APPENDIX 8

HOTEL MURRIETA
TRAFFIC IMPACT ANALYSIS

City of Murrieta

August 30, 2019

gandini

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

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TRAFFIC IMPACT ANALYSIS

City of Murrieta

August 30, 2019

prepared by
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18-0074

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EXECUTIVE SUMMARY

The purpose of this Traffic Impact Analysis is to provide an assessment of traffic operations resulting from development of the proposed Hotel Murrieta and to identify measures necessary to mitigate potentially significant traffic impacts. This report analyzes traffic impacts for the anticipated project opening year in Year 2021.

Although this is a technical report, effort has been made to write the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with terms related to transportation engineering.

PROJECT DESCRIPTION

The project site is generally located between Monroe Avenue and the I-15/I-215 interchange between Newton Azrak Street and Fig Street in the City of Murrieta. The project site is currently vacant.

The proposed project involves developing the site with a 257-room hotel. As a project design feature, Newton Azrak Street will be extended from its current eastern terminus to Monroe Avenue, Monroe Avenue will be constructed from the south project driveway to Guava Street, and Guava Street will be extended from its current eastern terminus to Monroe Avenue. Project site access is proposed via two full access driveways at Monroe Avenue, including one at the eastern leg of the Newton Azrak Street and Monroe Avenue intersection to be newly constructed. The proposed project is anticipated to be constructed and fully operational by year 2021.

EXISTING CONDITIONS

The study intersections currently operate within acceptable Levels of Service (D or better) during the peak hours for Existing conditions (see Table 1). The study roadway segments currently operate within acceptable Levels of Service (C or better) for Existing conditions (see Table 2).

PROJECT TRIPS

The proposed project is forecast to generate a total of approximately 2,149 daily trips, including 121 trips during the AM peak hour and 155 trips during the PM peak hour (see Table 3).

FORECAST OPERATIONS

Existing Plus Project Conditions

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Existing Plus Project conditions (see Table 5). Therefore, the proposed project is forecast to result in no significant impacts at the study intersections for Existing Plus Project conditions. The study roadway segments are forecast to operate within acceptable Levels of Service (C or better) for Existing Plus Project conditions (see Table 6). Therefore, the proposed project is forecast to result in no significant impacts at the study roadway segments for Existing Plus Project conditions.

Project Completion (Year 2021) Conditions

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Project Completion (Year 2021) conditions (see Table 7). Therefore, the proposed project is forecast to result in no significant impacts at the study intersections for Project Completion (Year 2021) conditions. The study roadway segments are forecast to operate within acceptable Levels of Service (C or better) for Project Completion (Year 2021) conditions (see Table 8). Therefore, the proposed project is

forecast to result in no significant impacts at the study roadway segments for Project Completion (Year 2021) conditions.

Project Completion (Year 2021) Plus Cumulative Conditions

The study intersections are forecast to operate within Levels of Service (D or better) during the peak hours for Project Completion (Year 2021) Plus Cumulative conditions, except for the intersection of I-15 Northbound Ramps/Murrieta Hot Springs Road during the PM peak hour, which is forecast to operate at the minimum allowable Level of Service E for freeway interchange intersections (see Table 9). Therefore, the proposed project is forecast to result in no significant impacts at the study intersections for Project Completion (Year 2021) Plus Cumulative conditions. The study roadway segments are forecast to operate within acceptable Levels of Service (C or better) for Project Completion (Year 2021) Plus Cumulative conditions (see Table 10). Therefore, the proposed project is forecast to result in no significant impacts at the study roadway segments for Project Completion (Year 2021) Plus Cumulative conditions.

1. INTRODUCTION

This section describes the purpose of this traffic impact analysis, project location, proposed development, and study area. Figure 1 shows the project location map. Figure 2 illustrates the project site plan.

PURPOSE AND OBJECTIVES

The purpose of this traffic impact analysis is to provide an assessment of traffic operations resulting from development of the proposed Hotel Murrieta and to identify measures necessary to mitigate potentially significant traffic impacts. This report analyzes traffic impacts for the anticipated project opening year in 2021.

Although this is a technical report, effort has been made to write the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with terms related to transportation engineering.

PROJECT DESCRIPTION

The project site is generally located between Monroe Avenue and the I-15/I-215 interchange between Newton Azrak Street and Fig Street in the City of Murrieta. The project site is currently vacant.

The proposed project involves developing the site with a 257-room hotel. As a project design feature, Newton Azrak Street will be extended from its current eastern terminus to Monroe Avenue, Monroe Avenue will be constructed from the south project driveway to Guava Street, and Guava Street will be extended from its current eastern terminus to Monroe Avenue. Project site access is proposed via two full access driveways at Monroe Avenue, including one at the eastern leg of the Newton Azrak Street and Monroe Avenue intersection to be newly constructed. The proposed project is anticipated to be constructed and fully operational by year 2021.

STUDY AREA

Based on the study intersections and roadway segments identified in the City-approved scoping agreement (see Appendix B), the study area consists of the following study intersections and roadway segments within the City of Murrieta and California Department of Transportation (Caltrans) jurisdiction:

	Study Intersections[1]	Jurisdiction
1.	Madison Avenue (NS) at Murrieta Hot Springs Road (EW)	Murrieta
2.	Madison Avenue (NS) at Guava Street (EW)	Murrieta
3.	Madison Avenue (NS) at Newton Azrak Street (EW)	Murrieta
4.	I-15 SB Ramps (NS) at Murrieta Hot Springs Road (EW)	Caltrans
5.	I-15 NB Ramps (NS) at Murrieta Hot Springs Road (EW)	Caltrans
6.	Monroe Avenue (NS) at Newton Azrak Street/Project Access (EW)	Murrieta

