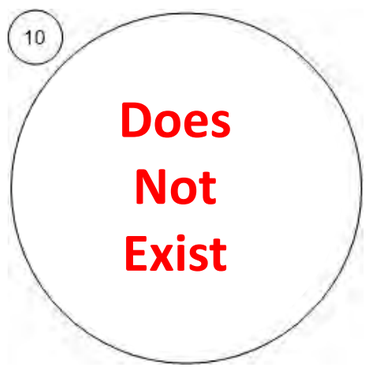
Tennessee Street/I-10 EB Ramps



W. Pioneer Avenue/Project Driveway 1



New York Street/Project Driveway 2



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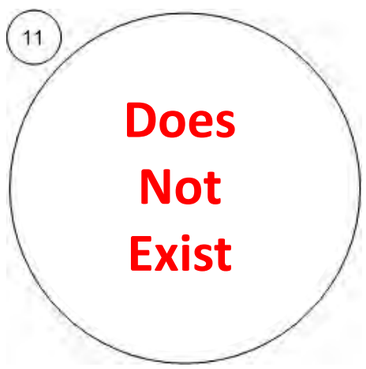
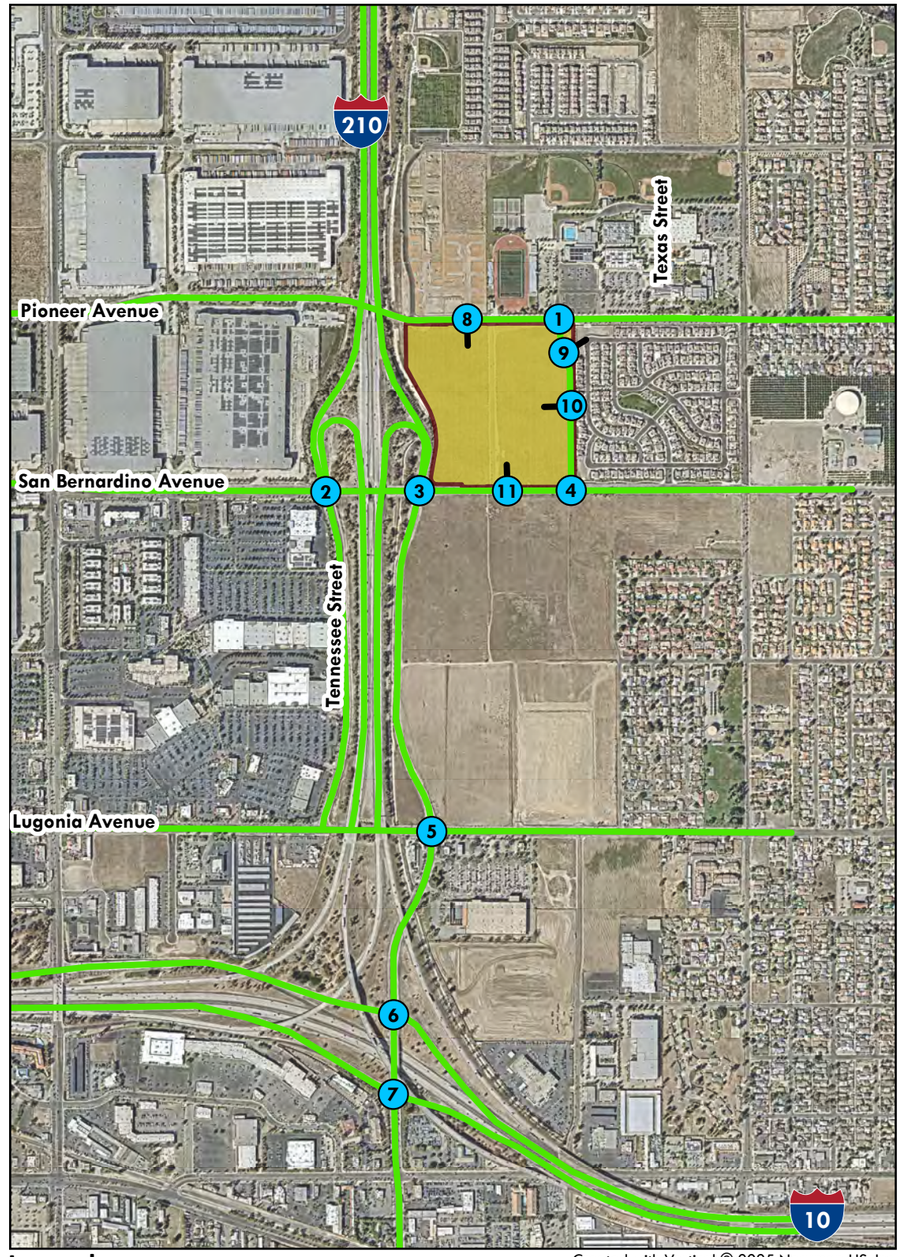


W. San Bernardino Avenue/Driveway 4



Legend

Project Boundary
Study Intersections
Project Driveway*
Study Roadways
*Intersection 11 Project Driveway is Right Out (RO) only

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N

0 0.15 0.3 Miles

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3.2 Existing (2026) Traffic Volumes and Intersection Operations

The traffic counts for the intersections for the Existing Conditions analysis were collected on Thursday, January 29, 2026. All traffic count sheets are provided in Appendix B. Counts were collected for the following intersections:

- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street
- 5. W. Lugonia Avenue/Tennessee Street
- 6. Tennessee Street/I-10 WB Ramps
- 7. Tennessee Street/I-10 EB Ramps

Existing (2026) AM and PM peak hour traffic volumes at the study area intersections are shown in Figures 3-2 and 3-3, respectively. As described previously in Section 2.3, *Methodology*, LOS at the study area intersections was determined using the HCM methodology. The existing LOS at the study area intersections is shown in Table 3-1. All LOS calculations are provided in Appendix C. As shown in Table 3-1, the following intersections operate at an unsatisfactory LOS/Delay during the AM or PM peak hours under Existing (2026) Conditions:

- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance: **LOS F** during the AM peak hour and **LOS D** during the PM peak hour.
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive: **LOS E** during the PM peak hours.
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street: **LOS D** during the AM peak hour.
- 5. W. Lugonia Avenue/Tennessee Street: **LOS D** during the PM peak hour.

Table 3-1: Existing (2026) AM and PM Peak Hour Level of Service

Intersection	Jurisdiction	Control Type	Existing (2026)				LOS Standard[1]	Satisfactory?
			AM Peak		PM Peak			
			Delay	LOS	Delay	LOS		
1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entran	City of Redlands	TWSC	**246.7**	**F**	**31.4**	**D**	C	**No**
2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Caltrans/San Bernardino County	Signalized	23.1	C	**64.9**	**E**	C	**No**
3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Caltrans/City of Redlands	Signalized	**51.7**	**D**	33.4	C	C	**No**
4. W. San Bernardino Ave/New York Street (Future Intersection)	City of Redlands	TWSC	-	-	-	-	C	-
5. W. Lugonia Avenue/Tennessee Street	City of Redlands	Signalized	19.8	B	**59.6**	**D**	C	**No**
6. Tennessee Street/I-10 WB Ramps	Caltrans/City of Redlands	Signalized	11.8	B	11.2	B	C	Yes
7. Tennessee Street/I-10 EB Ramps	Caltrans/City of Redlands	Signalized	19.7	B	23.7	C	C	Yes
8. W. Pioneer Avenue/Project Driveway 1	City of Redlands	TWSC	-	-	-	-	C	-
9. New York Street/Project Driveway 2	City of Redlands	TWSC	-	-	-	-	C	-
10. New York Street/Project Driveway 3	City of Redlands	TWSC	-	-	-	-	C	-
11. W. San Bernardino Avenue/Driveway 4	City of Redlands	TWSC	-	-	-	-	C	-

AWSC = All Way Stop Control

TWSC = Two Way Stop Control

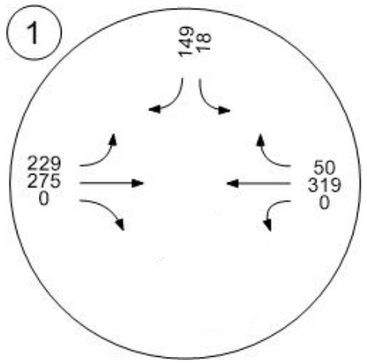
Delay Reported in Seconds per Vehicle

LOS = Level of Service

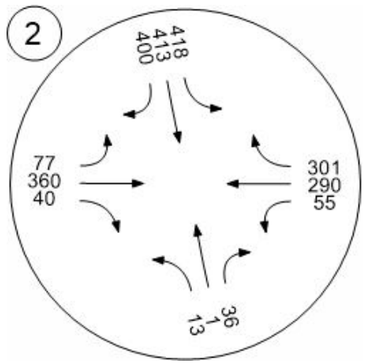
Unsatisfactory Level of Service

[1]LOS Standard per Jurisdiction's Guidelines

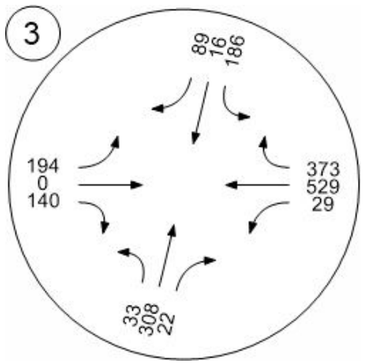
Figure 3-2: Existing (2026) AM Traffic Volumes



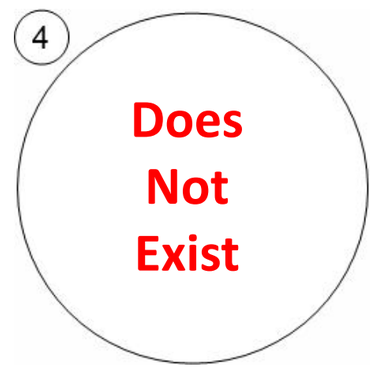
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



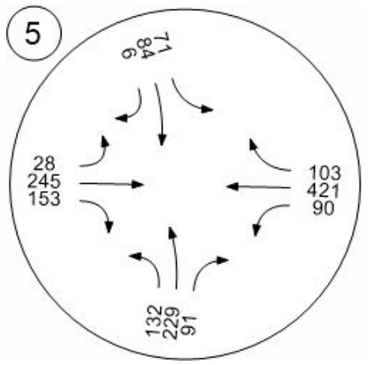
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



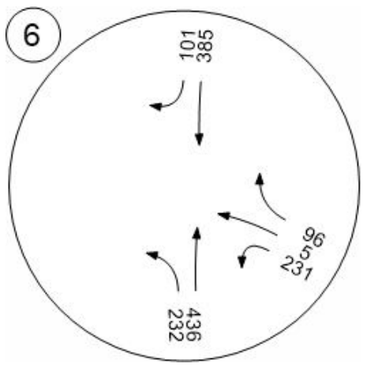
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



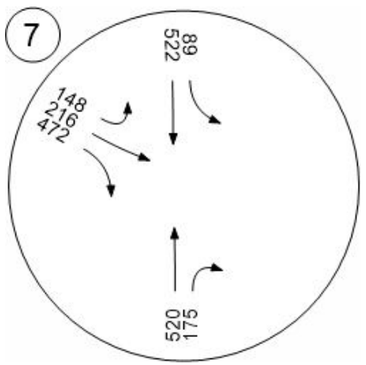
W. San Bernardino Ave/New York Street
(Future Intersection)



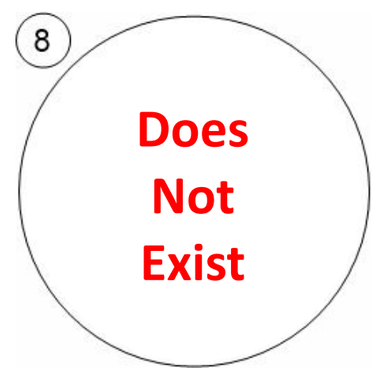
W. Lugonia Avenue/Tennessee Street



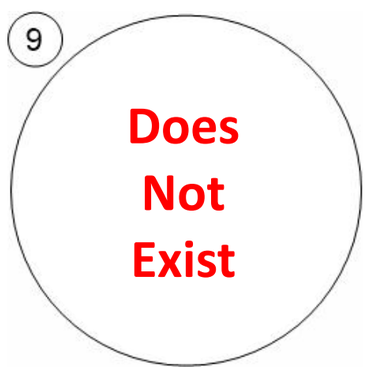
Tennessee Street/I-10 WB Ramps



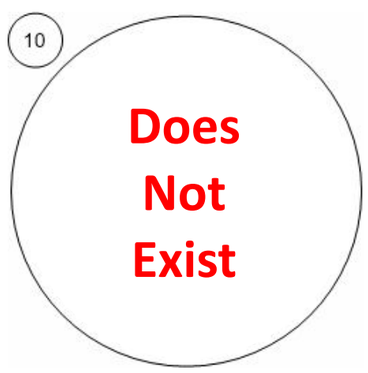
Tennessee Street/I-10 EB Ramps



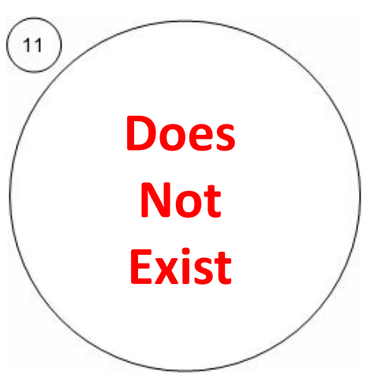
W. Pioneer Avenue/Project Driveway 1



New York Street/Project Driveway 2



New York Street/Project Driveway 3



W. San Bernardino Avenue/Driveway 4

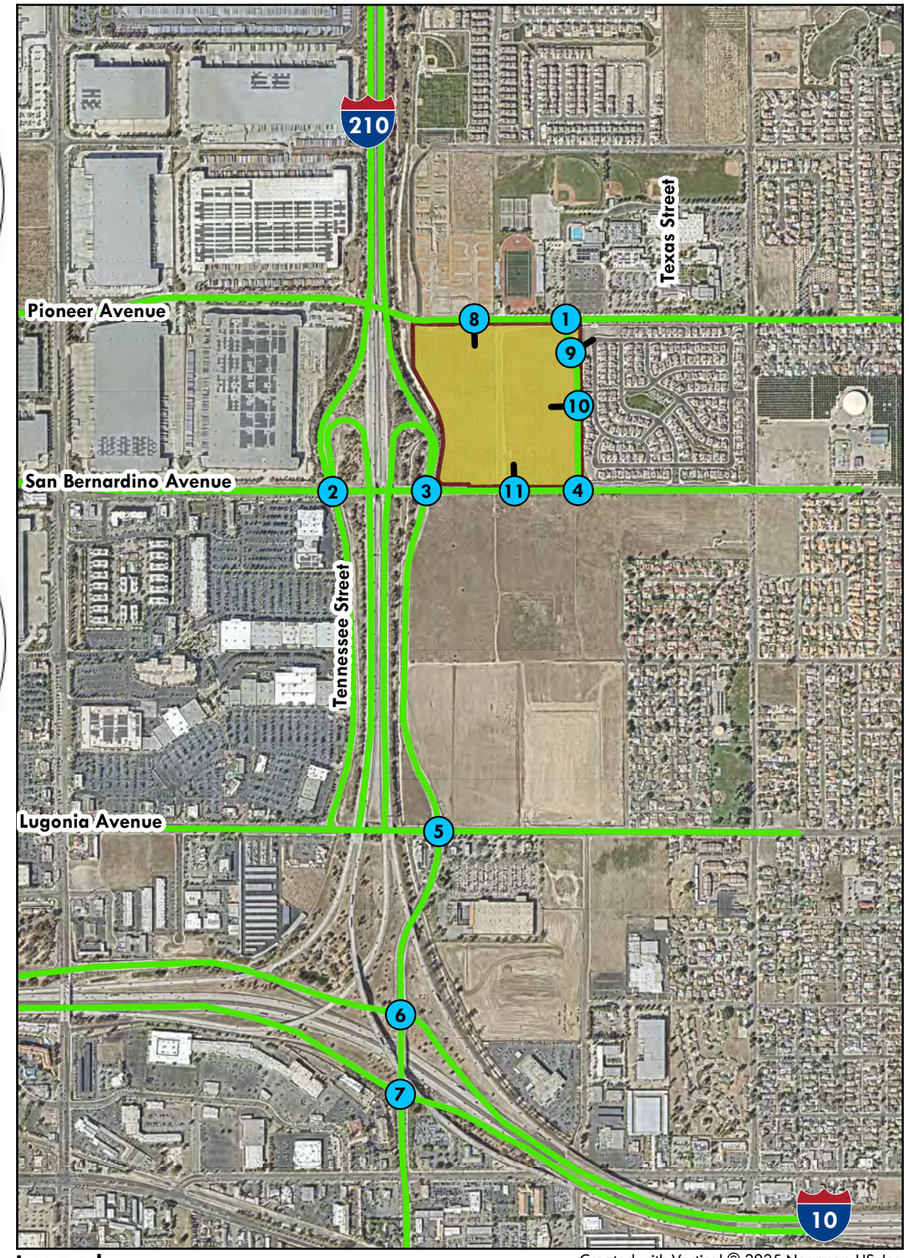


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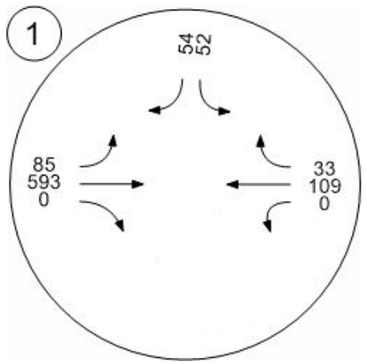
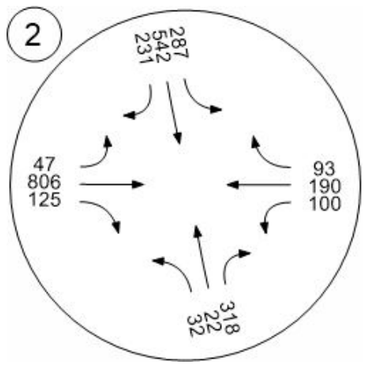
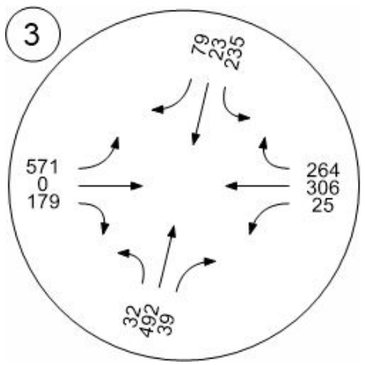
Figure 3-3: Existing (2026) PM Traffic Volumes



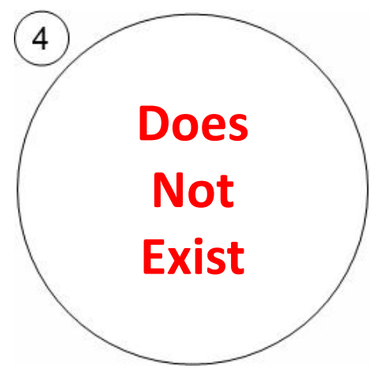
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



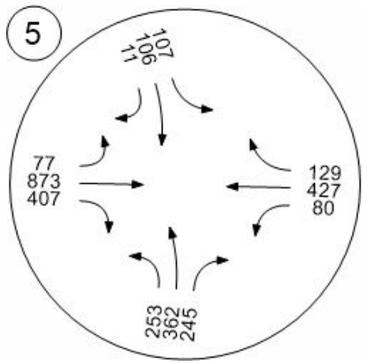
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



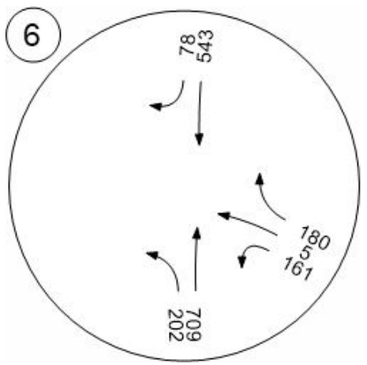
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



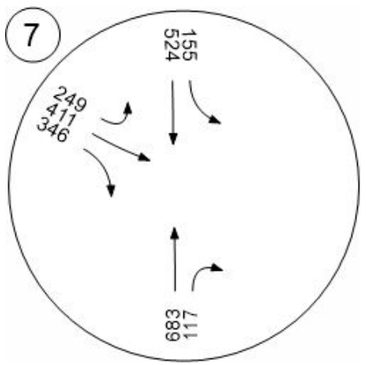
W. San Bernardino Ave/New York Street
(Future Intersection)



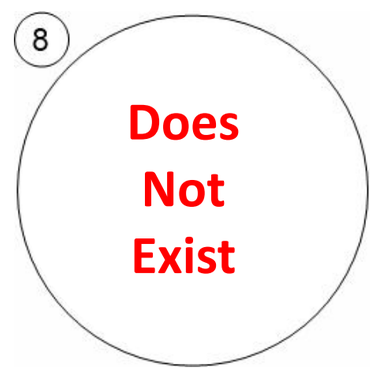
W. Lugonia Avenue/Tennessee Street



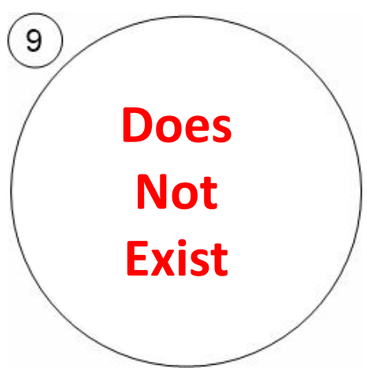
Tennessee Street/I-10 WB Ramps



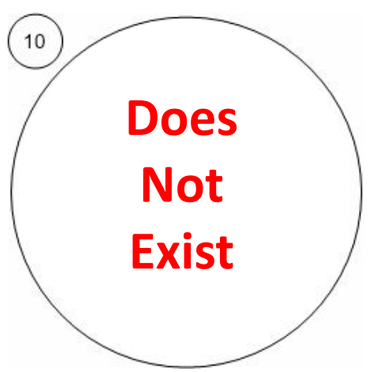
Tennessee Street/I-10 EB Ramps



W. Pioneer Avenue/Project Driveway 1



New York Street/Project Driveway 2



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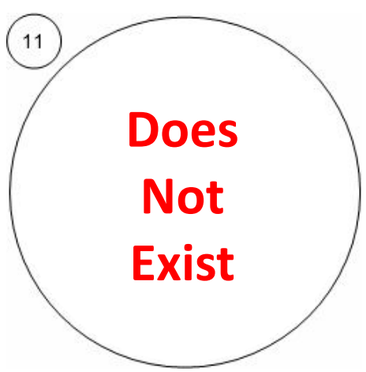
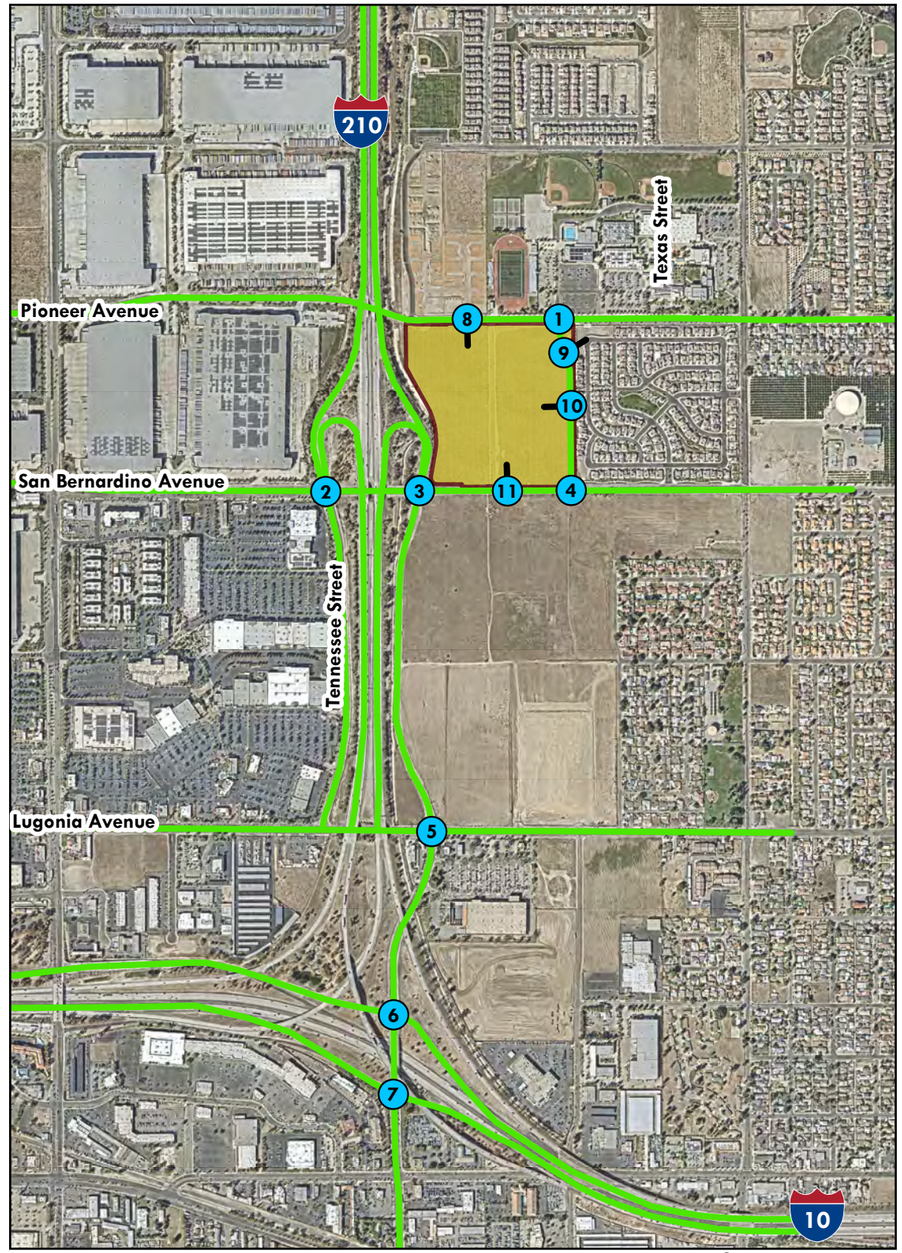


W. San Bernardino Avenue/Driveway 4



Legend

Project Boundary
Study Intersections
Project Driveway*
Study Roadways
*Intersection 11 Project Driveway is Right Out (RO) only

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N

0 0.15 0.3 Miles

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3.3 Cumulative Year (General Plan 2035) Without Project Traffic Volumes and Intersection Operations

The cumulative (No Project) traffic conditions for the year 2035 are based on the City of Redlands General Plan horizon year. In accordance with the approved scope of work by the City of Redlands, the Cumulative (General Plan 2035) No Project conditions were developed using the San Bernardino Transportation Analysis Model (SBTAM+) regional travel demand model. The SBTAM+ model reflects anticipated growth under full buildout conditions of the County of San Bernardino, consistent with the adopted General Plans of each jurisdiction within the County. In addition, traffic generated by identified nearby cumulative development projects was incorporated into the analysis to establish the forecasted 2035 traffic volumes under No Project conditions.

Link volumes for AM and PM peak hour growth rate were obtained from SBTAM+. The growth rates were then post-processed to compute intersection turning movement volumes using the Iterative Directional Volume Estimation Methodology from National Cooperative Highway Research Program (NCHRP) Report 765, based on methodology outlined in NCHRP Report 255. A peak hour factor of 0.95 was assumed for LOS analysis under Cumulative Year (General Plan 2035) Without and With Project Conditions. All traffic counts, SBTAM+ volume outputs, and volume adjustment worksheets are provided in Appendix B.

The locations of cumulative projects are shown in Figure 3-4. The AM and PM cumulative projects trip assignment at the study area intersections are shown in Figures 3-5 and 3-6, respectively. Cumulative Year (General Plan 2035) AM and PM peak hour traffic volumes at the study area intersections are shown in Figures 3-7 and 3-8, respectively.

As described previously in Section 2.3, *Methodology*, LOS at the study area intersections were determined using the HCM methodology. The Cumulative Year (General Plan 2035) Without Project LOS throughout the study area is shown in Table 3-2. All LOS calculations are provided in Appendix C. As shown in Table 3-2, the following intersections operate at an unsatisfactory LOS during the AM or PM peak hours under Cumulative Year (General Plan 2035) Without Project conditions:

- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance: **LOS F** during the AM peak hour and **LOS E** during the PM peak hour.
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive: **LOS E** during the AM and PM peak hours.
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street: **LOS E** during the AM peak hour and **LOS F** during the PM peak hour.
- 5. W. Lugonia Avenue/Tennessee Street: **LOS D** during the PM peak hour.
- 7. Tennessee Street/I-10 EB Ramps: **LOS F** during the AM and PM peak hours.

Table 3-2: Cumulative Year (General Plan 2035) Without Project AM and PM Peak Hour Level of Service

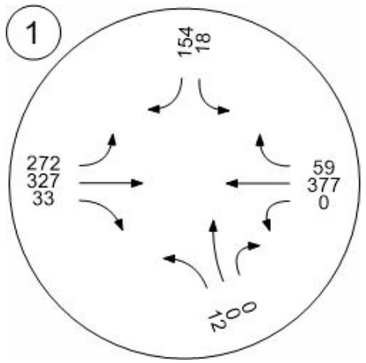
Intersection	Control Type	Cumulative Year (General Plan 2035) Without Project				LOS Standard[1]	Cumulative Year (General Plan 2035) Without Project Conditions Satisfactory?
		AM Peak		PM Peak			
		Delay	LOS	Delay	LOS		
1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	TWSC	**78.7**	**F**	**37.8**	**E**	C	**No**
2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	**57.4**	**E**	**76.1**	**E**	C	**No**
3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	**60.8**	**E**	**90.9**	**F**	C	**No**
4. W. San Bernardino Ave/New York Street (Future Intersection)	TWSC	-	-	-	-	C	-
5. W. Lugonia Avenue/Tennessee Street	Signalized	18.2	B	**42.3**	**D**	C	**No**
6. Tennessee Street/I-10 WB Ramps	Signalized	15.0	B	13.9	B	C	Yes
7. Tennessee Street/I-10 EB Ramps	Signalized	**82.3**	**F**	**126.3**	**F**	C	**No**
8. W. Pioneer Avenue/Project Driveway 1	TWSC	-	-	-	-	C	Yes
9. New York Street/Project Driveway 2	TWSC	-	-	-	-	C	-
10. New York Street/Project Driveway 3	TWSC	-	-	-	-	C	-
11. W. San Bernardino Avenue/Driveway 4	TWSC	-	-	-	-	C	-

AWSC = All Way Stop Control
TWSC = Two Way Stop Control
Delay Reported in Seconds per Vehicle
LOS = Level of Service
Unsatisfactory Level of Service
[1]LOS Standard per Jurisdiction's Guidelines

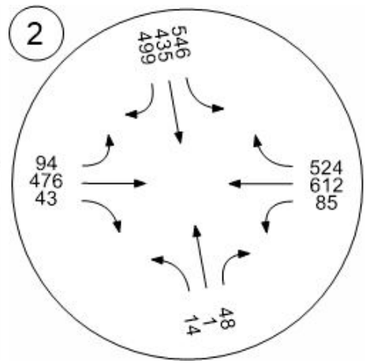
Figure 3-4: Location of Cumulative Projects



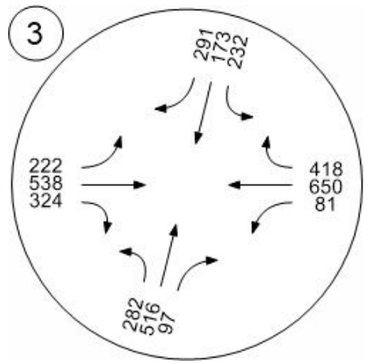
Figure 3-5 Cumulative Projects AM Trip Assignment



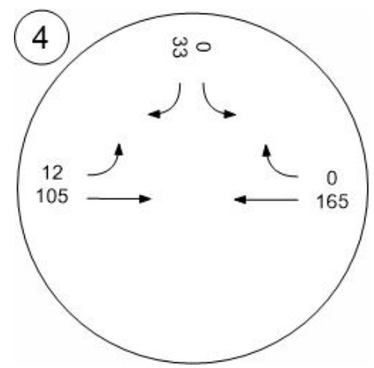
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



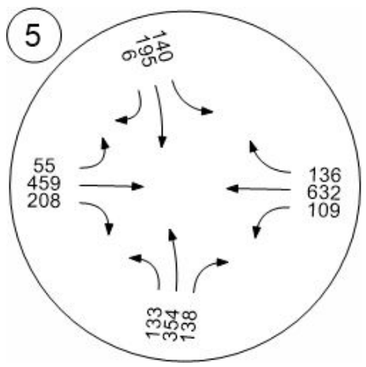
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



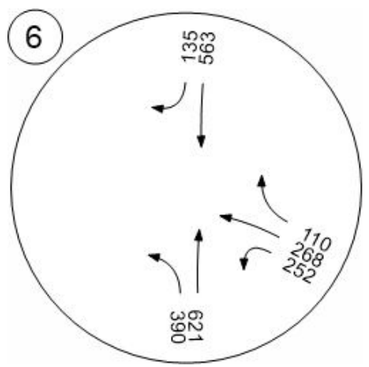
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



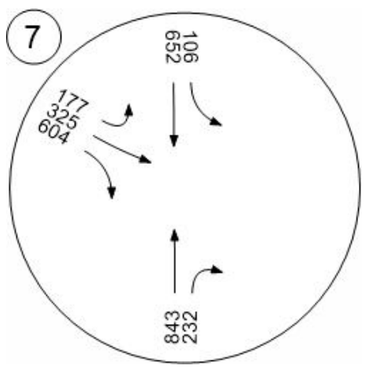
W. San Bernardino Ave/New York Street
(Future Intersection)



W. Lugonia Avenue/Tennessee Street



Tennessee Street/I-10 WB Ramps



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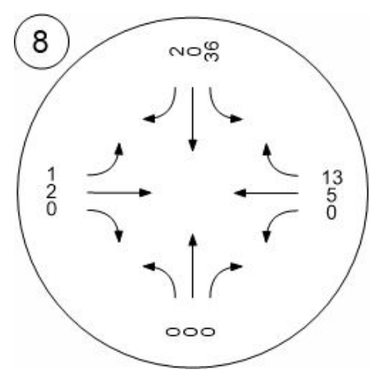

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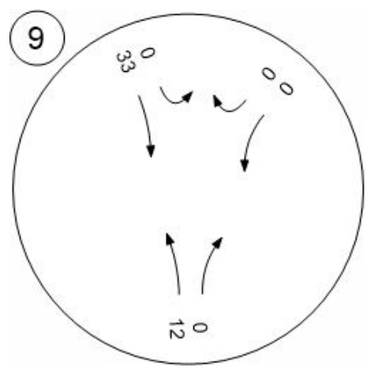

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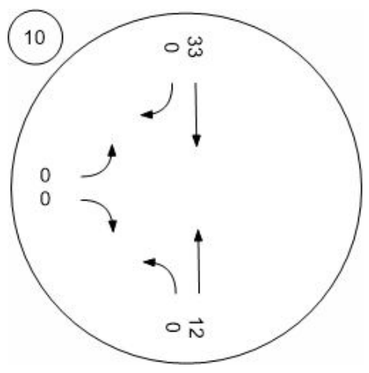

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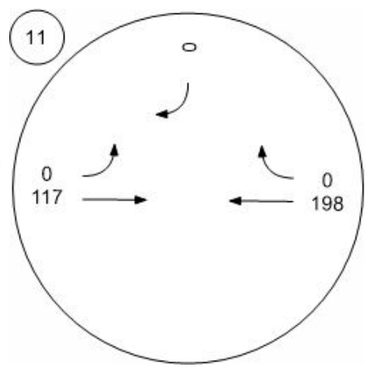

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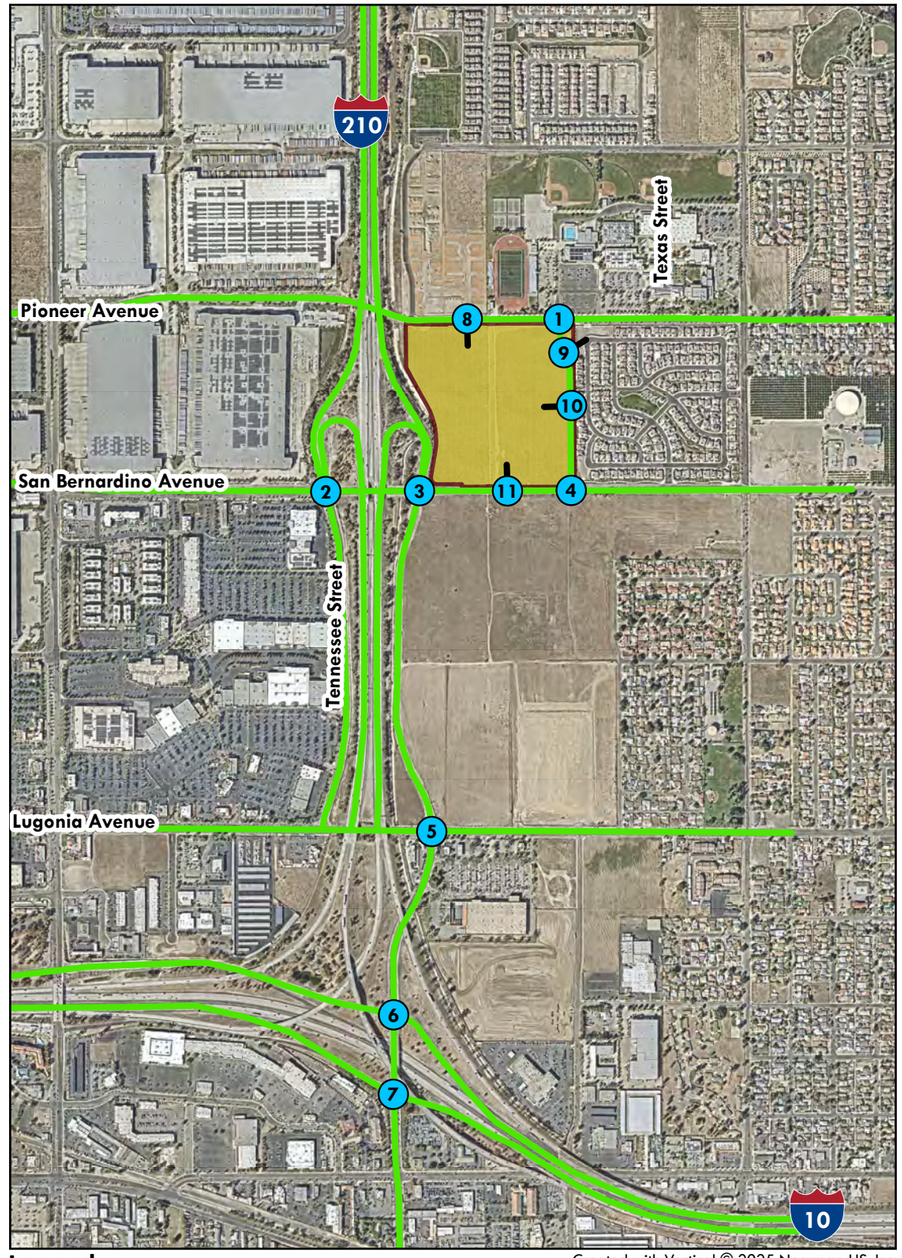

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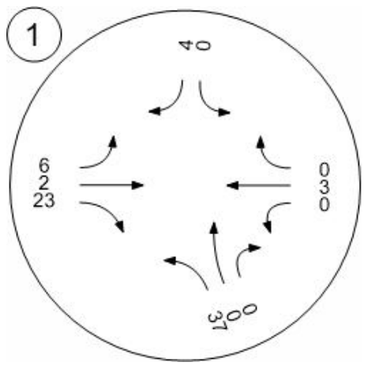
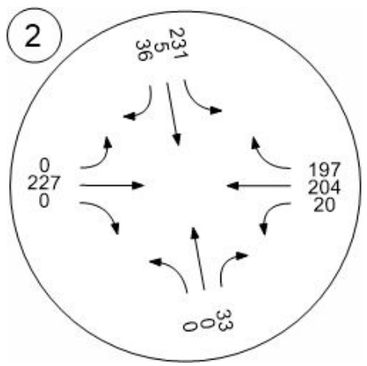
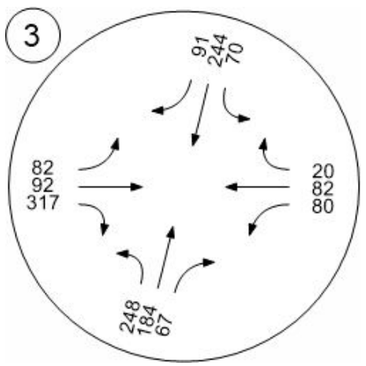
Figure 3-6: Cumulative Projects PM Trip Assignment



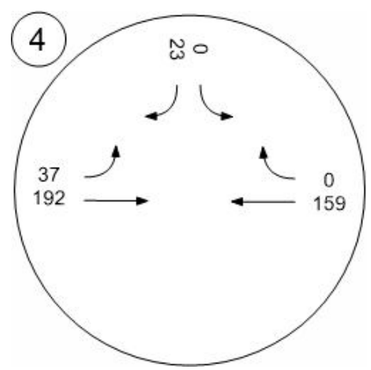
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



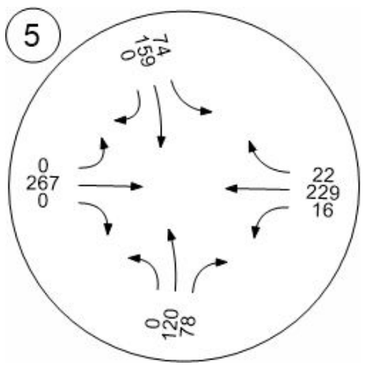
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



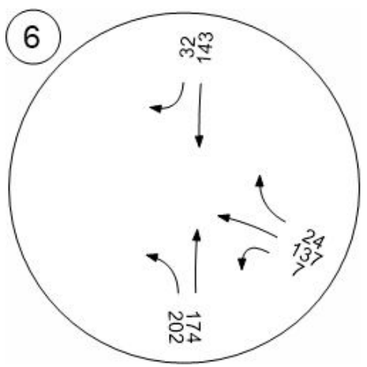
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



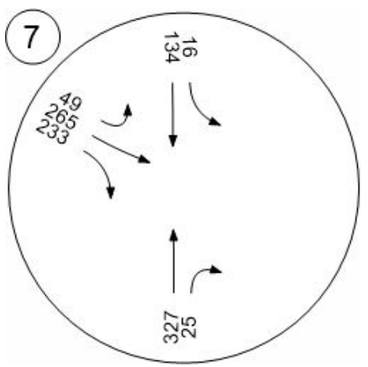
W. San Bernardino Ave/New York Street
(Future Intersection)



W. Lugonia Avenue/Tennessee Street



Tennessee Street/I-10 WB Ramps



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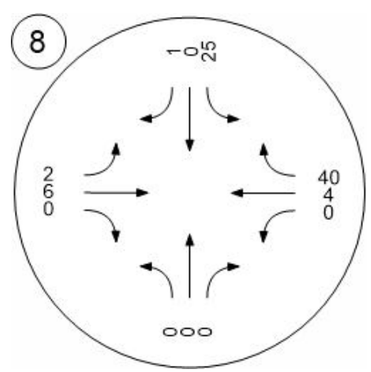

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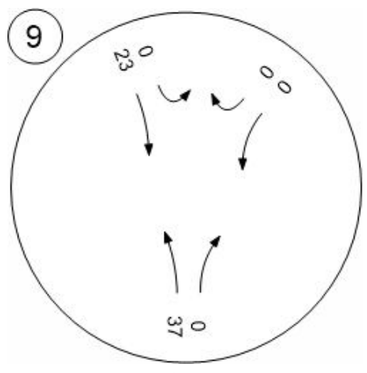

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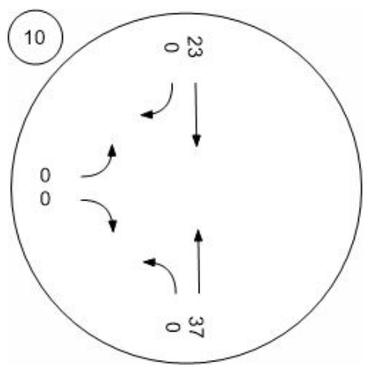

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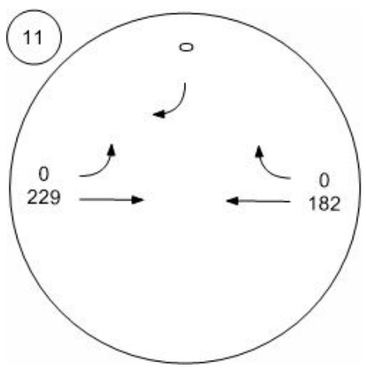

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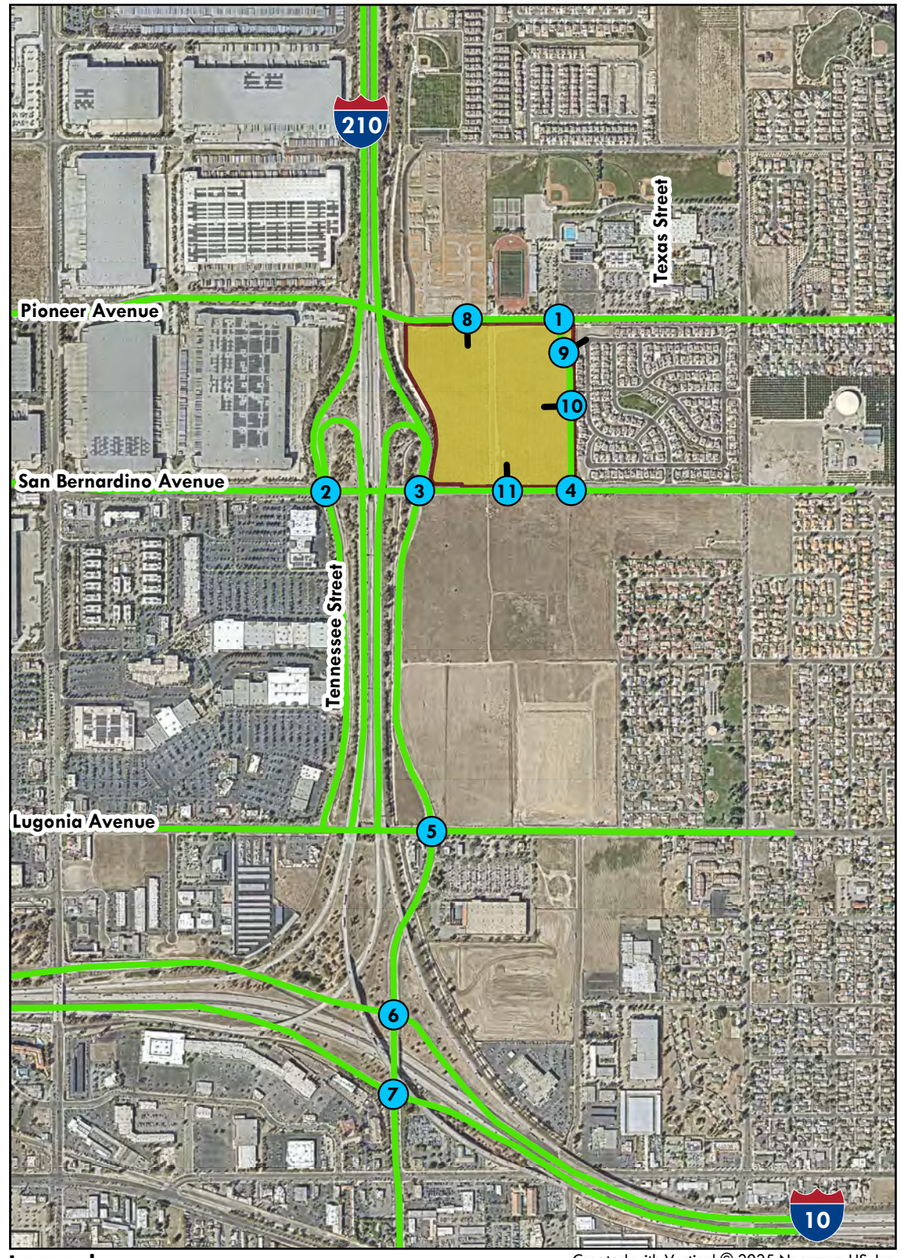

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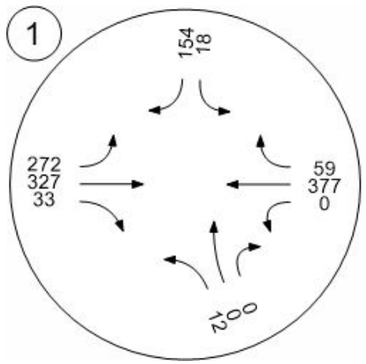
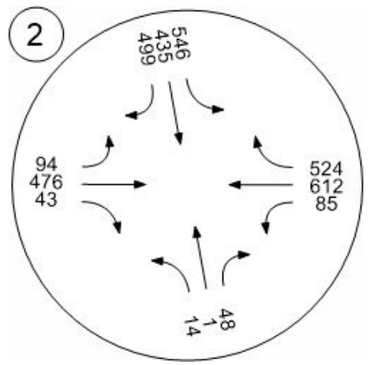
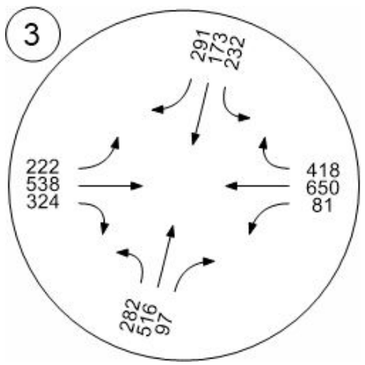
Figure 3-7 Cumulative Year (General Plan 2035) Without Project AM Traffic Volumes



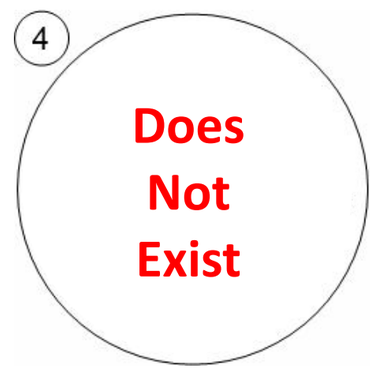
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



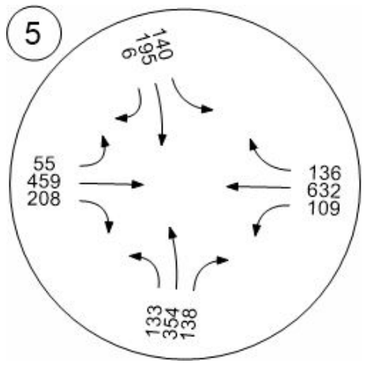
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



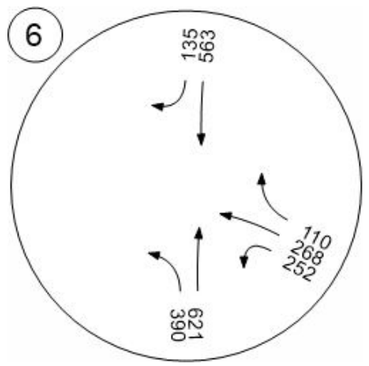
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



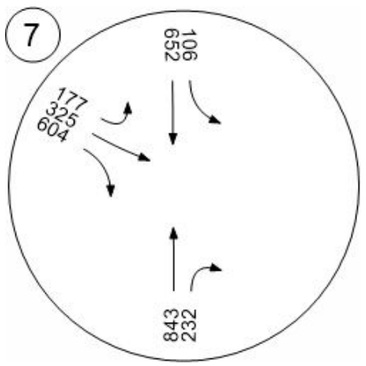
W. San Bernardino Ave/New York Street
(Future Intersection)



W. Lugonia Avenue/Tennessee Street



Tennessee Street/I-10 WB Ramps



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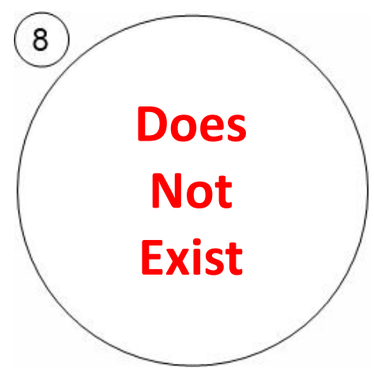

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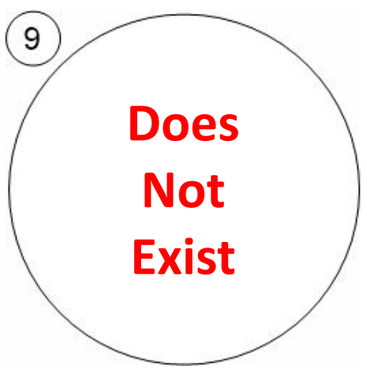

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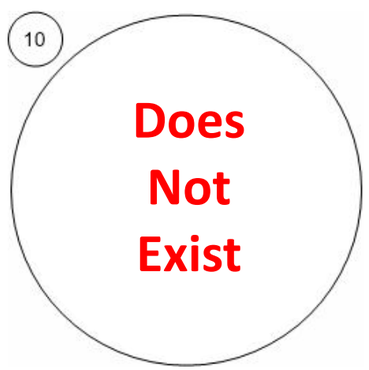

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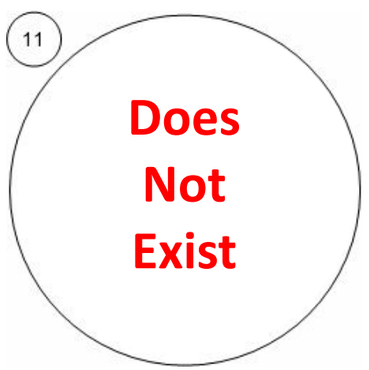

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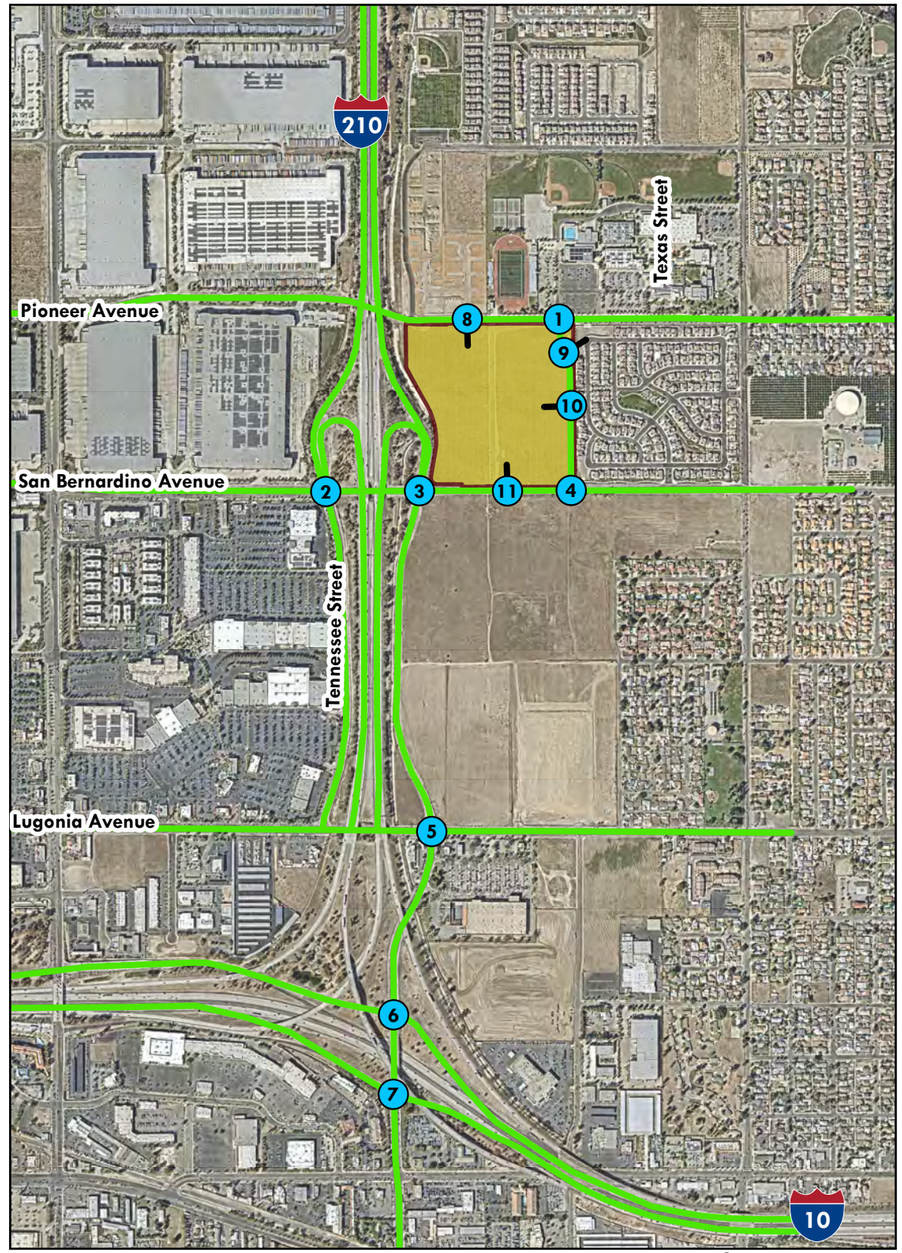

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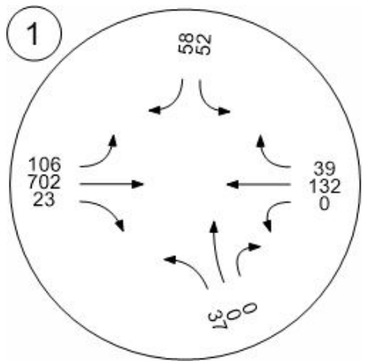
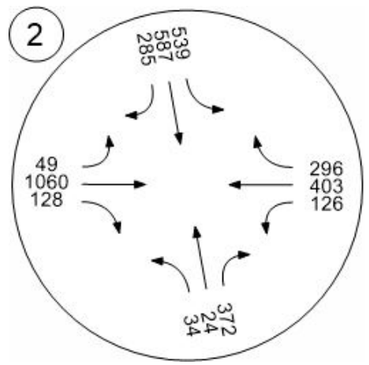
Figure 3-8: Cumulative Year (General Plan 2035) Without Project PM Traffic Volumes



W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



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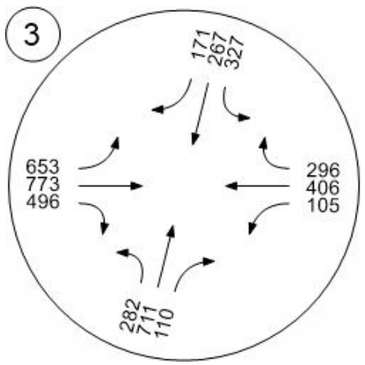
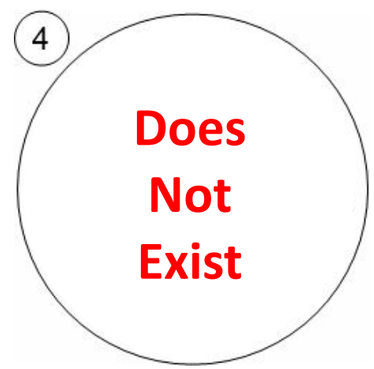
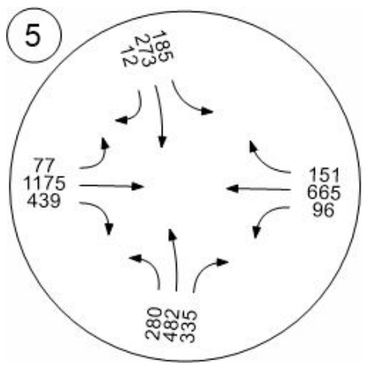
Citrus Plaza Drive



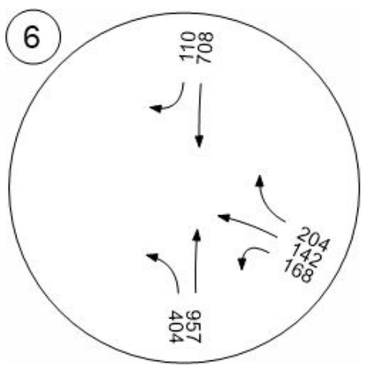
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



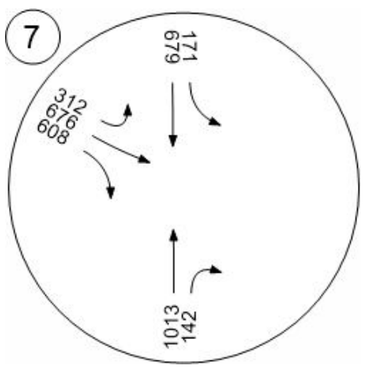
W. San Bernardino Ave/New York Street
(Future Intersection)



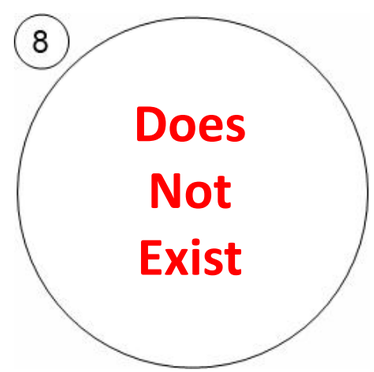
W. Lugonia Avenue/Tennessee Street



Tennessee Street/I-10 WB Ramps



Tennessee Street/I-10 EB Ramps



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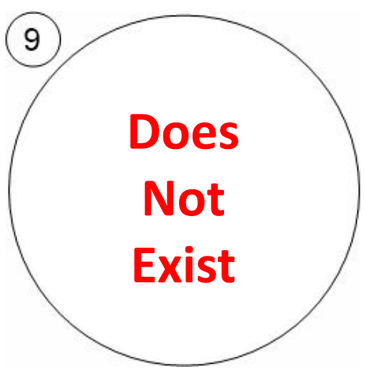

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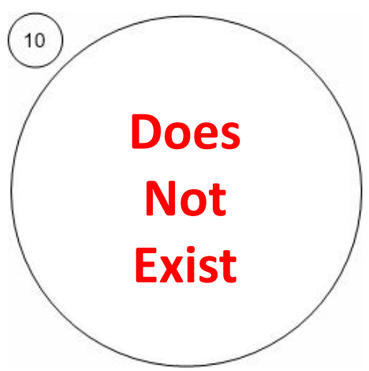

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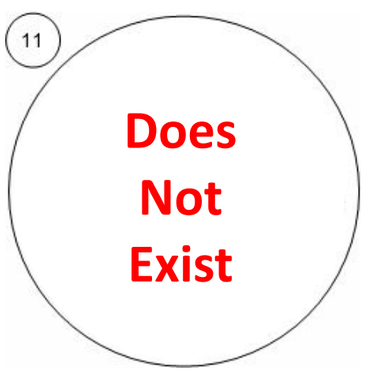

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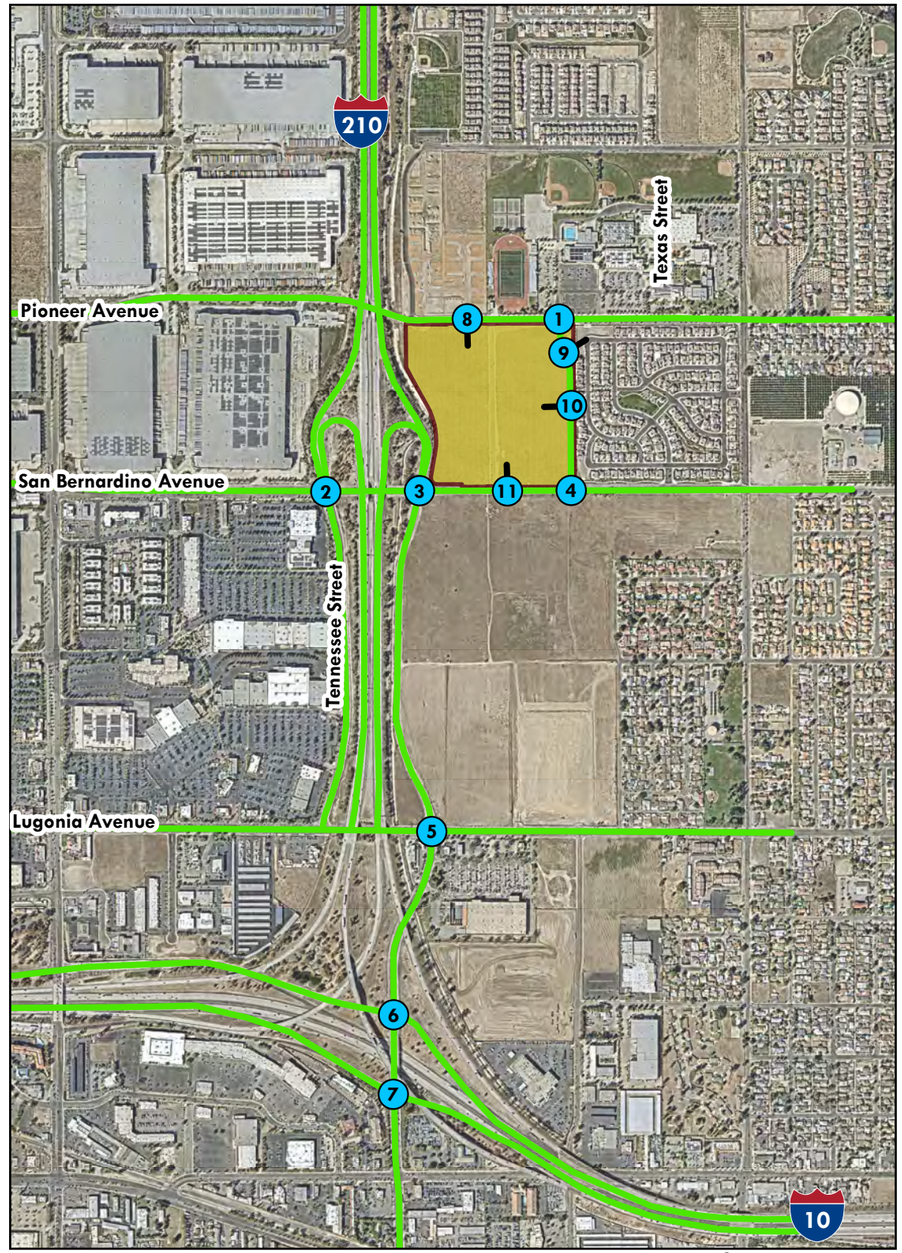

Legend

Project Boundary

Study Intersections

Project Driveway*

Study Roadways

*Intersection 11 Project Driveway is Right Out (RO) only

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N

0 0.15 0.3 Miles

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4 PROPOSED PROJECT

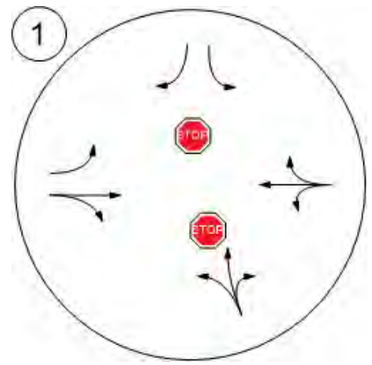
The lane geometry and traffic control for the study intersections post-Project completion is shown in Figure 4-1.

4.1 Project Trip Generation

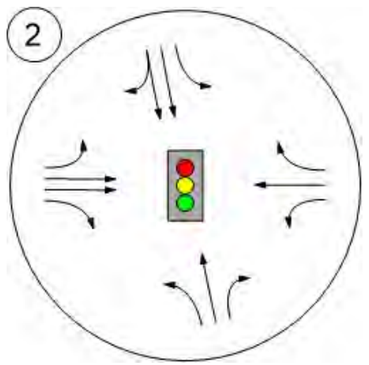
A trip generation analysis was prepared to determine the estimated change in site trip generation that would result from the proposed Project. The Project's trip generation was prepared using trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation Manual, 12th Edition* (2025). Land Use Codes for Single-Family Detached Housing (ITE Land Use Code 210) and Multi-Family Housing (Low-Rise) (ITE Land Use Code 220) were used. The Project's trip generation is shown in Table 4-1.

As shown in Table 4-1, the Project's trip generation would result in 2,543 daily trips, 196 trips during the AM peak hour, and 260 trips during the PM peak hour.

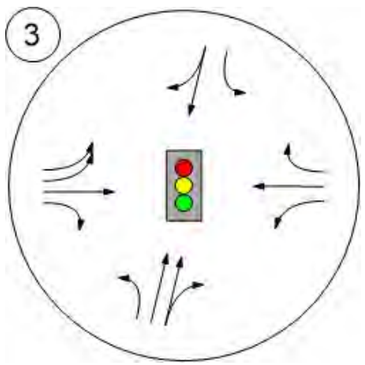
Figure 4-1: Post-Project Completion Lane Geometry and Traffic Control



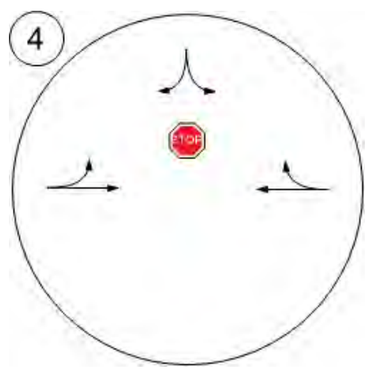
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



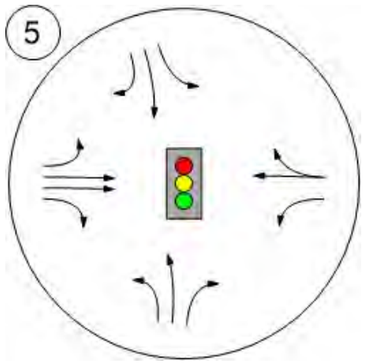
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



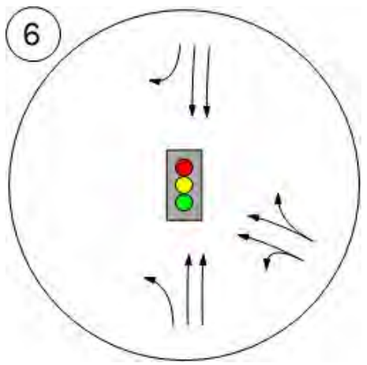
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



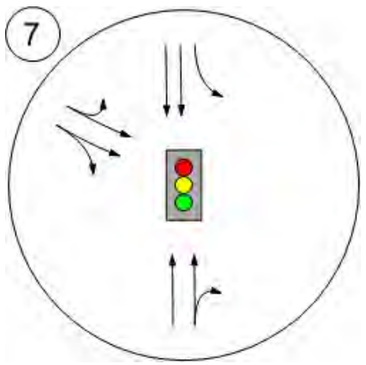
W. San Bernardino Ave/New York Street
(Future Intersection)



W. Lugonia Avenue/Tennessee Street



Tennessee Street/I-10 WB Ramps



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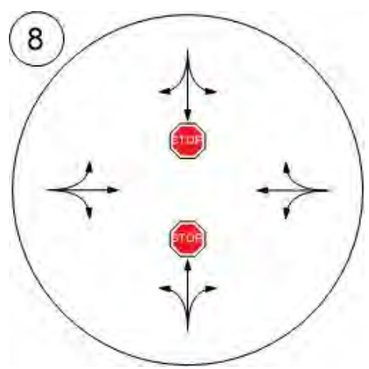
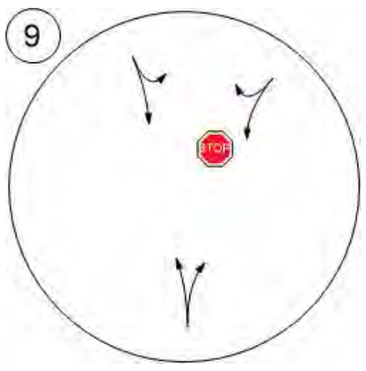
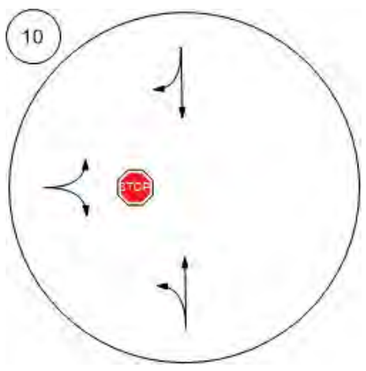


W. Pioneer Avenue/Project Driveway 1



New York Street/Project Driveway 2



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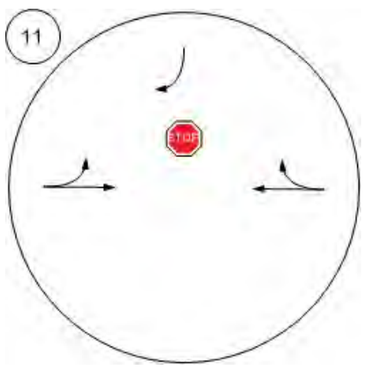
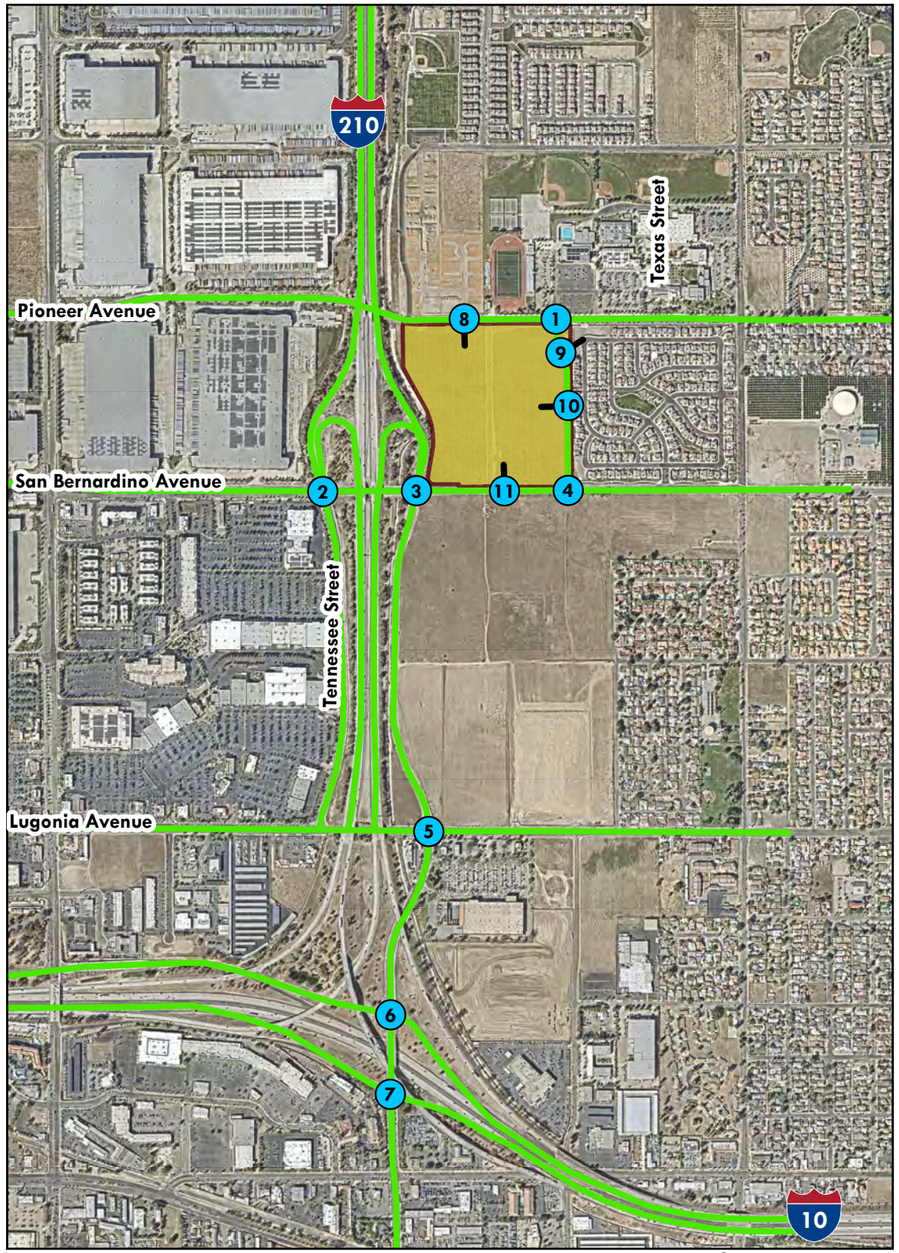


W. San Bernardino Avenue/Driveway 4



Legend

Project Boundary

Study Intersections

Project Driveway*

Study Roadways

*Intersection 11 Project Driveway is Right Out (RO) only

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N

0 0.15 0.3 Miles

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Table 4-1: Project Trip Generation

				AM Peak Hour			PM Peak Hour		
Land Use		**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Trip Rates									
210 Single-Family Detached Housing[1]		DU	9.09	0.19	0.51	0.70	0.58	0.35	0.93
220 Multifamily Housing (Low-Rise)[2]		DU	6.21	0.10	0.31	0.41	0.32	0.20	0.52
Project Trip Generation									
1 Single-Family Detached Housing[1]	275	DU	2500	52	141	193	159	97	256
2 Multifamily Housing (Low-Rise)[2]	7	DU	43	1	2	3	2	2	4
Total Project Trip Generation			**2543**	**53**	**143**	**196**	**161**	**99**	**260**

DU = Dwelling Unit

[1]Institute of Transportation Engineers, Trip Generation Manual, 12th Edition, 2025. Land Use Code 210 - Single-Family Detached Housing (Average Rate)

[2]Institute of Transportation Engineers, Trip Generation Manual, 12th Edition, 2025. Land Use Code 220 - Multifamily Housing (Low-Rise) (Average Rate)

4.2 Project Trip Distribution and Assignment

Project trips were distributed to the study area intersections based on the location of the Project and logical routes of travel to and from the site and approved by City of Redlands staff. The Project's inbound and outbound trip distributions are shown in Figures 4-2 and 4-3, respectively.

Project trips were assigned to the study area intersections by multiplying the proposed Project trip generation by the trip distribution percentage at each location. The Project's AM and PM trip assignments are shown in Figures 4-4 and 4-5, respectively.

Figure 4-2: Project Inbound Trip Distribution

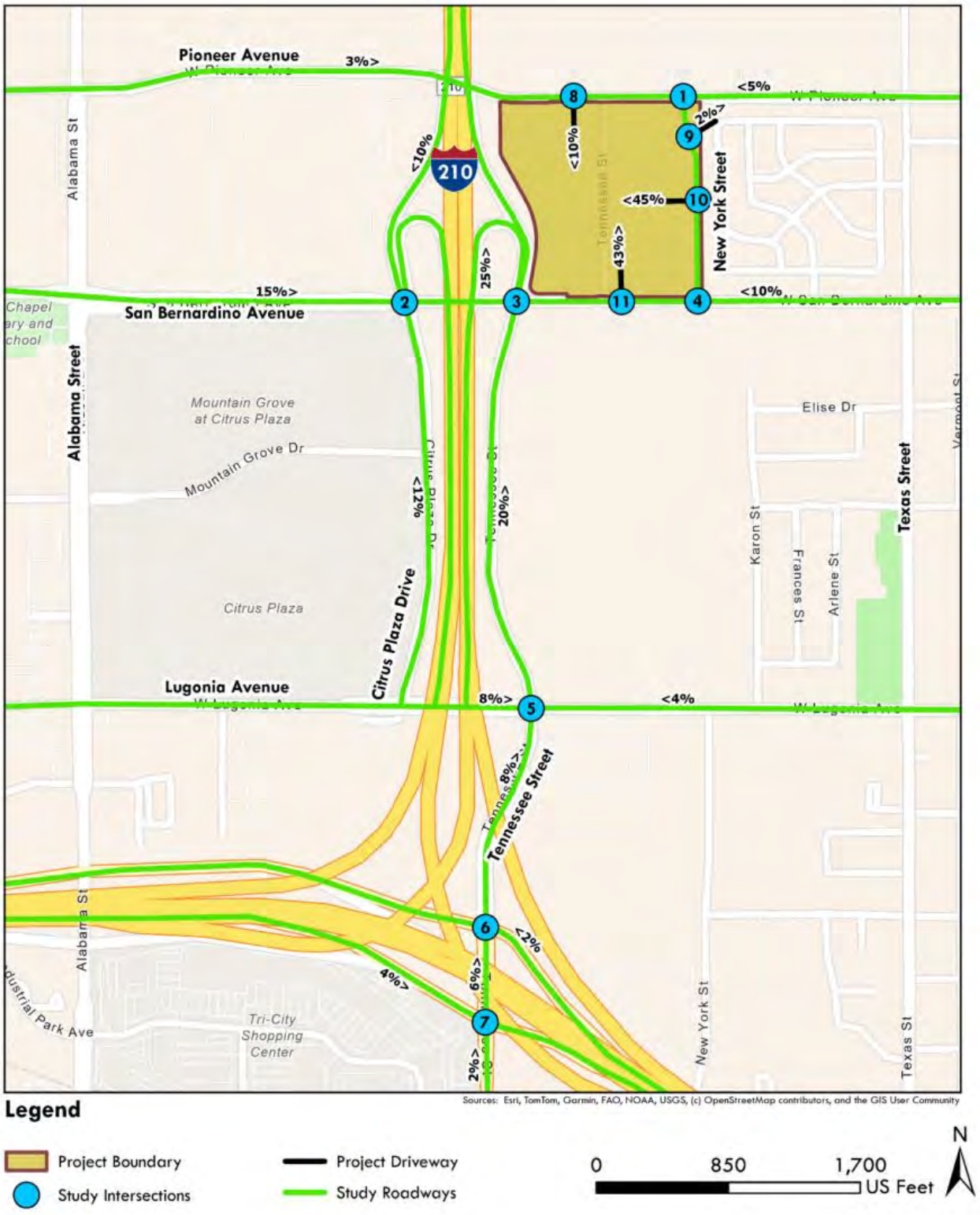


Figure 4-3: Project Outbound Trip Distribution

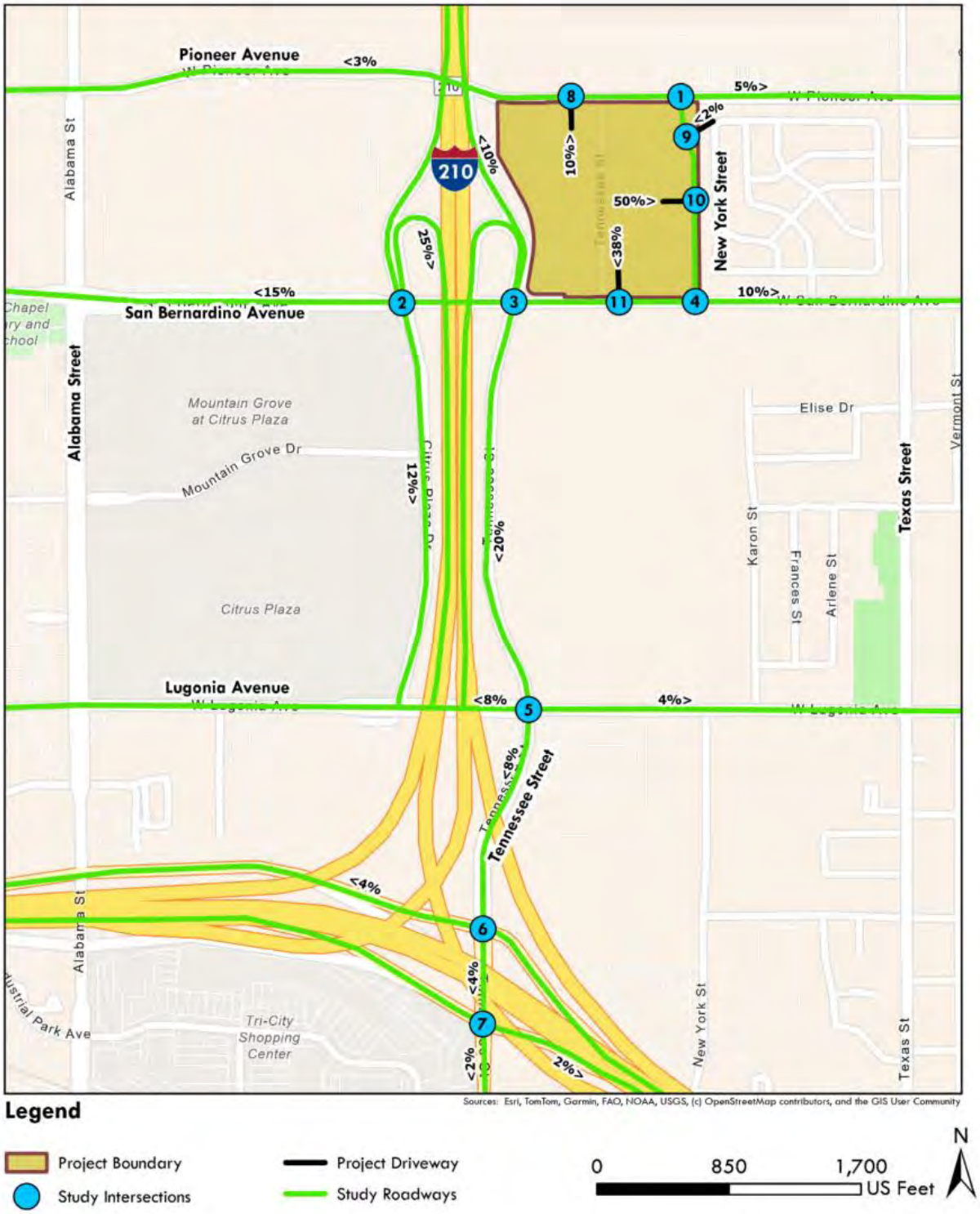
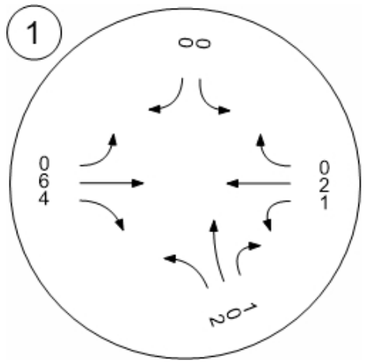
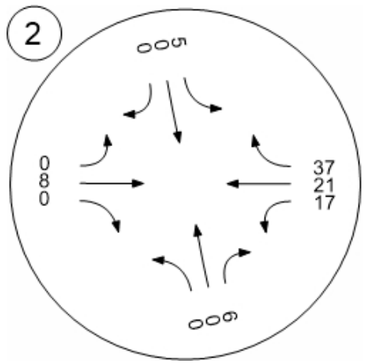


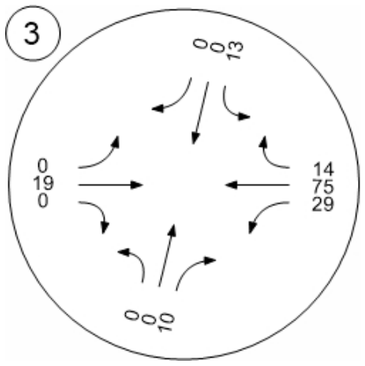
Figure 4-4: Project AM Trip Assignment



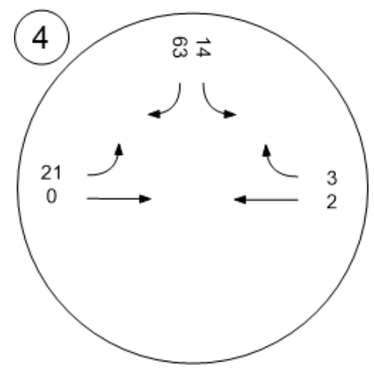
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



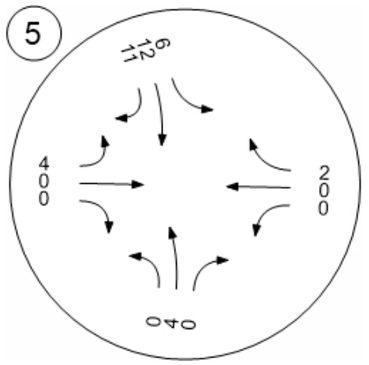
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



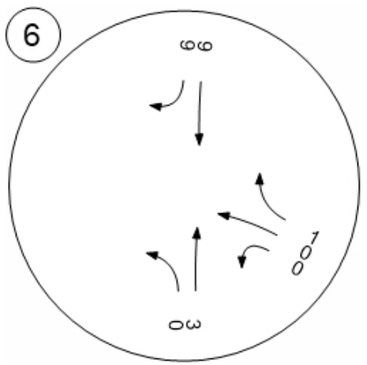
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



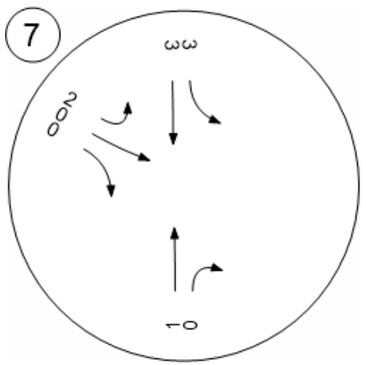
W. San Bernardino Ave/New York Street
(Future Intersection)



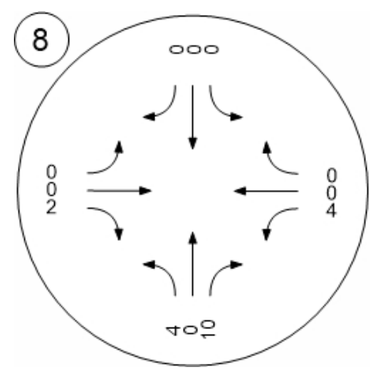
W. Lugonia Avenue/Tennessee Street



Tennessee Street/I-10 WB Ramps



Tennessee Street/I-10 EB Ramps



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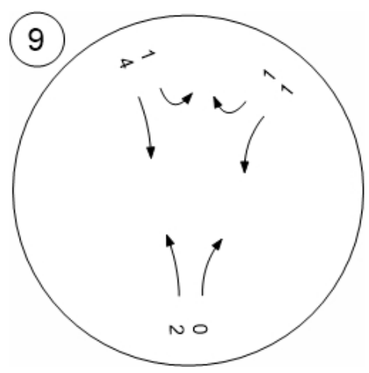
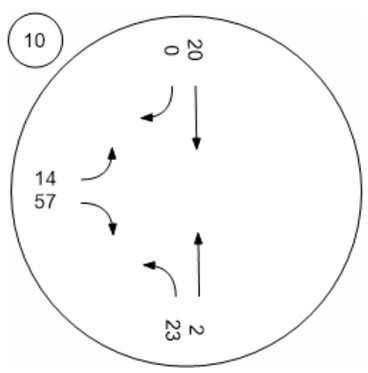


New York Street/Project Driveway 2



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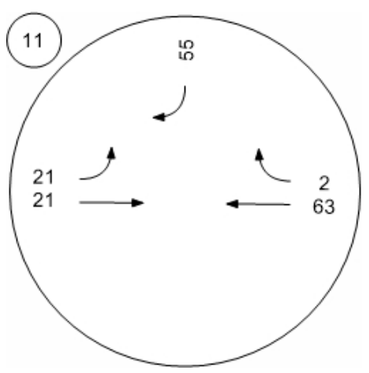
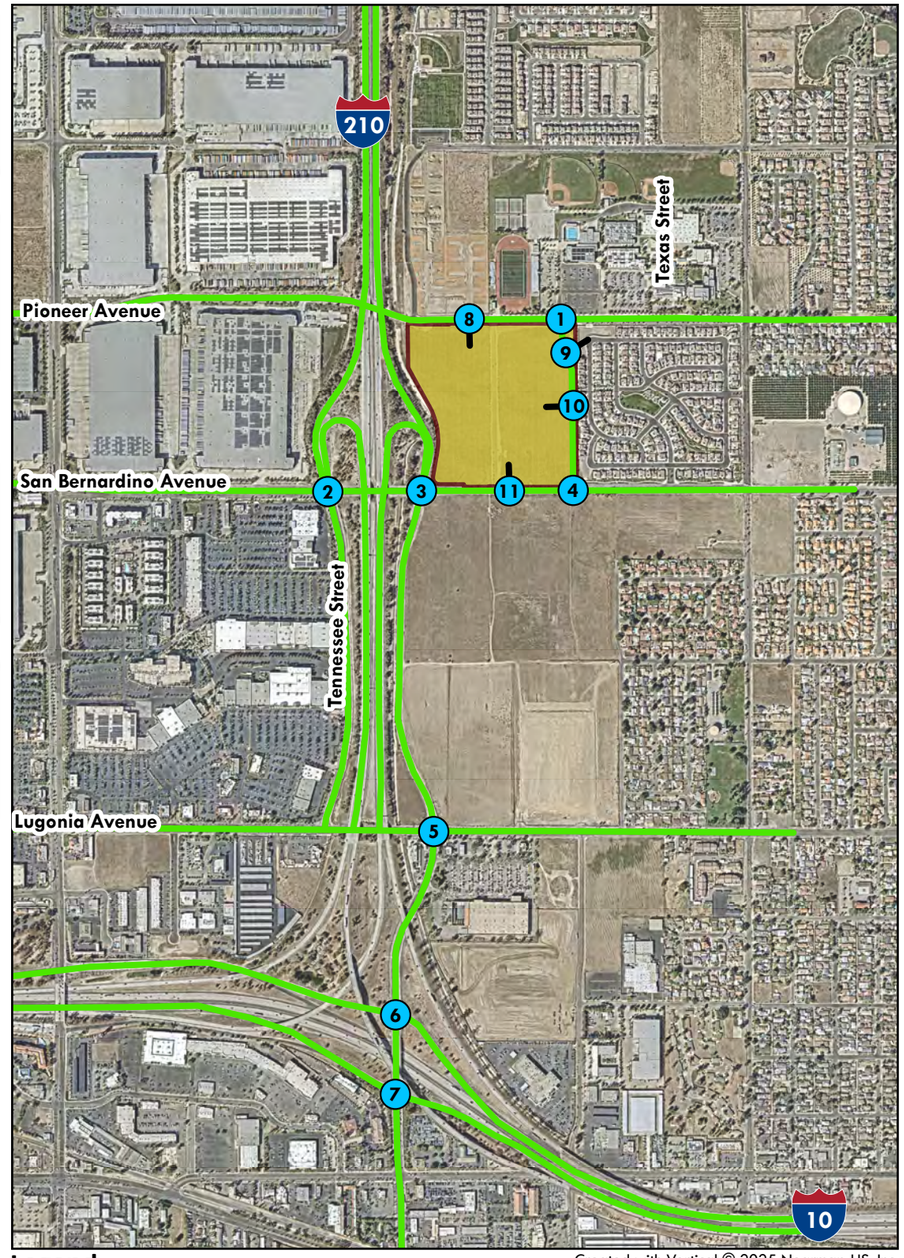


W. San Bernardino Avenue/Driveway 4



Legend

Project Boundary
Study Intersections
Project Driveway*
Study Roadways
*Intersection 11 Project Driveway is Right Out (RO) only

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N

0 0.15 0.3 Miles

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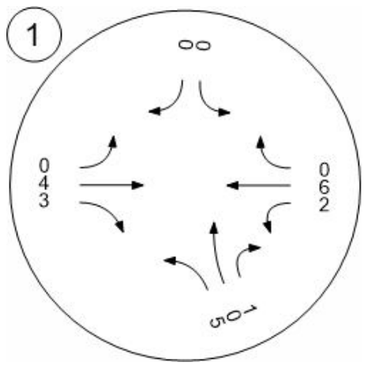
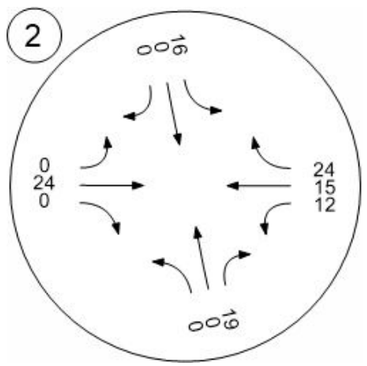
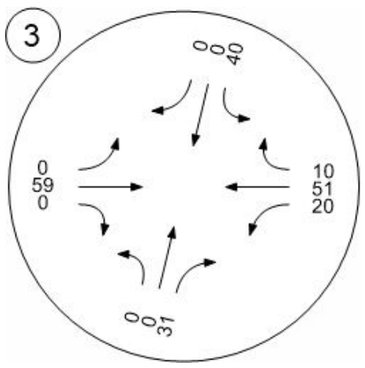
Figure 4-5: Project PM Trip Assignment



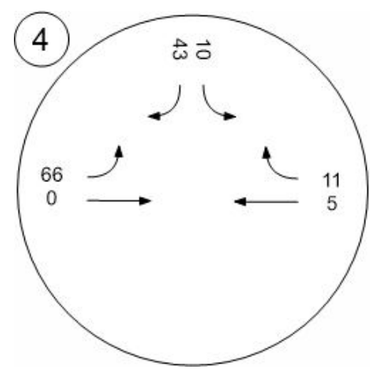
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



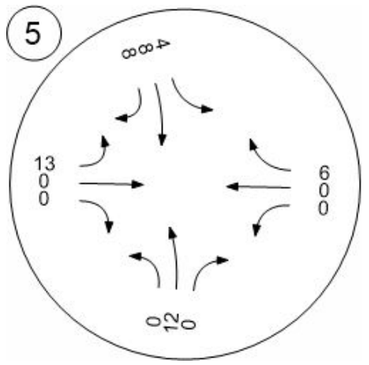
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



W. San Bernardino Ave/New York Street
(Future Intersection)



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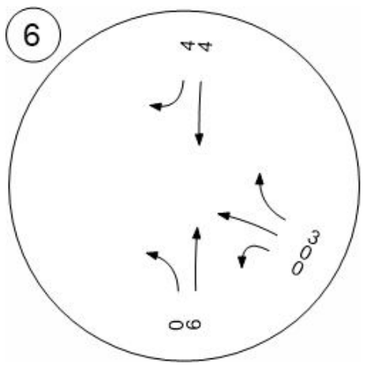
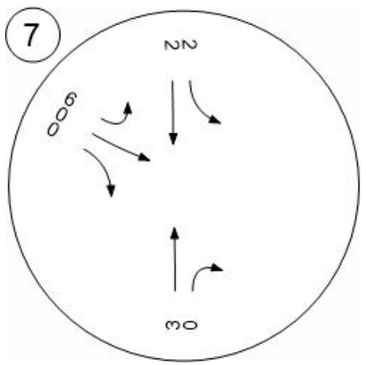
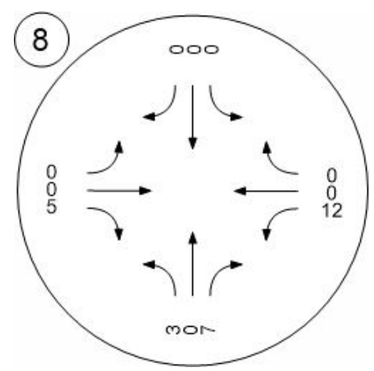


Tennessee Street/I-10 WB Ramps



Tennessee Street/I-10 EB Ramps



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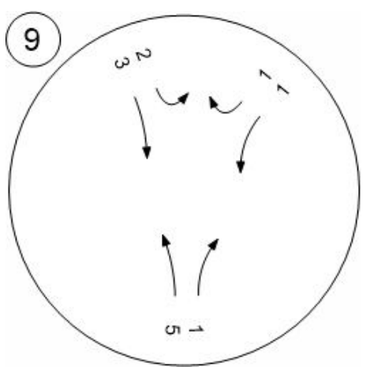

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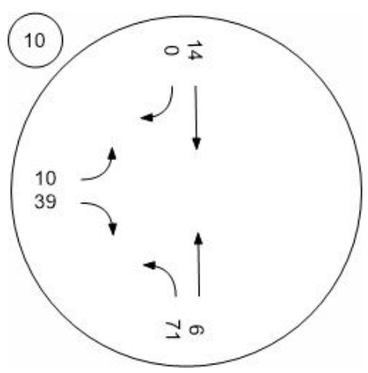

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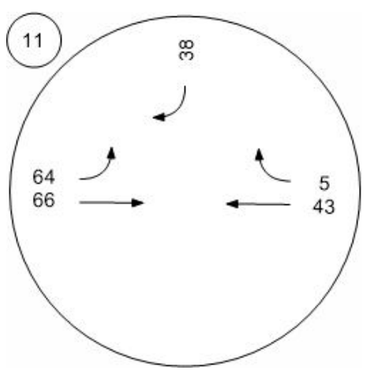

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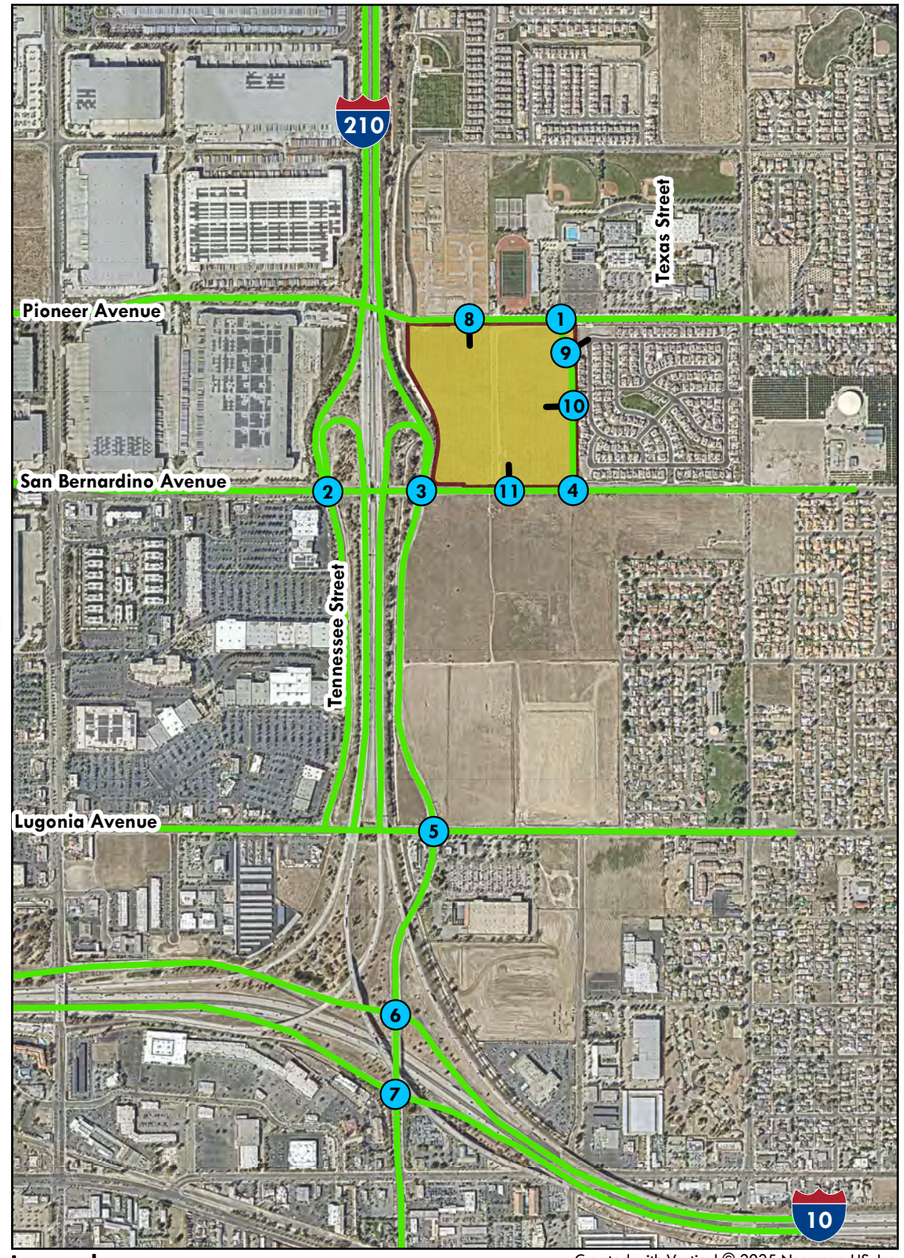

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5 WITH PROJECT CONDITIONS

It should be noted that the Project proposes the removal of Tennessee Street as part of the construction of the Project. Traffic counts were collected at the existing intersection of Tennessee Street and W. San Bernardino Avenue and are included in Appendix B. Traffic counts at this intersection were collected to represent the cut through trips along Tennessee Street between W. Pioneer Avenue and W. San Bernardino Avenue. These volumes were incorporated into Plus Project scenarios to conservatively analyze the impacts on removing Tennessee Street and adding New York Street. This additional volume accounts for a portion of the increase in delay between Without Project and Plus Project scenarios LOS at study intersections 1 and 4 along New York Avenue.

5.1 Existing (2026) Plus Project Conditions

Existing (2026) Plus Project traffic volumes were determined by adding the Project trips to the Existing (2026) Conditions traffic volumes. Existing (2026) Plus Project AM and PM peak hour traffic volumes at the study area intersections are shown in Figures 5-1 and 5-2, respectively.

As described previously in Section 2.3, *Methodology*, LOS at the study area intersections was determined using the HCM methodology. The Existing (2026) Plus Project LOS throughout the study area is shown in Table 5-1. All LOS calculations are provided in Appendix C. As shown in Table 5-1, the following intersections would operate at an unsatisfactory LOS under the Existing (2026) Plus Project Conditions:

- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance: **LOS F** during the AM and PM peak hour.
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive: **LOS E** during the PM peak hours.
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street: **LOS E** during the AM peak hour and **LOS D** during the PM peak hour.
- 4. W. San Bernardino Ave/New York Street: **LOS F** during the AM and PM peak hours.
- 5. W. Lugonia Avenue/Tennessee Street: **LOS E** during the PM peak hour.

Table 5-1: Existing (2026) Plus Project AM and PM Peak Hour LOS

Intersection	Control Type	Existing (2026)				Existing (2026) Plus Project				Delay Difference		LOS Standard[1]	Existing (2026) Plus Project Satisfactory?
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak	PM Peak		
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS				
1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	TWSC	**246.7**	**F**	**31.4**	**D**	**10,000.0**	**F**	**62.6**	**F**	9,753.3	31.2	C	**No**
2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	23.1	C	**64.9**	**E**	24.6	C	**70.0**	**E**	1.5	5.1	C	**No**
3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	**51.7**	**D**	33.4	C	**73.4**	**E**	**44.5**	**D**	21.7	11.1	C	**No**
4. W. San Bernardino Ave/New York Street (Future Intersection)	TWSC	-	-	-	-	**193.1**	**F**	**80.2**	**F**	-	-	C	**No**
5. W. Lugonia Avenue/Tennessee Street	Signalized	19.8	B	**59.6**	**D**	20.4	C	**63.5**	**E**	0.6	3.9	C	**No**
6. Tennessee Street/I-10 WB Ramps	Signalized	11.8	B	11.2	B	11.8	B	11.2	B	0.0	0.0	C	Yes
7. Tennessee Street/I-10 EB Ramps	Signalized	19.7	B	23.7	C	19.9	B	24.1	C	0.2	0.4	C	Yes
8. W. Pioneer Avenue/Project Driveway 1	TWSC	-	-	-	-	8.6	A	8.7	A	-	-	C	Yes
9. New York Street/Project Driveway 2	TWSC	-	-	-	-	8.5	A	8.6	A	-	-	C	Yes
10. New York Street/Project Driveway 3	TWSC	-	-	-	-	9.2	A	9.8	A	-	-	C	Yes
11. W. San Bernardino Avenue/Driveway 4	TWSC	-	-	-	-	8.8	A	8.7	A	-	-	C	Yes

AWSC = All Way Stop Control

TWSC = Two Way Stop Control

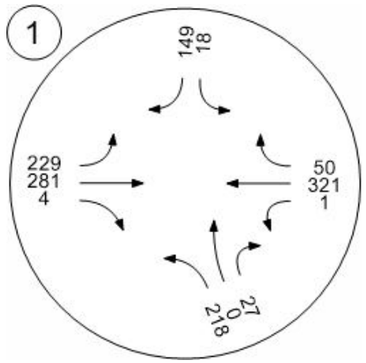
ported in Seconds per Vehicle

LOS = Level of Service

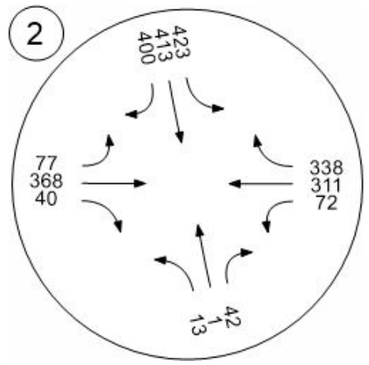
Unsatisfactory Level of Service

ıdard per Jurisdiction's Guidelines

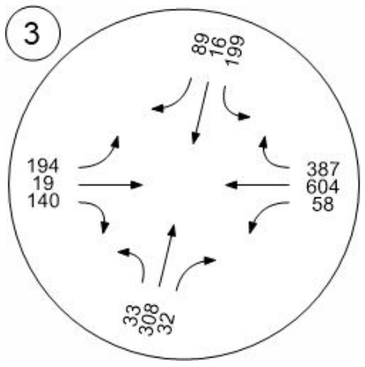
Figure 5-1: Existing (2026) Plus Project AM Peak Hour Traffic Volumes



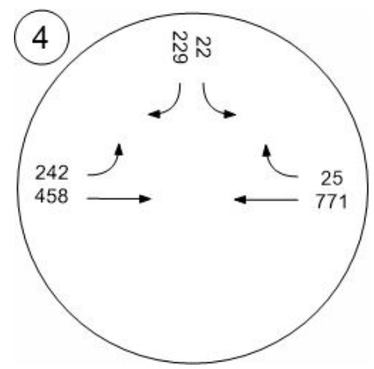
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



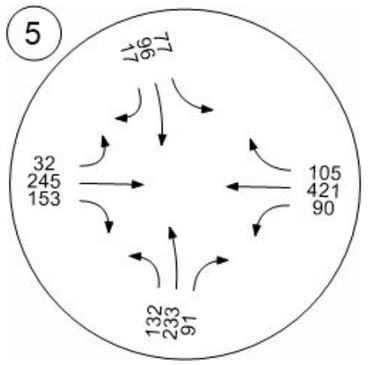
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



W. San Bernardino Ave/New York Street
(Future Intersection)



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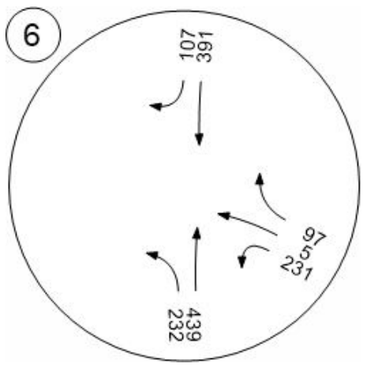
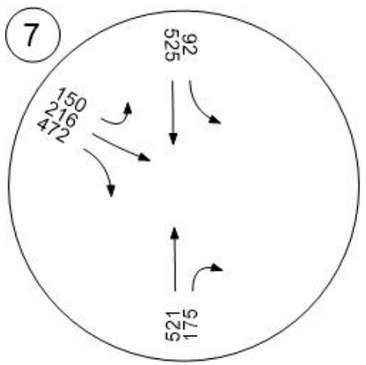
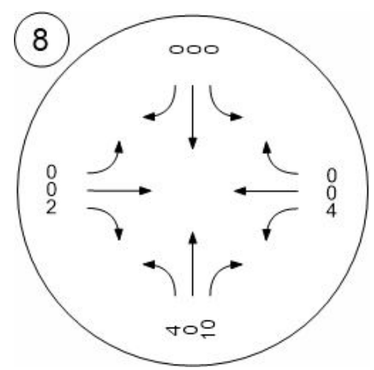


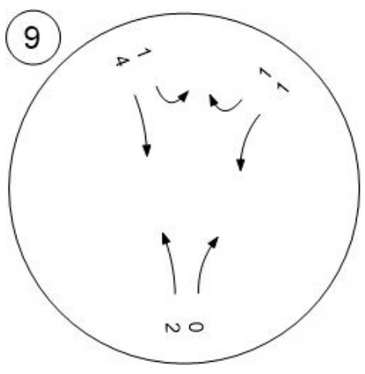
Tennessee Street/I-10 WB Ramps



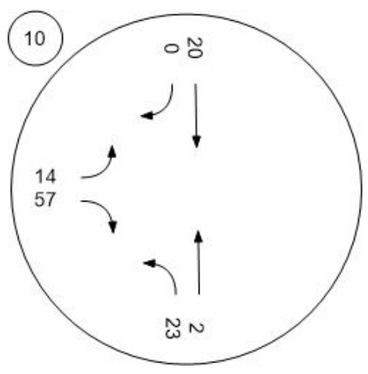
Tennessee Street/I-10 EB Ramps



W. Pioneer Avenue/Project Driveway 1



New York Street/Project Driveway 2



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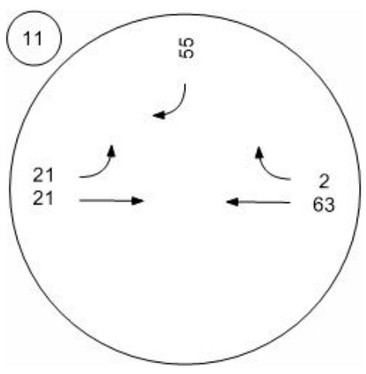

W. San Bernardino Avenue/Driveway 4

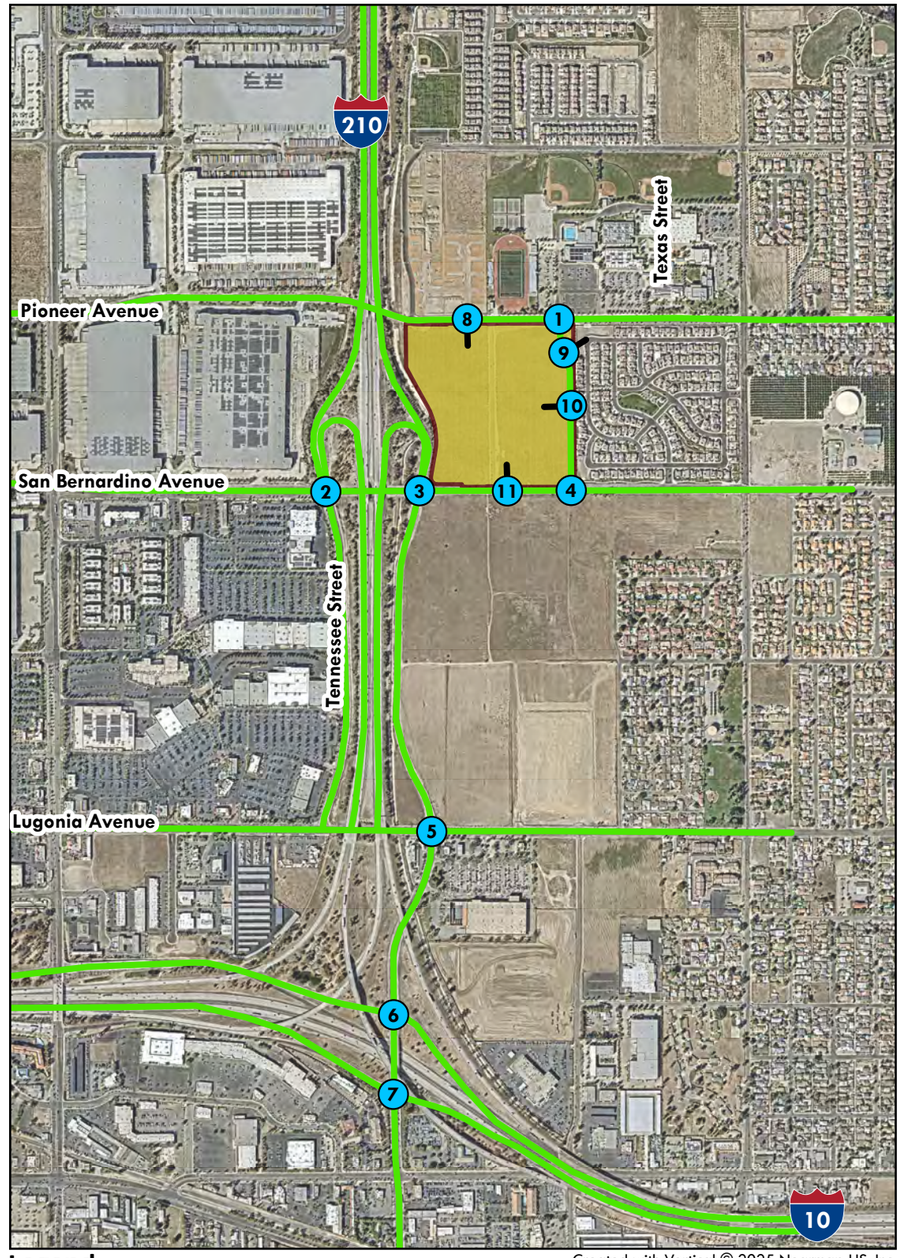

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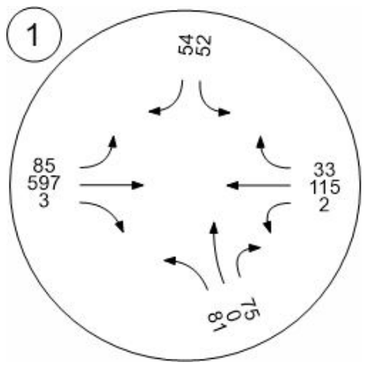
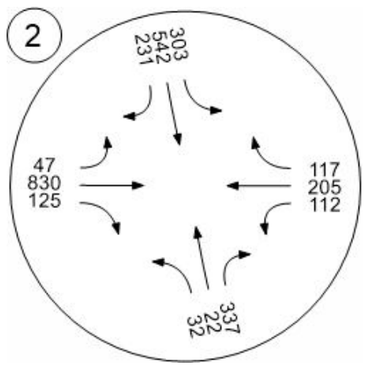
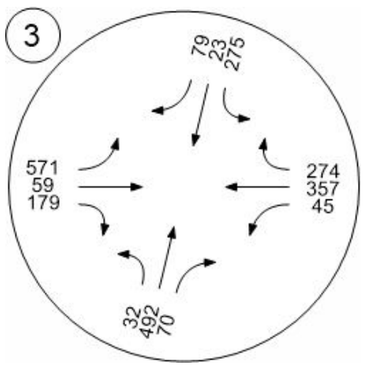
Figure 5-2: Existing (2026) Plus Project PM Peak Hour Traffic Volumes



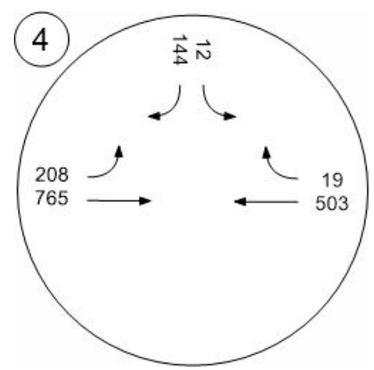
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



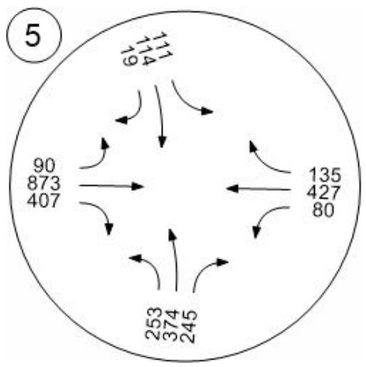
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



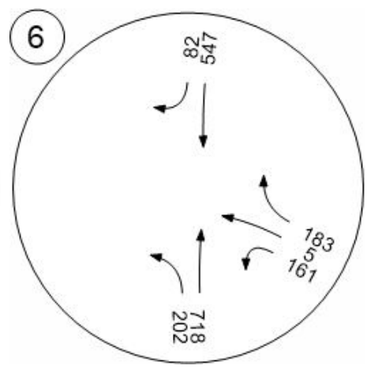
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



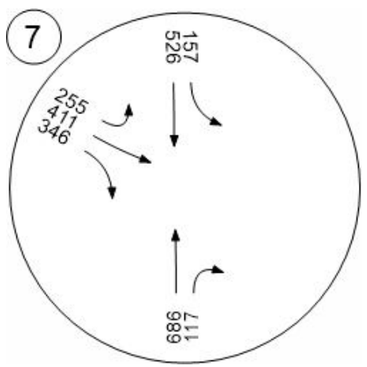
W. San Bernardino Ave/New York Street
(Future Intersection)



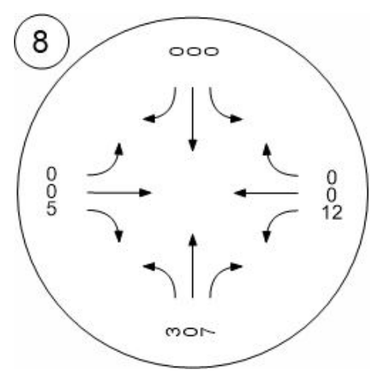
W. Lugonia Avenue/Tennessee Street



Tennessee Street/I-10 WB Ramps



Tennessee Street/I-10 EB Ramps



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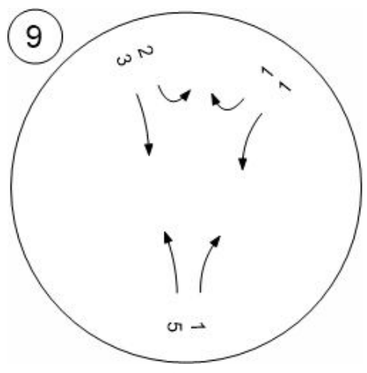
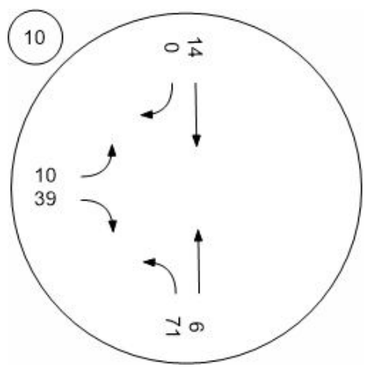


New York Street/Project Driveway 2



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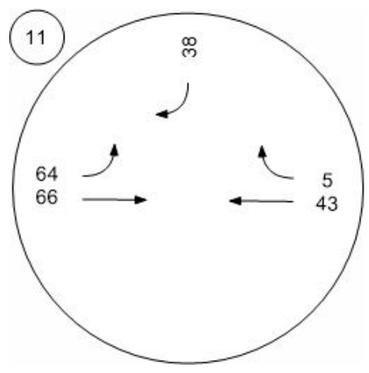
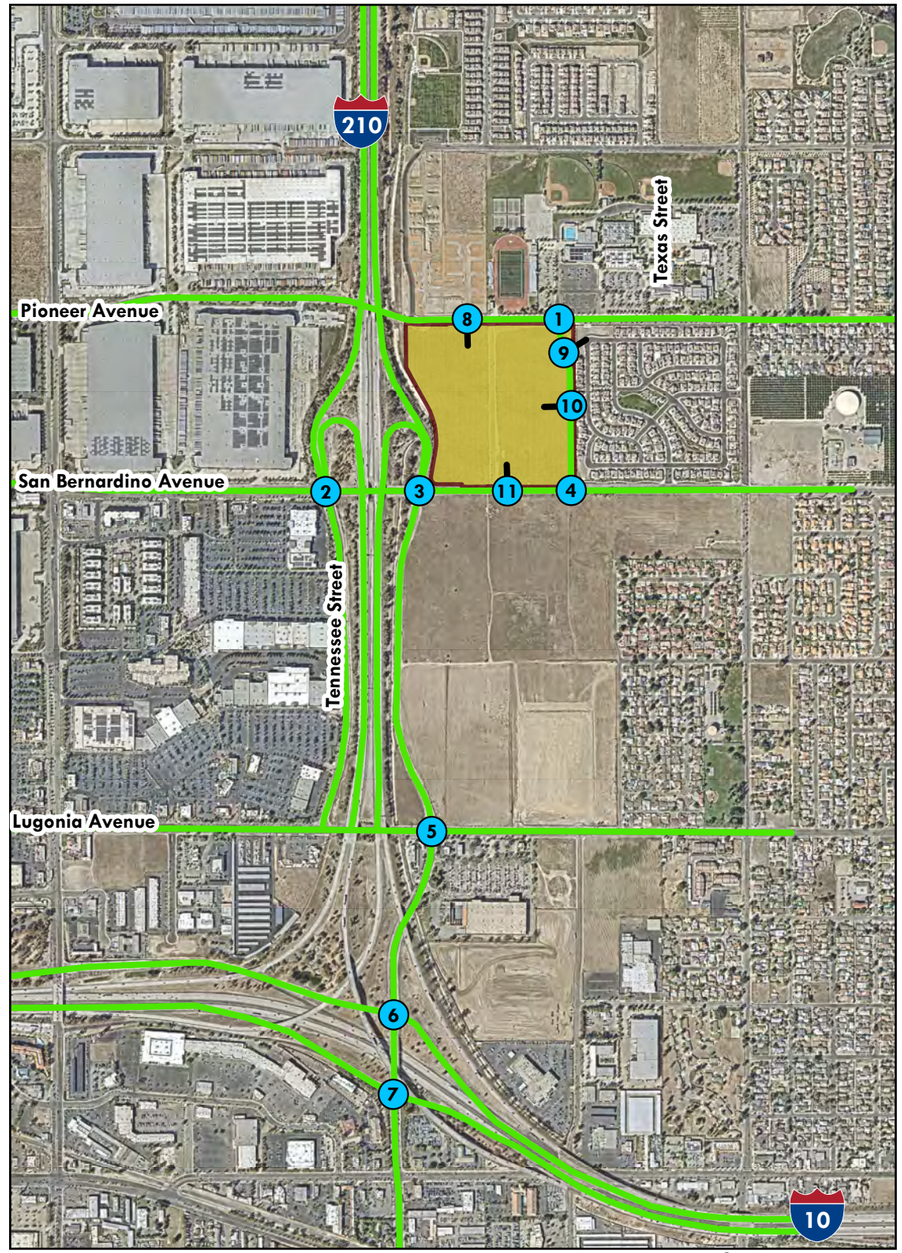


W. San Bernardino Avenue/Driveway 4



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5.2 Cumulative Year (General Plan 2035) Plus Project Conditions

Cumulative Year (General Plan 2035) Plus Project traffic volumes were determined by adding the Project trips to the Cumulative Year (General Plan 2035) Without Project traffic volumes. Cumulative Year (General Plan 2035) Plus Project AM and PM peak hour traffic volumes at the study area intersections are shown in Figures 5-3 and 5-4, respectively.

As described previously in Section 2.3, *Methodology*, LOS at the study area intersections was determined using the HCM methodology. The Cumulative Year (General Plan 2035) Plus Project LOS throughout the study area is shown in Table 5-2. All LOS calculations are provided in Appendix C. As shown in Table 5-2, the following intersections would operate at an unsatisfactory LOS under the Cumulative Year (General Plan 2035) Plus Project Conditions:

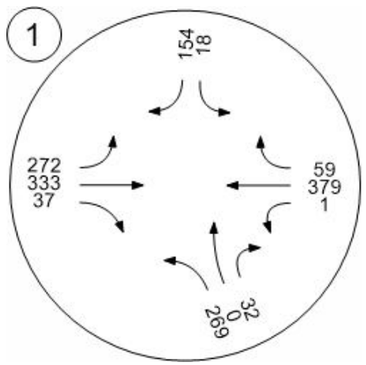
- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance: **LOS F** during the AM and PM peak hours.
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive: **LOS E** during the AM peak hour and **LOS F** during the PM peak hours.
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street: **LOS E** during the AM peak hour and **LOS F** during the PM peak hour.
- 4. W. San Bernardino Ave/New York Street: **LOS F** during the AM and PM peak hours.
- 5. W. Lugonia Avenue/Tennessee Street: **LOS D** during the PM peak hour.
- 7. Tennessee Street/I-10 EB Ramps: **LOS F** during the AM and PM peak hours.

Table 5-2: Cumulative Year (General Plan 2035) Plus Project AM and PM Peak Hour LOS

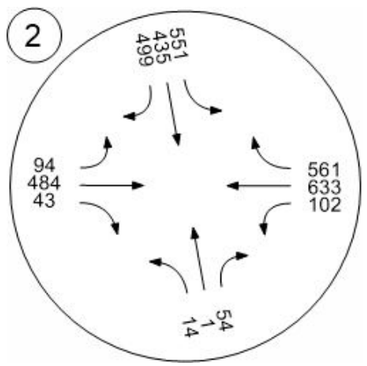
Intersection	Control Type	Cumulative Year (General Plan 2035) Without Project				Cumulative Year (General Plan 2035) Plus Project				Delay Difference		LOS Standard[1]	Cumulative Year (General Plan 2035) Plus Project Conditions Satisfactory?
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak	PM Peak		
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS				
1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	TWSC	**78.7**	**F**	**37.8**	**E**	**1,825.9**	**F**	**181.6**	**F**	1,747.2	143.8	C	No
2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	**57.4**	**E**	**76.1**	**E**	**62.6**	**E**	**81.8**	**F**	5.2	5.7	C	No
3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	**60.8**	**E**	**90.9**	**F**	**61.9**	**E**	**98.4**	**F**	1.1	7.5	C	No
4. W. San Bernardino Ave/New York Street (Future Intersection)	TWSC	-	-	-	-	**10,000.0**	**F**	**163.6**	**F**	-	-	C	No
5. W. Lugonia Avenue/Tennessee Street	Signalized	18.2	B	**42.3**	**D**	18.3	B	**44.5**	**D**	0.1	2.2	C	No
6. Tennessee Street/I-10 WB Ramps	Signalized	15.0	B	13.9	B	15.0	B	13.9	B	0.0	0.0	C	Yes
7. Tennessee Street/I-10 EB Ramps	Signalized	**82.3**	**F**	**126.3**	**F**	**82.6**	**F**	**127.7**	**F**	0.3	1.4	C	No
8. W. Pioneer Avenue/Project Driveway 1	TWSC	-	-	-	-	8.9	A	9.0	A	-	-	C	Yes
9. New York Street/Project Driveway 2	TWSC	-	-	-	-	8.8	A	8.9	A	-	-	C	Yes
10. New York Street/Project Driveway 3	TWSC	-	-	-	-	9.5	A	10.2	B	-	-	C	Yes
11. W. San Bernardino Avenue/Driveway 4	TWSC	-	-	-	-	10.2	A	9.9	A	-	-	C	Yes

AWSC = All Way Stop Control
TWSC = Two Way Stop Control
Delay Reported in Seconds per Vehicle
LOS = Level of Service
Unsatisfactory Level of Service
[1]LOS Standard per Jurisdiction's Guidelines

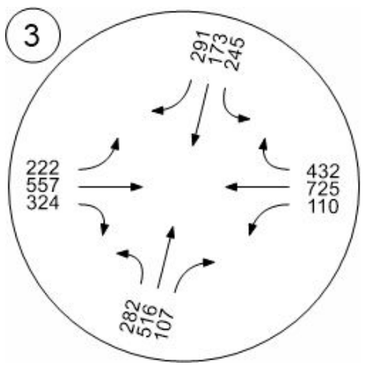
Figure 5-3: Cumulative Year (General Plan 2035) Plus Project AM Peak Hour Traffic Volumes



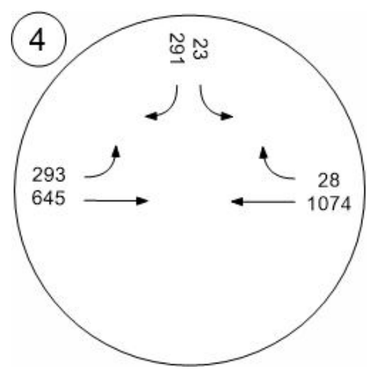
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



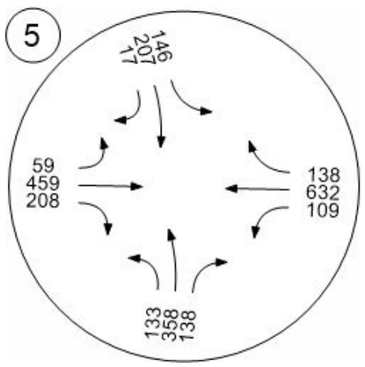
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



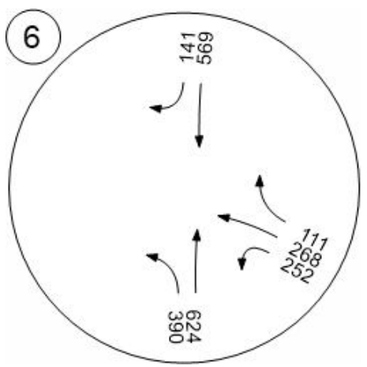
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



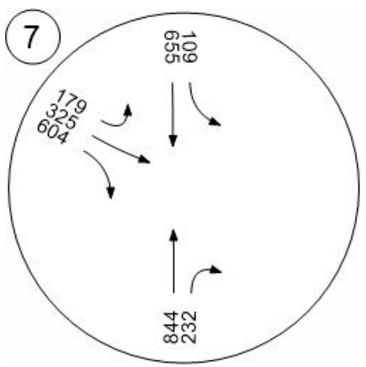
W. San Bernardino Ave/New York Street
(Future Intersection)



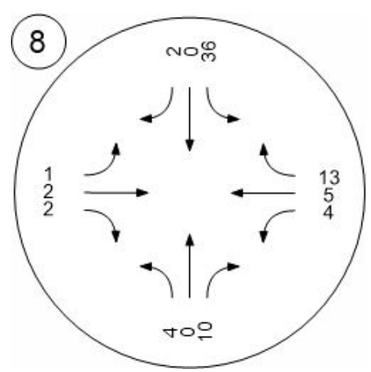
W. Lugonia Avenue/Tennessee Street



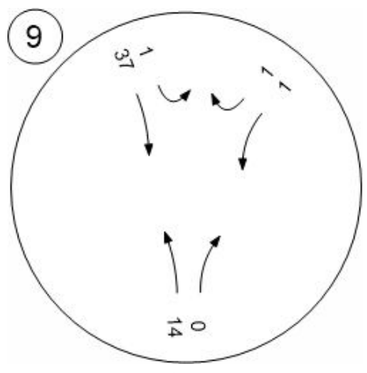
Tennessee Street/I-10 WB Ramps



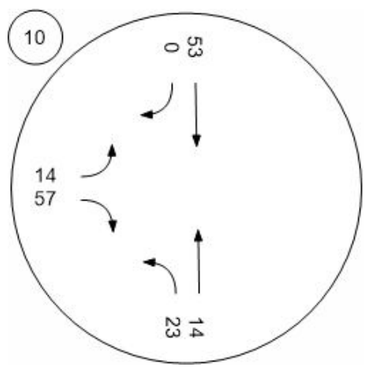
Tennessee Street/I-10 EB Ramps



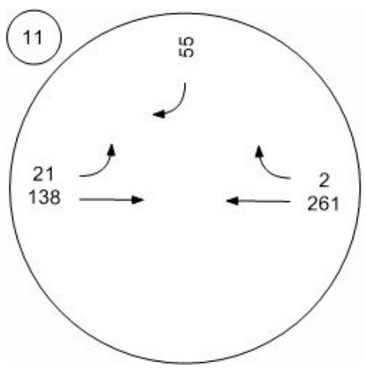
W. Pioneer Avenue/Project Driveway 1



New York Street/Project Driveway 2



New York Street/Project Driveway 3



W. San Bernardino Avenue/Driveway 4

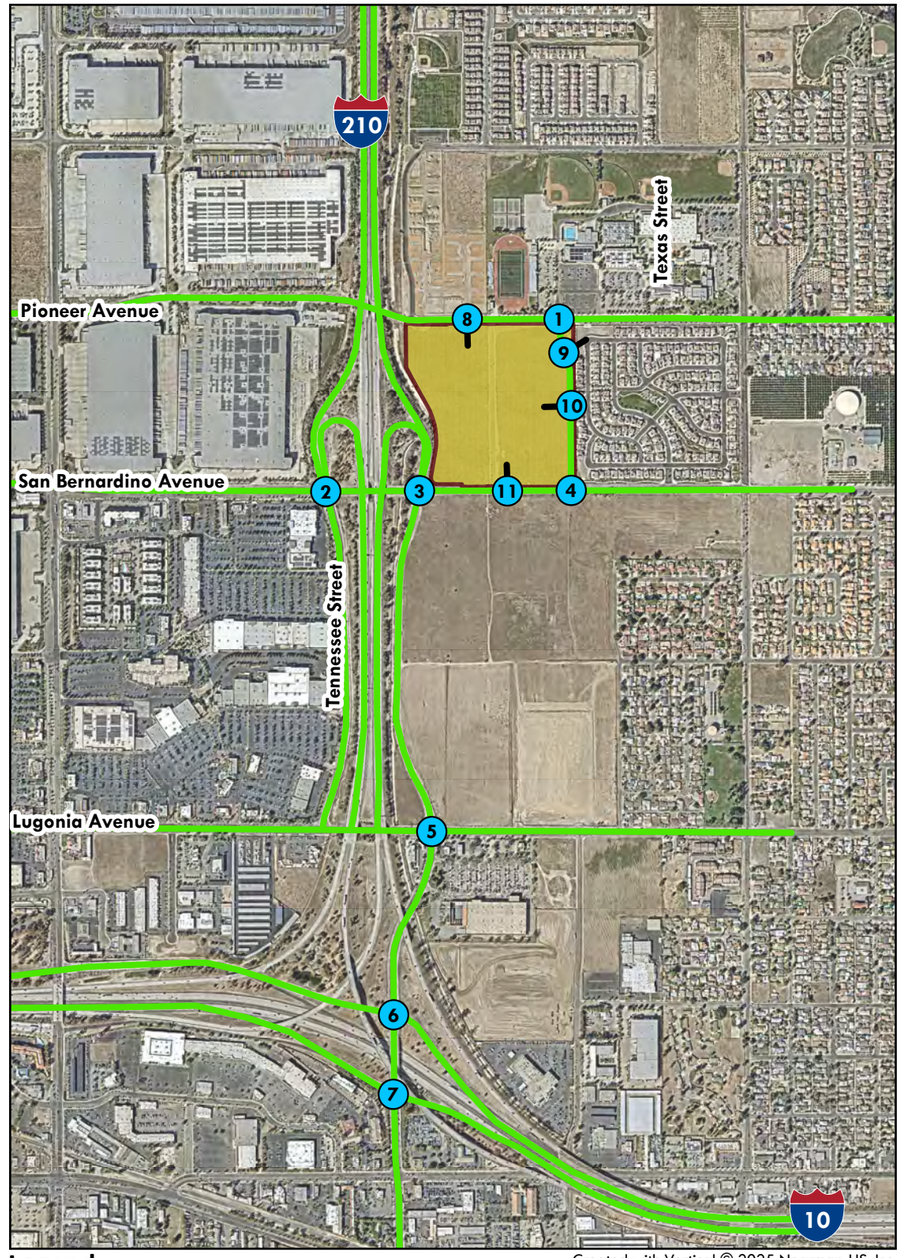


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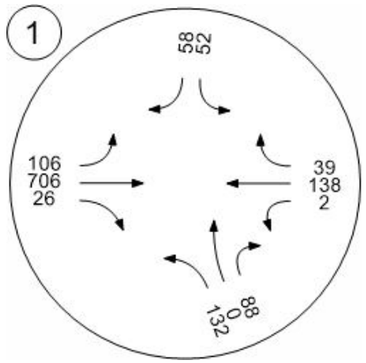
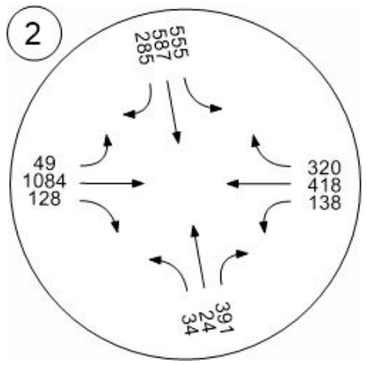
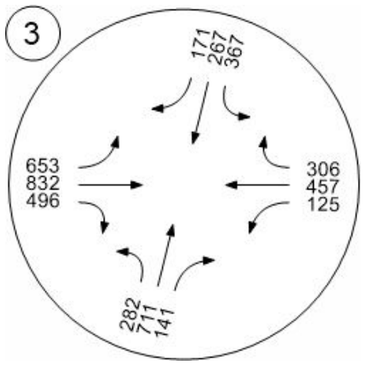
Figure 5-4: Cumulative Year (General Plan 2035) Plus Project PM Peak Hour Traffic Volumes



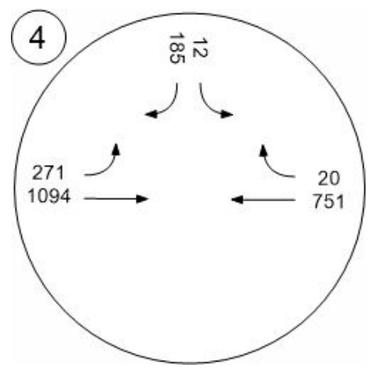
W. Pioneer Avenue/New York Street/
Citrus Valley High School Entrance



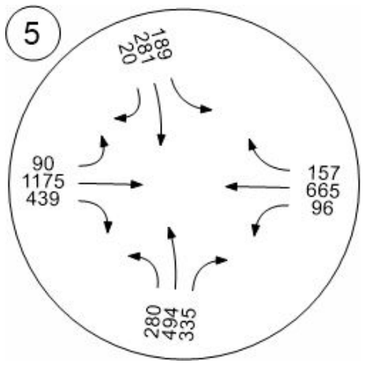
W. San Bernardino Avenue/210 EB Ramps/
Citrus Plaza Drive



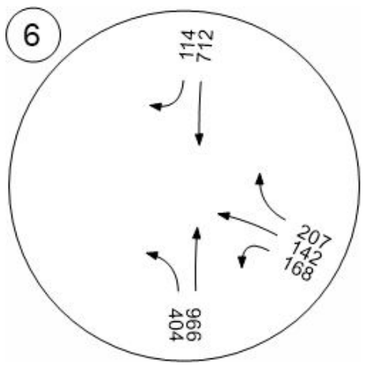
W. San Bernardino Avenue/
210 WB Ramps/Tennessee Street



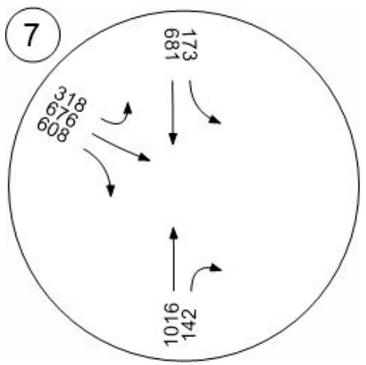
W. San Bernardino Ave/New York Street
(Future Intersection)



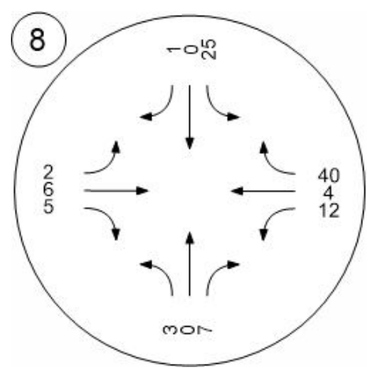
W. Lugonia Avenue/Tennessee Street



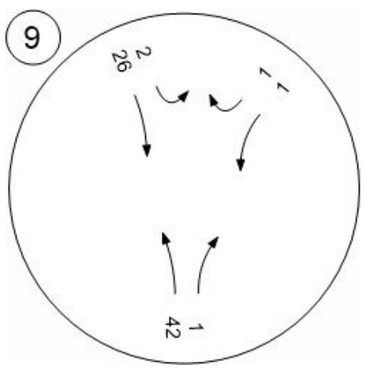
Tennessee Street/I-10 WB Ramps



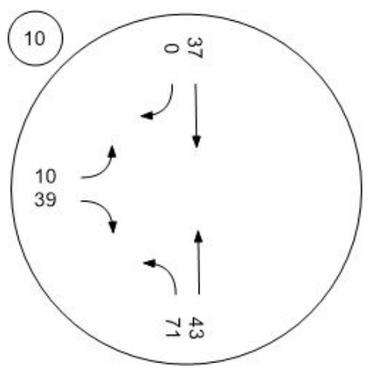
Tennessee Street/I-10 EB Ramps



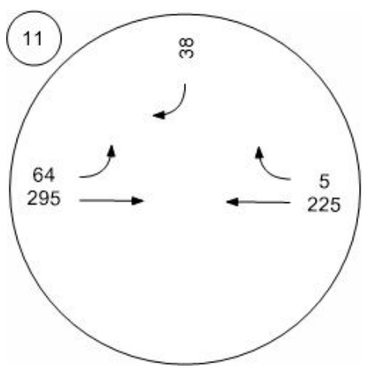
W. Pioneer Avenue/Project Driveway 1



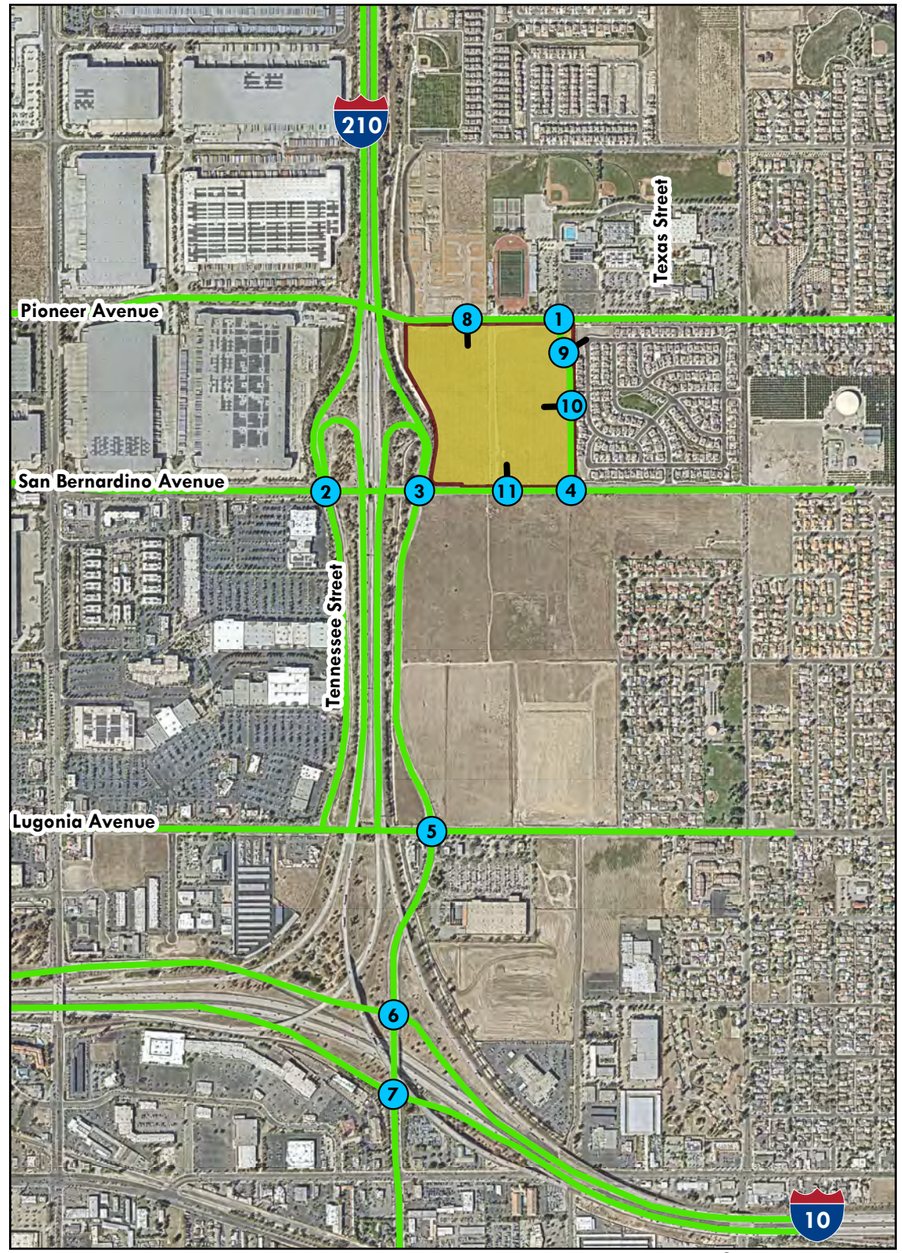
New York Street/Project Driveway 2



New York Street/Project Driveway 3



W. San Bernardino Avenue/Driveway 4



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6 PROJECT IMPROVEMENTS

6.1 Peak Hour Signal Warrant Analysis

A Warrant 3 peak hour signal warrant analysis was conducted to evaluate whether existing stop-controlled intersections should be modified to signalized control. The analysis was conducted for each unsignalized study intersection via Vistro. The Vistro output sheets for the peak hour signal warrant analysis are provided in Appendix D.

Table 6-1 presents the signal warrant analysis results for the AM and PM peak hours at the unsignalized study intersections. As shown in Table 6-1, a traffic signal is warranted for Intersections 1 and 4 under Existing (2026) Plus Project Conditions and Cumulative Year (2035) Plus Project Conditions. Sections 6.2 and 6.3 discuss the recommended improvements of adding traffic signals at Intersections 1 and 4 as well as other necessary intersection improvements.

Table 6-1: Peak Hour Signal Warrant Analysis Results

Intersection	Control Type	Existing (2026) Plus Project		General Plan (2035) Without Project		General Plan (2035) Plus Project	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	TWSC	**Yes**	No	No	No	**Yes**	**Yes**
4. W. San Bernardino Ave/New York Street	TWSC	**Yes**	**Yes**	No	No	**Yes**	**Yes**
8. W. Pioneer Avenue/Project Driveway 1	TWSC	No	No	No	No	No	No
9. New York Street/Project Driveway 2	TWSC	No	No	No	No	No	No
10. New York Street/Project Driveway 3	TWSC	No	No	No	No	No	No
11. W. San Bernardino Avenue/Driveway 4	TWSC	No	No	No	No	No	No

TWSC = Two-Way Stop Control

Meets Signal Warrant

6.2 Existing (2026) Plus Project Improvements

As previously shown in Section 5.1, the addition of the Project's trips in the Existing (2026) Plus Project Conditions would result in an unsatisfactory LOS at five study intersections. The following improvements would improve the LOS to a satisfactory level for the intersections with an unsatisfactory LOS under Existing (2026) Plus Project Conditions, as shown in Table 6-2:

- 1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance: Install a traffic signal with protected/permissive phasing for northbound, southbound, and eastbound. See Figure 6-1 for lane geometry with recommended improvements.
- 2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive: Optimize the existing signal.
- 3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street: Optimize the existing signal.
- 4. W. San Bernardino Ave/New York Street: Install a traffic signal with protected/permissive phasing for the eastbound left-turn lane. Change the eastbound approach from shared left-turn/through lane to left-turn lane and a through lane. See Figure 6-1 for lane geometry with recommended improvements.
- 5. W. Lugonia Avenue/Tennessee Street: Optimize the existing signal.

The lane configuration and traffic control at the study area intersections under Existing (2026) Plus Project conditions with the recommended improvements is shown in Figure 6-1.

Table 6-2: Existing (2026) Plus Project Peak Hour LOS With Improvements

Intersection	Control Type	Existing (2026) Conditions				Existing (2026) With Project				Delay Difference Between PC & CC		LOS Standard[1]	Existing (2026) With Project Conditions Satisfactory?	Project Deficiency?[2]	Existing (2026) With Project With Improvements				Less Than Baseline?[3]	Improvements
		AM Peak		PM Peak		AM Peak		PM Peak							AM Peak		PM Peak			
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM Peak	PM Peak				Delay	LOS	Delay	LOS		
1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	TWSC	**246.7**	**F**	**31.4**	**D**	**10000**	**F**	**62.6**	**F**	9753.3	31.2	C	No	Yes	21.2	C	18.7	B	Yes	Install a traffic signal with protected/permissive phasing for northbound, southbound, and eastbound. See Figure 6-1 for lane geometry with recommended improvements.
2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	23.1	C	**64.9**	**E**	24.6	C	**70.0**	**E**	1.5	5.1	C	No	Yes	18.0	B	25.1	C	Yes	Optimize the signal.
3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	**51.7**	**D**	33.4	C	**73.4**	**E**	**44.5**	**D**	21.7	11.1	C	No	Yes	26.2	B	32.7	C	No	Optimize the signal.
4. W. San Bernardino Ave/New York Street (Future Intersection)	TWSC	-	-	-	-	**193.1**	**F**	**80.2**	**F**	193.1	80.2	C	No	Yes	29.0	B	14.1	A	-	Install a traffic signal with protected/permissive phasing for the eastbound left-turn lane. Change the eastbound approach from shared left-turn/through lane to left-turn lane and a through lane. See Figure 6-1 for lane geometry with recommended improvements.
5. W. Lugonia Avenue/Tennessee Street	Signalized	19.8	B	**59.6**	**D**	20.4	C	**63.5**	**E**	20.4	63.5	C	No	Yes	18.8	B	24.7	C	Yes	Optimize the signal.

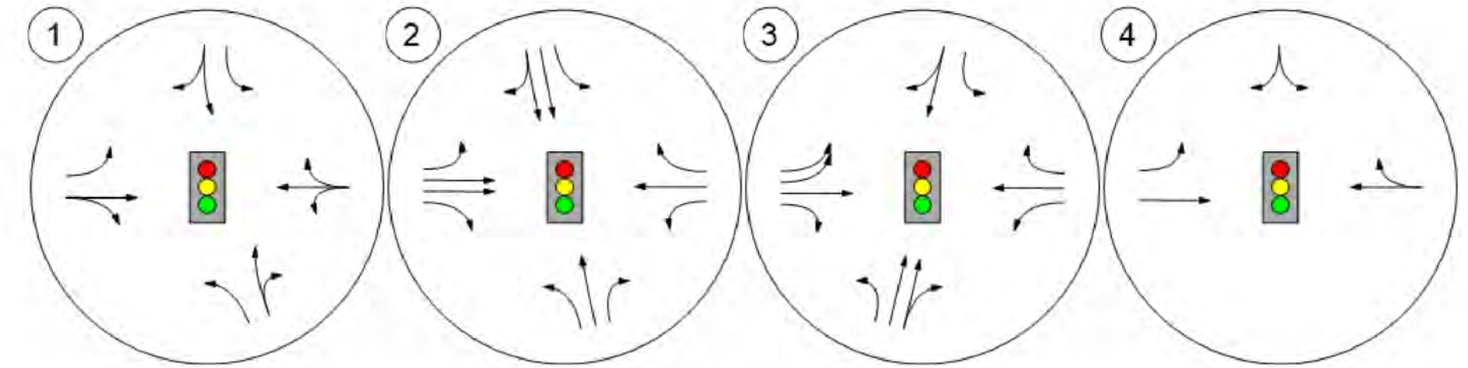
AWSC = All Way Stop Control
TWSC = Two Way Stop Control
Delay Reported in Seconds per Vehicle
LOS = Level of Service
Unsatisfactory Level of Service

[1]LOS Standard per Jurisdiction's Guidelines

[2]Project would cause a deficiency if project trips or cumulative trips cause an intersection to deteriorate from satisfactory LOS to unsatisfactory LOS or if project trips adds delay to an intersection operating at unsatisfactory LOS under baseline conditions.

[3]Baseline in this context refers to Existing (2026) conditions.

Figure 6-1: Existing (2026) Plus Project With Improvements Lane Configuration and Traffic Control

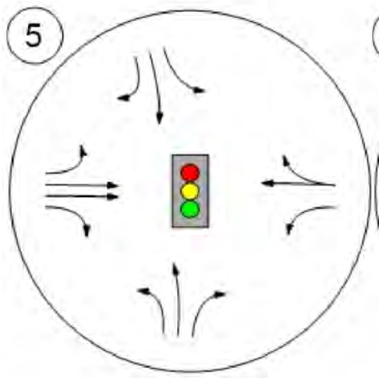


W. Pioneer Avenue/New York Street/ Citrus Valley High School Entrance

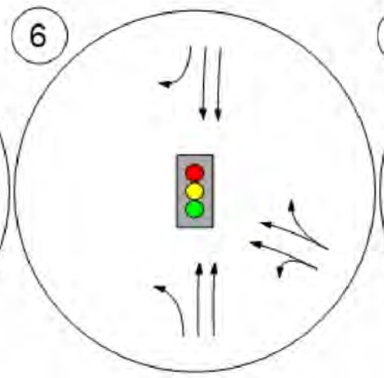
W. San Bernardino Avenue/210 EB Ramps/ Citrus Plaza Drive

W. San Bernardino Avenue/ 210 WB Ramps/Tennessee Street

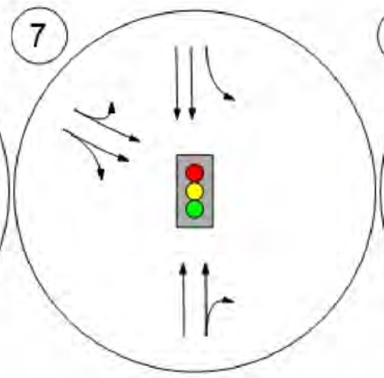
W. San Bernardino Ave/New York Street (Future Intersection)



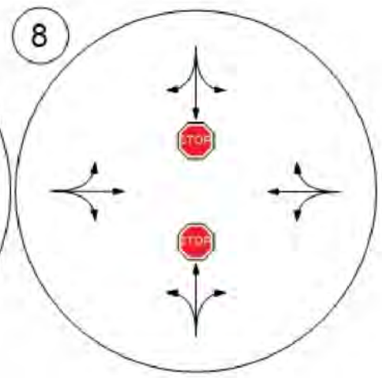
W. Lugonia Avenue/Tennessee Street



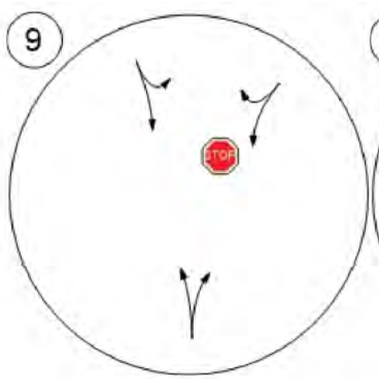
Tennessee Street/I-10 WB Ramps



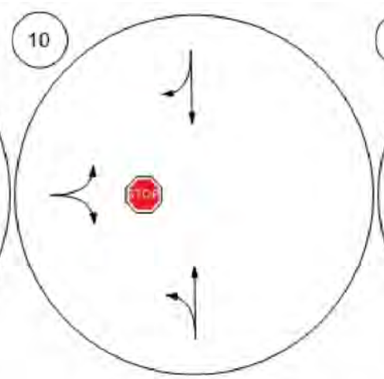
Tennessee Street/I-10 EB Ramps



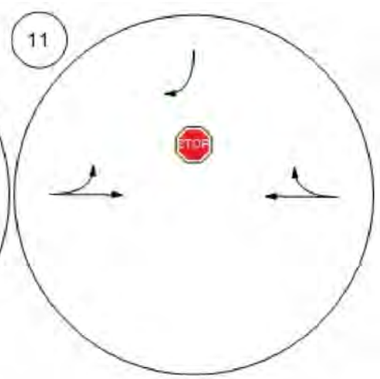
W. Pioneer Avenue/Project Driveway 1



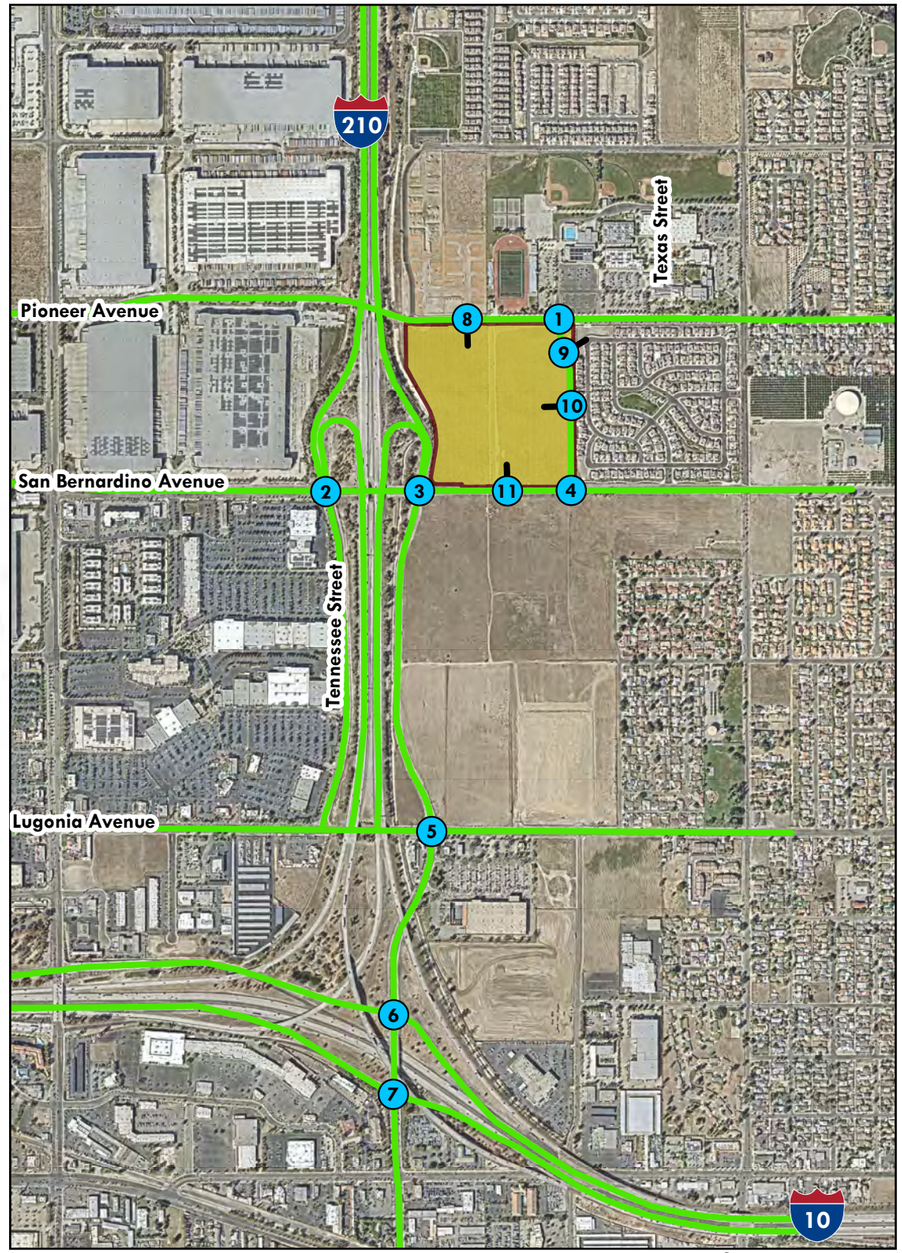
New York Street/Project Driveway 2



New York Street/Project Driveway 3



W. San Bernardino Avenue/Driveway 4



Legend

Created with Vertical © 2025 Nearmap US, Inc.

- Project Boundary
- Study Intersections
- Project Driveway*
- Study Roadways

*Intersection 11 Project Driveway is Right Out (RO) only

N

0 0.15 0.3 Miles

PTV VISTRO

E | P | D SOLUTIONS, INC

APPENDIX A – TRAFFIC STUDY SCOPING AGREEMENT

E | P | D SOLUTIONS, INC

WHERE EXPERIENCE AND PASSION MEET

Date:	February 18, 2026
Prepared by:	Jordan Mower, Chad Karns, EPD Solutions
To:	City of Redlands
Site:	Northwest and Northeast corners of W. San Bernardino Avenue/Tennessee Street APNs: 0167-091-09, -10, -11, -12
Subject:	**Traffic Analysis Scoping Agreement** **EPD#25-124**

The purpose of this memorandum is to outline the proposed traffic analysis (TA) parameters and assumptions for the Pioneer Park Specific Plan (Project). The TA is intended to inform City officials in developing their recommendation by: (1) evaluating level of service (LOS) impacts relative to the Measure U thresholds associated with Tentative Tract Map No. 20797; (2) disclosing the anticipated generalized roadway impacts expected to occur under future cumulative buildout conditions; and, (3) providing a brief, qualitative discussion of how traffic behavior and trip generation magnitudes would generally differ between buildout under the existing Commercial designation and the proposed Residential designation. The project description and proposed scope of work are discussed in detail below.

Project Name: Pioneer Park Specific Plan

Project Address: The project is bounded by Pioneer Avenue to the north, W. San Bernardino Avenue to the south, New York Avenue to the east, and the SR-210 West On-Ramp to the west in the City of Redlands. Regional access to the project site is provided by the Interstate 10 Freeway (I-10) located approximately 0.9 miles south, and State Route 210 (SR-210) located approximately 0.1 miles west.

Project Description: The project site is currently vacant and undeveloped. The Project proposes a residential Specific Plan that would result in a maximum buildout of up to 275 single-family homes and 7 townhomes. The proposed project will be accessible via four driveways; one driveway on W. Pioneer Avenue aligned with the Citrus Valley High School driveway; another driveway on W. San Bernardino Avenue at Tennessee Street; and two driveways along New York Street, which will be constructed between W. San Bernardino Avenue and W. Pioneer Avenue along the eastern boundary of the Project. The Project driveways on W. Pioneer Avenue and New York Street will be full-access, while the driveway on W. San Bernardino Avenue will be full-access ingress and right-out (RO) only egress.

Trip Generation Rate(s): The Project's trip generation was prepared using trip rates from the Institute of Transportation Engineers (ITE), Trip Generation Manual, 12th edition (2025). Land Use Codes for Single-Family Detached Housing (ITE Land Use Code 210) and Multi-Family Housing (Low-Rise) (ITE Land Use Code 220) were used. The Project's trip generation is shown in Table 1.

As shown in Table 1, the Project's trip generation would result in 2,543 daily trips, 196 trips during the AM peak hour, and 260 trips during the PM peak hour.

Study Intersections: The following eleven intersections are proposed to be included in the study area.

1. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance
2. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive
3. W. San Bernardino Avenue/210 WB Ramps/Tennessee Street
4. W. San Bernardino Ave/New York Street (Future Intersection)
5. W. Lugonia Avenue/Tennessee Street
6. Tennessee Street/I-10 WB Ramps
7. Tennessee Street/I-10 EB Ramps
8. W. Pioneer Avenue/Project Driveway 1
9. New York Street/Project Driveway 2
10. New York Street/Project Driveway 3
11. W. San Bernardino Avenue/Driveway 4

The proposed study area is shown in Figure 1.

Geographic Distribution: The project trips were distributed throughout the study area based on logical travel paths and patterns. The Project's inbound and outbound trip distributions are shown in Figure 2 and Figure 3.

Analysis Scenarios: The following scenarios will be evaluated in the Traffic Impact Analysis:

- Existing AM and PM Peak Hour Conditions
- Existing Plus Project AM and PM Peak Hour Conditions
- Cumulative Year Without Project AM and PM Peak Hour Conditions
- Cumulative Year Plus Project AM and PM Peak Hour Conditions

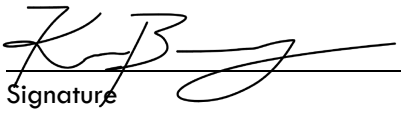
Site Access Analysis: Queue lengths at the Project driveways will be analyzed to assess any queueing deficiencies. If LOS at any Project Driveways is deficient with the addition of the Project, peak hour signal warrant analysis will be conducted for each Project driveway intersection to determine if a signal is warranted.

VMT Analysis: The *City of Redlands CEQA Assessment VMT Analysis Guidelines* were utilized for this project. As shown in Figure 4, the Project is not located within a TPA according to the SBCTA VMT Screening Tool. The Project proposes a land use that is not consistent with the current General Plan, and therefore the Low-VMT Area screening criteria is not applicable for the Project. The Project would generate more than the 3,000 MT CO2e per year threshold provided in the City of Redlands VMT Guidelines. The Project does not meet any of the City of Redlands VMT screening criteria; therefore, a full VMT analysis is required.

The VMT analysis is a CEQA requirement and will be prepared as a separate report from the Measure U Traffic Analysis. The SBTAM+ Travel Demand Forecasting Model will be used for the VMT analysis. A SBTAM+ VMT analysis will be prepared for the Without and With Project scenarios for 2019 Base Year and 2050 Buildout Year. Baseline 2025 VMT per Service Population will be interpolated from the 2019 Base Year and 2050 Buildout Year model data. The SBTAM Model land use inputs are provided in Appendix A.

We appreciate your review of this information. Upon completion of your review, please forward any comments or approval of this methodology to techservices@epdsolutions.com. If you have any questions, please do not hesitate to contact us by email or at (949) 794-1180.

City Approval of Scope of Work:



Signature

Kevin Beery

Name

2/20/26

Date

Table 1: Project Trip Generation

				AM Peak Hour			PM Peak Hour		
Land Use		**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Trip Rates									
210 Single-Family Detached Housing[1]		DU	9.09	0.19	0.51	0.70	0.58	0.35	0.93
220 Multifamily Housing (Low-Rise)[2]		DU	6.21	0.10	0.31	0.41	0.32	0.20	0.52
Project Trip Generation									
Single-Family Detached Housing[1]	275	DU	2500	52	141	193	159	97	256
Multifamily Housing (Low-Rise)[2]	7	DU	43	1	2	3	2	2	4
Total Project Trip Generation			**2543**	**53**	**143**	**196**	**161**	**99**	**260**

DU = Dwelling Unit

[1]Institute of Transportation Engineers, Trip Generation Manual, 12th Edition, 2025. Land Use Code 210 - Single-Family Detached Housing (Average Rate)

[2]Institute of Transportation Engineers, Trip Generation Manual, 12th Edition, 2025. Land Use Code 220 - Multifamily Housing (Low-Rise) (Average Rate)

Figure 1: Study Area Intersections

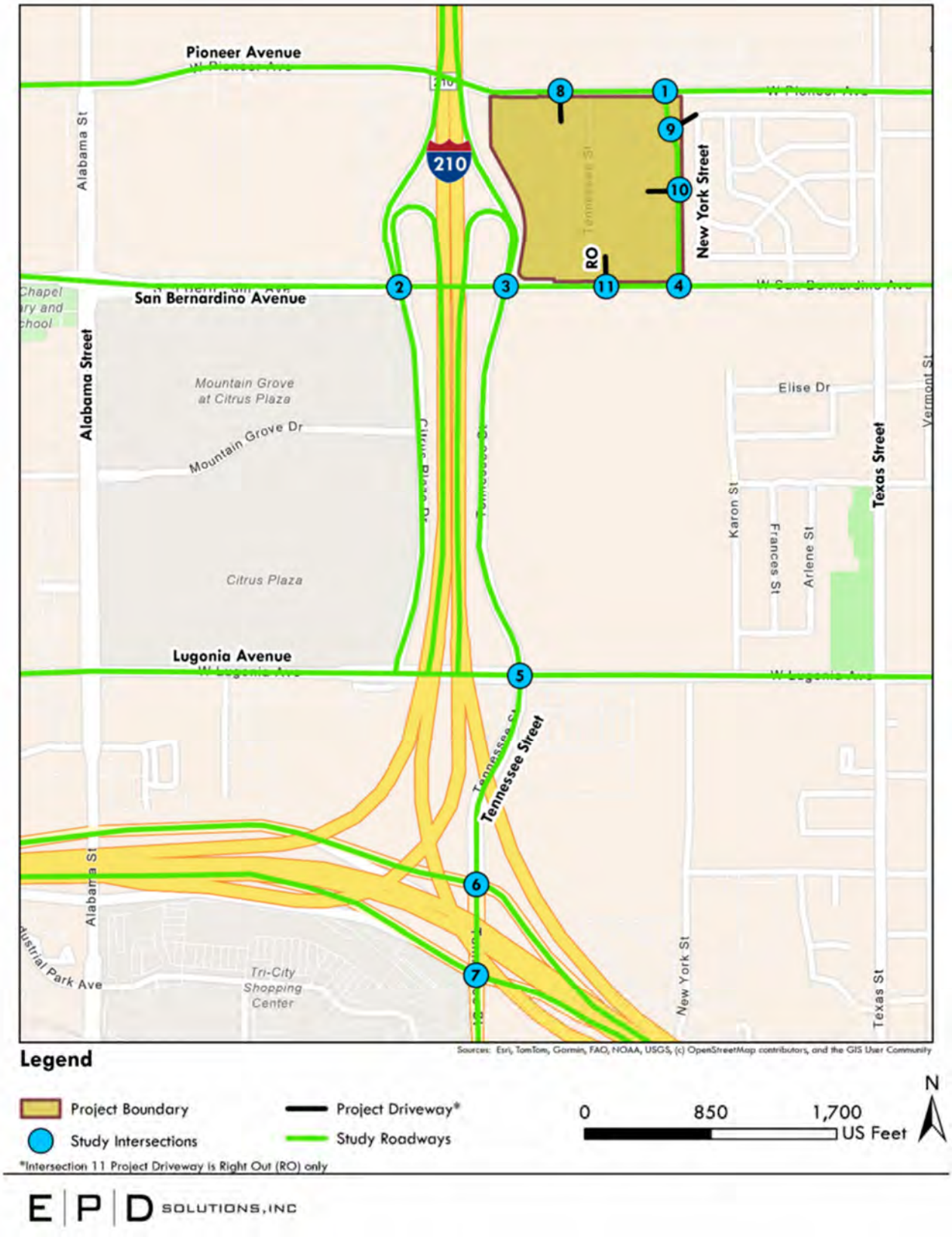


Figure 2: Project Trip Distribution (Inbound)

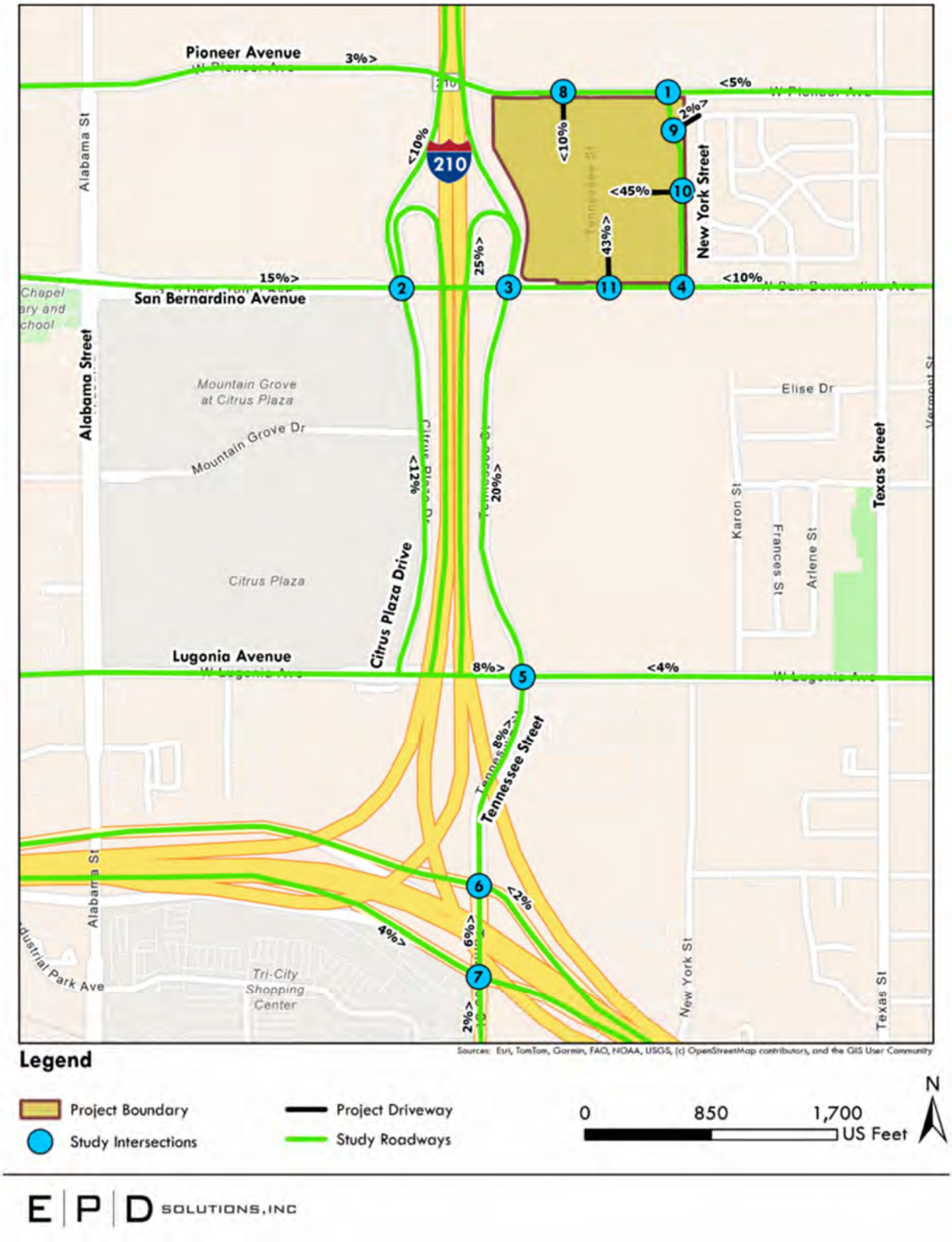


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Figure 3: Project Trip Distribution (Outbound)



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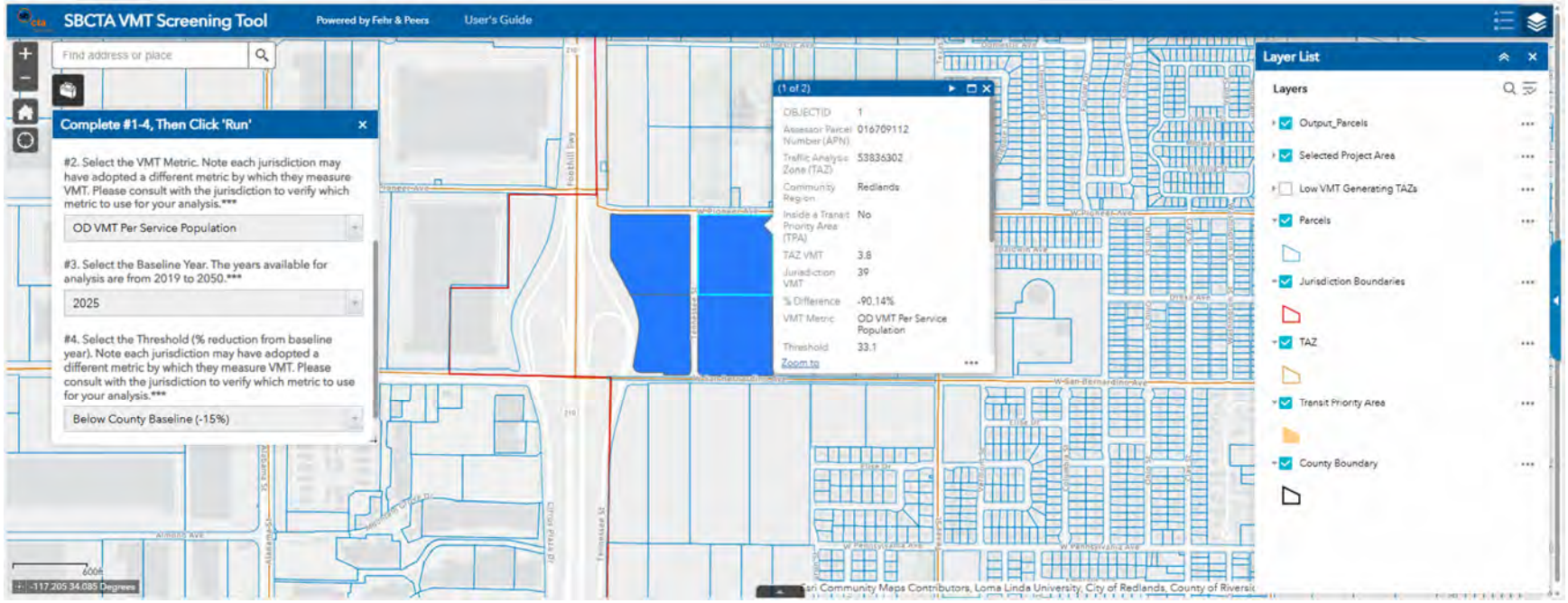
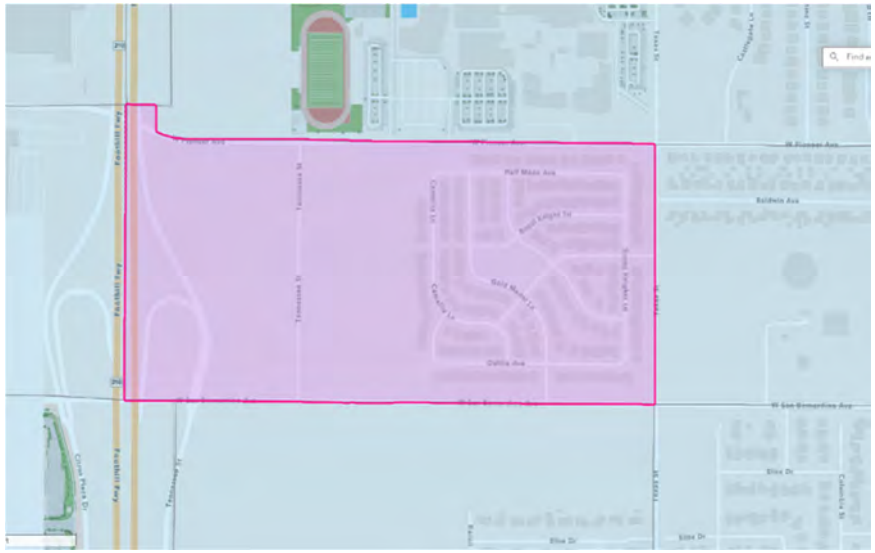
Figure 4: SBCTA VMT Screening Tool Results



APPENDIX A - SBTAM Model Land Use Inputs

SBTAM+ TAZ	53836302
Project Total Added Employees	0
Project Total Added Dwelling Units	282



No Project 2019

SBTAM_TAZ	TIER2_TAZ	HH	TOT_EMP	TOTLOW_EMP	TOTMED_EMP	TOTHIG_EMP	AG_EMP	CONST_EMP	MANU_EMP	WHOLE_EMP	RET_EMP	TRANS_EMP	INFOR_EMP	FIRE_EMP	PROF_EMP	EDUC_EMP	ARTENT_EMP	OTHSER_EMP	PUBADM_EMP	l_ware_emp	h_ware_emp	K12	COLLEGE
53836302	53836300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Plus Project 2019

SBTAM_TAZ	TIER2_TAZ	HH	TOT_EMP	TOTLOW_EMP	TOTMED_EMP	TOTHIG_EMP	AG_EMP	CONST_EMP	MANU_EMP	WHOLE_EMP	RET_EMP	TRANS_EMP	INFOR_EMP	FIRE_EMP	PROF_EMP	EDUC_EMP	ARTENT_EMP	OTHSER_EMP	PUBADM_EMP	l_ware_emp	h_ware_emp	K12	COLLEGE
53836302	53836300	282	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Plus Project - No Project

SBTAM_TAZ	TIER2_TAZ	HH	TOT_EMP	TOTLOW_EMP	TOTMED_EMP	TOTHIG_EMP	AG_EMP	CONST_EMP	MANU_EMP	WHOLE_EMP	RET_EMP	TRANS_EMP	INFOR_EMP	FIRE_EMP	PROF_EMP	EDUC_EMP	ARTENT_EMP	OTHSER_EMP	PUBADM_EMP	l_ware_emp	h_ware_emp	K12	COLLEGE
53836302	53836300	282	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

No Project 2050

SBTAM_TAZ	TIER2_TAZ	HH	TOT_EMP	TOTLOW_EMP	TOTMED_EMP	TOTHIG_EMP	AG_EMP	CONST_EMP	MANU_EMP	WHOLE_EMP	RET_EMP	TRANS_EMP	INFOR_EMP	FIRE_EMP	PROF_EMP	EDUC_EMP	ARTENT_EMP	OTHSER_EMP	PUBADM_EMP	l_ware_emp	h_ware_emp	K12	COLLEGE
53836302	53836300	207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Plus Project 2050

SBTAM_TAZ	TIER2_TAZ	HH	TOT_EMP	TOTLOW_EMP	TOTMED_EMP	TOTHIG_EMP	AG_EMP	CONST_EMP	MANU_EMP	WHOLE_EMP	RET_EMP	TRANS_EMP	INFOR_EMP	FIRE_EMP	PROF_EMP	EDUC_EMP	ARTENT_EMP	OTHSER_EMP	PUBADM_EMP	l_ware_emp	h_ware_emp	K12	COLLEGE
53836302	53836300	489	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Plus Project - No Project

SBTAM_TAZ	TIER2_TAZ	HH	TOT_EMP	TOTLOW_EMP	TOTMED_EMP	TOTHIG_EMP	AG_EMP	CONST_EMP	MANU_EMP	WHOLE_EMP	RET_EMP	TRANS_EMP	INFOR_EMP	FIRE_EMP	PROF_EMP	EDUC_EMP	ARTENT_EMP	OTHSER_EMP	PUBADM_EMP	l_ware_emp	h_ware_emp	K12	COLLEGE
53836302	53836300	282	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX B – TRAFFIC COUNTS, SBTAM+ VOLUME OUTPUTS, AND VOLUME ADJUSTMENT WORKSHEETS

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

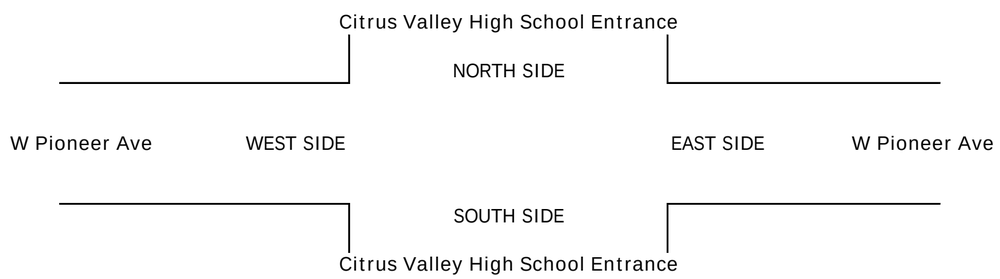
DATE:				
1/29/26	LOCATION:	Redlands	PROJECT #:	SC5862
THURSDAY	NORTH & SOUTH:	Citrus Valley High School Entrance	LOCATION #:	1
	EAST & WEST:	W Pioneer Ave	CONTROL:	STOP S

	NOTES:								
PCE Adjusted	Class	1	2	3	4	5	6		
	Factor	1	1.5	2	3	2	2		

AM
PM
MD
OTHER
OTHER

▲ N
◄ W E ►
S ▼

	NORTHBOUND Citrus Valley High School Entrance			SOUTHBOUND Citrus Valley High School Entrance			EASTBOUND W Pioneer Ave			WESTBOUND W Pioneer Ave				U-TURNS				
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 0	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	1	0	3	1	34	0	0	37	3	78					0
7:15 AM	0	0	0	7	0	8	9	33	0	0	49	22	128					0
7:30 AM	0	0	0	5	0	12	12	35	0	0	73	13	150					0
7:45 AM	0	0	0	3	0	15	18	47	0	0	73	5	160					0
8:00 AM	0	0	0	5	0	49	58	90	0	0	77	15	294					0
8:15 AM	0	0	0	5	0	73	141	103	0	0	96	17	435					0
8:30 AM	0	0	0	7	0	19	6	41	0	0	65	0	138					0
8:45 AM	0	0	0	0	0	0	0	37	0	0	33	0	69					0
VOLUMES	0	0	0	33	0	179	245	489	0	0	564	75	1,585	0	0	0	0	0
APPROACH %	0%	0%	0%	16%	0%	84%	33%	67%	0%	0%	88%	12%						
APP/DEPART	0	/	320	212	/	0	734	/	522	639	/	743	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	0	0	0	18	0	149	229	275	0	0	319	50	1,039					
APPROACH %	0%	0%	0%	11%	0%	89%	45%	55%	0%	0%	86%	14%						
PEAK HR FACTOR		0.000			0.535			0.516			0.815		0.597					
APP/DEPART	0	/	279	167	/	0	504	/	293	369	/	468	0					
04:00 PM	0	0	0	3	0	3	17	104	0	0	44	8	179					0
4:15 PM	0	0	0	3	0	3	8	93	0	0	37	4	148					0
4:30 PM	0	0	0	1	0	2	12	129	0	0	22	1	167					0
4:45 PM	0	0	0	7	0	2	16	122	0	0	33	8	188					0
5:00 PM	0	0	0	8	0	9	14	142	0	0	27	5	205					0
5:15 PM	0	0	0	6	0	13	33	179	0	0	35	5	271					0
5:30 PM	0	0	0	26	0	22	17	151	0	0	26	13	254					0
5:45 PM	0	0	0	12	0	10	21	122	0	0	21	10	196					0
VOLUMES	0	0	0	66	0	64	138	1,041	0	0	244	54	1,606	0	0	0	0	0
APPROACH %	0%	0%	0%	51%	0%	49%	12%	88%	0%	0%	82%	18%						
APP/DEPART	0	/	192	130	/	0	1,178	/	1,107	298	/	308	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	0	0	0	52	0	54	85	593	0	0	109	33	925					
APPROACH %	0%	0%	0%	49%	0%	51%	12%	88%	0%	0%	77%	23%						
PEAK HR FACTOR		0.000			0.555			0.801			0.888		0.855					
APP/DEPART	0	/	118	106	/	0	678	/	645	142	/	163	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
1/29/26	LOCATION:	Redlands	PROJECT #:	SC5862
THURSDAY	NORTH & SOUTH:	SR-210 EB Ramps	LOCATION #:	2
	EAST & WEST:	W San Bernardino Ave	CONTROL:	SIGNAL

	NOTES:								
PCE Adjusted	Class	1	2	3	4	5	6		
	Factor	1	1.5	2	3	2	2		

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND Citrus Plaza Dr			SOUTHBOUND SR-210 EB Ramps			EASTBOUND W San Bernardino Ave			WESTBOUND W San Bernardino Ave				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1,5	SR 0,5	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	3	35	46	62	18	62	2	7	66	94	394					0
	7:15 AM	3	4	5	67	84	87	20	56	5	6	65	87	488					0
	7:30 AM	5	1	5	88	86	90	25	67	5	12	61	100	543					0
	7:45 AM	3	0	9	101	128	111	28	67	8	11	75	71	610					0
	8:00 AM	3	0	11	124	106	96	13	107	11	16	88	62	637					0
	8:15 AM	2	0	11	105	94	103	12	120	16	16	66	68	612					0
	8:30 AM	7	1	8	45	99	69	16	75	7	15	72	71	484					0
	8:45 AM	1	1	15	55	96	80	16	59	6	20	53	50	450					0
	VOLUMES	24	7	67	619	737	696	146	612	60	103	545	602	4,216	0	0	0	0	0
	APPROACH %	25%	7%	68%	30%	36%	34%	18%	75%	7%	8%	44%	48%						
	APP/DEPART	98	/	755	2,051	/	900	818	/	1,297	1,250	/	1,265	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	13	1	36	418	413	400	77	360	40	55	290	301	2,401					
	APPROACH %	26%	2%	72%	34%	34%	32%	16%	75%	8%	9%	45%	47%						
	PEAK HR FACTOR		0.884			0.907			0.808			0.932		0.943					
	APP/DEPART	50	/	379	1,230	/	508	477	/	813	645	/	702	0					
PM	04:00 PM	9	4	86	77	121	41	14	138	11	24	39	26	589					0
	4:15 PM	6	9	79	85	135	45	6	184	20	24	37	33	662					0
	4:30 PM	7	9	76	74	128	59	17	195	19	18	43	26	668					0
	4:45 PM	7	1	81	65	126	50	15	181	28	36	42	24	654					0
	5:00 PM	8	3	83	76	143	61	6	183	33	31	54	20	698					0
	5:15 PM	10	9	78	73	147	62	10	248	45	15	52	23	771					0
	5:30 PM	13	8	75	64	108	61	11	193	21	30	51	36	671					0
	5:45 PM	9	7	81	68	142	60	8	135	18	33	47	33	641					0
	VOLUMES	69	50	638	580	1,048	438	86	1,455	195	211	363	221	5,352	0	0	0	0	0
	APPROACH %	9%	7%	84%	28%	51%	21%	5%	84%	11%	27%	46%	28%						
	APP/DEPART	757	/	357	2,066	/	1,454	1,735	/	2,673	795	/	870	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	32	22	318	287	542	231	47	806	125	100	190	93	2,790					
	APPROACH %	9%	6%	85%	27%	51%	22%	5%	82%	13%	26%	50%	24%						
	PEAK HR FACTOR		0.957			0.941			0.806			0.914		0.905					
	APP/DEPART	372	/	162	1,060	/	767	977	/	1,410	382	/	453	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
1/29/26	LOCATION:	Redlands	PROJECT #:	SC5862
THURSDAY	NORTH & SOUTH:	SR-210 WB Ramps	LOCATION #:	3
	EAST & WEST:	W San Bernardino Ave	CONTROL:	SIGNAL