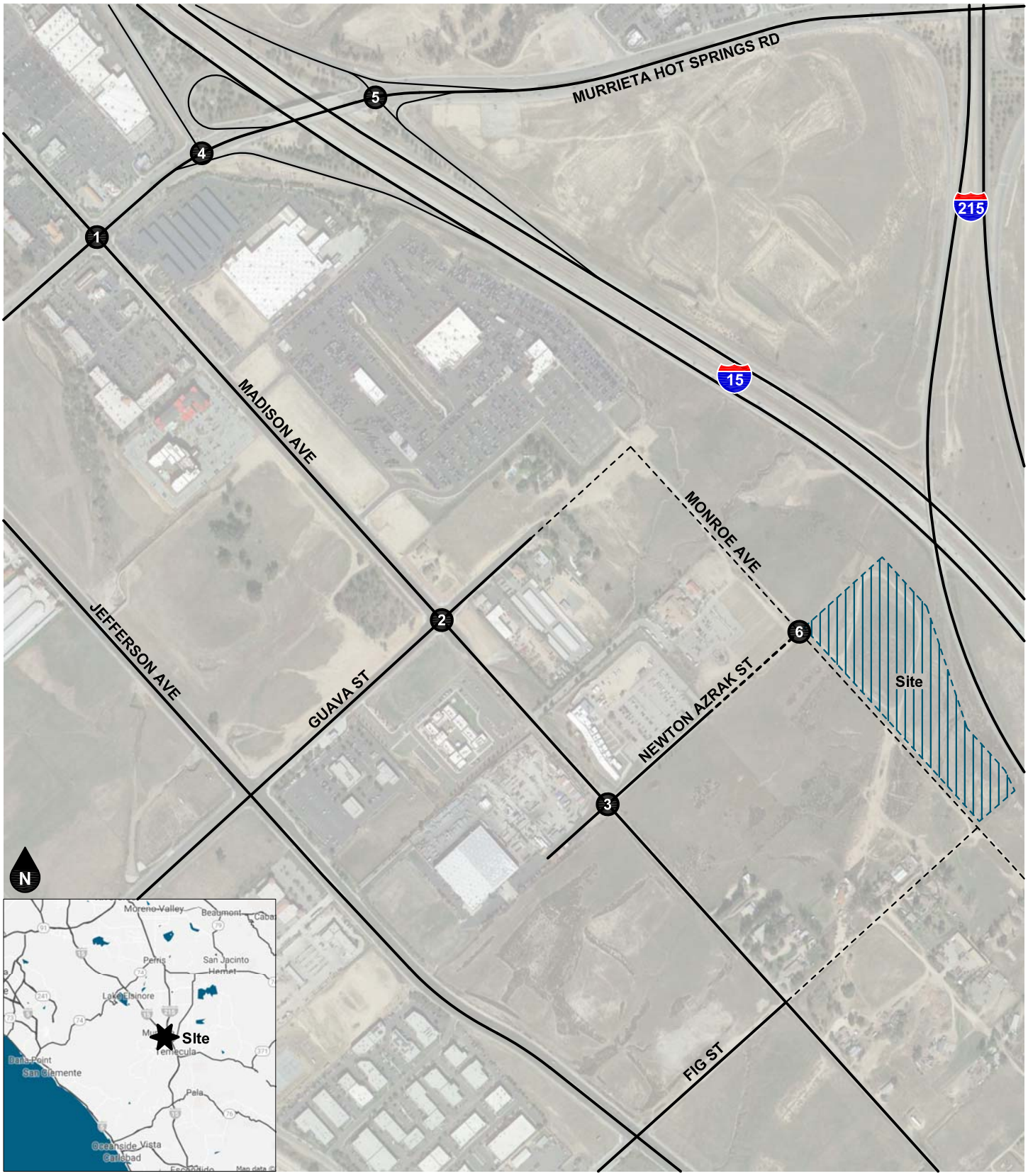
	Study Roadway Segments	Jurisdiction
1.	Madison Avenue from Murrieta Hot Springs Road to Guava Street	Murrieta
2.	Madison Avenue from Guava Street to Newton Azrak Street	Murrieta
3.	Guava Street east of Madison Avenue	Murrieta

Notes:
[1] (NS) = north-south roadway; (EW) = east-west roadway

ANALYSIS SCENARIOS

In accordance with the City of Murrieta Traffic Impact Analysis Preparation Guide (October 2013) ["City of Murrieta guidelines"], this report includes the following analysis scenarios during typical weekday AM and PM peak hour conditions (with mitigation as necessary):

- Existing Conditions
- Existing Plus Project Conditions
- Project Completion Conditions
- Project Completion Plus Cumulative Conditions



Legend

(#) Study Intersection

Figure 1
Project Location Map



Figure 2
Site Plan

2. METHODOLOGY

This section discusses the analysis methodologies used to assess transportation facility performance as adopted by the respective jurisdictional agencies. This report has been prepared in accordance with City of Murrieta Traffic Impact Analysis Preparation Guide (October 2013) ["City of Murrieta guidelines"].

INTERSECTION DELAY METHODOLOGY

To assess the performance of an intersection, the City of Murrieta and Caltrans use the intersection delay method based on procedures contained in the Highway Capacity Manual (Transportation Research Board, 6th Edition). The methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle and corresponding Level of Service. Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay. The intersection control delay is then correlated to Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual (6th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane).

Intersection delay analysis was performed using the Vistro (Version 6.00-00) software. Intersection analysis input parameters for Highway Capacity Manual calculations were applied in accordance with Exhibit C of the City of Murrieta Traffic Impact Analysis Preparation Guide (October 2013).

PERFORMANCE STANDARDS/THRESHOLDS OF SIGNIFICANCE

City of Murrieta

As established in the City of Murrieta General Plan, the City's Level of Service standards are Level of Service C for roadway segments and Level of Service D for peak hour intersection operations with Level of Service E for freeway interchanges. Accordingly, a project traffic impact is considered significant if:

- The addition of project-generated trips is forecast to cause or worsen a roadway segment operating at an unacceptable Level of Service (D, E, or F); or

- The addition of project-generated trips is forecast to cause or worsen a non-freeway interchange intersection operating at an unacceptable Level of Service (E or F); or

- The addition of project-generated trips is forecast to cause or worsen a freeway interchange intersection operating at an unacceptable Level of Service F.

California Department of Transportation

As stated in the Guide for the Preparation of Traffic Impact Studies (State of California, 2002), "California Department of Transportation endeavors to maintain a target LOS [Level of Service] at the transition between LOS "C" and LOS "D" on State highway facilities". The California Department of Transportation acknowledges this may not always be feasible and recommends consultation with the California Department of Transportation to determine the appropriate target Level of Service. For consistency with City of Murrieta requirements, this analysis defines Level of Service E as the minimum acceptable Level of Service for the I-15/Murrieta Hot Springs Road on/off ramp intersections.