	NOTES:												
PCE Adjusted	Class	1	2	3	4	5	6			AM	▲ N		
	Factor	1	1.5	2	3	2	2			PM	◄ W		E ►
										MD			
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										OTHER			

	NORTHBOUND Tennessee St			SOUTHBOUND SR-210 WB Ramps			EASTBOUND W San Bernardino Ave			WESTBOUND W San Bernardino Ave				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	1	2	0	1	0,5	0,5	2	1	1	1	1	1						
AM 7:00 AM	8	70	5	33	1	19	37	47	16	6	140	73	453					0
7:15 AM	8	65	4	32	5	21	31	75	22	4	130	98	493					0
7:30 AM	5	74	6	34	1	24	39	92	29	4	143	108	557					0
7:45 AM	13	65	4	59	3	23	40	90	41	4	123	88	551					0
8:00 AM	11	78	5	54	7	27	50	144	48	8	134	93	658					0
8:15 AM	5	92	7	40	5	15	65	148	23	13	130	84	625					0
8:30 AM	6	62	1	34	2	20	46	61	22	7	132	84	474					0
8:45 AM	10	78	4	28	7	14	35	76	18	6	98	61	434					0
VOLUMES	65	582	36	312	31	163	341	732	218	51	1,028	687	4,243	0	0	0	0	0
APPROACH %	9%	85%	5%	62%	6%	32%	26%	57%	17%	3%	58%	39%						
APP/DEPART	682	/	1,610	506	/	300	1,291	/	1,079	1,766	/	1,255	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	33	308	22	186	16	89	194	474	140	29	529	373	2,390					
APPROACH %	9%	85%	6%	64%	6%	30%	24%	59%	17%	3%	57%	40%						
PEAK HR FACTOR		0.879			0.825			0.835			0.914		0.909					
APP/DEPART	362	/	874	291	/	185	807	/	681	931	/	650	0					
PM 04:00 PM	4	143	8	63	7	23	136	133	32	2	62	62	674					0
4:15 PM	3	115	11	59	6	12	139	166	43	8	79	44	683					0
4:30 PM	4	137	7	45	6	15	143	159	43	6	68	68	699					0
4:45 PM	6	123	11	66	6	14	144	148	35	4	82	47	684					0
5:00 PM	12	138	8	61	4	19	150	138	46	5	74	71	724					0
5:15 PM	7	116	6	55	7	18	151	193	55	7	69	80	762					0
5:30 PM	7	116	14	54	6	28	127	159	44	9	82	67	712					0
5:45 PM	5	87	6	55	4	21	118	130	38	5	87	48	604					0
VOLUMES	48	973	71	457	46	150	1,106	1,225	334	46	601	485	5,540	0	0	0	0	0
APPROACH %	4%	89%	6%	70%	7%	23%	42%	46%	13%	4%	53%	43%						
APP/DEPART	1,092	/	2,564	653	/	426	2,665	/	1,752	1,132	/	799	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	32	492	39	235	23	79	571	637	179	25	306	264	2,881					
APPROACH %	6%	87%	7%	70%	7%	23%	41%	46%	13%	4%	51%	44%						
PEAK HR FACTOR		0.890			0.961			0.869			0.941		0.945					
APP/DEPART	563	/	1,327	337	/	227	1,387	/	911	595	/	417	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
1/29/26	LOCATION:	Redlands	PROJECT #:	SC5862
THURSDAY	NORTH & SOUTH:	Tennessee St	LOCATION #:	4
	EAST & WEST:	W Lugonia Ave	CONTROL:	SIGNAL

	NOTES:								
PCE Adjusted	Class	1	2	3	4	5	6		
	Factor	1	1.5	2	3	2	2		

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	NORTHBOUND Tennessee St			SOUTHBOUND Tennessee St			EASTBOUND W Lugonia Ave			WESTBOUND W Lugonia Ave				U-TURNS				
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 0.5	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	15	64	14	9	14	0	5	29	30	23	42	15	256					0
7:15 AM	15	51	21	15	14	2	7	35	28	26	66	19	296					0
7:30 AM	18	55	17	17	17	0	8	40	31	33	81	22	337					0
7:45 AM	26	56	19	19	29	1	5	38	34	34	101	23	382					0
8:00 AM	30	59	23	20	29	1	5	44	37	25	109	32	412					0
8:15 AM	27	71	28	18	30	2	9	72	39	24	107	23	447					0
8:30 AM	39	38	23	16	13	2	5	68	40	23	104	27	395					0
8:45 AM	37	62	18	17	13	1	9	63	37	19	102	22	398					0
AM VOLUMES	205	454	162	129	158	9	52	386	274	205	710	181	2,921	0	0	0	0	0
AM APPROACH %	25%	55%	20%	44%	53%	3%	7%	54%	39%	19%	65%	16%						
AM APP/DEPART	820	/	686	296	/	637	711	/	676	1,095	/	923	0					
AM BEGIN PEAK HR		8:00 AM																
AM VOLUMES	132	229	91	71	84	6	28	245	153	90	421	103	1,651					
AM APPROACH %	29%	51%	20%	44%	52%	4%	6%	58%	36%	15%	69%	17%						
AM PEAK HR FACTOR		0.904			0.811			0.893			0.927		0.924					
AM APP/DEPART	452	/	360	161	/	327	425	/	407	614	/	559	0					
04:00 PM	67	91	47	21	20	1	19	232	111	27	118	34	786					0
4:15 PM	58	90	51	19	29	3	17	197	99	28	99	22	709					0
4:30 PM	51	107	58	28	19	6	20	229	126	16	105	28	790					0
4:45 PM	54	94	63	12	31	0	14	208	107	27	104	33	745					0
5:00 PM	75	95	70	30	26	2	30	213	86	20	107	28	780					0
5:15 PM	73	67	55	38	30	3	13	224	89	17	112	40	758					0
5:30 PM	57	92	68	32	20	2	22	196	100	21	86	36	731					0
5:45 PM	62	56	48	23	25	3	19	180	124	14	100	22	675					0
PM VOLUMES	496	690	458	202	200	20	154	1,677	839	169	829	242	5,973	0	0	0	0	0
PM APPROACH %	30%	42%	28%	48%	47%	5%	6%	63%	31%	14%	67%	20%						
PM APP/DEPART	1,644	/	1,086	421	/	1,207	2,669	/	2,336	1,240	/	1,345	0					
PM BEGIN PEAK HR		4:30 PM																
PM VOLUMES	253	362	245	107	106	11	77	873	407	80	427	129	3,073					
PM APPROACH %	29%	42%	28%	48%	47%	5%	6%	64%	30%	13%	67%	20%						
PM PEAK HR FACTOR		0.897			0.789			0.906			0.941		0.972					
PM APP/DEPART	859	/	567	224	/	592	1,356	/	1,224	635	/	690	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
1/29/26	LOCATION:	Redlands	PROJECT #:	SC5862
THURSDAY	NORTH & SOUTH:	Tennessee St	LOCATION #:	5
	EAST & WEST:	I-10 WB Ramps	CONTROL:	SIGNAL

	NOTES:									
PCE Adjusted	Class	1	2	3	4	5	6			AM
	Factor	1	1.5	2	3	2	2			PM
										MD
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		NORTHBOUND Tennessee St			SOUTHBOUND Tennessee St			EASTBOUND I-10 WB Ramps			WESTBOUND I-10 WB Ramps				U-TURNS				
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL X	ET X	ER X	WL 0.5	WT 1	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	40	66	0	0	43	23	0	0	0	31	0	12	214					0
	7:15 AM	48	79	0	0	75	25	0	0	0	38	1	17	282					0
	7:30 AM	63	93	0	0	85	19	0	0	0	75	2	17	353					0
	7:45 AM	52	102	0	0	99	30	0	0	0	63	1	23	368					0
	8:00 AM	56	119	0	0	111	20	0	0	0	53	1	28	386					0
	8:15 AM	62	122	0	0	91	33	0	0	0	40	1	30	379					0
	8:30 AM	58	107	0	0	104	24	0	0	0	22	1	26	341					0
	8:45 AM	59	89	0	0	67	14	0	0	0	44	0	28	300					0
	VOLUMES	436	775	0	0	674	187	0	0	0	365	7	178	2,622	0	0	0	0	0
	APPROACH %	36%	64%	0%	0%	78%	22%	0%	0%	0%	66%	1%	32%						
	APP/DEPART	1,211	/	953	861	/	1,039	0	/	0	550	/	630	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	232	436	0	0	385	101	0	0	0	231	5	96	1,485					
	APPROACH %	35%	65%	0%	0%	79%	21%	0%	0%	0%	70%	2%	29%						
	PEAK HR FACTOR		0.907			0.935			0.000			0.886		0.962					
	APP/DEPART	668	/	532	486	/	616	0	/	0	332	/	338	0					
PM	04:00 PM	51	165	0	0	137	25	0	0	0	23	0	50	450					0
	4:15 PM	47	177	0	0	139	21	0	0	0	42	1	44	469					0
	4:30 PM	57	174	0	0	143	17	0	0	0	29	2	42	464					0
	4:45 PM	51	178	0	0	140	25	0	0	0	52	0	37	482					0
	5:00 PM	48	180	0	0	121	16	0	0	0	38	2	58	463					0
	5:15 PM	60	185	0	0	126	18	0	0	0	37	4	36	464					0
	5:30 PM	48	166	0	0	124	23	0	0	0	43	1	39	444					0
	5:45 PM	38	140	0	0	155	17	0	0	0	31	1	45	427					0
	VOLUMES	399	1,364	0	0	1,084	160	0	0	0	294	11	350	3,660	0	0	0	0	0
	APPROACH %	23%	77%	0%	0%	87%	13%	0%	0%	0%	45%	2%	53%						
	APP/DEPART	1,763	/	1,714	1,244	/	1,378	0	/	0	654	/	569	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	202	709	0	0	543	78	0	0	0	161	5	180	1,877					
	APPROACH %	22%	78%	0%	0%	87%	13%	0%	0%	0%	46%	1%	52%						
	PEAK HR FACTOR		0.985			0.943			0.000			0.881		0.974					
	APP/DEPART	911	/	889	621	/	703	0	/	0	346	/	285	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
1/29/26	LOCATION:	Redlands	PROJECT #:	SC5862
THURSDAY	NORTH & SOUTH:	Tennessee St	LOCATION #:	6
	EAST & WEST:	I-10 EB Ramps	CONTROL:	SIGNAL

	NOTES:								
PCE Adjusted	Class	1	2	3	4	5	6		
	Factor	1	1.5	2	3	2	2		

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		NORTHBOUND Tennessee St			SOUTHBOUND Tennessee St			EASTBOUND I-10 EB Ramps			WESTBOUND I-10 EB Ramps				U-TURNS				
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0.5	ET 1	ER 0.5	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	90	26	15	59	0	16	47	59	0	0	0	310					0
	7:15 AM	0	98	18	14	99	0	32	50	72	0	0	0	383					0
	7:30 AM	0	118	35	10	145	0	38	44	116	0	0	0	506					0
	7:45 AM	0	121	44	16	145	0	33	46	128	0	0	0	532					0
	8:00 AM	0	134	51	37	127	0	41	53	127	0	0	0	569					0
	8:15 AM	0	148	45	26	105	0	36	73	102	0	0	0	535					0
	8:30 AM	0	130	42	31	96	0	35	66	112	0	0	0	510					0
	8:45 AM	0	117	31	16	95	0	30	56	100	0	0	0	445					0
	VOLUMES	0	955	291	164	870	0	261	434	815	0	0	0	3,788	0	0	0	0	0
	APPROACH %	0%	77%	23%	16%	84%	0%	17%	29%	54%	0%	0%	0%						
	APP/DEPART	1,245	/	1,215	1,034	/	1,685	1,509	/	888	0	/	0	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	520	175	89	522	0	148	216	472	0	0	0	2,140					
	APPROACH %	0%	75%	25%	14%	86%	0%	18%	26%	57%	0%	0%	0%						
	PEAK HR FACTOR		0.900			0.933			0.947			0.000		0.941					
	APP/DEPART	695	/	668	611	/	994	835	/	479	0	/	0	0					
PM	04:00 PM	0	160	44	45	115	0	56	115	105	0	0	0	638					0
	4:15 PM	0	169	28	40	141	0	61	96	68	0	0	0	601					0
	4:30 PM	0	171	36	38	134	0	60	97	92	0	0	0	628					0
	4:45 PM	0	173	18	40	146	0	56	82	76	0	0	0	589					0
	5:00 PM	0	164	34	44	115	0	64	125	76	0	0	0	622					0
	5:15 PM	0	175	30	33	130	0	70	108	102	0	0	0	647					0
	5:30 PM	0	145	24	36	131	0	70	102	89	0	0	0	595					0
	5:45 PM	0	126	22	48	138	0	52	70	87	0	0	0	543					0
	VOLUMES	0	1,282	235	324	1,048	0	487	793	694	0	0	0	4,862	0	0	0	0	0
	APPROACH %	0%	85%	15%	24%	76%	0%	25%	40%	35%	0%	0%	0%						
	APP/DEPART	1,516	/	1,769	1,372	/	1,742	1,974	/	1,352	0	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	683	117	155	524	0	249	411	346	0	0	0	2,485					
	APPROACH %	0%	85%	15%	23%	77%	0%	25%	41%	34%	0%	0%	0%						
	PEAK HR FACTOR		0.966			0.915			0.900			0.000		0.961					
	APP/DEPART	800	/	932	679	/	870	1,006	/	683	0	/	0	0					

Tennessee St

NORTH SIDE

I-10 EB Ramps WEST SIDE EAST SIDE I-10 EB Ramps

SOUTH SIDE

Tennessee St

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
1/29/26	LOCATION:	Redlands	PROJECT #:	SC5862
THURSDAY	NORTH & SOUTH:	Tennesee St	LOCATION #:	7
	EAST & WEST:	W San Bernardino Ave	CONTROL:	STOP S

	NOTES:								
PCE Adjusted	Class	1	2	3	4	5	6		
	Factor	1	1.5	2	3	2	2		

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		NORTHBOUND Tennesee St			SOUTHBOUND Tennesee St			EASTBOUND W San Bernardino Ave			WESTBOUND W San Bernardino Ave				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	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	20	18	67	0	0	198	8	311					0
	7:15 AM	0	0	0	0	0	21	25	86	0	0	211	4	346					0
	7:30 AM	0	0	0	0	0	32	35	97	0	0	223	2	389					0
	7:45 AM	0	0	0	1	0	24	29	124	0	0	191	6	375					0
	8:00 AM	0	0	0	4	0	53	71	129	0	0	186	9	450					0
	8:15 AM	0	0	0	3	0	57	86	108	0	0	170	5	429					0
	8:30 AM	0	0	0	3	0	44	18	77	0	0	178	6	325					0
	8:45 AM	0	0	0	1	0	19	11	97	0	0	146	6	279					0
	VOLUMES	0	0	0	12	0	269	293	784	0	0	1,501	45	2,902	0	0	0	0	0
	APPROACH %	0%	0%	0%	4%	0%	96%	27%	73%	0%	0%	97%	3%						
	APP/DEPART	0	/	337	280	/	0	1,076	/	795	1,546	/	1,770	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	8	0	166	221	458	0	0	769	22	1,642					
	APPROACH %	0%	0%	0%	4%	0%	96%	33%	67%	0%	0%	97%	3%						
	PEAK HR FACTOR		0.000			0.721			0.850			0.878		0.912					
	APP/DEPART	0	/	242	173	/	0	678	/	465	791	/	935	0					
PM	04:00 PM	0	0	0	1	0	27	35	169	0	0	99	4	334					0
	4:15 PM	0	0	0	1	0	18	26	210	0	0	113	2	370					0
	4:30 PM	0	0	0	0	0	20	20	191	0	0	121	0	352					0
	4:45 PM	0	0	0	0	0	18	30	195	0	0	119	4	365					0
	5:00 PM	0	0	0	0	0	24	34	173	0	0	125	2	358					0
	5:15 PM	0	0	0	1	0	31	42	208	0	0	124	1	407					0
	5:30 PM	0	0	0	1	0	28	37	190	0	0	130	1	386					0
	5:45 PM	0	0	0	0	0	19	35	156	0	0	121	0	331					0
	VOLUMES	0	0	0	4	0	184	258	1,490	0	0	952	14	2,901	0	0	0	0	0
	APPROACH %	0%	0%	0%	2%	0%	98%	15%	85%	0%	0%	99%	1%						
	APP/DEPART	0	/	272	188	/	0	1,748	/	1,494	965	/	1,136	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	2	0	101	142	765	0	0	498	8	1,515					
	APPROACH %	0%	0%	0%	2%	0%	98%	16%	84%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.805			0.908			0.965		0.932					
	APP/DEPART	0	/	150	103	/	0	907	/	767	506	/	599	0					



EX AM Traffic Volumes

	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus Valley	1	0	0	0	18	0	149	229	275	0	0	319	50	1039
2. W. San Bernardino Avenue/210 EB Ramps/Citrus	2	13	1	36	418	413	400	77	360	40	55	290	301	2401
3. W. San Bernardino Avenue/210 WB Ramps/Tenn	3	33	308	22	186	16	89	194	474	140	29	529	373	2390
4. W. San Bernardino Ave/New York Street (Future I	4				0		0	0	0			0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	132	229	91	71	84	6	28	245	153	90	421	103	1651
6. Tennessee Street/I-10 WB Ramps	6	232	436	0	0	385	101	0	0	0	231	5	96	1485
7. Tennessee Street/I-10 EB Ramps	7	0	520	175	89	522	0	148	216	472	0	0	0	2140
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9		0	0	0	0					0		0	0
10. New York Street/Project Driveway 3	10	0	0			0	0	0		0				0
11. W. San Bernardino Avenue/Driveway 4	11	0												0

FY AM Traffic Volumes

	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	18	0	149	270	324	0	0	376	59	1195.96
2. W. San Bernardino Avenue/210 EB Ramps/	2	14	1	37	416	434	418	94	373	43	52	266	308	2456
3. W. San Bernardino Avenue/210 WB Ramps	3	37	369	34	208	16	73	159	508	133	34	525	388	2484
4. W. San Bernardino Ave/New York Street (F	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	133	273	64	64	86	6	55	289	208	74	424	122	1798
6. Tennessee Street/I-10 WB Ramps	6	178	507	0	0	469	59	0	0	0	175	3	49	1440
7. Tennessee Street/I-10 EB Ramps	7	0	600	224	83	554	0	129	212	513	0	0	0	2315
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
10. New York Street/Project Driveway 3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
11. W. San Bernardino Avenue/Driveway 4	11	0	0	0		0								0

	EX PM Traffic Volumes													
	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	52	0	53.5	84.5	593	0	0	109	33	925
2. W. San Bernardino Avenue/210 EB Ramps/	2	32	22	317.5	286.5	542	231	47	805.5	124.5	100	189.5	92.5	2790
3. W. San Bernardino Avenue/210 WB Ramps	3	32	492	38.5	235	23	78.5	571	637	179	25	306	263.5	2880.5
4. W. San Bernardino Ave/New York Street (F	4				0		0	0	0			0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	252.5	362	244.5	107	106	11	76.5	872.5	406.5	79.5	426.5	128.5	3073
6. Tennessee Street/I-10 WB Ramps	6	202	708.5	0	0	542.5	78	0	0	0	160.5	5	180	1876.5
7. Tennessee Street/I-10 EB Ramps	7	0	683	117	155	524	0	249	411	346	0	0	0	2485
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9		0	0	0	0					0		0	0
10. New York Street/Project Driveway 3	10	0	0											0
11. W. San Bernardino Avenue/Driveway 4	11	0	0	0										0

	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	52	0	54	100	700	0	0	129	39	1072.51
2. W. San Bernardino Avenue/210 EB Ramps/	2	34	24	339	308	582	249	49	833	128	106	199	99	2950
3. W. San Bernardino Avenue/210 WB Ramps	3	34	527	43	257	22	80	565	681	172	24	324	276	3005
4. W. San Bernardino Ave/New York Street (F	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	280	354	257	111	114	12	75	908	439	80	436	116	3182
6. Tennessee Street/I-10 WB Ramps	6	145	783	0	0	565	54	0	0	0	152	3	168	1870
7. Tennessee Street/I-10 EB Ramps	7	0	686	80	108	545	0	263	297	375	0	0	0	2354
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
10. New York Street/Project Driveway 3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
11. W. San Bernardino Avenue/Driveway 4	11	0	0											0

	FY - EX AM Traffic Volumes													
	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	0	0	0	41.22	49.41	0	0	57.33	9	156.96
2. W. San Bernardino Avenue/210 EB Ramps/	2	1	0	1.5	-1.5	21.5	18.5	17	13	3	-3	-23.5	7.5	55
3. W. San Bernardino Avenue/210 WB Ramps	3	4	61.5	12.5	22	0	-15.5	-34.5	34.5	-7	5	-3.5	15	94
4. W. San Bernardino Ave/New York Street (F	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	1	44	-27	-6.5	2	0	27.5	44	55.5	-16	3.5	19	147
6. Tennessee Street/I-10 WB Ramps	6	-54	71.5	0	0	84	-42	0	0	0	-55.5	-2	-47	-45
7. Tennessee Street/I-10 EB Ramps	7	0	80	49.5	-5.5	32	0	-18.5	-3.5	41	0	0	0	175
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
10. New York Street/Project Driveway 3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
11. W. San Bernardino Avenue/Driveway 4	11	0	0	0	0	0	0	0	0	0	0	0	0	0

	FY - EX PM Traffic Volumes													
	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	0	0	0	15.21	106.74	0	0	19.62	5.94	147.51
2. W. San Bernardino Avenue/210 EB Ramps/	2	2	2	21.5	21.5	40	18	2	27.5	3.5	6	9.5	6.5	160
3. W. San Bernardino Avenue/210 WB Ramps	3	2	35	4.5	22	-1	1.5	-6	44	-7	-1	18	12.5	124.5
4. W. San Bernardino Ave/New York Street (F	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	27.5	-8	12.5	4	8	1	-1.5	35.5	32.5	0.5	9.5	-12.5	109
6. Tennessee Street/I-10 WB Ramps	6	-57	74.5	0	0	22.5	-24	0	0	0	-8.5	-2	-12	-6.5
7. Tennessee Street/I-10 EB Ramps	7	0	3	-37	-47	21	0	14	-114	29	0	0	0	-131
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
10. New York Street/Project Driveway 3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
11. W. San Bernardino Avenue/Driveway 4	11	0	0	0	0	0	0	0	0	0	0	0	0	0

	FY - EX AM Traffic Volumes Adjusted													
	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	0	0	0	41	49	0	0	57	9	157
2. W. San Bernardino Avenue/210 EB Ramps/	2	1	0	2	0	22	19	17	13	3	0	0	8	83
3. W. San Bernardino Avenue/210 WB Ramps	3	4	62	13	22	0	0	0	35	0	5	0	15	155
4. W. San Bernardino Ave/New York Street (F	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	1	44	0	0	2	0	28	44	56	0	4	19	197
6. Tennessee Street/I-10 WB Ramps	6	0	72	0	0	84	0	0	0	0	0	0	0	156
7. Tennessee Street/I-10 EB Ramps	7	0	80	50	0	32	0	0	0	41	0	0	0	203
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
10. New York Street/Project Driveway 3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
11. W. San Bernardino Avenue/Driveway 4	11	0	0	0	0	0	0	0	0	0	0	0	0	0

	FY - EX PM Traffic Volumes Adjusted													
	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	0	0	0	15	107	0	0	20	6	148
2. W. San Bernardino Avenue/210 EB Ramps/	2	2	2	22	22	40	18	2	28	4	6	10	7	160
3. W. San Bernardino Avenue/210 WB Ramps	3	2	35	5	22	0	2	0	44	0	0	18	13	140
4. W. San Bernardino Ave/New York Street (F	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	28	0	13	4	8	1	0	36	33	1	10	0	131
6. Tennessee Street/I-10 WB Ramps	6	0	75	0	0	23	0	0	0	0	0	0	0	97
7. Tennessee Street/I-10 EB Ramps	7	0	3	0	0	21	0	14	0	29	0	0	0	67
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
10. New York Street/Project Driveway 3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
11. W. San Bernardino Avenue/Driveway 4	11	0	0	0	0	0	0	0	0	0	0	0	0	0

	EX AM Traffic Volumes													
	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	18	0	149	229	274.5	0	0	318.5	50	1039
2. W. San Bernardino Avenue/210 EB Ramps/	2	13	1	35.5	417.5	412.5	399.5	77	360	40	55	289.5	300.5	2401
3. W. San Bernardino Avenue/210 WB Ramp	3	33	307.5	21.5	186	16	88.5	193.5	473.5	140	29	528.5	373	2390
4. W. San Bernardino Ave/New York Street (F	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	132	229	91	70.5	84	6	27.5	245	152.5	90	420.5	103	1651
6. Tennessee Street/I-10 WB Ramps	6	232	435.5	0	0	385	101	0	0	0	230.5	5	96	1485
7. Tennessee Street/I-10 EB Ramps	7	0	520	174.5	88.5	522	0	147.5	215.5	472	0	0	0	2140
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
10. New York Street/Project Driveway 3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
11. W. San Bernardino Avenue/Driveway 4	11	0	0	0	0	0	0	0	0	0	0	0	0	0

	FY AM Traffic Volumes													
	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	18	0	149	270	324	0	0	376	59	1196
2. W. San Bernardino Avenue/210 EB Ramps/	2	14	1	37	418	434	418	94	373	43	55	290	308	2484
3. W. San Bernardino Avenue/210 WB Ramp	3	37	369	34	208	16	89	194	508	140	34	529	388	2545
4. W. San Bernardino Ave/New York Street (F	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	133	273	91	71	86	6	55	289	208	90	424	122	1848
6. Tennessee Street/I-10 WB Ramps	6	232	507	0	0	469	101	0	0	0	231	5	96	1641
7. Tennessee Street/I-10 EB Ramps	7	0	600	224	89	554	0	148	216	513	0	0	0	2343
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
10. New York Street/Project Driveway 3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
11. W. San Bernardino Avenue/Driveway 4	11	0	0	0	0	0	0	0	0	0	0	0	0	0

	EX AM Traffic Volumes													
	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	18	0	149	229	274.5	0	0	318.5	50	1039
2. W. San Bernardino Avenue/210 EB Ramps/	2	13	1	35.5	417.5	412.5	399.5	77	360	40	55	289.5	300.5	2401
3. W. San Bernardino Avenue/210 WB Ramp	3	33	307.5	21.5	186	16	88.5	193.5	473.5	140	29	528.5	373	2390
4. W. San Bernardino Ave/New York Street (F	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	132	229	91	70.5	84	6	27.5	245	152.5	90	420.5	103	1651
6. Tennessee Street/I-10 WB Ramps	6	232	435.5	0	0	385	101	0	0	0	230.5	5	96	1485
7. Tennessee Street/I-10 EB Ramps	7	0	520	174.5	88.5	522	0	147.5	215.5	472	0	0	0	2140
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
10. New York Street/Project Driveway 3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
11. W. San Bernardino Avenue/Driveway 4	11	0	0	0	0	0	0	0	0	0	0	0	0	0

	FY AM Traffic Volumes													
	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	sum
1. W. Pioneer Avenue/New York Street/Citrus	1	0	0	0	18	0	149	270	324	0	0	376	59	1196
2. W. San Bernardino Avenue/210 EB Ramps/	2	14	1	37	418	434	418	94	373	43	55	290	308	2484
3. W. San Bernardino Avenue/210 WB Ramp	3	37	369	34	208	16	89	194	508	140	34	529	388	2545
4. W. San Bernardino Ave/New York Street (F	4	0	0	0	0	0	0	0	0	0	0	0	0	0
5. W. Lugonia Avenue/Tennessee Street	5	133	273	91	71	86	6	55	289	208	90	424	122	1848
6. Tennessee Street/I-10 WB Ramps	6	232	507	0	0	469	101	0	0	0	231	5	96	1641
7. Tennessee Street/I-10 EB Ramps	7	0	600	224	89	554	0	148	216	513	0	0	0	2343
8. W. Pioneer Avenue/Project Driveway 1	8	0	0	0	0	0	0	0	0	0	0	0	0	0
9. New York Street/Project Driveway 2	9	0	0	0	0	0	0	0	0	0	0	0	0	0
10. New York Street/Project Driveway 3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
11. W. San Bernardino Avenue/Driveway 4	11	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX C – LEVEL OF SERVICE CALCULATIONS, AND SIGNAL TIMING SHEETS FOR EXISTING SIGNALIZED INTERSECTIONS

Vistro File: C:\...\25-124 Pioneer Park_JM_3.23.26 Updated 2035 Lane Geometry.vistro
Report File: C:\...\EX AM.pdf

Scenario 1 Ex AM
4/10/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	Two-way stop	HCM 7th Edition	SB Left	0.799	246.7	F
2	W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	HCM 7th Edition	SB Left	0.654	23.1	C
3	W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	HCM 7th Edition	WB Thru	0.750	51.7	D
4	W. San Bernardino Ave/New York Street	Two-way stop	HCM 7th Edition		0.000	0.0	
5	W. Lugonia Avenue/Tennessee Street	Signalized	HCM 7th Edition	NB Left	0.797	19.8	B
6	Tennessee Street/I-10 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.511	11.8	B
7	Tennessee Street/I-10 EB Ramps	Signalized	HCM 7th Edition	NB Right	0.792	19.7	B
8	W. Pioneer Avenue/Project Driveway 1	Two-way stop	HCM 7th Edition		0.000	0.0	
9	New York Street/Project Driveway 2	Two-way stop	HCM 7th Edition		0.000	0.0	
10	New York Street/Project Driveway 3	Two-way stop	HCM 7th Edition		0.000	0.0	
11	W. San Bernardino Avenue/Driveway 4	Two-way stop	HCM 7th Edition	SB Right	0.504	24.7	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Control Type:	Two-way stop	Delay (sec / veh):	246.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.799

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	18	0	149	229	275	0	0	319	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	18	0	149	229	275	0	0	319	50
Peak Hour Factor	0.5970	0.5970	0.5970	0.5970	0.9500	0.5970	0.5970	0.5970	0.5970	0.5970	0.5970	0.5970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	8	0	62	96	115	0	0	134	21
Total Analysis Volume [veh/h]	0	0	0	30	0	250	384	461	0	0	534	84
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No			
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.80	0.00	0.48	0.40	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	230.98	83.84	10.95	246.74	0.00	18.13	11.10	0.00	0.00	8.24	0.00	0.00
Movement LOS	F	F	B	F		C	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	2.92	0.00	2.57	1.91	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	72.88	0.00	64.37	47.74	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	108.59			42.63			5.05			0.00		
Approach LOS	F			E			A			A		
d_I, Intersection Delay [s/veh]	9.29											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	225.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	155.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			50.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	1	36	418	413	400	77	360	40	55	290	301
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	9	0	0	100	0	0	10	0	0	75
Total Hourly Volume [veh/h]	13	1	27	418	413	300	77	360	30	55	290	226
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	7	111	109	80	20	95	8	15	77	60
Total Analysis Volume [veh/h]	14	1	29	443	438	318	82	382	32	58	308	240
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	20.0	30.0	20.0	20.0	30.0	0.0	20.0	40.0	0.0	20.0	40.0	0.0
Amber [s]	4.4	5.0	4.4	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	24.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	20.0	11.0	20.0	29.0	0.0	11.0	15.0	0.0	11.0	15.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	56	56	56	56	56	56	56	56	56	56	56	56
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3.4	3.1	16.0	16.0	15.8	15.8	8.6	12.0	12.0	8.8	12.2	12.2
g / C, Green / Cycle	0.06	0.06	0.29	0.29	0.28	0.28	0.15	0.21	0.21	0.16	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.02	0.24	0.21	0.21	0.05	0.11	0.02	0.03	0.16	0.15
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1638	1810	3618	1615	1810	1900	1615
c, Capacity [veh/h]	109	107	461	517	535	461	279	775	346	286	414	352
d1, Uniform Delay [s]	24.91	24.95	15.59	18.91	18.35	18.39	20.98	19.32	17.63	20.51	20.43	20.10
k, delay calibration	0.04	0.04	0.04	0.34	0.04	0.04	0.04	0.04	0.04	0.04	0.28	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.01	0.02	11.93	0.83	0.99	0.22	0.18	0.04	0.13	6.57	4.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.01	0.06	0.86	0.76	0.76	0.29	0.49	0.09	0.20	0.74	0.68
d, Delay for Lane Group [s/veh]	25.11	24.96	15.61	30.84	19.18	19.38	21.19	19.50	17.67	20.64	27.00	24.72
Lane Group LOS	C	C	B	C	B	B	C	B	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.17	0.01	0.25	6.54	4.38	3.84	0.82	1.82	0.28	0.58	3.92	2.87
50th-Percentile Queue Length [ft/ln]	4.21	0.30	6.26	163.43	109.58	95.89	20.52	45.47	6.98	14.53	97.90	71.87
95th-Percentile Queue Length [veh/ln]	0.30	0.02	0.45	10.73	7.82	6.90	1.48	3.27	0.50	1.05	7.05	5.17
95th-Percentile Queue Length [ft/ln]	7.57	0.54	11.27	268.26	195.42	172.59	36.93	81.85	12.56	26.16	176.22	129.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.11	24.96	15.61	30.84	19.20	19.38	21.19	19.50	17.67	20.64	27.00	24.72
Movement LOS	C	C	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	18.84			23.55			19.66			25.49		
Approach LOS	B			C			B			C		
d_I, Intersection Delay [s/veh]	23.14											
Intersection LOS	C											
Intersection V/C	0.654											

Emissions

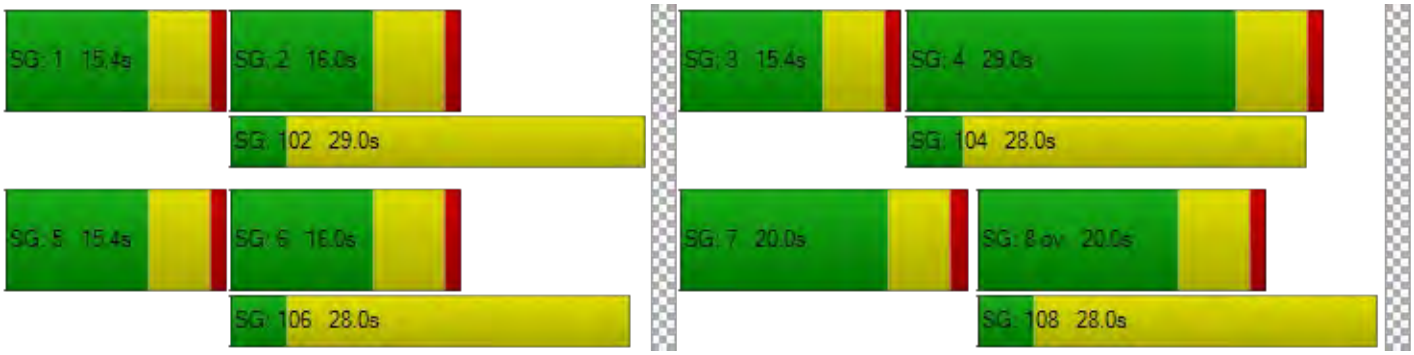
Vehicle Miles Traveled [mph]	1.40	0.10	2.91	49.50	45.21	39.27	7.03	32.76	2.74	7.72	40.98	31.93
Stops [stops/h]	10.82	0.77	16.10	420.35	281.84	246.62	52.77	233.90	17.95	37.38	251.80	184.86
Fuel consumption [US gal/h]	0.21	0.01	0.32	7.14	5.00	4.37	1.40	6.20	0.48	0.97	6.23	4.60
CO [g/h]	14.43	1.03	22.65	499.11	349.33	305.16	97.80	433.63	33.73	68.00	435.32	321.57
NOx [g/h]	2.81	0.20	4.41	97.11	67.97	59.37	19.03	84.37	6.56	13.23	84.70	62.57
VOC [g/h]	3.34	0.24	5.25	115.67	80.96	70.72	22.67	100.50	7.82	15.76	100.89	74.53

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	20.57	20.57	20.57	20.57
l_p,int, Pedestrian LOS Score for Intersectio	2.426	2.752	2.698	2.837
Crosswalk LOS	B	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	822	357	357
d_b, Bicycle Delay [s]	15.74	9.72	18.89	18.89
l_b,int, Bicycle LOS Score for Intersection	1.647	2.631	1.977	2.683
Bicycle LOS	A	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: W. San Bernardino Avenue/210 WB Ramps/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	51.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.750

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	136.00	100.00	165.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	308	22	186	16	89	194	0	140	29	529	373
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	308	22	186	16	89	194	0	140	29	529	373
Peak Hour Factor	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	85	6	51	4	24	53	0	39	8	146	103
Total Analysis Volume [veh/h]	36	339	24	205	18	98	213	0	154	32	582	410
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20.0	25.0	0.0	20.0	25.0	0.0	25.0	40.0	0.0	25.0	40.0	0.0
Amber [s]	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	22.0	0.0	0.0	22.0	0.0	0.0	23.0	0.0	0.0	23.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	21.0	0.0	11.0	20.0	0.0	11.0	23.0	0.0	11.0	23.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	69	69	69	69	69	69	69	69	69	69	69
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.5	12.0	12.0	11.2	16.8	11.2	24.2	24.2	6.1	19.0	19.0
g / C, Green / Cycle	0.09	0.17	0.17	0.16	0.24	0.16	0.35	0.35	0.09	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.02	0.10	0.10	0.11	0.07	0.06	0.00	0.10	0.02	0.31	0.25
s, saturation flow rate [veh/h]	1810	1900	1856	1810	1653	3514	1900	1615	1810	1900	1615
c, Capacity [veh/h]	168	329	321	292	399	568	661	562	158	520	442
d1, Uniform Delay [s]	29.16	26.28	26.31	27.55	21.49	25.99	0.00	16.33	29.46	25.24	24.58
k, delay calibration	0.04	0.04	0.04	0.18	0.04	0.04	0.04	0.04	0.04	0.50	0.43
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.55	0.57	5.13	0.15	0.15	0.00	0.10	0.23	76.83	25.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.56	0.56	0.70	0.29	0.37	0.00	0.27	0.20	1.12	0.93
d, Delay for Lane Group [s/veh]	29.40	26.83	26.88	32.69	21.64	26.14	0.00	16.43	29.70	102.07	50.16
Lane Group LOS	C	C	C	C	C	C	A	B	C	F	D
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.55	2.70	2.66	3.49	1.48	1.44	0.00	1.55	0.47	18.57	8.89
50th-Percentile Queue Length [ft/ln]	13.70	67.40	66.48	87.29	37.07	36.05	0.00	38.77	11.70	464.15	222.13
95th-Percentile Queue Length [veh/ln]	0.99	4.85	4.79	6.29	2.67	2.60	0.00	2.79	0.84	27.38	13.77
95th-Percentile Queue Length [ft/ln]	24.66	121.32	119.66	157.13	66.73	64.89	0.00	69.78	21.06	684.50	344.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.40	26.85	26.88	32.69	21.64	21.64	26.14	0.00	16.43	29.70	102.07	50.16
Movement LOS	C	C	C	C	C	C	C	A	B	C	F	D
d_A, Approach Delay [s/veh]	27.08			28.70			22.06			79.03		
Approach LOS	C			C			C			E		
d_I, Intersection Delay [s/veh]	51.65											
Intersection LOS	D											
Intersection V/C	0.750											

Emissions

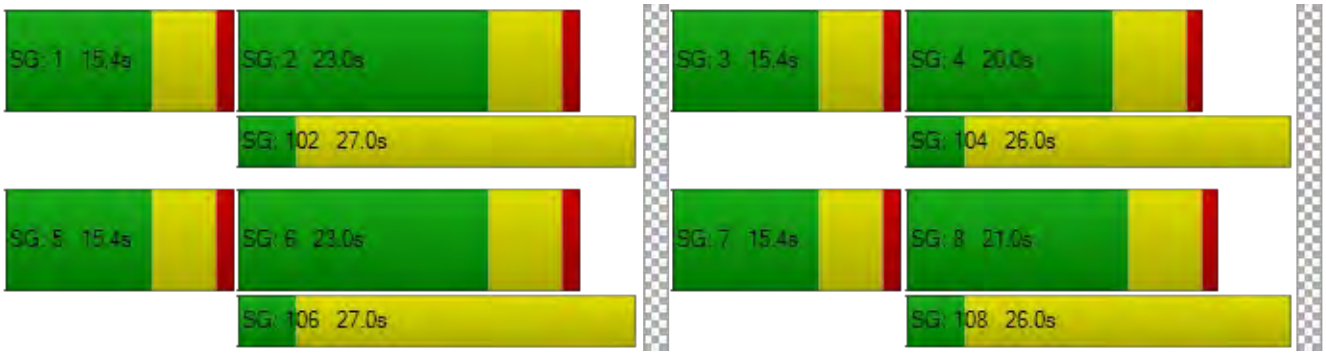
Vehicle Miles Traveled [mph]	14.34	72.85	71.75	9.81	5.55	28.34	0.00	20.49	4.16	75.67	53.31
Stops [stops/h]	28.39	139.68	137.77	180.91	76.83	149.43	0.00	80.34	24.24	961.92	460.35
Fuel consumption [US gal/h]	0.96	4.77	4.70	2.77	1.16	3.96	0.00	2.22	0.64	26.64	11.74
CO [g/h]	67.28	333.38	328.54	193.41	81.35	276.96	0.00	154.90	44.56	1862.23	820.36
NOx [g/h]	13.09	64.86	63.92	37.63	15.83	53.89	0.00	30.14	8.67	362.32	159.61
VOC [g/h]	15.59	77.26	76.14	44.83	18.85	64.19	0.00	35.90	10.33	431.59	190.13

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	27.20	27.20	27.20	27.20
l_p,int, Pedestrian LOS Score for Intersectio	2.268	2.434	2.606	2.579
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	432	403	489	489
d_b, Bicycle Delay [s]	21.36	22.15	19.82	19.82
l_b,int, Bicycle LOS Score for Intersection	1.889	2.089	2.165	3.249
Bicycle LOS	A	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: W. San Bernardino Ave/New York Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.50	8.30	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.40		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.00					
Intersection LOS						

Intersection Level Of Service Report
Intersection 5: W. Lugonia Avenue/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.797

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	200.00	100.00	100.00	100.00	100.00	50.00	135.00	100.00	85.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	132	229	91	71	84	6	28	245	153	90	421	103
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	132	229	91	71	84	6	28	245	153	90	421	103
Peak Hour Factor	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	62	25	19	23	2	8	66	41	24	114	28
Total Analysis Volume [veh/h]	143	248	98	77	91	6	30	265	166	97	455	111
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	19.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Maximum Green [s]	40.0	25.0	0.0	20.0	25.0	0.0	30.0	35.0	0.0	30.0	35.0	0.0
Amber [s]	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	20.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	34.0	0.0	9.0	34.0	0.0	9.0	36.0	0.0	9.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
Vehicle Extension [s]	3.0	2.0	0.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C
C, Calculated Cycle Length [s]	51	51	51	51	51	51	51	51	51	51	51
L, Total Lost Time per Cycle [s]	4.50	5.00	5.00	4.50	5.00	5.00	4.50	5.00	5.00	4.50	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	3.00	3.00	2.50	3.00	3.00	2.50	3.00	3.00	2.50	3.00
g_i, Effective Green Time [s]	5.0	8.6	8.6	3.3	6.9	6.9	1.7	15.9	15.9	3.7	17.9
g / C, Green / Cycle	0.10	0.17	0.17	0.07	0.14	0.14	0.03	0.31	0.31	0.07	0.35
(v / s)_i Volume / Saturation Flow Rate	0.08	0.13	0.06	0.04	0.05	0.00	0.02	0.07	0.10	0.05	0.31
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	3618	1615	1810	1836
c, Capacity [veh/h]	179	323	275	119	260	221	62	1139	509	134	651
d1, Uniform Delay [s]	22.31	20.05	18.56	23.07	19.80	18.92	24.00	12.81	13.23	22.93	15.24
k, delay calibration	0.13	0.04	0.04	0.04	0.04	0.04	0.04	0.11	0.11	0.04	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.74	1.46	0.29	2.21	0.30	0.02	2.16	0.10	0.37	2.79	3.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.77	0.36	0.65	0.35	0.03	0.48	0.23	0.33	0.73	0.87
d, Delay for Lane Group [s/veh]	32.05	21.50	18.85	25.28	20.10	18.94	26.16	12.92	13.60	25.73	18.97
Lane Group LOS	C	C	B	C	C	B	C	B	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.93	2.51	0.89	0.86	0.86	0.05	0.35	0.92	1.22	1.10	5.37
50th-Percentile Queue Length [ft/ln]	48.31	62.66	22.28	21.52	21.55	1.35	8.74	22.90	30.41	27.40	134.19
95th-Percentile Queue Length [veh/ln]	3.48	4.51	1.60	1.55	1.55	0.10	0.63	1.65	2.19	1.97	9.17
95th-Percentile Queue Length [ft/ln]	86.96	112.80	40.11	38.73	38.80	2.43	15.73	41.22	54.74	49.32	229.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.05	21.50	18.85	25.28	20.10	18.94	26.16	12.92	13.60	25.73	18.97	18.97
Movement LOS	C	C	B	C	C	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	24.06			22.35			14.03			19.96		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.78											
Intersection LOS	B											
Intersection V/C	0.797											

Emissions

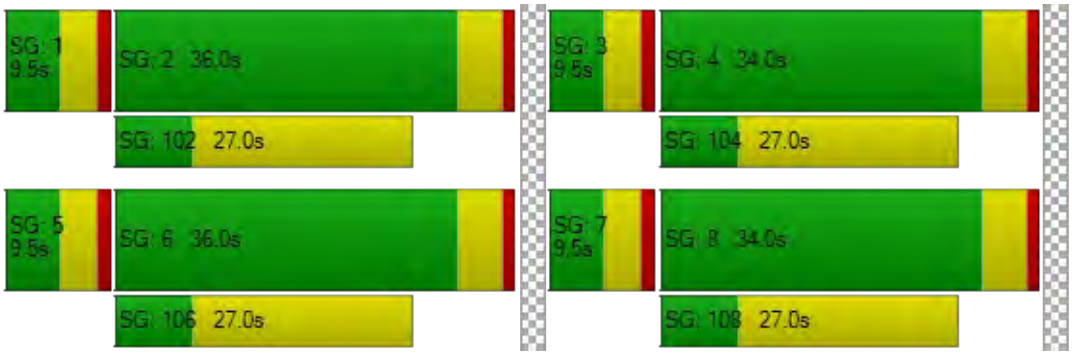
Vehicle Miles Traveled [mph]	39.74	68.93	27.24	8.30	9.81	0.65	2.26	19.97	12.51	12.06	70.35
Stops [stops/h]	137.47	178.31	63.40	61.23	61.33	3.85	24.87	130.32	86.53	77.97	381.82
Fuel consumption [US gal/h]	3.71	5.31	1.97	1.29	1.33	0.08	0.48	2.69	1.76	1.71	8.46
CO [g/h]	259.11	370.88	138.01	90.52	92.70	5.88	33.90	188.18	122.87	119.23	591.07
NOx [g/h]	50.41	72.16	26.85	17.61	18.04	1.14	6.60	36.61	23.91	23.20	115.00
VOC [g/h]	60.05	85.96	31.99	20.98	21.48	1.36	7.86	43.61	28.48	27.63	136.99

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	15.50	15.50	15.50	15.50
l_p,int, Pedestrian LOS Score for Intersectio	2.486	2.281	2.544	2.457
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1146	1146	1225	1225
d_b, Bicycle Delay [s]	4.61	4.61	3.80	3.80
l_b,int, Bicycle LOS Score for Intersection	2.366	1.847	1.940	2.654
Bicycle LOS	B	A	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Tennessee Street/I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	232	436	0	0	385	101	0	0	0	231	5	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	232	436	0	0	385	101	0	0	0	231	5	96
Peak Hour Factor	0.9618	0.9618	0.9500	0.9500	0.9618	0.9618	0.9500	0.9500	0.9500	0.9618	0.9618	0.9618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	113	0	0	100	26	0	0	0	60	1	25
Total Analysis Volume [veh/h]	241	453	0	0	400	105	0	0	0	240	5	100
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Amber [s]	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.5	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	11.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	59.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	C
C, Calculated Cycle Length [s]	45	45	45	45		45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	10.6	26.1	11.5	11.5		11.4	11.4
g / C, Green / Cycle	0.23	0.57	0.25	0.25		0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.11	0.07		0.13	0.06
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1627
c, Capacity [veh/h]	421	2076	916	409		453	407
d1, Uniform Delay [s]	15.45	4.72	14.26	13.57		14.73	13.66
k, delay calibration	0.04	0.04	0.04	0.04		0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	0.46	0.02	0.12	0.12		0.36	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.22	0.44	0.26		0.53	0.26
d, Delay for Lane Group [s/veh]	15.91	4.74	14.38	13.69		15.09	13.78
Lane Group LOS	B	A	B	B		B	B
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	1.82	0.54	1.39	0.70		1.87	0.75
50th-Percentile Queue Length [ft/ln]	45.53	13.40	34.67	17.47		46.69	18.83
95th-Percentile Queue Length [veh/ln]	3.28	0.96	2.50	1.26		3.36	1.36
95th-Percentile Queue Length [ft/ln]	81.96	24.11	62.40	31.44		84.05	33.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.91	4.74	0.00	0.00	14.38	13.69	0.00	0.00	0.00	15.09	13.78	13.78
Movement LOS	B	A			B	B				B	B	B
d_A, Approach Delay [s/veh]	8.62			14.24			0.00			14.69		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	11.82											
Intersection LOS	B											
Intersection V/C	0.511											

Emissions

Vehicle Miles Traveled [mph]	27.21	51.15	111.17	29.18		266.90	116.77
Stops [stops/h]	144.16	84.82	219.51	55.30		147.83	59.62
Fuel consumption [US gal/h]	3.17	3.10	7.31	1.88		12.54	5.43
CO [g/h]	221.67	216.89	510.93	131.49		876.63	379.62
NOx [g/h]	43.13	42.20	99.41	25.58		170.56	73.86
VOC [g/h]	51.37	50.27	118.41	30.47		203.17	87.98

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	15.45
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.019
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2352	594	0	594
d_b, Bicycle Delay [s]	0.71	11.25	22.74	11.25
l_b,int, Bicycle LOS Score for Intersection	2.132	1.976	4.132	1.844
Bicycle LOS	B	A	D	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Tennessee Street/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.792

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	520	175	89	522	0	148	216	472	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	520	175	89	522	0	148	216	472	0	0	0
Peak Hour Factor	0.9500	0.9411	0.9411	0.9411	0.9411	0.9500	0.9411	0.9411	0.9411	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	138	46	24	139	0	39	57	125	0	0	0
Total Analysis Volume [veh/h]	0	553	186	95	555	0	157	230	502	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0.0	40.0	0.0	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
Amber [s]	0.0	4.5	0.0	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	19.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	3.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	22.0	0.0	17.0	44.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0.0	10.0	0.0	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		Yes		No	Yes			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	C	
C, Calculated Cycle Length [s]	58	58	58	58	58	58	
L, Total Lost Time per Cycle [s]	5.50	5.50	5.00	5.50	5.50	5.50	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.50	3.50	3.00	3.50	3.50	3.50	
g_i, Effective Green Time [s]	14.3	14.3	7.9	27.2	20.3	20.3	
g / C, Green / Cycle	0.24	0.24	0.14	0.47	0.35	0.35	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.05	0.15	0.21	0.31	
s, saturation flow rate [veh/h]	1900	1745	1810	3618	1862	1615	
c, Capacity [veh/h]	464	427	244	1682	646	560	
d1, Uniform Delay [s]	20.72	21.18	23.09	9.89	15.75	18.10	
k, delay calibration	0.10	0.15	0.04	0.04	0.04	0.10	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.02	7.30	0.38	0.04	0.33	5.13	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.80	0.87	0.39	0.33	0.60	0.90	
d, Delay for Lane Group [s/veh]	23.74	28.48	23.47	9.93	16.08	23.23	
Lane Group LOS	C	C	C	A	B	C	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.49	5.05	1.10	1.77	3.83	6.43	
50th-Percentile Queue Length [ft/ln]	112.23	126.36	27.50	44.13	95.86	160.66	
95th-Percentile Queue Length [veh/ln]	7.96	8.74	1.98	3.18	6.90	10.58	
95th-Percentile Queue Length [ft/ln]	199.10	218.54	49.49	79.43	172.55	264.59	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.31	28.48	23.47	9.93	0.00	16.08	16.08	23.23	0.00	0.00	0.00
Movement LOS		C	C	C	A		B	B	C			
d_A, Approach Delay [s/veh]	26.11			11.91			20.12			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	19.72											
Intersection LOS	B											
Intersection V/C	0.792											

Emissions

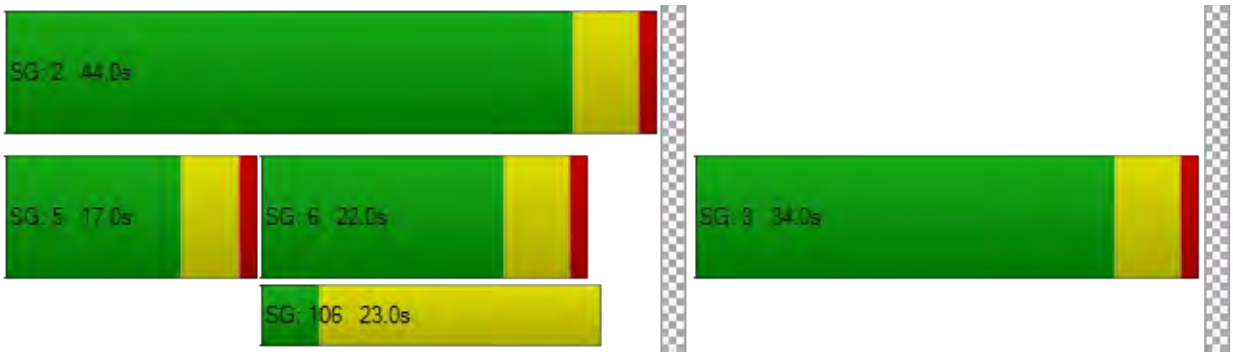
Vehicle Miles Traveled [mph]	29.20	29.20	10.73	62.67	202.08	262.13	
Stops [stops/h]	276.30	311.10	67.69	217.27	236.00	395.52	
Fuel consumption [US gal/h]	5.55	6.24	1.50	5.50	10.89	15.35	
CO [g/h]	387.63	436.42	105.05	384.50	761.16	1072.90	
NOx [g/h]	75.42	84.91	20.44	74.81	148.09	208.75	
VOC [g/h]	89.84	101.14	24.35	89.11	176.41	248.65	

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	21.79
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	1.945
Crosswalk LOS				A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	564	1316	975	0
d_b, Bicycle Delay [s]	15.07	3.42	7.69	29.25
l_b,int, Bicycle LOS Score for Intersection	2.169	2.096	2.293	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: W. Pioneer Avenue/Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.50	9.00	8.30	8.50	9.00	8.30	7.20	0.00	0.00	7.20	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.60			8.60			2.40			2.40		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.50											
Intersection LOS												

Intersection Level Of Service Report
Intersection 9: New York Street/Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.20	0.00	8.50	8.30
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		3.60		8.40	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.00					
Intersection LOS						

Intersection Level Of Service Report
Intersection 10: New York Street/Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.20	0.00	0.00	0.00	8.50	8.30
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	3.60		0.00		8.40	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.00					
Intersection LOS						

Intersection Level Of Service Report
Intersection 11: W. San Bernardino Avenue/Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	24.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	166	221	458	769	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	166	221	458	769	22
Peak Hour Factor	0.9500	0.9119	0.9119	0.9119	0.9119	0.9119
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	46	61	126	211	6
Total Analysis Volume [veh/h]	0	182	242	502	843	24
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.50	0.31	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	24.70	9.92	0.00	0.00	0.00
Movement LOS		C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	2.72	0.48	0.48	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	68.01	12.08	12.08	0.00	0.00
d_A, Approach Delay [s/veh]	24.70		3.23		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	3.85					
Intersection LOS	C					

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Report File: C:\...\EX PM.pdf

Scenario 2 Ex PM
4/10/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	Two-way stop	HCM 7th Edition	SB Left	0.311	31.4	D
2	W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	HCM 7th Edition	EB Thru	0.824	64.9	E
3	W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	HCM 7th Edition	EB Left	0.826	33.4	C
4	W. San Bernardino Ave/New York Street	Two-way stop	HCM 7th Edition		0.000	0.0	
5	W. Lugonia Avenue/Tennessee Street	Signalized	HCM 7th Edition	NB Left	0.864	59.6	E
6	Tennessee Street/I-10 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.521	11.2	B
7	Tennessee Street/I-10 EB Ramps	Signalized	HCM 7th Edition	NB Right	0.830	23.7	C
8	W. Pioneer Avenue/Project Driveway 1	Two-way stop	HCM 7th Edition		0.000	0.0	
9	New York Street/Project Driveway 2	Two-way stop	HCM 7th Edition		0.000	0.0	
10	New York Street/Project Driveway 3	Two-way stop	HCM 7th Edition		0.000	0.0	
11	W. San Bernardino Avenue/Driveway 4	Two-way stop	HCM 7th Edition	SB Right	0.198	13.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Control Type:	Two-way stop	Delay (sec / veh):	31.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.311

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	52	0	54	85	593	0	0	109	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	52	0	54	85	593	0	0	109	33
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.9500	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	15	0	16	25	173	0	0	32	10
Total Analysis Volume [veh/h]	0	0	0	61	0	63	99	694	0	0	127	39
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No			
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.31	0.00	0.07	0.07	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	25.73	22.08	13.07	31.45	0.00	9.27	7.72	0.00	0.00	8.95	0.00	0.00
Movement LOS	D	C	B	D		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	1.26	0.00	0.22	0.22	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	31.52	0.00	5.59	5.59	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	20.29			20.18			0.96			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	3.02											
Intersection LOS	D											

Intersection Level Of Service Report

Intersection 2: W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive

Control Type:	Signalized	Delay (sec / veh):	64.9
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.824

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	225.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	155.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			50.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	22	318	287	542	231	47	806	125	100	190	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	80	0	0	58	0	0	31	0	0	23
Total Hourly Volume [veh/h]	32	22	238	287	542	173	47	806	94	100	190	70
Peak Hour Factor	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	6	66	79	150	48	13	223	26	28	52	19
Total Analysis Volume [veh/h]	35	24	263	317	599	191	52	891	104	110	210	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	20.0	30.0	20.0	20.0	30.0	0.0	20.0	40.0	0.0	20.0	40.0	0.0
Amber [s]	4.4	5.0	4.4	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	24.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	20.0	11.0	20.0	29.0	0.0	11.0	15.0	0.0	11.0	15.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	63	63	63	63	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.0	9.5	24.9	13.9	17.3	17.3	7.4	12.0	12.0	11.4	16.0	16.0
g / C, Green / Cycle	0.10	0.15	0.40	0.22	0.28	0.28	0.12	0.19	0.19	0.18	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.16	0.18	0.22	0.22	0.03	0.25	0.06	0.06	0.11	0.05
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1745	1810	3618	1615	1810	1900	1615
c, Capacity [veh/h]	174	287	640	401	525	482	214	692	309	328	484	411
d1, Uniform Delay [s]	26.15	22.91	14.70	23.06	20.97	20.98	25.13	25.38	21.94	22.38	19.60	18.31
k, delay calibration	0.04	0.04	0.36	0.19	0.08	0.08	0.04	0.17	0.04	0.04	0.11	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.05	1.42	6.05	1.95	2.16	0.22	133.49	0.24	0.22	0.64	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.08	0.41	0.79	0.78	0.78	0.24	1.29	0.34	0.34	0.43	0.19
d, Delay for Lane Group [s/veh]	26.36	22.96	16.12	29.10	22.92	23.13	25.34	158.86	22.17	22.61	20.24	18.39
Lane Group LOS	C	C	B	C	C	C	C	F	C	C	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.46	0.29	2.70	4.78	5.39	4.99	0.63	17.23	1.17	1.27	2.31	0.77
50th-Percentile Queue Length [ft/ln]	11.54	7.20	67.62	119.50	134.87	124.76	15.82	430.82	29.15	31.84	57.79	19.29
95th-Percentile Queue Length [veh/ln]	0.83	0.52	4.87	8.37	9.20	8.65	1.14	26.99	2.10	2.29	4.16	1.39
95th-Percentile Queue Length [ft/ln]	20.77	12.95	121.71	209.14	230.11	216.36	28.48	674.85	52.46	57.32	104.02	34.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.36	22.96	16.12	29.10	22.99	23.13	25.34	158.86	22.17	22.61	20.24	18.39
Movement LOS	C	C	B	C	C	C	C	F	C	C	C	B
d_A, Approach Delay [s/veh]	17.74			24.76			138.65			20.53		
Approach LOS	B			C			F			C		
d_I, Intersection Delay [s/veh]	64.90											
Intersection LOS	E											
Intersection V/C	0.824											

Emissions

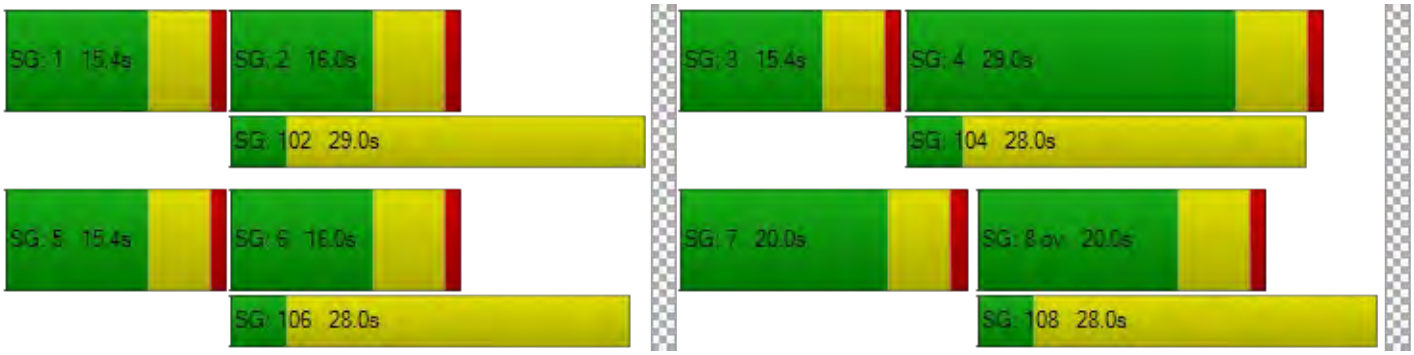
Vehicle Miles Traveled [mph]	3.51	2.41	26.38	35.42	45.99	42.29	4.46	76.41	8.92	14.63	27.94	10.24
Stops [stops/h]	26.48	16.51	155.16	274.22	309.50	286.30	36.31	1977.23	66.88	73.07	132.61	44.26
Fuel consumption [US gal/h]	0.52	0.33	3.04	4.85	5.52	5.10	0.97	61.71	1.79	1.92	3.47	1.19
CO [g/h]	36.40	22.93	212.16	339.06	386.02	356.80	68.15	4313.62	125.45	133.95	242.64	83.15
NOx [g/h]	7.08	4.46	41.28	65.97	75.11	69.42	13.26	839.27	24.41	26.06	47.21	16.18
VOC [g/h]	8.44	5.31	49.17	78.58	89.46	82.69	15.79	999.72	29.07	31.04	56.23	19.27

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.89	23.89	23.89	23.89
l_p,int, Pedestrian LOS Score for Intersectio	2.682	2.628	2.839	2.894
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	446	733	319	319
d_b, Bicycle Delay [s]	18.94	12.59	22.17	22.17
l_b,int, Bicycle LOS Score for Intersection	2.223	2.521	2.449	2.253
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: W. San Bernardino Avenue/210 WB Ramps/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	33.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.826

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	136.00	100.00	165.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	492	39	235	23	79	571	0	179	25	306	264
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	492	39	235	23	79	571	0	179	25	306	264
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	130	10	62	6	21	151	0	47	7	81	70
Total Analysis Volume [veh/h]	34	521	41	249	24	84	604	0	189	26	324	279
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20.0	25.0	0.0	20.0	25.0	0.0	25.0	40.0	0.0	25.0	40.0	0.0
Amber [s]	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	22.0	0.0	0.0	22.0	0.0	0.0	23.0	0.0	0.0	23.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	21.0	0.0	11.0	20.0	0.0	11.0	23.0	0.0	11.0	23.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	68	68	68	68	68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.2	13.9	13.9	11.4	19.1	11.4	21.5	21.5	5.4	15.4	15.4
g / C, Green / Cycle	0.09	0.20	0.20	0.17	0.28	0.17	0.32	0.32	0.08	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.15	0.15	0.14	0.06	0.17	0.00	0.12	0.01	0.17	0.17
s, saturation flow rate [veh/h]	1810	1900	1852	1810	1671	3514	1900	1615	1810	1900	1615
c, Capacity [veh/h]	165	388	378	303	468	588	599	509	142	430	366
d1, Uniform Delay [s]	28.68	25.37	25.39	27.39	18.87	28.37	0.00	18.10	29.35	24.58	24.64
k, delay calibration	0.04	0.13	0.13	0.30	0.04	0.04	0.04	0.04	0.04	0.14	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	3.25	3.43	14.02	0.09	18.48	0.00	0.17	0.23	3.53	4.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.73	0.74	0.82	0.23	1.03	0.00	0.37	0.18	0.75	0.76
d, Delay for Lane Group [s/veh]	28.91	28.63	28.82	41.41	18.96	46.85	0.00	18.27	29.58	28.11	29.20
Lane Group LOS	C	C	C	D	B	F	A	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.51	4.42	4.34	4.90	1.25	5.81	0.00	2.04	0.38	4.75	4.20
50th-Percentile Queue Length [ft/ln]	12.66	110.47	108.58	122.42	31.30	145.36	0.00	50.88	9.38	118.71	104.97
95th-Percentile Queue Length [veh/ln]	0.91	7.87	7.76	8.53	2.25	9.88	0.00	3.66	0.68	8.32	7.56
95th-Percentile Queue Length [ft/ln]	22.80	196.65	194.03	213.15	56.34	247.12	0.00	91.59	16.88	208.06	188.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.91	28.72	28.82	41.41	18.96	18.96	46.85	0.00	18.27	29.58	28.11	29.20
Movement LOS	C	C	C	D	B	B	F	A	B	C	C	C
d_A, Approach Delay [s/veh]	28.73			34.62			40.04			28.65		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	33.37											
Intersection LOS	C											
Intersection V/C	0.826											

Emissions

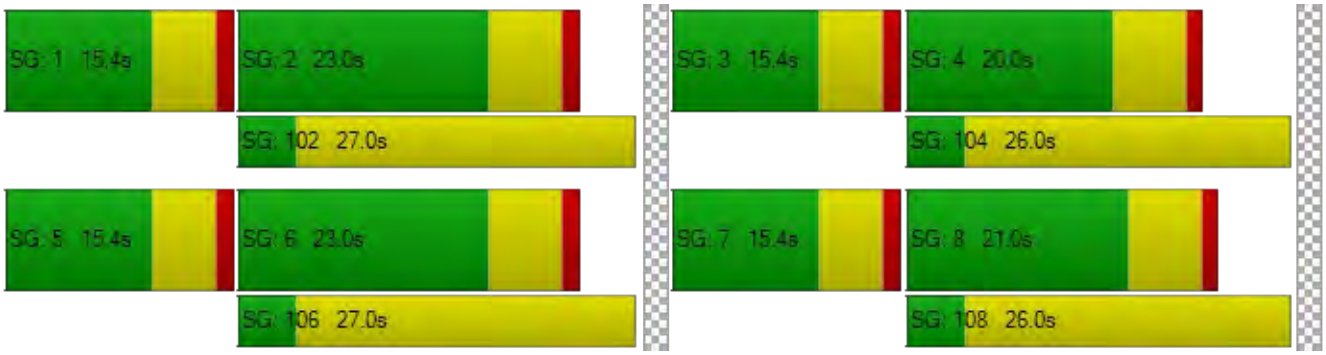
Vehicle Miles Traveled [mph]	13.54	113.16	110.71	11.91	5.17	80.36	0.00	25.15	3.38	42.13	36.28
Stops [stops/h]	26.76	233.44	229.46	258.70	66.14	614.34	0.00	107.53	19.81	250.87	221.83
Fuel consumption [US gal/h]	0.91	7.60	7.46	4.02	0.99	16.15	0.00	2.90	0.52	6.42	5.66
CO [g/h]	63.29	531.45	521.15	280.87	69.54	1128.96	0.00	202.81	36.26	448.51	395.61
NOx [g/h]	12.31	103.40	101.40	54.65	13.53	219.66	0.00	39.46	7.05	87.26	76.97
VOC [g/h]	14.67	123.17	120.78	65.09	16.12	261.65	0.00	47.00	8.40	103.95	91.69

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.54	26.54	26.54	26.54
l_p,int, Pedestrian LOS Score for Intersectio	2.323	2.549	2.650	2.456
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	440	411	499	499
d_b, Bicycle Delay [s]	20.72	21.51	19.19	19.19
l_b,int, Bicycle LOS Score for Intersection	2.051	2.149	2.868	2.597
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: W. San Bernardino Ave/New York Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.50	8.30	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.40		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.00					
Intersection LOS						

Intersection Level Of Service Report
Intersection 5: W. Lugonia Avenue/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	59.6
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.864

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	200.00	100.00	100.00	100.00	100.00	50.00	135.00	100.00	85.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	253	362	245	107	106	11	77	873	407	80	427	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	253	362	245	107	106	11	77	873	407	80	427	129
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	93	63	28	27	3	20	225	105	21	110	33
Total Analysis Volume [veh/h]	260	372	252	110	109	11	79	898	419	82	439	133
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	19.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Maximum Green [s]	40.0	25.0	0.0	20.0	25.0	0.0	30.0	35.0	0.0	30.0	35.0	0.0
Amber [s]	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	20.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	34.0	0.0	9.0	34.0	0.0	9.0	36.0	0.0	9.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
Vehicle Extension [s]	3.0	2.0	0.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C
C, Calculated Cycle Length [s]	66	66	66	66	66	66	66	66	66	66	66
L, Total Lost Time per Cycle [s]	4.50	5.00	5.00	4.50	5.00	5.00	4.50	5.00	5.00	4.50	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	3.00	3.00	2.50	3.00	3.00	2.50	3.00	3.00	2.50	3.00
g_i, Effective Green Time [s]	5.0	15.0	15.0	5.0	15.0	15.0	3.8	22.7	22.7	3.9	22.8
g / C, Green / Cycle	0.08	0.23	0.23	0.08	0.23	0.23	0.06	0.35	0.35	0.06	0.35
(v / s)_i Volume / Saturation Flow Rate	0.14	0.20	0.16	0.06	0.06	0.01	0.04	0.25	0.26	0.05	0.31
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	3618	1615	1810	1825
c, Capacity [veh/h]	138	434	369	138	434	369	106	1253	559	107	634
d1, Uniform Delay [s]	30.30	24.27	23.13	29.80	20.71	19.65	30.41	18.65	18.93	30.40	20.35
k, delay calibration	0.50	0.04	0.04	0.07	0.04	0.04	0.04	0.11	0.11	0.04	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	424.33	1.93	0.84	6.63	0.11	0.01	3.93	0.78	2.05	4.18	8.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.88	0.86	0.68	0.80	0.25	0.03	0.75	0.72	0.75	0.76	0.90
d, Delay for Lane Group [s/veh]	454.63	26.20	23.97	36.43	20.82	19.67	34.34	19.43	20.98	34.58	28.75
Lane Group LOS	F	C	C	D	C	B	C	B	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	18.27	5.19	3.29	1.83	1.25	0.12	1.26	5.26	5.17	1.31	8.61
50th-Percentile Queue Length [ft/ln]	456.82	129.78	82.16	45.87	31.32	3.00	31.42	131.42	129.23	32.76	215.14
95th-Percentile Queue Length [veh/ln]	29.66	8.93	5.92	3.30	2.26	0.22	2.26	9.02	8.90	2.36	13.42
95th-Percentile Queue Length [ft/ln]	741.59	223.20	147.89	82.56	56.38	5.40	56.55	225.42	222.45	58.96	335.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	454.63	26.20	23.97	36.43	20.82	19.67	34.34	19.43	20.98	34.58	28.75	28.75
Movement LOS	F	C	C	D	C	B	C	B	C	C	C	C
d_A, Approach Delay [s/veh]	151.57			28.23			20.74			29.48		
Approach LOS	F			C			C			C		
d_I, Intersection Delay [s/veh]	59.64											
Intersection LOS	E											
Intersection V/C	0.864											

Emissions

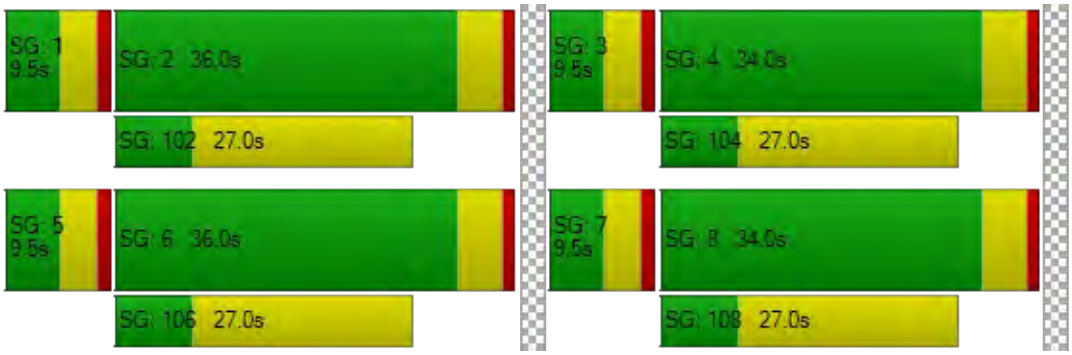
Vehicle Miles Traveled [mph]	72.26	103.39	70.04	11.86	11.75	1.19	5.95	67.67	31.57	10.19	71.10
Stops [stops/h]	1002.86	284.91	180.37	100.69	68.76	6.58	68.97	577.02	283.71	71.91	472.30
Fuel consumption [US gal/h]	36.49	8.49	5.51	2.23	1.56	0.15	1.44	11.64	5.71	1.65	10.53
CO [g/h]	2550.63	593.18	385.14	155.84	108.93	10.57	100.85	813.82	398.90	115.23	736.25
NOx [g/h]	496.26	115.41	74.93	30.32	21.19	2.06	19.62	158.34	77.61	22.42	143.25
VOC [g/h]	591.13	137.48	89.26	36.12	25.25	2.45	23.37	188.61	92.45	26.71	170.63

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	22.72	22.72	22.72	22.72
l_p,int, Pedestrian LOS Score for Intersectio	2.671	2.378	2.830	2.736
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	884	884	945	945
d_b, Bicycle Delay [s]	10.21	10.21	9.12	9.12
l_b,int, Bicycle LOS Score for Intersection	3.018	1.939	2.711	2.639
Bicycle LOS	C	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Tennessee Street/I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.521

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	202	709	0	0	543	78	0	0	0	161	5	180
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	202	709	0	0	543	78	0	0	0	161	5	180
Peak Hour Factor	0.9740	0.9740	0.9500	0.9500	0.9740	0.9740	0.9500	0.9500	0.9500	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	182	0	0	139	20	0	0	0	41	1	46
Total Analysis Volume [veh/h]	207	728	0	0	557	80	0	0	0	165	5	185
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Amber [s]	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.5	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	11.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	59.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	C
C, Calculated Cycle Length [s]	45	45	45	45		45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	10.3	25.8	11.5	11.5		11.4	11.4
g / C, Green / Cycle	0.23	0.57	0.25	0.25		0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.11	0.20	0.15	0.05		0.09	0.11
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1812	1615
c, Capacity [veh/h]	413	2067	922	411		456	407
d1, Uniform Delay [s]	15.22	5.21	14.85	13.22		13.97	14.30
k, delay calibration	0.04	0.04	0.04	0.04		0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	0.35	0.04	0.24	0.08		0.19	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.35	0.60	0.19		0.37	0.45
d, Delay for Lane Group [s/veh]	15.57	5.24	15.09	13.30		14.16	14.59
Lane Group LOS	B	A	B	B		B	B
Critical Lane Group	Yes	No	Yes	No		No	Yes
50th-Percentile Queue Length [veh/ln]	1.53	0.95	2.02	0.52		1.25	1.40
50th-Percentile Queue Length [ft/ln]	38.19	23.63	50.38	12.93		31.17	34.88
95th-Percentile Queue Length [veh/ln]	2.75	1.70	3.63	0.93		2.24	2.51
95th-Percentile Queue Length [ft/ln]	68.75	42.54	90.69	23.27		56.10	62.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.57	5.24	0.00	0.00	15.09	13.30	0.00	0.00	0.00	14.16	14.16	14.59
Movement LOS	B	A			B	B				B	B	B
d_A, Approach Delay [s/veh]	7.53			14.87			0.00			14.39		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	11.22											
Intersection LOS	B											
Intersection V/C	0.521											

Emissions

Vehicle Miles Traveled [mph]	23.37	82.20	154.81	22.23		189.05	205.73
Stops [stops/h]	121.55	150.44	320.69	41.15		99.19	111.01
Fuel consumption [US gal/h]	2.69	5.20	10.41	1.42		8.82	9.63
CO [g/h]	187.84	363.43	727.41	99.07		616.56	673.29
NOx [g/h]	36.55	70.71	141.53	19.28		119.96	131.00
VOC [g/h]	43.53	84.23	168.58	22.96		142.89	156.04

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	15.33
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.022
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2365	597	0	597
d_b, Bicycle Delay [s]	0.75	11.14	22.62	11.14
l_b,int, Bicycle LOS Score for Intersection	2.331	2.085	4.132	1.852
Bicycle LOS	B	B	D	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Tennessee Street/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.830

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	683	117	155	524	0	249	411	346	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	683	117	155	524	0	249	411	346	0	0	0
Peak Hour Factor	0.9500	0.9610	0.9610	0.9610	0.9610	0.9500	0.9610	0.9610	0.9610	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	178	30	40	136	0	65	107	90	0	0	0
Total Analysis Volume [veh/h]	0	711	122	161	545	0	259	428	360	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0.0	40.0	0.0	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
Amber [s]	0.0	4.5	0.0	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	19.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	3.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	22.0	0.0	17.0	44.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0.0	10.0	0.0	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		Yes		No	Yes			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	C	
C, Calculated Cycle Length [s]	62	62	62	62	62	62	
L, Total Lost Time per Cycle [s]	5.50	5.50	5.00	5.50	5.50	5.50	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.50	3.50	3.00	3.50	3.50	3.50	
g_i, Effective Green Time [s]	16.0	16.0	9.4	30.3	20.5	20.5	
g / C, Green / Cycle	0.26	0.26	0.15	0.49	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.22	0.23	0.09	0.15	0.30	0.30	
s, saturation flow rate [veh/h]	1900	1807	1810	3618	1856	1685	
c, Capacity [veh/h]	490	466	275	1775	615	559	
d1, Uniform Delay [s]	21.80	22.13	24.42	9.45	19.62	19.62	
k, delay calibration	0.20	0.24	0.04	0.04	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	7.60	12.19	0.74	0.04	4.64	5.10	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.85	0.89	0.59	0.31	0.89	0.89	
d, Delay for Lane Group [s/veh]	29.40	34.32	25.16	9.48	24.26	24.73	
Lane Group LOS	C	C	C	A	C	C	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	6.05	6.67	2.04	1.75	7.49	6.88	
50th-Percentile Queue Length [ft/ln]	151.35	166.80	51.05	43.64	187.28	171.94	
95th-Percentile Queue Length [veh/ln]	10.09	10.91	3.68	3.14	11.98	11.18	
95th-Percentile Queue Length [ft/ln]	252.23	272.70	91.89	78.55	299.50	279.46	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	31.44	34.32	25.16	9.48	0.00	24.26	24.41	24.73	0.00	0.00	0.00
Movement LOS		C	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	31.86			13.06			24.48			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	23.74											
Intersection LOS	C											
Intersection V/C	0.830											

Emissions

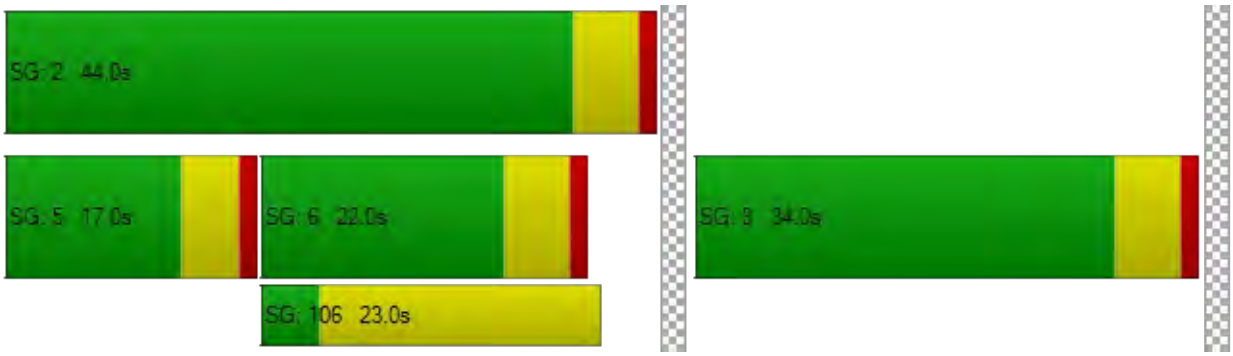
Vehicle Miles Traveled [mph]	32.91	32.91	18.18	61.54	286.49	260.23	
Stops [stops/h]	352.41	388.37	118.86	203.22	436.07	400.34	
Fuel consumption [US gal/h]	7.13	7.90	2.64	5.25	16.91	15.43	
CO [g/h]	498.61	552.43	184.77	367.15	1182.10	1078.70	
NOx [g/h]	97.01	107.48	35.95	71.43	229.99	209.88	
VOC [g/h]	115.56	128.03	42.82	85.09	273.96	250.00	

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	23.44
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.045
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	534	1245	922	0
d_b, Bicycle Delay [s]	16.62	4.41	8.99	30.92
l_b,int, Bicycle LOS Score for Intersection	2.247	2.142	2.423	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: W. Pioneer Avenue/Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.50	9.00	8.30	8.50	9.00	8.30	7.20	0.00	0.00	7.20	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.60			8.60			2.40			2.40		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.50											
Intersection LOS												

Intersection Level Of Service Report
Intersection 9: New York Street/Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.20	0.00	8.50	8.30
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		3.60		8.40	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.00					
Intersection LOS						

Intersection Level Of Service Report
Intersection 10: New York Street/Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.20	0.00	0.00	0.00	8.50	8.30
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	3.60		0.00		8.40	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.00					
Intersection LOS						

Intersection Level Of Service Report
Intersection 11: W. San Bernardino Avenue/Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.198

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	101	142	765	498	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	101	142	765	498	8
Peak Hour Factor	0.9500	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	27	38	205	134	2
Total Analysis Volume [veh/h]	0	108	152	821	534	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.20	0.15	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	13.20	8.66	0.00	0.00	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.73	0.28	0.28	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	18.22	6.91	6.91	0.00	0.00
d_A, Approach Delay [s/veh]	13.20		1.35		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.69					
Intersection LOS	B					

Vistro File: C:\...\25-124 Pioneer Park_JM_3.23.26 Updated 2035 Lane Geometry.vistro
Scenario 3 Ex PP AM

Report File: C:\...\EX PP AM.pdf
4/13/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	Two-way stop	HCM 7th Edition	NB Left	23.966	10,000.0	F
2	W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	HCM 7th Edition	SB Left	0.672	24.6	C
3	W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	HCM 7th Edition	WB Thru	0.821	73.4	E
4	W. San Bernardino Ave/New York Street	Two-way stop	HCM 7th Edition	SB Left	0.468	193.1	F
5	W. Lugonia Avenue/Tennessee Street	Signalized	HCM 7th Edition	NB Left	0.803	20.4	C
6	Tennessee Street/I-10 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.514	11.8	B
7	Tennessee Street/I-10 EB Ramps	Signalized	HCM 7th Edition	NB Right	0.793	19.9	B
8	W. Pioneer Avenue/Project Driveway 1	Two-way stop	HCM 7th Edition	NB Left	0.004	8.6	A
9	New York Street/Project Driveway 2	Two-way stop	HCM 7th Edition	WB Thru	0.001	8.5	A
10	New York Street/Project Driveway 3	Two-way stop	HCM 7th Edition	EB Left	0.016	9.2	A
11	W. San Bernardino Avenue/Driveway 4	Two-way stop	HCM 7th Edition	SB Right	0.060	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	23.966

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	216	0	26	18	0	149	229	275	0	0	319	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	0	1	0	0	0	0	6	4	1	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	218	0	27	18	0	149	229	281	4	1	321	50
Peak Hour Factor	0.5970	0.5970	0.5970	0.5970	0.9500	0.5970	0.5970	0.5970	0.5970	0.5970	0.5970	0.5970
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	0	11	8	0	62	96	118	2	0	134	21
Total Analysis Volume [veh/h]	365	0	45	30	0	250	384	471	7	2	538	84
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No			
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	23.97	0.00	0.08	0.93	0.00	0.48	0.40	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	10000.0	10000.0	10000.0	319.31	0.00	18.26	11.14	0.00	0.00	8.29	0.00	0.00
Movement LOS	F	F	F	F		C	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	52.07	52.07	52.07	3.22	0.00	2.60	1.92	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1301.77	1301.77	1301.77	80.56	0.00	64.93	48.00	0.00	0.00	0.09	0.09	0.09
d_A, Approach Delay [s/veh]	10000.00			50.52			4.96			0.03		
Approach LOS	F			F			A			A		
d_I, Intersection Delay [s/veh]	1892.66											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 2: W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	225.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	155.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			50.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	1	36	418	413	400	77	360	40	55	290	301
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	5	0	0	0	8	0	17	21	37
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	11	0	0	100	0	0	10	0	0	85
Total Hourly Volume [veh/h]	13	1	31	423	413	300	77	368	30	72	311	253
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	8	112	109	80	20	98	8	19	82	67
Total Analysis Volume [veh/h]	14	1	33	449	438	318	82	390	32	76	330	268
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	20.0	30.0	20.0	20.0	30.0	0.0	20.0	40.0	0.0	20.0	40.0	0.0
Amber [s]	4.4	5.0	4.4	4.4	5.0	0.0	4.4	5.0	0.0	4.4	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	24.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	20.0	11.0	20.0	29.0	0.0	11.0	15.0	0.0	11.0	15.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	57	57	57	57	57	57	57	57	57	57	57	57
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3.4	3.5	17.1	16.0	16.0	16.0	8.7	12.0	12.0	9.7	12.9	12.9
g / C, Green / Cycle	0.06	0.06	0.30	0.28	0.28	0.28	0.15	0.21	0.21	0.17	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.02	0.25	0.21	0.21	0.05	0.11	0.02	0.04	0.17	0.17
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1638	1810	3618	1615	1810	1900	1615
c, Capacity [veh/h]	109	115	484	507	533	460	276	760	339	306	430	366
d1, Uniform Delay [s]	25.42	25.21	15.31	19.67	18.77	18.81	21.47	19.97	18.18	20.57	20.67	20.48
k, delay calibration	0.04	0.04	0.04	0.37	0.04	0.04	0.04	0.04	0.04	0.04	0.28	0.25
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	0.01	0.02	15.44	0.84	1.01	0.22	0.20	0.04	0.16	7.26	6.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.01	0.07	0.89	0.76	0.76	0.30	0.51	0.09	0.25	0.77	0.73
d, Delay for Lane Group [s/veh]	25.62	25.23	15.33	35.11	19.61	19.82	21.69	20.17	18.22	20.73	27.94	26.91
Lane Group LOS	C	C	B	D	B	B	C	C	B	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.17	0.01	0.29	7.27	4.51	3.94	0.85	1.93	0.29	0.78	4.34	3.45
50th-Percentile Queue Length [ft/ln]	4.31	0.30	7.14	181.74	112.64	98.61	21.14	48.28	7.24	19.40	108.60	86.24
95th-Percentile Queue Length [veh/ln]	0.31	0.02	0.51	11.69	7.99	7.10	1.52	3.48	0.52	1.40	7.76	6.21
95th-Percentile Queue Length [ft/ln]	7.76	0.55	12.85	292.28	199.66	177.49	38.05	86.90	13.03	34.91	194.06	155.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.62	25.23	15.33	35.11	19.63	19.82	21.69	20.17	18.22	20.73	27.94	26.91
Movement LOS	C	C	B	D	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	18.54			25.45			20.30			26.71		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	24.59											
Intersection LOS	C											
Intersection V/C	0.672											

Emissions

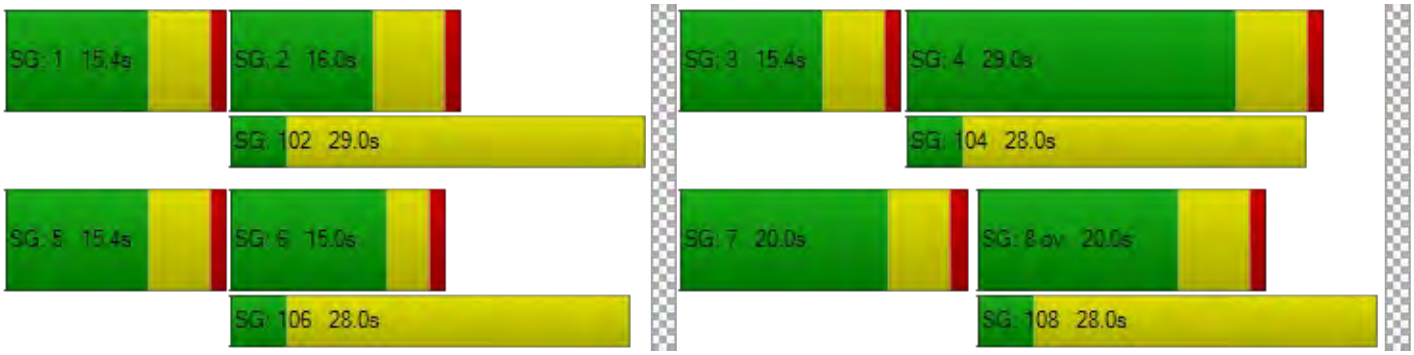
Vehicle Miles Traveled [mph]	1.40	0.10	3.31	50.17	45.20	39.28	7.03	33.45	2.74	10.11	43.90	35.66
Stops [stops/h]	10.87	0.77	18.00	458.32	284.05	248.68	53.31	243.49	18.25	48.92	273.88	217.48
Fuel consumption [US gal/h]	0.21	0.01	0.36	7.81	5.04	4.41	1.42	6.46	0.49	1.28	6.79	5.39
CO [g/h]	14.56	1.03	25.48	545.62	352.58	308.17	98.96	451.48	34.30	89.15	474.37	377.02
NOx [g/h]	2.83	0.20	4.96	106.16	68.60	59.96	19.25	87.84	6.67	17.35	92.29	73.35
VOC [g/h]	3.37	0.24	5.90	126.45	81.71	71.42	22.94	104.63	7.95	20.66	109.94	87.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.11	21.11	21.11	21.11
l_p,int, Pedestrian LOS Score for Intersectio	2.435	2.761	2.708	2.881
Crosswalk LOS	B	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	806	350	385
d_b, Bicycle Delay [s]	16.27	10.18	19.43	18.61
l_b,int, Bicycle LOS Score for Intersection	1.657	2.636	1.984	2.812
Bicycle LOS	A	B	A	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: W. San Bernardino Avenue/210 WB Ramps/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	73.4
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.821

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	136.00	100.00	165.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	308	22	186	16	89	194	0	140	29	529	373
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	10	13	0	0	0	19	0	29	75	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	308	32	199	16	89	194	19	140	58	604	387
Peak Hour Factor	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	85	9	55	4	24	53	5	39	16	166	106
Total Analysis Volume [veh/h]	36	339	35	219	18	98	213	21	154	64	665	426
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20.0	25.0	0.0	20.0	25.0	0.0	25.0	40.0	0.0	25.0	40.0	0.0
Amber [s]	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	22.0	0.0	0.0	22.0	0.0	0.0	23.0	0.0	0.0	23.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	21.0	0.0	11.0	20.0	0.0	11.0	23.0	0.0	11.0	23.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.5	12.1	12.1	11.3	16.9	11.2	21.7	21.7	8.6	19.0	19.0
g / C, Green / Cycle	0.09	0.17	0.17	0.16	0.24	0.16	0.31	0.31	0.12	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.02	0.10	0.10	0.12	0.07	0.06	0.01	0.10	0.04	0.35	0.26
s, saturation flow rate [veh/h]	1810	1900	1839	1810	1653	3514	1900	1615	1810	1900	1615
c, Capacity [veh/h]	169	329	319	294	401	567	591	503	223	518	441
d1, Uniform Delay [s]	29.19	26.42	26.46	27.78	21.49	26.06	16.70	18.26	27.76	25.32	25.01
k, delay calibration	0.04	0.04	0.04	0.23	0.04	0.04	0.04	0.04	0.04	0.50	0.47
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.59	0.62	7.56	0.15	0.15	0.01	0.13	0.26	141.45	34.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.57	0.58	0.74	0.29	0.38	0.04	0.31	0.29	1.28	0.97
d, Delay for Lane Group [s/veh]	29.42	27.01	27.08	35.34	21.64	26.22	16.71	18.39	28.02	166.77	59.07
Lane Group LOS	C	C	C	D	C	C	B	B	C	F	E
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.55	2.81	2.75	3.94	1.48	1.45	0.21	1.68	0.91	27.85	10.25
50th-Percentile Queue Length [ft/ln]	13.72	70.14	68.76	98.38	37.12	36.17	5.22	41.97	22.63	696.37	256.14
95th-Percentile Queue Length [veh/ln]	0.99	5.05	4.95	7.08	2.67	2.60	0.38	3.02	1.63	41.81	15.50
95th-Percentile Queue Length [ft/ln]	24.70	126.26	123.77	177.08	66.82	65.11	9.39	75.55	40.73	1045.17	387.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.42	27.04	27.08	35.34	21.64	21.64	26.22	16.71	18.39	28.02	166.77	59.07
Movement LOS	C	C	C	D	C	C	C	B	B	C	F	E
d_A, Approach Delay [s/veh]	27.26			30.59			22.59			119.36		
Approach LOS	C			C			C			F		
d_I, Intersection Delay [s/veh]	73.45											
Intersection LOS	E											
Intersection V/C	0.821											

Emissions

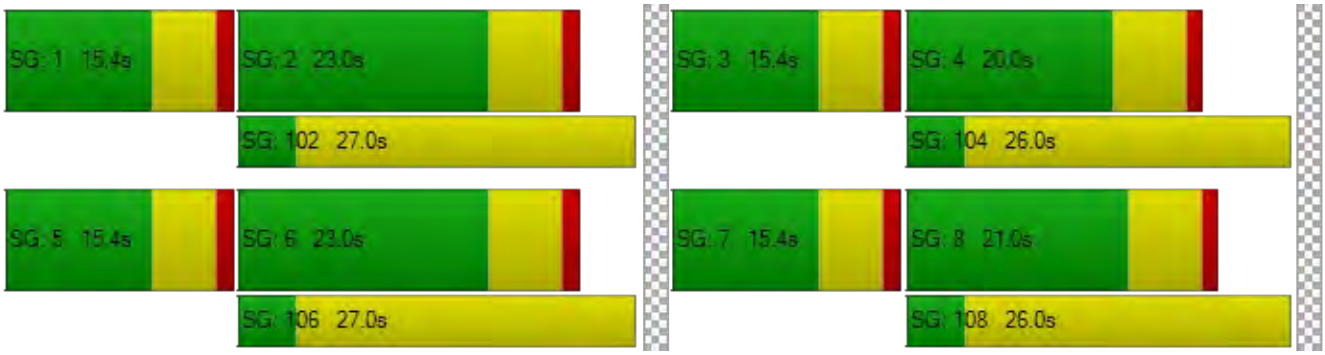
Vehicle Miles Traveled [mph]	14.34	75.31	73.67	10.48	5.55	28.34	2.79	20.49	8.32	86.46	55.39
Stops [stops/h]	28.38	145.04	142.19	203.42	76.76	149.59	10.79	86.79	46.79	1439.93	529.64
Fuel consumption [US gal/h]	0.96	4.94	4.84	3.13	1.16	3.97	0.30	2.36	1.23	43.43	13.60
CO [g/h]	67.29	345.37	338.16	218.79	81.33	277.34	21.06	164.80	86.11	3035.97	950.96
NOx [g/h]	13.09	67.20	65.79	42.57	15.82	53.96	4.10	32.06	16.75	590.69	185.02
VOC [g/h]	15.60	80.04	78.37	50.71	18.85	64.28	4.88	38.19	19.96	703.62	220.39

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	27.28	27.28	27.28	27.28
l_p,int, Pedestrian LOS Score for Intersectio	2.278	2.441	2.637	2.644
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	431	402	488	488
d_b, Bicycle Delay [s]	21.44	22.23	19.90	19.90
l_b,int, Bicycle LOS Score for Intersection	1.898	2.112	2.200	3.465
Bicycle LOS	A	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: W. San Bernardino Ave/New York Street

Control Type:	Two-way stop	Delay (sec / veh):	193.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	8	166	221	458	769	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	63	21	0	2	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	229	242	458	771	25
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	60	64	121	203	7
Total Analysis Volume [veh/h]	23	241	255	482	812	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.47	0.64	0.32	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	193.13	129.52	9.84	0.00	0.00	0.00
Movement LOS	F	F	A	A	A	A
95th-Percentile Queue Length [veh/ln]	11.71	11.71	0.53	0.53	0.00	0.00
95th-Percentile Queue Length [ft/ln]	292.72	292.72	13.16	13.16	0.00	0.00
d_A, Approach Delay [s/veh]	135.06		3.41		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	20.75					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: W. Lugonia Avenue/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.803

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	200.00	100.00	100.00	100.00	100.00	50.00	135.00	100.00	85.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	132	229	91	71	84	6	28	245	153	90	421	103
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	6	12	11	4	0	0	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	132	233	91	77	96	17	32	245	153	90	421	105
Peak Hour Factor	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	63	25	21	26	5	9	66	41	24	114	28
Total Analysis Volume [veh/h]	143	252	98	83	104	18	35	265	166	97	455	114
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	19.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Maximum Green [s]	40.0	25.0	0.0	20.0	25.0	0.0	30.0	35.0	0.0	30.0	35.0	0.0
Amber [s]	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	20.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	34.0	0.0	9.0	34.0	0.0	9.0	36.0	0.0	9.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
Vehicle Extension [s]	3.0	2.0	0.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C
C, Calculated Cycle Length [s]	52	52	52	52	52	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]	4.50	5.00	5.00	4.50	5.00	5.00	4.50	5.00	5.00	4.50	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	3.00	3.00	2.50	3.00	3.00	2.50	3.00	3.00	2.50	3.00
g_i, Effective Green Time [s]	5.0	8.9	8.9	3.5	7.4	7.4	2.0	16.6	16.6	3.8	18.4
g / C, Green / Cycle	0.10	0.17	0.17	0.07	0.14	0.14	0.04	0.32	0.32	0.07	0.36
(v / s)_i Volume / Saturation Flow Rate	0.08	0.13	0.06	0.05	0.05	0.01	0.02	0.07	0.10	0.05	0.31
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	3618	1615	1810	1835
c, Capacity [veh/h]	175	326	277	122	271	230	70	1160	518	132	652
d1, Uniform Delay [s]	22.93	20.48	18.91	23.57	20.13	19.24	24.39	12.88	13.30	23.49	15.59
k, delay calibration	0.14	0.04	0.04	0.04	0.04	0.04	0.04	0.11	0.11	0.04	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.62	1.50	0.29	2.44	0.33	0.05	2.08	0.10	0.35	2.95	3.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.77	0.35	0.68	0.38	0.08	0.50	0.23	0.32	0.73	0.87
d, Delay for Lane Group [s/veh]	34.54	21.98	19.20	26.02	20.46	19.30	26.47	12.98	13.66	26.44	19.42
Lane Group LOS	C	C	B	C	C	B	C	B	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.06	2.63	0.92	0.96	1.01	0.17	0.41	0.93	1.24	1.13	5.58
50th-Percentile Queue Length [ft/ln]	51.56	65.65	22.91	23.96	25.35	4.18	10.36	23.36	30.99	28.30	139.59
95th-Percentile Queue Length [veh/ln]	3.71	4.73	1.65	1.73	1.83	0.30	0.75	1.68	2.23	2.04	9.46
95th-Percentile Queue Length [ft/ln]	92.80	118.17	41.24	43.13	45.63	7.52	18.64	42.06	55.78	50.93	236.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.54	21.98	19.20	26.02	20.46	19.30	26.47	12.98	13.66	26.44	19.42	19.42
Movement LOS	C	C	B	C	C	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	25.07			22.61			14.23			20.44		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	20.35											
Intersection LOS	C											
Intersection V/C	0.803											

Emissions

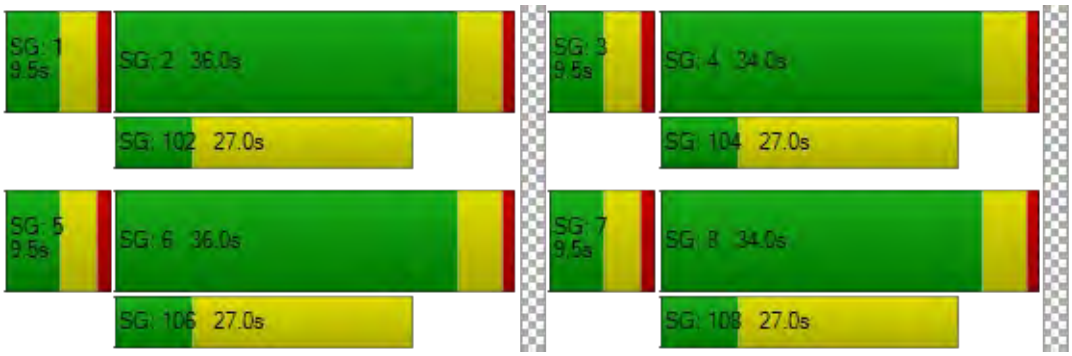
Vehicle Miles Traveled [mph]	39.74	70.04	27.24	8.95	11.21	1.94	2.64	19.97	12.51	12.06	70.72
Stops [stops/h]	143.47	182.69	63.75	66.69	70.55	11.62	28.82	130.04	86.24	78.75	388.47
Fuel consumption [US gal/h]	3.84	5.43	1.98	1.42	1.53	0.25	0.57	2.69	1.76	1.73	8.60
CO [g/h]	268.30	379.60	138.74	98.92	106.79	17.78	39.57	188.22	122.79	120.75	601.02
NOx [g/h]	52.20	73.86	26.99	19.25	20.78	3.46	7.70	36.62	23.89	23.49	116.94
VOC [g/h]	62.18	87.97	32.15	22.92	24.75	4.12	9.17	43.62	28.46	27.98	139.29

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.04	16.04	16.04	16.04
l_p,int, Pedestrian LOS Score for Intersectio	2.492	2.297	2.550	2.461
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1121	1121	1198	1198
d_b, Bicycle Delay [s]	5.00	5.00	4.16	4.16
l_b,int, Bicycle LOS Score for Intersection	2.373	1.898	1.944	2.659
Bicycle LOS	B	A	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Tennessee Street/I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.514

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	232	436	0	0	385	101	0	0	0	231	5	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	0	0	6	6	0	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	232	439	0	0	391	107	0	0	0	231	5	97
Peak Hour Factor	0.9618	0.9618	0.9500	0.9500	0.9618	0.9618	0.9500	0.9500	0.9500	0.9618	0.9618	0.9618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	114	0	0	102	28	0	0	0	60	1	25
Total Analysis Volume [veh/h]	241	456	0	0	407	111	0	0	0	240	5	101
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Amber [s]	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.5	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	11.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	59.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	C
C, Calculated Cycle Length [s]	45	45	45	45		45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	10.6	26.1	11.5	11.5		11.4	11.4
g / C, Green / Cycle	0.23	0.57	0.25	0.25		0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.11	0.07		0.13	0.07
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1810	1627
c, Capacity [veh/h]	421	2076	916	409		453	407
d1, Uniform Delay [s]	15.45	4.73	14.29	13.62		14.73	13.67
k, delay calibration	0.04	0.04	0.04	0.04		0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	0.46	0.02	0.13	0.13		0.36	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.22	0.44	0.27		0.53	0.26
d, Delay for Lane Group [s/veh]	15.91	4.75	14.42	13.75		15.09	13.80
Lane Group LOS	B	A	B	B		B	B
Critical Lane Group	Yes	No	Yes	No		Yes	No
50th-Percentile Queue Length [veh/ln]	1.82	0.54	1.41	0.74		1.87	0.76
50th-Percentile Queue Length [ft/ln]	45.54	13.50	35.36	18.55		46.69	19.03
95th-Percentile Queue Length [veh/ln]	3.28	0.97	2.55	1.34		3.36	1.37
95th-Percentile Queue Length [ft/ln]	81.97	24.30	63.65	33.38		84.05	34.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.91	4.75	0.00	0.00	14.42	13.75	0.00	0.00	0.00	15.09	13.80	13.80
Movement LOS	B	A			B	B				B	B	B
d_A, Approach Delay [s/veh]	8.61			14.28			0.00			14.69		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	11.84											
Intersection LOS	B											
Intersection V/C	0.514											

Emissions

Vehicle Miles Traveled [mph]	27.21	51.49	113.12	30.85		266.90	117.88
Stops [stops/h]	144.16	85.48	223.87	58.71		147.82	60.23
Fuel consumption [US gal/h]	3.17	3.12	7.45	1.99		12.54	5.48
CO [g/h]	221.68	218.42	520.44	139.27		876.63	383.27
NOx [g/h]	43.13	42.50	101.26	27.10		170.56	74.57
VOC [g/h]	51.38	50.62	120.62	32.28		203.17	88.83

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	15.45
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.020
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2352	594	0	594
d_b, Bicycle Delay [s]	0.71	11.25	22.74	11.25
l_b,int, Bicycle LOS Score for Intersection	2.135	1.987	4.132	1.845
Bicycle LOS	B	A	D	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Tennessee Street/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	520	175	89	522	0	148	216	472	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	3	3	0	2	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	521	175	92	525	0	150	216	472	0	0	0
Peak Hour Factor	0.9500	0.9411	0.9411	0.9411	0.9411	0.9500	0.9411	0.9411	0.9411	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	138	46	24	139	0	40	57	125	0	0	0
Total Analysis Volume [veh/h]	0	554	186	98	558	0	159	230	502	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0.0	40.0	0.0	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
Amber [s]	0.0	4.5	0.0	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	19.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	3.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	22.0	0.0	17.0	44.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0.0	10.0	0.0	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		Yes		No	Yes			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	C	
C, Calculated Cycle Length [s]	59	59	59	59	59	59	
L, Total Lost Time per Cycle [s]	5.50	5.50	5.00	5.50	5.50	5.50	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.50	3.50	3.00	3.50	3.50	3.50	
g_i, Effective Green Time [s]	14.4	14.4	8.0	27.4	20.4	20.4	
g / C, Green / Cycle	0.24	0.24	0.14	0.47	0.35	0.35	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.05	0.15	0.21	0.31	
s, saturation flow rate [veh/h]	1900	1745	1810	3618	1862	1615	
c, Capacity [veh/h]	464	427	247	1686	646	560	
d1, Uniform Delay [s]	20.82	21.28	23.16	9.90	15.84	18.19	
k, delay calibration	0.11	0.15	0.04	0.04	0.04	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.12	7.49	0.38	0.04	0.34	5.26	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.80	0.87	0.40	0.33	0.60	0.90	
d, Delay for Lane Group [s/veh]	23.94	28.77	23.54	9.94	16.18	23.44	
Lane Group LOS	C	C	C	A	B	C	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.53	5.11	1.14	1.78	3.88	6.48	
50th-Percentile Queue Length [ft/ln]	113.34	127.73	28.51	44.58	97.10	162.03	
95th-Percentile Queue Length [veh/ln]	8.03	8.82	2.05	3.21	6.99	10.66	
95th-Percentile Queue Length [ft/ln]	200.63	220.41	51.32	80.24	174.78	266.40	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.54	28.77	23.54	9.94	0.00	16.18	16.18	23.44	0.00	0.00	0.00
Movement LOS		C	C	C	A		B	B	C			
d_A, Approach Delay [s/veh]	26.35			11.98			20.27			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	19.86											
Intersection LOS	B											
Intersection V/C	0.793											

Emissions

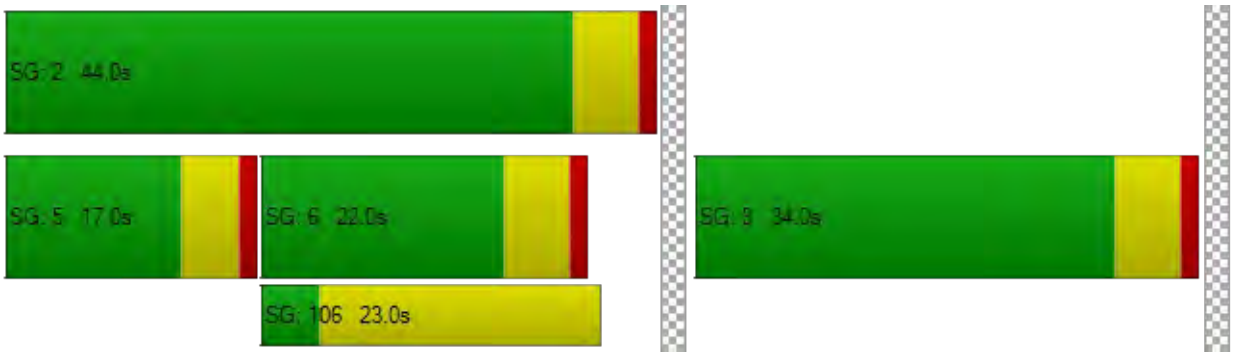
Vehicle Miles Traveled [mph]	29.24	29.24	11.07	63.01	203.12	262.13	
Stops [stops/h]	277.83	313.13	69.90	218.57	238.04	397.20	
Fuel consumption [US gal/h]	5.58	6.29	1.55	5.53	10.96	15.38	
CO [g/h]	390.00	439.65	108.52	386.79	765.98	1075.09	
NOx [g/h]	75.88	85.54	21.11	75.25	149.03	209.17	
VOC [g/h]	90.39	101.89	25.15	89.64	177.52	249.16	

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	21.92
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	1.947
Crosswalk LOS				A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	562	1311	970	0
d_b, Bicycle Delay [s]	15.19	3.49	7.78	29.37
l_b,int, Bicycle LOS Score for Intersection	2.170	2.101	2.295	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: W. Pioneer Avenue/Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	10	0	0	0	0	0	2	4	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	10	0	0	0	0	0	2	4	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	0	0	0	0	0	1	1	0	0
Total Analysis Volume [veh/h]	4	0	11	0	0	0	0	0	2	4	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.60	9.10	8.35	8.62	9.06	8.30	7.20	0.00	0.00	7.21	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	1.07	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18
d_A, Approach Delay [s/veh]	8.42			8.66			0.00			7.21		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	7.39											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 9: New York Street/Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	0	1	4	1	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	1	4	1	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	1	0	0
Total Analysis Volume [veh/h]	2	0	1	4	1	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.20	0.00	8.55	8.31
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.04	0.04	0.14	0.14
d_A, Approach Delay [s/veh]	0.00		1.44		8.43	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.67					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: New York Street/Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	2	20	0	14	57
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	2	20	0	14	57
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	1	5	0	4	15
Total Analysis Volume [veh/h]	24	2	21	0	15	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.02	0.06
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	9.17	8.66
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.23	0.23
95th-Percentile Queue Length [ft/ln]	1.05	1.05	0.00	0.00	5.87	5.87
d_A, Approach Delay [s/veh]	6.71		0.00		8.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.82					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: W. San Bernardino Avenue/Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.060

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	55	21	21	63	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	55	21	21	63	2
Peak Hour Factor	0.9500	0.9119	0.9119	0.9119	0.9119	0.9119
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	6	6	17	1
Total Analysis Volume [veh/h]	0	60	23	23	69	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.84	7.36	0.00	0.00	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.19	0.04	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.79	0.97	0.97	0.00	0.00
d_A, Approach Delay [s/veh]	8.84		3.68		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.95					
Intersection LOS	A					

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Report File: C:\...\EX PP PM.pdf

Scenario 4 Ex PP PM
4/10/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	Two-way stop	HCM 7th Edition	NB Left	0.565	62.6	F
2	W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	HCM 7th Edition	EB Thru	0.869	70.0	E
3	W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	HCM 7th Edition	SB Left	0.892	44.5	D
4	W. San Bernardino Ave/New York Street	Two-way stop	HCM 7th Edition	SB Left	0.232	80.2	F
5	W. Lugonia Avenue/Tennessee Street	Signalized	HCM 7th Edition	NB Left	0.877	63.5	E
6	Tennessee Street/I-10 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.526	11.2	B
7	Tennessee Street/I-10 EB Ramps	Signalized	HCM 7th Edition	NB Right	0.833	24.1	C
8	W. Pioneer Avenue/Project Driveway 1	Two-way stop	HCM 7th Edition	NB Left	0.003	8.7	A
9	New York Street/Project Driveway 2	Two-way stop	HCM 7th Edition	WB Thru	0.001	8.6	A
10	New York Street/Project Driveway 3	Two-way stop	HCM 7th Edition	EB Left	0.014	9.8	A
11	W. San Bernardino Avenue/Driveway 4	Two-way stop	HCM 7th Edition	SB Right	0.040	8.7	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Control Type:	Two-way stop	Delay (sec / veh):	62.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.565

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	76	0	74	52	0	54	85	593	0	0	109	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	1	0	0	0	0	4	3	2	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	0	75	52	0	54	85	597	3	2	115	33
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.9500	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	0	22	15	0	16	25	175	1	1	34	10
Total Analysis Volume [veh/h]	95	0	88	61	0	63	99	698	4	2	135	39
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No			
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.56	0.00	0.20	0.43	0.00	0.07	0.07	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	62.63	58.77	49.35	48.15	0.00	9.32	7.74	0.00	0.00	8.98	0.00	0.00
Movement LOS	F	F	E	E		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	5.47	5.47	5.47	1.90	0.00	0.23	0.23	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	136.74	136.74	136.74	47.51	0.00	5.66	5.64	0.00	0.00	0.09	0.09	0.09
d_A, Approach Delay [s/veh]	56.24			28.42			0.96			0.10		
Approach LOS	F			D			A			A		
d_I, Intersection Delay [s/veh]	11.37											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 2: W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive

Control Type:	Signalized	Delay (sec / veh):	70.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.869

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	225.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	155.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			50.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	22	318	287	542	231	47	806	125	100	190	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	19	16	0	0	0	24	0	12	15	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	84	0	0	58	0	0	31	0	0	29
Total Hourly Volume [veh/h]	32	22	253	303	542	173	47	830	94	112	205	88
Peak Hour Factor	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	6	70	84	150	48	13	229	26	31	57	24
Total Analysis Volume [veh/h]	35	24	280	335	599	191	52	917	104	124	227	97
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	20.0	30.0	20.0	20.0	30.0	0.0	20.0	40.0	0.0	20.0	40.0	0.0
Amber [s]	4.4	5.0	4.4	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	24.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	20.0	11.0	20.0	29.0	0.0	11.0	15.0	0.0	11.0	15.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	63	63	63	63	63	63	63	63	63	63	63	63
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.0	8.9	24.3	14.5	17.4	17.4	7.4	12.0	12.0	11.4	16.0	16.0
g / C, Green / Cycle	0.10	0.14	0.39	0.23	0.28	0.28	0.12	0.19	0.19	0.18	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.17	0.19	0.22	0.22	0.03	0.25	0.06	0.07	0.12	0.06
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1745	1810	3618	1615	1810	1900	1615
c, Capacity [veh/h]	174	269	625	418	525	482	214	692	309	328	484	411
d1, Uniform Delay [s]	26.16	23.42	15.33	22.78	20.97	20.98	25.13	25.38	21.94	22.57	19.80	18.55
k, delay calibration	0.04	0.04	0.41	0.22	0.08	0.08	0.04	0.19	0.04	0.04	0.15	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.05	1.92	7.24	1.95	2.16	0.22	150.53	0.24	0.27	1.01	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.09	0.45	0.80	0.78	0.78	0.24	1.33	0.34	0.38	0.47	0.24
d, Delay for Lane Group [s/veh]	26.37	23.47	17.26	30.02	22.92	23.14	25.35	175.91	22.18	22.84	20.81	18.66
Lane Group LOS	C	C	B	C	C	C	C	F	C	C	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.46	0.29	3.03	5.17	5.39	4.99	0.63	18.87	1.17	1.45	2.57	0.99
50th-Percentile Queue Length [ft/ln]	11.54	7.30	75.83	129.17	134.85	124.84	15.83	471.70	29.16	36.23	64.18	24.64
95th-Percentile Queue Length [veh/ln]	0.83	0.53	5.46	8.89	9.20	8.66	1.14	29.53	2.10	2.61	4.62	1.77
95th-Percentile Queue Length [ft/ln]	20.78	13.14	136.50	222.37	230.07	216.47	28.49	738.18	52.48	65.22	115.53	44.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.37	23.47	17.26	30.02	22.99	23.14	25.35	175.91	22.18	22.84	20.81	18.66
Movement LOS	C	C	B	C	C	C	C	F	C	C	C	B
d_A, Approach Delay [s/veh]	18.64			25.11			153.71			20.91		
Approach LOS	B			C			F			C		
d_I, Intersection Delay [s/veh]	69.97											
Intersection LOS	E											
Intersection V/C	0.869											

Emissions

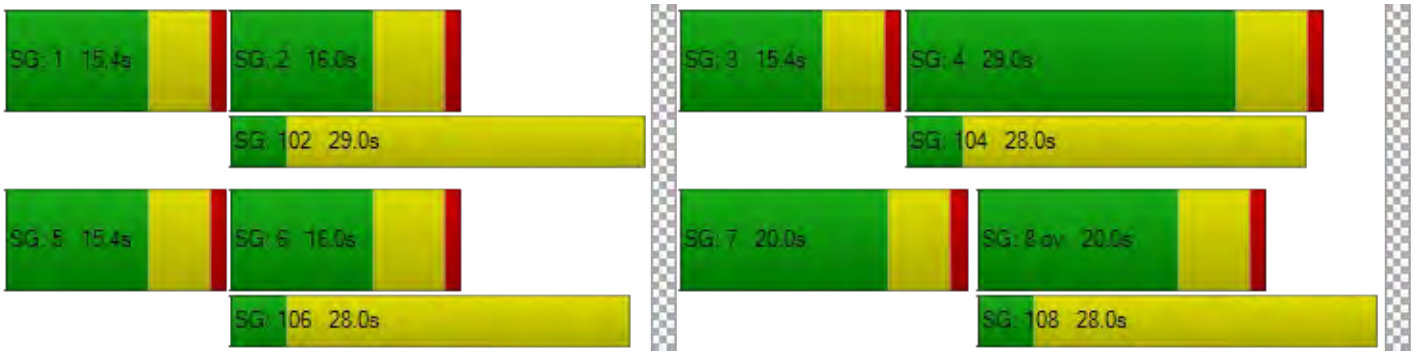
Vehicle Miles Traveled [mph]	3.51	2.41	28.08	37.43	45.98	42.30	4.46	78.64	8.92	16.50	30.20	12.91
Stops [stops/h]	26.48	16.75	173.99	296.36	309.39	286.43	36.31	2164.44	66.89	83.13	147.26	56.53
Fuel consumption [US gal/h]	0.52	0.33	3.36	5.22	5.52	5.11	0.97	68.68	1.79	2.18	3.83	1.51
CO [g/h]	36.40	23.24	235.03	365.22	385.90	356.96	68.15	4800.78	125.46	152.06	267.56	105.79
NOx [g/h]	7.08	4.52	45.73	71.06	75.08	69.45	13.26	934.06	24.41	29.59	52.06	20.58
VOC [g/h]	8.44	5.39	54.47	84.64	89.44	82.73	15.79	1112.63	29.08	35.24	62.01	24.52

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.89	23.89	23.89	23.89
l_p,int, Pedestrian LOS Score for Intersectio	2.695	2.637	2.853	2.938
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	446	733	319	319
d_b, Bicycle Delay [s]	18.94	12.60	22.18	22.18
l_b,int, Bicycle LOS Score for Intersection	2.258	2.536	2.470	2.347
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: W. San Bernardino Avenue/210 WB Ramps/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	44.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.892

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	136.00	100.00	165.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	492	39	235	23	79	571	0	179	25	306	264
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	31	40	0	0	0	59	0	20	51	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	492	70	275	23	79	571	59	179	45	357	274
Peak Hour Factor	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450	0.9450
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	130	19	73	6	21	151	16	47	12	94	72
Total Analysis Volume [veh/h]	34	521	74	291	24	84	604	62	189	48	378	290
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20.0	25.0	0.0	20.0	25.0	0.0	25.0	40.0	0.0	25.0	40.0	0.0
Amber [s]	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	22.0	0.0	0.0	22.0	0.0	0.0	23.0	0.0	0.0	23.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	21.0	0.0	11.0	20.0	0.0	11.0	23.0	0.0	11.0	23.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	72	72	72	72	72	72	72	72	72	72	72
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.4	15.1	15.1	11.4	20.1	11.4	21.4	21.4	7.6	17.6	17.6
g / C, Green / Cycle	0.09	0.21	0.21	0.16	0.28	0.16	0.30	0.30	0.11	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.16	0.16	0.06	0.17	0.03	0.12	0.03	0.20	0.18
s, saturation flow rate [veh/h]	1810	1900	1819	1810	1671	3514	1900	1615	1810	1900	1615
c, Capacity [veh/h]	162	400	383	288	469	560	569	484	193	469	399
d1, Uniform Delay [s]	30.20	26.51	26.54	30.06	19.79	30.06	18.13	19.87	29.32	25.32	24.73
k, delay calibration	0.04	0.20	0.20	0.46	0.04	0.05	0.04	0.04	0.04	0.27	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	5.30	5.73	53.17	0.09	39.27	0.03	0.19	0.25	7.88	4.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.76	0.76	1.01	0.23	1.08	0.11	0.39	0.25	0.81	0.73
d, Delay for Lane Group [s/veh]	30.44	31.81	32.27	83.23	19.88	69.33	18.17	20.06	29.56	33.20	29.42
Lane Group LOS	C	C	C	F	B	F	B	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.54	5.21	5.06	9.00	1.33	7.43	0.67	2.24	0.71	6.40	4.55
50th-Percentile Queue Length [ft/ln]	13.43	130.15	126.43	225.02	33.23	185.79	16.70	56.02	17.81	160.10	113.70
95th-Percentile Queue Length [veh/ln]	0.97	8.95	8.75	13.98	2.39	12.30	1.20	4.03	1.28	10.55	8.05
95th-Percentile Queue Length [ft/ln]	24.18	223.69	218.63	349.47	59.82	307.48	30.07	100.84	32.06	263.86	201.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.44	32.00	32.27	83.23	19.88	19.88	69.33	18.17	20.06	29.56	33.20	29.42
Movement LOS	C	C	C	F	B	B	F	B	C	C	C	C
d_A, Approach Delay [s/veh]	31.95			66.08			54.73			31.42		
Approach LOS	C			E			D			C		
d_I, Intersection Delay [s/veh]	44.54											
Intersection LOS	D											
Intersection V/C	0.892											

Emissions

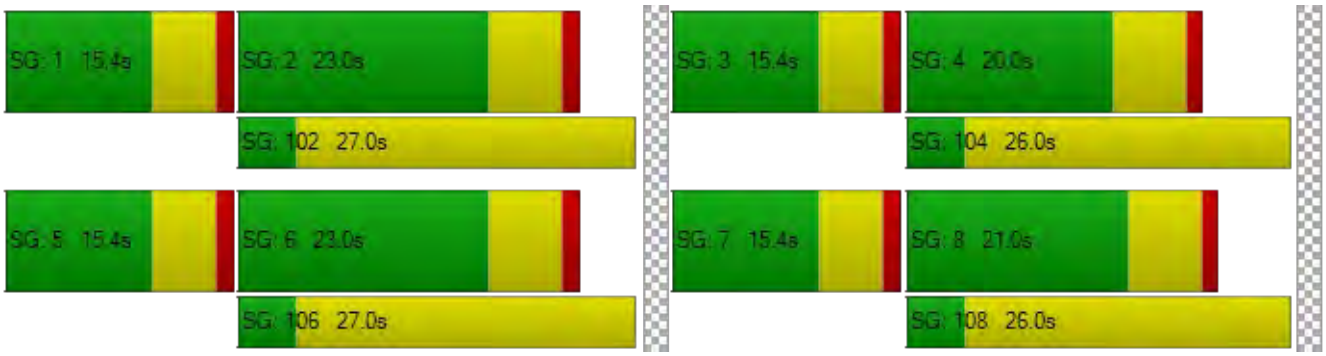
Vehicle Miles Traveled [mph]	13.54	120.79	116.24	13.92	5.17	80.36	8.25	25.15	6.24	49.15	37.71
Stops [stops/h]	27.05	262.06	254.57	453.09	66.92	748.21	33.64	112.81	35.87	322.38	228.95
Fuel consumption [US gal/h]	0.92	8.38	8.11	8.00	1.02	20.58	0.93	3.04	0.95	8.25	5.88
CO [g/h]	64.14	585.97	566.71	559.52	71.26	1438.41	65.02	212.22	66.31	576.45	410.67
NOx [g/h]	12.48	114.01	110.26	108.86	13.87	279.86	12.65	41.29	12.90	112.16	79.90
VOC [g/h]	14.87	135.80	131.34	129.67	16.52	333.37	15.07	49.18	15.37	133.60	95.18

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	28.20	28.20	28.20	28.20
l_p,int, Pedestrian LOS Score for Intersectio	2.339	2.564	2.686	2.540
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	420	392	475	475
d_b, Bicycle Delay [s]	22.33	23.13	20.78	20.78
l_b,int, Bicycle LOS Score for Intersection	2.079	2.218	2.970	2.741
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: W. San Bernardino Ave/New York Street

Control Type:	Two-way stop	Delay (sec / veh):	80.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.232

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	2	101	142	765	498	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	43	66	0	5	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	144	208	765	503	19
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	38	55	201	132	5
Total Analysis Volume [veh/h]	13	152	219	805	529	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.23	0.28	0.21	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	80.21	22.61	8.77	0.00	0.00	0.00
Movement LOS	F	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.74	2.74	0.41	0.41	0.00	0.00
95th-Percentile Queue Length [ft/ln]	68.56	68.56	10.37	10.37	0.00	0.00
d_A, Approach Delay [s/veh]	27.15		1.88		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	3.68					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: W. Lugonia Avenue/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	63.5
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.877

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	200.00	100.00	100.00	100.00	100.00	50.00	135.00	100.00	85.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	253	362	245	107	106	11	77	873	407	80	427	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	0	4	8	8	13	0	0	0	0	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	253	374	245	111	114	19	90	873	407	80	427	135
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	96	63	29	29	5	23	225	105	21	110	35
Total Analysis Volume [veh/h]	260	385	252	114	117	20	93	898	419	82	439	139
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	19.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Maximum Green [s]	40.0	25.0	0.0	20.0	25.0	0.0	30.0	35.0	0.0	30.0	35.0	0.0
Amber [s]	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	20.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	34.0	0.0	9.0	34.0	0.0	9.0	36.0	0.0	9.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
Vehicle Extension [s]	3.0	2.0	0.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C
C, Calculated Cycle Length [s]	69	69	69	69	69	69	69	69	69	69	69
L, Total Lost Time per Cycle [s]	4.50	5.00	5.00	4.50	5.00	5.00	4.50	5.00	5.00	4.50	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	3.00	3.00	2.50	3.00	3.00	2.50	3.00	3.00	2.50	3.00
g_i, Effective Green Time [s]	5.0	16.1	16.1	5.0	16.1	16.1	4.6	24.5	24.5	4.0	23.9
g / C, Green / Cycle	0.07	0.23	0.23	0.07	0.23	0.23	0.07	0.36	0.36	0.06	0.35
(v / s)_i Volume / Saturation Flow Rate	0.14	0.20	0.16	0.06	0.06	0.01	0.05	0.25	0.26	0.05	0.32
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	3618	1615	1810	1823
c, Capacity [veh/h]	132	445	378	132	445	378	121	1292	577	107	636
d1, Uniform Delay [s]	31.79	25.22	23.83	31.45	21.43	20.37	31.48	18.85	19.14	31.81	21.27
k, delay calibration	0.50	0.04	0.04	0.11	0.04	0.04	0.04	0.11	0.13	0.04	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	462.92	2.02	0.76	15.27	0.12	0.02	3.86	0.68	2.06	4.35	9.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.97	0.87	0.67	0.86	0.26	0.05	0.77	0.70	0.73	0.77	0.91
d, Delay for Lane Group [s/veh]	494.70	27.25	24.59	46.72	21.55	20.39	35.35	19.54	21.20	36.16	31.09
Lane Group LOS	F	C	C	D	C	C	D	B	C	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	19.00	5.68	3.44	2.30	1.42	0.23	1.55	5.44	5.37	1.38	9.41
50th-Percentile Queue Length [ft/ln]	475.10	142.07	85.99	57.55	35.43	5.75	38.63	136.10	134.28	34.55	235.13
95th-Percentile Queue Length [veh/ln]	30.79	9.59	6.19	4.14	2.55	0.41	2.78	9.27	9.17	2.49	14.43
95th-Percentile Queue Length [ft/ln]	769.69	239.80	154.77	103.60	63.77	10.35	69.54	231.76	229.30	62.18	360.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	494.70	27.25	24.59	46.72	21.55	20.39	35.35	19.54	21.20	36.16	31.09	31.09
Movement LOS	F	C	C	D	C	C	D	B	C	D	C	C
d_A, Approach Delay [s/veh]	162.00			32.89			21.07			31.72		
Approach LOS	F			C			C			C		
d_I, Intersection Delay [s/veh]	63.46											
Intersection LOS	E											
Intersection V/C	0.877											

Emissions

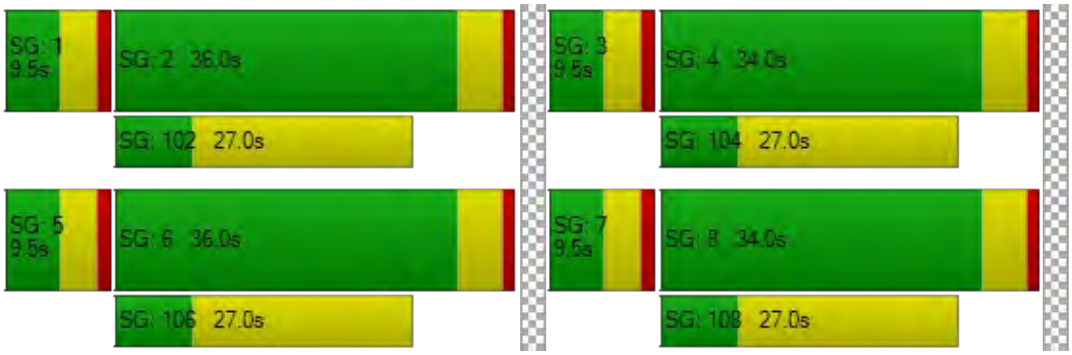
Vehicle Miles Traveled [mph]	72.26	107.00	70.04	12.29	12.62	2.16	7.01	67.67	31.57	10.19	71.84
Stops [stops/h]	997.65	298.33	180.56	120.86	74.40	12.08	81.12	571.59	281.97	72.54	493.75
Fuel consumption [US gal/h]	38.56	8.90	5.54	2.71	1.70	0.28	1.72	11.61	5.71	1.68	11.08
CO [g/h]	2695.23	622.00	387.50	189.53	118.54	19.49	120.01	811.51	399.04	117.51	774.58
NOx [g/h]	524.39	121.02	75.39	36.88	23.06	3.79	23.35	157.89	77.64	22.86	150.71
VOC [g/h]	624.65	144.15	89.81	43.93	27.47	4.52	27.81	188.08	92.48	27.23	179.52

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.17	24.17	24.17	24.17
l_p,int, Pedestrian LOS Score for Intersectio	2.679	2.398	2.838	2.741
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	846	846	904	904
d_b, Bicycle Delay [s]	11.42	11.42	10.29	10.29
l_b,int, Bicycle LOS Score for Intersection	3.040	1.974	2.723	2.649
Bicycle LOS	C	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Tennessee Street/I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	202	709	0	0	543	78	0	0	0	161	5	180
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	9	0	0	4	4	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	202	718	0	0	547	82	0	0	0	161	5	183
Peak Hour Factor	0.9740	0.9740	0.9500	0.9500	0.9740	0.9740	0.9500	0.9500	0.9500	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	184	0	0	140	21	0	0	0	41	1	47
Total Analysis Volume [veh/h]	207	737	0	0	562	84	0	0	0	165	5	188
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Amber [s]	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.5	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	11.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	59.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	C
C, Calculated Cycle Length [s]	45	45	45	45		45	45
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	10.3	25.8	11.5	11.5		11.4	11.4
g / C, Green / Cycle	0.23	0.57	0.25	0.25		0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.11	0.20	0.16	0.05		0.09	0.12
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1812	1615
c, Capacity [veh/h]	413	2067	921	411		457	407
d1, Uniform Delay [s]	15.22	5.22	14.88	13.26		13.97	14.33
k, delay calibration	0.04	0.04	0.04	0.04		0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	0.35	0.04	0.24	0.09		0.19	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.36	0.61	0.20		0.37	0.46
d, Delay for Lane Group [s/veh]	15.57	5.26	15.12	13.35		14.16	14.63
Lane Group LOS	B	A	B	B		B	B
Critical Lane Group	Yes	No	Yes	No		No	Yes
50th-Percentile Queue Length [veh/ln]	1.53	0.96	2.04	0.54		1.25	1.42
50th-Percentile Queue Length [ft/ln]	38.20	24.02	50.94	13.62		31.17	35.53
95th-Percentile Queue Length [veh/ln]	2.75	1.73	3.67	0.98		2.24	2.56
95th-Percentile Queue Length [ft/ln]	68.76	43.23	91.69	24.51		56.10	63.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.57	5.26	0.00	0.00	15.12	13.35	0.00	0.00	0.00	14.16	14.16	14.63
Movement LOS	B	A			B	B				B	B	B
d_A, Approach Delay [s/veh]	7.52			14.89			0.00			14.41		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	11.23											
Intersection LOS	B											
Intersection V/C	0.526											

Emissions

Vehicle Miles Traveled [mph]	23.37	83.22	156.20	23.35		189.05	209.07
Stops [stops/h]	121.56	152.85	324.19	43.33		99.18	113.07
Fuel consumption [US gal/h]	2.69	5.27	10.51	1.49		8.82	9.79
CO [g/h]	187.85	368.50	734.63	104.16		616.55	684.41
NOx [g/h]	36.55	71.70	142.93	20.27		119.96	133.16
VOC [g/h]	43.54	85.40	170.26	24.14		142.89	158.62

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	15.33
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.023
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2365	597	0	597
d_b, Bicycle Delay [s]	0.75	11.14	22.63	11.14
l_b,int, Bicycle LOS Score for Intersection	2.338	2.093	4.132	1.855
Bicycle LOS	B	B	D	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Tennessee Street/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.833

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	683	117	155	524	0	249	411	346	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	0	2	2	0	6	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	686	117	157	526	0	255	411	346	0	0	0
Peak Hour Factor	0.9500	0.9610	0.9610	0.9610	0.9610	0.9500	0.9610	0.9610	0.9610	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	178	30	41	137	0	66	107	90	0	0	0
Total Analysis Volume [veh/h]	0	714	122	163	547	0	265	428	360	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0.0	40.0	0.0	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
Amber [s]	0.0	4.5	0.0	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	19.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	3.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	22.0	0.0	17.0	44.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0.0	10.0	0.0	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		Yes		No	Yes			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	C	
C, Calculated Cycle Length [s]	62	62	62	62	62	62	
L, Total Lost Time per Cycle [s]	5.50	5.50	5.00	5.50	5.50	5.50	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.50	3.50	3.00	3.50	3.50	3.50	
g_i, Effective Green Time [s]	16.1	16.1	9.4	30.5	20.8	20.8	
g / C, Green / Cycle	0.26	0.26	0.15	0.49	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.22	0.23	0.09	0.15	0.30	0.30	
s, saturation flow rate [veh/h]	1900	1807	1810	3618	1855	1686	
c, Capacity [veh/h]	491	467	274	1773	618	562	
d1, Uniform Delay [s]	21.95	22.27	24.66	9.54	19.70	19.71	
k, delay calibration	0.21	0.24	0.04	0.04	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	7.87	12.56	0.77	0.04	4.90	5.39	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.85	0.89	0.60	0.31	0.89	0.89	
d, Delay for Lane Group [s/veh]	29.82	34.83	25.43	9.57	24.61	25.10	
Lane Group LOS	C	C	C	A	C	C	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	6.16	6.79	2.09	1.78	7.63	7.02	
50th-Percentile Queue Length [ft/ln]	154.02	169.79	52.29	44.40	190.81	175.46	
95th-Percentile Queue Length [veh/ln]	10.23	11.07	3.76	3.20	12.16	11.36	
95th-Percentile Queue Length [ft/ln]	255.78	276.64	94.12	79.93	304.09	284.08	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	31.90	34.83	25.43	9.57	0.00	24.61	24.77	25.10	0.00	0.00	0.00
Movement LOS		C	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	32.33			13.21			24.84			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	24.07											
Intersection LOS	C											
Intersection V/C	0.833											

Emissions

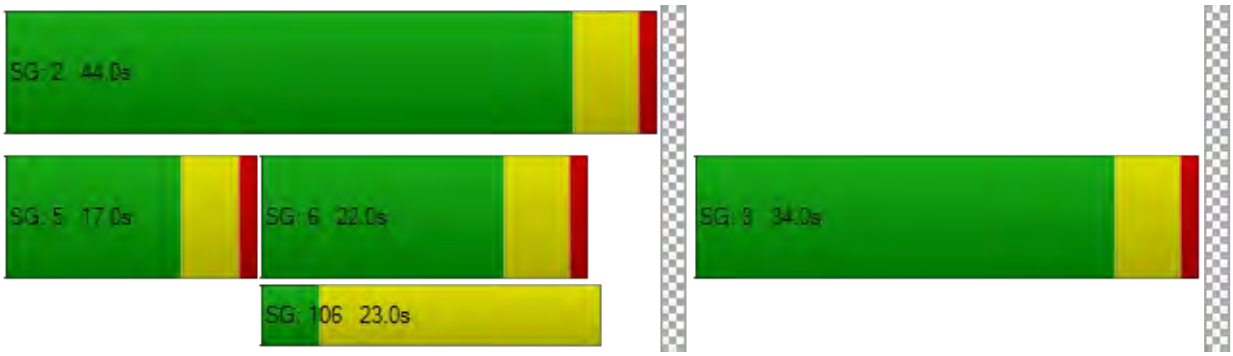
Vehicle Miles Traveled [mph]	33.03	33.03	18.40	61.76	287.96	261.88	
Stops [stops/h]	356.03	392.49	120.87	205.29	441.08	405.59	
Fuel consumption [US gal/h]	7.22	8.00	2.69	5.30	17.05	15.58	
CO [g/h]	504.50	559.34	188.04	370.12	1192.00	1089.27	
NOx [g/h]	98.16	108.83	36.59	72.01	231.92	211.93	
VOC [g/h]	116.92	129.63	43.58	85.78	276.26	252.45	

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	23.66
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.047
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	530	1236	915	0
d_b, Bicycle Delay [s]	16.83	4.54	9.17	31.15
l_b,int, Bicycle LOS Score for Intersection	2.249	2.145	2.428	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: W. Pioneer Avenue/Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	7	0	0	0	0	0	5	12	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	0	7	0	0	0	0	0	5	12	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	0	0	0	0	0	1	3	0	0
Total Analysis Volume [veh/h]	3	0	7	0	0	0	0	0	5	13	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	8.71	9.21	8.34	8.72	9.19	8.30	7.20	0.00	0.00	7.23	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.72	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.60	0.60
d_A, Approach Delay [s/veh]	8.45			8.74			0.00			7.23		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	6.37											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 9: New York Street/Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	1	2	3	1	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	1	2	3	1	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	1	0	0
Total Analysis Volume [veh/h]	5	1	2	3	1	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.21	0.00	8.57	8.33
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.08	0.08	0.14	0.14
d_A, Approach Delay [s/veh]	0.00		2.89		8.45	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.41					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: New York Street/Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	71	6	14	0	10	39
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	6	14	0	10	39
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	2	4	0	3	10
Total Analysis Volume [veh/h]	75	6	15	0	11	41
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.01	0.04
d_M, Delay for Movement [s/veh]	7.32	0.00	0.00	0.00	9.78	8.56
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.14	0.14	0.00	0.00	0.17	0.17
95th-Percentile Queue Length [ft/ln]	3.38	3.38	0.00	0.00	4.13	4.13
d_A, Approach Delay [s/veh]	6.78		0.00		8.82	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.81					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: W. San Bernardino Avenue/Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	38	64	66	43	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	38	64	66	43	5
Peak Hour Factor	0.9500	0.9320	0.9320	0.9320	0.9320	0.9320
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	10	17	18	12	1
Total Analysis Volume [veh/h]	0	41	69	71	46	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.04	0.04	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.65	7.38	0.00	0.00	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.12	0.12	0.12	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	3.12	2.99	2.99	0.00	0.00
d_A, Approach Delay [s/veh]	8.65		3.63		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.72					
Intersection LOS	A					

Vistro File: C:\...\25-124 Pioneer Park_JM_3.23.26 Updated 2035 Lane Geometry.vistro
Scenario 9 Cumulative 2035 AM

Report File: C:\...\2035 AM.pdf
4/10/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	Two-way stop	HCM 7th Edition	NB Left	0.212	78.7	F
2	W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	HCM 7th Edition	WB Right	0.881	57.4	E
3	W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	HCM 7th Edition	SB Right	1.006	60.8	E
4	W. San Bernardino Ave/New York Street	Two-way stop	HCM 7th Edition	SB Right	0.043	9.6	A
5	W. Lugonia Avenue/Tennessee Street	Signalized	HCM 7th Edition	NB Left	0.713	18.2	B
6	Tennessee Street/I-10 WB Ramps	Signalized	HCM 7th Edition	WB Right	0.757	15.0	B
7	Tennessee Street/I-10 EB Ramps	Signalized	HCM 7th Edition	NB Right	1.006	82.3	F
8	W. Pioneer Avenue/Project Driveway 1	Two-way stop	HCM 7th Edition	SB Left	0.038	8.7	A
9	New York Street/Project Driveway 2	Two-way stop	HCM 7th Edition	SB Thru	0.000	0.0	A
10	New York Street/Project Driveway 3	Two-way stop	HCM 7th Edition	SB Thru	0.000	0.0	A
11	W. San Bernardino Avenue/Driveway 4	Two-way stop	HCM 7th Edition	WB Thru	0.002	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Control Type:	Two-way stop	Delay (sec / veh):	78.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.212

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	18	0	149	270	324	0	0	376	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	0	0	0	0	5	2	3	33	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	0	0	18	0	154	272	327	33	0	377	59
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	0	5	0	41	72	86	9	0	99	16
Total Analysis Volume [veh/h]	13	0	0	19	0	162	286	344	35	0	397	62
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No			
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.00	0.00	0.20	0.00	0.26	0.26	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	78.71	53.94	25.33	52.74	0.00	12.66	9.35	0.00	0.00	8.02	0.00	0.00
Movement LOS	F	F	D	F		B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.72	0.72	0.72	0.71	0.00	1.02	1.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	18.00	18.00	18.00	17.66	0.00	25.46	25.69	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	78.71			16.87			4.02			0.00		
Approach LOS	F			C			A			A		
d_I, Intersection Delay [s/veh]	5.12											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive

Control Type:	Signalized	Delay (sec / veh):	57.4
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.881

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			50.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	1	37	418	434	418	94	373	43	55	290	308
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	11	128	1	81	0	103	0	30	322	216
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	12	0	0	125	0	0	11	0	0	131
Total Hourly Volume [veh/h]	14	1	36	546	435	374	94	476	32	85	612	393
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	9	144	114	98	25	125	8	22	161	103
Total Analysis Volume [veh/h]	15	1	38	575	458	394	99	501	34	89	644	414
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	20.0	30.0	20.0	20.0	30.0	0.0	20.0	40.0	0.0	20.0	40.0	0.0
Amber [s]	4.4	5.0	4.4	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	24.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	20.0	11.0	20.0	29.0	0.0	11.0	15.0	0.0	11.0	15.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3.7	6.2	20.5	16.0	18.6	18.6	9.5	12.0	12.0	10.2	12.7	12.7
g / C, Green / Cycle	0.06	0.10	0.34	0.26	0.31	0.31	0.16	0.20	0.20	0.17	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.02	0.32	0.24	0.25	0.05	0.10	0.10	0.05	0.18	0.26
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1618	1810	3618	1839	1810	3618	1615
c, Capacity [veh/h]	110	195	546	479	583	497	285	718	365	306	760	339
d1, Uniform Delay [s]	26.90	24.34	14.52	22.23	19.07	19.27	22.69	21.52	21.54	21.93	22.94	23.87
k, delay calibration	0.04	0.04	0.04	0.50	0.11	0.13	0.04	0.04	0.04	0.04	0.04	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.00	0.02	108.90	2.33	3.65	0.27	0.19	0.39	0.19	1.04	122.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.01	0.07	1.20	0.78	0.80	0.35	0.49	0.50	0.29	0.85	1.22
d, Delay for Lane Group [s/veh]	27.11	24.35	14.54	131.12	21.39	22.91	22.95	21.71	21.93	22.13	23.98	146.48
Lane Group LOS	C	C	B	F	C	C	C	C	C	C	C	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.20	0.01	0.33	20.65	5.59	5.14	1.11	1.91	1.99	0.99	3.91	15.73
50th-Percentile Queue Length [ft/ln]	4.95	0.30	8.24	516.28	139.67	128.40	27.63	47.81	49.67	24.71	97.71	393.19
95th-Percentile Queue Length [veh/ln]	0.36	0.02	0.59	31.08	9.46	8.85	1.99	3.44	3.58	1.78	7.03	24.49
95th-Percentile Queue Length [ft/ln]	8.91	0.55	14.83	776.93	236.58	221.31	49.74	86.06	89.40	44.47	175.87	612.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.11	24.35	14.54	131.12	21.41	22.91	22.95	21.78	21.93	22.13	23.98	146.48
Movement LOS	C	C	B	F	C	C	C	C	C	C	C	F
d_A, Approach Delay [s/veh]	18.21			66.03			21.97			68.05		
Approach LOS	B			E			C			E		
d_I, Intersection Delay [s/veh]	57.39											
Intersection LOS	E											
Intersection V/C	0.881											

Emissions

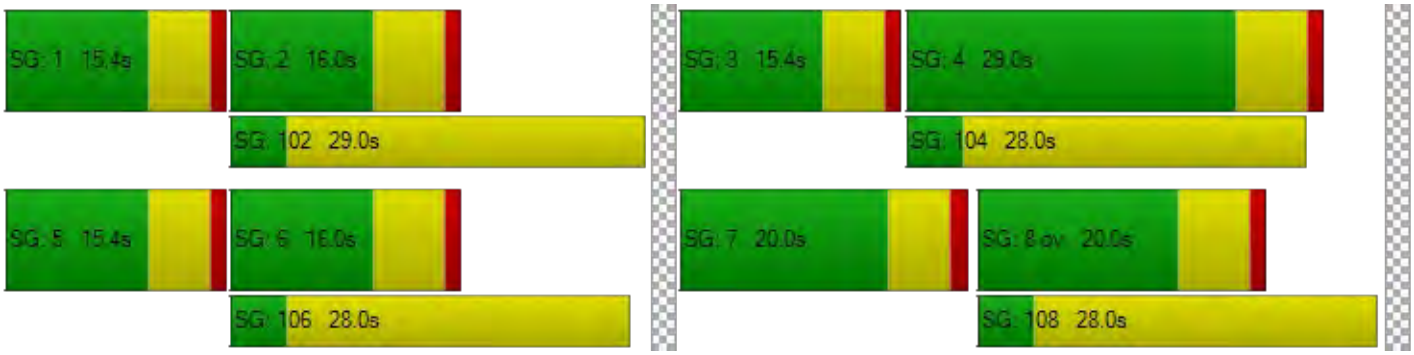
Vehicle Miles Traveled [mph]	1.65	0.11	4.19	64.25	50.64	44.56	8.49	30.31	15.57	11.84	85.68	55.08
Stops [stops/h]	11.79	0.72	19.62	1229.84	332.71	305.86	65.83	227.79	118.31	58.86	465.50	936.63
Fuel consumption [US gal/h]	0.23	0.01	0.42	24.78	5.90	5.38	1.76	6.07	3.15	1.54	11.87	25.87
CO [g/h]	16.39	1.02	29.34	1732.18	412.14	376.35	122.83	424.55	220.04	107.54	829.50	1808.55
NOx [g/h]	3.19	0.20	5.71	337.02	80.19	73.22	23.90	82.60	42.81	20.92	161.39	351.88
VOC [g/h]	3.80	0.24	6.80	401.45	95.52	87.22	28.47	98.39	51.00	24.92	192.25	419.15

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	22.75	22.75	22.75	22.75
l_p,int, Pedestrian LOS Score for Intersectio	2.449	2.889	3.015	3.265
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	463	761	331	331
d_b, Bicycle Delay [s]	17.85	11.60	21.05	21.05
l_b,int, Bicycle LOS Score for Intersection	1.669	2.840	1.914	2.263
Bicycle LOS	A	C	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: W. San Bernardino Avenue/210 WB Ramps/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	60.8
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.006

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	37	369	34	208	16	89	194	508	140	34	529	388
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	245	147	63	24	157	202	28	30	184	47	121	30
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	282	516	97	232	173	291	222	538	324	81	650	418
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	136	26	61	46	77	58	142	85	21	171	110
Total Analysis Volume [veh/h]	297	543	102	244	182	306	234	566	341	85	684	440
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20.0	25.0	0.0	20.0	25.0	0.0	25.0	40.0	0.0	25.0	40.0	0.0
Amber [s]	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	22.0	0.0	0.0	22.0	0.0	0.0	23.0	0.0	0.0	23.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	21.0	0.0	11.0	20.0	0.0	11.0	23.0	0.0	11.0	23.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	74	74	74	74	74	74	74	74	74	74	74
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11.4	16.3	16.3	11.4	16.3	11.3	20.6	20.6	9.7	19.0	19.0
g / C, Green / Cycle	0.15	0.22	0.22	0.15	0.22	0.15	0.28	0.28	0.13	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.16	0.17	0.17	0.13	0.29	0.07	0.16	0.21	0.05	0.19	0.27
s, saturation flow rate [veh/h]	1810	1900	1797	1810	1711	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	279	419	396	279	377	537	1007	449	237	928	414
d1, Uniform Delay [s]	31.32	27.25	27.25	30.63	28.86	28.46	22.86	24.45	29.32	25.23	27.52
k, delay calibration	0.50	0.28	0.28	0.35	0.50	0.04	0.04	0.34	0.04	0.04	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	72.50	8.36	8.80	22.47	150.69	0.21	0.18	7.92	0.34	0.43	61.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.07	0.79	0.79	0.88	1.29	0.44	0.56	0.76	0.36	0.74	1.06
d, Delay for Lane Group [s/veh]	103.82	35.61	36.05	53.10	179.55	28.67	23.05	32.37	29.66	25.67	89.05
Lane Group LOS	F	D	D	D	F	C	C	C	C	C	F
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	10.39	6.25	5.96	5.83	22.15	1.75	3.81	5.86	1.30	5.00	13.62
50th-Percentile Queue Length [ft/ln]	259.77	156.31	149.06	145.82	553.73	43.81	95.25	146.61	32.45	125.03	340.48
95th-Percentile Queue Length [veh/ln]	16.15	10.35	9.97	9.79	33.91	3.15	6.86	9.84	2.34	8.67	20.35
95th-Percentile Queue Length [ft/ln]	403.65	258.84	249.17	244.84	847.64	78.87	171.46	245.90	58.42	216.72	508.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	103.82	35.78	36.05	53.10	179.55	179.55	28.67	23.05	32.37	29.66	25.67	89.05
Movement LOS	F	D	D	D	F	F	C	C	C	C	C	F
d_A, Approach Delay [s/veh]	57.26			137.40			26.99			49.02		
Approach LOS	E			F			C			D		
d_I, Intersection Delay [s/veh]	60.78											
Intersection LOS	E											
Intersection V/C	1.006											

Emissions

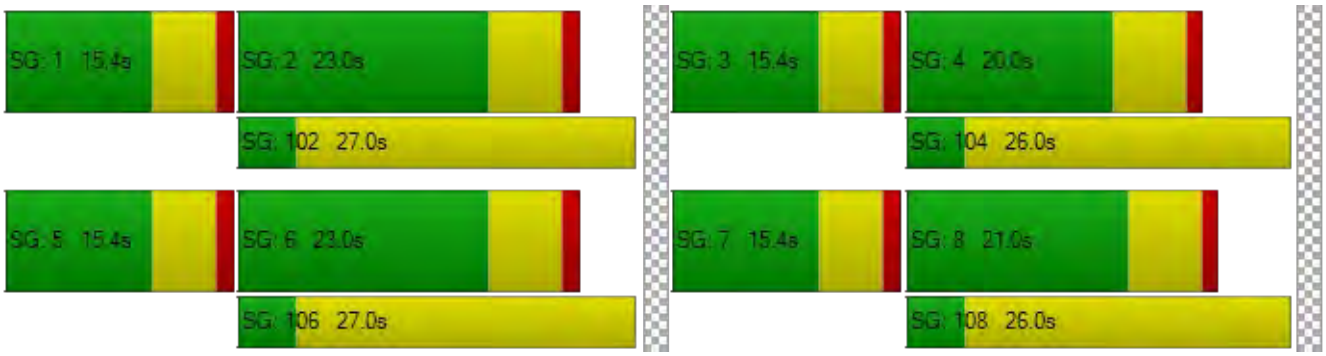
Vehicle Miles Traveled [mph]	118.40	132.15	124.98	11.68	23.35	31.13	75.30	45.37	11.05	88.93	57.21
Stops [stops/h]	505.17	303.99	289.88	283.58	1076.85	170.41	370.48	285.12	63.11	486.29	662.13
Fuel consumption [US gal/h]	13.94	9.52	9.05	4.68	24.74	4.55	9.84	7.35	1.68	12.67	18.17
CO [g/h]	974.36	665.58	632.38	327.39	1729.22	318.13	687.98	513.50	117.19	885.45	1269.85
NOx [g/h]	189.58	129.50	123.04	63.70	336.44	61.90	133.86	99.91	22.80	172.28	247.07
VOC [g/h]	225.82	154.25	146.56	75.88	400.76	73.73	159.45	119.01	27.16	205.21	294.30

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.46	29.46	29.46	29.46
l_p,int, Pedestrian LOS Score for Intersectio	2.595	2.599	3.162	3.030
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	405	378	459	459
d_b, Bicycle Delay [s]	23.54	24.35	21.97	21.97
l_b,int, Bicycle LOS Score for Intersection	2.337	2.767	2.187	2.225
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: W. San Bernardino Ave/New York Street

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	33	12	105	165	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	33	12	105	165	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	9	3	28	43	0
Total Analysis Volume [veh/h]	0	35	13	111	174	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.04	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.20	9.62	8.73	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.02	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.36	3.36	0.55	0.18	0.00	0.00
d_A, Approach Delay [s/veh]	9.62		0.92		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.35					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 5: W. Lugonia Avenue/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.713

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	2	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	133	273	91	71	86	6	55	289	208	90	424	122
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	81	47	69	109	0	0	170	0	19	208	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	133	354	138	140	195	6	55	459	208	109	632	136
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	93	36	37	51	2	14	121	55	29	166	36
Total Analysis Volume [veh/h]	140	373	145	147	205	6	58	483	219	115	665	143
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	19.50

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	1	2	0	5	6	0
Auxiliary Signal Groups												
Maximum Green [s]	40.0	30.0	0.0	5.0	30.0	0.0	30.0	32.0	0.0	30.0	32.0	0.0
Amber [s]	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	20.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0	0.0	27.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	34.0	0.0	9.0	34.0	0.0	9.0	46.0	0.0	9.0	46.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
Vehicle Extension [s]	3.0	2.0	0.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.50	5.00	5.00	5.00	5.00	5.00	4.50	5.00	5.00	4.50	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	3.00	3.00	2.50	2.50	3.00	2.50	3.00	3.00	2.50	3.00	3.00
g_i, Effective Green Time [s]	5.0	7.3	7.3	12.3	12.3	7.3	2.8	15.3	15.3	4.1	14.0	14.0
g / C, Green / Cycle	0.10	0.15	0.15	0.25	0.25	0.15	0.06	0.31	0.31	0.08	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.05	0.10	0.05	0.06	0.08	0.08	0.03	0.13	0.14	0.06	0.22	0.22
s, saturation flow rate [veh/h]	1196	3618	2859	1269	1150	1716	1810	3618	1615	1810	1900	1785
c, Capacity [veh/h]	267	535	422	374	500	254	101	1120	500	149	538	505
d1, Uniform Delay [s]	22.49	19.96	18.86	12.25	12.03	19.53	22.70	13.57	13.60	22.17	16.23	16.23
k, delay calibration	0.32	0.04	0.04	0.04	0.25	0.04	0.04	0.11	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.63	0.62	0.18	0.12	0.61	0.73	1.89	0.26	0.61	3.18	2.42	2.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.70	0.34	0.23	0.25	0.56	0.57	0.43	0.44	0.77	0.77	0.77
d, Delay for Lane Group [s/veh]	27.12	20.58	19.04	12.37	12.65	20.27	24.59	13.83	14.20	25.35	18.65	18.80
Lane Group LOS	C	C	B	B	B	C	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.77	1.78	0.65	0.54	0.88	1.35	0.63	1.75	1.63	1.27	3.82	3.61
50th-Percentile Queue Length [ft/ln]	44.15	44.48	16.17	13.44	22.11	33.79	15.70	43.66	40.86	31.63	95.49	90.27
95th-Percentile Queue Length [veh/ln]	3.18	3.20	1.16	0.97	1.59	2.43	1.13	3.14	2.94	2.28	6.88	6.50
95th-Percentile Queue Length [ft/ln]	79.47	80.06	29.11	24.20	39.80	60.81	28.26	78.59	73.55	56.94	171.89	162.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.12	20.58	19.04	12.44	17.74	20.27	24.59	13.83	14.20	25.35	18.71	18.80
Movement LOS	C	C	B	B	B	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.63			15.62			14.76			19.55		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	18.19											
Intersection LOS	B											
Intersection V/C	0.713											

Emissions

Vehicle Miles Traveled [mph]	38.91	103.67	40.30	9.47	13.72	15.42	4.37	36.40	16.50	14.29	51.78	48.65
Stops [stops/h]	128.95	259.81	94.48	39.26	64.58	98.68	45.85	255.03	119.33	92.39	278.90	263.64
Fuel consumption [US gal/h]	3.43	7.83	2.93	0.95	1.45	2.11	0.90	5.17	2.40	2.01	6.18	5.83
CO [g/h]	239.98	547.20	205.06	66.11	101.60	147.57	62.72	361.27	167.52	140.71	431.69	407.56
NOx [g/h]	46.69	106.46	39.90	12.86	19.77	28.71	12.20	70.29	32.59	27.38	83.99	79.30
VOC [g/h]	55.62	126.82	47.52	15.32	23.55	34.20	14.54	83.73	38.82	32.61	100.05	94.46

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.88	14.88	14.88	14.88
l_p,int, Pedestrian LOS Score for Intersectio	2.782	2.508	2.958	2.918
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1176	1176	1663	1663
d_b, Bicycle Delay [s]	4.18	4.18	0.70	0.70
l_b,int, Bicycle LOS Score for Intersection	2.102	1.855	2.187	2.321
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Tennessee Street/I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.757

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	232	507	0	0	469	101	0	0	0	231	5	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	158	114	0	0	94	34	0	0	0	21	263	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	390	621	0	0	563	135	0	0	0	252	268	110
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	163	0	0	148	36	0	0	0	66	71	29
Total Analysis Volume [veh/h]	411	654	0	0	593	142	0	0	0	265	282	116
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Amber [s]	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.5	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	11.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	59.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	C
C, Calculated Cycle Length [s]	50	50	50	50		50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	13.9	29.5	11.5	11.5		12.3	12.3
g / C, Green / Cycle	0.28	0.59	0.23	0.23		0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.23	0.18	0.16	0.09		0.18	0.18
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1828	1788
c, Capacity [veh/h]	507	2141	837	374		452	442
d1, Uniform Delay [s]	16.69	5.06	17.58	16.12		17.26	17.27
k, delay calibration	0.04	0.04	0.04	0.04		0.12	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	1.20	0.03	0.42	0.24		2.69	2.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.31	0.71	0.38		0.74	0.74
d, Delay for Lane Group [s/veh]	17.89	5.09	18.00	16.35		19.95	20.06
Lane Group LOS	B	A	B	B		B	C
Critical Lane Group	Yes	No	Yes	No		No	Yes
50th-Percentile Queue Length [veh/ln]	3.69	0.93	2.63	1.16		3.42	3.37
50th-Percentile Queue Length [ft/ln]	92.17	23.21	65.82	28.98		85.50	84.18
95th-Percentile Queue Length [veh/ln]	6.64	1.67	4.74	2.09		6.16	6.06
95th-Percentile Queue Length [ft/ln]	165.91	41.78	118.48	52.16		153.90	151.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.89	5.09	0.00	0.00	18.00	16.35	0.00	0.00	0.00	19.95	20.03	20.06
Movement LOS	B	A			B	B				B	C	C
d_A, Approach Delay [s/veh]	10.03			17.68			0.00			20.00		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	15.00											
Intersection LOS	B											
Intersection V/C	0.757											

Emissions

Vehicle Miles Traveled [mph]	46.41	73.85	164.81	39.47		372.26	365.05
Stops [stops/h]	266.69	134.31	380.91	83.85		247.39	243.58
Fuel consumption [US gal/h]	5.78	4.64	11.82	2.71		18.05	17.71
CO [g/h]	403.93	324.47	826.06	189.43		1261.73	1238.18
NOx [g/h]	78.59	63.13	160.72	36.86		245.49	240.91
VOC [g/h]	93.61	75.20	191.45	43.90		292.42	286.96

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	17.53
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.128
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2150	543	0	543
d_b, Bicycle Delay [s]	0.14	13.22	24.88	13.22
l_b,int, Bicycle LOS Score for Intersection	2.438	2.166	4.132	2.107
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Tennessee Street/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	82.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.006

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	600	224	89	554	0	148	216	513	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	243	8	17	98	0	29	109	91	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	843	232	106	652	0	177	325	604	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	222	61	28	172	0	47	86	159	0	0	0
Total Analysis Volume [veh/h]	0	887	244	112	686	0	186	342	636	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0.0	40.0	0.0	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
Amber [s]	0.0	4.5	0.0	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	19.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	3.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	22.0	0.0	17.0	44.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0.0	10.0	0.0	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		Yes		No	Yes			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	C	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	5.50	5.50	5.00	5.50	5.50	5.50	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.50	3.50	3.00	3.50	3.50	3.50	
g_i, Effective Green Time [s]	16.5	16.5	8.9	30.4	28.5	28.5	
g / C, Green / Cycle	0.24	0.24	0.13	0.44	0.41	0.41	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.32	0.06	0.19	0.28	0.39	
s, saturation flow rate [veh/h]	1900	1766	1810	3618	1867	1615	
c, Capacity [veh/h]	449	417	230	1575	761	658	
d1, Uniform Delay [s]	26.70	26.70	28.39	13.76	17.12	20.25	
k, delay calibration	0.50	0.50	0.04	0.04	0.15	0.37	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	133.41	174.58	0.59	0.07	1.58	23.14	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.26	1.35	0.49	0.44	0.69	0.97	
d, Delay for Lane Group [s/veh]	160.11	201.28	28.98	13.83	18.70	43.40	
Lane Group LOS	F	F	C	B	B	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	23.41	26.53	1.66	3.25	6.69	13.28	
50th-Percentile Queue Length [ft/ln]	585.36	663.31	41.59	81.17	167.13	332.05	
95th-Percentile Queue Length [veh/ln]	35.32	40.64	2.99	5.84	10.93	19.26	
95th-Percentile Queue Length [ft/ln]	883.01	1015.93	74.87	146.11	273.13	481.48	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	175.03	201.28	28.98	13.83	0.00	18.70	18.70	43.40	0.00	0.00	0.00
Movement LOS		F	F	C	B		B	B	D			
d_A, Approach Delay [s/veh]	180.70			15.96			32.19			0.00		
Approach LOS	F			B			C			A		
d_I, Intersection Delay [s/veh]	82.31											
Intersection LOS	F											
Intersection V/C	1.006											

Emissions

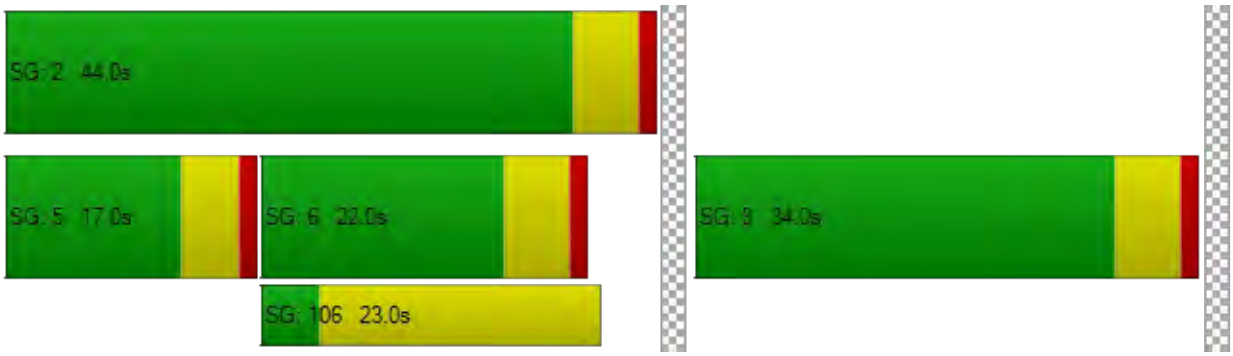
Vehicle Miles Traveled [mph]	49.48	49.48	12.65	77.46	275.71	332.10	
Stops [stops/h]	1205.16	1365.65	85.63	334.24	344.09	683.64	
Fuel consumption [US gal/h]	32.03	38.35	1.95	7.99	15.26	23.06	
CO [g/h]	2239.18	2680.49	136.64	558.47	1066.67	1612.23	
NOx [g/h]	435.66	521.53	26.59	108.66	207.54	313.68	
VOC [g/h]	518.95	621.23	31.67	129.43	247.21	373.65	

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	27.43
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.045
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	472	1101	815	0
d_b, Bicycle Delay [s]	20.42	7.07	12.28	34.97
l_b,int, Bicycle LOS Score for Intersection	2.493	2.218	2.520	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: W. Pioneer Avenue/Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.038

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	36	0	2	1	2	0	0	5	13
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	36	0	2	1	2	0	0	5	13
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	9	0	1	0	1	0	0	1	3
Total Analysis Volume [veh/h]	0	0	0	38	0	2	1	2	0	0	5	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.60	9.12	8.31	8.73	9.23	8.50	7.24	0.00	0.00	7.20	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.12	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	3.10	3.10	3.10	0.04	0.04	0.04	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.68			8.72			2.41			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.74											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 9: New York Street/Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	0	0	33	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	0	0	33	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	0	9	0	0
Total Analysis Volume [veh/h]	13	0	0	35	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.22	0.00	8.72	8.35
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.54	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: New York Street/Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	33	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	12	33	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	9	0	0	0
Total Analysis Volume [veh/h]	0	13	35	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.27	0.00	0.00	0.00	8.72	8.45
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.59	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: W. San Bernardino Avenue/Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	117	198	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	117	198	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	31	52	0
Total Analysis Volume [veh/h]	0	0	0	123	208	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.53	8.86	0.00	0.00	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.53		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Vistro File: C:\...\25-124 Pioneer Park_JM_3.23.26 Updated 2035 Lane Geometry.vistro
Scenario 10 Cumulative 2035 PM

Report File: C:\...\2035 pm.pdf
4/10/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	Two-way stop	HCM 7th Edition	NB Left	0.263	37.8	E
2	W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	HCM 7th Edition	SB Left	1.010	76.1	E
3	W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	HCM 7th Edition	SB Left	1.037	90.9	F
4	W. San Bernardino Ave/New York Street	Two-way stop	HCM 7th Edition	SB Right	0.029	9.5	A
5	W. Lugonia Avenue/Tennessee Street	Signalized	HCM 7th Edition	NB Left	0.884	42.3	D
6	Tennessee Street/I-10 WB Ramps	Signalized	HCM 7th Edition	WB Right	0.776	13.9	B
7	Tennessee Street/I-10 EB Ramps	Signalized	HCM 7th Edition	NB Right	1.192	126.3	F
8	W. Pioneer Avenue/Project Driveway 1	Two-way stop	HCM 7th Edition	SB Left	0.027	8.8	A
9	New York Street/Project Driveway 2	Two-way stop	HCM 7th Edition	NB Thru	0.000	0.0	A
10	New York Street/Project Driveway 3	Two-way stop	HCM 7th Edition	NB Thru	0.000	0.0	A
11	W. San Bernardino Avenue/Driveway 4	Two-way stop	HCM 7th Edition	EB Thru	0.002	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Control Type:	Two-way stop	Delay (sec / veh):	37.8
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.263

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	52	0	54	100	700	0	0	129	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	0	0	0	0	4	6	2	23	0	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	0	0	52	0	58	106	702	23	0	132	39
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	0	14	0	15	28	185	6	0	35	10
Total Analysis Volume [veh/h]	39	0	0	55	0	61	112	739	24	0	139	41
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No			
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.26	0.00	0.00	0.33	0.00	0.07	0.08	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	37.79	33.18	22.17	36.86	0.00	9.34	7.78	0.00	0.00	9.19	0.00	0.00
Movement LOS	E	D	C	E		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.00	1.00	1.00	1.35	0.00	0.22	0.26	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	24.98	24.98	24.98	33.66	0.00	5.50	6.47	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	37.79			22.38			1.00			0.00		
Approach LOS	E			C			A			A		
d_I, Intersection Delay [s/veh]	4.08											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 2: W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive

Control Type:	Signalized	Delay (sec / veh):	76.1
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.010

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			50.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	24	339	308	582	249	49	833	128	106	199	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	33	231	5	36	0	227	0	20	204	197
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	93	0	0	71	0	0	32	0	0	74
Total Hourly Volume [veh/h]	34	24	279	539	587	214	49	1060	96	126	403	222
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	6	73	142	154	56	13	279	25	33	106	58
Total Analysis Volume [veh/h]	36	25	294	567	618	225	52	1116	101	133	424	234
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	20.0	30.0	20.0	20.0	30.0	0.0	20.0	40.0	0.0	20.0	40.0	0.0
Amber [s]	4.4	5.0	4.4	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	24.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	20.0	11.0	20.0	29.0	0.0	11.0	15.0	0.0	11.0	15.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	64	64	64	64	64	64	64	64	64	64	64	64
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.2	8.9	24.3	16.0	18.7	18.7	7.5	12.0	12.0	11.4	15.9	15.9
g / C, Green / Cycle	0.10	0.14	0.38	0.25	0.29	0.29	0.12	0.19	0.19	0.18	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.18	0.31	0.23	0.23	0.03	0.22	0.22	0.07	0.12	0.14
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1731	1810	3618	1820	1810	3618	1615
c, Capacity [veh/h]	174	264	611	450	554	504	211	675	340	321	894	399
d1, Uniform Delay [s]	26.80	24.17	16.29	24.16	20.98	21.10	25.85	26.16	26.16	23.51	20.65	21.32
k, delay calibration	0.04	0.04	0.48	0.50	0.13	0.13	0.04	0.13	0.50	0.04	0.04	0.29
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.06	2.59	133.85	2.97	3.80	0.22	93.79	115.02	0.32	0.15	3.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.09	0.48	1.26	0.79	0.80	0.25	1.20	1.20	0.41	0.47	0.59
d, Delay for Lane Group [s/veh]	27.02	24.23	18.87	158.02	23.95	24.90	26.07	119.95	141.18	23.83	20.80	25.01
Lane Group LOS	C	C	B	F	C	C	C	F	F	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.49	0.32	3.45	23.05	6.01	5.71	0.66	13.25	15.33	1.63	2.39	3.11
50th-Percentile Queue Length [ft/ln]	12.23	7.88	86.35	576.21	150.29	142.85	16.38	331.16	383.35	40.68	59.81	77.87
95th-Percentile Queue Length [veh/ln]	0.88	0.57	6.22	34.91	10.03	9.63	1.18	20.91	23.72	2.93	4.31	5.61
95th-Percentile Queue Length [ft/ln]	22.02	14.18	155.43	872.73	250.82	240.86	29.49	522.67	593.02	73.23	107.66	140.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.02	24.23	18.87	158.02	24.23	24.90	26.07	125.78	141.18	23.83	20.80	25.01
Movement LOS	C	C	B	F	C	C	C	F	F	C	C	C
d_A, Approach Delay [s/veh]	20.08			78.14			122.92			22.55		
Approach LOS	C			E			F			C		
d_I, Intersection Delay [s/veh]	76.11											
Intersection LOS	E											
Intersection V/C	1.010											

Emissions

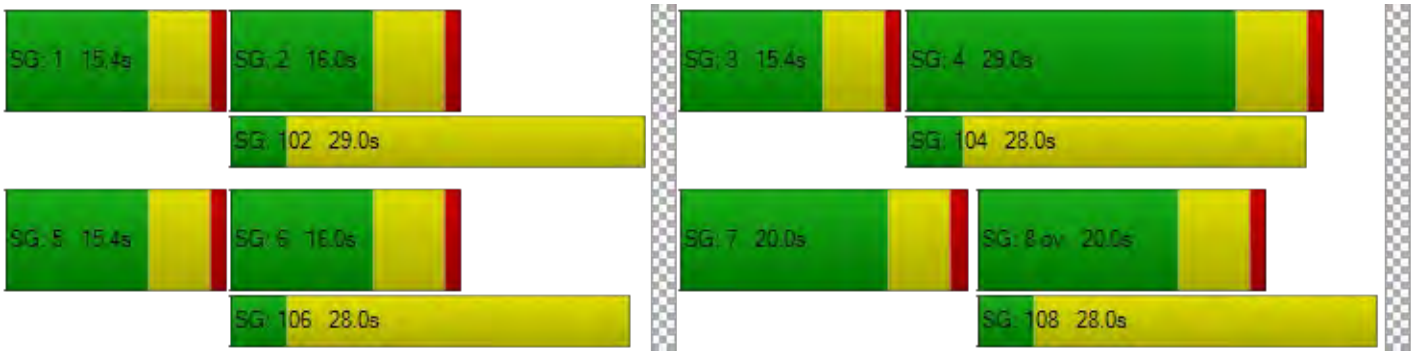
Vehicle Miles Traveled [mph]	3.97	2.76	32.41	63.36	48.87	45.33	4.46	69.41	34.95	17.70	56.41	31.13
Stops [stops/h]	27.39	17.64	193.29	1289.85	336.44	319.77	36.67	1482.61	858.13	91.07	267.78	174.32
Fuel consumption [US gal/h]	0.56	0.36	3.82	27.96	6.00	5.69	0.99	44.84	26.05	2.38	7.06	4.43
CO [g/h]	38.81	25.23	266.91	1954.72	419.56	397.62	69.07	3134.22	1821.03	166.62	493.32	309.35
NOx [g/h]	7.55	4.91	51.93	380.32	81.63	77.36	13.44	609.80	354.31	32.42	95.98	60.19
VOC [g/h]	8.99	5.85	61.86	453.03	97.24	92.15	16.01	726.39	422.04	38.62	114.33	71.69

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.66	24.66	24.66	24.66
l_p,int, Pedestrian LOS Score for Intersectio	2.721	2.751	3.103	3.298
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	435	715	311	311
d_b, Bicycle Delay [s]	19.69	13.28	22.94	22.94
l_b,int, Bicycle LOS Score for Intersection	2.299	2.781	2.275	2.035
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: W. San Bernardino Avenue/210 WB Ramps/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	90.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.037

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	527	43	257	23	80	571	681	179	25	324	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	248	184	67	70	244	91	82	92	317	80	82	20
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	282	711	110	327	267	171	653	773	496	105	406	296
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	187	29	86	70	45	172	203	131	28	107	78
Total Analysis Volume [veh/h]	297	748	116	344	281	180	687	814	522	111	427	312
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20.0	25.0	0.0	20.0	25.0	0.0	25.0	40.0	0.0	25.0	40.0	0.0
Amber [s]	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	22.0	0.0	0.0	22.0	0.0	0.0	23.0	0.0	0.0	23.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	21.0	0.0	11.0	20.0	0.0	11.0	23.0	0.0	11.0	23.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	74	74	74	74	74	74	74	74	74	74	74
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11.4	17.0	17.0	11.4	17.0	11.4	19.0	19.0	10.4	18.0	18.0
g / C, Green / Cycle	0.15	0.23	0.23	0.15	0.23	0.15	0.26	0.26	0.14	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.16	0.23	0.23	0.19	0.26	0.20	0.23	0.32	0.06	0.12	0.19
s, saturation flow rate [veh/h]	1810	1900	1812	1810	1778	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	279	437	417	279	409	543	931	416	256	884	395
d1, Uniform Delay [s]	31.22	28.42	28.42	31.22	28.42	31.22	26.28	27.42	29.00	23.90	26.13
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.13	0.04	0.50	0.04	0.04	0.27
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	71.53	45.60	47.09	131.33	83.62	123.93	1.06	133.62	0.43	0.15	8.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.06	1.01	1.01	1.23	1.13	1.27	0.87	1.26	0.43	0.48	0.79
d, Delay for Lane Group [s/veh]	102.75	74.02	75.51	162.55	112.04	155.16	27.34	161.04	29.43	24.06	34.68
Lane Group LOS	F	F	F	F	F	F	C	F	C	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	10.33	12.87	12.45	14.97	16.37	13.76	6.27	21.95	1.69	2.91	5.55
50th-Percentile Queue Length [ft/ln]	258.19	321.84	311.27	374.20	409.14	343.96	156.64	548.81	42.29	72.70	138.82
95th-Percentile Queue Length [veh/ln]	16.05	18.87	18.36	23.34	24.52	21.91	10.37	33.44	3.05	5.23	9.42
95th-Percentile Queue Length [ft/ln]	401.13	471.65	458.99	583.39	613.08	547.85	259.27	835.89	76.13	130.85	235.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	102.75	74.63	75.51	162.55	112.04	112.04	155.16	27.34	161.04	29.43	24.06	34.68
Movement LOS	F	E	E	F	F	F	F	C	F	C	C	C
d_A, Approach Delay [s/veh]	81.91			133.63			105.25			28.66		
Approach LOS	F			F			F			C		
d_I, Intersection Delay [s/veh]	90.92											
Intersection LOS	F											
Intersection V/C	1.037											

Emissions

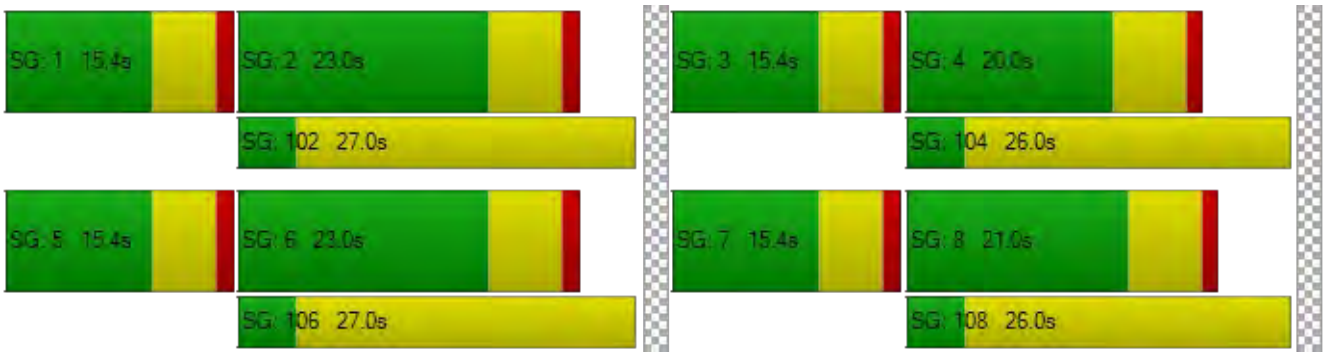
Vehicle Miles Traveled [mph]	118.40	176.15	168.29	16.46	22.06	91.40	108.30	69.45	14.43	55.52	40.57
Stops [stops/h]	503.49	627.61	606.99	729.71	797.85	1341.48	610.92	1070.20	82.47	283.52	270.70
Fuel consumption [US gal/h]	13.87	17.37	16.77	16.09	15.83	41.50	15.84	32.79	2.18	7.52	6.96
CO [g/h]	969.19	1214.45	1172.07	1124.46	1106.23	2900.89	1107.02	2292.12	152.72	525.55	486.39
NOx [g/h]	188.57	236.29	228.04	218.78	215.23	564.41	215.39	445.96	29.71	102.25	94.63
VOC [g/h]	224.62	281.46	271.64	260.60	256.38	672.31	256.56	531.22	35.39	121.80	112.73

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.36	29.36	29.36	29.36
l_p,int, Pedestrian LOS Score for Intersectio	2.697	2.746	3.253	3.030
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	406	379	460	460
d_b, Bicycle Delay [s]	23.45	24.25	21.88	21.88
l_b,int, Bicycle LOS Score for Intersection	2.517	2.888	2.672	2.027
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: W. San Bernardino Ave/New York Street

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.029

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	37	192	159	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	23	37	192	159	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	10	51	42	0
Total Analysis Volume [veh/h]	0	24	39	202	167	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.03	0.04	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.75	9.53	8.74	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.07	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.26	2.26	1.66	0.55	0.00	0.00
d_A, Approach Delay [s/veh]	9.53		1.41		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.32					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 5: W. Lugonia Avenue/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.884

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	2	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	280	362	257	111	114	12	77	908	439	80	436	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	120	78	74	159	0	0	267	0	16	229	22
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	280	482	335	185	273	12	77	1175	439	96	665	151
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	127	88	49	72	3	20	309	116	25	175	40
Total Analysis Volume [veh/h]	295	507	353	195	287	13	81	1237	462	101	700	159
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	19.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	1	2	0	5	6	0
Auxiliary Signal Groups												
Maximum Green [s]	40.0	30.0	0.0	5.0	30.0	0.0	30.0	32.0	0.0	30.0	32.0	0.0
Amber [s]	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	20.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0	0.0	27.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	34.0	0.0	9.0	34.0	0.0	9.0	46.0	0.0	9.0	46.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
Vehicle Extension [s]	3.0	2.0	0.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	69	69	69	69	69	69	69	69	69	69	69	69
L, Total Lost Time per Cycle [s]	4.50	5.00	5.00	5.00	5.00	5.00	4.50	5.00	5.00	4.50	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	3.00	3.00	2.50	2.50	3.00	2.50	3.00	3.00	2.50	3.00	3.00
g_i, Effective Green Time [s]	5.0	12.1	12.1	17.1	17.1	12.1	4.0	29.0	29.0	5.0	28.0	28.0
g / C, Green / Cycle	0.07	0.18	0.18	0.25	0.25	0.18	0.06	0.42	0.42	0.07	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.12	0.14	0.12	0.10	0.13	0.14	0.04	0.34	0.29	0.06	0.23	0.23
s, saturation flow rate [veh/h]	1109	3618	2859	991	768	1712	1810	3618	1615	1810	1900	1780
c, Capacity [veh/h]	184	634	501	262	356	300	105	1518	678	130	771	722
d1, Uniform Delay [s]	33.47	27.35	26.83	18.98	19.05	27.29	32.11	17.69	16.30	31.52	15.93	15.93
k, delay calibration	0.50	0.04	0.04	0.48	0.50	0.04	0.04	0.11	0.11	0.05	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	293.70	0.90	0.69	4.31	3.78	1.78	4.47	1.11	1.22	4.85	0.68	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.60	0.80	0.71	0.40	0.43	0.79	0.77	0.81	0.68	0.78	0.58	0.58
d, Delay for Lane Group [s/veh]	327.17	28.25	27.51	23.28	22.83	29.08	36.58	18.80	17.52	36.37	16.61	16.65
Lane Group LOS	F	C	C	C	C	C	D	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	18.25	3.76	2.56	1.41	2.20	3.59	1.38	7.57	5.28	1.72	4.82	4.52
50th-Percentile Queue Length [ft/ln]	456.20	94.12	64.12	35.22	54.91	89.71	34.52	189.24	131.99	43.11	120.43	113.05
95th-Percentile Queue Length [veh/ln]	28.87	6.78	4.62	2.54	3.95	6.46	2.49	12.08	9.05	3.10	8.42	8.01
95th-Percentile Queue Length [ft/ln]	721.84	169.41	115.41	63.39	98.84	161.47	62.14	302.04	226.20	77.59	210.42	200.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	327.17	28.25	27.51	23.19	27.71	29.08	36.58	18.80	17.52	36.37	16.63	16.65
Movement LOS	F	C	C	C	C	C	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	104.37			25.92			19.28			18.71		
Approach LOS	F			C			B			B		
d_I, Intersection Delay [s/veh]	42.29											
Intersection LOS	D											
Intersection V/C	0.884											

Emissions

Vehicle Miles Traveled [mph]	81.99	140.91	98.11	11.29	16.52	25.56	6.10	93.21	34.81	12.55	55.13	51.64
Stops [stops/h]	950.45	392.16	267.16	73.37	114.40	186.89	71.92	788.53	274.99	89.81	250.91	235.52
Fuel consumption [US gal/h]	31.91	11.81	8.12	1.62	2.43	4.15	1.53	15.82	5.60	2.08	5.94	5.57
CO [g/h]	2230.59	825.85	567.26	113.33	169.68	290.40	106.81	1105.66	391.15	145.35	415.12	389.46
NOx [g/h]	433.99	160.68	110.37	22.05	33.01	56.50	20.78	215.12	76.10	28.28	80.77	75.78
VOC [g/h]	516.96	191.40	131.47	26.26	39.33	67.30	24.76	256.25	90.65	33.69	96.21	90.26

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.43	24.43	24.43	24.43
l_p,int, Pedestrian LOS Score for Intersectio	2.952	2.608	3.462	3.253
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	839	839	1186	1186
d_b, Bicycle Delay [s]	11.64	11.64	5.72	5.72
l_b,int, Bicycle LOS Score for Intersection	2.512	1.968	3.028	2.352
Bicycle LOS	B	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Tennessee Street/I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.776

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	202	783	0	0	565	78	0	0	0	161	5	180
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	202	174	0	0	143	32	0	0	0	7	137	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	404	957	0	0	708	110	0	0	0	168	142	204
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	106	252	0	0	186	29	0	0	0	44	37	54
Total Analysis Volume [veh/h]	425	1007	0	0	745	116	0	0	0	177	149	215
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Amber [s]	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.5	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	11.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	59.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	C
C, Calculated Cycle Length [s]	52	52	52	52		52	52
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	14.9	32.6	13.7	13.7		11.5	11.5
g / C, Green / Cycle	0.29	0.63	0.26	0.26		0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.23	0.28	0.21	0.07		0.15	0.16
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1842	1657
c, Capacity [veh/h]	516	2263	954	426		407	366
d1, Uniform Delay [s]	17.40	5.06	17.78	15.21		18.68	18.74
k, delay calibration	0.04	0.04	0.04	0.04		0.05	0.06
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	1.29	0.05	0.54	0.13		1.07	1.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.44	0.78	0.27		0.69	0.71
d, Delay for Lane Group [s/veh]	18.69	5.11	18.32	15.34		19.75	20.23
Lane Group LOS	B	A	B	B		B	C
Critical Lane Group	Yes	No	Yes	No		No	Yes
50th-Percentile Queue Length [veh/ln]	4.08	1.47	3.50	0.93		2.92	2.73
50th-Percentile Queue Length [ft/ln]	101.94	36.68	87.59	23.24		72.94	68.13
95th-Percentile Queue Length [veh/ln]	7.34	2.64	6.31	1.67		5.25	4.91
95th-Percentile Queue Length [ft/ln]	183.49	66.03	157.67	41.83		131.30	122.64

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.69	5.11	0.00	0.00	18.32	15.34	0.00	0.00	0.00	19.75	19.89	20.23
Movement LOS	B	A			B	B				B	B	C
d_A, Approach Delay [s/veh]	9.14			17.92			0.00			19.98		
Approach LOS	A			B			A			B		
d_I, Intersection Delay [s/veh]	13.88											
Intersection LOS	B											
Intersection V/C	0.776											

Emissions

Vehicle Miles Traveled [mph]	47.99	113.70	207.06	32.24		313.80	287.83
Stops [stops/h]	281.74	202.77	484.18	64.23		201.60	188.31
Fuel consumption [US gal/h]	6.10	7.11	14.95	2.15		15.17	13.95
CO [g/h]	426.61	497.14	1045.07	150.14		1060.11	975.45
NOx [g/h]	83.00	96.73	203.33	29.21		206.26	189.79
VOC [g/h]	98.87	115.22	242.20	34.80		245.69	226.07

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	18.67
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.091
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2054	518	0	518
d_b, Bicycle Delay [s]	0.02	14.30	26.05	14.30
l_b,int, Bicycle LOS Score for Intersection	2.741	2.270	4.132	2.006
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Tennessee Street/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	126.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.192