Mitigation Requirements

If a project is forecast to cause a significant traffic impact, feasible mitigation measures that will reduce the impact to a less than significant level are identified. Mitigation measures can be in many forms, including the addition of lanes, traffic control modification, or demand management measures. If no feasible mitigation measures can be identified for a significantly impacted facility, the impact will remain significant and unavoidable and a statement of overriding considerations is required.

3. EXISTING CONDITIONS

EXISTING ROADWAY SYSTEM

Figure 3 identifies the lane geometry and intersection traffic controls for Existing conditions based on a field survey of the study area. Regional access to the project area is provided by the I-15 and I-215 Freeways east of the project site. The key north-south roadways providing local circulation are Madison Avenue and Monroe Avenue. The key east-west roadway providing local circulation are Murrieta Hot Springs Road, Guava Street, and Newton Azrak Street.

Madison Avenue is a 2-lane undivided to 4-lane divided roadway in the study area. Madison Avenue is classified as a Major (100 foot right-of-way) in the City of Murrieta Circulation Element. On-street parking is prohibited in the project area. On-street bicycle facilities are provided from Murrieta Hot Springs Road to Guava Street. Sidewalks are provided on both sides of the roadway from north of Murrieta Hot Springs Road to midway between Murrieta Hot Spring Road and Guava Street, with a sidewalk continuing on the east side of the road to Guava Street. Sidewalks are not provided south of Guava Street in the study area.

Monroe Avenue is a dirt roadway in the study area. Monroe Avenue is classified as a Major (100 foot right-of-way) south of Guava Street in the City of Murrieta Circulation Element.

Murrieta Hot Springs Road is a 6-lane to 8-lane divided roadway in the study area. Murrieta Hot Springs Road is classified as an Augmented Urban Arterial (150 foot right-of-way) in the City of Murrieta Circulation Element. On-street parking is prohibited in the project area. On-street parking is prohibited in the project area. No bicycle facilities are provided in the study area. Sidewalks are provided on both sides of the roadway.

Guava Street is a 2-lane undivided to 3-lane divided roadway in the study area. Guava Street's paved roadway extends approximately 600 feet east of Madison Avenue where it becomes a dirt roadway. Guava Street is classified as a Major (100 foot right-of-way) west of Madison Avenue and as a Secondary (88 foot right-of-way) east of Madison Avenue in the City of Murrieta Circulation Element. On-street parking is prohibited in the project area. On-street parking is generally permitted east of Madison Avenue and prohibited west of Madison Avenue in the project area. On-street bicycle facilities are provided on the south leg of Guava Street west of Madison Avenue in the study area. Sidewalks are provided on both sides of the roadway east of Madison Avenue and on the south side of the roadway west of Madison Avenue.

Newton Azrak Street is a 2-lane undivided roadway in the study area. Newton Azrak Street's paved roadway extends approximately 650 feet east of Madison Avenue where it turns into a parking lot for the federal facility located north of the roadway. Newton Azrak Street is not classified in the City of Murrieta Circulation Element. On-street parking is prohibited in the project area. On-street parking is prohibited in the project area. No bicycle facilities or sidewalks are provided in the study area.

PEDESTRIAN FACILITIES

Existing pedestrian facilities in the project vicinity are shown on Figure 4.

BICYCLE ROUTES

On-street bicycle facilities are not provided along Monroe Avenue in the project area as the roadway is currently a dirt roadway. The City of Murrieta General Plan Trails and Bikeways Map is depicted on Figure 5, and shows Monroe Avenue as a proposed Class II (On-Road Striped Bike Lane) in the project area.

TRANSIT FACILITIES

Figure 6 shows the existing transit routes available in the project vicinity. As shown on Figure 6, Riverside Transit Agency Routes 23, 202, 205, and 206 along Murrieta Hot Springs Road and Route 23 along Madison Avenue which terminates at the Walmart south of Murrieta Hot Springs Road.

GENERAL PLAN CONTEXT

Figure 7 shows the City of Murrieta General Plan Circulation Element roadway classifications map. This figure shows the nature and extent of arterial and collector highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. Figure 8 illustrates the City of Murrieta General Plan roadway cross-sections.

EXISTING TRAFFIC VOLUMES

Figure 9 shows the Existing average daily traffic volumes. The Existing average daily traffic volumes have been obtained from 24-hour roadway segment counts conducted in August 2019, the 2017 Traffic Volumes on California State Highways by the California Department of Transportation (Caltrans), and factored from peak hour intersection turning movement volumes using the following formula for each intersection leg:

Evening Peak Hour (Approach Volume + Exit Volume) x 12 = Leg Volume.

Existing peak hour intersection volumes are based upon AM peak period and PM peak period intersection turning movement counts obtained in August 2019 during typical weekday conditions while local schools were in session. The AM peak period was counted between 7:00 AM and 9:00 AM and the PM peak period was counted between 4:00 PM and 6:00 PM. The actual peak hour within the peak period is the four consecutive 15 minute periods with the highest total volume when all movements are added together. Thus, the weekday evening peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15 minute periods have the highest combined volume. Intersection turning movement count worksheets are provided in Appendix C.

Figure 10 and Figure 11 show the Existing AM peak hour and PM peak hour intersection turning movement volumes.

EXISTING INTERSECTION LEVEL OF SERVICE

The intersection Levels of Service for Existing conditions have been calculated and are shown in Table 1. Existing intersection Level of Service worksheets are provided in Appendix D.

As shown in Table 1, the study intersections currently operate at Levels of Service C or better during the peak hours for Existing conditions.

EXISTING ROADWAY SEGMENT LEVEL OF SERVICE

Table 2 shows the roadway segment capacity analysis for Existing conditions. As shown in Table 2 , the study roadway segments currently operate within acceptable Levels of Service (D or better) for Existing conditions.

Table 1
Existing Intersection Level of Service

ID	Study Intersection	Jurisdiction	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
				Delay[2]	LOS[3]	Delay[2]	LOS[3]
1.	Madison Avenue at Murrieta Hot Springs Road	Murrieta	TS	17.1	B	27.6	C
2.	Madison Avenue at Guava Street	Murrieta	TS	7.7	A	8.3	A
3.	Madison Avenue at Newton Azrak Street	Murrieta	CSS	9.6	A	12.1	B
4.	I-15 SB Ramps at Murrieta Hot Springs Road	Caltrans	TS	9.0	A	14.5	B
5.	I-15 NB Ramps at Murrieta Hot Springs Road	Caltrans	TS	4.7	A	14.7	B

Notes:

(1) TS = Traffic Signal; CSS = Cross Street Stop

(2) Delay and Level of Service have been calculated using the following analysis software: Vistro, Version 6.00-03. Per the Highway Capacity Manual, overall average intersection delay and Level of Service are shown for intersections with all way stop control. For intersections with cross street stop control, the delay and Level of Service for the worst individual movement (or movements sharing a single lane) are shown.