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	686	117	155	545	0	263	411	375	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	327	25	16	134	0	49	265	233	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1013	142	171	679	0	312	676	608	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	267	37	45	179	0	82	178	160	0	0	0
Total Analysis Volume [veh/h]	0	1066	149	180	715	0	328	712	640	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0.0	40.0	0.0	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
Amber [s]	0.0	4.5	0.0	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	19.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	3.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	22.0	0.0	17.0	44.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0.0	10.0	0.0	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		Yes		No	Yes			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	C	
C, Calculated Cycle Length [s]	71	71	71	71	71	71	
L, Total Lost Time per Cycle [s]	5.50	5.50	5.00	5.50	5.50	5.50	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.50	3.50	3.00	3.50	3.50	3.50	
g_i, Effective Green Time [s]	16.5	16.5	9.7	31.3	28.5	28.5	
g / C, Green / Cycle	0.23	0.23	0.14	0.44	0.40	0.40	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.33	0.10	0.20	0.46	0.49	
s, saturation flow rate [veh/h]	1900	1821	1810	3618	1865	1669	
c, Capacity [veh/h]	444	426	249	1598	751	672	
d1, Uniform Delay [s]	27.12	27.12	29.23	13.74	21.14	21.14	
k, delay calibration	0.50	0.50	0.04	0.04	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	179.57	205.54	1.50	0.07	82.16	110.33	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.37	1.43	0.72	0.45	1.15	1.22	
d, Delay for Lane Group [s/veh]	206.69	232.66	30.73	13.81	103.29	131.46	
Lane Group LOS	F	F	C	B	F	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	28.94	30.81	2.83	3.42	28.27	30.57	
50th-Percentile Queue Length [ft/ln]	723.59	770.31	70.64	85.45	706.78	764.28	
95th-Percentile Queue Length [veh/ln]	44.07	47.32	5.09	6.15	40.64	45.00	
95th-Percentile Queue Length [ft/ln]	1101.86	1183.01	127.15	153.80	1015.96	1124.98	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	217.86	232.66	30.73	13.81	0.00	103.29	110.31	131.46	0.00	0.00	0.00
Movement LOS		F	F	C	B		F	F	F			
d_A, Approach Delay [s/veh]	219.67			17.21			117.00			0.00		
Approach LOS	F			B			F			A		
d_I, Intersection Delay [s/veh]	126.35											
Intersection LOS	F											
Intersection V/C	1.192											

Emissions

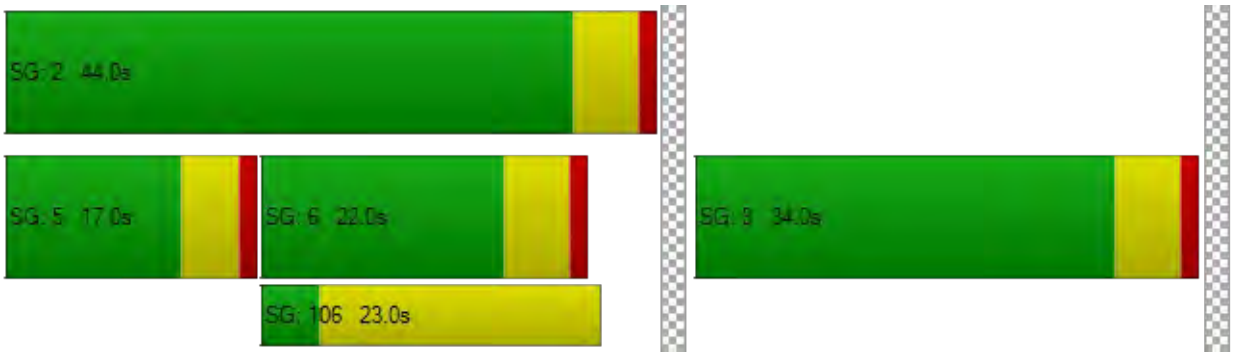
Vehicle Miles Traveled [mph]	53.15	53.15	20.32	80.73	450.52	426.73	
Stops [stops/h]	1472.31	1567.38	143.73	347.72	1438.11	1555.10	
Fuel consumption [US gal/h]	41.92	46.06	3.27	8.32	44.63	48.02	
CO [g/h]	2929.89	3219.51	228.27	581.40	3119.31	3356.50	
NOx [g/h]	570.05	626.40	44.41	113.12	606.90	653.05	
VOC [g/h]	679.03	746.15	52.90	134.75	722.93	777.90	

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	27.84
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.213
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	466	1088	805	0
d_b, Bicycle Delay [s]	20.81	7.36	12.62	35.39
l_b,int, Bicycle LOS Score for Intersection	2.562	2.298	2.946	4.132
Bicycle LOS	B	B	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: W. Pioneer Avenue/Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	25	0	1	2	6	0	0	4	40
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	25	0	1	2	6	0	0	4	40
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	7	0	0	1	2	0	0	1	11
Total Analysis Volume [veh/h]	0	0	0	26	0	1	2	6	0	0	4	42
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.70	9.30	8.33	8.80	9.29	8.51	7.29	0.00	0.00	7.21	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.09	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	2.13	2.13	2.13	0.08	0.08	0.08	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.77			8.79			1.82			0.00		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.11											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 9: New York Street/Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	37	0	0	23	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	0	0	23	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	0	6	0	0
Total Analysis Volume [veh/h]	39	0	0	24	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.27	0.00	8.80	8.47
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.63	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: New York Street/Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	37	23	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	37	23	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	10	6	0	0	0
Total Analysis Volume [veh/h]	0	39	24	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.24	0.00	0.00	0.00	8.80	8.40
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.60	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: W. San Bernardino Avenue/Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	229	182	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	229	182	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	60	48	0
Total Analysis Volume [veh/h]	0	0	0	241	192	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.48	8.79	0.00	0.00	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.48		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

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Report File: C:\...\2035 PP AM.pdf

Scenario 11 Cumulative 2035 PP AM
4/10/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	Two-way stop	HCM 7th Edition	NB Left	4.717	1,825.9	F
2	W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	HCM 7th Edition	WB Right	0.909	62.6	E
3	W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	HCM 7th Edition	SB Right	1.017	61.9	E
4	W. San Bernardino Ave/New York Street	Two-way stop	HCM 7th Edition	SB Right	0.773	10,000.0	F
5	W. Lugonia Avenue/Tennessee Street	Signalized	HCM 7th Edition	NB Left	0.722	18.3	B
6	Tennessee Street/I-10 WB Ramps	Signalized	HCM 7th Edition	WB Right	0.760	15.0	B
7	Tennessee Street/I-10 EB Ramps	Signalized	HCM 7th Edition	NB Right	1.008	82.6	F
8	W. Pioneer Avenue/Project Driveway 1	Two-way stop	HCM 7th Edition	SB Left	0.039	8.9	A
9	New York Street/Project Driveway 2	Two-way stop	HCM 7th Edition	WB Thru	0.001	8.8	A
10	New York Street/Project Driveway 3	Two-way stop	HCM 7th Edition	EB Left	0.017	9.5	A
11	W. San Bernardino Avenue/Driveway 4	Two-way stop	HCM 7th Edition	SB Right	0.077	10.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Control Type:	Two-way stop	Delay (sec / veh):	1,825.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	4.717

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	255	0	31	18	0	149	270	324	0	0	376	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	1	0	0	5	2	9	37	1	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	269	0	32	18	0	154	272	333	37	1	379	59
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	71	0	8	5	0	41	72	88	10	0	100	16
Total Analysis Volume [veh/h]	283	0	34	19	0	162	286	351	39	1	399	62
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No			
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	4.72	0.00	0.05	0.22	0.00	0.26	0.26	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	1825.90	1800.42	1771.19	59.15	0.00	12.69	9.36	0.00	0.00	8.05	0.00	0.00
Movement LOS	F	F	F	F		B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	34.73	34.73	34.73	0.79	0.00	1.02	1.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	868.36	868.36	868.36	19.71	0.00	25.55	25.75	0.00	0.00	0.04	0.04	0.04
d_A, Approach Delay [s/veh]	1820.03			17.57			3.96			0.02		
Approach LOS	F			C			A			A		
d_I, Intersection Delay [s/veh]	356.24											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 2: W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive

Control Type:	Signalized	Delay (sec / veh):	62.6
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.909

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			50.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	1	37	418	434	418	94	373	43	55	290	308
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	17	133	1	81	0	111	0	47	343	253
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	14	0	0	125	0	0	11	0	0	140
Total Hourly Volume [veh/h]	14	1	40	551	435	374	94	484	32	102	633	421
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	11	145	114	98	25	127	8	27	167	111
Total Analysis Volume [veh/h]	15	1	42	580	458	394	99	509	34	107	666	443
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	20.0	30.0	20.0	20.0	30.0	0.0	20.0	40.0	0.0	20.0	40.0	0.0
Amber [s]	4.4	5.0	4.4	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	24.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	20.0	11.0	20.0	29.0	0.0	11.0	15.0	0.0	11.0	15.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	61	61	61	61	61	61	61	61	61	61	61	61
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3.7	6.4	21.0	16.0	18.7	18.7	9.6	12.0	12.0	10.6	13.1	13.1
g / C, Green / Cycle	0.06	0.10	0.34	0.26	0.31	0.31	0.16	0.20	0.20	0.17	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.03	0.32	0.24	0.25	0.05	0.10	0.10	0.06	0.18	0.27
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1618	1810	3618	1840	1810	3618	1615
c, Capacity [veh/h]	109	198	555	475	582	496	284	712	362	315	775	346
d1, Uniform Delay [s]	27.15	24.48	14.43	22.48	19.26	19.47	22.93	21.83	21.85	22.10	23.07	23.95
k, delay calibration	0.04	0.04	0.04	0.50	0.12	0.13	0.04	0.04	0.05	0.04	0.04	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.00	0.02	117.35	2.44	3.83	0.27	0.21	0.50	0.24	1.12	146.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.01	0.08	1.22	0.78	0.80	0.35	0.50	0.51	0.34	0.86	1.28
d, Delay for Lane Group [s/veh]	27.36	24.48	14.45	139.83	21.70	23.29	23.20	22.03	22.35	22.33	24.19	170.72
Lane Group LOS	C	C	B	F	C	C	C	C	C	C	C	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.20	0.01	0.37	21.67	5.67	5.22	1.12	1.97	2.06	1.21	4.10	18.39
50th-Percentile Queue Length [ft/ln]	5.00	0.31	9.13	541.64	141.66	130.50	28.00	49.33	51.47	30.14	102.43	459.75
95th-Percentile Queue Length [veh/ln]	0.36	0.02	0.66	32.67	9.57	8.97	2.02	3.55	3.71	2.17	7.37	28.63
95th-Percentile Queue Length [ft/ln]	9.00	0.55	16.43	816.65	239.25	224.18	50.39	88.80	92.64	54.26	184.37	715.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.36	24.48	14.45	139.83	21.71	23.29	23.20	22.13	22.35	22.33	24.19	170.72
Movement LOS	C	C	B	F	C	C	C	C	C	C	C	F
d_A, Approach Delay [s/veh]	17.96			69.99			22.30			77.41		
Approach LOS	B			E			C			E		
d_I, Intersection Delay [s/veh]	62.64											
Intersection LOS	E											
Intersection V/C	0.909											

Emissions

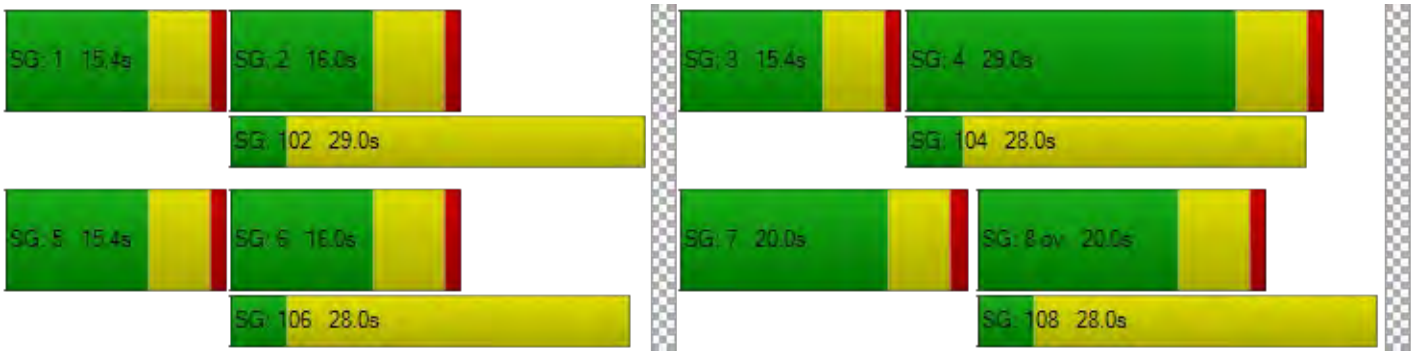
Vehicle Miles Traveled [mph]	1.65	0.11	4.63	64.81	50.62	44.58	8.49	30.76	15.80	14.24	88.61	58.94
Stops [stops/h]	11.81	0.72	21.56	1279.32	334.58	308.24	66.13	233.04	121.56	71.20	483.86	1085.92
Fuel consumption [US gal/h]	0.24	0.01	0.46	26.24	5.93	5.43	1.77	6.22	3.23	1.86	12.33	30.91
CO [g/h]	16.45	1.02	32.30	1834.08	414.70	379.53	123.50	434.51	226.01	129.99	862.03	2160.67
NOx [g/h]	3.20	0.20	6.29	356.85	80.69	73.84	24.03	84.54	43.97	25.29	167.72	420.39
VOC [g/h]	3.81	0.24	7.49	425.07	96.11	87.96	28.62	100.70	52.38	30.13	199.78	500.76

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.01	23.01	23.01	23.01
l_p,int, Pedestrian LOS Score for Intersectio	2.458	2.898	3.023	3.299
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	459	755	328	328
d_b, Bicycle Delay [s]	18.09	11.82	21.30	21.30
l_b,int, Bicycle LOS Score for Intersection	1.678	2.844	1.919	2.305
Bicycle LOS	A	C	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: W. San Bernardino Avenue/210 WB Ramps/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	61.9
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.017

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	37	369	34	208	16	89	194	508	140	34	529	388
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	245	147	73	37	157	202	28	49	184	76	196	44
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	282	516	107	245	173	291	222	557	324	110	725	432
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	136	28	64	46	77	58	147	85	29	191	114
Total Analysis Volume [veh/h]	297	543	113	258	182	306	234	586	341	116	763	455
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20.0	25.0	0.0	20.0	25.0	0.0	25.0	40.0	0.0	25.0	40.0	0.0
Amber [s]	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	22.0	0.0	0.0	22.0	0.0	0.0	23.0	0.0	0.0	23.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	21.0	0.0	11.0	20.0	0.0	11.0	23.0	0.0	11.0	23.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	74	74	74	74	74	74	74	74	74	74	74
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11.4	16.6	16.6	11.4	16.6	11.3	19.8	19.8	10.5	19.0	19.0
g / C, Green / Cycle	0.15	0.22	0.22	0.15	0.22	0.15	0.27	0.27	0.14	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.16	0.18	0.18	0.14	0.29	0.07	0.16	0.21	0.06	0.21	0.28
s, saturation flow rate [veh/h]	1810	1900	1788	1810	1711	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	278	424	399	278	382	536	963	430	257	925	413
d1, Uniform Delay [s]	31.46	27.27	27.27	31.06	28.86	28.60	23.88	25.37	29.23	26.09	27.66
k, delay calibration	0.50	0.30	0.30	0.39	0.50	0.04	0.04	0.34	0.04	0.04	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	73.79	8.96	9.47	32.92	143.89	0.21	0.23	9.88	0.46	0.73	74.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.07	0.80	0.80	0.93	1.28	0.44	0.61	0.79	0.45	0.82	1.10
d, Delay for Lane Group [s/veh]	105.25	36.23	36.74	63.98	172.75	28.81	24.11	35.25	29.69	26.82	102.44
Lane Group LOS	F	D	D	E	F	C	C	D	C	C	F
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	10.47	6.46	6.14	6.93	21.73	1.76	4.08	6.19	1.79	5.80	15.12
50th-Percentile Queue Length [ft/ln]	261.85	161.54	153.44	173.22	543.22	44.05	102.03	154.68	44.66	144.97	378.08
95th-Percentile Queue Length [veh/ln]	16.28	10.63	10.20	11.25	33.19	3.17	7.35	10.27	3.22	9.75	22.70
95th-Percentile Queue Length [ft/ln]	406.99	265.76	255.01	281.14	829.74	79.28	183.66	256.66	80.40	243.70	567.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	105.25	36.42	36.74	63.98	172.75	172.75	28.81	24.11	35.25	29.69	26.82	102.44
Movement LOS	F	D	D	E	F	F	C	C	D	C	C	F
d_A, Approach Delay [s/veh]	57.91			135.13			28.33			52.86		
Approach LOS	E			F			C			D		
d_I, Intersection Delay [s/veh]	61.85											
Intersection LOS	E											
Intersection V/C	1.017											

Emissions

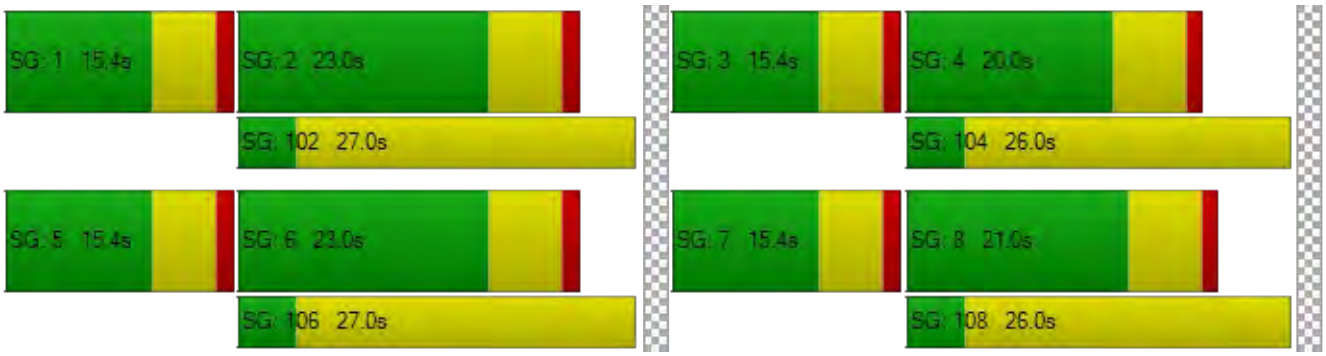
Vehicle Miles Traveled [mph]	118.40	134.73	126.79	12.35	23.35	31.13	77.96	45.37	15.08	99.20	59.16
Stops [stops/h]	507.39	313.01	297.31	335.65	1052.59	170.70	395.42	299.72	86.55	561.81	732.61
Fuel consumption [US gal/h]	14.04	9.77	9.24	5.72	23.93	4.56	10.46	7.73	2.29	14.55	20.62
CO [g/h]	981.24	682.74	645.87	399.92	1672.69	318.84	731.47	540.15	160.35	1017.03	1441.40
NOx [g/h]	190.91	132.84	125.66	77.81	325.44	62.03	142.32	105.09	31.20	197.88	280.44
VOC [g/h]	227.41	158.23	149.69	92.68	387.66	73.89	169.52	125.19	37.16	235.71	334.06

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.59	29.59	29.59	29.59
l_p,int, Pedestrian LOS Score for Intersectio	2.603	2.606	3.181	3.066
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	404	377	458	458
d_b, Bicycle Delay [s]	23.67	24.48	22.10	22.10
l_b,int, Bicycle LOS Score for Intersection	2.346	2.791	2.198	2.293
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: W. San Bernardino Ave/New York Street

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.773

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	9	195	260	540	907	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	96	33	105	167	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	291	293	645	1074	28
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	77	77	170	283	7
Total Analysis Volume [veh/h]	24	306	308	679	1131	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.77	0.93	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	10000.00	10000.00	17.71	0.00	0.00	0.00
Movement LOS	F	F	C	A	A	A
95th-Percentile Queue Length [veh/ln]	44.06	44.06	1.45	0.48	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1101.47	1101.47	36.31	12.10	0.00	0.00
d_A, Approach Delay [s/veh]	10000.00		5.53		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	1334.46					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: W. Lugonia Avenue/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.722

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	2	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	133	273	91	71	86	6	55	289	208	90	424	122
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	85	47	75	121	11	4	170	0	19	208	16
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	133	358	138	146	207	17	59	459	208	109	632	138
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	94	36	38	54	4	16	121	55	29	166	36
Total Analysis Volume [veh/h]	140	377	145	154	218	18	62	483	219	115	665	145
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	19.50

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	1	2	0	5	6	0
Auxiliary Signal Groups												
Maximum Green [s]	40.0	30.0	0.0	5.0	30.0	0.0	30.0	32.0	0.0	30.0	32.0	0.0
Amber [s]	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	20.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0	0.0	27.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	34.0	0.0	9.0	34.0	0.0	9.0	46.0	0.0	9.0	46.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
Vehicle Extension [s]	3.0	2.0	0.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.50	5.00	5.00	5.00	5.00	5.00	4.50	5.00	5.00	4.50	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	3.00	3.00	2.50	2.50	3.00	2.50	3.00	3.00	2.50	3.00	3.00
g_i, Effective Green Time [s]	5.0	7.4	7.4	12.4	12.4	7.4	2.9	15.2	15.2	4.1	14.0	14.0
g / C, Green / Cycle	0.10	0.15	0.15	0.25	0.25	0.15	0.06	0.31	0.31	0.08	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.05	0.10	0.05	0.06	0.09	0.09	0.03	0.13	0.14	0.06	0.22	0.22
s, saturation flow rate [veh/h]	1182	3618	2859	1264	1171	1694	1810	3618	1615	1810	1900	1784
c, Capacity [veh/h]	265	538	425	373	499	252	106	1113	497	149	539	506
d1, Uniform Delay [s]	22.59	20.00	18.88	12.35	12.13	19.73	22.70	13.68	13.71	22.24	16.27	16.27
k, delay calibration	0.33	0.04	0.04	0.04	0.30	0.04	0.04	0.11	0.11	0.04	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.88	0.63	0.18	0.14	0.82	0.92	1.93	0.27	0.62	3.18	2.43	2.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.70	0.34	0.26	0.28	0.62	0.59	0.43	0.44	0.77	0.78	0.78
d, Delay for Lane Group [s/veh]	27.48	20.63	19.05	12.49	12.95	20.65	24.63	13.95	14.33	25.42	18.70	18.85
Lane Group LOS	C	C	B	B	B	C	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.79	1.81	0.65	0.60	0.99	1.50	0.67	1.76	1.65	1.27	3.85	3.63
50th-Percentile Queue Length [ft/ln]	44.76	45.13	16.21	14.88	24.75	37.41	16.82	44.05	41.23	31.75	96.16	90.84
95th-Percentile Queue Length [veh/ln]	3.22	3.25	1.17	1.07	1.78	2.69	1.21	3.17	2.97	2.29	6.92	6.54
95th-Percentile Queue Length [ft/ln]	80.57	81.23	29.19	26.79	44.56	67.33	30.27	79.30	74.21	57.15	173.09	163.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.48	20.63	19.05	12.58	17.81	20.65	24.63	13.95	14.33	25.42	18.76	18.85
Movement LOS	C	C	B	B	B	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.73			15.91			14.92			19.60		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	18.29											
Intersection LOS	B											
Intersection V/C	0.722											

Emissions

Vehicle Miles Traveled [mph]	38.91	104.78	40.30	10.37	14.90	16.78	4.67	36.40	16.50	14.29	51.93	48.75
Stops [stops/h]	130.34	262.80	94.42	43.33	72.08	108.92	48.97	256.55	120.05	92.45	280.00	264.50
Fuel consumption [US gal/h]	3.46	7.92	2.93	1.04	1.61	2.33	0.96	5.20	2.41	2.02	6.20	5.85
CO [g/h]	241.65	553.44	205.04	72.81	112.26	162.52	67.05	363.14	168.40	140.86	433.40	408.90
NOx [g/h]	47.02	107.68	39.89	14.17	21.84	31.62	13.04	70.65	32.76	27.41	84.32	79.56
VOC [g/h]	56.00	128.26	47.52	16.88	26.02	37.67	15.54	84.16	39.03	32.64	100.44	94.77

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.95	14.95	14.95	14.95
l_p,int, Pedestrian LOS Score for Intersectio	2.785	2.519	2.962	2.939
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1173	1173	1658	1658
d_b, Bicycle Delay [s]	4.23	4.23	0.72	0.72
l_b,int, Bicycle LOS Score for Intersection	2.106	1.881	2.190	2.323
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Tennessee Street/I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	232	507	0	0	469	101	0	0	0	231	5	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	158	117	0	0	100	40	0	0	0	21	263	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	390	624	0	0	569	141	0	0	0	252	268	111
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	164	0	0	150	37	0	0	0	66	71	29
Total Analysis Volume [veh/h]	411	657	0	0	599	148	0	0	0	265	282	117
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Amber [s]	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.5	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	11.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	59.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	C
C, Calculated Cycle Length [s]	50	50	50	50		50	50
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	13.9	29.5	11.5	11.5		12.3	12.3
g / C, Green / Cycle	0.28	0.59	0.23	0.23		0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.23	0.18	0.17	0.09		0.18	0.18
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1828	1788
c, Capacity [veh/h]	507	2141	838	374		452	442
d1, Uniform Delay [s]	16.70	5.07	17.62	16.18		17.27	17.28
k, delay calibration	0.04	0.04	0.04	0.04		0.12	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	1.21	0.03	0.43	0.25		2.73	2.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.31	0.71	0.40		0.74	0.74
d, Delay for Lane Group [s/veh]	17.91	5.10	18.05	16.43		20.00	20.12
Lane Group LOS	B	A	B	B		C	C
Critical Lane Group	Yes	No	Yes	No		No	Yes
50th-Percentile Queue Length [veh/ln]	3.69	0.93	2.67	1.21		3.43	3.38
50th-Percentile Queue Length [ft/ln]	92.30	23.37	66.67	30.35		85.84	84.49
95th-Percentile Queue Length [veh/ln]	6.65	1.68	4.80	2.19		6.18	6.08
95th-Percentile Queue Length [ft/ln]	166.15	42.07	120.01	54.63		154.52	152.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.91	5.10	0.00	0.00	18.05	16.43	0.00	0.00	0.00	20.00	20.09	20.12
Movement LOS	B	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	10.03			17.73			0.00			20.06		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	15.03											
Intersection LOS	B											
Intersection V/C	0.760											

Emissions

Vehicle Miles Traveled [mph]	46.41	74.18	166.48	41.13		372.91	365.51
Stops [stops/h]	266.91	135.17	385.58	87.77		248.23	244.32
Fuel consumption [US gal/h]	5.78	4.67	11.95	2.83		18.09	17.74
CO [g/h]	404.22	326.20	835.38	197.86		1264.33	1240.19
NOx [g/h]	78.65	63.47	162.53	38.50		245.99	241.30
VOC [g/h]	93.68	75.60	193.61	45.86		293.02	287.43

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	17.54
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.128
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2149	542	0	542
d_b, Bicycle Delay [s]	0.14	13.23	24.90	13.23
l_b,int, Bicycle LOS Score for Intersection	2.441	2.176	4.132	2.107
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Tennessee Street/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	82.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.008

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	600	224	89	554	0	148	216	513	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	244	8	20	101	0	31	109	91	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	844	232	109	655	0	179	325	604	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	222	61	29	172	0	47	86	159	0	0	0
Total Analysis Volume [veh/h]	0	888	244	115	689	0	188	342	636	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0.0	40.0	0.0	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
Amber [s]	0.0	4.5	0.0	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	19.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	3.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	22.0	0.0	17.0	44.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0.0	10.0	0.0	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		Yes		No	Yes			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	C	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	
L, Total Lost Time per Cycle [s]	5.50	5.50	5.00	5.50	5.50	5.50	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.50	3.50	3.00	3.50	3.50	3.50	
g_i, Effective Green Time [s]	16.5	16.5	9.0	30.5	28.5	28.5	
g / C, Green / Cycle	0.24	0.24	0.13	0.44	0.41	0.41	
(v / s)_i Volume / Saturation Flow Rate	0.30	0.32	0.06	0.19	0.28	0.39	
s, saturation flow rate [veh/h]	1900	1766	1810	3618	1867	1615	
c, Capacity [veh/h]	449	417	232	1576	760	657	
d1, Uniform Delay [s]	26.73	26.73	28.42	13.77	17.18	20.30	
k, delay calibration	0.50	0.50	0.04	0.04	0.15	0.37	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	134.36	175.60	0.61	0.07	1.63	23.35	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.26	1.36	0.50	0.44	0.70	0.97	
d, Delay for Lane Group [s/veh]	161.10	202.34	29.03	13.84	18.82	43.65	
Lane Group LOS	F	F	C	B	B	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	23.52	26.64	1.71	3.26	6.74	13.34	
50th-Percentile Queue Length [ft/ln]	588.01	665.90	42.79	81.61	168.60	333.39	
95th-Percentile Queue Length [veh/ln]	35.49	40.80	3.08	5.88	11.00	19.32	
95th-Percentile Queue Length [ft/ln]	887.20	1020.08	77.03	146.90	275.07	483.11	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	176.05	202.34	29.03	13.84	0.00	18.82	18.82	43.65	0.00	0.00	0.00
Movement LOS		F	F	C	B		B	B	D			
d_A, Approach Delay [s/veh]	181.72			16.01			32.36			0.00		
Approach LOS	F			B			C			A		
d_I, Intersection Delay [s/veh]	82.63											
Intersection LOS	F											
Intersection V/C	1.008											

Emissions

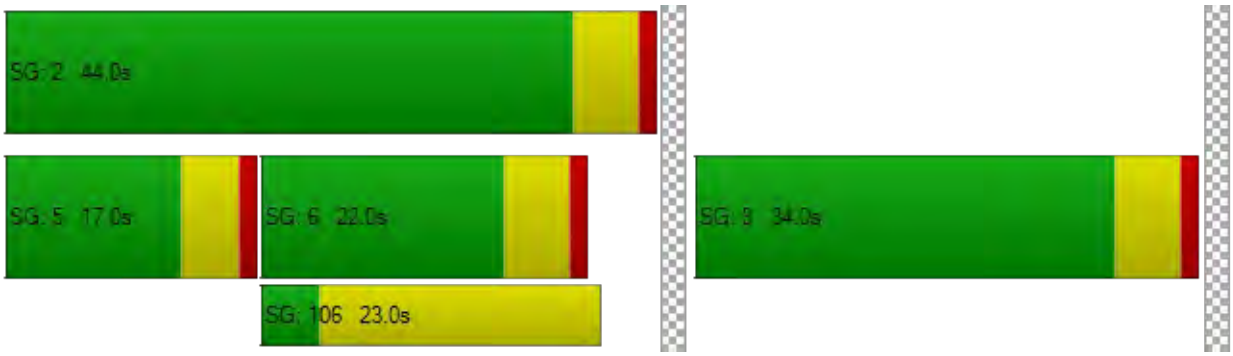
Vehicle Miles Traveled [mph]	49.52	49.52	12.99	77.80	276.75	332.10	
Stops [stops/h]	1209.49	1369.69	88.02	335.73	346.79	685.75	
Fuel consumption [US gal/h]	32.21	38.53	2.01	8.03	15.34	23.11	
CO [g/h]	2251.36	2693.30	140.44	560.95	1072.16	1615.34	
NOx [g/h]	438.03	524.02	27.32	109.14	208.60	314.29	
VOC [g/h]	521.77	624.20	32.55	130.01	248.48	374.37	

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	27.46
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.047
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	471	1100	814	0
d_b, Bicycle Delay [s]	20.45	7.09	12.31	35.00
l_b,int, Bicycle LOS Score for Intersection	2.494	2.223	2.522	4.132
Bicycle LOS	B	B	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: W. Pioneer Avenue/Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.039

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	0	10	36	0	2	1	2	2	4	5	13
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	10	36	0	2	1	2	2	4	5	13
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	9	0	1	0	1	1	1	1	3
Total Analysis Volume [veh/h]	4	0	11	38	0	2	1	2	2	4	5	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.71	9.23	8.36	8.87	9.30	8.51	7.24	0.00	0.00	7.21	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.13	0.13	0.13	0.00	0.00	0.00	0.01	0.01	0.01
95th-Percentile Queue Length [ft/ln]	1.08	1.08	1.08	3.21	3.21	3.21	0.05	0.05	0.05	0.19	0.19	0.19
d_A, Approach Delay [s/veh]	8.45			8.85			1.45			1.25		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	6.23											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 9: New York Street/Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	1	37	1	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	0	1	37	1	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	0	10	0	0
Total Analysis Volume [veh/h]	15	0	1	39	1	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.23	0.00	8.77	8.37
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.04	0.04	0.15	0.15
d_A, Approach Delay [s/veh]	0.00		0.18		8.57	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.43					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: New York Street/Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	14	53	0	14	57
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	14	53	0	14	57
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	4	14	0	4	15
Total Analysis Volume [veh/h]	24	15	56	0	15	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.02	0.06
d_M, Delay for Movement [s/veh]	7.33	0.00	0.00	0.00	9.45	8.84
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.25	0.25
95th-Percentile Queue Length [ft/ln]	1.01	1.01	0.00	0.00	6.18	6.18
d_A, Approach Delay [s/veh]	4.51		0.00		8.97	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.99					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 11: W. San Bernardino Avenue/Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.077

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	55	21	138	261	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	55	21	138	261	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	14	6	36	69	1
Total Analysis Volume [veh/h]	0	58	22	145	275	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.08	0.03	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.15	9.17	0.00	0.00	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.25	0.04	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	6.21	0.93	0.31	0.00	0.00
d_A, Approach Delay [s/veh]	10.15		1.21		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.58					
Intersection LOS	B					

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Report File: C:\...\2035 PP PM.pdf

Scenario 12 Cumulative 2035 PP PM
4/10/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	Two-way stop	HCM 7th Edition	NB Left	0.965	181.6	F
2	W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	HCM 7th Edition	SB Left	1.047	81.8	F
3	W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	HCM 7th Edition	SB Left	1.087	98.4	F
4	W. San Bernardino Ave/New York Street	Two-way stop	HCM 7th Edition	SB Left	0.428	163.6	F
5	W. Lugonia Avenue/Tennessee Street	Signalized	HCM 7th Edition	NB Left	0.896	44.5	D
6	Tennessee Street/I-10 WB Ramps	Signalized	HCM 7th Edition	WB Right	0.778	13.9	B
7	Tennessee Street/I-10 EB Ramps	Signalized	HCM 7th Edition	NB Right	1.197	127.7	F
8	W. Pioneer Avenue/Project Driveway 1	Two-way stop	HCM 7th Edition	SB Left	0.028	9.0	A
9	New York Street/Project Driveway 2	Two-way stop	HCM 7th Edition	WB Thru	0.001	8.9	A
10	New York Street/Project Driveway 3	Two-way stop	HCM 7th Edition	EB Left	0.015	10.2	B
11	W. San Bernardino Avenue/Driveway 4	Two-way stop	HCM 7th Edition	SB Right	0.052	9.9	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Control Type:	Two-way stop	Delay (sec / veh):	181.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.965

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	90	0	87	52	0	54	100	700	0	0	129	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	42	0	1	0	0	4	6	6	26	2	9	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	132	0	88	52	0	58	106	706	26	2	138	39
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	0	23	14	0	15	28	186	7	1	36	10
Total Analysis Volume [veh/h]	139	0	93	55	0	61	112	743	27	2	145	41
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No			
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.97	0.00	0.23	0.47	0.00	0.07	0.08	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	181.65	176.83	165.40	60.76	0.00	9.37	7.79	0.00	0.00	9.22	0.00	0.00
Movement LOS	F	F	F	F		A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	11.95	11.95	11.95	2.10	0.00	0.22	0.26	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	298.67	298.67	298.67	52.55	0.00	5.55	6.51	0.00	0.00	0.09	0.09	0.09
d_A, Approach Delay [s/veh]	175.14			33.74			0.99			0.10		
Approach LOS	F			D			A			A		
d_I, Intersection Delay [s/veh]	32.04											
Intersection LOS	F											

Intersection Level Of Service Report

Intersection 2: W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive

Control Type:	Signalized	Delay (sec / veh):	81.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.047

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			50.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	24	339	308	582	249	49	833	128	106	199	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	52	247	5	36	0	251	0	32	219	221
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	98	0	0	71	0	0	32	0	0	80
Total Hourly Volume [veh/h]	34	24	293	555	587	214	49	1084	96	138	418	240
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	6	77	146	154	56	13	285	25	36	110	63
Total Analysis Volume [veh/h]	36	25	308	584	618	225	52	1141	101	145	440	253
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	1	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups			1,8									
Maximum Green [s]	20.0	30.0	20.0	20.0	30.0	0.0	20.0	40.0	0.0	20.0	40.0	0.0
Amber [s]	4.4	5.0	4.4	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	24.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	20.0	11.0	20.0	29.0	0.0	11.0	15.0	0.0	11.0	15.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	10.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	64	64	64	64	64	64	64	64	64	64	64	64
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.2	8.9	24.3	16.0	18.8	18.8	7.5	12.0	12.0	11.4	15.9	15.9
g / C, Green / Cycle	0.10	0.14	0.38	0.25	0.29	0.29	0.12	0.19	0.19	0.18	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.19	0.32	0.23	0.23	0.03	0.23	0.23	0.08	0.12	0.16
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1731	1810	3618	1822	1810	3618	1615
c, Capacity [veh/h]	174	264	611	450	554	504	211	675	340	321	894	399
d1, Uniform Delay [s]	26.81	24.17	16.46	24.17	20.98	21.10	25.86	26.17	26.17	23.68	20.76	21.62
k, delay calibration	0.04	0.04	0.50	0.50	0.12	0.14	0.04	0.14	0.50	0.04	0.04	0.35
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.06	2.96	149.66	2.94	3.82	0.22	104.85	124.56	0.37	0.16	5.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.09	0.50	1.30	0.79	0.80	0.25	1.22	1.22	0.45	0.49	0.63
d, Delay for Lane Group [s/veh]	27.03	24.22	19.41	173.83	23.92	24.92	26.08	131.02	150.74	24.05	20.92	26.96
Lane Group LOS	C	C	B	F	C	C	C	F	F	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.49	0.32	3.69	25.02	6.00	5.72	0.66	14.28	16.25	1.79	2.50	3.56
50th-Percentile Queue Length [ft/ln]	12.24	7.88	92.36	625.53	150.09	143.06	16.39	357.03	406.15	44.74	62.42	88.98
95th-Percentile Queue Length [veh/ln]	0.88	0.57	6.65	38.02	10.02	9.65	1.18	22.48	25.14	3.22	4.49	6.41
95th-Percentile Queue Length [ft/ln]	22.03	14.18	166.25	950.47	250.55	241.13	29.50	562.04	628.49	80.53	112.36	160.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.03	24.22	19.41	173.83	24.21	24.92	26.08	136.47	150.74	24.05	20.92	26.96
Movement LOS	C	C	B	F	C	C	C	F	F	C	C	C
d_A, Approach Delay [s/veh]	20.48			85.56			133.14			23.29		
Approach LOS	C			F			F			C		
d_I, Intersection Delay [s/veh]	81.84											
Intersection LOS	F											
Intersection V/C	1.047											

Emissions

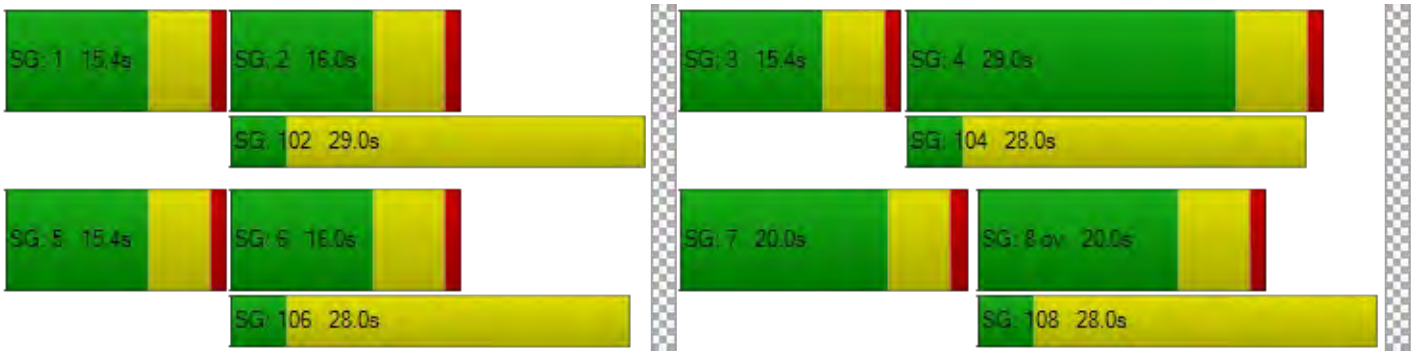
Vehicle Miles Traveled [mph]	3.97	2.76	33.96	65.26	48.84	45.36	4.46	70.82	35.69	19.29	58.54	33.66
Stops [stops/h]	27.39	17.64	206.70	1399.91	335.89	320.15	36.67	1598.06	908.96	100.12	279.40	199.14
Fuel consumption [US gal/h]	0.56	0.36	4.07	31.08	5.99	5.70	0.99	48.92	27.91	2.62	7.35	5.02
CO [g/h]	38.81	25.23	284.19	2172.29	418.95	398.09	69.08	3419.47	1951.04	182.85	514.01	350.76
NOx [g/h]	7.55	4.91	55.29	422.65	81.51	77.45	13.44	665.30	379.60	35.58	100.01	68.24
VOC [g/h]	9.00	5.85	65.86	503.45	97.10	92.26	16.01	792.50	452.17	42.38	119.13	81.29

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.67	24.67	24.67	24.67
l_p,int, Pedestrian LOS Score for Intersectio	2.735	2.759	3.112	3.331
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	435	715	311	311
d_b, Bicycle Delay [s]	19.70	13.28	22.95	22.95
l_b,int, Bicycle LOS Score for Intersection	2.330	2.795	2.289	2.065
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: W. San Bernardino Avenue/210 WB Ramps/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	98.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.087

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	527	43	257	23	80	571	681	179	25	324	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	248	184	98	110	244	91	82	151	317	100	133	30
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	282	711	141	367	267	171	653	832	496	125	457	306
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	187	37	97	70	45	172	219	131	33	120	81
Total Analysis Volume [veh/h]	297	748	148	386	281	180	687	876	522	132	481	322
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	20.0	25.0	0.0	20.0	25.0	0.0	25.0	40.0	0.0	25.0	40.0	0.0
Amber [s]	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0	4.4	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Pedestrian Clearance [s]	0.0	22.0	0.0	0.0	22.0	0.0	0.0	23.0	0.0	0.0	23.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	21.0	0.0	11.0	20.0	0.0	11.0	23.0	0.0	11.0	23.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0	10.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	74	74	74	74	74	74	74	74	74	74	74
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11.4	17.0	17.0	11.4	17.0	11.4	19.0	19.0	10.8	18.4	18.4
g / C, Green / Cycle	0.15	0.23	0.23	0.15	0.23	0.15	0.26	0.26	0.15	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.16	0.24	0.24	0.21	0.26	0.20	0.24	0.32	0.07	0.13	0.20
s, saturation flow rate [veh/h]	1810	1900	1793	1810	1778	3514	3618	1615	1810	3618	1615
c, Capacity [veh/h]	278	435	411	278	407	540	927	414	263	897	400
d1, Uniform Delay [s]	31.39	28.59	28.59	31.39	28.59	31.39	27.08	27.59	29.22	24.20	26.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.14	0.04	0.50	0.04	0.04	0.30
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	73.16	59.11	61.32	195.37	85.59	126.59	2.46	136.07	0.55	0.19	9.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.07	1.06	1.06	1.39	1.13	1.27	0.95	1.26	0.50	0.54	0.80
d, Delay for Lane Group [s/veh]	104.56	87.71	89.91	226.76	114.18	157.99	29.54	163.66	29.77	24.39	36.07
Lane Group LOS	F	F	F	F	F	F	C	F	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	10.43	14.49	13.92	19.87	16.55	13.92	7.12	22.18	2.04	3.33	5.90
50th-Percentile Queue Length [ft/ln]	260.85	362.31	348.11	496.82	413.85	348.03	177.88	554.38	51.01	83.34	147.41
95th-Percentile Queue Length [veh/ln]	16.21	21.39	20.70	31.09	24.82	22.17	11.49	33.80	3.67	6.00	9.88
95th-Percentile Queue Length [ft/ln]	405.37	534.72	517.58	777.27	620.50	554.22	287.25	844.91	91.81	150.02	246.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	104.56	88.55	89.91	226.76	114.18	114.18	157.99	29.54	163.66	29.77	24.39	36.07
Movement LOS	F	F	F	F	F	F	F	C	F	C	C	D
d_A, Approach Delay [s/veh]	92.71			165.49			105.44			29.17		
Approach LOS	F			F			F			C		
d_I, Intersection Delay [s/veh]	98.40											
Intersection LOS	F											
Intersection V/C	1.087											

Emissions

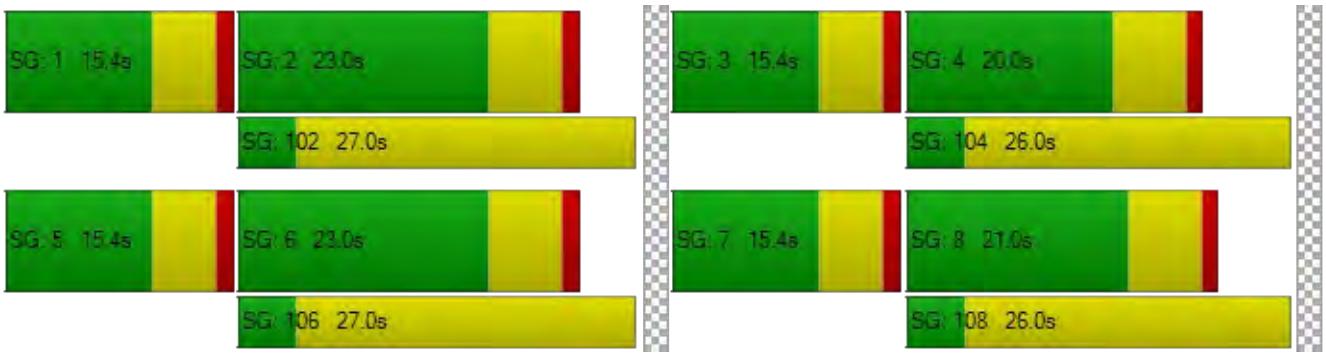
Vehicle Miles Traveled [mph]	118.40	183.54	173.66	18.47	22.06	91.40	116.55	69.45	17.16	62.54	41.87
Stops [stops/h]	506.32	703.28	675.71	964.37	803.31	1351.12	690.57	1076.09	99.01	323.55	286.13
Fuel consumption [US gal/h]	13.99	19.66	18.85	23.90	16.06	42.02	17.85	33.14	2.62	8.55	7.36
CO [g/h]	977.91	1374.06	1317.73	1670.44	1122.37	2936.94	1247.54	2316.68	183.08	597.92	514.21
NOx [g/h]	190.27	267.34	256.38	325.01	218.37	571.42	242.73	450.74	35.62	116.33	100.05
VOC [g/h]	226.64	318.45	305.40	387.14	260.12	680.66	289.13	536.91	42.43	138.57	119.17

Other Modes

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.52	29.52	29.52	29.52
l_p,int, Pedestrian LOS Score for Intersectio	2.708	2.759	3.275	3.077
Crosswalk LOS	B	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	404	377	458	458
d_b, Bicycle Delay [s]	23.61	24.41	22.04	22.04
l_b,int, Bicycle LOS Score for Intersection	2.544	2.957	2.706	2.074
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: W. San Bernardino Ave/New York Street

Control Type:	Two-way stop	Delay (sec / veh):	163.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.428

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	2	119	168	902	587	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	66	103	192	164	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	185	271	1094	751	20
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	49	71	288	198	5
Total Analysis Volume [veh/h]	13	195	285	1152	791	21
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.43	0.38	0.58	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	163.65	52.25	12.75	0.00	0.00	0.00
Movement LOS	F	F	B	A	A	A
95th-Percentile Queue Length [veh/ln]	6.27	6.27	0.56	0.19	0.00	0.00
95th-Percentile Queue Length [ft/ln]	156.78	156.78	14.07	4.69	0.00	0.00
d_A, Approach Delay [s/veh]	59.22		2.53		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	6.49					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 5: W. Lugonia Avenue/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	44.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.896

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	2	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	280	362	257	111	114	12	77	908	439	80	436	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	132	78	78	167	8	13	267	0	16	229	28
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	280	494	335	189	281	20	90	1175	439	96	665	157
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	130	88	50	74	5	24	309	116	25	175	41
Total Analysis Volume [veh/h]	295	520	353	199	296	21	95	1237	462	101	700	165
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	19.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	1	2	0	5	6	0
Auxiliary Signal Groups												
Maximum Green [s]	40.0	30.0	0.0	5.0	30.0	0.0	30.0	32.0	0.0	30.0	32.0	0.0
Amber [s]	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0	3.5	4.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	20.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0	0.0	27.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	34.0	0.0	9.0	34.0	0.0	9.0	46.0	0.0	9.0	46.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
Vehicle Extension [s]	3.0	2.0	0.0	2.0	2.0	0.0	2.0	3.0	0.0	2.0	3.0	0.0
Minimum Recall	No	No		Yes	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Calculated Cycle Length [s]	71	71	71	71	71	71	71	71	71	71	71	71
L, Total Lost Time per Cycle [s]	4.50	5.00	5.00	5.00	5.00	5.00	4.50	5.00	5.00	4.50	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	3.00	3.00	2.50	2.50	3.00	2.50	3.00	3.00	2.50	3.00	3.00
g_i, Effective Green Time [s]	5.0	12.8	12.8	17.8	17.8	12.8	4.8	29.7	29.7	5.0	29.5	29.5
g / C, Green / Cycle	0.07	0.18	0.18	0.25	0.25	0.18	0.07	0.42	0.42	0.07	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.12	0.14	0.12	0.11	0.14	0.15	0.05	0.34	0.29	0.06	0.24	0.24
s, saturation flow rate [veh/h]	1100	3618	2859	973	757	1704	1810	3618	1615	1810	1900	1776
c, Capacity [veh/h]	178	647	511	254	348	305	123	1507	673	127	787	736
d1, Uniform Delay [s]	34.56	28.06	27.42	19.67	19.64	28.16	32.68	18.44	17.00	32.64	15.99	15.99
k, delay calibration	0.50	0.04	0.04	0.50	0.50	0.04	0.04	0.11	0.11	0.07	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	318.65	0.90	0.63	5.14	4.25	2.09	3.86	1.17	1.26	7.00	0.65	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.66	0.80	0.69	0.43	0.45	0.82	0.77	0.82	0.69	0.80	0.57	0.57
d, Delay for Lane Group [s/veh]	353.21	28.97	28.04	24.81	23.88	30.25	36.54	19.61	18.25	39.64	16.64	16.68
Lane Group LOS	F	C	C	C	C	C	D	B	B	D	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	18.98	4.00	2.65	1.55	2.38	3.96	1.65	7.97	5.55	1.86	4.97	4.66
50th-Percentile Queue Length [ft/ln]	474.41	100.12	66.16	38.68	59.58	98.93	41.19	199.17	138.80	46.49	124.27	116.41
95th-Percentile Queue Length [veh/ln]	30.02	7.21	4.76	2.78	4.29	7.12	2.97	12.60	9.42	3.35	8.63	8.20
95th-Percentile Queue Length [ft/ln]	750.44	180.21	119.09	69.62	107.25	178.07	74.14	314.89	235.40	83.68	215.68	204.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	353.21	28.97	28.04	24.64	28.80	30.25	36.54	19.61	18.25	39.64	16.65	16.68
Movement LOS	F	C	C	C	C	C	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	110.58			27.16			20.16			19.06		
Approach LOS	F			C			C			B		
d_I, Intersection Delay [s/veh]	44.50											
Intersection LOS	D											
Intersection V/C	0.896											

Emissions

Vehicle Miles Traveled [mph]	81.99	144.52	98.11	11.67	17.05	26.92	7.16	93.21	34.81	12.55	55.57	51.95
Stops [stops/h]	958.32	404.48	267.29	78.13	120.35	199.84	83.21	804.63	280.37	93.91	251.03	235.14
Fuel consumption [US gal/h]	33.55	12.22	8.15	1.73	2.56	4.46	1.78	16.18	5.72	2.19	5.97	5.59
CO [g/h]	2345.21	853.87	570.00	121.07	179.04	312.05	124.44	1130.94	399.66	152.87	417.32	390.72
NOx [g/h]	456.29	166.13	110.90	23.56	34.83	60.71	24.21	220.04	77.76	29.74	81.19	76.02
VOC [g/h]	543.53	197.89	132.10	28.06	41.49	72.32	28.84	262.11	92.63	35.43	96.72	90.55

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	25.49	25.49	25.49	25.49
l_p,int, Pedestrian LOS Score for Intersectio	2.958	2.624	3.469	3.265
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	814	814	1150	1150
d_b, Bicycle Delay [s]	12.54	12.54	6.43	6.43
l_b,int, Bicycle LOS Score for Intersection	2.523	1.985	3.040	2.357
Bicycle LOS	B	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Tennessee Street/I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.778

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	202	783	0	0	565	78	0	0	0	161	5	180
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	202	183	0	0	147	36	0	0	0	7	137	27
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	404	966	0	0	712	114	0	0	0	168	142	207
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	106	254	0	0	187	30	0	0	0	44	37	54
Total Analysis Volume [veh/h]	425	1017	0	0	749	120	0	0	0	177	149	218
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Amber [s]	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.5	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	11.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	59.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		C	C
C, Calculated Cycle Length [s]	52	52	52	52		52	52
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	14.9	32.7	13.8	13.8		11.5	11.5
g / C, Green / Cycle	0.29	0.63	0.26	0.26		0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.23	0.28	0.21	0.07		0.15	0.16
s, saturation flow rate [veh/h]	1810	3618	3618	1615		1843	1655
c, Capacity [veh/h]	516	2266	957	427		406	365
d1, Uniform Delay [s]	17.44	5.07	17.80	15.25		18.76	18.83
k, delay calibration	0.04	0.04	0.04	0.04		0.06	0.07
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	1.29	0.05	0.54	0.13		1.18	1.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.45	0.78	0.28		0.70	0.71
d, Delay for Lane Group [s/veh]	18.73	5.12	18.34	15.38		19.94	20.45
Lane Group LOS	B	A	B	B		B	C
Critical Lane Group	Yes	No	Yes	No		No	Yes
50th-Percentile Queue Length [veh/ln]	4.09	1.49	3.53	0.97		2.96	2.76
50th-Percentile Queue Length [ft/ln]	102.26	37.22	88.32	24.14		74.01	69.09
95th-Percentile Queue Length [veh/ln]	7.36	2.68	6.36	1.74		5.33	4.97
95th-Percentile Queue Length [ft/ln]	184.06	67.00	158.97	43.45		133.21	124.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.73	5.12	0.00	0.00	18.34	15.38	0.00	0.00	0.00	19.94	20.08	20.45
Movement LOS	B	A			B	B				B	C	C
d_A, Approach Delay [s/veh]	9.13			17.93			0.00			20.18		
Approach LOS	A			B			A			C		
d_I, Intersection Delay [s/veh]	13.92											
Intersection LOS	B											
Intersection V/C	0.778											

Emissions

Vehicle Miles Traveled [mph]	47.99	114.83	208.17	33.35		315.75	289.22
Stops [stops/h]	281.99	205.28	487.11	66.57		204.09	190.53
Fuel consumption [US gal/h]	6.11	7.19	15.04	2.22		15.28	14.04
CO [g/h]	427.01	502.59	1051.16	155.48		1067.93	981.46
NOx [g/h]	83.08	97.79	204.52	30.25		207.78	190.96
VOC [g/h]	98.96	116.48	243.62	36.03		247.50	227.46

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	18.72
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.092
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2049	517	0	517
d_b, Bicycle Delay [s]	0.02	14.35	26.11	14.35
l_b,int, Bicycle LOS Score for Intersection	2.749	2.277	4.132	2.008
Bicycle LOS	B	B	D	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Tennessee Street/I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	127.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.197

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	686	117	155	545	0	263	411	375	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	330	25	18	136	0	55	265	233	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1016	142	173	681	0	318	676	608	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	267	37	46	179	0	84	178	160	0	0	0
Total Analysis Volume [veh/h]	0	1069	149	182	717	0	335	712	640	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0.0	40.0	0.0	30.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
Amber [s]	0.0	4.5	0.0	4.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	19.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	3.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	22.0	0.0	17.0	44.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0.0	10.0	0.0	10.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		Yes		No	Yes			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	C	
C, Calculated Cycle Length [s]	71	71	71	71	71	71	
L, Total Lost Time per Cycle [s]	5.50	5.50	5.00	5.50	5.50	5.50	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	3.50	3.50	3.00	3.50	3.50	3.50	
g_i, Effective Green Time [s]	16.5	16.5	9.7	31.3	28.5	28.5	
g / C, Green / Cycle	0.23	0.23	0.14	0.44	0.40	0.40	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.33	0.10	0.20	0.46	0.49	
s, saturation flow rate [veh/h]	1900	1821	1810	3618	1864	1670	
c, Capacity [veh/h]	444	426	249	1599	750	673	
d1, Uniform Delay [s]	27.12	27.12	29.26	13.75	21.14	21.14	
k, delay calibration	0.50	0.50	0.04	0.04	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	181.11	207.10	1.55	0.07	83.91	112.60	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.37	1.43	0.73	0.45	1.15	1.22	
d, Delay for Lane Group [s/veh]	208.23	234.22	30.81	13.82	105.05	133.75	
Lane Group LOS	F	F	C	B	F	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	29.13	31.00	2.86	3.43	28.62	31.01	
50th-Percentile Queue Length [ft/ln]	728.25	774.91	71.58	85.75	715.62	775.31	
95th-Percentile Queue Length [veh/ln]	44.37	47.61	5.15	6.17	41.19	45.69	
95th-Percentile Queue Length [ft/ln]	1109.28	1190.36	128.84	154.34	1029.64	1142.34	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	219.41	234.22	30.81	13.82	0.00	105.05	112.36	133.75	0.00	0.00	0.00
Movement LOS		F	F	C	B		F	F	F			
d_A, Approach Delay [s/veh]	221.22			17.26			119.02			0.00		
Approach LOS	F			B			F			A		
d_I, Intersection Delay [s/veh]	127.70											
Intersection LOS	F											
Intersection V/C	1.197											

Emissions

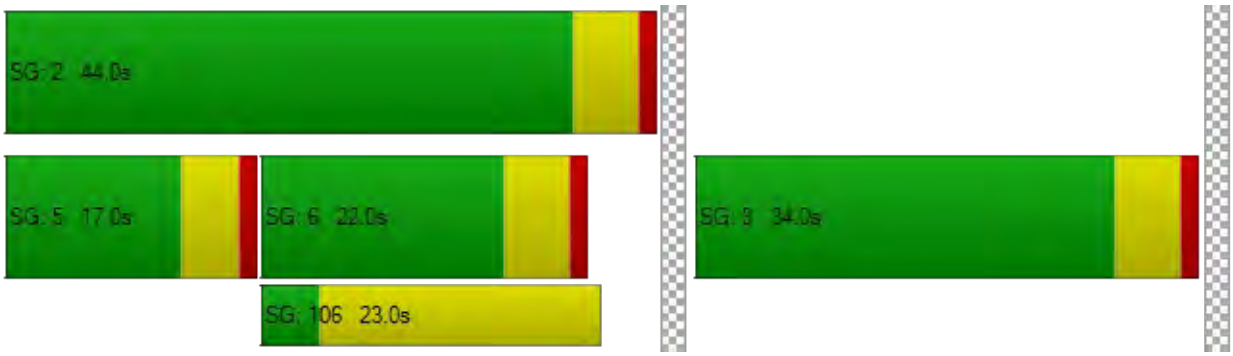
Vehicle Miles Traveled [mph]	53.28	53.28	20.55	80.96	452.04	428.86	
Stops [stops/h]	1481.56	1576.47	145.61	348.88	1455.87	1577.29	
Fuel consumption [US gal/h]	42.27	46.42	3.31	8.34	45.16	48.72	
CO [g/h]	2954.35	3244.57	231.22	583.23	3156.43	3405.50	
NOx [g/h]	574.81	631.27	44.99	113.48	614.13	662.59	
VOC [g/h]	684.70	751.96	53.59	135.17	731.53	789.26	

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	8.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	27.84
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	2.214
Crosswalk LOS				B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	466	1088	805	0
d_b, Bicycle Delay [s]	20.81	7.36	12.63	35.39
l_b,int, Bicycle LOS Score for Intersection	2.564	2.301	2.951	4.132
Bicycle LOS	B	B	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 8: W. Pioneer Avenue/Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	7	25	0	1	2	6	5	12	4	40
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	0	7	25	0	1	2	6	5	12	4	40
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	2	7	0	0	1	2	1	3	1	11
Total Analysis Volume [veh/h]	3	0	7	26	0	1	2	6	5	13	4	42
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	8.93	9.52	8.37	9.05	9.50	8.52	7.29	0.00	0.00	7.24	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.09	0.09	0.09	0.00	0.00	0.00	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.74	0.74	0.74	2.26	2.26	2.26	0.09	0.09	0.09	0.65	0.65	0.65
d_A, Approach Delay [s/veh]	8.54			9.03			1.12			1.60		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.02											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 9: New York Street/Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	42	1	2	26	1	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1	2	26	1	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	0	1	7	0	0
Total Analysis Volume [veh/h]	44	1	2	27	1	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.29	0.00	8.87	8.50
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.08	0.08	0.15	0.15
d_A, Approach Delay [s/veh]	0.00		0.50		8.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.42					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 10: New York Street/Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	71	43	37	0	10	39
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	43	37	0	10	39
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	11	10	0	3	10
Total Analysis Volume [veh/h]	75	45	39	0	11	41
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.02	0.04
d_M, Delay for Movement [s/veh]	7.36	0.00	0.00	0.00	10.21	8.69
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.00	0.00	0.17	0.17
95th-Percentile Queue Length [ft/ln]	3.26	3.26	0.00	0.00	4.34	4.34
d_A, Approach Delay [s/veh]	4.60		0.00		9.01	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.84					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 11: W. San Bernardino Avenue/Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	38	64	295	225	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	38	64	295	225	5
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	10	17	78	59	1
Total Analysis Volume [veh/h]	0	40	67	311	237	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.07	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.89	9.07	0.00	0.00	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.16	0.12	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.07	2.90	0.97	0.00	0.00
d_A, Approach Delay [s/veh]	9.89		1.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.52					
Intersection LOS	A					

Vistro File: C:\...\25-124 Pioneer Park_JM_5.14.2026 Mitigations.vistro
Scenario 3 Ex PP AM

Report File: C:\...\Int. 1 IMP EX PP AM.pdf
5/14/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	Signalized	HCM 7th Edition	SB Right	0.667	21.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.667

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	216	0	26	18	0	149	229	275	0	0	319	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	0	1	0	0	0	0	6	4	1	2	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	218	0	27	18	0	149	229	281	4	1	321	50
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	0	7	5	0	40	62	76	1	0	87	14
Total Analysis Volume [veh/h]	237	0	29	20	0	162	249	305	4	1	349	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No			No					
Signal Group	3	8	0	7	4	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	10.0	24.0	0.0	5.0	19.0	0.0	6.0	49.0	0.0	0.0	39.0	0.0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	14.0	28.0	0.0	9.0	23.0	0.0	10.0	53.0	0.0	0.0	43.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0	0.0	10.0	0.0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C
C, Calculated Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	33.0	24.0	24.0	19.0	49.0	49.0	39.0
g / C, Green / Cycle	0.37	0.27	0.27	0.21	0.54	0.54	0.43
(v / s)_i Volume / Saturation Flow Rate	0.19	0.02	0.01	0.11	0.29	0.18	0.24
s, saturation flow rate [veh/h]	1304	1454	1339	1454	1017	1706	1670
c, Capacity [veh/h]	448	388	437	307	471	929	764
d1, Uniform Delay [s]	21.68	24.69	18.73	31.52	11.34	11.40	19.06
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.44	0.38	0.20	6.37	4.19	0.96	2.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.07	0.05	0.53	0.53	0.33	0.53
d, Delay for Lane Group [s/veh]	26.12	25.07	18.93	37.89	15.53	12.37	21.67
Lane Group LOS	C	C	B	D	B	B	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	4.14	0.50	0.29	3.61	2.98	3.37	6.45
50th-Percentile Queue Length [ft/ln]	103.57	12.44	7.15	90.32	74.55	84.30	161.14
95th-Percentile Queue Length [veh/ln]	7.46	0.90	0.52	6.50	5.37	6.07	10.61
95th-Percentile Queue Length [ft/ln]	186.43	22.39	12.88	162.58	134.19	151.75	265.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.12	25.07	25.07	18.93	37.89	37.89	15.53	12.37	12.37	21.67	21.67	21.67
Movement LOS	C	C	C	B	D	D	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	26.00			35.80			13.78			21.67		
Approach LOS	C			D			B			C		
d_I, Intersection Delay [s/veh]	21.19											
Intersection LOS	C											
Intersection V/C	0.667											

Emissions

Vehicle Miles Traveled [mph]	14.25	1.74	0.50	4.06	35.07	43.52	9.58
Stops [stops/h]	165.72	19.90	11.45	144.51	119.28	134.89	257.83
Fuel consumption [US gal/h]	2.76	0.33	0.16	2.21	3.02	3.45	4.09
CO [g/h]	193.06	23.05	11.25	154.81	211.16	241.23	285.63
NOx [g/h]	37.56	4.48	2.19	30.12	41.08	46.94	55.57
VOC [g/h]	44.74	5.34	2.61	35.88	48.94	55.91	66.20

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS				
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	422	1089	867
d_b, Bicycle Delay [s]	24.20	28.01	9.34	14.45
l_b,int, Bicycle LOS Score for Intersection	1.999	1.860	2.480	2.226
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Vistro File: C:\...\25-124 Pioneer Park_JM_5.14.2026 Mitigations.vistro
Scenario 4 Ex PP PM
Report File: C:\...\Int. 1 IMP EX PP PM.pdf
5/14/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance	Signalized	HCM 7th Edition	NB Right	0.560	18.6	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.560

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	76	0	74	52	0	54	85	593	0	0	109	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	1	0	0	0	0	4	3	2	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	0	75	52	0	54	85	597	3	2	115	33
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.9500	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	0	22	15	0	16	25	175	1	1	34	10
Total Analysis Volume [veh/h]	95	0	88	61	0	63	99	698	4	2	135	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No			No					
Signal Group	3	8	0	7	4	0	5	2	0	0	6	0
Auxiliary Signal Groups												
Maximum Green [s]	6.0	14.0	0.0	5.0	13.0	0.0	5.0	89.0	0.0	0.0	80.0	0.0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	10.0	18.0	0.0	9.0	17.0	0.0	9.0	93.0	0.0	0.0	84.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0	0.0	10.0	0.0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	21.0	14.0	18.0	13.0	89.0	89.0	80.0
g / C, Green / Cycle	0.18	0.12	0.15	0.11	0.74	0.74	0.67
(v / s)_i Volume / Saturation Flow Rate	0.07	0.06	0.05	0.04	0.08	0.41	0.11
s, saturation flow rate [veh/h]	1340	1454	1317	1454	1148	1708	1640
c, Capacity [veh/h]	245	170	199	157	867	1267	1124
d1, Uniform Delay [s]	41.92	49.83	41.24	49.87	4.26	6.80	7.47
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.58	10.90	3.93	7.42	0.27	1.75	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.52	0.31	0.40	0.11	0.55	0.16
d, Delay for Lane Group [s/veh]	46.50	60.74	45.18	57.29	4.53	8.55	7.76
Lane Group LOS	D	E	D	E	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.74	3.00	1.74	2.09	0.64	7.17	1.67
50th-Percentile Queue Length [ft/ln]	68.47	75.04	43.56	52.30	16.10	179.27	41.74
95th-Percentile Queue Length [veh/ln]	4.93	5.40	3.14	3.77	1.16	11.56	3.01
95th-Percentile Queue Length [ft/ln]	123.25	135.07	78.41	94.14	28.99	289.06	75.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.50	60.74	60.74	45.18	57.29	57.29	4.53	8.55	8.55	7.76	7.76	7.76
Movement LOS	D	E	E	D	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	53.34			51.33			8.05			7.76		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	18.65											
Intersection LOS	B											
Intersection V/C	0.560											

Emissions

Vehicle Miles Traveled [mph]	5.71	5.29	1.53	1.58	13.94	98.88	4.18
Stops [stops/h]	82.16	90.04	52.27	62.76	19.33	215.13	50.08
Fuel consumption [US gal/h]	1.59	1.80	0.91	1.15	0.77	6.61	0.81
CO [g/h]	111.00	126.02	63.79	80.12	53.69	461.89	56.89
NOx [g/h]	21.60	24.52	12.41	15.59	10.45	89.87	11.07
VOC [g/h]	25.73	29.21	14.78	18.57	12.44	107.05	13.18

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS				
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	233	217	1483	1333
d_b, Bicycle Delay [s]	46.82	47.70	4.00	6.67
l_b,int, Bicycle LOS Score for Intersection	1.862	1.764	2.881	1.850
Bicycle LOS	A	A	C	A

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 3 Ex PP AM

Report File: C:\...\Int. 2 IMP EX PP AM.pdf
5/14/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	HCM 7th Edition	NB Left	0.723	17.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	225.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	155.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			50.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	13	1	36	418	413	400	77	360	40	55	290	301
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	5	0	0	0	8	0	17	21	37
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	11	0	0	100	0	0	10	0	0	85
Total Hourly Volume [veh/h]	13	1	31	423	413	300	77	368	30	72	311	253
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	8	112	109	80	20	98	8	19	82	67
Total Analysis Volume [veh/h]	14	1	33	449	438	318	82	390	32	76	330	268
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	6	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups			6,7									
Maximum Green [s]	5.0	31.0	31.0	32.0	58.0	0.0	5.0	35.0	0.0	6.0	36.0	0.0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	26.0	26.0	0.0	30.0	0.0	0.0	30.0	0.0	0.0	31.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	35.0	35.0	36.0	62.0	0.0	9.0	39.0	0.0	10.0	40.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	10.0	10.0	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	49	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0.9	3.7	11.0	14.6	17.4	17.4	3.4	11.6	11.6	3.2	11.4	11.4
g / C, Green / Cycle	0.02	0.08	0.22	0.30	0.35	0.35	0.07	0.24	0.24	0.07	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.00	0.02	0.25	0.21	0.21	0.05	0.11	0.02	0.04	0.17	0.17
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1638	1810	3618	1615	1810	1900	1615
c, Capacity [veh/h]	32	145	361	536	674	581	125	853	381	120	443	376
d1, Uniform Delay [s]	23.88	20.98	15.11	16.19	13.00	13.03	22.31	16.08	14.64	22.37	17.50	17.33
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.84	0.02	0.11	3.57	0.86	1.02	5.76	0.38	0.09	5.47	2.52	2.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.01	0.09	0.84	0.60	0.61	0.66	0.46	0.08	0.64	0.75	0.71
d, Delay for Lane Group [s/veh]	32.73	21.00	15.22	19.75	13.86	14.05	28.07	16.47	14.73	27.84	20.02	19.84
Lane Group LOS	C	C	B	B	B	B	C	B	B	C	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.22	0.01	0.26	4.55	3.21	2.82	0.97	1.50	0.23	0.91	3.07	2.48
50th-Percentile Queue Length [ft/ln]	5.62	0.26	6.58	113.65	80.16	70.42	24.14	37.41	5.67	22.76	76.69	62.03
95th-Percentile Queue Length [veh/ln]	0.40	0.02	0.47	8.04	5.77	5.07	1.74	2.69	0.41	1.64	5.52	4.47
95th-Percentile Queue Length [ft/ln]	10.12	0.46	11.84	201.07	144.29	126.75	43.44	67.34	10.20	40.97	138.04	111.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.73	21.00	15.22	19.75	13.88	14.05	28.07	16.47	14.73	27.84	20.02	19.84
Movement LOS	C	C	B	B	B	B	C	B	B	C	C	B
d_A, Approach Delay [s/veh]	20.45			16.11			18.25			20.83		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	17.95											
Intersection LOS	B											
Intersection V/C	0.723											

Emissions

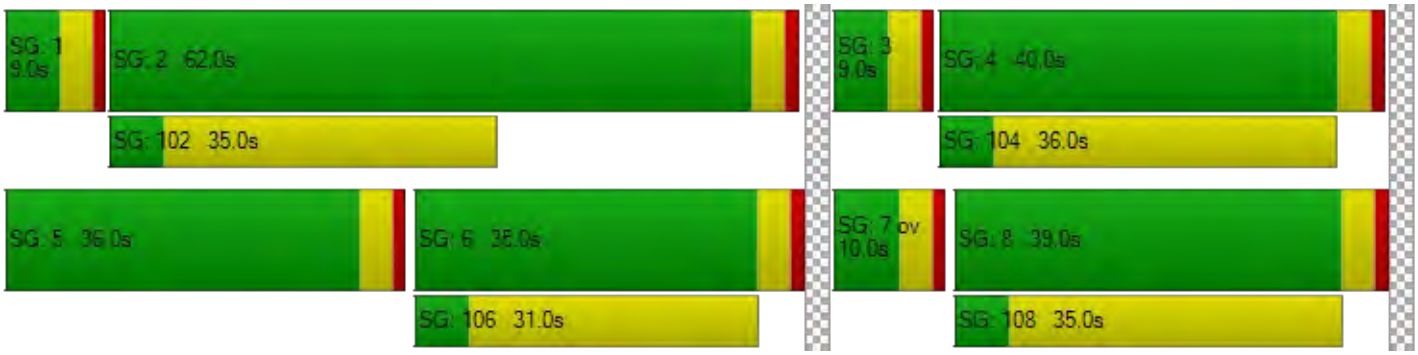
Vehicle Miles Traveled [mph]	1.40	0.10	3.31	50.17	45.20	39.28	7.03	33.45	2.74	10.11	43.90	35.66
Stops [stops/h]	16.47	0.75	19.27	333.02	234.89	206.34	70.73	219.26	16.60	66.70	224.73	181.78
Fuel consumption [US gal/h]	0.27	0.01	0.37	5.71	4.30	3.76	1.79	5.79	0.44	1.61	5.64	4.56
CO [g/h]	18.92	0.96	26.09	399.17	300.55	262.99	125.09	404.93	30.95	112.30	394.47	319.08
NOx [g/h]	3.68	0.19	5.08	77.66	58.48	51.17	24.34	78.78	6.02	21.85	76.75	62.08
VOC [g/h]	4.38	0.22	6.05	92.51	69.65	60.95	28.99	93.85	7.17	26.03	91.42	73.95

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.40	16.40	16.40	16.40
l_p,int, Pedestrian LOS Score for Intersectio	2.425	2.751	2.698	2.871
Crosswalk LOS	B	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1262	2361	1424	1465
d_b, Bicycle Delay [s]	3.35	0.80	2.03	1.76
l_b,int, Bicycle LOS Score for Intersection	1.657	2.636	1.984	2.812
Bicycle LOS	A	B	A	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Vistro File: C:\...\25-124 Pioneer Park_JM_5.14.2026 Mitigations.vistro
Report File: C:\...\Int. 2 IMP EX PP PM.pdf

Scenario 4 Ex PP PM
5/14/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive	Signalized	HCM 7th Edition	WB Left	0.732	25.1	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 2: W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive

Control Type:	Signalized	Delay (sec / veh):	25.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	225.00	100.00	100.00	65.00	100.00	100.00	100.00	100.00	100.00	155.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			50.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	22	318	287	542	231	47	806	125	100	190	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	19	16	0	0	0	24	0	12	15	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	84	0	0	58	0	0	31	0	0	29
Total Hourly Volume [veh/h]	32	22	253	303	542	173	47	830	94	112	205	88
Peak Hour Factor	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050	0.9050
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	6	70	84	150	48	13	229	26	31	57	24
Total Analysis Volume [veh/h]	35	24	280	335	599	191	52	917	104	124	227	97
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	6	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups			6,7									
Maximum Green [s]	5.0	31.0	31.0	32.0	58.0	0.0	5.0	35.0	0.0	6.0	36.0	0.0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	5.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	26.0	26.0	0.0	30.0	0.0	0.0	30.0	0.0	0.0	31.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	9.0	35.0	35.0	36.0	62.0	0.0	9.0	39.0	0.0	10.0	40.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	10.0	10.0	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No		No	No		No	No	
Maximum Recall	No	No	No	No	No		No	No		No	No	
Pedestrian Recall	No	No	No	No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	73	73	73	73	73	73	73	73	73	73	73	73
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2.6	13.2	23.2	15.8	26.5	26.5	3.3	22.1	22.1	6.0	24.8	24.8
g / C, Green / Cycle	0.03	0.18	0.32	0.22	0.36	0.36	0.04	0.30	0.30	0.08	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.02	0.01	0.17	0.19	0.22	0.22	0.03	0.25	0.06	0.07	0.12	0.06
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1745	1810	3618	1615	1810	1900	1615
c, Capacity [veh/h]	63	344	514	391	689	632	81	1092	487	148	644	548
d1, Uniform Delay [s]	34.72	24.83	20.57	27.57	18.97	18.98	34.35	23.88	19.05	33.07	18.14	16.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.21	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.36	0.08	0.90	5.47	0.83	0.91	8.20	1.82	0.22	20.03	0.33	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.07	0.55	0.86	0.60	0.60	0.64	0.84	0.21	0.84	0.35	0.18
d, Delay for Lane Group [s/veh]	42.08	24.91	21.48	33.03	19.80	19.89	42.54	25.70	19.27	53.10	18.47	17.15
Lane Group LOS	D	C	C	C	B	B	D	C	B	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.72	0.34	3.77	5.95	5.45	5.03	1.02	6.66	1.18	2.83	2.60	1.04
50th-Percentile Queue Length [ft/ln]	17.94	8.42	94.19	148.84	136.15	125.67	25.50	166.45	29.60	70.84	65.01	26.02
95th-Percentile Queue Length [veh/ln]	1.29	0.61	6.78	9.96	9.27	8.70	1.84	10.89	2.13	5.10	4.68	1.87
95th-Percentile Queue Length [ft/ln]	32.30	15.15	169.55	248.88	231.83	217.59	45.90	272.24	53.29	127.51	117.03	46.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.08	24.91	21.48	33.03	19.83	19.89	42.54	25.70	19.27	53.10	18.47	17.15
Movement LOS	D	C	C	C	B	B	D	C	B	D	B	B
d_A, Approach Delay [s/veh]	23.85			23.77			25.89			27.77		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.14											
Intersection LOS	C											
Intersection V/C	0.732											

Emissions

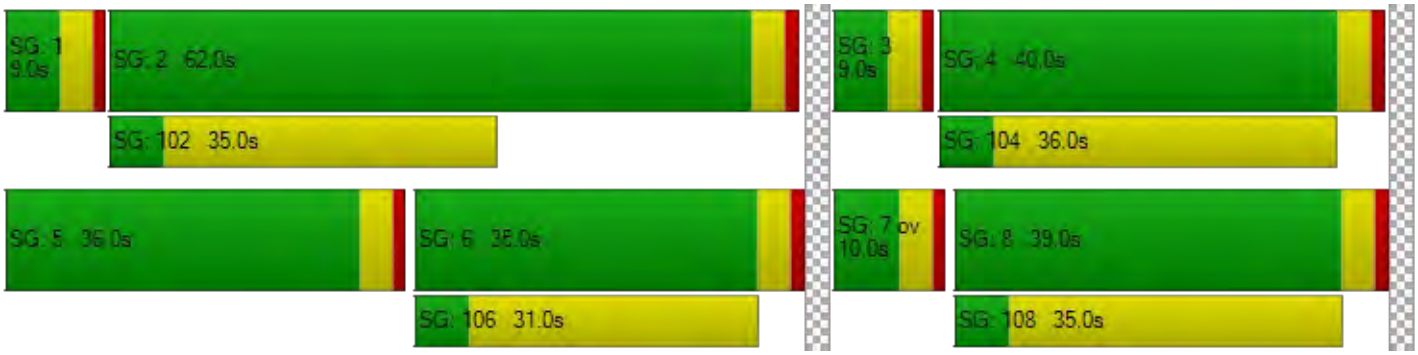
Vehicle Miles Traveled [mph]	3.51	2.41	28.08	37.43	45.98	42.30	4.46	78.64	8.92	16.50	30.20	12.91
Stops [stops/h]	35.34	16.58	185.50	293.11	268.11	247.48	50.22	655.57	58.30	139.50	128.03	51.24
Fuel consumption [US gal/h]	0.70	0.34	3.69	5.41	5.03	4.64	1.37	17.49	1.60	3.64	3.48	1.42
CO [g/h]	48.88	23.63	257.89	378.32	351.75	324.43	95.80	1222.78	111.94	254.42	243.27	99.11
NOx [g/h]	9.51	4.60	50.18	73.61	68.44	63.12	18.64	237.91	21.78	49.50	47.33	19.28
VOC [g/h]	11.33	5.48	59.77	87.68	81.52	75.19	22.20	283.39	25.94	58.97	56.38	22.97

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	28.11	28.11	28.11	28.11
l_p,int, Pedestrian LOS Score for Intersectio	2.702	2.644	2.860	2.944
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	848	1586	957	985
d_b, Bicycle Delay [s]	12.13	1.56	9.94	9.42
l_b,int, Bicycle LOS Score for Intersection	2.258	2.536	2.470	2.347
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 3 Ex PP AM

Report File: C:\...\Int. 3 IMP EX PP AM.pdf
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Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
3	W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	HCM 7th Edition	SB Left	0.826	26.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 3: W. San Bernardino Avenue/210 WB Ramps/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.826

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	136.00	100.00	165.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	33	308	22	186	16	89	194	0	140	29	529	373
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	10	13	0	0	0	19	0	29	75	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	308	32	199	16	89	194	19	140	58	604	387
Peak Hour Factor	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087	0.9087
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	85	9	55	4	24	53	5	39	16	166	106
Total Analysis Volume [veh/h]	36	339	35	219	18	98	213	21	154	64	665	426
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11.0	32.0	0.0	10.0	31.0	0.0	5.0	34.0	0.0	23.0	52.0	0.0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	26.0	0.0	0.0	29.0	0.0	0.0	26.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15.0	36.0	0.0	14.0	35.0	0.0	9.0	38.0	0.0	27.0	56.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	68	68	68	68	68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2.5	10.0	10.0	9.9	17.4	5.0	28.6	28.6	3.5	27.2	27.2
g / C, Green / Cycle	0.04	0.15	0.15	0.15	0.26	0.07	0.42	0.42	0.05	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.02	0.10	0.10	0.12	0.07	0.06	0.01	0.10	0.04	0.35	0.26
s, saturation flow rate [veh/h]	1810	1900	1839	1810	1653	3514	1900	1615	1810	1900	1615
c, Capacity [veh/h]	66	279	270	263	423	258	799	679	94	758	645
d1, Uniform Delay [s]	32.24	27.50	27.54	28.28	20.27	31.11	11.55	12.63	31.72	18.91	16.69
k, delay calibration	0.11	0.11	0.11	0.25	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.79	2.86	3.05	14.48	0.35	6.57	0.01	0.17	8.35	3.44	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.68	0.68	0.83	0.27	0.83	0.03	0.23	0.68	0.88	0.66
d, Delay for Lane Group [s/veh]	39.03	30.37	30.59	42.77	20.62	37.68	11.57	12.80	40.07	22.35	17.86
Lane Group LOS	D	C	C	D	C	D	B	B	D	C	B
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.69	3.00	2.95	4.37	1.44	1.82	0.16	1.29	1.17	8.70	4.72
50th-Percentile Queue Length [ft/ln]	17.20	75.08	73.83	109.16	35.91	45.44	4.00	32.25	29.27	217.57	118.03
95th-Percentile Queue Length [veh/ln]	1.24	5.41	5.32	7.79	2.59	3.27	0.29	2.32	2.11	13.54	8.28
95th-Percentile Queue Length [ft/ln]	30.96	135.14	132.89	194.84	64.64	81.80	7.19	58.04	52.69	338.52	207.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.03	30.47	30.59	42.77	20.62	20.62	37.68	11.57	12.80	40.07	22.35	17.86
Movement LOS	D	C	C	D	C	C	D	B	B	D	C	B
d_A, Approach Delay [s/veh]	31.23			35.10			26.39			21.67		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	26.15											
Intersection LOS	C											
Intersection V/C	0.826											

Emissions

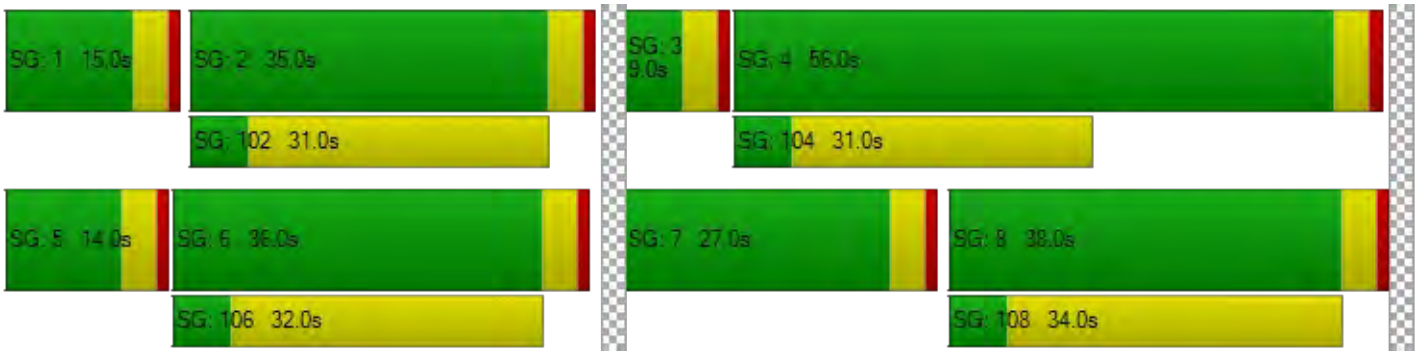
Vehicle Miles Traveled [mph]	14.34	75.31	73.67	10.48	5.55	28.34	2.79	20.49	8.32	86.46	55.39
Stops [stops/h]	36.39	158.80	156.16	230.91	75.96	192.25	8.45	68.21	61.92	460.20	249.65
Fuel consumption [US gal/h]	1.08	5.15	5.05	3.61	1.13	4.99	0.25	1.95	1.58	11.71	6.55
CO [g/h]	75.30	359.70	352.79	252.55	79.33	349.14	17.50	136.41	110.23	818.54	457.92
NOx [g/h]	14.65	69.98	68.64	49.14	15.43	67.93	3.40	26.54	21.45	159.26	89.09
VOC [g/h]	17.45	83.36	81.76	58.53	18.39	80.92	4.06	31.61	25.55	189.70	106.13

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	25.63	25.63	25.63	25.63
l_p,int, Pedestrian LOS Score for Intersectio	2.276	2.439	2.634	2.641
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	940	911	999	1528
d_b, Bicycle Delay [s]	9.56	10.10	8.53	1.90
l_b,int, Bicycle LOS Score for Intersection	1.898	2.112	2.200	3.465
Bicycle LOS	A	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 4 Ex PP PM

Report File: C:\...\Int. 3 IMP EX PP PM.pdf
5/14/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
3	W. San Bernardino Avenue/210 WB Ramps/Tennessee Street	Signalized	HCM 7th Edition	WB Left	0.843	32.7	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 3: W. San Bernardino Avenue/210 WB Ramps/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.843

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	2	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	136.00	100.00	165.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	32	492	39	235	23	79	571	0	179	25	306	264
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	31	40	0	0	0	59	0	20	51	10
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	492	70	275	23	79	571	59	179	45	357	274
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	127	18	71	6	20	147	15	46	12	92	71
Total Analysis Volume [veh/h]	33	507	72	284	24	81	589	61	185	46	368	282
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	24.0	32.0	0.0	23.0	31.0	0.0	18.0	34.0	0.0	15.0	31.0	0.0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	26.0	0.0	0.0	29.0	0.0	0.0	26.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	28.0	36.0	0.0	27.0	35.0	0.0	22.0	38.0	0.0	19.0	35.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2.6	15.3	15.3	14.7	27.4	15.7	30.8	30.8	3.2	18.3	18.3
g / C, Green / Cycle	0.03	0.19	0.19	0.18	0.34	0.20	0.38	0.38	0.04	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.16	0.16	0.06	0.17	0.03	0.11	0.03	0.19	0.17
s, saturation flow rate [veh/h]	1810	1900	1819	1810	1672	3514	1900	1615	1810	1900	1615
c, Capacity [veh/h]	59	364	348	332	572	688	731	622	73	436	370
d1, Uniform Delay [s]	38.12	30.94	30.97	31.64	18.46	31.07	15.63	17.09	37.80	29.46	28.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.02	4.35	4.67	6.44	0.15	3.21	0.05	0.26	8.75	4.55	3.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.81	0.82	0.86	0.18	0.86	0.08	0.30	0.63	0.84	0.76
d, Delay for Lane Group [s/veh]	46.13	35.29	35.64	38.08	18.61	34.28	15.68	17.35	46.55	34.01	32.03
Lane Group LOS	D	D	D	D	B	C	B	B	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.76	5.70	5.53	5.73	1.34	5.37	0.65	2.16	1.01	6.74	4.97
50th-Percentile Queue Length [ft/ln]	18.92	142.61	138.15	143.34	33.46	134.17	16.16	53.90	25.37	168.46	124.16
95th-Percentile Queue Length [veh/ln]	1.36	9.62	9.38	9.66	2.41	9.17	1.16	3.88	1.83	11.00	8.62
95th-Percentile Queue Length [ft/ln]	34.06	240.53	234.54	241.52	60.22	229.15	29.09	97.02	45.67	274.89	215.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.13	35.44	35.64	38.08	18.61	18.61	34.28	15.68	17.35	46.55	34.01	32.03
Movement LOS	D	D	D	D	B	B	C	B	B	D	C	C
d_A, Approach Delay [s/veh]	36.04			32.82			29.17			34.04		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	32.73											
Intersection LOS	C											
Intersection V/C	0.843											

Emissions

Vehicle Miles Traveled [mph]	13.15	117.51	113.14	13.59	5.02	78.36	8.12	24.61	5.98	47.85	36.67
Stops [stops/h]	34.07	256.76	248.74	258.09	60.24	483.14	29.10	97.05	45.69	303.31	223.54
Fuel consumption [US gal/h]	1.04	8.37	8.09	4.19	0.94	12.80	0.83	2.70	1.21	7.96	5.87
CO [g/h]	72.64	585.36	565.62	292.59	65.52	894.89	58.34	188.98	84.50	556.28	410.61
NOx [g/h]	14.13	113.89	110.05	56.93	12.75	174.11	11.35	36.77	16.44	108.23	79.89
VOC [g/h]	16.83	135.66	131.09	67.81	15.19	207.40	13.52	43.80	19.58	128.92	95.16

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersectio	2.338	2.557	2.681	2.534
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	775	850	775
d_b, Bicycle Delay [s]	14.39	15.00	13.22	15.00
l_b,int, Bicycle LOS Score for Intersection	2.065	2.201	2.937	2.708
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Vistro File: C:\...\25-124 Pioneer Park_JM_5.14.2026 Mitigations.vistro
Scenario 3 Ex PP AM
Report File: C:\...\Int. 4 IMP EX PP AM.pdf
5/14/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	W. San Bernardino Ave/New York Street	Signalized	HCM 7th Edition	SB Right	0.838	29.0	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 4: W. San Bernardino Ave/New York Street

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.838

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	8	166	221	458	769	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	63	21	0	2	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	229	242	458	771	25
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	62	66	124	210	7
Total Analysis Volume [veh/h]	24	249	263	498	838	27
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Flashing Yellow Arrow			No			
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	27.0	0.0	7.0	85.0	74.0	0.0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5.0	0.0	0.0	5.0	5.0	0.0
Pedestrian Clearance [s]	10.0	0.0	0.0	10.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	31.0	0.0	11.0	89.0	78.0	0.0
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5.0	0.0	5.0	10.0	10.0	0.0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	27.0	85.0	85.0	74.0
g / C, Green / Cycle	0.23	0.71	0.71	0.62
(v / s)_i Volume / Saturation Flow Rate	0.19	0.58	0.29	0.51
s, saturation flow rate [veh/h]	1467	695	1710	1701
c, Capacity [veh/h]	330	320	1211	1049
d1, Uniform Delay [s]	44.27	22.69	7.20	17.94
k, delay calibration	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.60	20.50	1.03	7.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.82	0.41	0.82
d, Delay for Lane Group [s/veh]	64.87	43.20	8.23	25.33
Lane Group LOS	E	D	A	C
Critical Lane Group	Yes	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	9.59	3.76	4.67	18.37
50th-Percentile Queue Length [ft/ln]	239.65	93.91	116.85	459.26
95th-Percentile Queue Length [veh/ln]	14.66	6.76	8.22	25.40
95th-Percentile Queue Length [ft/ln]	366.59	169.04	205.49	634.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	64.87	64.87	43.20	8.23	25.33	25.33
Movement LOS	E	E	D	A	C	C
d_A, Approach Delay [s/veh]	64.87		20.32		25.33	
Approach LOS	E		C		C	
d_I, Intersection Delay [s/veh]	29.01					
Intersection LOS	C					
Intersection V/C	0.838					

Emissions

Vehicle Miles Traveled [mph]	29.70	26.27	49.74	20.52
Stops [stops/h]	287.58	112.69	140.22	551.11
Fuel consumption [US gal/h]	6.42	4.61	4.28	12.01
CO [g/h]	448.42	322.45	299.39	839.83
NOx [g/h]	87.25	62.74	58.25	163.40
VOC [g/h]	103.92	74.73	69.39	194.64

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000
Crosswalk LOS			
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	450	1417	1233
d_b, Bicycle Delay [s]	36.04	5.10	8.82
l_b,int, Bicycle LOS Score for Intersection	2.010	2.815	2.987
Bicycle LOS	B	C	C

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Scenario 4 Ex PP PM

Report File: C:\...\Int. 4 IMP EX PP PM.pdf
5/14/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	W. San Bernardino Ave/New York Street	Signalized	HCM 7th Edition	SB Right	0.625	14.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 4: W. San Bernardino Ave/New York Street

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.625

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	2	101	142	765	498	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	43	66	0	5	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	144	208	765	503	19
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	38	55	201	132	5
Total Analysis Volume [veh/h]	13	152	219	805	529	20
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permissive	Permissive	ProtPerm	Permissive	Permissive	Permissive
Flashing Yellow Arrow			No			
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Maximum Green [s]	22.0	0.0	5.0	90.0	81.0	0.0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Walk [s]	5.0	0.0	0.0	5.0	5.0	0.0
Pedestrian Clearance [s]	10.0	0.0	0.0	10.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	26.0	0.0	9.0	94.0	85.0	0.0
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5.0	0.0	5.0	10.0	10.0	0.0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	22.0	90.0	90.0	81.0
g / C, Green / Cycle	0.18	0.75	0.75	0.68
(v / s)_i Volume / Saturation Flow Rate	0.11	0.29	0.47	0.32
s, saturation flow rate [veh/h]	1466	850	1710	1699
c, Capacity [veh/h]	269	576	1283	1147
d1, Uniform Delay [s]	45.09	6.34	7.09	9.36
k, delay calibration	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.07	1.90	2.33	1.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.38	0.63	0.48
d, Delay for Lane Group [s/veh]	55.16	8.24	9.42	10.80
Lane Group LOS	E	A	A	B
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.28	1.51	8.08	6.35
50th-Percentile Queue Length [ft/ln]	131.92	37.78	202.10	158.78
95th-Percentile Queue Length [veh/ln]	9.04	2.72	12.75	10.48
95th-Percentile Queue Length [ft/ln]	226.10	68.00	318.68	262.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.16	55.16	8.24	9.42	10.80	10.80
Movement LOS	E	E	A	A	B	B
d_A, Approach Delay [s/veh]	55.16		9.17		10.80	
Approach LOS	E		A		B	
d_I, Intersection Delay [s/veh]	14.05					
Intersection LOS	B					
Intersection V/C	0.625					

Emissions

Vehicle Miles Traveled [mph]	17.95	21.88	80.41	13.03
Stops [stops/h]	158.30	45.33	242.52	190.54
Fuel consumption [US gal/h]	3.47	1.68	7.31	4.02
CO [g/h]	242.25	117.48	511.30	281.12
NOx [g/h]	47.13	22.86	99.48	54.70
VOC [g/h]	56.14	27.23	118.50	65.15

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000
Crosswalk LOS			
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	1500	1350
d_b, Bicycle Delay [s]	40.02	3.75	6.34
l_b,int, Bicycle LOS Score for Intersection	1.832	3.249	2.465
Bicycle LOS	A	C	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Vistro File: C:\...\25-124 Pioneer Park_JM_5.14.2026 Mitigations.vistro
Scenario 3 Ex PP AM

Report File: C:\...\Int. 5 IMP EX PP AM.pdf
5/14/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	W. Lugonia Avenue/Tennessee Street	Signalized	HCM 7th Edition	WB Left	0.755	18.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 5: W. Lugonia Avenue/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.755

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	200.00	100.00	100.00	100.00	100.00	50.00	135.00	100.00	85.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	132	229	91	71	84	6	28	245	153	90	421	103
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	6	12	11	4	0	0	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	132	233	91	77	96	17	32	245	153	90	421	105
Peak Hour Factor	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244	0.9244
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	63	25	21	26	5	9	66	41	24	114	28
Total Analysis Volume [veh/h]	143	252	98	83	104	18	35	265	166	97	455	114
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	14.0	29.0	0.0	15.0	30.0	0.0	5.0	29.0	0.0	31.0	55.0	0.0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0	0.0	27.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	18.0	33.0	0.0	19.0	34.0	0.0	9.0	33.0	0.0	35.0	59.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C
C, Calculated Cycle Length [s]	49	49	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5.1	9.9	9.9	3.4	8.2	8.2	1.9	15.8	15.8	3.7	17.6
g / C, Green / Cycle	0.10	0.20	0.20	0.07	0.17	0.17	0.04	0.32	0.32	0.08	0.36
(v / s)_i Volume / Saturation Flow Rate	0.08	0.13	0.06	0.05	0.05	0.01	0.02	0.07	0.10	0.05	0.31
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	3618	1615	1810	1835
c, Capacity [veh/h]	189	387	329	126	320	272	71	1172	523	136	661
d1, Uniform Delay [s]	21.25	17.86	16.49	22.15	17.86	17.08	22.99	12.04	12.44	22.05	14.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.99	1.86	0.50	5.75	0.58	0.10	5.29	0.10	0.35	6.68	3.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.65	0.30	0.66	0.33	0.07	0.50	0.23	0.32	0.71	0.86
d, Delay for Lane Group [s/veh]	27.23	19.72	16.99	27.90	18.45	17.18	28.28	12.14	12.78	28.73	17.93
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.68	2.37	0.82	1.01	0.93	0.15	0.45	0.85	1.13	1.20	5.04
50th-Percentile Queue Length [ft/ln]	42.06	59.23	20.62	25.22	23.15	3.81	11.24	21.24	28.23	29.91	125.90
95th-Percentile Queue Length [veh/ln]	3.03	4.26	1.48	1.82	1.67	0.27	0.81	1.53	2.03	2.15	8.72
95th-Percentile Queue Length [ft/ln]	75.70	106.61	37.12	45.39	41.66	6.85	20.24	38.23	50.82	53.84	217.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.23	19.72	16.99	27.90	18.45	17.18	28.28	12.14	12.78	28.73	17.93	17.93
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.36			22.17			13.58			19.50		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.79											
Intersection LOS	B											
Intersection V/C	0.755											

Emissions

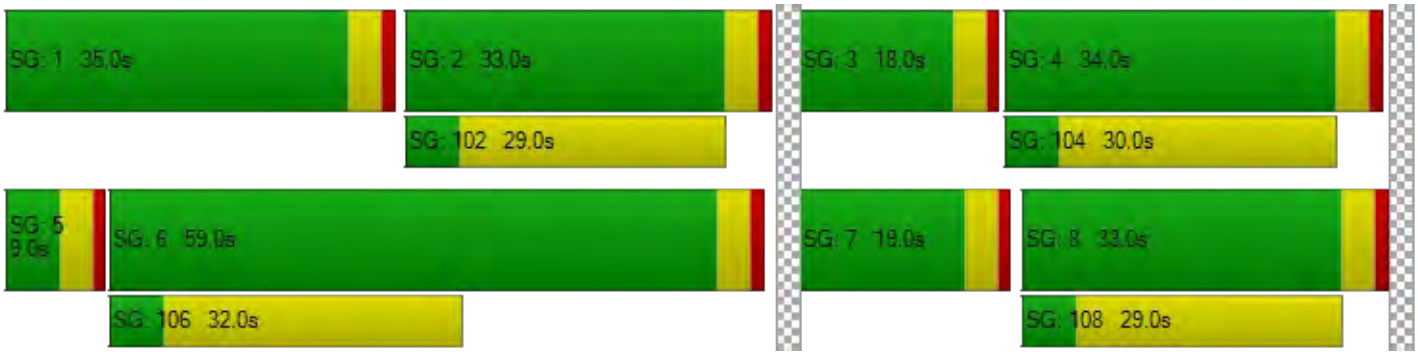
Vehicle Miles Traveled [mph]	39.74	70.04	27.24	8.95	11.21	1.94	2.64	19.97	12.51	12.06	70.72
Stops [stops/h]	124.04	174.67	60.81	74.37	68.26	11.22	33.16	125.29	83.26	88.21	371.31
Fuel consumption [US gal/h]	3.43	5.24	1.91	1.52	1.46	0.24	0.62	2.60	1.70	1.87	8.26
CO [g/h]	240.09	366.01	133.65	106.42	102.25	16.97	43.45	181.79	118.68	130.41	577.17
NOx [g/h]	46.71	71.21	26.00	20.71	19.89	3.30	8.45	35.37	23.09	25.37	112.30
VOC [g/h]	55.64	84.83	30.97	24.66	23.70	3.93	10.07	42.13	27.51	30.22	133.77

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.24	16.24	16.24	16.24
l_p,int, Pedestrian LOS Score for Intersectio	2.493	2.297	2.550	2.462
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1188	1229	1188	2253
d_b, Bicycle Delay [s]	4.03	3.63	4.03	0.39
l_b,int, Bicycle LOS Score for Intersection	2.373	1.898	1.944	2.659
Bicycle LOS	B	A	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Vistro File: C:\...\25-124 Pioneer Park_JM_5.14.2026 Mitigations.vistro
Scenario 4 Ex PP PM

Report File: C:\...\Int. 5 IMP EX PP PM.pdf
5/14/2026

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	W. Lugonia Avenue/Tennessee Street	Signalized	HCM 7th Edition	SB Left	0.846	24.7	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 5: W. Lugonia Avenue/Tennessee Street

Control Type:	Signalized	Delay (sec / veh):	24.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.846

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	200.00	100.00	100.00	100.00	100.00	50.00	135.00	100.00	85.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	253	362	245	107	106	11	77	873	407	80	427	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	12	0	4	8	8	13	0	0	0	0	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	253	374	245	111	114	19	90	873	407	80	427	135
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	96	63	29	29	5	23	225	105	21	110	35
Total Analysis Volume [veh/h]	260	385	252	114	117	20	93	898	419	82	439	139
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	11.0	36.0	0.0	5.0	30.0	0.0	5.0	29.0	0.0	34.0	58.0	0.0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	24.0	0.0	0.0	25.0	0.0	0.0	24.0	0.0	0.0	27.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	15.0	40.0	0.0	9.0	34.0	0.0	9.0	33.0	0.0	38.0	62.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0	5.0	10.0	0.0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	L	C	R	L	C
C, Calculated Cycle Length [s]	64	64	64	64	64	64	64	64	64	64	64
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10.8	15.8	15.8	5.0	10.0	10.0	4.3	23.1	23.1	3.9	22.7
g / C, Green / Cycle	0.17	0.25	0.25	0.08	0.16	0.16	0.07	0.36	0.36	0.06	0.36
(v / s)_i Volume / Saturation Flow Rate	0.14	0.20	0.16	0.06	0.06	0.01	0.05	0.25	0.26	0.05	0.32
s, saturation flow rate [veh/h]	1810	1900	1615	1810	1900	1615	1810	3618	1615	1810	1823
c, Capacity [veh/h]	308	471	400	142	297	252	121	1310	585	110	649
d1, Uniform Delay [s]	25.66	22.62	21.37	28.91	24.19	22.99	29.28	17.26	17.52	29.48	19.37
k, delay calibration	0.27	0.11	0.11	0.17	0.11	0.11	0.11	0.11	0.13	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.23	3.54	1.63	14.79	0.85	0.13	9.85	0.64	2.06	9.71	4.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.82	0.63	0.80	0.39	0.08	0.77	0.69	0.72	0.75	0.89
d, Delay for Lane Group [s/veh]	39.88	26.16	23.00	43.70	25.04	23.12	39.13	17.90	19.57	39.19	23.84
Lane Group LOS	D	C	C	D	C	C	D	B	B	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.67	5.29	3.16	2.16	1.52	0.24	1.62	4.87	4.84	1.44	7.64
50th-Percentile Queue Length [ft/ln]	116.69	132.13	79.10	54.09	37.95	6.11	40.61	121.82	120.99	35.97	190.97
95th-Percentile Queue Length [veh/ln]	8.21	9.06	5.69	3.89	2.73	0.44	2.92	8.49	8.45	2.59	12.17
95th-Percentile Queue Length [ft/ln]	205.27	226.39	142.37	97.36	68.30	11.00	73.10	212.33	211.19	64.74	304.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.88	26.16	23.00	43.70	25.04	23.12	39.13	17.90	19.57	39.19	23.84	23.84
Movement LOS	D	C	C	D	C	C	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	29.25			33.37			19.80			25.75		
Approach LOS	C			C			B			C		
d_I, Intersection Delay [s/veh]	24.71											
Intersection LOS	C											
Intersection V/C	0.846											

Emissions

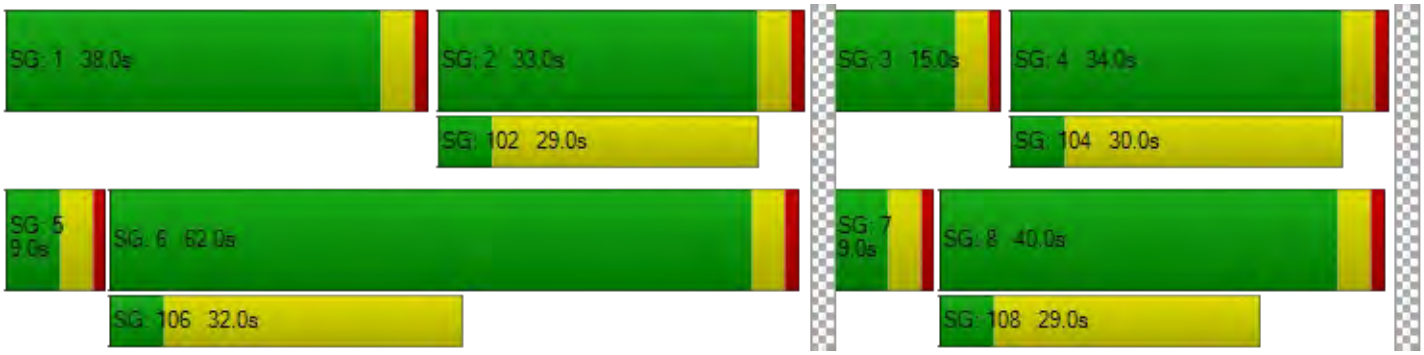
Vehicle Miles Traveled [mph]	72.26	107.00	70.04	12.29	12.62	2.16	7.01	67.67	31.57	10.19	71.84
Stops [stops/h]	263.42	298.27	178.55	122.10	85.66	13.80	91.67	550.02	273.12	81.19	431.09
Fuel consumption [US gal/h]	7.29	8.81	5.44	2.65	1.89	0.31	1.89	11.10	5.48	1.82	9.61
CO [g/h]	509.31	616.00	380.44	185.49	132.09	21.45	132.26	775.77	383.27	126.99	671.91
NOx [g/h]	99.09	119.85	74.02	36.09	25.70	4.17	25.73	150.94	74.57	24.71	130.73
VOC [g/h]	118.04	142.76	88.17	42.99	30.61	4.97	30.65	179.79	88.83	29.43	155.72

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	23.53	23.53	23.53	23.53
l_p,int, Pedestrian LOS Score for Intersectio	2.678	2.397	2.837	2.740
Crosswalk LOS	B	B	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1129	941	909	1818
d_b, Bicycle Delay [s]	6.05	8.95	9.49	0.26
l_b,int, Bicycle LOS Score for Intersection	3.040	1.974	2.723	2.649
Bicycle LOS	C	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Location: SR 210 032.322 @ San Bernardino Ave WB
Designed By:
System: **District:** **Installed By:** R Ebrahim
Master At: **I/C:** **Service Info:**

Timing Change:	Date Start:	Date End:	Designed:	Installed:
11/6/2025				

		FLASH
PHASE	1) LT San Bernardino WB	[ ]
	2) San Bernardino EB	[ ]
	3) LT Tennesse	[ ]
	4) WB Off Ramp	[ ]
	5) LT San Bernardino EB	[ ]
	6) San Bernardino WB	[ ]
	7) LT WB Off Ramp	[ ]
	8) Tennesse NB	[ ]
OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:
Pole: Big Poles are 26-4-80-40-12-88 F (1A poles from same year 88)
Ped: Old style push button

RAM Checksum

Page 2: 2FCF	Page 8: 3CD3
Page 3: 946A	Page 9: D2FD
Page 4: 2908	Page 10: 2444
Page 5: 191A	Page 11: 692C
Page 6: 191A	Page 12: D68F
Page 7: 398C	Page 13: 86F7

CONFIGURATION PHASE FLAGS

Cabinet
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	1 2 3 4 5 6 7 8
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	
Red	1 . . . . .
Yellow	1 . . . . .
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. 2 . 4 . 6 . 8
Max Green 2	. . . . .
Max Green 3	. . . . .