(3) LOS = Level of Service

Table 2
Existing Roadway Segment Capacity Analysis

Roadway	Segment		Murrieta Roadway Standards[1]			Existing Conditions					
	From	To	Classification	Lanes	Capacity	Lanes	Capacity[2]	ADT[3]	V/C[4]	Capacity Threshold	LOS[5]
Madison Avenue	Murrieta Hot Springs Road	Guava Street	**Major**	4	34,100	4	34,100	6,800	0.20	Acceptable	A
	Guava Street	Newton Azrak Street	Major	4	34,100	2	13,000	2,800	0.22	Acceptable	A
Guava Street	Madison Avenue	East of Madison Avenue	Secondary	4	25,900	2	13,000	100	0.01	Acceptable	A

Notes:

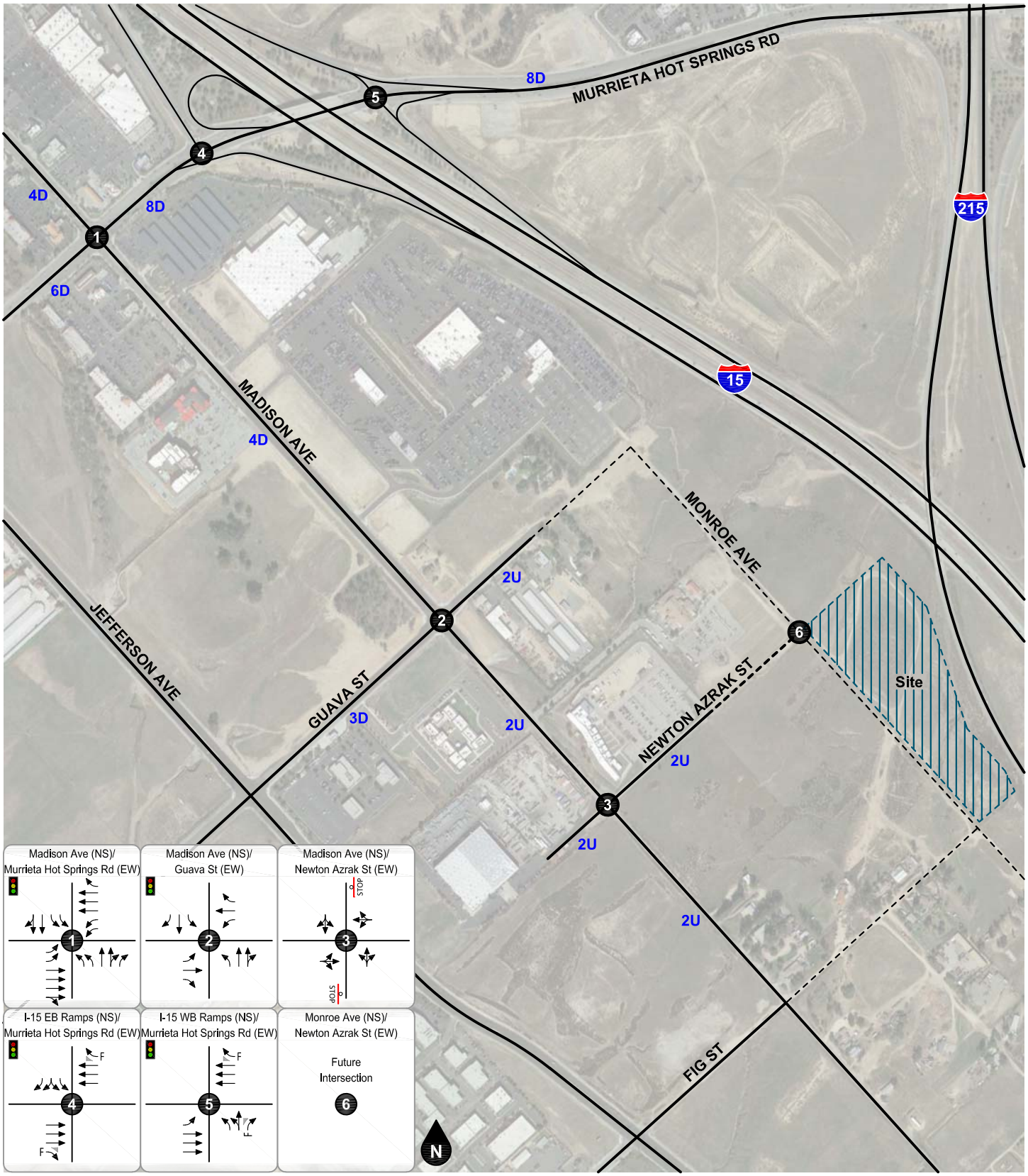
(1) The City of Murrieta roadway maximum capacity at Level of Service "E" (City of Murrieta General Plan 2035). **Bold** denotes roadway is currently built at its ultimate cross-section width.

(2) Maximum capacity at Level of Service "E" based on existing number of lanes. Ultimate standard capacity is only assumed if the roadway is constructed at its ultimate cross-section width, including design improvement features (lane width, shoulder width, bike lanes or medians).

(3) ADT = Average Daily Traffic

(4) V/C = Volume to Capacity Ratio.