Startup (2-1-1-5)	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	. . . 4 . . . 8
Vehicle Calls	1 2 3 4 5 6 7 8
Pedestrian Calls	. 2 . 4 . 6 . 8
Yellow Start Overlaps	. . . . .
Startup All-Red	6.0

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlap	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlap	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. 2 . 4 . 6 . 8

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . 4 . . . .
P5	. . . . .
P6	. . . . . 6 . .
P7	. . . . .
P8	 8

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	. . . . .	. . . . .	. . . . .	. . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

PHASE TIMING

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	4	0	4	0	4	0	4
Flash Don't Walk	0	23	0	22	0	23	0	22
Minimum Green	10	10	10	10	10	10	10	10
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	25	40	20	25	25	40	20	25
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Maximum Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.4	5.0	4.4	5.0	4.4	5.0	4.4	5.0
All-Red	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	3	0	3	0	3	0	3
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	90		. . . . .	72			11	23	11	20	11	23	11	21
Plan 2	Green Factor	90		. . . . .	26			10	21	10	25	18	13	20	13
Plan 3	Green Factor			. . . . .											
Plan 4	Green Factor			. . . . .											
Plan 5	Green Factor			. . . . .											
Plan 6	Green Factor			. . . . .											
Plan 7	Green Factor			. . . . .											
Plan 8	Green Factor			. . . . .											
Plan 9	Green Factor			. . . . .											

Master Timer Sync (7-A)	
Enable in Plans	
1-9	. . . . .
11-19	. . . . .
21-29	. . . . .

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
. 2 . 4 . 6 . 8	. . . . .
Veh Min	Veh Max
. 2 . . . 6 . .	. . . . .
Ped	Bike
. . . . .	. . . . .
Cond	Cond Grn
. . . . .	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 2	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 3	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 4	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 5	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 6	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 7	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 9	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	OffSet
	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

DETECTORS

Detector Attributes (5-1)

Det	Type	Phases	Lock	Slot
1	COUNT+CALL+EXTEND	1	NO	I1U
2	COUNT+CALL+EXTEND	1	NO	I1L
3	COUNT+CALL+EXTEND	. 2	NO	I2U
4	COUNT+CALL+EXTEND	. 2	NO	I2L
5	COUNT+CALL+EXTEND	. 2	NO	I3U
6	COUNT+CALL+EXTEND	. 2	NO	I3L
7	COUNT+CALL+EXTEND	. 2	NO	I4U
8	COUNT+CALL+EXTEND	. 2	NO	I4L
9	COUNT+CALL+EXTEND	. . 3	NO	I5U
10	COUNT+CALL+EXTEND	. . 3	NO	I5L
11	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6U
12	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6L
13	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7U
14	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7L
15	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8U
16	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8L
17	COUNT+CALL+EXTEND	1	NO	I9U
18	COUNT+CALL+EXTEND	. . 3	NO	I9L
19	COUNT+CALL+EXTEND	. 2	NO	I10U
20	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I10L
21	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1U
22	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1L
23	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2U
24	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2L
25	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3U
26	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3L
27	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4U
28	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4L
29	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5U
30	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5L
31	COUNT+CALL+EXTEND	 8	NO	J6U
32	COUNT+CALL+EXTEND	 8	NO	J6L
33	COUNT+CALL+EXTEND	 8	NO	J7U
34	COUNT+CALL+EXTEND	 8	NO	J7L
35	COUNT+CALL+EXTEND	 8	NO	J8U
36	COUNT+CALL+EXTEND	 8	NO	J8L
37	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J9U
38	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J9L
39	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J10U
40	COUNT+CALL+EXTEND	 8	NO	J10L
41	PEDESTRIAN	. 2	NO	I12U
42	PEDESTRIAN	. . . 4 . . .	NO	I12L
43	PEDESTRIAN	. . . . . 6 . .	NO	I13U
44	PEDESTRIAN	 8	NO	I13L

Detector Configuration (5-2)

Det	Delay	Extend	Recall	Port
1			10	3.2
2			10	7.2
3			10	1.1
4			10	1.5
5			10	4.5
6			10	6.2
7			10	2.1
8			10	7.4
9			10	3.4
10			10	7.6
11			10	1.3
12			10	1.7
13			10	4.7
14			10	6.4
15			10	2.3
16			10	7.8
17			10	3.6
18			10	3.8
19			10	4.1
20			10	4.2
21			10	3.1
22			10	7.1
23			10	1.2
24			10	1.6
25			10	4.6
26			10	6.3
27			10	2.2
28			10	7.3
29			10	3.3
30			10	7.5
31			10	1.4
32			10	1.8
33			10	4.8
34			10	6.5
35			10	2.4
36			10	7.7
37			10	3.5
38			10	3.7
39			10	4.3
40			10	4.4
41			10	5.1
42			10	5.3
43			10	5.2
44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	. . . . .
Detectors 9-16	. . . . .
Detectors17-24	. . . . .
Detectors 25-32	. . . . .
Detectors 33-40	. . . . .
Detectors 41-44	. . . . .

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)

Enable in Plans	. . . . .

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0630	255	A
1130	255	A
1900	255	A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			. . . . .	
2			. . . . .	
3			. . . . .	
4			. . . . .	
5			. . . . .	
6			. . . . .	
7			. . . . .	
8			. . . . .	
9			. . . . .	
10			. . . . .	
11			. . . . .	
12			. . . . .	
13			. . . . .	
14			. . . . .	
15			. . . . .	
16			. . . . .	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			. . . . .	
2			. . . . .	
3			. . . . .	
4			. . . . .	
5			. . . . .	
6			. . . . .	
7			. . . . .	
8			. . . . .	
9			. . . . .	
10			. . . . .	
11			. . . . .	
12			. . . . .	
13			. . . . .	
14			. . . . .	
15			. . . . .	
16			. . . . .	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	. . . . .
Holiday	. . . . .

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			. . . . .		. . . . .
2			. . . . .		. . . . .
3			. . . . .		. . . . .
4			. . . . .		. . . . .
5			. . . . .		. . . . .
6			. . . . .		. . . . .
7			. . . . .		. . . . .
8			. . . . .		. . . . .
9			. . . . .		. . . . .
10			. . . . .		. . . . .
11			. . . . .		. . . . .
12			. . . . .		. . . . .
13			. . . . .		. . . . .
14			. . . . .		. . . . .
15			. . . . .		. . . . .
16			. . . . .		. . . . .

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
27. Traffic Actuated Max 2
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting
100+Action Code = Phases removed
200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	1
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Access Levels:

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)

#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27000
Type	STATIC
Central Acces	6
Field Access	0

IP Address	10	.	122	.	9	.	233
Netmask	255	.	255	.	255	.	224
Broadcast	10	.	122	.	9	.	255
Gateway	10	.	122	.	9	.	226

RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. 2 . . 5 . . .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		. . . . .	. . . . .	1 2 3 4 5 6 7 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	A B C D E F
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-1-5)

Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8

Configuration (3-1-6)

Primary Port	Secondary Port	Latching	Power-Up
2.5	0.0	YES	FLASHING

RR 2

(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. . . 4 . . 7 .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		1 2 3 . . 6 . .	. . . . .	. . . . .	. 2 . . . 6 . .	. . . . .	. . . 4 . . . 8	. . . . .	. . . . .	. . . . .
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-2-5)

Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	. . . 4 . . 7 .	. . . . .

Configuration (3-2-6)

Primary Port	Secondary Port	Latching	Power-up
2.6	0.0	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	5	60	. 2 . . 5 . . .	. . . . .

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	5	60	. . . 4 . . 7 .	. . . . .

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	5	60	1 . . . . 6 . .	. . . . .

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	5	60	. . 3 8	. . . . .

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	FLASHING

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							+
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

+ middle output of loadswitches 3 and 6 Channel 9 and 10

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Transit Priority Configuration (3-E-A)				Indicator Output	
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	. . . . .	0.0	OPT	0	0
Plan 11-19	. . . . .	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
	. . . . .
	. . . . .

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	. . . . .

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					. . . . .	0.0	0.0	0.0	0	0.0	0

Location: SR 210 032.124 @ San Bernardino Ave EB
Designed By:
System: **District:** 08 **Installed By:** R Ebrahim
Master At: **I/C:** **Service Info:**

Timing Change:	Date Start:	Date End:	Designed:	Installed:
11/6/2025				

		FLASH
PHASE	1) LT San Bernardino WB	[ ]
	2) San Bernardino EB	[ ]
	3) LT Citrus Plaza NB	[ ]
	4) EB Off Ramp	[ ]
	5) LT San Bernardino EB	[ ]
	6) San Bernardino WB	[ ]
	7) LT EB Off Ramp	[ ]
	8) Citrus Plaza NB	[ ]
OVERLAP	A)	[ ]
	B)	[ ]
	C)	[ ]
	D)	[ ]
	E)	[ ]
	F)	[ ]

Intersection Layout

Comments and Notes:
Pole: Big Poles are same as WB
Ped: Old Style Push Button
New 2070e controller - R.E M.M. 11/2025

RAM Checksum

Page 2: 2AB7	Page 8: 3CD3
Page 3: 99D4	Page 9: D2FD
Page 4: 5F95	Page 10: 89B8
Page 5: 191A	Page 11: 692C
Page 6: 191A	Page 12: D68F
Page 7: 398C	Page 13: 86F7

CONFIGURATION PHASE FLAGS

Cabinet
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	1 2 3 4 5 6 7 8
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	
Red	. . . . .
Yellow	. . . . .
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. 2 . 4 . 6 . 8
Max Green 2	. . . . .
Max Green 3	. . . . .

Startup (2-1-1-5)	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	. . . 4 . . . 8
Vehicle Calls	1 2 3 4 5 6 7 8
Pedestrian Calls	. 2 . 4 . 6 . 8
Yellow Start Overlaps	. . . . .
Startup All-Red	6.0

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlap	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlap	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. 2 . 4 . 6 . 8

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . 4 . . .
P5	. . . . .
P6	. . . . . 6 . .
P7	. . . . .
P8	 8

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	. . . . .	. . . . .	. . . . .	. . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	1 . . . 5 . . .	. . . . .	. . . . .	. 2 . . . . 7 .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

PHASE TIMING

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	4	0	4	0	4	0	4
Flash Don't Walk	0	25	0	24	0	24	0	24
Minimum Green	10	10	10	10	10	10	10	10
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	20	40	20	30	20	40	20	30
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Maximum Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.4	5.0	4.4	5.0	4.4	5.0	4.4	5.0
All-Red	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ped/Bike (2-3)	**-1-**	**-2-**	**-3-**	**-4-**	**-5-**	**-6-**	**-7-**	**-8-**
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	3	0	3	0	3	0	3
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.4	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	90		. . . . .	24			11	15	11	29	11	15	20	20
Plan 2	Green Factor	90		. . . . .	69			10	19	10	27	10	19	20	15
Plan 3	Green Factor			. . . . .											
Plan 4	Green Factor			. . . . .											
Plan 5	Green Factor			. . . . .											
Plan 6	Green Factor			. . . . .											
Plan 7	Green Factor			. . . . .											
Plan 8	Green Factor			. . . . .											
Plan 9	Green Factor			. . . . .											

Master Timer Sync (7-A)	
Enable in Plans	
1-9	. . . . .
11-19	. . . . .
21-29	. . . . .

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
. 2 . 4 . 6 . 8	. . . . .
Veh Min	Veh Max
. 2 . . . 6 . .	. . . . .
Ped	Bike
. . . . .	. . . . .
Cond	Cond Grn
. . . . .	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 2	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 3	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 4	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 5	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 6	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 7	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 9	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	OffSet
	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

DETECTORS

Detector Attributes (5-1)

Det	Type	Phases	Lock	Slot
1	COUNT+CALL+EXTEND	1	NO	I1U
2	COUNT+CALL+EXTEND	1	NO	I1L
3	COUNT+CALL+EXTEND	. 2	NO	I2U
4	COUNT+CALL+EXTEND	. 2	NO	I2L
5	COUNT+CALL+EXTEND	. 2	NO	I3U
6	COUNT+CALL+EXTEND	. 2	NO	I3L
7	COUNT+CALL+EXTEND	. 2	NO	I4U
8	COUNT+CALL+EXTEND	. 2	NO	I4L
9	COUNT+CALL+EXTEND	. . 3	NO	I5U
10	COUNT+CALL+EXTEND	. . 3	NO	I5L
11	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6U
12	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6L
13	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7U
14	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7L
15	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8U
16	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8L
17	COUNT+CALL+EXTEND	1	NO	I9U
18	COUNT+CALL+EXTEND	. . 3	NO	I9L
19	COUNT+CALL+EXTEND	. 2	NO	I10U
20	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I10L
21	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1U
22	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1L
23	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2U
24	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2L
25	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3U
26	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3L
27	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4U
28	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4L
29	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5U
30	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5L
31	COUNT+CALL+EXTEND	 8	NO	J6U
32	COUNT+CALL+EXTEND	 8	NO	J6L
33	COUNT+CALL+EXTEND	 8	NO	J7U
34	COUNT+CALL+EXTEND	 8	NO	J7L
35	COUNT+CALL+EXTEND	 8	NO	J8U
36	COUNT+CALL+EXTEND	 8	NO	J8L
37	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J9U
38	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J9L
39	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J10U
40	COUNT+CALL+EXTEND	 8	NO	J10L
41	PEDESTRIAN	. 2	NO	I12U
42	PEDESTRIAN	. . . 4 . . .	NO	I12L
43	PEDESTRIAN	. . . . . 6 . .	NO	I13U
44	PEDESTRIAN	 8	NO	I13L

Detector Configuration (5-2)

Det	Delay	Extend	Recall	Port
1			10	3.2
2			10	7.2
3			10	1.1
4			10	1.5
5			10	4.5
6			10	6.2
7			10	2.1
8			10	7.4
9			10	3.4
10			10	7.6
11			10	1.3
12			10	1.7
13			10	4.7
14			10	6.4
15			10	2.3
16			10	7.8
17			10	3.6
18			10	3.8
19			10	4.1
20			10	4.2
21			10	3.1
22			10	7.1
23			10	1.2
24			10	1.6
25			10	4.6
26			10	6.3
27			10	2.2
28			10	7.3
29			10	3.3
30			10	7.5
31			10	1.4
32			10	1.8
33			10	4.8
34			10	6.5
35			10	2.4
36			10	7.7
37			10	3.5
38			10	3.7
39			10	4.3
40			10	4.4
41			10	5.1
42			10	5.3
43			10	5.2
44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)

Detectors 1-8	. . . . .
Detectors 9-16	. . . . .
Detectors17-24	. . . . .
Detectors 25-32	. . . . .
Detectors 33-40	. . . . .
Detectors 41-44	. . . . .

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)

Enable in Plans	. . . . .

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0630	255	A
1130	255	A
1900	255	A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			. . . . .	
2			. . . . .	
3			. . . . .	
4			. . . . .	
5			. . . . .	
6			. . . . .	
7			. . . . .	
8			. . . . .	
9			. . . . .	
10			. . . . .	
11			. . . . .	
12			. . . . .	
13			. . . . .	
14			. . . . .	
15			. . . . .	
16			. . . . .	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			. . . . .	
2			. . . . .	
3			. . . . .	
4			. . . . .	
5			. . . . .	
6			. . . . .	
7			. . . . .	
8			. . . . .	
9			. . . . .	
10			. . . . .	
11			. . . . .	
12			. . . . .	
13			. . . . .	
14			. . . . .	
15			. . . . .	
16			. . . . .	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	. . . . .
Holiday	. . . . .

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			. . . . .		. . . . .
2			. . . . .		. . . . .
3			. . . . .		. . . . .
4			. . . . .		. . . . .
5			. . . . .		. . . . .
6			. . . . .		. . . . .
7			. . . . .		. . . . .
8			. . . . .		. . . . .
9			. . . . .		. . . . .
10			. . . . .		. . . . .
11			. . . . .		. . . . .
12			. . . . .		. . . . .
13			. . . . .		. . . . .
14			. . . . .		. . . . .
15			. . . . .		. . . . .
16			. . . . .		. . . . .

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
27. Traffic Actuated Max 2
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	2
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Access Levels:

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)

#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

NETWORK

Network (6-4)	
Address	2
Protocol	AB3418
Port	27000
Type	STATIC
Central Acces	6
Field Access	0

IP Address	172	.	25	.	193	.	135
Netmask	255	.	255	.	255	.	192
Broadcast	0	.	0	.	0	.	255
Gateway	172	.	25	.	193	.	129

RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. 2 . . 5 . . .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		. . . . .	. . . . .	1 2 3 4 5 6 7 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	A B C D E F
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-1-5)			
Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8

Configuration (3-1-6)			
Primary Port	Secondary Port	Latching	Power-Up
2.5	0.0	YES	FLASHING

RR 2

(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. . . 4 . . 7 .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		1 2 3 . . 6 . .	. . . . .	. . . . .	. 2 . . . 6 . .	. . . . .	. . . 4 . . . 8	. . . . .	. . . . .	. . . . .
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-2-5)			
Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	. . . 4 . . 7 .	. . . . .

Configuration (3-2-6)			
Primary Port	Secondary Port	Latching	Power-up
2.6	0.0	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	5	60	. 2 . . 5 . . .	. . . . .

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	5	60	. . . 4 . . 7 .	. . . . .

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	5	60	1 . . . . 6 . .	. . . . .

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	5	60	. . 3 8	. . . . .

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	FLASHING

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							+
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

+ middle output of loadswitches 3 and 6 Channel 9 and 10

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Transit Priority Configuration (3-E-A)		Indicator Output			
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	. . . . .	0.0	OPT	0	0
Plan 11-19	. . . . .	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
	. . . . .
	. . . . .

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	. . . . .

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					. . . . .	0.0	0.0	0.0	0	0.0	0

Lugonia & Tennessee

PHASE SET UP								
# 1 – INTERVAL TIMES – AS OF ~~4/22/20~~ KS 7-1-20								
PHASE	1	2	3	4	5	6	7	8
MOVEMENT								
DIRECTION								
MIN GREEN	5	5	5	5	5	5	5	5
GAP, EXT	2.0	3.0	3.0 KS ~~2.0~~	2.0	2.0	3.0	2.0	2.0
MAX 1	30	35	45	25	30	35	20	25
MAX 2								
YELLOW	3.5	4.0	3.5	4.0	3.5	4.0	3.5	4.0
RED	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
WALK		7		7		7		7
PED CLEAR		20		20		20		20
ADD INIT								
TT REDUCE								
TB REDUCTION								
MIN GAP								
MX IN GR								
WALK 2								
PED CLR 2								
MAX 3								
# 4 - RECALL								
PHASE	1	2	3	4	5	6	7	8
RECALL		X				X		
# 6 – OPTIONS								
PHASE	1	2	3	4	5	6	7	8
PED PROTECT								
NON ACTUATION								
NON ACTUATION 2								
LAST CAR PASSAGE								
REST IN WALK								
DON'T SKIP								
SOFT RECALL								
SELECT MAX 2								
SELECT PED TIMING								
FLASHING								
OMIT								
DUAL								
SIMUL . GAP								

Location: I-10 WB @ TENNESSEE ST
System:
Master At: E/B LOCATION
District:
I/C:
Designed By:
Installed By: SAFWAN SAYED
Service Info:

Timing Change:	Date Start:	Date End:	Designed:	Installed:
4/24/2025	10/12/2011			11/19/2008

			FLASH
PHASE	1)	N/B TENNESSEE ST-LEFT TO W/B I-10	[ ]
	2)	S/B TENNESSEE ST	[ ]
	3)		[ ]
	4)	I-10 W/B OFF RAMP	[ ]
	5)		[ ]
	6)	N/B TENNESSEE ST	[ ]
	7)		[ ]
	8)		[ ]
OVERLAP	A)		[ ]
	B)		[ ]
	C)		[ ]
	D)		[ ]
	E)		[ ]
	F)		[ ]

Intersection Layout

Comments and Notes:
Implement the LPI for the PED Phases on 4/24/2025
Added Dummy PED Phase 2 for LPI Purposes. (DO NOT INSTALL LOAD SWITCH FOR IT).

RAM Checksum

Page 2: 2D5B	Page 8: FD15
Page 3: 1A22	Page 9: D2FD
Page 4: EDE2	Page 10: A157
Page 5: 191A	Page 11: C3CB
Page 6: 191A	Page 12: D68F
Page 7: 0F01	Page 13: 86F7

Post Mile: 08-SBD-10 W/B-33.189-TENNESSEE ST

Printed: 10/16/2025

CONFIGURATION PHASE FLAGS

Cabinet
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	1 2 . 4 . 6 . .
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	
Red	. . . . .
Yellow	. . . . .
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. . . . .
Max Green 2	. . . . .
Max Green 3	. . . . .

Startup (2-1-1-5)	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	. . . . .
Vehicle Calls	1 2 . 4 . 6 . .
Pedestrian Calls	. 2 . . . 6 . .
Yellow Start Overlaps	. . . . .
Startup All-Red	6.0

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlap	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlap	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. 2 . . . 6 . .

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . . .
P5	. . . . .
P6	. . . . . 6 . .
P7	. . . . .
P8	. . . . .

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	. . . . .	. . . . .	. . . . .	. . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

PHASE TIMING

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	4	0	0	0	4	0	0
Flash Don't Walk	0	11	0	0	0	11	0	0
Minimum Green	10	10	0	10	0	10	0	0
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	30	40	0	40	0	40	0	0
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Maximum Gap	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Minimum Gap	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.5	3.0	4.5	3.0	4.5	3.0	3.0
All-Red	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0

Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	3	0	0	0	3	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	90		. . . . .	81			35	19		19		59		
Plan 2	Green Factor	90		. . . . .	32			28	26		19		59		
Plan 3	Green Factor	90		. . . . .	90			35	19		19		59		
Plan 4	Green Factor			. . . . .											
Plan 5	Green Factor			. . . . .											
Plan 6	Green Factor			. . . . .											
Plan 7	Green Factor			. . . . .											
Plan 8	Green Factor			. . . . .											
Plan 9	Green Factor			. . . . .											

Master Timer Sync (7-A)	
Enable in Plans	
1-9	. . . . .
11-19	. . . . .
21-29	. . . . .

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
. 2 . 4 . 6 . 8	. . . . .
Veh Min	Veh Max
. 2 . . . 6 . .	. . . . .
Ped	Bike
. . . . .	. . . . .
Cond	Cond Grn
. . . . .	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 2	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 3	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 4	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 5	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 6	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 7	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 9	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	OffSet
	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

DETECTORS

Detector Attributes (5-1)

Det	Type	Phases	Lock	Slot
1	COUNT+CALL+EXTEND	1	NO	I1U
2	COUNT+CALL+EXTEND	1	NO	I1L
3	COUNT+CALL+EXTEND	. 2	NO	I2U
4	COUNT+CALL+EXTEND	. 2	NO	I2L
5	COUNT+CALL+EXTEND	. 2	NO	I3U
6	COUNT+CALL+EXTEND	. 2	NO	I3L
7	COUNT+CALL+EXTEND	. 2	NO	I4U
8	COUNT+CALL+EXTEND	. 2	NO	I4L
9	COUNT+CALL+EXTEND	. . 3	NO	I5U
10	COUNT+CALL+EXTEND	. . 3	NO	I5L
11	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6U
12	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6L
13	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7U
14	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7L
15	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8U
16	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8L
17	COUNT+CALL+EXTEND	1	NO	I9U
18	COUNT+CALL+EXTEND	. . 3	NO	I9L
19	COUNT+CALL+EXTEND	. 2	NO	I10U
20	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I10L
21	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1U
22	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1L
23	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2U
24	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2L
25	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3U
26	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3L
27	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4U
28	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4L
29	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5U
30	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5L
31	COUNT+CALL+EXTEND	 8	NO	J6U
32	COUNT+CALL+EXTEND	 8	NO	J6L
33	COUNT+CALL+EXTEND	 8	NO	J7U
34	COUNT+CALL+EXTEND	 8	NO	J7L
35	COUNT+CALL+EXTEND	 8	NO	J8U
36	COUNT+CALL+EXTEND	 8	NO	J8L
37	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J9U
38	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J9L
39	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J10U
40	COUNT+CALL+EXTEND	 8	NO	J10L
41	PEDESTRIAN	. 2 . . . 6 . .	NO	I12U
42	PEDESTRIAN	. . . 4 . . .	NO	I12L
43	PEDESTRIAN	. 2 . . . 6 . .	NO	I13U
44	PEDESTRIAN	 8	NO	I13L

Detector Configuration (5-2)

Det	Delay	Extend	Recall	Port
1			10	3.2
2			10	7.2
3			10	1.1
4			10	1.5
5			10	4.5
6			10	6.2
7			10	2.1
8			10	7.4
9			10	3.4
10			10	7.6
11			10	1.3
12			10	1.7
13			10	4.7
14			10	6.4
15			10	2.3
16			10	7.8
17			10	3.6
18			10	3.8
19			10	4.1
20			10	4.2
21			10	3.1
22			10	7.1
23			10	1.2
24			10	1.6
25			10	4.6
26			10	6.3
27			10	2.2
28			10	7.3
29			10	3.3
30			10	7.5
31			10	1.4
32			10	1.8
33			10	4.8
34			10	6.5
35			10	2.4
36			10	7.7
37			10	3.5
38			10	3.7
39			10	4.3
40			10	4.4
41			10	5.1
42			10	5.3
43			10	5.2
44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)

Detectors 1-8	. . . . .
Detectors 9-16	. . . . .
Detectors17-24	. . . . .
Detectors 25-32	. . . . .
Detectors 33-40	. . . . .
Detectors 41-44	. . . . .

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)

Enable in Plans	. . . . .

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0630	1	A
0930	2	A
1500	3	A
2100	255	A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			. . . . .	
2			. . . . .	
3			. . . . .	
4			. . . . .	
5			. . . . .	
6			. . . . .	
7			. . . . .	
8			. . . . .	
9			. . . . .	
10			. . . . .	
11			. . . . .	
12			. . . . .	
13			. . . . .	
14			. . . . .	
15			. . . . .	
16			. . . . .	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			. . . . .	
2			. . . . .	
3			. . . . .	
4			. . . . .	
5			. . . . .	
6			. . . . .	
7			. . . . .	
8			. . . . .	
9			. . . . .	
10			. . . . .	
11			. . . . .	
12			. . . . .	
13			. . . . .	
14			. . . . .	
15			. . . . .	
16			. . . . .	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	. . . . .
Holiday	. . . . .

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			. . . . .		. . . . .
2			. . . . .		. . . . .
3			. . . . .		. . . . .
4			. . . . .		. . . . .
5			. . . . .		. . . . .
6			. . . . .		. . . . .
7			. . . . .		. . . . .
8			. . . . .		. . . . .
9			. . . . .		. . . . .
10			. . . . .		. . . . .
11			. . . . .		. . . . .
12			. . . . .		. . . . .
13			. . . . .		. . . . .
14			. . . . .		. . . . .
15			. . . . .		. . . . .
16			. . . . .		. . . . .

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
27. Traffic Actuated Max 2
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	2
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Access Levels:

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)

#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27002
Type	STATIC
Central Access	0
Field Access	0

IP Address	192	.	168	.	0	.	102
Netmask	255	.	255	.	255	.	0
Broadcast	192	.	168	.	0	.	255
Gateway	192	.	168	.	0	.	1

RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. 2 . . 5 . . .	. . . .	. . . .	. . . .	. . . .	. 2 . 4 . 6 . 8	. . . . . .	. . . . . .	. . . . . .
Clear 2		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Clear 3		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Hold		. . . .	. . . .	1 2 3 4 5 6 7 8	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	A B C D E F
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-1-5)

Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . .	. . . . . .	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8

Configuration (3-1-6)

Primary Port	Secondary Port	Latching	Power-Up
2.5	0.0	YES	FLASHING

RR 2

(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. . . 4 . . 7 .	. . . .	. . . .	. . . .	. . . .	. 2 . 4 . 6 . 8	. . . . . .	. . . . . .	. . . . . .
Clear 2		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Clear 3		. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . . . .	. . . . . .	. . . . . .
Hold		1 2 3 . . 6 . .	. . . .	. . . .	. 2 . . . 6 . .	. . . .	. . . 4 . . . 8	. . . . . .	. . . . . .	. . . . . .
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-2-5)

Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . .	. . . . . .	. . . 4 . . 7 .	. . . .

Configuration (3-2-6)

Primary Port	Secondary Port	Latching	Power-up
2.6	0.0	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	. 2 . . 5 . . .	. . . . . .

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	. . . 4 . . 7 .	. . . . . .

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	1 . . . . 6 . .	. . . . . .

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	. . 3 8	. . . . . .

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	FLASHING

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							+
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

+ middle output of loadswitches 3 and 6 Channel 9 and 10

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Transit Priority Configuration (3-E-A)				Indicator Output	
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	. . . . .	0.0	OPT	0	0
Plan 11-19	. . . . .	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
	. . . . .
	. . . . .

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	. . . . .

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					. . . . .	0.0	0.0	0.0	0	0.0	0

Location: I-10 EB @ TENNESSEE ST
System:
Master At: THIS LOCATION
District: 08-SAN BERNARDINO
I/C:
Designed By:
Installed By: SAFWAN SAYED
Service Info:

Timing Change:	Date Start:	Date End:	Designed:	Installed:
4/24/2025	10/12/2011			

			FLASH
PHASE	1)		[ ]
	2)	S/B TENNESSEE ST	[ ]
	3)		[ ]
	4)		[ ]
	5)	S/B TENNESSEE ST-LEFT TO E/B I-10	[ ]
	6)	N/B TENNESSEE ST	[ ]
	7)		[ ]
	8)	I-10 E/B OFF RAMP	[ ]
OVERLAP	A)		[ ]
	B)		[ ]
	C)		[ ]
	D)		[ ]
	E)		[ ]
	F)		[ ]

Intersection Layout

Comments and Notes:
Implement the LPI for the PED Phases on 4/24/2025
Added Dummy PED Phase 2 for LPI Purposes. (DO NOT INSTALL LOAD SWITCH FOR IT).

RAM Checksum

Page 2: 15AA	Page 8: FD15
Page 3: 265F	Page 9: D2FD
Page 4: BEDF	Page 10: 49DF
Page 5: 191A	Page 11: C3CB
Page 6: 191A	Page 12: D68F
Page 7: 0F01	Page 13: 86F7

Post Mile: 08-SBD-10 E/B-33.379-TENNESSEE ST

Printed: 10/16/2025

CONFIGURATION PHASE FLAGS

Cabinet
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	. 2 . . 5 6 . 8
Restricted	. . . . .

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

Phase Locks (2-1-1-3)	
Red	. . . . .
Yellow	. . . . .
Force/Max	. . . . .

Phase Features (2-1-1-4)	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. 2 . . . 6 . .
Max Green 2	. . . . .
Max Green 3	. . . . .

Startup (2-1-1-5)	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	. . . . .
Vehicle Calls	. 2 . . 5 6 . 8
Pedestrian Calls	. 2 . . . 6 . .
Yellow Start Overlaps	. . . . .
Startup All-Red	6.0

Call To Phase (2-1-2-1)		Omit On Green	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	. . . . .
Yellow Flash Overlap	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlap	. . . . .

Special Operation (2-1-2-3)	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. 2 . . . 6 . .

Protected Permissive (2-1-2-4)	
Protected Permissive	. . . . .

Pedestrian (2-1-3)	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . . .
P5	. . . . .
P6	. . . . . 6 . .
P7	. . . . .
P8	. . . . .

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A	. . . . .	. . . . .	. . . . .	. . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .

PHASE TIMING

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	4	0	0	0	4	0	0
Flash Don't Walk	0	19	0	0	0	19	0	0
Minimum Green	0	10	0	0	10	10	0	10
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	0	40	0	0	30	40	0	40
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Maximum Gap	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Minimum Gap	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.5	3.0	3.0	4.0	4.5	3.0	4.5
All-Red	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0
Ped/Bike (2-3)	**-1-**	**-2-**	**-3-**	**-4-**	**-5-**	**-6-**	**-7-**	**-8-**
--- Walk 2 ---	0	4	0	0	0	4	0	0
Delay/Early Walk	0	3	0	0	0	3	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

Local Plan 1...9 (7-1) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	90		. . . . .	29				44			17	22		34
Plan 2	Green Factor	90		. . . . .	65				42			17	20		36
Plan 3	Green Factor	90		. . . . .	24				38			17	16		40
Plan 4	Green Factor			. . . . .											
Plan 5	Green Factor			. . . . .											
Plan 6	Green Factor			. . . . .											
Plan 7	Green Factor			. . . . .											
Plan 8	Green Factor			. . . . .											
Plan 9	Green Factor			. . . . .											

Master Timer Sync (7-A)	
Enable in Plans	
1-9	. . . . .
11-19	. . . . .
21-29	. . . . .

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
. 2 . 4 . 6 . 8	. . . . .
Veh Min	Veh Max
. 2 . . . 6 . .	. . . . .
Ped	Bike
. . . . .	. . . . .
Cond	Cond Grn
. . . . .	10

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	. . . . 5 . . 8	. . . . .	. . . . .	. . . . .
Plan 2	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	. . . . 5 . . 8	. . . . .	. . . . .	. . . . .
Plan 3	. 2 . 4 . 6 . 8	. 2 . . . 6 . .	. . . . .	. . . . .	. . . . 5 . . 8	. . . . .	. . . . .	. . . . .
Plan 4	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 5	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 6	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 7	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Plan 9	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .

MANUAL COMMANDS

Manual Plan (4-1)	
Plan	OffSet
	A

Plan: 1-9
15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

Local Plan 11...19 (7-2) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

Local Plan 21...29 (7-3) TIMING DATA

COORDINATION

[Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

DETECTORS

Detector Attributes (5-1)				Slot
Det	Type	Phases	Lock	
1	COUNT+CALL+EXTEND	1	NO	I1U
2	COUNT+CALL+EXTEND	1	NO	I1L
3	COUNT+CALL+EXTEND	. 2	NO	I2U
4	COUNT+CALL+EXTEND	. 2	NO	I2L
5	COUNT+CALL+EXTEND	. 2	NO	I3U
6	COUNT+CALL+EXTEND	. 2	NO	I3L
7	COUNT+CALL+EXTEND	. 2	NO	I4U
8	COUNT+CALL+EXTEND	. 2	NO	I4L
9	COUNT+CALL+EXTEND	. . 3	NO	I5U
10	COUNT+CALL+EXTEND	. . 3	NO	I5L
11	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6U
12	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I6L
13	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7U
14	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I7L
15	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8U
16	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I8L
17	COUNT+CALL+EXTEND	1	NO	I9U
18	COUNT+CALL+EXTEND	. . 3	NO	I9L
19	COUNT+CALL+EXTEND	. 2	NO	I10U
20	COUNT+CALL+EXTEND	. . . 4 . . .	NO	I10L
21	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1U
22	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J1L
23	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2U
24	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J2L
25	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3U
26	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J3L
27	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4U
28	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J4L
29	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5U
30	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J5L
31	COUNT+CALL+EXTEND	 8	NO	J6U
32	COUNT+CALL+EXTEND	 8	NO	J6L
33	COUNT+CALL+EXTEND	 8	NO	J7U
34	COUNT+CALL+EXTEND	 8	NO	J7L
35	COUNT+CALL+EXTEND	 8	NO	J8U
36	COUNT+CALL+EXTEND	 8	NO	J8L
37	COUNT+CALL+EXTEND	. . . . 5 . . .	NO	J9U
38	COUNT+CALL+EXTEND	. . . . . 7 .	NO	J9L
39	COUNT+CALL+EXTEND	. . . . . 6 . .	NO	J10U
40	COUNT+CALL+EXTEND	 8	NO	J10L
41	PEDESTRIAN	. 2 . . . 6 . .	NO	I12U
42	PEDESTRIAN	. . . 4 . . .	NO	I12L
43	PEDESTRIAN	. 2 . . . 6 . .	NO	I13U
44	PEDESTRIAN	 8	NO	I13L

Detector Configuration (5-2)				
Det	Delay	Extend	Recall	Port
1			10	3.2
2			10	7.2
3			10	1.1
4			10	1.5
5			10	4.5
6			10	6.2
7			10	2.1
8			10	7.4
9			10	3.4
10			10	7.6
11			10	1.3
12			10	1.7
13			10	4.7
14			10	6.4
15			10	2.3
16			10	7.8
17			10	3.6
18			10	3.8
19			10	4.1
20			10	4.2
21			10	3.1
22			10	7.1
23			10	1.2
24			10	1.6
25			10	4.6
26			10	6.3
27			10	2.2
28			10	7.3
29			10	3.3
30			10	7.5
31			10	1.4
32			10	1.8
33			10	4.8
34			10	6.5
35			10	2.4
36			10	7.7
37			10	3.5
38			10	3.7
39			10	4.3
40			10	4.4
41			10	5.1
42			10	5.3
43			10	5.2
44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	. . . . .
Detectors 9-16	. . . . .
Detectors17-24	. . . . .
Detectors 25-32	. . . . .
Detectors 33-40	. . . . .
Detectors 41-44	. . . . .

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)	
Enable in Plans	. . . . .

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)		
Time	Plan	OS
0630	1	A
0930	2	A
1500	3	A
2100	255	A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 2 (8-2-2)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 3 (8-2-3)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 4 (8-2-4)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 5 (8-2-5)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

Table 6 (8-2-6)		
Time	Plan	OS
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A
		A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES

Floating Holiday Table (8-2-8)

#	Mnth	Week	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS

TOD Functions (8-3)

#	Start	End	DOW	Action	Phases
1			.....		.....
2			.....		.....
3			.....		.....
4			.....		.....
5			.....		.....
6			.....		.....
7			.....		.....
8			.....		.....
9			.....		.....
10			.....		.....
11			.....		.....
12			.....		.....
13			.....		.....
14			.....		.....
15			.....		.....
16			.....		.....

Action Codes:

0. None
1. Permitted
2. Restricted
4. Veh Min Recall
5. Veh Max Recall
6. Ped Recall
7. Bike Recall
8. Red Lock
9. Yellow Lock
10. Force/Max Lock
11. Double Entry
12. Y-Coord C
13. Y-Coord D
14. Free
15. Flashing
16. Walk 2
17. Max Green 2
18. Max Green 3
19. Rest in Walk
20. Rest in Red
21. Free Lag Phases
22. Special Functions
23. Truck Preempt
24. Conditional Service
25. Conditional Service
26. Leading Ped
27. Traffic Actuated Max 2
41. Protected Permissive
42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	1
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Access Levels:

0-Full Access
1-Status Only
2-Status, Set Pattern, Time
3-Status, Set Pattern, Time, Manual Plan
4-Reserved
5-Full Access with No Set Pattern
6-Full Access with No Set Time
7-Full Access with No Set Pattern, Manual Plan
8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27001
Type	STATIC
Central Access	0
Field Access	0

IP Address	192	.	168	.	0	.	101
Netmask	255	.	255	.	255	.	0
Broadcast	192	.	168	.	0	.	255
Gateway	192	.	168	.	0	.	1

RAILROAD PREEMPTION

RR 1

(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. 2 . . 5 . . .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		. . . . .	. . . . .	1 2 3 4 5 6 7 8	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	A B C D E F
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-1-5)

Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8

Configuration (3-1-6)

Primary Port	Secondary Port	Latching	Power-Up
2.5	0.0	YES	FLASHING

RR 2

(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
Clear 1	10	. . . 4 . . 7 .	. . . . .	. . . . .	. . . . .	. . . . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .	. . . . .
Clear 2		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Clear 3		. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Hold		1 2 3 . . 6 . .	. . . . .	. . . . .	. 2 . . . 6 . .	. . . . .	. . . 4 . . . 8	. . . . .	. . . . .	. . . . .
Exit										
Min Grn										
Ped Clr										

Exit Parameters (3-2-5)

Phase Green	Overlap Green	Vehicle Call	Ped Call
. . . . .	. . . . .	. . . 4 . . 7 .	. . . . .

Configuration (3-2-6)

Primary Port	Secondary Port	Latching	Power-up
2.6	0.0	YES	DARK

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	. 2 . . 5 . . .	. . . . .

Port	Latching	Phase Termination
5.5	NO	ADVANCE

EVB (3-B)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	. . . 4 . . 7 .	. . . . .

Port	Latching	Phase Termination
5.6	NO	ADVANCE

EVC (3-C)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	1 . . . . 6 . .	. . . . .

Port	Latching	Phase Termination
5.7	NO	ADVANCE

EVD (3-D)

Preempt Timers			Phase Green	Overlap Green
Delay	Clear	Max		
	30	30	. . 3 8	. . . . .

Port	Latching	Phase Termination
5.8	NO	ADVANCE

INPUTS

		7 Wire I/C (2-1-5-1)			
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	FLASHING

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

OUTPUTS

Loadswitch Assignments (2-1-6)							+
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)
1-8 Vehicle 1-8
9-14 Overlap A-F
21-28 Ped 1-8
41-47 Special Functions
41 Protected Permissive Flashing Phase 1
43 Protected Permissive Flashing Phase 3
45 Protected Permissive Flashing Phase 5
47 Protected Permissive Flashing Phase 7
51-57 Special Functions
71-72 Seven Wire I/C

+ middle output of loadswitches 3 and 6 Channel 9 and 10

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Transit Priority Configuration (3-E-A)				Indicator Output	
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	. . . . .	0.0	OPT	0	0
Plan 11-19	. . . . .	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
	. . . . .
	. . . . .

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	. . . . .

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	. . . . .	. . . . .

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					. . . . .	0.0	0.0	0.0	0	0.0	0

APPENDIX D – PEAK HOUR SIGNAL WARRANT RESULTS

Signal Warrants Report For Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	372	514	245	167
2	361	499	238	162
3	353	488	233	159
4	331	457	218	149
5	294	406	194	132
6	290	401	191	130
7	286	396	189	129
8	260	360	172	117
9	257	355	169	115
10	253	350	167	114
11	219	303	145	99
12	205	283	135	92
13	201	278	132	90
14	149	206	98	67
15	149	206	98	67
16	104	144	69	47
17	60	82	39	27
18	60	82	39	27
19	33	46	22	15
20	19	26	12	8
21	11	15	7	5
22	4	5	2	2
23	4	5	2	2
24	4	5	2	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	886	2	245	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
2	2	860	2	238	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
3	2	841	2	233	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
4	2	788	2	218	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
5	2	700	2	194	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
6	2	691	2	191	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
7	2	682	2	189	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
8	2	620	2	172	No	Yes	Yes	Yes	No	No	No	Yes	No	No
9	2	612	2	169	No	Yes	Yes	Yes	No	No	No	Yes	No	No
10	2	603	2	167	No	Yes	Yes	Yes	No	No	No	Yes	No	No
11	2	522	2	145	No	No	Yes	Yes	No	No	No	Yes	No	No
12	2	488	2	135	No	No	No	Yes	No	No	No	No	No	No
13	2	479	2	132	No	No	No	Yes	No	No	No	No	No	No
14	2	355	2	98	No	No	No	No	No	No	No	No	No	No
15	2	355	2	98	No	No	No	No	No	No	No	No	No	No
16	2	248	2	69	No	No	No	No	No	No	No	No	No	No
17	2	142	2	39	No	No	No	No	No	No	No	No	No	No
18	2	142	2	39	No	No	No	No	No	No	No	No	No	No
19	2	79	2	22	No	No	No	No	No	No	No	No	No	No
20	2	45	2	12	No	No	No	No	No	No	No	No	No	No
21	2	26	2	7	No	No	No	No	No	No	No	No	No	No
22	2	9	2	2	No	No	No	No	No	No	No	No	No	No
23	2	9	2	2	No	No	No	No	No	No	No	No	No	No
24	2	9	2	2	No	No	No	No	No	No	No	No	No	No
Hours Met					4	10	11	13	0	4	7	11	1	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	10000	50.5
Number of Lanes on Minor Street Approach	1	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	680:33	2:20
Delay Condition Met	Yes	No
Volume on Minor Street Approach During Same Hour	245	167
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	1298	1298
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	No
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 4: W. San Bernardino Ave/New York Street

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	796	700	251
2	772	679	243
3	756	665	238
4	708	623	223
5	629	553	198
6	621	546	196
7	613	539	193
8	557	490	176
9	549	483	173
10	541	476	171
11	470	413	148
12	438	385	138
13	430	378	136
14	318	280	100
15	318	280	100
16	223	196	70
17	127	112	40
18	127	112	40
19	72	63	23
20	40	35	13
21	24	21	8
22	8	7	3
23	8	7	3
24	8	7	3

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	1496	1	251	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	1	1451	1	243	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	1	1421	1	238	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	1	1331	1	223	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	1	1182	1	198	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	1	1167	1	196	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	1	1152	1	193	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	1	1047	1	176	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	1	1032	1	173	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	1	1017	1	171	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	1	883	1	148	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	1	823	1	138	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
13	1	808	1	136	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
14	1	598	1	100	No	No	No	Yes	No	No	Yes	Yes	Yes	No
15	1	598	1	100	No	No	No	Yes	No	No	Yes	Yes	Yes	No
16	1	419	1	70	No	No	No	No	No	No	No	No	No	No
17	1	239	1	40	No	No	No	No	No	No	No	No	No	No
18	1	239	1	40	No	No	No	No	No	No	No	No	No	No
19	1	135	1	23	No	No	No	No	No	No	No	No	No	No
20	1	75	1	13	No	No	No	No	No	No	No	No	No	No
21	1	45	1	8	No	No	No	No	No	No	No	No	No	No
22	1	15	1	3	No	No	No	No	No	No	No	No	No	No
23	1	15	1	3	No	No	No	No	No	No	No	No	No	No
24	1	15	1	3	No	No	No	No	No	No	No	No	No	No
Hours Met					10	13	13	15	13	13	15	15	15	11

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	135.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	9:25
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	251
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1747
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 8: W. Pioneer Avenue/Project Driveway 1

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	4	2	14	0
2	4	2	14	0
3	4	2	13	0
4	4	2	12	0
5	3	2	11	0
6	3	2	11	0
7	3	2	11	0
8	3	1	10	0
9	3	1	10	0
10	3	1	10	0
11	2	1	8	0
12	2	1	8	0
13	2	1	8	0
14	2	1	6	0
15	2	1	6	0
16	1	1	4	0
17	1	0	2	0
18	1	0	2	0
19	0	0	1	0
20	0	0	1	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	6	1	14	No	No	No	No	No	No	No	No	No	No
2	1	6	1	14	No	No	No	No	No	No	No	No	No	No
3	1	6	1	13	No	No	No	No	No	No	No	No	No	No
4	1	6	1	12	No	No	No	No	No	No	No	No	No	No
5	1	5	1	11	No	No	No	No	No	No	No	No	No	No
6	1	5	1	11	No	No	No	No	No	No	No	No	No	No
7	1	5	1	11	No	No	No	No	No	No	No	No	No	No
8	1	4	1	10	No	No	No	No	No	No	No	No	No	No
9	1	4	1	10	No	No	No	No	No	No	No	No	No	No
10	1	4	1	10	No	No	No	No	No	No	No	No	No	No
11	1	3	1	8	No	No	No	No	No	No	No	No	No	No
12	1	3	1	8	No	No	No	No	No	No	No	No	No	No
13	1	3	1	8	No	No	No	No	No	No	No	No	No	No
14	1	3	1	6	No	No	No	No	No	No	No	No	No	No
15	1	3	1	6	No	No	No	No	No	No	No	No	No	No
16	1	2	1	4	No	No	No	No	No	No	No	No	No	No
17	1	1	1	2	No	No	No	No	No	No	No	No	No	No
18	1	1	1	2	No	No	No	No	No	No	No	No	No	No
19	1	0	1	1	No	No	No	No	No	No	No	No	No	No
20	1	0	1	1	No	No	No	No	No	No	No	No	No	No
21	1	0	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.4	8.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01	0:00
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	14	0
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	20	20
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 9: New York Street/Project Driveway 2

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	2	5	2
2	2	5	2
3	2	5	2
4	2	4	2
5	2	4	2
6	2	4	2
7	2	4	2
8	1	4	1
9	1	3	1
10	1	3	1
11	1	3	1
12	1	3	1
13	1	3	1
14	1	2	1
15	1	2	1
16	1	1	1
17	0	1	0
18	0	1	0
19	0	0	0
20	0	0	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	7	1	2	No	No	No	No	No	No	No	No	No	No
2	1	7	1	2	No	No	No	No	No	No	No	No	No	No
3	1	7	1	2	No	No	No	No	No	No	No	No	No	No
4	1	6	1	2	No	No	No	No	No	No	No	No	No	No
5	1	6	1	2	No	No	No	No	No	No	No	No	No	No
6	1	6	1	2	No	No	No	No	No	No	No	No	No	No
7	1	6	1	2	No	No	No	No	No	No	No	No	No	No
8	1	5	1	1	No	No	No	No	No	No	No	No	No	No
9	1	4	1	1	No	No	No	No	No	No	No	No	No	No
10	1	4	1	1	No	No	No	No	No	No	No	No	No	No
11	1	4	1	1	No	No	No	No	No	No	No	No	No	No
12	1	4	1	1	No	No	No	No	No	No	No	No	No	No
13	1	4	1	1	No	No	No	No	No	No	No	No	No	No
14	1	3	1	1	No	No	No	No	No	No	No	No	No	No
15	1	3	1	1	No	No	No	No	No	No	No	No	No	No
16	1	2	1	1	No	No	No	No	No	No	No	No	No	No
17	1	1	1	0	No	No	No	No	No	No	No	No	No	No
18	1	1	1	0	No	No	No	No	No	No	No	No	No	No
19	1	0	1	0	No	No	No	No	No	No	No	No	No	No
20	1	0	1	0	No	No	No	No	No	No	No	No	No	No
21	1	0	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.4
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	9
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: New York Street/Project Driveway 3

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	25	20	71
2	24	19	69
3	24	19	67
4	22	18	63
5	20	16	56
6	20	16	55
7	19	15	55
8	18	14	50
9	17	14	49
10	17	14	48
11	15	12	42
12	14	11	39
13	14	11	38
14	10	8	28
15	10	8	28
16	7	6	20
17	4	3	11
18	4	3	11
19	2	2	6
20	1	1	4
21	1	1	2
22	0	0	1
23	0	0	1
24	0	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	45	1	71	No	No	No	No	No	No	No	No	No	No
2	1	43	1	69	No	No	No	No	No	No	No	No	No	No
3	1	43	1	67	No	No	No	No	No	No	No	No	No	No
4	1	40	1	63	No	No	No	No	No	No	No	No	No	No
5	1	36	1	56	No	No	No	No	No	No	No	No	No	No
6	1	36	1	55	No	No	No	No	No	No	No	No	No	No
7	1	34	1	55	No	No	No	No	No	No	No	No	No	No
8	1	32	1	50	No	No	No	No	No	No	No	No	No	No
9	1	31	1	49	No	No	No	No	No	No	No	No	No	No
10	1	31	1	48	No	No	No	No	No	No	No	No	No	No
11	1	27	1	42	No	No	No	No	No	No	No	No	No	No
12	1	25	1	39	No	No	No	No	No	No	No	No	No	No
13	1	25	1	38	No	No	No	No	No	No	No	No	No	No
14	1	18	1	28	No	No	No	No	No	No	No	No	No	No
15	1	18	1	28	No	No	No	No	No	No	No	No	No	No
16	1	13	1	20	No	No	No	No	No	No	No	No	No	No
17	1	7	1	11	No	No	No	No	No	No	No	No	No	No
18	1	7	1	11	No	No	No	No	No	No	No	No	No	No
19	1	4	1	6	No	No	No	No	No	No	No	No	No	No
20	1	2	1	4	No	No	No	No	No	No	No	No	No	No
21	1	2	1	2	No	No	No	No	No	No	No	No	No	No
22	1	0	1	1	No	No	No	No	No	No	No	No	No	No
23	1	0	1	1	No	No	No	No	No	No	No	No	No	No
24	1	0	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	71
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	116
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 11: W. San Bernardino Avenue/Driveway 4

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	65	42	55
2	63	41	53
3	62	40	52
4	58	37	49
5	51	33	43
6	51	33	43
7	50	32	42
8	46	29	39
9	45	29	38
10	44	29	37
11	38	25	32
12	36	23	30
13	35	23	30
14	26	17	22
15	26	17	22
16	18	12	15
17	10	7	9
18	10	7	9
19	6	4	5
20	3	2	3
21	2	1	2
22	1	0	1
23	1	0	1
24	1	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	107	1	55	No	No	No	No	No	No	No	No	No	No
2	1	104	1	53	No	No	No	No	No	No	No	No	No	No
3	1	102	1	52	No	No	No	No	No	No	No	No	No	No
4	1	95	1	49	No	No	No	No	No	No	No	No	No	No
5	1	84	1	43	No	No	No	No	No	No	No	No	No	No
6	1	84	1	43	No	No	No	No	No	No	No	No	No	No
7	1	82	1	42	No	No	No	No	No	No	No	No	No	No
8	1	75	1	39	No	No	No	No	No	No	No	No	No	No
9	1	74	1	38	No	No	No	No	No	No	No	No	No	No
10	1	73	1	37	No	No	No	No	No	No	No	No	No	No
11	1	63	1	32	No	No	No	No	No	No	No	No	No	No
12	1	59	1	30	No	No	No	No	No	No	No	No	No	No
13	1	58	1	30	No	No	No	No	No	No	No	No	No	No
14	1	43	1	22	No	No	No	No	No	No	No	No	No	No
15	1	43	1	22	No	No	No	No	No	No	No	No	No	No
16	1	30	1	15	No	No	No	No	No	No	No	No	No	No
17	1	17	1	9	No	No	No	No	No	No	No	No	No	No
18	1	17	1	9	No	No	No	No	No	No	No	No	No	No
19	1	10	1	5	No	No	No	No	No	No	No	No	No	No
20	1	5	1	3	No	No	No	No	No	No	No	No	No	No
21	1	3	1	2	No	No	No	No	No	No	No	No	No	No
22	1	1	1	1	No	No	No	No	No	No	No	No	No	No
23	1	1	1	1	No	No	No	No	No	No	No	No	No	No
24	1	1	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:08
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	55
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	162
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	150	685	156	106
2	146	664	151	103
3	143	651	148	101
4	134	610	139	94
5	119	541	123	84
6	117	534	122	83
7	116	527	120	82
8	105	479	109	74
9	103	473	108	73
10	102	466	106	72
11	89	404	92	63
12	83	377	86	58
13	81	370	84	57
14	60	274	62	42
15	60	274	62	42
16	42	192	44	30
17	24	110	25	17
18	24	110	25	17
19	14	62	14	10
20	8	34	8	5
21	5	21	5	3
22	2	7	2	1
23	2	7	2	1
24	2	7	2	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	835	1	156	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
2	2	810	1	151	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
3	2	794	1	148	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
4	2	744	1	139	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
5	2	660	1	123	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
6	2	651	1	122	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
7	2	643	1	120	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No
8	2	584	1	109	No	No	Yes	Yes	No	No	No	Yes	No	No
9	2	576	1	108	No	No	Yes	Yes	No	No	No	Yes	No	No
10	2	568	1	106	No	No	Yes	Yes	No	No	No	Yes	No	No
11	2	493	1	92	No	No	No	Yes	No	No	No	No	No	No
12	2	460	1	86	No	No	No	Yes	No	No	No	No	No	No
13	2	451	1	84	No	No	No	Yes	No	No	No	No	No	No
14	2	334	1	62	No	No	No	No	No	No	No	No	No	No
15	2	334	1	62	No	No	No	No	No	No	No	No	No	No
16	2	234	1	44	No	No	No	No	No	No	No	No	No	No
17	2	134	1	25	No	No	No	No	No	No	No	No	No	No
18	2	134	1	25	No	No	No	No	No	No	No	No	No	No
19	2	76	1	14	No	No	No	No	No	No	No	No	No	No
20	2	42	1	8	No	No	No	No	No	No	No	No	No	No
21	2	26	1	5	No	No	No	No	No	No	No	No	No	No
22	2	9	1	2	No	No	No	No	No	No	No	No	No	No
23	2	9	1	2	No	No	No	No	No	No	No	No	No	No
24	2	9	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					2	7	10	13	0	4	7	10	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	56.2	28.4
Number of Lanes on Minor Street Approach	1	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	2:26	0:50
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	156	106
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	1097	1097
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 4: W. San Bernardino Ave/New York Street

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	522	973	156
2	506	944	151
3	496	924	148
4	465	866	139
5	412	769	123
6	407	759	122
7	402	749	120
8	365	681	109
9	360	671	108
10	355	662	106
11	308	574	92
12	287	535	86
13	282	525	84
14	209	389	62
15	209	389	62
16	146	272	44
17	84	156	25
18	84	156	25
19	47	88	14
20	26	49	8
21	16	29	5
22	5	10	2
23	5	10	2
24	5	10	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	1495	1	156	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	1	1450	1	151	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	1	1420	1	148	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	1	1331	1	139	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	1	1181	1	123	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	1	1166	1	122	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	1	1151	1	120	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	1	1046	1	109	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	1	1031	1	108	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
10	1	1017	1	106	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
11	1	882	1	92	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
12	1	822	1	86	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
13	1	807	1	84	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No
14	1	598	1	62	No	No	No	No	No	No	Yes	Yes	No	No
15	1	598	1	62	No	No	No	No	No	No	Yes	Yes	No	No
16	1	418	1	44	No	No	No	No	No	No	No	No	No	No
17	1	240	1	25	No	No	No	No	No	No	No	No	No	No
18	1	240	1	25	No	No	No	No	No	No	No	No	No	No
19	1	135	1	14	No	No	No	No	No	No	No	No	No	No
20	1	75	1	8	No	No	No	No	No	No	No	No	No	No
21	1	45	1	5	No	No	No	No	No	No	No	No	No	No
22	1	15	1	2	No	No	No	No	No	No	No	No	No	No
23	1	15	1	2	No	No	No	No	No	No	No	No	No	No
24	1	15	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					2	7	10	13	13	13	15	15	13	8

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	27.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:10
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	156
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1651
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: W. Pioneer Avenue/Project Driveway 1

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	12	5	10	0
2	12	5	10	0
3	11	5	10	0
4	11	4	9	0
5	9	4	8	0
6	9	4	8	0
7	9	4	8	0
8	8	4	7	0
9	8	3	7	0
10	8	3	7	0
11	7	3	6	0
12	7	3	6	0
13	6	3	5	0
14	5	2	4	0
15	5	2	4	0
16	3	1	3	0
17	2	1	2	0
18	2	1	2	0
19	1	0	1	0
20	1	0	1	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	17	1	10	No	No	No	No	No	No	No	No	No	No
2	1	17	1	10	No	No	No	No	No	No	No	No	No	No
3	1	16	1	10	No	No	No	No	No	No	No	No	No	No
4	1	15	1	9	No	No	No	No	No	No	No	No	No	No
5	1	13	1	8	No	No	No	No	No	No	No	No	No	No
6	1	13	1	8	No	No	No	No	No	No	No	No	No	No
7	1	13	1	8	No	No	No	No	No	No	No	No	No	No
8	1	12	1	7	No	No	No	No	No	No	No	No	No	No
9	1	11	1	7	No	No	No	No	No	No	No	No	No	No
10	1	11	1	7	No	No	No	No	No	No	No	No	No	No
11	1	10	1	6	No	No	No	No	No	No	No	No	No	No
12	1	10	1	6	No	No	No	No	No	No	No	No	No	No
13	1	9	1	5	No	No	No	No	No	No	No	No	No	No
14	1	7	1	4	No	No	No	No	No	No	No	No	No	No
15	1	7	1	4	No	No	No	No	No	No	No	No	No	No
16	1	4	1	3	No	No	No	No	No	No	No	No	No	No
17	1	3	1	2	No	No	No	No	No	No	No	No	No	No
18	1	3	1	2	No	No	No	No	No	No	No	No	No	No
19	1	1	1	1	No	No	No	No	No	No	No	No	No	No
20	1	1	1	1	No	No	No	No	No	No	No	No	No	No
21	1	0	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.5	8.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01	0:00
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	10	0
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	27	27
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 9: New York Street/Project Driveway 2

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	6	5	2
2	6	5	2
3	6	5	2
4	5	4	2
5	5	4	2
6	5	4	2
7	5	4	2
8	4	4	1
9	4	3	1
10	4	3	1
11	4	3	1
12	3	3	1
13	3	3	1
14	2	2	1
15	2	2	1
16	2	1	1
17	1	1	0
18	1	1	0
19	1	0	0
20	0	0	0
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	11	1	2	No	No	No	No	No	No	No	No	No	No
2	1	11	1	2	No	No	No	No	No	No	No	No	No	No
3	1	11	1	2	No	No	No	No	No	No	No	No	No	No
4	1	9	1	2	No	No	No	No	No	No	No	No	No	No
5	1	9	1	2	No	No	No	No	No	No	No	No	No	No
6	1	9	1	2	No	No	No	No	No	No	No	No	No	No
7	1	9	1	2	No	No	No	No	No	No	No	No	No	No
8	1	8	1	1	No	No	No	No	No	No	No	No	No	No
9	1	7	1	1	No	No	No	No	No	No	No	No	No	No
10	1	7	1	1	No	No	No	No	No	No	No	No	No	No
11	1	7	1	1	No	No	No	No	No	No	No	No	No	No
12	1	6	1	1	No	No	No	No	No	No	No	No	No	No
13	1	6	1	1	No	No	No	No	No	No	No	No	No	No
14	1	4	1	1	No	No	No	No	No	No	No	No	No	No
15	1	4	1	1	No	No	No	No	No	No	No	No	No	No
16	1	3	1	1	No	No	No	No	No	No	No	No	No	No
17	1	2	1	0	No	No	No	No	No	No	No	No	No	No
18	1	2	1	0	No	No	No	No	No	No	No	No	No	No
19	1	1	1	0	No	No	No	No	No	No	No	No	No	No
20	1	0	1	0	No	No	No	No	No	No	No	No	No	No
21	1	0	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.4
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	13
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: New York Street/Project Driveway 3

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	77	14	49
2	75	14	48
3	73	13	47
4	69	12	44
5	61	11	39
6	60	11	38
7	59	11	38
8	54	10	34
9	53	10	34
10	52	10	33
11	45	8	29
12	42	8	27
13	42	8	26
14	31	6	20
15	31	6	20
16	22	4	14
17	12	2	8
18	12	2	8
19	7	1	4
20	4	1	2
21	2	0	1
22	1	0	0
23	1	0	0
24	1	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	91	1	49	No	No	No	No	No	No	No	No	No	No
2	1	89	1	48	No	No	No	No	No	No	No	No	No	No
3	1	86	1	47	No	No	No	No	No	No	No	No	No	No
4	1	81	1	44	No	No	No	No	No	No	No	No	No	No
5	1	72	1	39	No	No	No	No	No	No	No	No	No	No
6	1	71	1	38	No	No	No	No	No	No	No	No	No	No
7	1	70	1	38	No	No	No	No	No	No	No	No	No	No
8	1	64	1	34	No	No	No	No	No	No	No	No	No	No
9	1	63	1	34	No	No	No	No	No	No	No	No	No	No
10	1	62	1	33	No	No	No	No	No	No	No	No	No	No
11	1	53	1	29	No	No	No	No	No	No	No	No	No	No
12	1	50	1	27	No	No	No	No	No	No	No	No	No	No
13	1	50	1	26	No	No	No	No	No	No	No	No	No	No
14	1	37	1	20	No	No	No	No	No	No	No	No	No	No
15	1	37	1	20	No	No	No	No	No	No	No	No	No	No
16	1	26	1	14	No	No	No	No	No	No	No	No	No	No
17	1	14	1	8	No	No	No	No	No	No	No	No	No	No
18	1	14	1	8	No	No	No	No	No	No	No	No	No	No
19	1	8	1	4	No	No	No	No	No	No	No	No	No	No
20	1	5	1	2	No	No	No	No	No	No	No	No	No	No
21	1	2	1	1	No	No	No	No	No	No	No	No	No	No
22	1	1	1	0	No	No	No	No	No	No	No	No	No	No
23	1	1	1	0	No	No	No	No	No	No	No	No	No	No
24	1	1	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	49
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	140
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 11: W. San Bernardino Avenue/Driveway 4

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	48	130	38
2	47	126	37
3	46	124	36
4	43	116	34
5	38	103	30
6	37	101	30
7	37	100	29
8	34	91	27
9	33	90	26
10	33	88	26
11	28	77	22
12	26	72	21
13	26	70	21
14	19	52	15
15	19	52	15
16	13	36	11
17	8	21	6
18	8	21	6
19	4	12	3
20	2	7	2
21	1	4	1
22	0	1	0
23	0	1	0
24	0	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	178	1	38	No	No	No	No	No	No	No	No	No	No
2	1	173	1	37	No	No	No	No	No	No	No	No	No	No
3	1	170	1	36	No	No	No	No	No	No	No	No	No	No
4	1	159	1	34	No	No	No	No	No	No	No	No	No	No
5	1	141	1	30	No	No	No	No	No	No	No	No	No	No
6	1	138	1	30	No	No	No	No	No	No	No	No	No	No
7	1	137	1	29	No	No	No	No	No	No	No	No	No	No
8	1	125	1	27	No	No	No	No	No	No	No	No	No	No
9	1	123	1	26	No	No	No	No	No	No	No	No	No	No
10	1	121	1	26	No	No	No	No	No	No	No	No	No	No
11	1	105	1	22	No	No	No	No	No	No	No	No	No	No
12	1	98	1	21	No	No	No	No	No	No	No	No	No	No
13	1	96	1	21	No	No	No	No	No	No	No	No	No	No
14	1	71	1	15	No	No	No	No	No	No	No	No	No	No
15	1	71	1	15	No	No	No	No	No	No	No	No	No	No
16	1	49	1	11	No	No	No	No	No	No	No	No	No	No
17	1	29	1	6	No	No	No	No	No	No	No	No	No	No
18	1	29	1	6	No	No	No	No	No	No	No	No	No	No
19	1	16	1	3	No	No	No	No	No	No	No	No	No	No
20	1	9	1	2	No	No	No	No	No	No	No	No	No	No
21	1	5	1	1	No	No	No	No	No	No	No	No	No	No
22	1	1	1	0	No	No	No	No	No	No	No	No	No	No
23	1	1	1	0	No	No	No	No	No	No	No	No	No	No
24	1	1	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	38
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	216
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	436	632	12	172
2	423	613	12	167
3	414	600	11	163
4	388	562	11	153
5	344	499	9	136
6	340	493	9	134
7	336	487	9	132
8	305	442	8	120
9	301	436	8	119
10	296	430	8	117
11	257	373	7	101
12	240	348	7	95
13	235	341	6	93
14	174	253	5	69
15	174	253	5	69
16	122	177	3	48
17	70	101	2	28
18	70	101	2	28
19	39	57	1	15
20	22	32	1	9
21	13	19	0	5
22	4	6	0	2
23	4	6	0	2
24	4	6	0	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	1068	2	172	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
2	2	1036	2	167	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
3	2	1014	2	163	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
4	2	950	2	153	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
5	2	843	2	136	No	No	No	Yes	No	Yes	Yes	Yes	No	No
6	2	833	2	134	No	No	No	Yes	No	Yes	Yes	Yes	No	No
7	2	823	2	132	No	No	No	Yes	No	Yes	Yes	Yes	No	No
8	2	747	2	120	No	No	No	Yes	No	Yes	Yes	Yes	No	No
9	2	737	2	119	No	No	No	Yes	No	Yes	Yes	Yes	No	No
10	2	726	2	117	No	No	No	Yes	No	Yes	Yes	Yes	No	No
11	2	630	2	101	No	No	No	No	No	No	Yes	Yes	No	No
12	2	588	2	95	No	No	No	No	No	No	No	Yes	No	No
13	2	576	2	93	No	No	No	No	No	No	No	Yes	No	No
14	2	427	2	69	No	No	No	No	No	No	No	No	No	No
15	2	427	2	69	No	No	No	No	No	No	No	No	No	No
16	2	299	2	48	No	No	No	No	No	No	No	No	No	No
17	2	171	2	28	No	No	No	No	No	No	No	No	No	No
18	2	171	2	28	No	No	No	No	No	No	No	No	No	No
19	2	96	2	15	No	No	No	No	No	No	No	No	No	No
20	2	54	2	9	No	No	No	No	No	No	No	No	No	No
21	2	32	2	5	No	No	No	No	No	No	No	No	No	No
22	2	10	2	2	No	No	No	No	No	No	No	No	No	No
23	2	10	2	2	No	No	No	No	No	No	No	No	No	No
24	2	10	2	2	No	No	No	No	No	No	No	No	No	No
Hours Met					0	3	4	10	4	10	11	13	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	78.7	16.9
Number of Lanes on Minor Street Approach	1	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:15	0:48
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	12	172
High Minor Volume Condition Met	No	Yes
Total Entering Volume on All Approaches During Same Hour	1252	1252
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 4: W. San Bernardino Ave/New York Street

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	165	117	33
2	160	113	32
3	157	111	31
4	147	104	29
5	130	92	26
6	129	91	26
7	127	90	25
8	115	82	23
9	114	81	23
10	112	80	22
11	97	69	19
12	91	64	18
13	89	63	18
14	66	47	13
15	66	47	13
16	46	33	9
17	26	19	5
18	26	19	5
19	15	11	3
20	8	6	2
21	5	4	1
22	2	1	0
23	2	1	0
24	2	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	282	1	33	No	No	No	No	No	No	No	No	No	No
2	3	273	1	32	No	No	No	No	No	No	No	No	No	No
3	3	268	1	31	No	No	No	No	No	No	No	No	No	No
4	3	251	1	29	No	No	No	No	No	No	No	No	No	No
5	3	222	1	26	No	No	No	No	No	No	No	No	No	No
6	3	220	1	26	No	No	No	No	No	No	No	No	No	No
7	3	217	1	25	No	No	No	No	No	No	No	No	No	No
8	3	197	1	23	No	No	No	No	No	No	No	No	No	No
9	3	195	1	23	No	No	No	No	No	No	No	No	No	No
10	3	192	1	22	No	No	No	No	No	No	No	No	No	No
11	3	166	1	19	No	No	No	No	No	No	No	No	No	No
12	3	155	1	18	No	No	No	No	No	No	No	No	No	No
13	3	152	1	18	No	No	No	No	No	No	No	No	No	No
14	3	113	1	13	No	No	No	No	No	No	No	No	No	No
15	3	113	1	13	No	No	No	No	No	No	No	No	No	No
16	3	79	1	9	No	No	No	No	No	No	No	No	No	No
17	3	45	1	5	No	No	No	No	No	No	No	No	No	No
18	3	45	1	5	No	No	No	No	No	No	No	No	No	No
19	3	26	1	3	No	No	No	No	No	No	No	No	No	No
20	3	14	1	2	No	No	No	No	No	No	No	No	No	No
21	3	9	1	1	No	No	No	No	No	No	No	No	No	No
22	3	3	1	0	No	No	No	No	No	No	No	No	No	No
23	3	3	1	0	No	No	No	No	No	No	No	No	No	No
24	3	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	33
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	315
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: W. Pioneer Avenue/Project Driveway 1

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	18	3	0	38
2	17	3	0	37
3	17	3	0	36
4	16	3	0	34
5	14	2	0	30
6	14	2	0	30
7	14	2	0	29
8	13	2	0	27
9	12	2	0	26
10	12	2	0	26
11	11	2	0	22
12	10	2	0	21
13	10	2	0	21
14	7	1	0	15
15	7	1	0	15
16	5	1	0	11
17	3	0	0	6
18	3	0	0	6
19	2	0	0	3
20	1	0	0	2
21	1	0	0	1
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	21	1	38	No	No	No	No	No	No	No	No	No	No
2	1	20	1	37	No	No	No	No	No	No	No	No	No	No
3	1	20	1	36	No	No	No	No	No	No	No	No	No	No
4	1	19	1	34	No	No	No	No	No	No	No	No	No	No
5	1	16	1	30	No	No	No	No	No	No	No	No	No	No
6	1	16	1	30	No	No	No	No	No	No	No	No	No	No
7	1	16	1	29	No	No	No	No	No	No	No	No	No	No
8	1	15	1	27	No	No	No	No	No	No	No	No	No	No
9	1	14	1	26	No	No	No	No	No	No	No	No	No	No
10	1	14	1	26	No	No	No	No	No	No	No	No	No	No
11	1	13	1	22	No	No	No	No	No	No	No	No	No	No
12	1	12	1	21	No	No	No	No	No	No	No	No	No	No
13	1	12	1	21	No	No	No	No	No	No	No	No	No	No
14	1	8	1	15	No	No	No	No	No	No	No	No	No	No
15	1	8	1	15	No	No	No	No	No	No	No	No	No	No
16	1	6	1	11	No	No	No	No	No	No	No	No	No	No
17	1	3	1	6	No	No	No	No	No	No	No	No	No	No
18	1	3	1	6	No	No	No	No	No	No	No	No	No	No
19	1	2	1	3	No	No	No	No	No	No	No	No	No	No
20	1	1	1	2	No	No	No	No	No	No	No	No	No	No
21	1	1	1	1	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.7	8.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00	0:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	0	38
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	59	59
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 9: New York Street/Project Driveway 2

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	12	33	0
2	12	32	0
3	11	31	0
4	11	29	0
5	9	26	0
6	9	26	0
7	9	25	0
8	8	23	0
9	8	23	0
10	8	22	0
11	7	19	0
12	7	18	0
13	6	18	0
14	5	13	0
15	5	13	0
16	3	9	0
17	2	5	0
18	2	5	0
19	1	3	0
20	1	2	0
21	0	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	45	1	0	No	No	No	No	No	No	No	No	No	No
2	1	44	1	0	No	No	No	No	No	No	No	No	No	No
3	1	42	1	0	No	No	No	No	No	No	No	No	No	No
4	1	40	1	0	No	No	No	No	No	No	No	No	No	No
5	1	35	1	0	No	No	No	No	No	No	No	No	No	No
6	1	35	1	0	No	No	No	No	No	No	No	No	No	No
7	1	34	1	0	No	No	No	No	No	No	No	No	No	No
8	1	31	1	0	No	No	No	No	No	No	No	No	No	No
9	1	31	1	0	No	No	No	No	No	No	No	No	No	No
10	1	30	1	0	No	No	No	No	No	No	No	No	No	No
11	1	26	1	0	No	No	No	No	No	No	No	No	No	No
12	1	25	1	0	No	No	No	No	No	No	No	No	No	No
13	1	24	1	0	No	No	No	No	No	No	No	No	No	No
14	1	18	1	0	No	No	No	No	No	No	No	No	No	No
15	1	18	1	0	No	No	No	No	No	No	No	No	No	No
16	1	12	1	0	No	No	No	No	No	No	No	No	No	No
17	1	7	1	0	No	No	No	No	No	No	No	No	No	No
18	1	7	1	0	No	No	No	No	No	No	No	No	No	No
19	1	4	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	1	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	45
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: New York Street/Project Driveway 3

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	12	33	0
2	12	32	0
3	11	31	0
4	11	29	0
5	9	26	0
6	9	26	0
7	9	25	0
8	8	23	0
9	8	23	0
10	8	22	0
11	7	19	0
12	7	18	0
13	6	18	0
14	5	13	0
15	5	13	0
16	3	9	0
17	2	5	0
18	2	5	0
19	1	3	0
20	1	2	0
21	0	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	45	1	0	No	No	No	No	No	No	No	No	No	No
2	1	44	1	0	No	No	No	No	No	No	No	No	No	No
3	1	42	1	0	No	No	No	No	No	No	No	No	No	No
4	1	40	1	0	No	No	No	No	No	No	No	No	No	No
5	1	35	1	0	No	No	No	No	No	No	No	No	No	No
6	1	35	1	0	No	No	No	No	No	No	No	No	No	No
7	1	34	1	0	No	No	No	No	No	No	No	No	No	No
8	1	31	1	0	No	No	No	No	No	No	No	No	No	No
9	1	31	1	0	No	No	No	No	No	No	No	No	No	No
10	1	30	1	0	No	No	No	No	No	No	No	No	No	No
11	1	26	1	0	No	No	No	No	No	No	No	No	No	No
12	1	25	1	0	No	No	No	No	No	No	No	No	No	No
13	1	24	1	0	No	No	No	No	No	No	No	No	No	No
14	1	18	1	0	No	No	No	No	No	No	No	No	No	No
15	1	18	1	0	No	No	No	No	No	No	No	No	No	No
16	1	12	1	0	No	No	No	No	No	No	No	No	No	No
17	1	7	1	0	No	No	No	No	No	No	No	No	No	No
18	1	7	1	0	No	No	No	No	No	No	No	No	No	No
19	1	4	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	1	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	45
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 11: W. San Bernardino Avenue/Driveway 4

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	198	117	0
2	192	113	0
3	188	111	0
4	176	104	0
5	156	92	0
6	154	91	0
7	152	90	0
8	139	82	0
9	137	81	0
10	135	80	0
11	117	69	0
12	109	64	0
13	107	63	0
14	79	47	0
15	79	47	0
16	55	33	0
17	32	19	0
18	32	19	0
19	18	11	0
20	10	6	0
21	6	4	0
22	2	1	0
23	2	1	0
24	2	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	315	1	0	No	No	No	No	No	No	No	No	No	No
2	3	305	1	0	No	No	No	No	No	No	No	No	No	No
3	3	299	1	0	No	No	No	No	No	No	No	No	No	No
4	3	280	1	0	No	No	No	No	No	No	No	No	No	No
5	3	248	1	0	No	No	No	No	No	No	No	No	No	No
6	3	245	1	0	No	No	No	No	No	No	No	No	No	No
7	3	242	1	0	No	No	No	No	No	No	No	No	No	No
8	3	221	1	0	No	No	No	No	No	No	No	No	No	No
9	3	218	1	0	No	No	No	No	No	No	No	No	No	No
10	3	215	1	0	No	No	No	No	No	No	No	No	No	No
11	3	186	1	0	No	No	No	No	No	No	No	No	No	No
12	3	173	1	0	No	No	No	No	No	No	No	No	No	No
13	3	170	1	0	No	No	No	No	No	No	No	No	No	No
14	3	126	1	0	No	No	No	No	No	No	No	No	No	No
15	3	126	1	0	No	No	No	No	No	No	No	No	No	No
16	3	88	1	0	No	No	No	No	No	No	No	No	No	No
17	3	51	1	0	No	No	No	No	No	No	No	No	No	No
18	3	51	1	0	No	No	No	No	No	No	No	No	No	No
19	3	29	1	0	No	No	No	No	No	No	No	No	No	No
20	3	16	1	0	No	No	No	No	No	No	No	No	No	No
21	3	10	1	0	No	No	No	No	No	No	No	No	No	No
22	3	3	1	0	No	No	No	No	No	No	No	No	No	No
23	3	3	1	0	No	No	No	No	No	No	No	No	No	No
24	3	3	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	315
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	171	831	37	110
2	166	806	36	107
3	162	789	35	105
4	152	740	33	98
5	135	656	29	87
6	133	648	29	86
7	132	640	28	85
8	120	582	26	77
9	118	573	26	76
10	116	565	25	75
11	101	490	22	65
12	94	457	20	61
13	92	449	20	59
14	68	332	15	44
15	68	332	15	44
16	48	233	10	31
17	27	133	6	18
18	27	133	6	18
19	15	75	3	10
20	9	42	2	6
21	5	25	1	3
22	2	8	0	1
23	2	8	0	1
24	2	8	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	1002	2	110	No	No	No	No	Yes	Yes	Yes	Yes	No	No
2	2	972	2	107	No	No	No	No	Yes	Yes	Yes	Yes	No	No
3	2	951	2	105	No	No	No	No	Yes	Yes	Yes	Yes	No	No
4	2	892	2	98	No	No	No	No	No	Yes	Yes	Yes	No	No
5	2	791	2	87	No	No	No	No	No	Yes	Yes	Yes	No	No
6	2	781	2	86	No	No	No	No	No	Yes	Yes	Yes	No	No
7	2	772	2	85	No	No	No	No	No	Yes	Yes	Yes	No	No
8	2	702	2	77	No	No	No	No	No	No	Yes	Yes	No	No
9	2	691	2	76	No	No	No	No	No	No	Yes	Yes	No	No
10	2	681	2	75	No	No	No	No	No	No	Yes	Yes	No	No
11	2	591	2	65	No	No	No	No	No	No	No	Yes	No	No
12	2	551	2	61	No	No	No	No	No	No	No	Yes	No	No
13	2	541	2	59	No	No	No	No	No	No	No	Yes	No	No
14	2	400	2	44	No	No	No	No	No	No	No	No	No	No
15	2	400	2	44	No	No	No	No	No	No	No	No	No	No
16	2	281	2	31	No	No	No	No	No	No	No	No	No	No
17	2	160	2	18	No	No	No	No	No	No	No	No	No	No
18	2	160	2	18	No	No	No	No	No	No	No	No	No	No
19	2	90	2	10	No	No	No	No	No	No	No	No	No	No
20	2	51	2	6	No	No	No	No	No	No	No	No	No	No
21	2	30	2	3	No	No	No	No	No	No	No	No	No	No
22	2	10	2	1	No	No	No	No	No	No	No	No	No	No
23	2	10	2	1	No	No	No	No	No	No	No	No	No	No
24	2	10	2	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	3	7	10	13	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	37.8	22.4
Number of Lanes on Minor Street Approach	1	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:23	0:41
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	37	110
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	1149	1149
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 4: W. San Bernardino Ave/New York Street

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	159	229	23
2	154	222	22
3	151	218	22
4	142	204	20
5	126	181	18
6	124	179	18
7	122	176	18
8	111	160	16
9	110	158	16
10	108	156	16
11	94	135	14
12	87	126	13
13	86	124	12
14	64	92	9
15	64	92	9
16	45	64	6
17	25	37	4
18	25	37	4
19	14	21	2
20	8	11	1
21	5	7	1
22	2	2	0
23	2	2	0
24	2	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	388	1	23	No	No	No	No	No	No	No	No	No	No
2	3	376	1	22	No	No	No	No	No	No	No	No	No	No
3	3	369	1	22	No	No	No	No	No	No	No	No	No	No
4	3	346	1	20	No	No	No	No	No	No	No	No	No	No
5	3	307	1	18	No	No	No	No	No	No	No	No	No	No
6	3	303	1	18	No	No	No	No	No	No	No	No	No	No
7	3	298	1	18	No	No	No	No	No	No	No	No	No	No
8	3	271	1	16	No	No	No	No	No	No	No	No	No	No
9	3	268	1	16	No	No	No	No	No	No	No	No	No	No
10	3	264	1	16	No	No	No	No	No	No	No	No	No	No
11	3	229	1	14	No	No	No	No	No	No	No	No	No	No
12	3	213	1	13	No	No	No	No	No	No	No	No	No	No
13	3	210	1	12	No	No	No	No	No	No	No	No	No	No
14	3	156	1	9	No	No	No	No	No	No	No	No	No	No
15	3	156	1	9	No	No	No	No	No	No	No	No	No	No
16	3	109	1	6	No	No	No	No	No	No	No	No	No	No
17	3	62	1	4	No	No	No	No	No	No	No	No	No	No
18	3	62	1	4	No	No	No	No	No	No	No	No	No	No
19	3	35	1	2	No	No	No	No	No	No	No	No	No	No
20	3	19	1	1	No	No	No	No	No	No	No	No	No	No
21	3	12	1	1	No	No	No	No	No	No	No	No	No	No
22	3	4	1	0	No	No	No	No	No	No	No	No	No	No
23	3	4	1	0	No	No	No	No	No	No	No	No	No	No
24	3	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	23
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	411
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: W. Pioneer Avenue/Project Driveway 1

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	44	8	0	26
2	43	8	0	25
3	42	8	0	25
4	39	7	0	23
5	35	6	0	21
6	34	6	0	20
7	34	6	0	20
8	31	6	0	18
9	30	6	0	18
10	30	5	0	18
11	26	5	0	15
12	24	4	0	14
13	24	4	0	14
14	18	3	0	10
15	18	3	0	10
16	12	2	0	7
17	7	1	0	4
18	7	1	0	4
19	4	1	0	2
20	2	0	0	1
21	1	0	0	1
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	52	1	26	No	No	No	No	No	No	No	No	No	No
2	1	51	1	25	No	No	No	No	No	No	No	No	No	No
3	1	50	1	25	No	No	No	No	No	No	No	No	No	No
4	1	46	1	23	No	No	No	No	No	No	No	No	No	No
5	1	41	1	21	No	No	No	No	No	No	No	No	No	No
6	1	40	1	20	No	No	No	No	No	No	No	No	No	No
7	1	40	1	20	No	No	No	No	No	No	No	No	No	No
8	1	37	1	18	No	No	No	No	No	No	No	No	No	No
9	1	36	1	18	No	No	No	No	No	No	No	No	No	No
10	1	35	1	18	No	No	No	No	No	No	No	No	No	No
11	1	31	1	15	No	No	No	No	No	No	No	No	No	No
12	1	28	1	14	No	No	No	No	No	No	No	No	No	No
13	1	28	1	14	No	No	No	No	No	No	No	No	No	No
14	1	21	1	10	No	No	No	No	No	No	No	No	No	No
15	1	21	1	10	No	No	No	No	No	No	No	No	No	No
16	1	14	1	7	No	No	No	No	No	No	No	No	No	No
17	1	8	1	4	No	No	No	No	No	No	No	No	No	No
18	1	8	1	4	No	No	No	No	No	No	No	No	No	No
19	1	5	1	2	No	No	No	No	No	No	No	No	No	No
20	1	2	1	1	No	No	No	No	No	No	No	No	No	No
21	1	1	1	1	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8	8.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00	0:03
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	0	26
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	78	78
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 9: New York Street/Project Driveway 2

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	37	23	0
2	36	22	0
3	35	22	0
4	33	20	0
5	29	18	0
6	29	18	0
7	28	18	0
8	26	16	0
9	26	16	0
10	25	16	0
11	22	14	0
12	20	13	0
13	20	12	0
14	15	9	0
15	15	9	0
16	10	6	0
17	6	4	0
18	6	4	0
19	3	2	0
20	2	1	0
21	1	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	60	1	0	No	No	No	No	No	No	No	No	No	No
2	1	58	1	0	No	No	No	No	No	No	No	No	No	No
3	1	57	1	0	No	No	No	No	No	No	No	No	No	No
4	1	53	1	0	No	No	No	No	No	No	No	No	No	No
5	1	47	1	0	No	No	No	No	No	No	No	No	No	No
6	1	47	1	0	No	No	No	No	No	No	No	No	No	No
7	1	46	1	0	No	No	No	No	No	No	No	No	No	No
8	1	42	1	0	No	No	No	No	No	No	No	No	No	No
9	1	42	1	0	No	No	No	No	No	No	No	No	No	No
10	1	41	1	0	No	No	No	No	No	No	No	No	No	No
11	1	36	1	0	No	No	No	No	No	No	No	No	No	No
12	1	33	1	0	No	No	No	No	No	No	No	No	No	No
13	1	32	1	0	No	No	No	No	No	No	No	No	No	No
14	1	24	1	0	No	No	No	No	No	No	No	No	No	No
15	1	24	1	0	No	No	No	No	No	No	No	No	No	No
16	1	16	1	0	No	No	No	No	No	No	No	No	No	No
17	1	10	1	0	No	No	No	No	No	No	No	No	No	No
18	1	10	1	0	No	No	No	No	No	No	No	No	No	No
19	1	5	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	2	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	60
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: New York Street/Project Driveway 3

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	37	23	0
2	36	22	0
3	35	22	0
4	33	20	0
5	29	18	0
6	29	18	0
7	28	18	0
8	26	16	0
9	26	16	0
10	25	16	0
11	22	14	0
12	20	13	0
13	20	12	0
14	15	9	0
15	15	9	0
16	10	6	0
17	6	4	0
18	6	4	0
19	3	2	0
20	2	1	0
21	1	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	60	1	0	No	No	No	No	No	No	No	No	No	No
2	1	58	1	0	No	No	No	No	No	No	No	No	No	No
3	1	57	1	0	No	No	No	No	No	No	No	No	No	No
4	1	53	1	0	No	No	No	No	No	No	No	No	No	No
5	1	47	1	0	No	No	No	No	No	No	No	No	No	No
6	1	47	1	0	No	No	No	No	No	No	No	No	No	No
7	1	46	1	0	No	No	No	No	No	No	No	No	No	No
8	1	42	1	0	No	No	No	No	No	No	No	No	No	No
9	1	42	1	0	No	No	No	No	No	No	No	No	No	No
10	1	41	1	0	No	No	No	No	No	No	No	No	No	No
11	1	36	1	0	No	No	No	No	No	No	No	No	No	No
12	1	33	1	0	No	No	No	No	No	No	No	No	No	No
13	1	32	1	0	No	No	No	No	No	No	No	No	No	No
14	1	24	1	0	No	No	No	No	No	No	No	No	No	No
15	1	24	1	0	No	No	No	No	No	No	No	No	No	No
16	1	16	1	0	No	No	No	No	No	No	No	No	No	No
17	1	10	1	0	No	No	No	No	No	No	No	No	No	No
18	1	10	1	0	No	No	No	No	No	No	No	No	No	No
19	1	5	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	2	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	60
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 11: W. San Bernardino Avenue/Driveway 4

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	182	229	0
2	177	222	0
3	173	218	0
4	162	204	0
5	144	181	0
6	142	179	0
7	140	176	0
8	127	160	0
9	126	158	0
10	124	156	0
11	107	135	0
12	100	126	0
13	98	124	0
14	73	92	0
15	73	92	0
16	51	64	0
17	29	37	0
18	29	37	0
19	16	21	0
20	9	11	0
21	5	7	0
22	2	2	0
23	2	2	0
24	2	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	411	1	0	No	No	No	No	No	No	No	No	No	No
2	3	399	1	0	No	No	No	No	No	No	No	No	No	No
3	3	391	1	0	No	No	No	No	No	No	No	No	No	No
4	3	366	1	0	No	No	No	No	No	No	No	No	No	No
5	3	325	1	0	No	No	No	No	No	No	No	No	No	No
6	3	321	1	0	No	No	No	No	No	No	No	No	No	No
7	3	316	1	0	No	No	No	No	No	No	No	No	No	No
8	3	287	1	0	No	No	No	No	No	No	No	No	No	No
9	3	284	1	0	No	No	No	No	No	No	No	No	No	No
10	3	280	1	0	No	No	No	No	No	No	No	No	No	No
11	3	242	1	0	No	No	No	No	No	No	No	No	No	No
12	3	226	1	0	No	No	No	No	No	No	No	No	No	No
13	3	222	1	0	No	No	No	No	No	No	No	No	No	No
14	3	165	1	0	No	No	No	No	No	No	No	No	No	No
15	3	165	1	0	No	No	No	No	No	No	No	No	No	No
16	3	115	1	0	No	No	No	No	No	No	No	No	No	No
17	3	66	1	0	No	No	No	No	No	No	No	No	No	No
18	3	66	1	0	No	No	No	No	No	No	No	No	No	No
19	3	37	1	0	No	No	No	No	No	No	No	No	No	No
20	3	20	1	0	No	No	No	No	No	No	No	No	No	No
21	3	12	1	0	No	No	No	No	No	No	No	No	No	No
22	3	4	1	0	No	No	No	No	No	No	No	No	No	No
23	3	4	1	0	No	No	No	No	No	No	No	No	No	No
24	3	4	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.5
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	0
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	411
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	439	642	301	172
2	426	623	292	167
3	417	610	286	163
4	391	571	268	153
5	347	507	238	136
6	342	501	235	134
7	338	494	232	132
8	307	449	211	120
9	303	443	208	119
10	299	437	205	117
11	259	379	178	101
12	241	353	166	95
13	237	347	163	93
14	176	257	120	69
15	176	257	120	69
16	123	180	84	48
17	70	103	48	28
18	70	103	48	28
19	40	58	27	15
20	22	32	15	9
21	13	19	9	5
22	4	6	3	2
23	4	6	3	2
24	4	6	3	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	1081	1	301	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	2	1049	1	292	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	2	1027	1	286	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	2	962	1	268	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
5	2	854	1	238	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
6	2	843	1	235	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
7	2	832	1	232	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
8	2	756	1	211	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
9	2	746	1	208	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
10	2	736	1	205	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
11	2	638	1	178	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
12	2	594	1	166	No	Yes	Yes	Yes	No	No	No	Yes	No	No
13	2	584	1	163	No	Yes	Yes	Yes	No	No	No	Yes	No	No
14	2	433	1	120	No	No	Yes	Yes	No	No	No	No	No	No
15	2	433	1	120	No	No	Yes	Yes	No	No	No	No	No	No
16	2	303	1	84	No	No	No	No	No	No	No	No	No	No
17	2	173	1	48	No	No	No	No	No	No	No	No	No	No
18	2	173	1	48	No	No	No	No	No	No	No	No	No	No
19	2	98	1	27	No	No	No	No	No	No	No	No	No	No
20	2	54	1	15	No	No	No	No	No	No	No	No	No	No
21	2	32	1	9	No	No	No	No	No	No	No	No	No	No
22	2	10	1	3	No	No	No	No	No	No	No	No	No	No
23	2	10	1	3	No	No	No	No	No	No	No	No	No	No
24	2	10	1	3	No	No	No	No	No	No	No	No	No	No
Hours Met					11	13	15	15	4	10	11	13	7	3

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	1820	17.6
Number of Lanes on Minor Street Approach	1	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	152:10	0:50
Delay Condition Met	Yes	No
Volume on Minor Street Approach During Same Hour	301	172
High Minor Volume Condition Met	Yes	Yes
Total Entering Volume on All Approaches During Same Hour	1554	1554
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	No
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 4: W. San Bernardino Ave/New York Street

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	1102	938	314
2	1069	910	305
3	1047	891	298
4	981	835	279
5	871	741	248
6	860	732	245
7	849	722	242
8	771	657	220
9	760	647	217
10	749	638	214
11	650	553	185
12	606	516	173
13	595	507	170
14	441	375	126
15	441	375	126
16	309	263	88
17	176	150	50
18	176	150	50
19	99	84	28
20	55	47	16
21	33	28	9
22	11	9	3
23	11	9	3
24	11	9	3

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2040	1	314	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	1979	1	305	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	1938	1	298	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	1816	1	279	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	3	1612	1	248	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	3	1592	1	245	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	3	1571	1	242	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	3	1428	1	220	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	3	1407	1	217	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	3	1387	1	214	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	3	1203	1	185	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	3	1122	1	173	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	3	1102	1	170	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	3	816	1	126	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
15	3	816	1	126	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
16	3	572	1	88	No	No	No	Yes	No	No	No	Yes	No	No
17	3	326	1	50	No	No	No	No	No	No	No	No	No	No
18	3	326	1	50	No	No	No	No	No	No	No	No	No	No
19	3	183	1	28	No	No	No	No	No	No	No	No	No	No
20	3	102	1	16	No	No	No	No	No	No	No	No	No	No
21	3	61	1	9	No	No	No	No	No	No	No	No	No	No
22	3	20	1	3	No	No	No	No	No	No	No	No	No	No
23	3	20	1	3	No	No	No	No	No	No	No	No	No	No
24	3	20	1	3	No	No	No	No	No	No	No	No	No	No
Hours Met					13	15	15	16	13	15	15	16	15	13

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	10000
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	872:13
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	314
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	2354
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Signal Warrants Report For Intersection 8: W. Pioneer Avenue/Project Driveway 1

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	22	5	14	38
2	21	5	14	37
3	21	5	13	36
4	20	4	12	34
5	17	4	11	30
6	17	4	11	30
7	17	4	11	29
8	15	4	10	27
9	15	3	10	26
10	15	3	10	26
11	13	3	8	22
12	12	3	8	21
13	12	3	8	21
14	9	2	6	15
15	9	2	6	15
16	6	1	4	11
17	4	1	2	6
18	4	1	2	6
19	2	0	1	3
20	1	0	1	2
21	1	0	0	1
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	27	1	38	No	No	No	No	No	No	No	No	No	No
2	1	26	1	37	No	No	No	No	No	No	No	No	No	No
3	1	26	1	36	No	No	No	No	No	No	No	No	No	No
4	1	24	1	34	No	No	No	No	No	No	No	No	No	No
5	1	21	1	30	No	No	No	No	No	No	No	No	No	No
6	1	21	1	30	No	No	No	No	No	No	No	No	No	No
7	1	21	1	29	No	No	No	No	No	No	No	No	No	No
8	1	19	1	27	No	No	No	No	No	No	No	No	No	No
9	1	18	1	26	No	No	No	No	No	No	No	No	No	No
10	1	18	1	26	No	No	No	No	No	No	No	No	No	No
11	1	16	1	22	No	No	No	No	No	No	No	No	No	No
12	1	15	1	21	No	No	No	No	No	No	No	No	No	No
13	1	15	1	21	No	No	No	No	No	No	No	No	No	No
14	1	11	1	15	No	No	No	No	No	No	No	No	No	No
15	1	11	1	15	No	No	No	No	No	No	No	No	No	No
16	1	7	1	11	No	No	No	No	No	No	No	No	No	No
17	1	5	1	6	No	No	No	No	No	No	No	No	No	No
18	1	5	1	6	No	No	No	No	No	No	No	No	No	No
19	1	2	1	3	No	No	No	No	No	No	No	No	No	No
20	1	1	1	2	No	No	No	No	No	No	No	No	No	No
21	1	1	1	1	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.5	8.9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01	0:05
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	14	38
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	79	79
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 9: New York Street/Project Driveway 2

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	14	38	2
2	14	37	2
3	13	36	2
4	12	34	2
5	11	30	2
6	11	30	2
7	11	29	2
8	10	27	1
9	10	26	1
10	10	26	1
11	8	22	1
12	8	21	1
13	8	21	1
14	6	15	1
15	6	15	1
16	4	11	1
17	2	6	0
18	2	6	0
19	1	3	0
20	1	2	0
21	0	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	52	1	2	No	No	No	No	No	No	No	No	No	No
2	1	51	1	2	No	No	No	No	No	No	No	No	No	No
3	1	49	1	2	No	No	No	No	No	No	No	No	No	No
4	1	46	1	2	No	No	No	No	No	No	No	No	No	No
5	1	41	1	2	No	No	No	No	No	No	No	No	No	No
6	1	41	1	2	No	No	No	No	No	No	No	No	No	No
7	1	40	1	2	No	No	No	No	No	No	No	No	No	No
8	1	37	1	1	No	No	No	No	No	No	No	No	No	No
9	1	36	1	1	No	No	No	No	No	No	No	No	No	No
10	1	36	1	1	No	No	No	No	No	No	No	No	No	No
11	1	30	1	1	No	No	No	No	No	No	No	No	No	No
12	1	29	1	1	No	No	No	No	No	No	No	No	No	No
13	1	29	1	1	No	No	No	No	No	No	No	No	No	No
14	1	21	1	1	No	No	No	No	No	No	No	No	No	No
15	1	21	1	1	No	No	No	No	No	No	No	No	No	No
16	1	15	1	1	No	No	No	No	No	No	No	No	No	No
17	1	8	1	0	No	No	No	No	No	No	No	No	No	No
18	1	8	1	0	No	No	No	No	No	No	No	No	No	No
19	1	4	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	1	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	54
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: New York Street/Project Driveway 3

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	37	53	71
2	36	51	69
3	35	50	67
4	33	47	63
5	29	42	56
6	29	41	55
7	28	41	55
8	26	37	50
9	26	37	49
10	25	36	48
11	22	31	42
12	20	29	39
13	20	29	38
14	15	21	28
15	15	21	28
16	10	15	20
17	6	8	11
18	6	8	11
19	3	5	6
20	2	3	4
21	1	2	2
22	0	1	1
23	0	1	1
24	0	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	90	1	71	No	No	No	No	No	No	No	No	No	No
2	1	87	1	69	No	No	No	No	No	No	No	No	No	No
3	1	85	1	67	No	No	No	No	No	No	No	No	No	No
4	1	80	1	63	No	No	No	No	No	No	No	No	No	No
5	1	71	1	56	No	No	No	No	No	No	No	No	No	No
6	1	70	1	55	No	No	No	No	No	No	No	No	No	No
7	1	69	1	55	No	No	No	No	No	No	No	No	No	No
8	1	63	1	50	No	No	No	No	No	No	No	No	No	No
9	1	63	1	49	No	No	No	No	No	No	No	No	No	No
10	1	61	1	48	No	No	No	No	No	No	No	No	No	No
11	1	53	1	42	No	No	No	No	No	No	No	No	No	No
12	1	49	1	39	No	No	No	No	No	No	No	No	No	No
13	1	49	1	38	No	No	No	No	No	No	No	No	No	No
14	1	36	1	28	No	No	No	No	No	No	No	No	No	No
15	1	36	1	28	No	No	No	No	No	No	No	No	No	No
16	1	25	1	20	No	No	No	No	No	No	No	No	No	No
17	1	14	1	11	No	No	No	No	No	No	No	No	No	No
18	1	14	1	11	No	No	No	No	No	No	No	No	No	No
19	1	8	1	6	No	No	No	No	No	No	No	No	No	No
20	1	5	1	4	No	No	No	No	No	No	No	No	No	No
21	1	3	1	2	No	No	No	No	No	No	No	No	No	No
22	1	1	1	1	No	No	No	No	No	No	No	No	No	No
23	1	1	1	1	No	No	No	No	No	No	No	No	No	No
24	1	1	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	71
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	161
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 11: W. San Bernardino Avenue/Driveway 4

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	263	159	55
2	255	154	53
3	250	151	52
4	234	142	49
5	208	126	43
6	205	124	43
7	203	122	42
8	184	111	39
9	181	110	38
10	179	108	37
11	155	94	32
12	145	87	30
13	142	86	30
14	105	64	22
15	105	64	22
16	74	45	15
17	42	25	9
18	42	25	9
19	24	14	5
20	13	8	3
21	8	5	2
22	3	2	1
23	3	2	1
24	3	2	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	422	1	55	No	No	No	No	No	No	No	No	No	No
2	3	409	1	53	No	No	No	No	No	No	No	No	No	No
3	3	401	1	52	No	No	No	No	No	No	No	No	No	No
4	3	376	1	49	No	No	No	No	No	No	No	No	No	No
5	3	334	1	43	No	No	No	No	No	No	No	No	No	No
6	3	329	1	43	No	No	No	No	No	No	No	No	No	No
7	3	325	1	42	No	No	No	No	No	No	No	No	No	No
8	3	295	1	39	No	No	No	No	No	No	No	No	No	No
9	3	291	1	38	No	No	No	No	No	No	No	No	No	No
10	3	287	1	37	No	No	No	No	No	No	No	No	No	No
11	3	249	1	32	No	No	No	No	No	No	No	No	No	No
12	3	232	1	30	No	No	No	No	No	No	No	No	No	No
13	3	228	1	30	No	No	No	No	No	No	No	No	No	No
14	3	169	1	22	No	No	No	No	No	No	No	No	No	No
15	3	169	1	22	No	No	No	No	No	No	No	No	No	No
16	3	119	1	15	No	No	No	No	No	No	No	No	No	No
17	3	67	1	9	No	No	No	No	No	No	No	No	No	No
18	3	67	1	9	No	No	No	No	No	No	No	No	No	No
19	3	38	1	5	No	No	No	No	No	No	No	No	No	No
20	3	21	1	3	No	No	No	No	No	No	No	No	No	No
21	3	13	1	2	No	No	No	No	No	No	No	No	No	No
22	3	5	1	1	No	No	No	No	No	No	No	No	No	No
23	3	5	1	1	No	No	No	No	No	No	No	No	No	No
24	3	5	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:09
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	55
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	477
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 1: W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	179	838	220	110
2	174	813	213	107
3	170	796	209	105
4	159	746	196	98
5	141	662	174	87
6	140	654	172	86
7	138	645	169	85
8	125	587	154	77
9	124	578	152	76
10	122	570	150	75
11	106	494	130	65
12	98	461	121	61
13	97	453	119	59
14	72	335	88	44
15	72	335	88	44
16	50	235	62	31
17	29	134	35	18
18	29	134	35	18
19	16	75	20	10
20	9	42	11	6
21	5	25	7	3
22	2	8	2	1
23	2	8	2	1
24	2	8	2	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	2	1017	1	220	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
2	2	987	1	213	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
3	2	966	1	209	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
4	2	905	1	196	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
5	2	803	1	174	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
6	2	794	1	172	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
7	2	783	1	169	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
8	2	712	1	154	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
9	2	702	1	152	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
10	2	692	1	150	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
11	2	600	1	130	No	Yes	Yes	Yes	No	No	No	Yes	No	No
12	2	559	1	121	No	Yes	Yes	Yes	No	No	No	Yes	No	No
13	2	550	1	119	No	No	Yes	Yes	No	No	No	Yes	No	No
14	2	407	1	88	No	No	No	Yes	No	No	No	No	No	No
15	2	407	1	88	No	No	No	Yes	No	No	No	No	No	No
16	2	285	1	62	No	No	No	No	No	No	No	No	No	No
17	2	163	1	35	No	No	No	No	No	No	No	No	No	No
18	2	163	1	35	No	No	No	No	No	No	No	No	No	No
19	2	91	1	20	No	No	No	No	No	No	No	No	No	No
20	2	51	1	11	No	No	No	No	No	No	No	No	No	No
21	2	30	1	7	No	No	No	No	No	No	No	No	No	No
22	2	10	1	2	No	No	No	No	No	No	No	No	No	No
23	2	10	1	2	No	No	No	No	No	No	No	No	No	No
24	2	10	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					10	12	13	15	4	7	10	13	4	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	175.1	33.7
Number of Lanes on Minor Street Approach	1	2
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	10:42	1:01
Delay Condition Met	Yes	No
Volume on Minor Street Approach During Same Hour	220	110
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	1347	1347
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	Yes	No
Warrant Met for Intersection	**Yes**	

Signal Warrants Report For Intersection 4: W. San Bernardino Ave/New York Street

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	Yes
Population < 10,000	No
Warrant Factor	70%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	771	1365	197
2	748	1324	191
3	732	1297	187
4	686	1215	175
5	609	1078	156
6	601	1065	154
7	594	1051	152
8	540	955	138
9	532	942	136
10	524	928	134
11	455	805	116
12	424	751	108
13	416	737	106
14	308	546	79
15	308	546	79
16	216	382	55
17	123	218	32
18	123	218	32
19	69	123	18
20	39	68	10
21	23	41	6
22	8	14	2
23	8	14	2
24	8	14	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	2136	1	197	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	2072	1	191	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	2029	1	187	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	1901	1	175	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	3	1687	1	156	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	3	1666	1	154	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	3	1645	1	152	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	3	1495	1	138	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	3	1474	1	136	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	3	1452	1	134	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	3	1260	1	116	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	3	1175	1	108	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	3	1153	1	106	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	3	854	1	79	No	No	No	No	No	Yes	Yes	Yes	Yes	No
15	3	854	1	79	No	No	No	No	No	Yes	Yes	Yes	Yes	No
16	3	598	1	55	No	No	No	No	No	No	No	Yes	No	No
17	3	341	1	32	No	No	No	No	No	No	No	No	No	No
18	3	341	1	32	No	No	No	No	No	No	No	No	No	No
19	3	192	1	18	No	No	No	No	No	No	No	No	No	No
20	3	107	1	10	No	No	No	No	No	No	No	No	No	No
21	3	64	1	6	No	No	No	No	No	No	No	No	No	No
22	3	22	1	2	No	No	No	No	No	No	No	No	No	No
23	3	22	1	2	No	No	No	No	No	No	No	No	No	No
24	3	22	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					7	10	13	13	13	15	15	16	15	13

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	59.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	3:14
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	197
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	2333
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: W. Pioneer Avenue/Project Driveway 1

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	56	13	10	26
2	54	13	10	25
3	53	12	10	25
4	50	12	9	23
5	44	10	8	21
6	44	10	8	20
7	43	10	8	20
8	39	9	7	18
9	39	9	7	18
10	38	9	7	18
11	33	8	6	15
12	31	7	6	14
13	30	7	5	14
14	22	5	4	10
15	22	5	4	10
16	16	4	3	7
17	9	2	2	4
18	9	2	2	4
19	5	1	1	2
20	3	1	1	1
21	2	0	0	1
22	1	0	0	0
23	1	0	0	0
24	1	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	69	1	26	No	No	No	No	No	No	No	No	No	No
2	1	67	1	25	No	No	No	No	No	No	No	No	No	No
3	1	65	1	25	No	No	No	No	No	No	No	No	No	No
4	1	62	1	23	No	No	No	No	No	No	No	No	No	No
5	1	54	1	21	No	No	No	No	No	No	No	No	No	No
6	1	54	1	20	No	No	No	No	No	No	No	No	No	No
7	1	53	1	20	No	No	No	No	No	No	No	No	No	No
8	1	48	1	18	No	No	No	No	No	No	No	No	No	No
9	1	48	1	18	No	No	No	No	No	No	No	No	No	No
10	1	47	1	18	No	No	No	No	No	No	No	No	No	No
11	1	41	1	15	No	No	No	No	No	No	No	No	No	No
12	1	38	1	14	No	No	No	No	No	No	No	No	No	No
13	1	37	1	14	No	No	No	No	No	No	No	No	No	No
14	1	27	1	10	No	No	No	No	No	No	No	No	No	No
15	1	27	1	10	No	No	No	No	No	No	No	No	No	No
16	1	20	1	7	No	No	No	No	No	No	No	No	No	No
17	1	11	1	4	No	No	No	No	No	No	No	No	No	No
18	1	11	1	4	No	No	No	No	No	No	No	No	No	No
19	1	6	1	2	No	No	No	No	No	No	No	No	No	No
20	1	4	1	1	No	No	No	No	No	No	No	No	No	No
21	1	2	1	1	No	No	No	No	No	No	No	No	No	No
22	1	1	1	0	No	No	No	No	No	No	No	No	No	No
23	1	1	1	0	No	No	No	No	No	No	No	No	No	No
24	1	1	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.5	9
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:01	0:03
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	10	26
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	105	105
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 9: New York Street/Project Driveway 2

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	E
1	43	28	2
2	42	27	2
3	41	27	2
4	38	25	2
5	34	22	2
6	34	22	2
7	33	22	2
8	30	20	1
9	30	19	1
10	29	19	1
11	25	17	1
12	24	15	1
13	23	15	1
14	17	11	1
15	17	11	1
16	12	8	1
17	7	4	0
18	7	4	0
19	4	3	0
20	2	1	0
21	1	1	0
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	71	1	2	No	No	No	No	No	No	No	No	No	No
2	1	69	1	2	No	No	No	No	No	No	No	No	No	No
3	1	68	1	2	No	No	No	No	No	No	No	No	No	No
4	1	63	1	2	No	No	No	No	No	No	No	No	No	No
5	1	56	1	2	No	No	No	No	No	No	No	No	No	No
6	1	56	1	2	No	No	No	No	No	No	No	No	No	No
7	1	55	1	2	No	No	No	No	No	No	No	No	No	No
8	1	50	1	1	No	No	No	No	No	No	No	No	No	No
9	1	49	1	1	No	No	No	No	No	No	No	No	No	No
10	1	48	1	1	No	No	No	No	No	No	No	No	No	No
11	1	42	1	1	No	No	No	No	No	No	No	No	No	No
12	1	39	1	1	No	No	No	No	No	No	No	No	No	No
13	1	38	1	1	No	No	No	No	No	No	No	No	No	No
14	1	28	1	1	No	No	No	No	No	No	No	No	No	No
15	1	28	1	1	No	No	No	No	No	No	No	No	No	No
16	1	20	1	1	No	No	No	No	No	No	No	No	No	No
17	1	11	1	0	No	No	No	No	No	No	No	No	No	No
18	1	11	1	0	No	No	No	No	No	No	No	No	No	No
19	1	7	1	0	No	No	No	No	No	No	No	No	No	No
20	1	3	1	0	No	No	No	No	No	No	No	No	No	No
21	1	2	1	0	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:00
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	2
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	73
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 10: New York Street/Project Driveway 3

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	114	37	49
2	111	36	48
3	108	35	47
4	101	33	44
5	90	29	39
6	89	29	38
7	88	28	38
8	80	26	34
9	79	26	34
10	78	25	33
11	67	22	29
12	63	20	27
13	62	20	26
14	46	15	20
15	46	15	20
16	32	10	14
17	18	6	8
18	18	6	8
19	10	3	4
20	6	2	2
21	3	1	1
22	1	0	0
23	1	0	0
24	1	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	151	1	49	No	No	No	No	No	No	No	No	No	No
2	1	147	1	48	No	No	No	No	No	No	No	No	No	No
3	1	143	1	47	No	No	No	No	No	No	No	No	No	No
4	1	134	1	44	No	No	No	No	No	No	No	No	No	No
5	1	119	1	39	No	No	No	No	No	No	No	No	No	No
6	1	118	1	38	No	No	No	No	No	No	No	No	No	No
7	1	116	1	38	No	No	No	No	No	No	No	No	No	No
8	1	106	1	34	No	No	No	No	No	No	No	No	No	No
9	1	105	1	34	No	No	No	No	No	No	No	No	No	No
10	1	103	1	33	No	No	No	No	No	No	No	No	No	No
11	1	89	1	29	No	No	No	No	No	No	No	No	No	No
12	1	83	1	27	No	No	No	No	No	No	No	No	No	No
13	1	82	1	26	No	No	No	No	No	No	No	No	No	No
14	1	61	1	20	No	No	No	No	No	No	No	No	No	No
15	1	61	1	20	No	No	No	No	No	No	No	No	No	No
16	1	42	1	14	No	No	No	No	No	No	No	No	No	No
17	1	24	1	8	No	No	No	No	No	No	No	No	No	No
18	1	24	1	8	No	No	No	No	No	No	No	No	No	No
19	1	13	1	4	No	No	No	No	No	No	No	No	No	No
20	1	8	1	2	No	No	No	No	No	No	No	No	No	No
21	1	4	1	1	No	No	No	No	No	No	No	No	No	No
22	1	1	1	0	No	No	No	No	No	No	No	No	No	No
23	1	1	1	0	No	No	No	No	No	No	No	No	No	No
24	1	1	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	49
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	200
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 11: W. San Bernardino Avenue/Driveway 4

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	230	359	38
2	223	348	37
3	219	341	36
4	205	320	34
5	182	284	30
6	179	280	30
7	177	276	29
8	161	251	27
9	159	248	26
10	156	244	26
11	136	212	22
12	127	197	21
13	124	194	21
14	92	144	15
15	92	144	15
16	64	101	11
17	37	57	6
18	37	57	6
19	21	32	3
20	12	18	2
21	7	11	1
22	2	4	0
23	2	4	0
24	2	4	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	589	1	38	No	No	No	No	No	No	No	No	No	No
2	3	571	1	37	No	No	No	No	No	No	No	No	No	No
3	3	560	1	36	No	No	No	No	No	No	No	No	No	No
4	3	525	1	34	No	No	No	No	No	No	No	No	No	No
5	3	466	1	30	No	No	No	No	No	No	No	No	No	No
6	3	459	1	30	No	No	No	No	No	No	No	No	No	No
7	3	453	1	29	No	No	No	No	No	No	No	No	No	No
8	3	412	1	27	No	No	No	No	No	No	No	No	No	No
9	3	407	1	26	No	No	No	No	No	No	No	No	No	No
10	3	400	1	26	No	No	No	No	No	No	No	No	No	No
11	3	348	1	22	No	No	No	No	No	No	No	No	No	No
12	3	324	1	21	No	No	No	No	No	No	No	No	No	No
13	3	318	1	21	No	No	No	No	No	No	No	No	No	No
14	3	236	1	15	No	No	No	No	No	No	No	No	No	No
15	3	236	1	15	No	No	No	No	No	No	No	No	No	No
16	3	165	1	11	No	No	No	No	No	No	No	No	No	No
17	3	94	1	6	No	No	No	No	No	No	No	No	No	No
18	3	94	1	6	No	No	No	No	No	No	No	No	No	No
19	3	53	1	3	No	No	No	No	No	No	No	No	No	No
20	3	30	1	2	No	No	No	No	No	No	No	No	No	No
21	3	18	1	1	No	No	No	No	No	No	No	No	No	No
22	3	6	1	0	No	No	No	No	No	No	No	No	No	No
23	3	6	1	0	No	No	No	No	No	No	No	No	No	No
24	3	6	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	38
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	627
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

INCLUSIONARY HOUSING PLAN

APPLICATION NUMBER: _____

City of Redlands
35 Cajon Street, Redlands, CA 92373
(909) 798-7555 ext. 2

Project Address: Tennessee Street, W. San Bernadino Ave/W. Pioneer

Assessor Parcel No(s): 017-091-09, -10, -11, -12

Site Dimension: _____

Site Size (Square Feet): 1,538,320 SF (Gross)

Property Owner's Name: Trojan Groves

Address: 21202 Kroll Lane, Huntington Beach, CA 92646

Telephone: 714-960-1417 Email: 2hbjmt@gmail.com

Applicant's Name: Redlands Pioneer Partners, LLC

Telephone: 949-325-3025 Email: qcorman@citivestinc.com

I. INCLUSIONARY HOUSING ALTERNATIVES

Select the applicable alternatives to indicate how the project will comply with the inclusionary housing requirement:

- ☐ On-site construction of Inclusionary Units
- ☐ Off-site construction of Affordable Units
- ☐ Land dedication
- ☑ In-lieu fee payment for entire obligation
- ☐ In-lieu fee payment for fractional unit [1]

II. RESIDENTIAL PROJECT DESCRIPTION

Describe the project in the following chart:

# of Bedrooms	Unit Size (Sq. Ft.)	# of Market Rate Units	# of Very-low Income Units	# of Low Income Units	# of Moderate Income Units	Total # of Units
Studio	0	0	0	0	0	0
1	0	0	0	0	0	0
2	1,150	7	0	0	0	7
3	1,600-1,850	72	0	0	0	72
4	1,805-2,000	159	0	0	0	159
5	2,150	24	0	0	0	24

Identify the gross livable floor area of proposed project in square feet:
~432,300

Will the project be constructed in phases? YES ○ NO ◉

Is a density bonus being requested? YES ○ NO ◉

[1] If the calculation of the number of Inclusionary Units required results in a fraction less than .5, the developer has the option to (i) provide an additional full Inclusionary Unit or (ii) pay an In-Lieu Fee equal to the percentage represented by the fractional Inclusionary Unit multiplied by the applicable In-Lieu Fee.

III. Fractional Inclusionary Unit Obligation

For Projects that choose to pay an in-lieu fee to fulfill a fractional Inclusionary Unit obligation, provide the fractional in-lieu fee obligation from the table below:

Fractional In-liue Fee:_____

Fractional In-lieu Fee Payment Calculations Measured Per Square Foot of the Saleable Area of One Unit in an Ownership Housing Development		
Affordability Gap Per Inclusionary Unit		$442,000
Average Unit Size (Square Feet of Saleable Area)		2430
In-lieu Fee Per Square Foot of One Unit		$181.90
Fraction	Fractional In-lieu Fee: Per Square Foot of One Unit	Total Fractional In-lieu Fee: For-Sale Development
0.10	$18.20	$44,230
0.20	$36.40	$88,450
0.30	$54.60	$132,680
0.40	$72.80	$176,900
0.50	$91.00	$221,130
0.60	$109.10	$265,110
0.70	$127.30	$309,340
0.80	$145.50	$353,570
0.90	$163.70	$397,790
1.00	$181.90	$442,020

In-Lieu Fee Payment to Fulfill the Entire Inclusionary Housing Obligation

The in-lieu fee payment obligation is calculated against the entire Habitable Area of the proposed Market Rate Project. The in-lieu fee schedule is $9.10 per square foot of the saleable area.

IV. REQUIRED EXHIBITS TO THE INCLUSIONARY HOUSING PLAN

A. A narrative description of the entire project;

B. A site plan that depicts the entire project detailing location of the Inclusionary Units, if applicable;

C. Legal description of the project; and

D. If applicable, a phasing plan that provides for the timely development of the Inclusionary Units as the project is built out; and

E. Application fee.

V. PROPERTY OWNER'S AFFIDAVIT

I hereby certify that I am the legally authorized owner of all property involved in this application or have been empowered to sign as the property owner on behalf of a corporation, partnership, business, etc., as evidenced by separate instrument attached herewith. I hereby grant to the applicant submitting this form full power to sign all documents related to this application, including any conditions or litigation measures as may be deemed necessary.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on (Date) 5-20-26 at Huntington Beach, California

Property Owner's Signature TROJAN GROVES, A general partnership by JOHN THOMAS, Managing Partner

Printed Name John Thomas

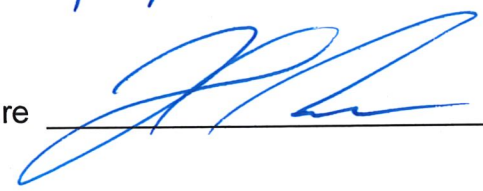
VI. APPLICANT'S AFFIDAVIT

I hereby certify that the statements furnished above and in the attached exhibits represent the data and information required for this initial evaluation and that the facts, statements and information presented are true and correct to the best of my knowledge and belief. Further, should the stated information be found false or insufficient, I agree to the return of this form for appropriate revisions, understanding the City of Redlands cannot process this form until all applicable information is corrected or provided by the applicant. I hereby certify that I have been legally authorized by the property owner to present this application and to sign on behalf of all documents related to this application, including any conditions or litigation measures as may be deemed necessary.

Note: When the applicant is a corporation, partnership, business, etc., a separate document verifying the authorization to sign for such applicant is required.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on (Date) May 21, 2026 at Tustin, California

Applicant's Signature 

Applicant's Printed Name Quntas Corman for Redlands Pioneer Partners, LLC

SOCIO-ECONOMIC EVALUATION CHECKLIST FORM

BACKGROUND

1. **Project Title:**
   Tentative Tract Map No. 20797

2. **Contact Person and Phone Number:**
   Kevin Beery
   Senior Planner
   (909) 307-7469

3. **Project Location:**
   The project site is located east of Route 210, north of West San Bernardino Avenue, south of West Pioneer Avenue and west of Tract No. 20257

   (APNs: 0167-091-09-0000; 0167-091-10-0000, 0167-091-11-0000 and 0167-091-042-0000)

4. **Project Sponsor's Name and Address:**
   Redlands Pioneer Partners, LLC
   43560 Von Karman Avenue, Suite 200
   Newport Beach, CA 92660

5. **General Plan Designation**
   Medium Density Residential (Proposed)

6. **Zoning:**
   Pioneer Park Specific Plan (Proposed)

7. **Description of Project:**
   A subdivision proposal that would: vacate the existing segment of Tennessee Street traversing the project site; dedicate a new segment of New York Street (66-foot-wide right-of-way) along the east side of the site; subdivide the site into 255 lots ranging in size from 2,006 to 6,256 square feet (2,737 square feet on average) for single-family residential development, one 0.41-acre lot for multi-family residential development and 13 lettered lots totaling 4.54 acres for open space and storm water treatment; and dedicate approximately 8.62 acres as public right-of-way for street purposes

8. **Surrounding Land Uses and Setting**
   Single-family residential and public high school (north); vacant (south); single-family residential (east); Route 210 (west)

COST BENEFIT FACTORS:

The cost benefit factors are evaluated independently using the cost benefit model. A positive or negative cost/benefit ratio will be derived by evaluating projects. A complete model used to evaluate the project is available in the Development Services Department. A summary of that analysis is provided here:

The project would neither create unmitigated physical blight within the City nor overburden public services. The cost/benefit model returns an annual revenue-to-cost ratio of 1.97, with approximately $398,315 in annual residential revenues to the City and $202,486 in annual recurring costs, resulting in an estimated annual surplus of $195,829. These fiscal estimates are based on the City's currently approved cost/benefit model, which has not been updated to reflect citywide revenue and cost projections for the current fiscal year. Additionally, the cost/benefit model does not account for revenues generated by Measure T, the local one-percent sales tax increase that has been in effect since 2021. Notwithstanding these factors, the broader regional social and economic benefits of increasing the housing supply are considered to outweigh the potential fiscal impacts of the proposed development.

PUBLIC INFRASTRUCTURE AND EFFECT ON THE CITY OF REDLANDS:

Identify the public infrastructure required for development of this project and identify the source(s) of funding for these improvements. Identify the effects of such development upon the City of Redlands.

List of public infrastructure required for the project:

The applicant will provide the infrastructure as required by the Municipal Utilities and Engineering Department. The developer will construct and/or fund the installation of necessary public improvements. The proposed development requires the following public improvement quantities:

Roads (Lane Miles):	**1.58**
Storm Drain (Lineal Miles):	**0.58**
Traffic Signals:	**2**
Aggregate Landscaping (Acres):	**0**
Street Lights:	**41**
Trails (Lineal Miles):	**0.25**

Sources of funding for these improvements to include developer installed payment of impact fees, assessment districts, etc.:

The conditions of approval require the subdivider to construct and/or fund the installation of necessary public infrastructure. In addition, the project developer(s) must pay applicable development impact fees in effect at the time of building permit issuance in accordance with the Municipal Code. Furthermore, the subdivider intends to annex the affected property into an existing community facilities district to fund ongoing street tree maintenance.

The effect of the project upon the City of Redlands relative to public infrastructure is as follows:

The new development would increase demand for public infrastructure such as sewer, water, streets and highways. To mitigate the impact of the development on public infrastructure, development impact fees will be charged prior to issuance of a building permit for new development in the tract. Furthermore, it is the responsibility of the subdivider to construct and/or fund the installation of roadway improvements, including two new traffic signals, so that the proposed development does not adversely affect safety conditions or traffic levels of service on public roadways. Accordingly, the proposed development would neither critically nor unduly affect public infrastructure below satisfactory performance levels, upon implementation of the conditions of approval.

BENEFITS OF THE PROJECT TO THE CITY OF REDLANDS

The following is a list of benefits that can be attributed to the proposed project. The benefits may fall into the categories identified or a miscellaneous category. Each benefit identified will be described in detail with supporting reasons as to how the item benefits the community.

A. Citrus Enhancements or Preservation. Does the project preserve citrus? The following are accepted ways to enhance or preserve citrus which may be determined to be a benefit to the City of Redlands.

1. Provide conservation easement(s) on citrus groves the City hopes to preserve.
2. Acquire citrus grove(s) and donate all or a portion of the grove to the City.
3. Enhance viability and productivity of existing groves by enhancing irrigation or adding frost water.
4. Maintain a viable buffer of citrus around the project (at least 3 rows).
5. Other ways to preserve citrus.

If this project provides benefit(s) that apply to citrus enhancement or preservation,

describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

The project does not preserve citrus. Presently the site is void of citrus. However, until the early 2000s, the site had been used for farming citrus as evidenced by aerial photographs. The project does not involve existing citrus or land designated and/or reserved for agricultural purposes. Therefore, the proposed development would not materially affect the local citrus industry or critically reduce capacity of suitable farmland.

B. Cultural Enhancements or Preservation. Does the project enhance or preserve cultural aspects of the community? The following are accepted ways to enhance and/or preserve cultural aspects of the community which may be determined to be a benefit to the City of Redlands.

1. Contributes to "art in public places" concept to a minimum of 1% of total project value.
2. Contributes to the alleviation of problems at cultural sites.
3. Provides an electronic library available to the public.
4. Enhances or contributes to current services or cultural resources.
5. Contribute to performing arts venues.

If this project provides benefit(s) that apply to cultural enhancements or preservation, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

The project does not enhance or preserve cultural aspects of the community. However, funding for cultural facilities would be partially supported by payment of development impact fees and additional tax revenue from property, business licenses and other revenue sources resulting from the proposed development.

C. Heritage Enhancements or Preservation. Does the project enhance or preserve heritage aspects of the community? The following are accepted ways to enhance and/or preserve heritage aspects of the community which may be determined to be a benefit to the City of Redlands.

1. Renovates existing historic homes.
2. The project has design features which include garage doors do not face street; 50% wrap around porch on 1-1/2 sides; broad overhangs on roof; driveway located on the side of house or a circular drive; decorative wood, masonry or wrought iron fence.
3. Adaptive reuse of historic structures in appropriate zones.
4. Forming a new or annexing to an existing historic district.

5. Designation of a structure as an individual historic resource.

If this project provides benefit(s) that apply to heritage enhancements or preservation, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

The project does not provide benefits applying to heritage enhancements or preservation because the project site is vacant and it has no features to enhance or preserve.

D. Architectural Enhancements. Does the project enhance architectural aspects of the community? The following are accepted ways to enhance architectural aspects of the community which may be determined to be a benefit to the City of Redlands.

1. Provide architectural or decorative enhancements to the project which exceed normal architectural standards.
2. Trees or other landscaping amenities that exceed minimum requirements.
3. Contribution of off-site enhancements in the public right-of-way, such as sidewalk installation and street tree replacement.
4. Assisting in undergrounding of utility lines.

If this project provides benefit(s) that apply to architectural enhancements, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

The proposed project is a land subdivision and involves neither immediate construction nor architectural review. However, the tentative subdivision map is accompanied by a proposed specific plan, the Pioneer Park Specific Plan (Specific Plan No. 67), which would establish comprehensive architectural and landscaping design guidelines to be followed for new development in the plan area. Therefore, as a whole the project would provide architectural and decorative enhancements beyond typical requirements, and therefore the project provides benefits with respect to architectural quality. Furthermore, the project would involve construction of frontage improvements, including sidewalk, street tree installation, and burial of overhead utility lines.

E. Historic Downtown Enhancements or Preservation. Does the project enhance or preserve the historic downtown of the community? The following are accepted ways to enhance and/or preserve the historic downtown of the community which may be determined to be a benefit to the City of Redlands.

1. Contributes financially to viability of core downtown within expanded downtown.
2. Renovate old buildings.

3. Within an expanded downtown extends DRBA streetscape enhancements.
4. Contributing to the restoration of original building facades of existing structures
5. Re-establishing historical "pedestrian oriented" street frontages where original buildings have been removed.
6. Provides unique adaptive use of historic building.
7. Contributes to alternative means of transportation.

If this project provides benefit(s) that apply to historic downtown enhancements or preservation, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

Not applicable. The project site is not in the downtown area.

F. Job Enhancements. Does the project enhance jobs for the community? The following are accepted ways to enhance jobs for the community which may be determined to be a benefit to the City of Redlands.

1. Provides jobs for the community.
2. Brings in revenue from outside the city.
3. Internship opportunities for students at universities, high school and colleges.

If this project provides benefit(s) that apply to job enhancements, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

As a residential subdivision, the project would not result in expanded industry or job employment beyond those temporarily engaged in construction of infrastructure and buildings in the tract. The residential community will not serve as a major employment center, although it may facilitate the establishment of new home-based businesses (e.g., home office, cottage food operations, music lessons, etc.).

G. Open Space Enhancements or Preservation. Does the project enhance or preserve open space aspects of the community? The following are accepted ways to enhance and/or preserve open space within the community which may be determined to be a benefit to the City of Redlands.

1. Hardscape feature that enhances wildlife-water/food/ shelter.
2. Enhanced landscape on commercial project which conceals infrastructure.
3. Waterscaping which increases illusion of open space.
4. Provides open space in addition to zoning requirement.
5. Provides a Planned Residential Development
6. Provides a usable conservation easement across open space

in perpetuity.
7. Preserves access for wildlife migration corridor.
8. Provides undisturbed refuge area for wildlife.

If this project provides benefit(s) that apply to open space enhancements or preservation, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

The project would preserve open space aspects of the community by reserving ample private open space areas encompassing approximately 4.54 acres or 14.6% of the site's gross acreage for common recreation areas, landscaping, and storm water treatment purposes. Specifically, the subdivision would include three private parks as well as landscaped buffer areas along its perimeter (i.e., Lugonia and San Bernardino Avenues and New York Street).

H. Park Enhancements or Preservation. Does the project enhance or preserve parks of the community? The following are accepted ways to enhance and/or preserve parks within the community which may be determined to be a benefit to the City of Redlands.

1. Adds improved parkland.
2. Adds parkland beyond requirements.
3. Provides pedestrian and/or bike trails to parks or provides extension of existing pedestrian and/or bike trails from the project site.
4. Adds meeting rooms accessible to local groups on a frequent basis.
5. Improves or adds to existing landscape and/or streetscape at or near the project site.

If this project provides benefit(s) that apply to park enhancements or preservation, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

The proposed development involves construction of frontage improvements as well as landscape buffer lots that will improve the streetscape at the project site. Furthermore, the project will pay City development impact fees and provide additional revenue from increased property tax assessment, business license tax, and other revenue sources that will directly or indirectly provide funding that may be used to benefit City parks.

I. Public Safety Enhancements. Does the project enhance public safety aspects of the community? The following are accepted ways to enhance public safety within the community which may be determined to be a benefit to the City of Redlands.

1. Security infrastructure is provided in an architecturally acceptable manner.

2. Exterior television monitoring on commercial project.
3. Provide a building site or fully equipped fire station or contributes to dedicated City account for future construction.
4. Provides significant additional fire equipment as determined by the Fire Department.
5. Provides for a police substation (subject to City approval).
6. Provides for a building site for a new facility.

If this project provides benefit(s) that apply to public safety enhancements, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

The project would not directly enhance public safety aspects of the community. However, the project will pay City development impact fees to fund public services, including police and fire services. The project will also provide significant additional revenue from increased property tax assessment, business license tax, and other revenue sources that may assist in funding police and fire facilities and services.

J. School Enhancements. Does the project enhance schools or their operations within the community? The following are accepted ways to enhance schools within the community which may be determined to be a benefit to the City of Redlands.

1. Senior citizen development adds revenue but no impact.
2. Provides day care and after school program(s).
3. Project is close to schools serving the project.
4. Contributes equipment or other enhancements to existing day care and after school programs.
5. Assist schools with land or financing (such as Mello Roos).

If this project provides benefit(s) that apply to schools, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

School facility fees will be paid to the Redlands Unified School District prior to issuance of building permits for new development in the tract.

K. Traffic. Does the project reduce traffic, enhance systems to improve traffic conditions or otherwise improve traffic within the community? The following are accepted ways to improve traffic within the community which may be determined to be a benefit to the City of Redlands.

1. Provide financial mitigation which helps alleviate parking problems in town i.e. by contributing to the parking district.
2. Incorporate “traffic calming” elements into the design of the circulation system.

3. Support for alternative forms of public transportation or public transportation facilities.
4. Add biking and pedestrian access to off campus intellectual or entertainment resources.
5. Have a unique method of product/inventory delivery.

If this project provides benefit(s) that apply to traffic, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

The project will feature various enhancements to the traffic system. First, the proposed development will construct frontage improvements on San Bernardino and Pioneer Avenues, and will construct a new segment of New York Street to replace the vacated segment of Tennessee Street. The replaced thoroughfare is beneficial because it will be constructed to current standards. Second, the development will provide two new traffic signals at the intersections of New York Street with Pioneer and San Bernardino Avenues, which will improve traffic flows and reduce congestion. Thirdly, the development will dedicate right-of-way for a new bus stop facility on San Bernardino Avenue to improve transit connectivity.

L. Wastewater System Enhancements. Does the project enhance the wastewater system within the community? The following are accepted ways to improve the wastewater system within the community which may be determined to be a benefit to the City of Redlands.

1. Provide a dual system to use potable and non-potable water.
2. Provide financial contributions to tertiary facilities at the Wastewater Treatment Plant.
3. Improve water quality.

If this project provides benefit(s) that apply to the wastewater system, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

The proposed project would connect to the City of Redlands sanitary sewer system. The proposed project would generate wastewater that can be discharged to the municipal system with sufficient capacity. No system upgrades are necessary to serve the new development. The project will pay development impact fees to be used for system maintenance and upgrades. Furthermore, the development will feature a dual system to use potable and non-potable water systems and will be responsible for extension of nearby public non-potable mains in the adjacent streets.

M. Miscellaneous Preservation or Enhancements. Does the project enhance or preserve elements within the community?

If this project provides benefit(s) that apply to enhancement or preservation of elements that are important to the City, describe in detail the benefit(s) with supporting reasons as to how the item(s) benefits the community.

The project does not provide any additional enhancements or preservation of elements within the community other than those previously identified.

SOCIAL FACTORS POTENTIALLY AFFECTED:

This project may create unmitigable physical blight or overburden public services for those social factors checked below within the "Potentially Significant," “Potentially Significant Unless Mitigation” or "Less Than Significant" as indicated by the checklist on the following pages.

__ Agricultural/Citrus Removal	__ Police Services	__ Recreational Programs
X Wildlife/Habitat	__ Downtown Impacts	__ Land Use Compatibility
X Traffic	__ Residential Design	__ Schools
__ Fire Services	__ Cultural Facilities	
__ Paramedic Services	__ Park Facilities	

DETERMINATION

On the basis of this initial evaluation:

___ I find that the proposed project will not create unmitigable physical blight or overburden public services in the community, and no additional information or evaluation is needed.

_X_ I find that although the proposed project could create unmitigable physical blight or overburden public services in the community, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project by the applicant.

___ I find that the proposed project may create unmitigable physical blight or overburden public services in the community, and additional information or evaluation is needed in the following areas:

___ I find that the proposed project has already been evaluated for socio-economic impacts and the prior evaluation adequately evaluated this project.

Signed: _____

Kevin Beery
Senior Planner
City of Redlands
September 29, 2026

EVALUATION OF SOCIAL FACTORS

Explanations of all "Potentially Significant," "Potentially Significant Unless Mitigation Incorporated," "Less Than Significant Impact," and "No Impact" answers are provided on the attached sheets.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AGRICULTURAL/CITRUS REMOVAL. Would the proposal:				
a) Affect agricultural resources or operations (e.g. impacts to soils or farmlands, or impacts from incompatible land uses)?	____	____	____	✓
b) Remove active citrus groves from production?	____	____	____	✓

Agricultural/Citrus Removal

1.a,b) The development proposal would neither affect agricultural activities nor remove active citrus groves from production. The project site is void of agricultural activities. Although the site has been historically used for commercial citrus production, the site has been planned for urban (commercial) development since the 1980s. Therefore, the proposal would not conflict with agricultural activities. Furthermore, the CEQA document prepared for the project concludes that the project would not affect agricultural resource capacity, according to California Department of Conservation data.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
2. WILDLIFE/HABITAT/OPEN SPACE PRESERVATION. Would the proposal:				
a) Eliminate or have negative impact upon wildlife corridors?	____	____	____	✓
b) Tend to urbanize open space impacting preservation and conservation of natural resources?	____	____	____	✓
c) Interfere with use of recognized trails used by joggers, hikers, equestrians or bicyclists?	____	____	____	✓

d) Eliminate, reduce, or have any negative impact upon wildlife habitat areas to include the protection of fringe or buffer areas?	____	____	✓	____

Wildlife/Habitat/Open Space Preservation

2.a-d) The project site comprises vacant parcels (with a public street passing through it) and is generally surrounded by urban development. The project site is void of mature trees and wetlands. A survey of the site found that the project site does not contain suitable habitat for species of concern including burrowing owls, San Bernardino kangaroo rat and Crotch's bumble bee. However, mitigation measures have been added as recommended project requirements to avoid significant impacts on wildlife by requiring pre-construction wildlife surveys, in case the site is populated by species of concern prior to project construction.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
3. TRAFFIC IMPACTS. Would the proposal:				
a) Result in increased vehicle trips or congestion?	____	✓	____	____
b) Create additional traffic so as to be in conflict with the policies of the General Plan?	____	✓	____	____
c) Does traffic impact livability of a residential neighborhood on streets which, due to design or terrain features, street side development or other factors, have greater than usual sensitivity to increased traffic?	____	____	____	✓
d) Create additional traffic so as to increase the level of service on roadways that are adjacent to or in the vicinity of the project?	____	✓	____	____

Traffic Impacts

3, a-d) According to the project traffic study, it is estimated that the proposed development would generate approximately 2,543 daily vehicle trips, 196 trips during the AM peak hour and 260 trips during the PM peak hours and it is expected that, without mitigation, the addition of traffic

generated by the development would degrade the performance of five nearby intersections below acceptable General Plan (Measure U) levels of service (LOS) thresholds. However, upon completion of the roadway improvements identified in the conditions of approval on the tentative map, study intersections are forecasted to perform at acceptable LOS once the project is operational.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
4. FIRE AND PARAMEDIC SERVICES. Will the proposal result in:				
a) Requiring fire and paramedic services that are beyond the current capabilities of the Fire Department?				✓
b) An increase in response time for essential fire or paramedic services to the remainder of the community?			✓	
c) The need for additional fire or paramedic facilities or equipment?				✓

Fire and Paramedic Services

4.a) According to the project's CEQA document, the proposed development is located in the service area of the City of Redlands Fire Department (RFD). RFD responds to medical emergencies, hazardous materials incidents, rescue calls, and motor-related accidents, in addition to regular fire suppression services. There are four fire stations in the city:

- **Station 261: 525 East Citrus Avenue**
- **Station 262: 1690 Garden Street**
- **Station 263: 10 West Pennsylvania Avenue**
- **Station 264: 1270 West Park Avenue**

The nearest fire station to the project site is Station 263, located approximately 0.75 miles southeast of the site. It is estimated that the development would house up to 747 residents. The project would create an incremental increase in demand for fire protection and emergency medical services. Future development within the project site would be installed with fire extinguishers, wet and dry sprinkler systems, pre-action sprinkler systems, fire alarm systems, fire pumps, backflow devices, and clean agent waterless fire suppression systems pursuant to the California Fire Code, adopted as Chapter 15.20 of the Redlands Municipal Code, the CBC, and

other existing regulations regarding fire safety. Payment of development impact fees would serve to ensure the maintenance of existing facilities and the timely provision of new facilities as needed. As of April 2025, the RFD has reopened Fire Station 262 after upgrades were made to the station in order to improve operational efficiency. In addition, the City of Redlands City Council has approved plans for a new fire station located near Heritage Park, in the central part of the city in order to expand services. Therefore, with the payment of development fees included as PPP PS-1, project impacts to fire services would be less than significant.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
5. POLICE SERVICES. Would the proposal:				
a) Requiring police services that are beyond the current capabilities of the Police Department?				✓
b) An increase in response time for essential police services to the remainder of the community?			✓	
c) The need for additional police facilities or equipment?				✓
d) Increase in crime as a result of the type of business?				✓

Police Services

5.a-d) The project site is served by the Redlands Police Department (RPD) which is staffed with over 85 sworn officers and approximately 40 civilian personnel. The increased residential population from the buildout of the proposed project would increase the frequency of emergency and non-emergency calls to the RPD, as compared to existing conditions. Buildout of the proposed project is not expected to increase demand for police protection to the extent that new facilities would be required beyond what has already been planned for. Currently, RPD is in the development of an additional police station to meet future demand based on planned population growth within the City. Payment of development impact fees would serve to ensure the maintenance of existing facilities. In addition, property tax

revenue generated by development of the project would provide funding for police services and would help to offset the project's increase in the demand for services. Therefore, impacts to police protection facilities would be less than significant.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
6. DOWNTOWN IMPACTS. Would the proposal:				
a) A reduction of the number or types of businesses located in the downtown?	____	____	____	✓
b) An unfair or unreasonable competitive disadvantage to existing businesses downtown?	____	____	____	✓
c) Creation of vacant buildings and the potential for blight?	____	____	____	✓
d) Cause an unreasonable increase in traffic downtown?	____	____	____	✓
e) Economic and social effects of businesses competing with downtown businesses?	____	____	____	✓

Downtown Impacts

6.a-e) As a residential development located roughly one mile northwest of the downtown area, the project would not negatively affect downtown businesses. In fact, the project would benefit the downtown economy by expanding the housing supply in north Redlands and thereby increasing the residential population (consumers and employees) within the trade area of downtown businesses.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
7. RESIDENTIAL DESIGN. Would the proposal:				
a) Conflict with existing codes and or standards?	____	____	____	✓
b) Meet minimum point standards of the Residential Development Allocation process?	____	____	____	✓

Residential Design

7.a) No impact. The proposed subdivision fully conforms to the development standards under the Pioneer Park Specific Plan. Plans for buildings in the tract would be reviewed for consistency with the specific plan development standards and its architectural design guidelines.

7.b) Not applicable. As the proposal involves just a tentative map and rezoning, there are no immediate development plans to build on individual lots. In addition, application of residential development allocation requirements may be limited under SB 330, the Housing Crisis Act of 2019.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
8. CULTURAL FACILITIES. Would the proposal result in:				
a) A reduction of the number or types of businesses located in the downtown?	____	____	____	✓
b) An unfair or unreasonable competitive disadvantage to existing businesses downtown?	____	____	____	✓
c) Impacts to cultural facilities such as the Smiley Library, Redlands Bowl, Lincoln Shrine, Joslyn Center, Community Center, etc?	____	____	____	✓
d) Have the potential to cause a physical change which would affect unique ethnic cultural values?	____	____	____	✓

e) Potential to disturb existing religious facilities? ____ ____ ____ ✓

f) Impact or restrict religious or sacred uses? ____ ____ ____ ✓

Cultural Facilities

8.a-f) No, the project would not materially affect cultural facilities.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
9. PARK FACILITIES AND RECREATIONAL PROGRAMS. Will the proposal result in:				
a) Increases in use or demand for park facilities or programs to include manpower, facilities or equipment?				✓
b) A ratio of parkland to population which exceeds standards and or goals established by the General Plan?				✓

Park Facilities and Recreational Programs

9.a,b) According to the project's CEQA document, it is estimated that the proposed development would house up to 748 new residents, increasing demand on existing parks and recreational facilities. However, the City of Redlands currently exceeds the State's parkland standard with 424.2 acres of parkland, and the additional population would not result in substantial deterioration or overuse of existing facilities. Development impact fees, ongoing maintenance requirements, and future environmental review for any new recreational facilities would ensure any impacts remain less than significant.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
10. LAND USE COMPATIBILITY. Would the proposal result in:				
a) Land uses that are not compatible or consistent with the General Plan?				✓
b) Economic impacts on businesses and small property owners from a project?				✓
c) Physical separation or division of an existing community				✓
d) Loss of jobs for the community?				✓
e) Overcrowding of housing?				✓

Land Use Compatibility

10.a) The proposal would not result in land uses that conflict with the General Plan because the development proposal is accompanied by a concurrent request to amend the General Plan land use map designation of the site from "Commercial" to "Medium Density Residential." The proposed development features a residential density of approximately 7.4 units per gross acre, which is consistent with this land use designation in which up to 15 dwelling units per gross acre are permitted.

10.b-d)As a residential development on a vacant infill site, the proposal would not result in: adverse economic effects on businesses or small property owners; physical separation or division of an existing community; or community job loss.

10.e) By facilitating the development of new housing, the proposal would not result in overcrowding of housing; rather, it may ease overcrowding by increasing supply without increasing demand (e.g., development of employment centers). The proposed density of 7.4 dwelling units per acre is compatible with typical suburban residential development patterns.

Issues and Supporting Information Sources:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

10. SCHOOLS. Would the proposal result in:

a)	Creating an overcapacity in schools?	____	____	✓	____
b)	The need for additional school facilities or equipment?	____	____	✓	____
c)	Land uses not consistent with or compatible with existing educational facilities in community?	____	____	____	✓
d)	Social or academic impacts on students resulting from school closures.	____	____	____	✓

Schools

11.a-d) The proposed development would house up to 748 residents, including an estimated 131 school-aged children who would be served by the Redlands Unified School District. Pursuant to SB 50 and California Government Code Sections 65995.5–65995.7, future development would be required to pay applicable school facility fees to offset impacts on school facilities. Payment of these fees constitutes full mitigation under state law; therefore, impacts on school facilities would be less than significant.

TABLE 1
CITY OF REDLANDS : MODEL
LAND USE SUMMARY:
FISCAL IMPACT ANALYSIS

LAND USE	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036	TOTAL
RESIDENTIAL UNITS											
RURAL LIVING (0.2 - 0.4 du/acre)	0	0	0	0	0	0	0	0	0	0	0
VERY-LOW-DENSITY RESIDENTIAL (0 - 2.7 du/acre)	0	0	0	0	0	0	0	0	0	0	0
LOW-DENSITY RESIDENTIAL (0 - 6.0 du/acre)	0	0	0	0	0	0	0	0	0	0	0
LOW-MEDIUM-DENSITY RESIDENTIAL (0 - 8.0 du/acre)	0	0	0	0	0	0	0	0	0	0	0
MEDIUM-DENSITY RESIDENTIAL (0 - 15.0 du/acre)	96	96	63	0	0	0	0	0	0	0	255
HIGH DENSITY (0 - 27.0 du/acre)	0	7	0	0	0	0	0	0	0	0	7
TOTAL, RESIDENTIAL UNITS	96	103	63	0	0	0	0	0	0	0	262
CUMULATIVE, RESIDENTIAL UNITS	96	199	262	262	262	262	262	262	262	262	NA
PROJECT RESIDENTS /1											
RURAL LIVING (0.4 - 0.2 du/acre)	0	0	0	0	0	0	0	0	0	0	0
VERY-LOW-DENSITY RESIDENTIAL (0 - 2.7 du/acre)	0	0	0	0	0	0	0	0	0	0	0
LOW-DENSITY RESIDENTIAL (0 - 6.0 du/acre)	0	0	0	0	0	0	0	0	0	0	0
LOW-MEDIUM-DENSITY RESIDENTIAL (0 - 8.0 du/acre)	0	0	0	0	0	0	0	0	0	0	0
MEDIUM-DENSITY RESIDENTIAL (0 - 15.0 du/acre)	269	269	176	0	0	0	0	0	0	0	714
HIGH DENSITY (0 - 27 du/acre)	0	20	0	0	0	0	0	0	0	0	20
TOTAL, PROJECT RESIDENTS	269	289	176	0	0	0	0	0	0	0	734
CUMULATIVE, PROJECT RESIDENTS	269	557	734	734	734	734	734	734	734	734	NA
CUMULATIVE PROJECT ACREAGE /2											
RURAL LIVING (0.4 - 0.2 du/acre)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA
VERY-LOW-DENSITY RESIDENTIAL (0 - 2.7 du/acre)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA
LOW-DENSITY RESIDENTIAL (0 - 6.0 du/acre)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA
LOW-MEDIUM-DENSITY RESIDENTIAL (0 - 8.0 du/acre)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA
MEDIUM-DENSITY RESIDENTIAL (0 - 15.0 du/acre)	6.40	12.80	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	NA
HIGH DENSITY (0 - 27 du/acre)	0.00	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	NA
CUMULATIVE, PROJECT ACREAGE	6.40	13.06	17.26	17.26	17.26	17.26	17.26	17.26	17.26	17.26	NA
LAND NON-RESIDENTIAL ACRES, ANNUAL /3											
RETAIL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDUSTRIAL	0.0	0	0	0	0	0	0	0	0	0	0.0
OTHER NON-RESIDENTIAL	0	0	0	0	0	0	0	0	0	0	0.0
ANNUAL TOTAL, NON-RESIDENTIAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LAND NON-RESIDENTIAL ACRES, CUMULATIVE											
RETAIL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
INDUSTRIAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
OTHER NON-RESIDENTIAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
CUMULATIVE TOTAL, NON-RESIDENTIAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
LAND NON-RESIDENTIAL EDU'S, CUMULATIVE /4											
RETAIL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
INDUSTRIAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
OTHER NON-RESIDENTIAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
CUMULATIVE TOTAL, NON-RESIDENTIAL EDU'S	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
BUILDING NON-RESIDENTIAL SQ.FT., ANNUAL											
RETAIL	0	0	0	0	0	0	0	0	0	0	0
INDUSTRIAL	0	0	0	0	0	0	0	0		0	0
OTHER NON-RESIDENTIAL	0	0	0	0	0	0	0	0	0	0	0
ANNUAL TOTAL, NON-RESIDENTIAL	0	0	0	0	0	0	0	0	0	0	0
BUILDING NON-RESIDENTIAL SQ.FT., CUMULATIVE											
RETAIL	0	0	0	0	0	0	0	0	0	0	NA
INDUSTRIAL	0	0	0	0	0	0	0	0	0	0	NA
OTHER NON-RESIDENTIAL	0	0	0	0	0	0	0	0	0	0	NA
CUMULATIVE TOTAL, NON-RESIDENTIAL	0	0	0	0	0	0	0	0	0	0	NA

SHADED CELLS ARE VARIABLE ASSUMPTIONS OR INPUTS UNIQUE TO THE PROJECT.

NOTES:

1. Average number of residents per Dwelling Unit ("DU") provided by the California Department of Finance.
   Residents per DU = 2.801 OTHER

2. Assumes residential acreage per unit of the following:

Rural Living (less than 0.2 - 0.4 du/acre)	NA
Very-Low-Density Residential (0 - 2.7 du/acre)	NA
Low-Density Residential (0 - 6.0 du/acre)	NA
Low-Medium-Density Residential (0 - 8.0 du/acre)	NA
Medium-Density Residential (0 - 15.0 du/acre)	0.07
High Density (0 - 27.0 du/acre)	0.04

3. Assumes average non-residential site coverage of the following (based on the General Plan):

Retail	35.0%
Industrial	45.0%
Other Non-Residential	40.0%

4. Assumes non-residential equivalent dwelling units of the following:
   EDUs per acre = 9.0 OTHER

GENERAL PLAN BUILDOUT	PROJ. Sq. Ft.*	F.A.R.*	Projected Acreage	
RETAIL	8,646,200	0.30	661.63	
INDUSTRIAL	10,048,400	0.40	576.70	OTHER
OTHER NON-RESIDENTIA	21,641,990	0.45	1,104.07	
	40,336,590		2,342.40	

*As disclosed in the General Plan

Typical Home Size: 1,900 OTHER
Estimated Equivalency: 9.06

TABLE 2
CITY OF REDLANDS : MODEL
LAND USE SUMMARY:
FISCAL IMPACT ANALYSIS

ASSESSED VALUATION ASSUMPTIONS

RESIDENTIAL	
RURAL LIVING ASSESSED VALUE	$0
VERY-LOW-DENSITY ASSESSED VALUE	$0
LOW-DENSITY ASSESSED VALUE	$0
LOW-MEDIUM-DENSITY ASSESSED VALUE	$0
MEDIUM-DENSITY ASSESSED VALUE	$595,000
HIGH DENSITY ASSESSED VALUE	$525,000
NON-RESIDENTIAL	
RETAIL ASSESSED VALUE	$0.00
INDUSTRIAL ASSESSED VALUE	$0.00
OTHER NON-RESIDENTIAL ASSESSED VALUE	$0.00

SECURED PROPERTY TAX ASSUMPTIONS

NET APPORTIONMENT FACTORS AS A FRACTION OF 1.0% TAX RATE

PROPERTY TAXES PASSED THROUGH TO CITY /1: 20.00% CITY

1. Based on amount disclosed in the adopted 1998-99 budget.

UNSECURED PROPERTY TAX ASSUMPTIONS

RESIDENTIAL:
UNSECURED TAXES AS A % OF SECURED: 2.75% CITY

NON-RESIDENTIAL:
UNSECURED TAXES AS A % OF SECURED: 10.00%

FISCAL YEAR ($s x1,000) end of:	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036
SECURED ASSESSED VALUE CALCULATION:										
ANNUAL ASSESSED VALUES (YEARLY INCREASE)										
RESIDENTIAL										
RURAL LIVING	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
VERY-LOW-DENSITY RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
LOW-DENSITY RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
LOW-MEDIUM-DENSITY RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MEDIUM-DENSITY RESIDENTIAL	$57,120	$57,120	$37,485	$0	$0	$0	$0	$0	$0	$0
HIGH DENSITY RESIDENTIAL	$0	$3,675	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL RESIDENTIAL	$57,120	$60,795	$37,485	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL										
RETAIL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
INDUSTRIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
OTHER NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL YEARLY VALUATION INCREASE:	$57,120	$60,795	$37,485	$0	$0	$0	$0	$0	$0	$0
CUMULATIVE ASSESSED VALUES										
RESIDENTIAL										
RURAL LIVING	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
VERY-LOW-DENSITY RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
LOW-DENSITY RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
LOW-MEDIUM-DENSITY RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MEDIUM-DENSITY RESIDENTIAL	$57,120	$114,240	$151,725	$151,725	$151,725	$151,725	$151,725	$151,725	$151,725	$151,725
HIGH DENSITY RESIDENTIAL	$0	$3,675	$3,675	$3,675	$3,675	$3,675	$3,675	$3,675	$3,675	$3,675
TOTAL RESIDENTIAL	$57,120	$117,915	$155,400	$155,400	$155,400	$155,400	$155,400	$155,400	$155,400	$155,400
NON-RESIDENTIAL										
RETAIL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
INDUSTRIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
OTHER NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL CUMULATIVE ASSESSED VALUE	$57,120	$117,915	$155,400	$155,400	$155,400	$155,400	$155,400	$155,400	$155,400	$155,400
SECURED PROPERTY TAX REVENUE CALCULATION:										
CITY OF REDLANDS										
RESIDENTIAL	$114	$236	$311	$311	$311	$311	$311	$311	$311	$311
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL SECURED TAX REVENUES TO CITY	$114	$236	$311	$311	$311	$311	$311	$311	$311	$311
UNSECURED PROPERTY TAX REVENUE CALCULATION:										
CITY OF REDLANDS										
RESIDENTIAL	$3	$6	$9	$9	$9	$9	$9	$9	$9	$9
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL UNSECURED TAX REVENUES TO CITY	$3	$6	$9	$9	$9	$9	$9	$9	$9	$9
TOTAL PROPERTY TAXES TO CITY	$117	$242	$319	$319	$319	$319	$319	$319	$319	$319

TABLE 3
CITY OF REDLANDS : MODEL
LAND USE SUMMARY:
FISCAL IMPACT ANALYSIS

RESIDENTIAL INDIRECT SALES TAX GENERATION ASSUMPTIONS

AVERAGE HOUSEHOLD INCOME ASSUMPTIONS:		
WEIGHTED AVERAGE RESIDENTIAL PRICE	$593,130	
AVERAGE RESIDENTIAL MORTGAGE (20% DOWN)	$474,504	
ANNUAL MORTGAGE PAYMENTS @ 6.50% & 30 YEARS	$35,990	CITY
AVG. HOUSEHOLD INCOME (3:1 INCOME/PAYMENT RATIO):	$107,971	
RETAIL TAXABLE EXPENDITURE (% OF INCOME):	25.0%	
PROJECT RESIDENTS' PURCHASES OUTSIDE PROJECT AND WITHIN INCORPORATED CITY:	50.0%	

BUSINESS DIRECT SALES & USE TAX GENERATION ASSUMPTIONS

SALES TAXES PASSED THROUGH TO CITY, APPLIED TO COSTS: /1	1.00%	CITY
MEASURE 'I' TAXES PASSED THROUGH TO TRANSIT AUTHORITY	0.00%	
LOCAL TRANSPORTATION SALES TAXES	0.00%	
DISPLACED EXISTING CITY SALES TAX	33.33%	
PROJECT RETAIL TAXABLE SALES PER SQ. FT:		
RETAIL	$0.00	
INDUSTRIAL	$0.00	
OTHER NON-RESIDENTIAL	$0.00	

PROPERTY TRANSFER TAX ASSUMPTIONS

RESIDENTIAL PROPERTY TURNOVER RATE	10.00%	CITY
BUS & COM PROPERTY TURNOVER RATE	5.00%	
TRANSFER TAX AS A % OF RESALE DOLLAR	0.11%	
PROPERTY TRANSFER TAX PASSED THROUGH TO CITY	50.00%	

1. Based on amount passed through to city in the adopted 1997-98 budget.

FISCAL YEAR	($s x1,000)	end of:	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036
SALES & USE TAX REVENUE CALCULATION (CUMULATIVE):												
INDIRECT SALES TAX GENERATION												
RESIDENTIAL TAXABLE EXPENDITURES			$2,591	$5,372	$7,072	$7,072	$7,072	$7,072	$7,072	$7,072	$7,072	$7,072
TOTAL TAXABLE PURCHASES WITHIN CITY			$1,296	$2,686	$3,536	$3,536	$3,536	$3,536	$3,536	$3,536	$3,536	$3,536
RESIDENTIAL SALES TAX GENERATION			$13	$27	$35	$35	$35	$35	$35	$35	$35	$35
DIRECT SALES TAX GENERATION												
RETAIL TAXABLE SALES			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
INDUSTRIAL TAXABLE SALES			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
OTHER NON-RESIDENTIAL TAXABLE SALES			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SUB-TOTAL DIRECT TAXABLE SALES			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
LESS: DISPLACED EXISTING CITY SALES TAX			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL DIRECT TAXABLE SALES			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL DIRECT SALES TAX GENERATION			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL PROJECT SALES & USE TAX REVENUES, APPLIED TO COSTS			$13	$27	$35	$35	$35	$35	$35	$35	$35	$35
RESIDENTIAL MEASURE 'I' SALES TAXES			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL MEASURE 'I' SALES TAXES			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
RESIDENTIAL LOCAL TRANSPORTATION SALES TAXES			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL LOCAL TRANSPORTATION SALES TAXES			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL PROJECT SALES & USE TAX REVENUES, FOR TRANSPORTATION			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
PROPERTY TRANSFER TAX CALCULATION (CUMULATIVE):												
RESIDENTIAL PROPERTY TRANSFER TAXES			$3.14	$6.49	$8.55	$8.55	$8.55	$8.55	$8.55	$8.55	$8.55	$8.55
NON-RESIDENTIAL PROPERTY TRANSFER T AXES			$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
TOTAL ANNUAL PROPERTY TRANSFER TAXES			$3	$6	$9	$9	$9	$9	$9	$9	$9	$9

SHADED CELLS ARE VARIABLE ASSUMPTIONS OR INPUTS UNIQUE TO THE PROJECT.

TABLE 4
CITY OF REDLANDS : MODEL
LAND USE SUMMARY:
FISCAL IMPACT ANALYSIS

BUSINESS LICENSE FEE REVENUE		FRANCHISE FEES (PER CAPITA)			TRANSIENT OCCUPANCY TAX	
RESIDENTIAL	NA		RESIDENTIAL	NON-RESIDENTIAL	NUMBER OF AVAILABLE HOTEL ROOMS	
NON-RESIDENTIAL		TOTAL FRANCHISE	$16.71	$16.71	OCCUPANCY RATE	
BUSINESS LICENSE FEES ARE CHARGED AT A RATE EQUAL					AVERAGE BILLING RATE PER ROOM	
TO $12 FOR THE FIRST $5,000 IN GROSS SALES, PLUS $3					% PASSED THROUGH TO CITY	
FOR EACH ADDITIONAL $5,000 INCREMENT IN GROSS SALES.					AVERAGE YEARLY OCCUPANCY REVENUES TO CITY	

FISCAL YEAR	($s x1,000)	end of:	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036
BUSINESS LICENSE FEE REVENUE												
RESIDENTIAL												
RURAL LIVING			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VERY-LOW-DENSITY RESIDENTIAL			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW-DENSITY RESIDENTIAL			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOW-MEDIUM-DENSITY RESIDENTIAL			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MEDIUM-DENSITY RESIDENTIAL			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HIGH DENSITY RESIDENTIAL			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RESIDENTIAL			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NON-RESIDENTIAL												
RETAIL			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
INDUSTRIAL			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
OTHER NON-RESIDENTIAL			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL NON-RESIDENTIAL			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, BUSINESS LICENSE FEE REVENUE			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
FRANCHISE FEE REVENUE												
RESIDENTIAL FRANCHISE FEES			$4.494	$9.315	$12.264	$12.264	$12.264	$12.264	$12.264	$12.264	$12.264	$12.264
NON-RESIDENTIAL FRANCHISE FEES			$0.000	$0.000	$0.017	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
TOTAL, FRANCHISE FEE REVENUE			$4	$9	$12	$12	$12	$12	$12	$12	$12	$12
TRANSIENT OCCUPANCY TAX REVENUE												
TOTAL, TRANSIENT OCCUPANCY TAX REVENUE			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

SHADED CELLS ARE VARIABLE ASSUMPTIONS OR INPUTS UNIQUE TO THE PROJECT.

TABLE 5
CITY OF REDLANDS : MODEL
OTHER REVENUE AND REVENUE SUMMARY
FISCAL IMPACT ANALYSIS

OTHER GENERAL REVENUES (PER CAPITA METHOD) /1	
OTHER TAXES /2	$10.86
OTHER REVENUES	$6.96
COMMUNITY DEVELOPMENT	NA
LIBRARY	NA
POLICE DEPARTMENT	NA
POLICE - ANIMAL CONTROL	NA
POLICE - RECREATION	NA
POLICE - SENIOR SERVICES	NA
FIRE	NA
PUBLIC WORKS	NA
SUBTOTAL, OTHER REVENUES PER CAPITA:	$17.83

INCOME FROM INVESTMENTS		
EFFECTIVE INTEREST	2.50%	OTHER

1. See Appendix for calculation of per capita multipliers. For items without values, a net cost technique is being employed.
2. Other Taxes includes Public Safety Sales Tax.

FISCAL YEAR ($s x1,000) end of:	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036
PER CAPITA REVENUES										
OTHER TAXES										
RESIDENTIAL	$3	$6	$8	$8	$8	$8	$8	$8	$8	$8
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, OTHER TAXES	$3	$6	$8	$8	$8	$8	$8	$8	$8	$8
OTHER REVENUES										
RESIDENTIAL	$2	$4	$5	$5	$5	$5	$5	$5	$5	$5
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, OTHER LICENSES, PERMITS & FINES	$2	$4	$5	$5	$5	$5	$5	$5	$5	$5
COMMUNITY DEVELOPMENT										
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, STATE REVENUES	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
LIBRARY										
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, FEDERAL REVENUES	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
POLICE DEPARTMENT										
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, CITY ATTORNEY	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
POLICE - ANIMAL CONTROL										
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, ENGINEERING SERVICES	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
POLICE - RECREATION										
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, FIRE DEPARTMENT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
POLICE - SENIOR SERVICES										
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, JOSLYN CENTER	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
FIRE										
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, LIBRARY	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
PUBLIC WORKS										
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL, PARKS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL RESIDENTIAL PER CAPITA REVENUES	$5	$10	$13	$13	$13	$13	$13	$13	$13	$13
TOTAL NON-RESIDENTIAL PER CAPITA REVENUES	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL PER CAPITA REVENUES	$5	$10	$13	$13	$13	$13	$13	$13	$13	$13
TOTAL RESIDENTIAL CASE STUDY REVENUES	$138	$285	$376	$376	$376	$376	$376	$376	$376	$376
TOTAL NON-RESIDENTIAL CASE STUDY REVENUES	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL CASE STUDY REVENUES	$138	$285	$376	$376	$376	$376	$376	$376	$376	$376
RESIDENTIAL REV AVAILABLE FOR INV. INCOME	$143	$295	$389	$389	$389	$389	$389	$389	$389	$389
NON-RESIDENTIAL REV AVAILABLE FOR INV. INCOME	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL REVENUES AVAILABLE FOR INVESTMENT INCOME	$143	$295	$389	$389	$389	$389	$389	$389	$389	$389
RESIDENTIAL INVESTMENT INCOME	$4	$7	$10	$10	$10	$10	$10	$10	$10	$10
NON-RESIDENTIAL INVESTMENT INCOME	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL INVESTMENT INCOME	$4	$7	$10	$10	$10	$10	$10	$10	$10	$10

SHADED CELLS ARE VARIABLE ASSUMPTIONS OR INPUTS UNIQUE TO THE PROJECT.

TABLE 6
CITY OF REDLANDS : MODEL
POLICE DEPARTMENT, FIRE DEPARTMENT, PUBLIC WORKS & PER CAPITA COSTS
FISCAL IMPACT ANALYSIS

POLICE DEPARTMENT COSTS

RESIDENTIAL CALLS	16,562	CITY
COST PER DWELLING UNIT	$295	
NON-RESIDENTIAL RETAIL CALLS	8,987	
COST PER BUILDING SQUARE FOOT	$0.47	
NON-RESIDENTIAL INDUSTRIAL CALLS	344	
COST PER BUILDING SQUARE FOOT	$0.02	
OTHER NON-RESIDENTIAL CALLS	7,948	
COST PER BUILDING SQUARE FOOT	$0.42	
MISCELLANEOUS CALLS /2	17,628	
TOTAL CALLS	51,469	

1. Based on Net Cost and number of calls to residential or non-residential properties.
2. Based on conversations with the Police Chief, these incidences are not related to residences or businesses in the City.

EXISTING DWELLING UNITS	25,984	CITY
EXISTING NON-RESIDENTIAL SQUARE FOOTAGE	8,824,690	

RESIDENTIAL FIRE DEPARTMENT COSTS [1]

RESIDENTIAL CALLS	3,579	CITY
COST PER DWELLING UNIT	$168	
NON-RESIDENTIAL RETAIL CALLS	446	
COST PER BUILDING SQUARE FOOT	$0.06	
NON-RESIDENTIAL INDUSTRIAL CALLS	155	
COST PER BUILDING SQUARE FOOT	$0.02	
OTHER NON-RESIDENTIAL CALLS	1,459	
COST PER BUILDING SQUARE FOOT	$0.20	
MISCELLANEOUS CALLS /2	1,988	
TOTAL CALLS	7,627	

1. Based on Net Cost and number of calls to residential or non-residential properties.
2. Based on information from Fire Chief, these incidences are not related to residences or businesses in the City.

PUBLIC INFRASTRUCTURE REQUIREMENTS /1

ROADS (LANE MILES)	1.6
TRAFFIC INTERSECTIONS REQUIRING SIGNALS	2.0
AGGREGATE LANDSCAPING (ACRES)	0.0
PARK ACREAGE (GROSS)	0.0
STREET LIGHTS	41.0
OPEN SPACE (ACRES)	0.0
TRAILS (LINEAL MILE)	0.3
STORM DRAINS (MILES)	0.6

1. Infrastructure should exclude privately maintained facilities.

PUBLIC WORKS MAINTENANCE COSTS

PAVEMENT MAINTENANCE PER LANE MILE /1	$5,000
STREET SWEEPING PER CURB MILE - ALL STREETS /1	$9
TRAFFIC SIGNAL OPERATIONS & MAINTENANCE PER INTERSECTION /1	$5,560
LANDSCAPE MAINTENANCE PER ACRE /1	$12,500
PARK MAINTENANCE PER ACRE /1	$7,000
STREET LIGHT MAINTENANCE COST PER LIGHT /1	$125
OPEN SPACE MAINTENANCE PER ACRE /2	$125
TRAIL MAINTENANCE PER LINEAL MILE /2	$500
STORM DRAIN MAINTENANCE PER MILE /2	$750

1. Based on consultations with the City of Redlands Public Works Department.
2. Based on consultant's experience.

CITY GENERAL GOVERNMENT COSTS*

CITY COUNCIL	$174,090
CITY CLERK	$285,939
CITY MANAGER	$314,819
FINANCE	$605,155
CITY TREASURER	$2,875,064
CITY ATTORNEY	$1,159,167
TOTAL, CITY GENERAL GOVERNMENT COSTS	$5,414,234

*Costs have been reduced to reflect department specific revenues.

CITY GENERAL GOVERNMENT COSTS CONTINUED

TOTAL CITY OPERATING BUDGET*	$49,046,241
*Excludes Debt Service, Utilities and Capital Improvements.	
OVERHEAD AS A % OF OPERATING BUDGET	11.04%
OVERHEAD AS A % OF DIRECT COSTS	12.41%
OVERHEAD BY DEFINITION CAUSING NO COST	0.00%
OVERHEAD AS % OF DIRECT, AVERAGE	6.20%

OTHER NET COSTS (PER CAPITA METHOD) /1

COMMUNITY DEVELOPMENT	$29.49
LIBRARY	$28.43

1. See Appendix for calculation of per capita multipliers.

FISCAL YEAR ($s x1,000) end of:	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036
CITY DIRECT COSTS										
POLICE DEPARTMENT COSTS										
RESIDENTIAL	$28.320	$58.705	$77.291	$77.291	$77.291	$77.291	$77.291	$77.291	$77.291	$77.291
NON-RESIDENTIAL RETAIL	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
NON-RESIDENTIAL INDUSTRIAL	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
OTHER NON-RESIDENTIAL	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
TOTAL, POLICE DEPARTMENT COSTS	$28.320	$58.705	$77.291	$77.291	$77.291	$77.291	$77.291	$77.291	$77.291	$77.291
FIRE DEPARTMENT COSTS										
RESIDENTIAL	$16.146	$33.470	$44.065	$44.065	$44.065	$44.065	$44.065	$44.065	$44.065	$44.065
NON-RESIDENTIAL RETAIL	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
NON-RESIDENTIAL INDUSTRIAL	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
OTHER NON-RESIDENTIAL	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
TOTAL, FIRE DEPARTMENT COSTS	$16.146	$33.470	$44.065	$44.065	$44.065	$44.065	$44.065	$44.065	$44.065	$44.065
PUBLIC WORKS COSTS										
PAVEMENT MAINTENANCE	$2.931	$6.076	$8.031	$8.000	$8.000	$8.000	$8.000	$8.000	$8.000	$8.000
STREET SWEEPING	$0.005	$0.010	$0.014	$0.014	$0.014	$0.014	$0.014	$0.014	$0.014	$0.014
TRAFFIC SIGNAL OPERATION	$4.075	$8.446	$11.162	$11.120	$11.120	$11.120	$11.120	$11.120	$11.120	$11.120
LANDSCAPE MAINTENANCE	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
PARK MAINTENANCE	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
STREET LIGHT MAINTENANCE	$1.878	$3.893	$5.145	$5.125	$5.125	$5.125	$5.125	$5.125	$5.125	$5.125
OPEN SPACE MAINTENANCE	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
TRAIL MAINTENANCE	$0.055	$0.114	$0.151	$0.150	$0.150	$0.150	$0.150	$0.150	$0.150	$0.150
STORM DRAIN MAINTENANCE	$0.165	$0.342	$0.452	$0.450	$0.450	$0.450	$0.450	$0.450	$0.450	$0.450
TOTAL, PUBLIC WORKS COSTS	$9.108	$18.881	$24.953	$24.859	$24.859	$24.859	$24.859	$24.859	$24.859	$24.859
COMMUNITY DEVELOPMENT										
RESIDENTIAL	$7.929	$16.437	$21.640	$21.640	$21.640	$21.640	$21.640	$21.640	$21.640	$21.640
NON-RESIDENTIAL	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
TOTAL, COMMUNITY DEVELOPMENT	$7.929	$16.437	$21.640	$21.640	$21.640	$21.640	$21.640	$21.640	$21.640	$21.640
LIBRARY										
RESIDENTIAL	$7.644	$15.844	$20.860	$20.860	$20.860	$20.860	$20.860	$20.860	$20.860	$20.860
NON-RESIDENTIAL	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000	$0.000
TOTAL, LIBRARY	$7.644	$15.844	$20.860	$20.860	$20.860	$20.860	$20.860	$20.860	$20.860	$20.860
CITY DIRECT COSTS										
RESIDENTIAL	$53.002	$109.868	$144.650	$144.650	$144.650	$144.650	$144.650	$144.650	$144.650	$144.650
NON-RESIDENTIAL	$28.320	$58.705	$77.385	$77.291	$77.291	$77.291	$77.291	$77.291	$77.291	$77.291
TOTAL, CITY DIRECT COSTS	$81.322	$168.573	$222.035	$221.941	$221.941	$221.941	$221.941	$221.941	$221.941	$221.941
CITY GENERAL GOVERNMENT COSTS										
RESIDENTIAL	$3.288	$6.817	$8.975	$8.975	$8.975	$8.975	$8.975	$8.975	$8.975	$8.975
NON-RESIDENTIAL	$1.757	$3.642	$4.801	$4.795	$4.795	$4.795	$4.795	$4.795	$4.795	$4.795
TOTAL, CITY GENERAL GOVERNMENT COSTS	$5.046	$10.459	$13.776	$13.770	$13.770	$13.770	$13.770	$13.770	$13.770	$13.770

SHADED CELLS ARE VARIABLE ASSUMPTIONS OR INPUTS UNIQUE TO THE PROJECT.