(5) LOS = Level of Service



Legend

- Traffic Signal
- Stop Sign
- #D #-Lane Divided Roadway
- #U #-Lane Undivided Roadway
- Existing Lane
- F Free Right Turn Lane

Figure 3
Existing Lane Geometry and Intersection Traffic Controls



Legend
- Sidewalk
- Cross Walk
- B Bus Stop

Figure 4
Existing Pedestrian Facilities

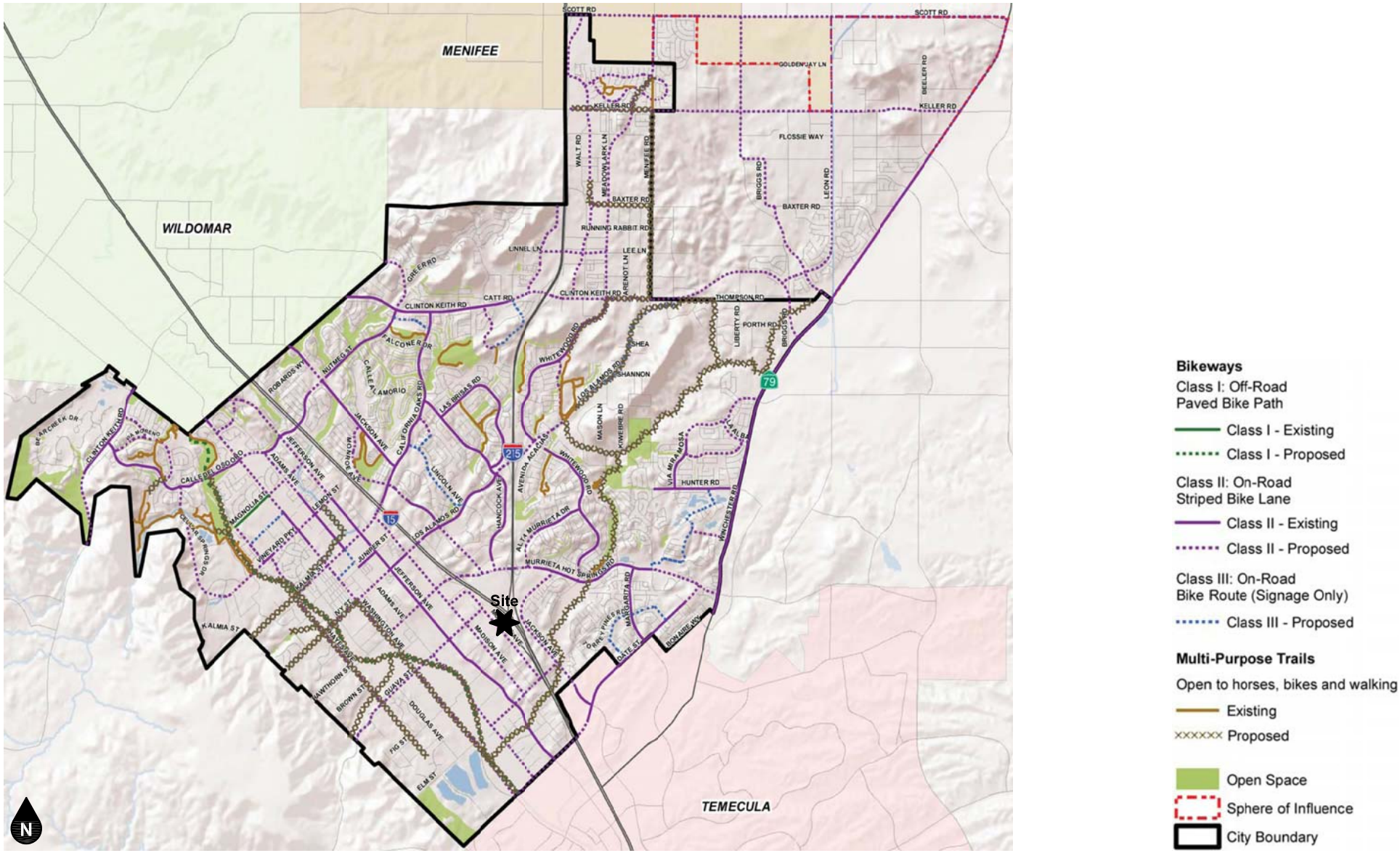


Figure 5
City of Murrieta General Plan Trails and Bikeways Map

Source: City of Murrieta



Source: Riverside Transit Agency

Figure 6
Riverside Transit Agency System Map

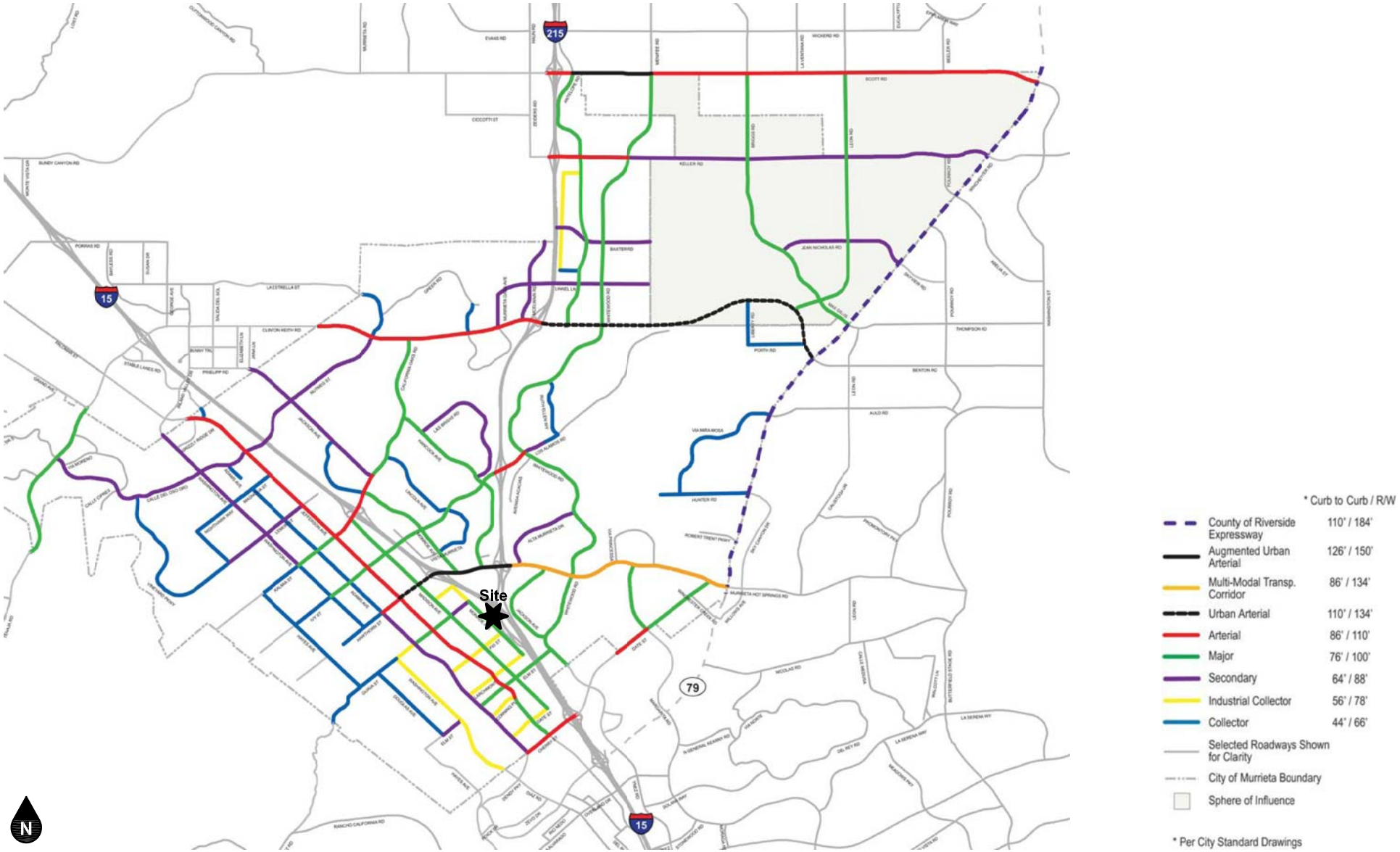


Figure 7
City of Murrieta General Plan Circulation Element

Source: City of Murrieta

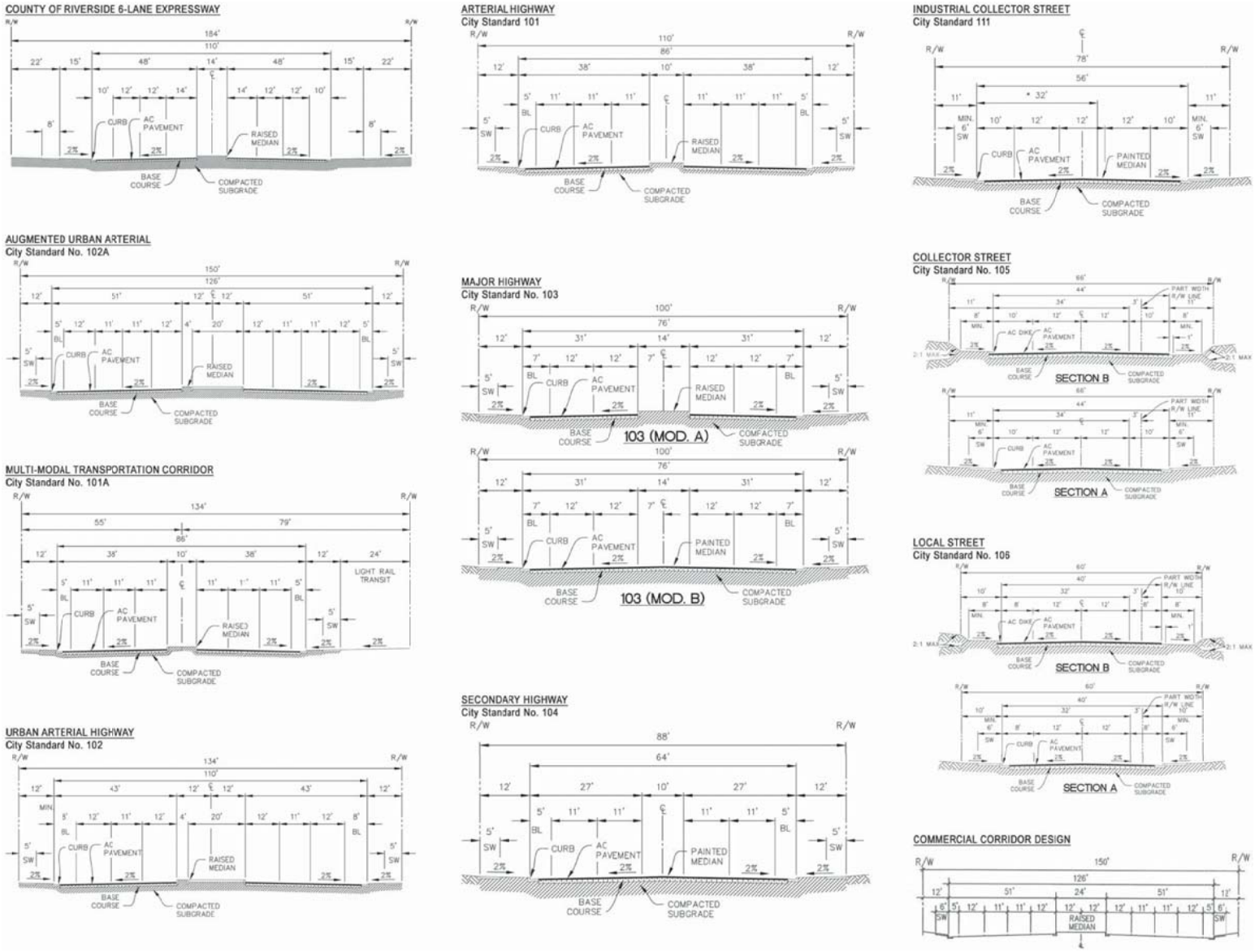
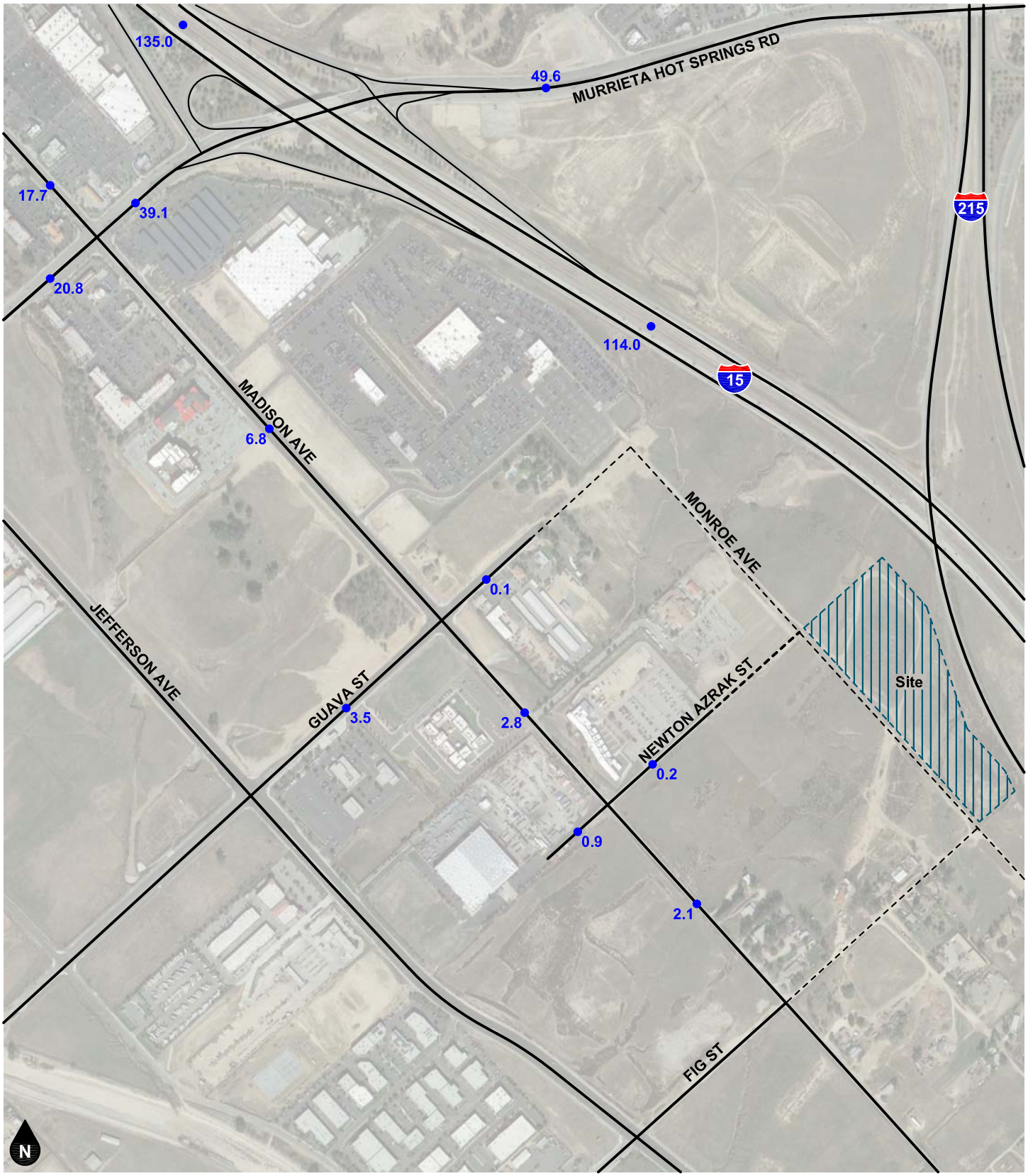