TABLE 7
CITY OF REDLANDS : MODEL
FISCAL IMPACT ANALYSIS DETAILED SUMMARY

FISCAL YEAR ($s x1,000) end of:	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036	% OF TOTAL
ONGOING REVENUES											
SECURED PROPERTY TAXES											
RESIDENTIAL	$114	$236	$311	$311	$311	$311	$311	$311	$311	$311	78.03%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
UNSECURED PROPERTY TAXES											
RESIDENTIAL	$3	$6	$9	$9	$9	$9	$9	$9	$9	$9	2.15%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
TRANSFER PROPERTY TAXES											
RESIDENTIAL	$3	$6	$9	$9	$9	$9	$9	$9	$9	$9	2.15%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
SALES TAXES											
RESIDENTIAL	$13	$27	$35	$35	$35	$35	$35	$35	$35	$35	8.88%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
MEASURE 'I' SALES TAXES											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
LOCAL TRANSPORTATION SALES TAXES											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
TRANSIENT OCCUPANCY TAX											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
FRANCHISE FEE REVENUES											
RESIDENTIAL	$4	$9	$12	$12	$12	$12	$12	$12	$12	$12	3.08%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
BUSINESS LICENSE REVENUES											
RESIDENTIAL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
OTHER TAXES											
RESIDENTIAL	$3	$6	$8	$8	$8	$8	$8	$8	$8	$8	2.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
OTHER REVENUES											
RESIDENTIAL	$2	$4	$5	$5	$5	$5	$5	$5	$5	$5	1.28%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
COMMUNITY DEVELOPMENT											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
LIBRARY											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
POLICE DEPARTMENT											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
POLICE - ANIMAL CONTROL											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
POLICE - RECREATION											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
POLICE - SENIOR SERVICES											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
FIRE											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
PUBLIC WORKS											
RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
INVESTMENT INCOME REVENUES											
RESIDENTIAL	$4	$7	$10	$10	$10	$10	$10	$10	$10	$10	2.44%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
TOTAL RESIDENTIAL REVENUES	$146	$302	$398	$398	$398	$398	$398	$398	$398	$398	100.00%
TOTAL NON-RESIDENTIAL REVENUES	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
TOTAL ON-GOING REVENUES	$146	$302	$398	$398	$398	$398	$398	$398	$398	$398	
ONGOING COSTS											
POLICE DEPARTMENT COSTS											
RESIDENTIAL	$28	$59	$77	$77	$77	$77	$77	$77	$77	$77	38.17%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
FIRE DEPARTMENT COSTS											
RESIDENTIAL	$16	$33	$44	$44	$44	$44	$44	$44	$44	$44	21.76%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
PUBLIC WORKS DEPARTMENT COST											
RESIDENTIAL	$9	$19	$25	$25	$25	$25	$25	$25	$25	$25	12.28%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
GENERAL GOVERNMENT COSTS											
RESIDENTIAL	$3	$7	$9	$9	$9	$9	$9	$9	$9	$9	4.43%
NON-RESIDENTIAL	$2	$4	$5	$5	$5	$5	$5	$5	$5	$5	2.37%
COMMUNITY DEVELOPMENT COSTS											
RESIDENTIAL	$8	$16	$22	$22	$22	$22	$22	$22	$22	$22	10.69%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
LIBRARY COSTS											
RESIDENTIAL	$8	$16	$21	$21	$21	$21	$21	$21	$21	$21	10.30%
NON-RESIDENTIAL	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.00%
TOTAL RESIDENTIAL COSTS	$72	$150	$198	$198	$198	$198	$198	$198	$198	$198	97.63%
TOTAL NON-RESIDENTIAL COSTS	$2	$4	$5	$5	$5	$5	$5	$5	$5	$5	2.37%
TOTAL ON-GOING COSTS	$74	$154	$203	$202	$202	$202	$202	$202	$202	$202	
ANNUAL RESIDENTIAL ONGOING SURPLUS/(DEFICIT)	$74	$152	$201	$201	$201	$201	$201	$201	$201	$201	
ANNUAL NON-RESIDENTIAL ONGOING SURPLUS/(DEFICIT)	($2)	($4)	($5)	($5)	($5)	($5)	($5)	($5)	($5)	($5)	
TOTAL ANNUAL ONGOING SURPLUS/(DEFICIT)	$72	$148	$196	$196	$196	$196	$196	$196	$196	$196	
ANNUAL RESIDENTIAL REVENUE/COST RATIO	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	
ANNUAL NON-RESIDENTIAL REVENUE/COST RATIO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTAL ANNUAL REVENUE/COST RATIO	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	

TABLE 8a
LAND USE SUMMARY:
FISCAL IMPACT ANALYSIS SUMMARY (Residential Only))

FISCAL YEAR	($s x1,000)	end of:	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036
ONGOING REVENUES												
TOTAL RESIDENTIAL REVENUES			$146.3357	$302.2820	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148
ONGOING COSTS												
TOTAL RESIDENTIAL COSTS			$72.4361	$150.1539	$197.6901	$197.6901	$197.6901	$197.6901	$197.6901	$197.6901	$197.6901	$197.6901
ANNUAL RESIDENTIAL ONGOING SURPLUS/(DEFICIT)			$73.8997	$152.1281	$200.6248	$200.6248	$200.6248	$200.6248	$200.6248	$200.6248	$200.6248	$200.6248
ANNUAL RESIDENTIAL REVENUE/COST RATIO			2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01

TABLE 8b
LAND USE SUMMARY:
FISCAL IMPACT ANALYSIS SUMMARY (Commercial Only)

FISCAL YEAR ($s x1,000) end of:	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036
ONGOING REVENUES										
TOTAL NON-RESIDENTIAL REVENUES	$0.0000	$0.0000	$0.0171	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000
ONGOING COSTS										
TOTAL NON-RESIDENTIAL COSTS	$1.7571	$3.6423	$4.8962	$4.7954	$4.7954	$4.7954	$4.7954	$4.7954	$4.7954	$4.7954
ANNUAL NON-RESIDENTIAL ONGOING SURPLUS/(DEFICIT)	($1.7571)	($3.6423)	($4.8791)	($4.7954)	($4.7954)	($4.7954)	($4.7954)	($4.7954)	($4.7954)	($4.7954)
ANNUAL NON-RESIDENTIAL REVENUE/COST RATIO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TABLE 8c
CITY OF REDLANDS : MODEL
FISCAL IMPACT ANALYSIS SUMMARY (MIXED)

FISCAL YEAR ($s x1,000) end of:	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036	% OF TOTAL
ONGOING REVENUES											
TOTAL RESIDENTIAL REVENUES	$146.3357	$302.2820	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148	100.00%
TOTAL NON-RESIDENTIAL REVENUES	$0.0000	$0.0000	$0.0171	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	0.00%
TOTAL ON-GOING REVENUES	$146.3357	$302.2820	$398.3319	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148	$398.3148	
ONGOING COSTS											
TOTAL RESIDENTIAL COSTS	$72.4361	$150.1539	$197.6901	$197.6901	$197.6901	$197.6901	$197.6901	$197.6901	$197.6901	$197.6901	97.63%
TOTAL NON-RESIDENTIAL COSTS	$1.7571	$3.6423	$4.8962	$4.7954	$4.7954	$4.7954	$4.7954	$4.7954	$4.7954	$4.7954	2.37%
TOTAL ON-GOING COSTS	$74.1932	$153.7962	$202.5863	$202.4855	$202.4855	$202.4855	$202.4855	$202.4855	$202.4855	$202.4855	
ANNUAL RESIDENTIAL ONGOING SURPLUS/(DEFICIT)	$73.8997	$152.1281	$200.6248	$200.6248	$200.6248	$200.6248	$200.6248	$200.6248	$200.6248	$200.6248	
ANNUAL NON-RESIDENTIAL ONGOING SURPLUS/(DEFICIT)	($1.7571)	($3.6423)	($4.8791)	($4.7954)	($4.7954)	($4.7954)	($4.7954)	($4.7954)	($4.7954)	($4.7954)	
TOTAL ANNUAL ONGOING SURPLUS/(DEFICIT)	$72.1426	$148.4858	$195.7457	$195.8293	$195.8293	$195.8293	$195.8293	$195.8293	$195.8293	$195.8293	
ANNUAL RESIDENTIAL REVENUE/COST RATIO	2.02	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	
ANNUAL NON-RESIDENTIAL REVENUE/COST RATIO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTAL ANNUAL REVENUE/COST RATIO	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97	

TABLE 9
CITY OF REDLANDS : MODEL
SCHOOL FEE MITIGATION (SB 50)
FISCAL IMPACT ANALYSIS

RESIDENTIAL SCHOOL FEE MITIGATION

DEVELOPER FEE REVENUE PER SINGLE FAMILY DETACHED UNIT /1	$3,113
DEVELOPER FEE REVENUE PER MULTI-FAMILY ATTACHED UNIT /2	$1,431
DEVELOPER FEE REVENUE PER MOBILE HOME /3	$1,212

STUDENT GENERATION FACTORS

ELEMENTARY SCHOOL	
SFD	0.2260
MFA	0.1362
Mobile Home	0.1068
MIDDLE SCHOOL	
SFD	0.1310
MFA	0.0574
Mobile Home	0.0548
HIGH SCHOOL	
SFD	0.1690
MFA	0.0565
Mobile Home	0.0493

SCHOOL DIST

	Capacity	Acreage	SBE 50 fees
Elementary	600	10	$5,200
Middle School	1000	20	$5,500
High School	2200	50	$7,200

FISCAL YEAR ($s ×1,000) end of:	YEAR 1 2027	YEAR 2 2028	YEAR 3 2029	YEAR 4 2030	YEAR 5 2031	YEAR 6 2032	YEAR 7 2033	YEAR 8 2034	YEAR 9 2035	YEAR 10 2036	TOTAL
CITY OF REDLANDS											
ANNUAL PROJECTED RESIDENTIAL DEVELOPMENT											
SFD	96	96	63	0	0	0	0	0	0	0	255
MFA	0	7	0	0	0	0	0	0	0	0	7
Mobile Home	0	0	0	0	0	0	0	0	0	0	0
STUDENT PROJECTIONS											
ELEMENTARY											
SFD	21.696	21.696	14.238	0	0	0	0	0	0	0	58
MFA	0	0.9534	0	0	0	0	0	0	0	0	1
Mobile Home	0	0	0	0	0	0	0	0	0	0	0
MIDDLE SCHOOL											
SFD	12.576	12.576	8.253	0	0	0	0	0	0	0	33
MFA	0	0.4018	0	0	0	0	0	0	0	0	0
Mobile Home	0	0	0	0	0	0	0	0	0	0	0
HIGH SCHOOL											
SFD	16.224	16.224	10.647	0	0	0	0	0	0	0	43
MFA	0	0.3955	0	0	0	0	0	0	0	0	0
Mobile Home	0	0	0	0	0	0	0	0	0	0	0
ANNUAL SCHOOL FEE MITIGATION											
ELEMENTARY											
SFD	$112,819	$112,819	$74,038	$0	$0	$0	$0	$0	$0	$0	
MFA	$0	$4,958	$0	$0	$0	$0	$0	$0	$0	$0	
Mobile Home	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
									Total	$304,634	
MIDDLE SCHOOL											
SFD	$69,168	$69,168	$45,392	$0	$0	$0	$0	$0	$0	$0	
MFA	$0	$2,210	$0	$0	$0	$0	$0	$0	$0	$0	
Mobile Home	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
									Total	$185,937	
HIGH SCHOOL											
SFD	$116,813	$116,813	$76,658	$0	$0	$0	$0	$0	$0	$0	
MFA	$0	$2,848	$0	$0	$0	$0	$0	$0	$0	$0	
Mobile Home	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
									Total	$313,132	
TOTAL SCHOOL FEE MITIGATION											
SFD	$298,800	$298,800	$196,088	$0	$0	$0	$0	$0	$0	$0	$793,688
MFA	$0	$10,015	$0	$0	$0	$0	$0	$0	$0	$0	$10,015
Mobile Home	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL	$298,800	$308,815	$196,088	$0	$0	$0	$0	$0	$0	$0	

RESOLUTION NO. 1761

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF REDLANDS RECOMMENDING THAT THE CITY COUNCIL AMENDS THE GENERAL PLAN LAND USE MAP, AMENDS THE EAST VALLEY CORRIDOR SPECIFIC PLAN (SPECIFIC PLAN NO. 40), ADOPTS THE PIONEER PARK SPECIFIC PLAN (SPECIFIC PLAN NO. 67) AND AMENDS THE CITY ZONING MAP TO IMPLEMENT THE PIONEER PARK SPECIFIC PLAN PROJECT.

WHEREAS, Redlands Pioneer Partners, LLC, has filed a development application requesting approval of Tentative Tract Map No. 20797, a proposed subdivision encompassing approximately 35.3 acres east of Route 210, north of West San Bernardino Avenue, south of West Pioneer Avenue and west of Tract No. 20257, that would: vacate the existing segment of Tennessee Street traversing the project site; dedicate a new segment of New York Street along the east side of the site; subdivide the site into 255 lots for single-family residential development, one 0.41-acre lot for multi-family residential development and 13 lettered lots totaling 4.54 acres for open space and storm water treatment; and dedicate approximately 8.62 acres as public right-of-way for street purposes (APNs: 0167-091-09-0000; 0167-091-10-0000, 0167-091-11-0000 and 0167-091-042-0000), in conjunction with an inclusionary housing plan; and

WHEREAS, Redlands Pioneer Partners, LLC, concurrently filed a legislative application requesting approval of General Plan Amendment No. 150, Specific Plan No. 67, Amendment No. 56 to Specific Plan No. 40 (East Valley Corridor Specific Plan), and Zone Change No. 483 to implement Tentative Tract Map No. 20797 (herein referred to as the "Pioneer Park Project"); and

WHEREAS, specific plans prepared in accordance with Article 8 of Chapter 3 of the Government Code (Gov. Code Sections 65450 – 65457) may be adopted by a local legislative body if the proposed plan is consistent with the general plan.

WHEREAS, pursuant to the California Environmental Quality Act ("CEQA"), the City prepared an initial study which concludes that the Pioneer Park Project may have a significant effect on the environment but valid, feasible and enforceable mitigation measures have been identified and made binding as conditions of approval on the project that would reduce potentially significant effects to a non-significant level, and therefore a mitigated negative declaration is the appropriate environmental determination for the Pioneer Park Project; and

WHEREAS, on September 18, 2026, notice of the Planning Commission's public hearing for the Pioneer Park Project was mailed to property owners within a 300-foot radius of the project site, and on September 24, 2026, notice of the Planning Commission's public hearing for the Pioneer Park Project was published in a newspaper of general circulation; and

WHEREAS, on October 13, 2026 and October 27, 2026, the Planning Commission held a public hearing at which interested persons had an opportunity to testify in support of, or in opposition to, the Pioneer Park Project; and, furthermore, the Planning Commission considered the staff report, oral report, the testimony and written evidence submitted by and on behalf of the applicant and by members of the public.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF REDLANDS AS FOLLOWS:

Section 1. Recommendation for Environmental Determination. It is hereby recommended that the City Council adopts a mitigated negative declaration and mitigation monitoring and reporting program for the Pioneer Park Project in accordance with CEQA. The City as the lead agency has prepared an initial study in accordance with the CEQA Guidelines, exercised its own independent judgment and analysis, and there is no substantial evidence that the proposed project may have a significant effect on the environment. Therefore, a mitigated negative declaration is the appropriate environmental determination for the proposed project.

Section 2. Recommendation for General Plan Amendment. It is hereby recommended that the City Council amends the General Plan land use map to change the classification applying to the real property described in Exhibit "A" from "Commercial" to "Medium Density Residential" and as shown in the Exhibit "B" map.

Section 3. Recommendation for Specific Plan Adoption. It is hereby recommended that the City Council adopts Specific Plan No. 67, the Pioneer Park Specific Plan.

Section 4. Recommendation for Specific Plan Amendment. It is hereby recommended that the City Council amends Specific Plan No. 40 (the "East Valley Corridor Specific Plan") to remove the area described in Exhibit "A" from the boundaries of Specific Plan No. 40. Specific Plan No. 67 ("Pioneer Park Specific Plan") is consistent with the General Plan (as proposed for amendment); that Specific Plan No. 67 has been prepared in accordance with, and satisfies the requirements of, Article 8 of Chapter 3 of the Government Code; and that enactment of the Pioneer Park Specific Plan is for the betterment of the public health, safety and general welfare. Additionally, the specific plan would establish requirements such as: lot size minimums; roadway layout and buffering requirements to promote safe and efficient circulation, functional site planning, and an orderly residential neighborhood; and to avoid haphazard development.

Section 5. Recommendation for Change of Zone. It is hereby recommended that the City Council amends the Zoning Map to change the district classification applying to the real property described in Exhibit "A" from "East Valley Corridor Special District EV/SD" to "Specific Plan No. 67" and as shown in the Exhibit "C" map, based on the following findings: (a) that proposed change of zone is in conformity with the general plan of the city because the applicable General Plan land use designation (as proposed for amendment) area to be rezoned is "Medium Density Residential" which designates areas intended to be developed at up to 15 dwelling units per acre

for the development of attached, detached and/or mixed residential uses with a range of densities and housing types. Therefore, the change of zone from the existing commercial zone (East Valley Corridor Special District EV/SD) to residential (Pioneer Park Specific Plan) conforms to the General Plan; and (b) that enactment of the proposed change of zone is for the betterment of the public health, safety and general welfare because the Pioneer Park Specific Plan establishes development standards, land use regulations, and community design guidelines that ensure residential development is appropriately scaled, located, and designed in relation to surrounding uses. These provisions minimize the potential for land use conflicts and promote compatibility with adjacent development. Additionally, features of the proposed zoning district include lot size minimums, roadway layout and buffering requirements that are aimed at supporting safe and efficient circulation, functional site planning and an orderly residential neighborhood, void of haphazard development. Furthermore, the following findings under Section 4.40s of the General Plan as adopted by Measure "U" are hereby made for the redesignation of farmland:

1. *There are substantial and overriding economic or social benefits to the City and its residents and taxpayers from the proposed density increase.*

   Under the current zoning designation, it is a policy of the East Valley Corridor Specific Plan to preserve existing viable agricultural activities as long as feasible while the area transitions to more intensive uses. Continued agricultural production within the area is constrained, as evidenced by aerials showing that the total removal of citrus groves from the site having occurred by 2005, the conversion of the site to development would be consistent with the intent of the East Valley Corridor Specific Plan which ultimately envisions urban development.

   The additional housing units would increase city revenues, primarily through real property tax, to fund infrastructure and public services and would serve as a direct economic benefit, particularly because the development would connect to existing infrastructure in the project area and would significantly improve the infrastructure through roadway improvements. As part of the project, the builder(s) would also pay development impact fees to offset the costs of infrastructure and public services including police, fire, parks and library. In addition, the broader regional social and economic benefits of increasing the housing supply are considered to outweigh the potential fiscal impacts of the proposed development.

   The proposed development would effect social benefits by providing private common open space including three parks for residents to use for gathering and recreation. In addition, the proposed small-lot development would be consistent with General Plan policies and is aimed at expanding the citywide housing supply to serve a mix of household income levels.

2. *The proposed density increase will not cause adverse environmental impacts, either individually or cumulatively, directly or indirectly.*

   According to the initial study and mitigated negative declaration prepared for the project

pursuant to CEQA, the environmental analysis concludes that density increase would not cause significant adverse environmental impacts upon implementation of seven mitigation measures which are included as conditions of approval on the tentative map.

3. *The proposed density increase will not convert viable agricultural land to non-agricultural uses.*

   The proposed density increase will not convert viable agricultural land to non-agricultural uses because sustained agricultural use of the land is constrained due to economic factors. Firstly, the subject property is vacant and unimproved, and currently has no active agricultural use. Additionally, the area surrounding the project site is urbanizing, with development to the north, east and west, as well as an approved Concept Plan for commercial development to the south. Aerial images indicate that citrus farmland was previously converted to development which in turns creates further development pressure to develop since scaled production and harvest efficiency are compromised by the cumulative reductions in available farmland acreage. According to the initial study and mitigated negative declaration, the project site is not designated as prime farmland, unique farmland, farmland of statewide importance or farmland of local importance by the California Department of Conversation, and is only identified as grazing land. For these reasons, sustained agricultural production on the project site is nonviable.

4. *The proposed density increase will not have a growth-inducing effect on other property.*

   The proposed density increase will not induce growth on other property because, as an infill site, the site of the proposed density increase is surrounded on all sides by existing development except for the property to the immediate south, which is vacant and zoned for nonresidential, commercial uses. The site of the proposed density increase is currently zoned for urban (commercial) use and is partially developed with a dedicated public street (Tennessee Street) which bisects the project site.

5. *The resulting use will be compatible with uses on adjacent land.*

   The proposed use is compatible with the existing residential use to the east, the high school and residences to the north, and the freeway to the west because it will feature a similar building scale, neighborhood character and density as neighboring uses, and the development will feature a perimeter wall to attenuate noise caused by freeway traffic.

6. *The proposed density increase will not require substantial expansion of public infrastructure, facilities or services.*

   The proposed density increase will not require substantial expansion of public infrastructure, facilities or services because, as an in-fill site, the site is located within an area that is presently served by infrastructure, wet and dry utilities and general public services including police, fire, and schools. The builder would be required to pay development impact fees for transportation and infrastructure improvements, public service facilities, and school district fees. Furthermore, the proposed development is

located on an in-fill development site and thus no major infrastructure expansions are necessary to serve it.

Section 6. Effective Date and Expiration. This resolution shall take effect upon adoption and shall expire one year thereafter.

ADOPTED, SIGNED AND APPROVED this 27th day of October, 2026.

_____
Karah Shaw, Chair
Planning Commission

ATTEST:

_____
Katherine Coleson, Secretary
Planning Commission

I, Katherine Coleson, Secretary to the Planning Commission, hereby certify that the foregoing resolution was duly adopted by the Planning Commission at a regular meeting thereof held on the 27th day of October, 2026.

AYES:
NOES:
ABSENT:
ABSTAINED:

_____
Katherine Coleson, Secretary
Planning Commission

EXHIBIT A – LEGAL DESCRIPTION

Real property in the City of Redlands, County of San Bernardino, State of California, described as follows:

PARCEL NO. 1:
LOTS 5, 6, 7 AND 8 SUBDIVISION OF SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 16, TOWNSHIP 1 SOUTH, RANGE 3 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO PLAT THEREOF RECORDED IN BOOK 13 OF MAPS, PAGE 13, RECORDS OF SAID COUNTY.

EXCEPTING THEREFROM THOSE PORTIONS OF LOTS 6, 7 AND 8 OF A SUBDIVISION OF THE SOUTH ½ OF THE SOUTHEAST 1/4 OF SECTION 16, TOWNSHIP 1 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF REDLANDS. AS PER PLAT RECORDED IN BOOK 13 OF MAPS, PAGE 13, RECORDS OF SAID COUNTY, FURTHER DESCRIBED AS FOLLOWS:

PARCEL A-1: BEGINNING AT THE INTERSECTION OF THE EAST LINE OF TENNESSEE STREET, 30 FEET WIDE, WITH THE NORTH LINE OF SAN BERNARDINO AVENUE, 66 FEET WIDE AS SAID STREETS ARE SHOWN ON SAID PLAT, THENCE ALONG SAID NORTH LINE NORTH 89° 59' 50" EAST, 418.09 FEET, THENCE COURSE "A", NORTH 0° 00' 47" WEST, 19.60 FEET, THENCE COURSE " B" SOUTH 89° 59' 13" WEST , 187.54 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE RIGHT WITH A RADIUS OF 50.00 FEET; THENCE WESTERLY, NORTHWESTERLY AND NORTHERLY ALONG SAID CURVE THROUGH AN ANGLE OF 99° 34' 33" A DISTANCE OF 86. 90 FEET; THENCE NORTH 9° 33' 46" EAST, 190.31 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE LEFT WITH A RADIUS OF 550 FEET; THENCE NORTHERLY AND NORTHWESTERLY ALONG SAID CURVE THROUGH AN ANGLE OF 38° 34' 09" A DISTANCE OF 370.24 FEET; THENCE NORTH 29° 00' 23" WEST 334.29 FEET TO SAID EAST LINE OF SAID TENNESSEE STREET; THENCE ALONG SAID EAST LINE SOUTH 0° 39' 45" EAST, 916.04 FEET TO THE POINT OF BEGINNING.

PARCEL B-1:
COMMENCING AT THE INTERSECTION OF SAID EAST LINE OF SAID TENNESSEE STREET WITH THE SOUTH LINE OF PIONEER AVENUE; THENCE ALONG SAID SOUTH LINE NORTH 89° 52' 13" EAST, 633.70 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID SOUTH LINE, NORTH 89° 52' 13" EAST, 64.00 FEET, THENCE COURSES "C" SOUTH 0° 33' 38" EAST, 1225.20 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE LEFT WITH A RADIUS OF 30 FEET; THENCE SOUTHERLY, SOUTHEASTERLY AND EASTERLY ALONG SAID CURVE THROUGH AN ANGLE OF 89° 26' 32", A DISTANCE OF 46.83 FEET TO THE NORTH RIGHT OF WAY LINE OF SAN BERNARDINO AVENUE AS IT NOW EXISTS; THENCE ALONG SAID NORTH LINE SOUTH 89° 59' 50" WEST, 124.01 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE LEFT WITH A RADIUS OF 30 FEET; THENCE EASTERLY, NORTHEASTERLY AND NORTHERLY ALONG SAID CURVE THROUGH AN ANGLE OF 90° 33' 28" A DISTANCE OF 47.42 FEET TO A LINE 64 FEET WESTERLY OF AND PARALLEL WITH SAID COURSE "C" THENCE ALONG SAID PARALLEL LINE NORTH 0° 33' 38" WEST, 1224.47 FEET TO THE POINT OF BEGINNING.

PARCEL C-1:
COMMENCING AT THE INTERSECTION OF SAID EAST LINE OF TENNESSEE STREET WITH SAID SOUTH LINE OF SAID PIONEER AVENUE, 63 FEET WIDE, AS SHOWN ON SAID PLAT, THENCE ALONG SAID SOUTH LINE NORTH 89° 52' 13" EAST, 27.88 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID SOUTH LINE NORTH 89° 52' 13" EAST, 291.33 FEET; THENCE SOUTH 0° 07' 47" EAST, 5.00 FEET; THENCE PARALLEL WITH SAID SOUTH LINE SOUTH 89° 52' 13" WEST, 218.70 FEET TO THE BEGINNING OF A TANGENT CURVE TO THE RIGHT WITH A RADIUS OF 530 FEET; THENCE WESTERLY ALONG SAID CURVE THROUGH AN ANGLE OF 7° 52' 37", A DISTANCE OF 72.86 FEET TO THE POINT OF BEGINNING, TOGETHER WITH UNDERLYING FEE INTEREST, IF ANY, APPURTENANT TO THE ABOVE DESCRIBED PARCELS IN AND TO THE ADJOINING PUBLIC WAYS SAN BERNARDINO AVENUE, TENNESSEE STREET AND PIONEER AVENUE.

APNs: 0167-091-09-0-000; 0167-091-10-0-000; 0167-091-11-0-000; 0167-091-12-0-000

EXHIBIT B-1
GENERAL PLAN LAND USE MAP (EXISTING)

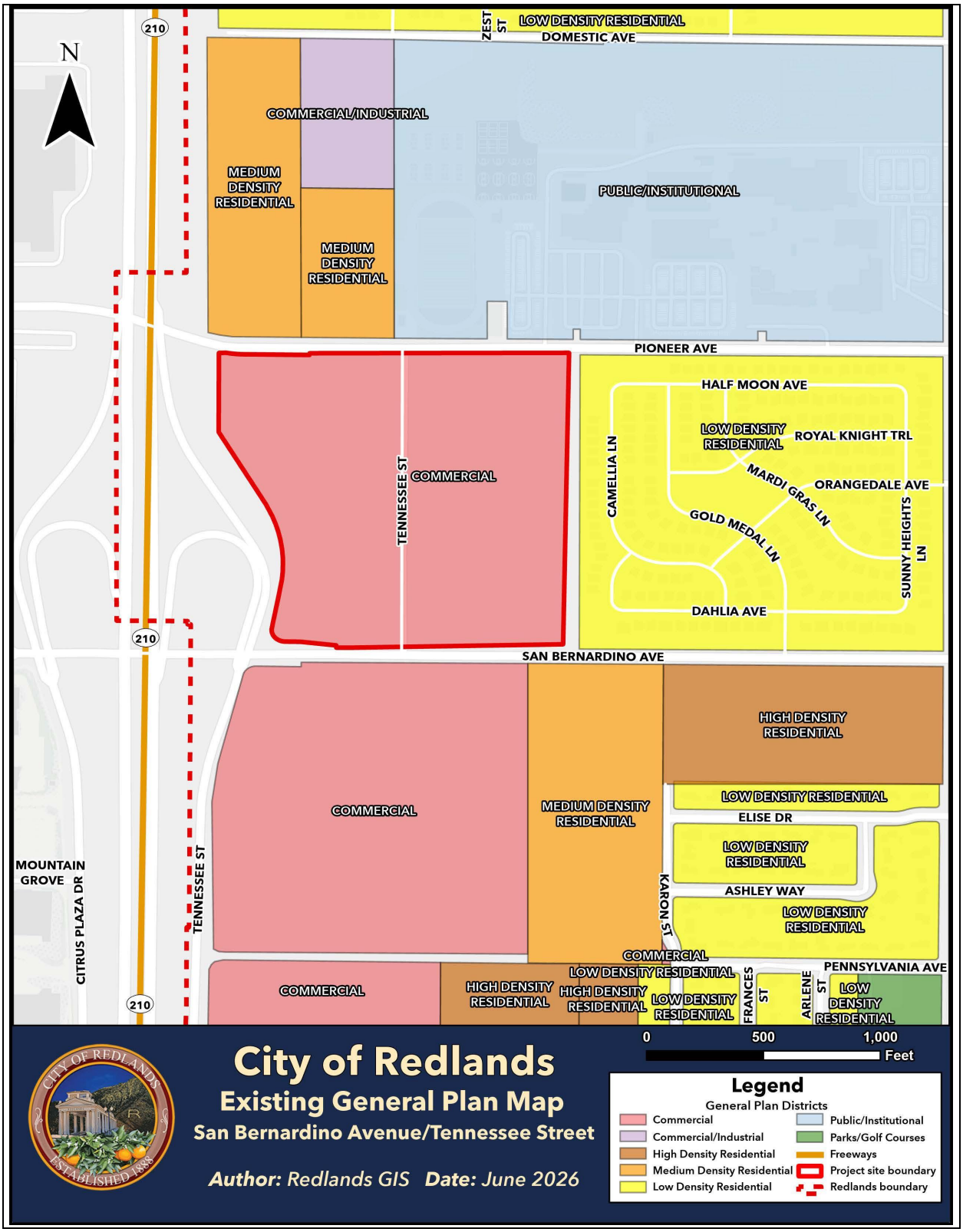


EXHIBIT B-2

GENERAL PLAN LAND USE MAP (PROPOSED)

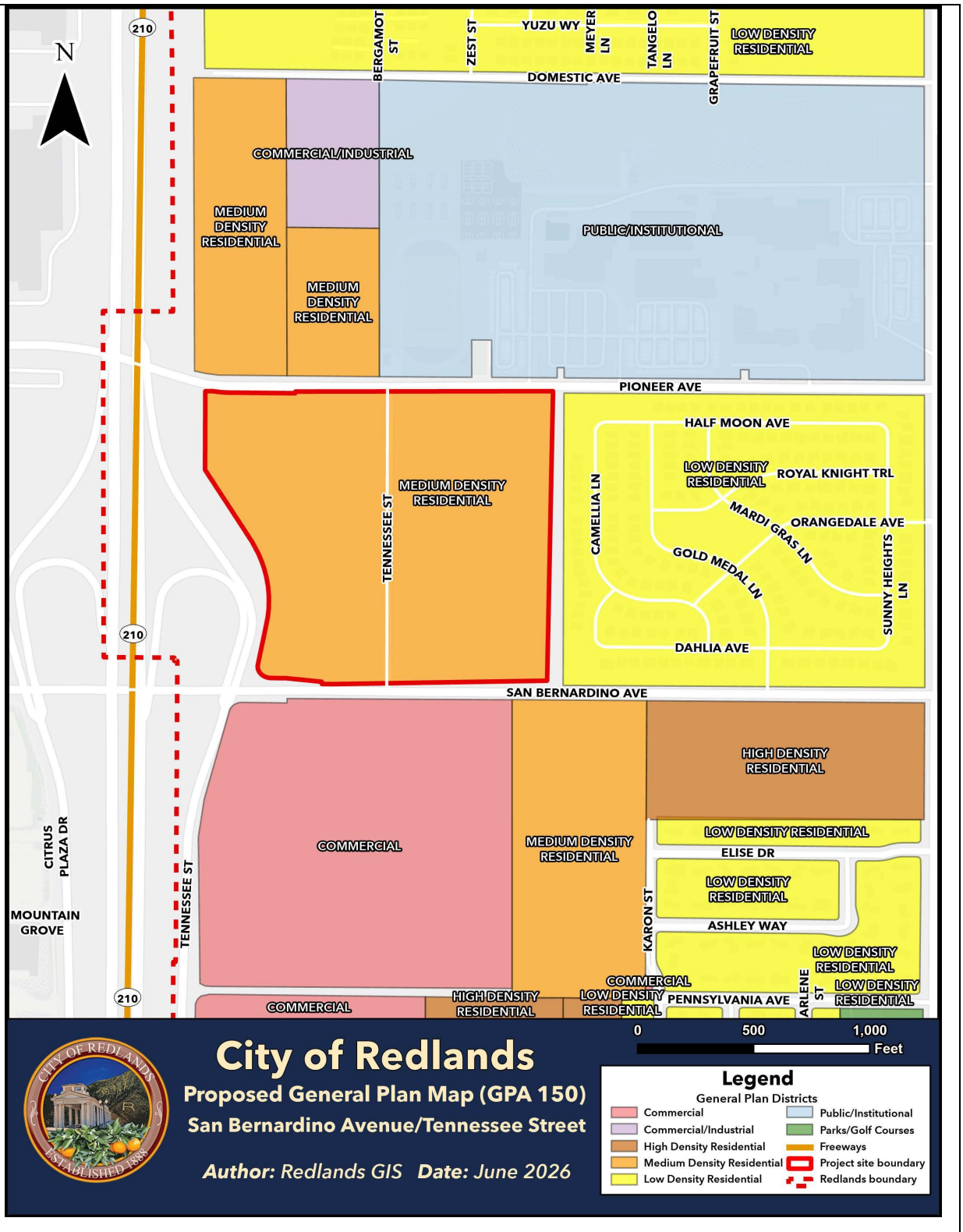


EXHIBIT C-1
ZONING MAP (EXISTING)

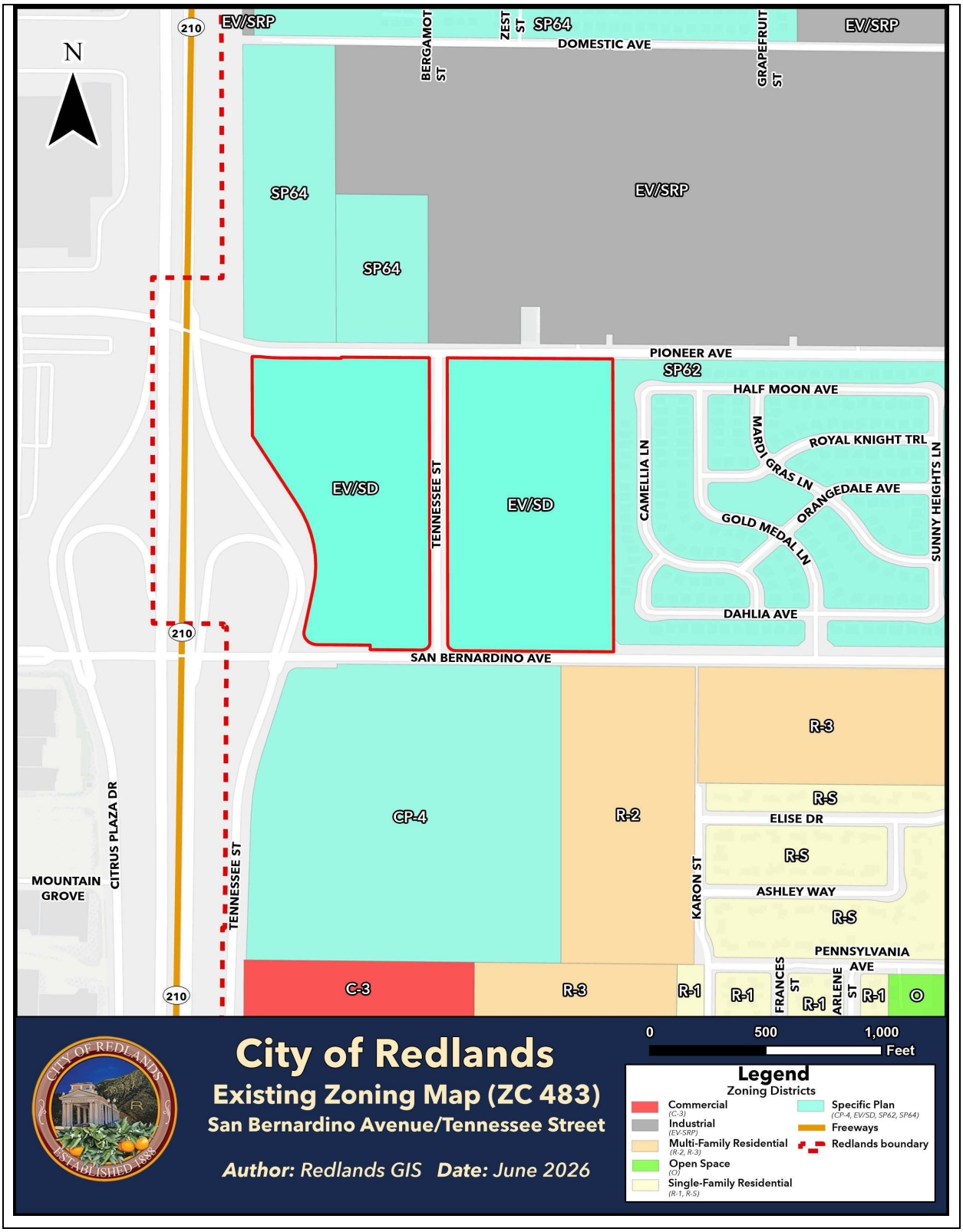
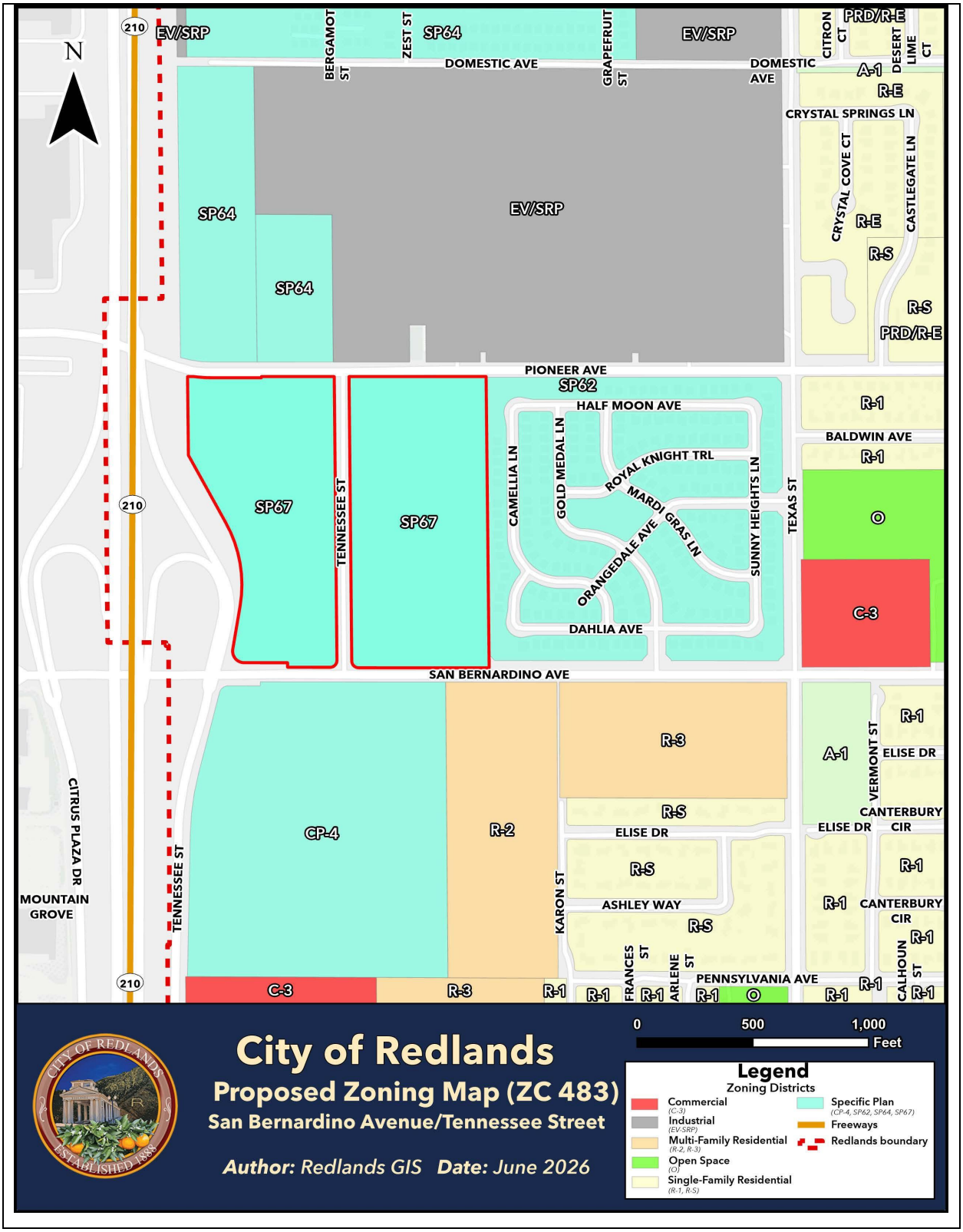


EXHIBIT C-2
ZONING MAP (PROPOSED)



RESOLUTION NO. 1762

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF REDLANDS RECOMMENDING THAT THE CITY COUNCIL ADOPTS A SOCIO-ECONOMIC COST/BENEFIT STUDY AND APPROVES TENTATIVE TRACT MAP NO. 20797 FOR THE PROPOSED PIONEER PARK PROJECT.

WHEREAS, Redlands Pioneer Partners, LLC filed a development application requesting approval of Tentative Tract Map No. 20797, a proposed subdivision encompassing approximately 35.3 acres east of Route 210, north of West San Bernardino Avenue, south of West Pioneer Avenue and west of Tract No. 20257, that would: vacate the existing segment of Tennessee Street traversing the project site; dedicate a new segment of New York Street (66-foot-wide right-of-way) along the east side of the site; subdivide the site into 255 lots for single-family residential development, one 0.41-acre lot for multi-family residential development and 13 lettered lots totaling 4.54 acres for open space and storm water treatment; and dedicate approximately 8.62 acres as public right-of-way for street purposes (APNs: 0167-091-09-0000; 0167-091-10-0000, 0167-091-11-0000 and 0167-091-042-0000), in conjunction with an inclusionary housing plan; and

WHEREAS, Redlands Pioneer Partners, LLC, concurrently filed a legislative application requesting approval of General Plan Amendment No. 150, Specific Plan No. 67, Amendment No. 56 to Specific Plan No. 40 (East Valley Corridor Specific Plan), and Zone Change No. 483 to implement Tentative Tract Map No. 20797 (herein referred to as the "Pioneer Park Project"); and

WHEREAS, residential developments including ten or more dwelling units are subject to the inclusionary housing requirements under chapter 18.230 of the Redlands municipal code; and

WHEREAS, pursuant to the California Environmental Quality Act ("CEQA"), the City prepared an initial study which concludes the Pioneer Park Project may have a significant effect on the environment but valid, feasible and enforceable mitigation measures have been identified and made binding as conditions of approval on the project that would reduce potentially significant effects to a non-significant level, and therefore a mitigated negative declaration is the appropriate environmental determination for the Pioneer Park Project; and

WHEREAS, on September 18, 2026, notice of the Planning Commission's public hearing for the Pioneer Park Project was mailed to property owners within a 300-foot radius of the project site, and on September 24, 2026, notice of the Planning Commission's public hearing for the Pioneer Park Project was published in a newspaper of general circulation; and

WHEREAS, on October 13, 2026 and October 27, 2026, the Planning Commission held a public hearing at which interested persons had an opportunity to testify in support of, or in opposition to, the Pioneer Park Project and, furthermore, considered the staff report, oral report, the testimony and written evidence submitted by and on behalf of the applicant and by members of the public; and

WHEREAS, on October 27, 2026, the Planning Commission adopted Resolution No. 1761 recommending that the City Council adopts a mitigated negative declaration and the mitigation monitoring and reporting program and that the City Council approves General Plan Amendment No. 150, Amendment No. 56 to Specific Plan No. 40 (East Valley Corridor Specific Plan), and

Zone Change No. 483 for the adoption and implementation of Specific Plan No. 67 (Pioneer Park Specific Plan).

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF REDLANDS AS FOLLOWS:

Section 1. Recommendation for Socio-Economic Cost/Benefit Study. The Socio-Economic Cost/Benefit Study prepared by City staff found that the proposed project would not create any significant unmitigable physical blight or overburden public services in the community, in accordance with the following findings, and is hereby recommended for adoption.

1. *The development project will not create unmitigated physical blight within the City or overburden public services, including without limitation the sufficiency of police and fire protection; and*

   The proposed development would neither create unmitigated physical blight within the City nor overburden public services, including sufficient police and fire protection services. The proposed residential development would be compatible with surrounding residential developments to the north and east, and all necessary on-site and off-site improvements will be constructed in accordance with City standards, to include undergrounding of utilities pursuant to the City of Redlands subdivision regulations. The developer will pay their fair share of development impact fees (including applicable Police and Fire fees), and the project would not result in physical blight. The benefits of the proposed development to the City outweigh any direct cost to the City that may result, based on the information and conclusions of the socio-economic study prepared for the project.

2. *The benefit of the development project to the City outweighs any direct cost to the City that may result.*

   The cost/benefit model returns an annual revenue-to-cost ratio of 1.97, with approximately $398,315 in annual residential revenues to the City and $202,486 in annual recurring costs, resulting in an estimated annual surplus of $195,829.

   These fiscal estimates are based on the City's currently approved cost/benefit model, which has not been updated to reflect citywide revenue and cost projections for the current fiscal year. The City has retained a consultant to comprehensively update the cost/benefit model. Additionally, the cost/benefit model does not account for revenues generated by Measure T, the local one-percent sales tax increase that has been in effect since 2021.

   Notwithstanding these factors, the broader regional social and economic benefits of increasing the housing supply are considered to outweigh the potential fiscal impacts of the proposed development.

Section 2. Recommendation for Tentative Tract Map. Tentative Tract Map No. 20797 and its associated inclusionary housing plan are hereby recommended for approval based on the finding that the proposed subdivision, together with the provisions for its design and improvement, is consistent with the general plan and the proposed Pioneer Park Specific Plan, subject to the Conditions of Approval attached hereto as Exhibit "A" and Exhibit "B." Furthermore, none of the denial findings under RMC Section 17.07.070(D) can be made as follows:

1. *The proposed map is consistent with the general plan or any applicable specific plan, or other applicable provisions of this code.*

   The proposed map will be consistent with the General Plan, as proposed for amendment. The proposed "Medium Density Residential" land use designation allows for up to 15 dwelling units per acre and the proposed development features a net residential density of approximately 8.5 dwelling units per acre.

   The tentative tract map is also consistent with the policies contained within the General Plan, as analyzed in the staff report. The proposed map will be consistent with the Pioneer Park Specific Plan (Specific Plan No. 67), which is being processed concurrently, and the Specific Plan's design guidelines and development standards will support development of the project. The proposed map will also be consistent with the applicable provisions of the Redlands Municipal Code.

2. *The site is physically suitable for the type of development.*

   The project site is physically suitable for the type of development. The site has a relatively flat grade with a very gradual slope (approximately 2%) towards the west over distance, the design of the subdivision and residential lots will generally follow the grade of the site, and will not require excessive grading or land forming. All off-site and on-site improvements proposed as part of the project's design will meet all City standards and provide a safe environment for existing and future residents, and is large enough at 35 acres to be subdivided into 256 residential lots (one multi-family, 255 single-family), with construction of the necessary on-site circulation, on-site landscaping, and private on-site recreational space. On-site and off-site improvements proposed as part of the project's design will ensure the property is compatible with adjacent developments and mitigate potential impacts on traffic and other environmental factors to a level that is less than significant.

3. *The site is physically suitable for the proposed density of development.*

   The maximum density allowed within the "Medium Density Residential" land use designation is fifteen units per acre. The proposed development features a net residential density of approximately 8.5 dwelling units per acre. The project site is relatively flat in topography, and the design of the subdivision will generally follow the grade of the site without the need for excessive grading. All on-site and off-site improvements proposed as part of the project's design will meet all City standards and provide a safe environment for existing and future residents. The Pioneer Park Specific Plan is designed with approximately 4.6% of the land area for common, recreational open space, and Coyazo Park is located 1,350 feet to the north of the subject property. The City's current population

is approximately 74,000 residents and the ratio of existing parkland acres per 1,000 residents is 5.7, which exceeds the General Plan's parkland/recreational space goal for 5.0 acres per 1,000 residents, and the developer will pay applicable development impact fees (including fees for parks). As such, the site is physically suitable for the density of development proposed.

4. *The design of the subdivision or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.*

   The design of the subdivision and proposed improvements is not likely to cause substantial environmental damage or injure fish or wildlife or their habitat. Based on the Initial Study that has been prepared for the project, there are no environmental factors that cannot be mitigated to a level that is less than significant. The initial study/mitigated negative declaration lists mitigation measures for biological resources including pre-construction surveys for sensitive species. As such, the project is not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

5. *The design of the subdivision or the type of improvements are not likely to cause serious public health problems.*

   The design of the subdivision and the type of improvements are not likely to cause any serious public health problems. An air quality analysis including health risk assessment was prepared for project, and the project will be required to comply with all local, state, and federal laws addressing air quality impacts. The analysis found that the project would have a less than significant impact on air quality and health risks, and will be required to comply with standard rules and regulations of the South Coast Air Quality Management District. The nature of the residential use does not involve any substantial amounts of hazardous materials, and would not cause serious public health problems.

6. *The design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision.*

   The project will improve access in the immediate vicinity by installing public improvements such as sidewalks along West San Bernardino Avenue, West Pioneer Avenue, and a new segment of New York Street (project site frontages). Improvements and sidewalks will also be installed throughout the interior of the development as a standard requirement. Additionally, private streets, drive aisles or driveways, and pedestrian access points will be provided throughout the project site. The design of the subdivision will not conflict with any easements on or through the proposed subdivision, and the related street vacation of a portion of Tennessee Street right-of-way is being processed concurrently.

7. *That pursuant to California Government Code Section 66474.4, of the Subdivision Map Act, the land is not subject to a contract entered into pursuant to the California Land Conservation Act of 1965 ("Williamson Act").*

The subject property is not under a Williamson Act Contract pursuant to the California Land Conservation Act of 1965, and will not be detrimental or otherwise affect lands in agricultural use.

Section 3. Effective Date and Expiration. This resolution shall take effect upon adoption, and shall expire one year thereafter.

ADOPTED, SIGNED AND APPROVED this 27th day of October, 2026.

_____
Karah Shaw, Chair
Planning Commission

ATTEST:

_____
Katherine Coleson, Secretary
Planning Commission

I, Katherine Coleson, Secretary to the Planning Commission, hereby certify that the foregoing resolution was duly adopted by the Planning Commission at a regular meeting thereof held on the 27th day of October, 2026.

AYES:
NOES:
ABSENT:
ABSTAINED:

_____
Katherine Coleson, Secretary
Planning Commission

EXHIBIT A
CONDITIONS OF APPROVAL
TENTATIVE TRACT MAP NO. 20797

General Requirements

1. This approval is for Tentative Tract Map No. 20797 which proposes to subdivide approximately 35.3 acres (APNs: 0167-091-09-0000; 0167-091-10-0000, 0167-091-11-0000 and 0167-091-042-0000) located on the east side of Route 210, north side of West San Bernardino Avenue, south side of West Pioneer Avenue, and west of Tract No. 20257. The subdivision would: vacate the existing segment of Tennessee Street traversing the project site; dedicate a new segment of New York Street along the east side of the site; subdivide the site into 255 lots ranging in size from approximately 2,006 to 6,256 square feet for single-family residential development, one 0.41-acre lot for multifamily residential development, and 13 lettered lots totaling 4.54 acres for open space and stormwater treatment; and dedicate approximately 8.62 acres as public right-of-way for street purposes.
2. This approval of Tentative Tract Map No. 20797 shall expire twenty-four (24) months from the date of project approval unless extended in accordance with the provisions under Sections 17.07.110 and/or 17.07.120 of the Redlands Municipal Code or otherwise by statute.
3. The property owner and applicant and their successors and assigns, shall defend, by paying for the defense costs of the City of Redlands (for counsel retained by the City), indemnify and hold harmless the City of Redlands, and its elected officials, officers, employees, and agents, from and against any and all claims, actions, and proceedings (collectively "Claims") to attack, set aside, void or annul the approval of this Conditional Use Permit by the City, or Claims brought against the City due to acts or omissions in any way connected to the applicant's project that is the subject of this permit. This indemnification shall include, but not be limited to, damages, fees, costs, liabilities, and expenses incurred in such actions or proceedings, including damages for the injury to property or persons, including death of a person, and any award of costs or attorneys' fees. In the event any such action is commenced to attack, set aside, void or annul all, or any, provisions of this permit, or is commenced for any other reason against the City for acts or omissions relating to the applicant's project, within fourteen (14) City business days following notice of such action from the City, the applicant shall file with the City a performance bond or irrevocable letter of credit, or other form of security satisfactory to the City (the "Security") in a form satisfactory to the City, and in the amount of three hundred thousand dollars ($300,000.00), to ensure applicant's performance of its defense and indemnity obligations under this condition. The Security amount shall not limit the total indemnity obligation of the applicant pursuant to this condition. The failure of the applicant to provide the Security shall be deemed an express acknowledgement and agreement by the applicant that the City shall have the authority and right, without

objection by the applicant, to revoke all entitlements granted for the project pursuant to this permit. The City shall have no liability to the applicant for the exercise of City's right to revoke this permit.

4. Pursuant to Government Code Section 66020(d), certain fees, dedications, reservations or exactions imposed by the City as a condition of approval of this project are subject to a statutory ninety (90) day protest period. Please be advised that the ninety (90) day protest period for those fees, dedications, reservations and exactions which are subject to Government Code Section 66020(a) has commenced to run on the date this project was approved by the City.
5. The issuance of any permits shall comply with all applicable provisions of the Redlands Municipal Code and Specific Plan No. 67.
6. All plans submitted to the City shall reflect the City Council approval and any other changes required by the City Council, Planning Commission and/or staff. This condition applies to the site plan, landscape plans, building elevations and materials, and all other illustrations, text, or plans submitted to the City in connection with this project.
7. No final inspection or Certificate of Occupancy shall be granted until all conditions of approval have been satisfied.
8. The applicant shall record the subdivision by a final map. Building permits for development within the tract shall not necessarily be issued until a final map has been recorded.
9. The final map shall substantially conform to the tentative map as approved by the City Council.
10. Any conditions of approval determined by the City to not be completed prior to Final Map approval shall be included within the Subdivision Improvement Agreement entered into by the developer with the City.
11. The project is subject to the City's inclusionary housing requirements codified in Chapter 18.230 of the Redlands Municipal Code. The required In-lieu Fees shall be paid at the time that the first building permit is obtained for the Residential Development, except that, for phased projects, the developer may pay a pro rata share of the In-lieu Fee, based on the number and size of phases in the development, concurrently with the issuance of the first building permit for each phase of the Residential Development.
12. All setback lines shall be designated on the final map and reviewed by the Development Services Director or designee prior to final map approval (RMC Section 18.148.060.C).
13. Common open space and recreational areas shall utilize durable materials and related protection devices to protect the area from vandalism by individuals or the use of skateboards.

14. The applicant shall establish a Home Owners Association (HOA) for the care and maintenance of all property improvements held in common ownership of the subdivision. The HOA shall be formed for the property, and Conditions, Covenants and Restrictions (CC&R's) shall be prepared, submitted for review and approval by the City Attorney, **prior to approval of the Final Map**. The HOA and the CC&R's shall cover the care and maintenance of all property and improvements held in common ownership of the subdivision.

15. Conditions, Covenants and Restrictions ("CC&Rs") shall be prepared by the applicant and approved by the City for the project. The CC&Rs shall contain the following:

    a. A provision which reads substantially as follows: "The City shall have the right to review and approve any proposed amendment or termination of [the CC&Rs] when such termination or amendment would alter, amend, terminate or otherwise impair the rights of the City under those provisions of [the CC&Rs] which satisfy the conditions of approval imposed by the City for the project. All proposed amendments shall be submitted to the City's Development Services Director and shall be approved in writing by the City Attorney as a precondition of and prior to the recordation of such amendment."

    b. A provision which reads substantially as follows: "[The CC&Rs] shall be covenants running with the land, and shall, in any event, and without regard to technical classification or designation, legal or otherwise, be, to the fullest extent permitted by law and equity, binding for the benefit and the favor of, and enforceable by the City of Redlands. Although the City of Redlands shall be a beneficiary of [the CC&Rs], and shall have a right to enforce [them], the City of Redlands shall not be obligated hereunder to exercise such rights of enforcement."

    c. CC&Rs shall detail the ownership and maintenance requirements for Lots B, C, D and E, stating that the required open space areas for the project shall be owned and maintained by the Home Owners Association for the project in perpetuity.

    (RMC Section 17.09.060.H)

16. Each lot within the subdivision shall be served by an approved domestic water system and an approved sanitary sewer system in accordance with the provisions of the Redlands Municipal Code. (RMC Section 17.17.020.E,D)

17. Each lot within the subdivision shall be served by gas, electricity and other necessary utilities. (RMC Section 17.17.020.F)

18. Lot Grading Requirements

    a. When two (2) or more lots are graded, and cut and fill slopes of steeper than ten percent (10%) occur adjacent to the property line between the lots, the top of the slope shall be located at the property line.

b. Cut and fill slopes adjacent to property line and at other approved locations within the tract shall not be steeper than one vertical to two horizontal.

c. Any slopes over three feet in height shall be provided with irrigation systems and planted with a combination of groundcover, shrubs and trees as approved by the Development Services Department to prevent erosion. Final landscaping plans for slopes over three feet in height shall be filed with the Building and Safety Division prior to issuance of a permit for tract grading. (RMC Chapter 18.212)

19. The unlettered medians of "C" and "I" Streets shown on the tentative subdivision map shall be classified and labeled as lettered lots on the final map, unless otherwise approved by the City Council.

20. The segment of Tennessee Street through the project site should remain open to public vehicular and pedestrian traffic (subject to a temporary access easement to the City of Redlands) at all times until the new segment of New York Street passing through the project site has been constructed and is fully operational.

21. Primary point(s) of access for project-related construction traffic and deliveries of construction materials should be from San Bernardino Avenue to the greatest extent feasible (exceptions may be made for access from Pioneer Avenue and the new segment of New York Street when necessary).

CEQA Mitigation Measures

22. BIO-1: Pre-construction Burrowing Owl Surveys. To ensure burrowing owl remain absent from the Project site, a pre-construction burrowing owl clearance survey shall be conducted in accordance with California Department of Fish and Wildlife's (CDFW) 2012 Staff Report on Burrowing Owl Mitigation. Two surveys shall be conducted, the first 14-30 days prior to ground disturbing activities and the second within 24 hours immediately before ground disturbing activities. If no burrowing owls are observed onsite, no further review will be required.

    If the site survey determines the presence of burrowing owl, mitigation in accordance with requirements set forth by CDFW shall be implemented as follows:

    A. If burrowing owls are found on the project site, construction activities should be avoided during the breeding season (February 1 to August 31).

    B. If an active burrow is found during the breeding season and construction activities cannot be avoided, a qualified biologist will establish buffers around occupied burrowing owl nests in accordance with the *Staff Report on Burrowing Owl Mitigation, State of California Natural Resource Agency, Department of Fish and Game (May 7, 2012)* to avoid any direct or indirect impacts to burrowing owl.

    C. If impacts to active burrows cannot be avoided, coordination will need to occur with CDFW to determine whether a California Endangered Species Act (CESA) Incidental Take Permit (ITP) will be required pursuant to Fish and Game Code section 2081. As part of the ITP, a plan to minimize and fully mitigate project-related impacts, avoid the incidental take of burrowing owl, and minimize disturbance of the species' habitat will need to be

prepared for approval by CDFW prior to commencing project activities. The plan should include methods for the relocation and/or exclusion of the species. Unavoidable impacts to occupied burrowing owl burrows and habitat will require the permanent protection of mitigation lands and habitat enhancement or expansion, as determined through consultation with CDFW.

D. Active relocation and eviction/passive relocation shall require the preservation and maintenance of suitable burrowing owl habitat determined through coordination with the Wildlife Agencies.

23. BIO-2: Pre-construction Nesting Bird Survey. Vegetation removal shall occur outside of the nesting bird season (generally between February 1 and September 15). If vegetation removal is required during the nesting bird season, the applicant must conduct avoidance surveys for nesting birds prior to initiating vegetation removal/clearing. Surveys will be conducted by a qualified biologist(s), as approved by the lead agency, within three days of vegetation removal. If active nests are observed, a qualified biologist will determine appropriate minimum disturbance buffers and other adaptive mitigation techniques (e.g., biological monitoring of active nests during construction-related activities, staggered schedules, etc.) to ensure that impacts to nesting birds are avoided until the nest is no longer active. At a minimum, construction activities will stay outside of a 300-foot buffer around the active nests. For raptor species, the buffer is to be expanded to 500 feet. The approved buffer zone shall be marked in the field with construction fencing, within which no vegetation clearing or ground disturbance shall commence until the qualified biologist verifies that the nests are no longer occupied, and the juvenile birds can survive independently from the nests. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, normal construction activities may occur. The surveys shall be documented with a biological resources survey log and at the conclusion of monitoring shall be submitted to the City of Redlands for recordkeeping.

24. CUL-1: Archeological Monitoring. A Secretary of the Interior qualified archaeologist with at least 3 years of regional experience in archaeology shall monitor all ground-disturbing pre-construction and construction activities. Prior to issuance of grading permits, the qualified archaeologist shall develop a Cultural Resources Management Plan to address the details, timing, and responsibility of all archaeological and cultural resource activities that occur on the Project site and ensure that any discovered resources are avoided and preserved in place. The Cultural Resources Management Plan shall be developed in coordination with the consulting tribes, including the Gabrieleño Band of Mission Indians – Kizh Nation, Soboba Band of Luiseño Indians, Morongo Band of Mission Indians, Yuhaaviatam of San Manuel, and Agua Caliente Band of Cahuilla Indians, to describe how the City's Mitigation Measures will be carried out during the course of project related ground disturbing activity and address the details of all activities and provides procedures that must be followed in order to reduce the impacts to cultural resources to a level that is less than significant as well as address potential impacts to undiscovered buried Tribal Cultural Resources and archaeological resources associated with implementing projects. The plan shall include a scope of work, project grading and development scheduling, pre-construction meeting (with consultants, contractors, and monitors), a monitoring schedule during all initial ground-disturbance related activities,

safety requirements, and protocols to follow in the event of previously unknown cultural resources discoveries that could be subject to a cultural resources evaluation. The Archaeologist shall conduct Cultural Resource Sensitivity Training, in conjunction with the Tribal Historic Preservation Officer and/or designated Tribal Representative from one or more consulting tribes. The training session shall focus on the archaeological and tribal cultural resources that may be encountered during ground- disturbing activities as well as the procedures to be followed in such an event. The Cultural Resources Management Plan shall be submitted to the City and the consulting tribes for review and comment, prior to final approval by the City. In case of disagreement on the terms and procedures set forth in the Cultural Resources Management Plan, the City of Redlands Director of Development Services shall have the ultimate authority for approving or revising the Cultural Resources Management Plan.

In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and the qualified archaeologist shall assess the find. Work on other portions of the project outside the buffered area may continue during the assessment period. During the course of construction, all discovered resources shall be temporarily curated in a secure location on site or at the offices of the project archaeologist. The removal of any artifacts from the project site will need to be thoroughly inventoried with tribal monitor oversight of the process.

The Cultural Resources Management Plan shall stipulate that the landowner(s) and/or project applicant shall relinquish ownership of all cultural resources and provide evidence to the satisfaction of the City of Redlands Director of Development Services that all archaeological materials recovered during the archaeological investigations have been handled through one of the following methods:

- Avoidance and preservation in place or reburial onsite. The discovered resource remains in its original location of discovery, and stipulations are developed for long term preservation. This may include project redesign to avoid the resource, soil capping, creative landscaping efforts to deter foot traffic, etc. If avoidance and preservation in place is determined to be not feasible;
- Relocation of the resource(s) and reburial onsite shall be required. This shall include measures and provisions to protect the reburial area from any future impacts. Reburial shall not occur until all cataloging, analysis, and special studies have been completed on the cultural resources. Details of contents and location(s) of the reburial shall be included in a Monitoring Report.
- Curation at a San Bernardino County curation facility that meets federal standards per 36 Code of Federal Regulations Part 79 and, therefore, will be professionally curated and made available to other archaeologists/researchers and tribal members for further study. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility identifying that archaeological materials have been received and that all fees have been paid.

In addition, the project would be required to adhere to Mitigation Measure TCR-2. Consulting tribes, including the Gabrieleño Band of Mission Indians – Kizh Nation,

Soboba Band of Luiseño Indians, Morongo Band of Mission Indians, Yuhaaviatam of San Manuel, and Agua Caliente Band of Cahuilla Indians, shall be contacted regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the consulting tribes and archaeologist disagree on preferred treatment, the ultimate authority shall be the City of Redlands Director of Development Services.

If human remains or funerary/burial objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code Section 7050.5 and that code enforced for the duration of the project.

A Monitoring Report documenting the field and analysis results and interpreting the artifact and research data within the research context shall be completed and submitted to the City of Redlands Development Services Department and the consulting tribes prior to issuance of certificate(s) of occupancy. The report will include Department of Parks and Recreation Primary and Archaeological Site Forms if any are required.

25. GEO-1: Paleontological Resources Impact Mitigation Program (PRIMP). Prior to the issuance of grading permits, the Applicant shall provide a letter to the City Development Services Director, or the Director's designee, from a professional paleontologist, stating that a qualified paleontologist (who meets the Society of Vertebrate Paleontology's definition for qualified profession paleontologist) has been retained to provide services for the proposed Project. The paleontologist shall develop a Paleontological Resources Impact Mitigation P lan (PRIMP) to mitigate t he potential impacts to unknown buried paleontological resources that may exist on-site. The PRIMP shall be provided to the City for review and approval. The PRIMP shall require that the paleontologist be present at the pre-grading conference to establish procedures for paleontological resource surveillance. Prior to commencement of grading activities, the City of Redlands Planning Division, or designee, shall verify that all Project grading and construction plans specify the requirements herein related to the PRIMP and the unanticipated discovery of paleontological resources.

    In the event paleontological resources are encountered, ground disturbing activity within 50 feet of the area shall cease. The paleontologist shall examine the materials encountered, assess the nature and extent o f t he find, and recommend a course of action to further investigate and protect or recover and salvage those resources that have been encountered pursuant to the guidelines of the Society of Vertebrate Paleontology.

    Criteria for discarding specific fossil specimens shall be made explicit in the PRIMP. If the qualified paleontologist determines that impacts to a sample containing significant paleontological resources cannot be avoided by Project construction, then recovery techniques shall be applied. Actions include recovering a sample of the fossiliferous material prior to construction, monitoring construction activities and halting construction if an important fossil needs to be recovered, and/or cleaning, identifying, and cataloging specimens for curation and research purposes. Recovery, salvage, and treatment shall be done at the Applicant's expense. All recovered and salvaged resources shall be prepared

to the point of identification and permanent preservation by the paleontologist. Resources shall be identified and curated into an established accredited professional repository. The paleontologist shall have a repository agreement in hand prior to initiating recovery of the resource. If no institution accepts the fossil(s), they shall be donated to a local school in the area for educational purposes. Accompanying notes, maps, and photographs shall also be filed at the repository and/or school. A report documenting the results of the monitoring, including any salvage activities and the significance of any fossils, shall be prepared and submitted to the City of Redlands Planning Division. The report and inventory, when submitted to the City of Redlands Planning Division, shall signify completion of the program to mitigate impacts to paleontological resources.

26. TCR-1: Retain Native American Monitors Prior to Commencement of Ground-Disturbing Activities

    A. The Project plans, specifications, and grading permits shall state that the Project applicant shall retain Native American monitor(s) from or approved by one or more consulting tribes including the Gabrieleño Band of Mission Indians – Kizh Nation, Soboba Band of Luiseño Indians, Morongo Band of Mission Indians, Yuhaaviatam of San Manuel Nation, and Agua Caliente Band of Cahuilla Indians. Participation in monitoring is entirely voluntary, and any tribe may choose not to participate, may discontinue participation at any time, or defer monitoring to other tribes. Monitoring may be conducted by multiple qualified tribal representatives on a simultaneous or rotating schedule, as determined by the consulting tribes. The monitor(s) shall be retained a minimum of 15 days prior to the commencement of any "ground-disturbing activity" for the Project (both onsite and any offsite locations that are included in the Project description and/or required in connection with the proposed Project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, tree removal, boring, grading, excavation, drilling, and trenching.

    B. A copy of the executed monitoring agreement(s) shall be submitted to the Lead Agency prior to the earlier of the commencement of any ground-disturbing activity or the issuance of any permit necessary to commence a ground-disturbing activity.

    C. The monitor(s) shall complete daily monitoring logs that shall provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the tribe(s). Monitor logs shall identify and describe any discovered TCRs, including but not limited to, Native American cultural and historical artifacts, or places of significance, etc. Copies of monitor logs shall be provided to the Project applicant upon written request to the consulting tribes.

    D. Onsite tribal monitoring shall conclude upon the earlier of the following (1) written confirmation to the consulting tribes from a designated point of contact for the Project applicant or Lead Agency that all ground-disturbing activities and phases associated with the Project site or in connection with the Project are complete; or (2) a determination and written notification by the consulting tribes to the Lead Agency that no future, planned

construction activity and/or development/construction phase at the Project site possesses the potential to impact TCRs.

E. If a significant Tribal Cultural Resource is encountered, as defined by CEQA (as amended, 2015), a consulting Tribal which did not elect to monitor the project at the beginning of development, may elect to have a Tribal monitor present for the remainder of the project.

27. TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)

    A. In the event of the discovery of unidentified and/or potential tribal cultural resources, all consulting Native American Tribal representatives that requested notification of any unanticipated discovery of tribal cultural resources on the Project shall be notified. The consulting tribes, including the Gabrieleño Band of Mission Indians – Kizh Nation, Soboba Band of Luiseño Indians, Morongo Band of Mission Indians, Yuhaaviatam of San Manuel Nation, and Agua Caliente Band of Cahuilla Indians, in consultation with the Lead Agency and the qualified Secretary of Interior standards archeologist, shall determine the significance of the discovered resource.

    B. Avoidance and preservation in place or reburial onsite. The discovered remains in its original location of discovery, and stipulations are developed for long term preservation. This may include project redesign to avoid the resource, soil capping, creative landscaping efforts to deter foot traffic, etc. If avoidance and preservation in place is determined to be not feasible;

    C. Relocation of the resource(s) and reburial onsite shall be required. This shall include measures and provisions to protect the reburial area from any future impacts. Reburial shall not occur until all cataloging, analysis, and special studies have been completed on the cultural resources. Details of contents and location(s) of the reburial shall be included in a Monitoring Report.

    D. Curation at a San Bernardino County curation facility that meets federal standards per 36 Code of Federal Regulations Part 79 and, therefore, will be professionally curated and made available to other archaeologists/researchers and tribal members for further study. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility identifying that archaeological materials have been received and that all fees have been paid.

28. TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects

    A. Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute.

    B. If Native American human remains and/or grave goods are discovered or recognized on the Project site, then Public Resource Code 5097.9, 5097.98, as well as Health and

Safety Code Section 7050.5 shall be followed. No photographs are to be taken except by the coroner, with written approval by the consulting tribes including the Gabrieleño Band of Mission Indians – Kizh Nation, Soboba Band of Luiseño Indians, Morongo Band of Mission Indians, Yuhaaviatam of San Manuel Nation, and Agua Caliente Band of Cahuilla Indians.

C. Human remains and grave/burial goods shall be treated alike per California Public Resources Code sections 5097.98(d)(1) and (2).

D. Preservation in place (i.e., avoidance) is the preferred manner of treatment for discovered human remains and/or burial goods.

E. Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

Building & Safety Division

29. When the Entitlement Review is approved submit complete construction drawings including structural calculations, energy calculations and a soils report to Building and Safety for plan review in accordance with the current edition of the California Building and Fire Codes including all local ordinances and standards which are effective at the time of Plan Check Submittal.

30. The site is located is a High Fire Hazard Severity Zone, ignition resistant construction and landscaping shall comply with the California Wildland Urban Interface Code.

Fire Department

31. Project site is located in a High Fire Hazard Severity Zone as determined by Cal Fire/ State Fire Marshal per the most current maps issued in 2025.

    a. Project will need to submit a Fire Protection Plan in coordination with the fire access/supply plan to Fire (Code Reference: 2025 CA WUI Code Section 602 & RMC 15.30).

    b. Exterior features of the structures will need to include the wildfire protection features (Code Reference: 2025 CA WUI Code Section 501)

    c. Site and individual lot landscaping plans will need to comply with the fire-resistant planting/species list and layouts (Code Reference: 2025 CA WUI Code Section 603 & RMC 15.30)

32. Fire Protection Deferred Submittal Information: Deferred submittals for fire protection systems listed below will apply to this project. These are electronic submittals to uploaded to the City's intake permit portal available on the Fire Department webpage.

    a. Fire Access & Water Supply Plan Note: Fire Access & Water Supply Plan shall be submitted prior the grading plans.

b. Fire Sprinkler Systems Additional fire sprinkler design/coverage may be required based on the motorcourt/drive aisle fire hose pull coverage requirements determined with the project's Fire Access & Water Supply Plan review.

c. Underground Fire Line and Fire Hydrant system (if private infrastructure).

33. Fuels Management and Weed Abatement:

a. From the present time until project construction phase, property owner is responsible to maintain compliance with Redlands Municipal Code Chapter 8.40 regarding Weed Abatement and Fuels Management.

b. Weeds and annual grasses shall be maintained at 4 inches of growth or less.

c. Tumbleweeds and similar uncultivated vegetation shall be removed.

Other City Departments/Divisions

34. Conditions of Approval from the following City Departments/Divisions are applicable to the project, and are hereby incorporated by reference:

a. Land Use Engineering Division (Exhibit B)

EXHIBIT B
CONDITIONS OF APPROVAL
LAND USE ENGINEERING DIVISION

[Attached]

REDLANDS DEVELOPMENT SERVICES DEPARTMENT
LAND USE ENGINEERING
DEVELOPMENT REQUIREMENTS
TENTATIVE TRACT NO. 20797

Date of P.C. Meeting:	**October 13, 2026**
Applicant:	**Redlands Pioneer Partners, LLC**
Location:	**Northeast Corner I-210 and San Bernardino Avenue**
Project Description:	**Subdivide Approximately 35.3 Acres into 255 Single-Family**

The applicant shall comply with the following engineering requirements to allow for the orderly development of the surrounding area and for public health and safety.

All requirements for development shall be consistent with requirements set forth in Specific Plan No. 67; applicable sections of Redlands Municipal Code; latest edition of "Redlands Standard Specifications and Detail Drawings for Design and Construction of Public Improvements"; latest edition of American Public Works Association "Standard Plans for Public Works" and "Standard Specifications for Public Works Construction – Greenbook"; latest edition of "Redlands Water Systems Standard Specifications"; latest edition of "Redlands Sanitary Sewer Systems Standard Specifications"; and current Redlands policies and guidelines relative to development projects.

A. The following items are required prior to issuance of the GRADING PERMIT.

1. Pay plan check fee as established per resolution. The amount will be determined at plan check submittal.

2. Plans required to be submitted include:
   a. Precise Grading Plan. Grading plans shall be coordinated with the existing and proposed off-site improvements. (RMC 15.04)
   b. SWPPP/Erosion Control Plan. Erosion/Sediment Control Plan shall be submitted for review and approval. A copy of the project's Storm Water Pollution Prevention Plan (SWPPP) shall be submitted for review. SWPPP Best Management Practices (BMPs) to prevent and control discharges to the municipal separate storm sewer (drain) system shall be in effect for the entire duration of project construction to its completion and acceptance by the City. (RMC 13.54)
   c. Water Quality Management Plan. Submit final Water Quality Management Plan (WQMP) for review and approval. WQMP shall consist of post construction Best Management Practices (BMPs) prepared in accordance with the requirements and guidelines of the San Bernardino County Stormwater Program. The requirements of the WQMP shall remain in effect throughout the life of the project. (California State Order No. R8-2010-0036)

   All plans used as reference for design shall be listed on title sheet of all plans with reference numbers. All plans shall be submitted on 24" x 36" size sheets. Six (6)

copies of each are required. After final review, grading and SWPPP plans shall be submitted on 24" x 36" size, min. 4 mil, mylar sheets for City's approval.

3. Submission of plan sets shall be complete and include all required engineering designs and drawings listed in No. 2 above. All plans submitted shall be substantially complete, and no plan check queue place-holder plans will be accepted. An incomplete plan submittal will not be accepted for plan check.

4. All support documentation shall be submitted with the plans to be checked. Submission shall include:
   a. Hydrology Report and Hydrologic Calculations; (RMC 17.07.030)
   b. Geotechnical Report; (RMC 17.07.040)
   c. Easement Documents. (RMC 17.09.050)

5. A final WQMP that is in substantial conformance with the preliminary WQMP and in full conformance with the WQMP Guidance Document shall be submitted and approved prior to the approval of precise grading plans.

6. The post-construction stormwater discharge rate (Q) from a 100 year storm event shall not be greater than the pre-construction stormwater discharge rate (Q).

7. Cash cleanup deposit shall be submitted ($3,000.00). Deposit will be reimbursed after the work is completed and accepted by the City upon written request. (RMC 12.16.290)

8. For all development requiring coverage under the state of California General Storm Water Permit, in effect at the time of permit issuance, and whom have filed with the State Board a Notice of Intent (NOI), a copy of the Waste Discharge Identification Number (WDID) and NOI shall be submitted for review and file. Call (866) 563-3107. (RMC 13.54)

9. The Final WQMP shall also include a site trash plan detailing the installation, operation, and maintenance of a Full Capture System (FCS) for loose trash. The intent of the FCS is to capture loose trash preventing the trash from entering the site storm drains and basins. BMPs or devices used as FCS devices shall require acceptance by the City Engineer. Full Capture Systems are defined as treatment controls (either a single device or a series of devices) capable of trapping all particles 5 mm or greater. In addition, the FCS shall trap trash from the greater of:

   a. A flow not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm. Precipitation intensity shall be determined using the NOAA ATLAS 14 Point Precipitation Frequency Estimates web site; or
   b. A flow rate equal to the on-site storm water conveyance system including pipes, channels, and swales.

B. The following items are required prior to RECORDATION OF TRACT MAP.

1. Prior to recordation of the final tract map, the Applicant shall complete the applicable plans, approvals, agreements and security/bonding required for the improvements identified in this Section. Physical construction of such improvements may occur following map recordation in accordance with the approved improvement plans, Subdivision Improvement Agreement, and applicable construction sequencing requirements.

2. Pay plan check fee as established per resolution. The amount will be determined at plan check submittal.

3. Plans required to be submitted shall include (RMC 17.17.060):
   a. Tract Map;
   b. Street Improvement;
   c. Storm Drain Construction;
   d. Pavement Striping and Signage Plans (including reflectorized pavement markers);
   e. Street Tree Installation – Street trees shall be provided as per the approved Street Tree List;
   f. Traffic Signal Modification/Construction;
   g. Street Light Installation – Provide street lighting plan which show approved locations of service pedestal(s), conduits, street lights, appurtenances, and any necessary detail by Southern California Edison Company;
   h. Potable Water Main Installation;
   i. Recycled Water Main Installation;
   j. Sewer Main Installation; and
   k. Approved Onsite Potable and Irrigation Water Line Installation.

   All plans used as reference for design shall be listed on title sheet of all plans with reference numbers. All plans shall be submitted on 24" x 36" size sheets. Three (3) copies of each are required. After final review, plans shall be submitted on 24" x 36" size, min. 4 mil, mylar sheets for City's approval.

4. Submission of plan sets shall be complete and include all required engineering designs and drawings listed in No. 2 above. All plans submitted shall be substantially complete, and no plan check queue place-holder plans will be accepted. An incomplete plan submittal will not be accepted for plan check.

5. All support documentation shall be submitted with the plans to be checked. Submission shall include (RMC 17.09.060):
   a. Title Reports and backup documents for the property;
   b. All record maps and deeds referenced on the Tract/Parcel Map;
   c. Easement Documents;
   d. Boundary and Lot Closure Calculations; and
   e. Record plans, maps and documents.

6. Finalize and obtain all necessary onsite and offsite permissions, permits, easements, right-of-way, and properties in order to satisfy the conditions of approval for this project. Such items may include:
   a. Encroachment Permits from Caltrans, County, and other agencies.

7. Pay the required development impact fees per ordinance in effect at time of approval of Final Tract Map. The exact amount will be determined based upon the review of the final building plans and project information. Development Impact Fees shall include;
   - Water Source Acquisition Charge (RMC 13.40);
   - Water/Sewer/Recycled Water Frontage Charges; (RMC 13.44 and 13.12) and
   - Remaining Development Impact Fees will be due at time of building permit issuance or water meter installation (RMC 13.48.030 and Redlands Ordinance No. 2830).

8. All off-site improvements shall be designed by a Civil Engineer licensed in the State of California. All existing utilities shall be pot-holed to determine the actual depth if no signed plan is available. Field notes will be submitted at time of submitting the plan for review and plan checking (RMC 17.17.060).

9. The approximate locations of existing underground utilities shall be shown on the improvement/site/grading plans. The utilities shall be plotted from record and field data. The City of Redlands and the design Engineer assume no liability as to the exact location of said lines where locations are not shown.

10. Submission of approved onsite potable and irrigations plans is required prior to connection to recycled water system. All onsite improvements shall be done in accordance with the Water Resources Control Board, Division of Drinking Water requirements for recycled water. City shall submit plans to Division of Drinking Water for approval prior to final approval and installation of irrigation meters.

11. Final City approved mylars for all public improvements shall be on file with the Municipal Utilities and Engineering Department.

12. Requirements for San Bernardino Avenue (RMC 17.15 and 17.17):

    a. Dedicate to provide for a 60 foot half street right-of-way width including a corner cutoff at the property line return to accommodate the curb return and pedestrian ramp;
    b. Construct standard curb and gutter 52 feet north side of street centerline;
    c. Provide full depth construction/reconstruction consistent with the City standard or alternative method of street rehabilitation as accepted by the City Engineer between the new curb and gutter to the street centerline verified through a geotechnical report;

d. Construct standard meandering sidewalk along the entire street frontage and ramps at all curb returns. Provide sidewalk easement across Lettered Lots A and B as accepted by the City engineer;
e. Install LED ornamental streetlight(s)with the equivalent illumination of a 150 watt sodium vapor streetlights. Streetlight spacing shall be determined by the City of Redlands design specifications. Location of the light will be determined at time of plan preparation. Coordinate with City staff for guidance. Prepare and submit a separate street lighting plan for City approval;
f. Provide street trees spaced every 40 feet avoiding sewer and water laterals. Prepare and submit a separate street tree plan for City approval;
g. Install a traffic signal at the proposed New York Street intersection in substantial conformance to the Traffic Impact Analysis prepared by EPD Solutions and as accepted by the City Engineer.
h. Provide a bus stop and pad as accepted by Omnitrans and the City Engineer.
i. Construct underwalk drain, if necessary;
j. Use traffic index of 9.0;
k. Install a minimum 8 inch diameter recycled water main including necessary valves and appurtenances; and
l. Install residential fire hydrants as required by the Redlands Fire Department.

13. Requirements for Pioneer Avenue (RMC 17.15 and 17.17):

a. Dedicate to provide for a 33 foot half street right-of-way width including a corner cutoff at the property line return to accommodate the curb return and pedestrian ramp;
b. Construct standard curb and gutter 22 feet south side of street centerline;
c. Provide full depth construction/reconstruction consistent with the City standard or alternative method of street rehabilitation as accepted by the City Engineer between the new curb and gutter to the street centerline verified through a geotechnical report;
d. Construct standard property line adjacent sidewalk along the entire street frontage and ramps at all curb returns;
e. Install LED ornamental streetlight(s) with the equivalent illumination of a 150 watt sodium vapor streetlights. Streetlight spacing shall be determined by the City of Redlands design specifications. Location of the lights will be determined at time of plan preparation. Coordinate with City staff for guidance. Prepare and submit a separate street lighting plan for City approval;
f. Provide street trees spaced every 40 feet avoiding sewer and water laterals. Prepare and submit a separate street tree plan for City approval.
g. Install a traffic signal at the proposed New York Street intersection in substantial conformance to the Traffic Impact Analysis prepared by EPD Solutions and as accepted by the City Engineer.
h. Construct underwalk drain, if necessary;

i. Use traffic index of 6.0; and
j. Install residential fire hydrants as required by the Redlands Fire Department:
k. Install a minimum 8 inch diameter sewer main with manholes and appurtenances connecting to the existing 8" sewer main approximately 460 feet west of I-210 as accepted by the City Engineer.

14. Requirements for New York Street (RMC 17.15 and 17.17):

a. Dedicate to provide for a 66 foot street right-of-way width including a corner cutoff at the property line return to accommodate the curb return and pedestrian ramp;
b. Construct standard curb and gutter 22 feet both sides of street centerline;
c. Provide full depth construction consistent with the City standard or as accepted by the City Engineer between the new curb and gutter verified through a geotechnical report;
d. Construct standard property line adjacent sidewalk along the entire street frontage and ramps at all curb returns;
e. Install LED ornamental streetlight(s) with the equivalent illumination of a 150 watt sodium vapor streetlight. Streetlight spacing shall be determined by the City of Redlands design specifications. Location of the lights will be determined at time of plan preparation. Coordinate with City staff for guidance. Prepare and submit a separate street lighting plan for City approval;
d. Provide street trees spaced every 40 feet avoiding sewer and water laterals. Prepare and submit a separate street tree plan for City approval.
e. Use traffic index of 6.0;
f. Install a minimum 8 inch diameter potable water main including necessary valves and appurtenances; and
g. Install residential fire hydrants as required by the Redlands Fire Department.

15. Requirements for Interior Public Streets (RMC 17.15 and 17.17):

a. Dedicate to provide for a 56 foot street right-of-way width including a corner cutoff at the property line return to accommodate a curb return and pedestrian ramp;
b. Construct standard curb and gutter 18 feet both sides of street centerline;
c. Provide full depth construction consistent with the City standard or as accepted by the City Engineer between the new curb and gutter verified through a geotechnical report;
d. Construct standard property line adjacent sidewalk along the entire street frontage and ramps at all curb returns. Provide sidewalk easements as needed;
e. Install LED ornamental street light(s) with the equivalent illumination of a 100 watt sodium vapor streetlight. Streetlight spacing shall be determined by the City of Redlands design specifications. Location of the lights will

be determined at time of plan preparation. Coordinate with City staff for guidance. Prepare and submit a separate street lighting plan for City approval;

f. Provide street trees spaced every 40 feet avoiding sewer and water laterals. Prepare and submit a separate street tree plan for City approval.
g. Construct standard right-angle turns per City standard and as accepted by City Engineer;
h. Use traffic index of 5.0;
i. Install a minimum 8 inch diameter potable water main including necessary valves and appurtenances;
j. Install residential fire hydrants as required by the Redlands Fire Department; and
k. Install a minimum 8 inch diameter sewer main with manholes and appurtenances.

16. Provide for adequate drainage facilities. The applicant shall provide and submit all necessary hydrology/hydraulic studies and calculations in accordance with the San Bernardino County Hydrology Manual (RMC 17.17).

17. Install minimum 8" non-potable main(s) in the interior streets as accepted by the City Engineer for the various lettered lots to be in compliance with AB 1572.

18. Optimize existing and proposed traffic signals in substantial conformance to the Traffic Impact Analysis prepared by EPD Solutions and as accepted by the City Engineer:

a. W. Pioneer Avenue/New York Street/Citrus Valley High School Entrance;
b. W. San Bernardino Avenue/210 EB Ramps/Citrus Plaza Drive;
c. W. San Bernardino Avenue/219WB Ramps/Tennessee Street;
d. W. San Bernardino Avenue/New York Street; and
e. W. Lugonia Avenue/Tennessee Street.

19. Conditions, Covenants and Restrictions ("CC&Rs") shall be prepared by the applicant and approved by the City for the project which address cross lot drainage, Water Quality Management Plan requirements, sewer usage, water service, and solid waste disposal, which are shared by the property owners. The CC&Rs shall contain the following:

a. A provision which reads substantially as follows: "The City shall have the right to review and approve any proposed amendment or termination of [the CC&Rs] when such termination or amendment would alter, amend, terminate or otherwise impair the rights of the City under those provisions of [the CC&Rs] which satisfy the conditions of approval imposed by the City for the project. All proposed amendments shall be submitted to the City's Development Services Director and shall be approved in writing by the City Attorney as a precondition of and prior to the recordation of such amendment."

b. A provision which reads substantially as follows: "[The CC&Rs] shall be covenants running with the land, and shall, in any event, and without regard to technical classification or designation, legal or otherwise, be, to the fullest extent permitted by law and equity, binding for the benefit and the favor of, and enforceable by the City of Redlands. Although the City of Redlands shall be a beneficiary of [the CC&Rs], and shall have a right to enforce [them], the City of Redlands shall not be obligated hereunder to exercise such rights of enforcement."

20. The CC&Rs shall be subject to a joint review by the all affected City Department Directors and the City Attorney's Office. The applicant shall be required to pay for the review of the CC&Rs by the affected Department Directors and the City Attorney's Office at such persons' hourly billing rates.

21. The CC&Rs shall be submitted to the City at least thirty (30) days prior to the submission of any request for approval of the final map. The CC&Rs shall subsequently be recorded, in the form approved by the City, prior to or at the same time as the final map.

22. Vacate Tennessee Street through the project site as accepted by the City Engineer and dedicate a temporary access easement in same action. Applicant will need to petition for a quitclaim of the access easement after New York Street has been constructed and is acceptable to the City Engineer and Fire Marshall for use as a north/south connector between San Bernardino Avenue and Pioneer Avenue.

23. As a condition of and prior to the final tract map approval, the applicant shall (1) petition the City for annexation of the property comprising Tentative Tract Map No. 20797 to the City's Community Facilities District No. 2004-1, or a similar City community facilities district, as designed by the City; (2) take actions reasonable or necessary to annex such property to community facilities district; and (3) pay the reasonable and actual costs incurred by the City in annexing the property to the community facilities district; all for the purpose of maintenance of street trees (California Community Facilities Act)

24. All off-site utilities shall be placed underground. The undergrounding shall include power poles located along the project site's street frontage(s) and may include power poles beyond the site's boundary as determined by Southern California Edison. Those overhead utility lines that are 66KV or greater will not be required to be undergrounded. Any power pole(s) that contain a streetlight will be required to install a standard streetlight, in accordance with the Municipal Utilities and Engineering Department's standards. Plans shall be submitted that detail the undergrounding of all off-site utilities, subject to review and approval by the City Engineer. (RMC 17.17.020)

25. Install reduced pressure principle backflow devices as required by City Engineer. (RMC 13.20)

26. Improvement bonds must be posted for the total estimated cost of off-site improvements as follows (RMC 17.17.080):

Performance	100% security (due prior to final map approval)
(Warranty)	10% security (due at time of acceptance of improvements)
Labor and Materials	50% security (due prior to final map approval)

Acceptable security forms: Surety Bond(s), Letter of Credit from a qualified bank or institution, Cash Deposits, or Set Aside Letter (savings account) in City's name subject to approval of the City Attorney and Finance Director.

27. Survey and Monumentation cash bond must be posted.

28. The 10% warranty security will be retained for one year after acceptance of public improvements by the City for warranty of off-site work.

29. Execute Subdivision Improvement Agreement (RMC 17.17.070).

C. The following items are required prior to issuance of the BUILDING PERMIT

1. Pay plan check fee as established per resolution. The amount is to be determined at plan check submittal.

2. Provide pad certification and compaction report to the Building and Safety Department.

3. Pay the required development impact fees per ordinance in effect at time of issuing the building permit. The exact amount will be determined based upon the review of the final building plan or project information. Development Impact Fees shall include:
   - Transportation Facilities; (RMC 3.54)
   - Fire Facilities; (RMC 3.60)
   - General Government Facilities; (RMC 3.60)
   - Library Facilities; (RMC 3.60)
   - Open Space/Park; (RMC 3.32)
   - Police Facilities; (RMC 3.60)
   - Storm Drain Facilities; (RMC 3.56)
   - Water Capital Improvement Charge; (RMC 3.48)
   - Recycled Water Capital Improvement Charge; (RMC 3.53)
   - Water Source Acquisition Charge; (RMC 13.40)
   - Sewer Capital Improvement Charge; (RMC 3.44)
   - Solid Waste Capital Improvement Charge; (RMC 3.70) and

- Water/Sewer/Recycled Water Frontage Charges *.(RMC 13.44 and 13.12.)

  * These charges are required for building permit issuance if Final Tract Map was not required for the project or charges were not paid with the Final or Parcel Map approval.

4. Although this project will have an on-going inspection throughout construction, a final inspection for all off-site improvements must be scheduled by developer to certify that these improvements comply with City specifications. (RMC 12.16.090)

5. Submit recycling plans for site demolition/construction for review and approval in accordance with Chapter 13.66 of the Redlands Municipal Code.

6. Tract map shall be recorded and proof of recordation provided.

D. The following items are required prior to approval of APPLICATION FOR WATER SERVICE CONNECTION and prior to WATER METER INSTALLATIÓN.

1. Pay the Water Capital Improvement Charge; (RMC 3.48.030)

2. Pay Water Source Acquisition Charge; (RMC 13.40)

3. Pay the Recycled Water Capital Improvement Charge; (RMC 3.53.050)

4. Water/Sewer/Recycled Water Frontage Charges; (RMC 13.44 and 13.12.) and

5. Pay the Water Meter Charge.

E. The following items are required prior to issuance of the ENCROACHMENT PERMIT.

1. Cash cleanup deposit shall be submitted ($3,000.00). Deposit will be reimbursed after the work is completed and accepted by the City upon written request. (Required unless previously submitted under Sections A, B or C.) (RMC 12.16.290)

2. Section 4216/4217 of the Government Code requires a Dig Alert Identification Number be issued before a "Permit to Excavate" will be valid. For your Dig Alert Identification Number, call Underground Service Alert toll free, 1-800-227-2600, two (2) working days prior to conducting any excavation. (RMC 12.20.120)

3. Encroachment Permit application and two (2) sets of City approved plans must be submitted for all off-site improvements. Encroachment Permit fees shall be paid prior to issuance of Encroachment Permit. (RMC 12.16.010)

4. A California OSHA Permit Number for all work that is 5 feet deep or deeper shall be provided. Call (909)383-4321. (RMC 12.16.040)

5. A copy of soils report is required with recommendation for the final pavement structural section to be submitted prior to placing of the street pavement. The report shall include test results and boring/sampling locations.

6. A traffic control plan shall be prepared in accordance with the latest revision of CA MUTCD or W.A.T.C.H. manual, submitted and accepted by the City Engineer prior to issuance of an encroachment permit. The plan shall show all required construction signage, warning devices, road closures, detours, delineation, phasing schedules and anticipated durations of closures and detours for any work within the public right-of-way. The plans shall provide names and 24-hour phone numbers of individuals who can be contacted regarding traffic control measures.

7. Improvement bonds must be posted for the total estimated cost of off-site improvements as follows:

Performance	100% security (due prior to final map approval)
(Warranty)	10% security (due at time of acceptance of improvements)
Labor and Materials	50% security (due prior to final map approval)

Acceptable security forms: Surety Bond(s), Letter of Credit from a qualified bank or institution, Cash Deposits, or Set Aside Letter (savings account) in City's name subject to approval of the City Attorney and Finance Director.

8. Execute Subdivision Improvement Agreement. (RMC 17.17.070).

F. The following items are required prior to issuance of CERTIFICATE OF OCCUPANCY.

1. The project and associated infrastructure may be constructed in a logical sequence, subject to approval of the City Engineer. Certificates of Occupancy may be issued for completed portions of the project provided the access, utilities, drainage and life-safety improvements necessary to serve those portions are completed and operational. Other project-wide improvements may be completed later in the construction sequence. The timing of the Tennessee Street vacation/closure and New York Street improvements may also be sequenced, provided adequate access and emergency access are maintained.

2. All requirements as described in Sections A, B, C, D and E of these conditions of approval shall be met

3. All work shall be completed to the satisfaction of the City Engineer. All as-built plans shall be delivered to the Municipal Utilities and Engineering Department for review and approval.

4. The Engineer of Record shall file a Final Grading Certification for all grading and improvements relating to the project development.

5. Owner's Licensed Land Surveyor shall reset survey points, monuments, record corners, and centerline ties that were destroyed during construction and shall file Corner Records for those points prior to completion of the project with San Bernardino County Surveyor. Copies of information shall be furnished to the Municipal Utilities and Engineering Department. [California B&P Code 8762, 8767, 8768, 8771, and 8773(b)]

6. A list of as-built infrastructure improvement quantities shall be provided in the Excel format provided by the City showing quantities for each street segment (i.e. pavement, curb and gutter, sidewalk, etc.)

7. Streets may be required to have a seal coat applied at the option of the City Engineer. Type of seal coat is to be determined by the City Engineer.

8. Resurface existing roadway as directed by the City Engineer due to utility installations and construction damage.

9. Existing striping shall be removed and replaced as necessary. New striping and pavement markings shall be installed as required by the City Engineer.

10. Contractors will be required to pave new streets in two (2) phases with last phase being delayed until 95 percent of construction has been completed, or on approval of the City Engineer.

11. Owner/Developer shall provide recycling receipts as required by the recycling plan.

G. The following items are required prior to release of SECURITIES/WARRANTIES/DEPOSITS.

1. Prior to the release of the securities for the project, all improvements shall be reviewed and accepted by the City Engineer.

2. A recorded mylar copy of the Tract map shall be submitted, if a part of a lot-sale subdivision and not included in Item E.

3. Tie sheets shall be submitted for all monuments found and/or set in the public right-of-way.

5. The release of securities/warranties/deposits must be requested in writing to the City Engineer. Allow 30 days for processing.

DONALD YOUNG, P.E., P.M.P.
One Stop Permit Center Manager

Initial

FILE: TM 20797