Figure 8
City of Murrieta General Plan Roadway Cross-Sections

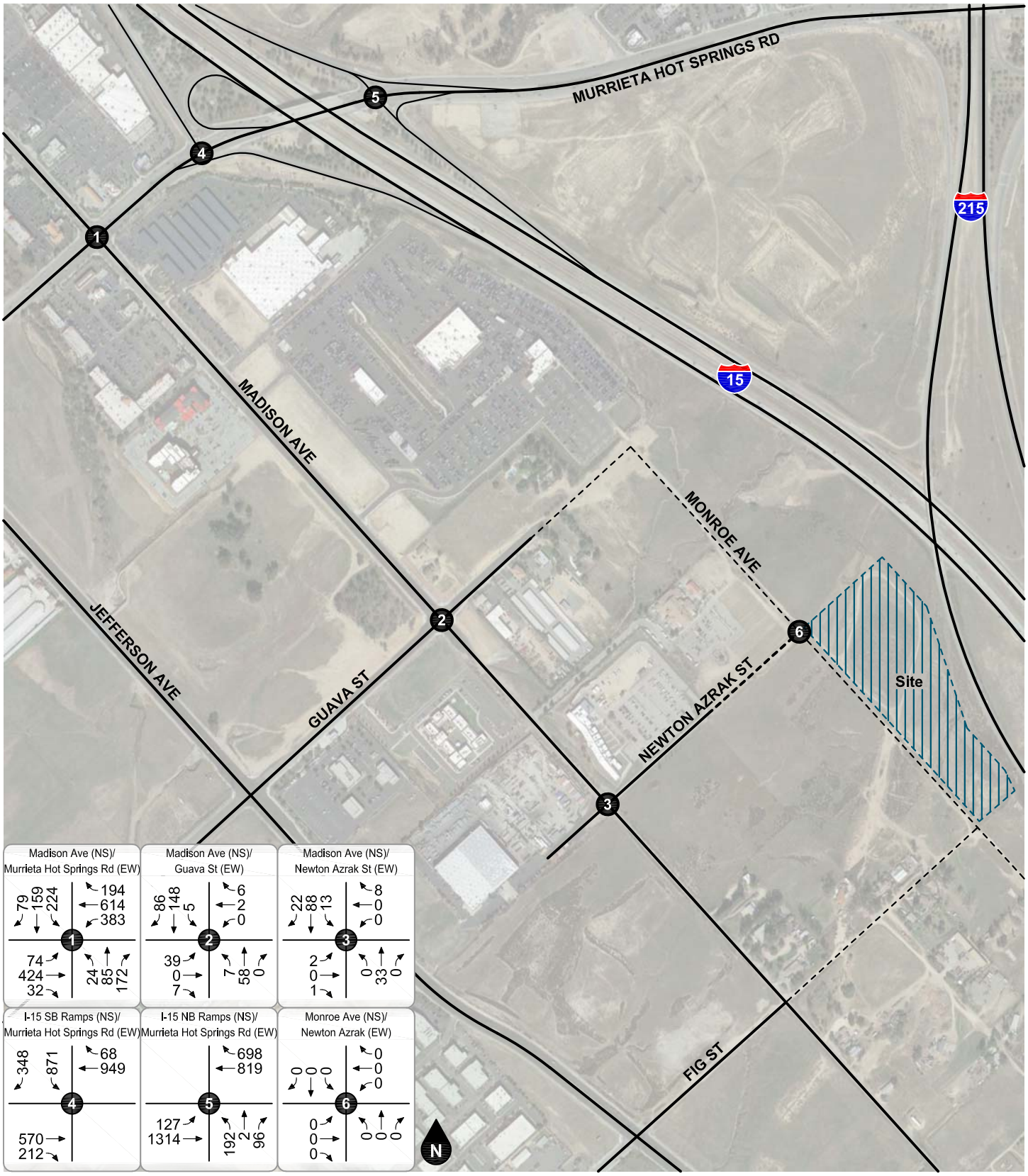
Source: City of Murrieta



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●## Vehicles Per Day (1,000's)

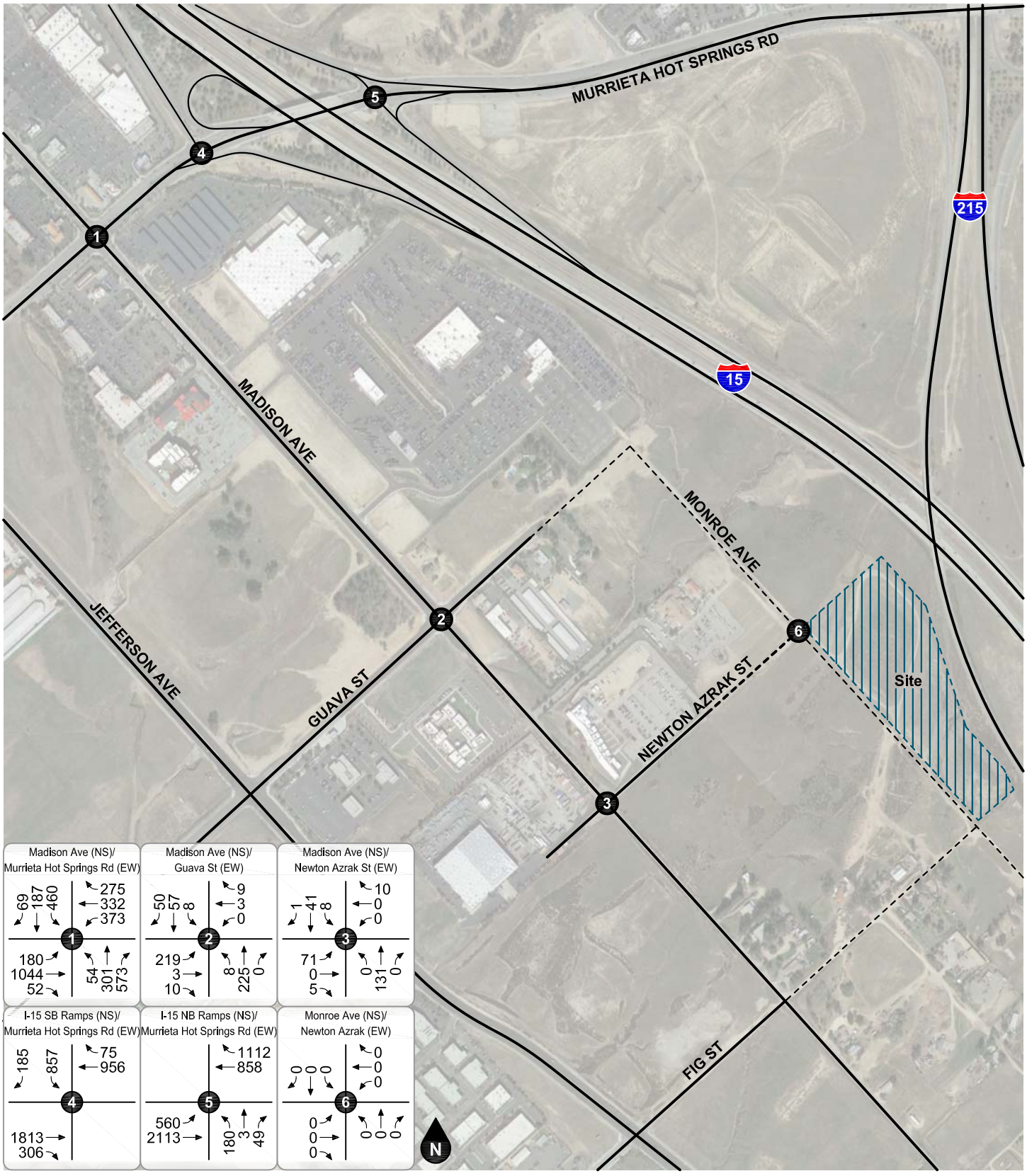
Figure 9
Existing Average Daily Traffic Volumes



Legend

(#) Study Intersection

Figure 10
Existing AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

Figure 11
Existing PM Peak Hour Intersection Turning Movement Volumes

4. PROJECT FORECASTS

This section describes how project trip generation, trip distribution, and trip assignment forecasts were developed. The forecast project volumes are illustrated on figures contained in this section.

PROJECT DESIGN FEATURES

This analysis assumes the proposed project shall construct the project access driveway at Monroe Avenue with the following lane configurations in accordance with applicable standards to the satisfaction of the City of Murrieta Department of Public Works:

- **Monroe Avenue at Newton Azrak Street/Project Access (EW) - #6**
  - Westbound: Shared left/through/right lane with stop control

The second project access south of Newton Azrak Street is proposed to be constructed with a left turn lane and right turn lane. For purposes of this analysis, all project trips are assumed to enter/exit the project site via the Newton Azrak Street/ Monroe Avenue intersection (#6), resulting in a conservative analysis of the project impact at this intersection. Since Monroe Avenue adjacent to the project site has nominal existing traffic, the second project access point south of Newton Azrak Street is presumed to operate at acceptable Levels of Service.

Newton Azrak Street will be extended from its current eastern terminus to Monroe Avenue, Monroe Avenue will be constructed from the south project driveway to Guava Street, and Guava Street will be extended from its current eastern terminus to Monroe Avenue. Project site access is proposed via two full access driveways at Monroe Avenue, including one at the eastern leg of the Newton Azrak Street and Monroe Avenue intersection to be newly constructed. These improvements shall be constructed in accordance with the design approval of the City of Murrieta Public Works Department.

PROJECT TRIP GENERATION

Table 3 shows the project trip generation based upon trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition, 2017). The project trip generation forecast is determined by multiplying the trip generation rates by the land use quantity. Trip generation rates for Hotel (Land Use Code 310) were used.

As shown in Table 3, the proposed project is forecast to generate a total of approximately 2,149 vehicle trips, including 121 trips during the AM peak hour and 155 trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Figure 12 shows the forecast directional distribution patterns for the project generated trips. The project trip distribution patterns are based on review of existing volume data, surrounding land uses, and the local and regional roadway facilities in the project vicinity.

Based on the identified project trip generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 13. The project-generated AM and PM peak hour intersection turning movement volumes are shown on Figure 14 and Figure 15.

Table 3
Project Trip Generation

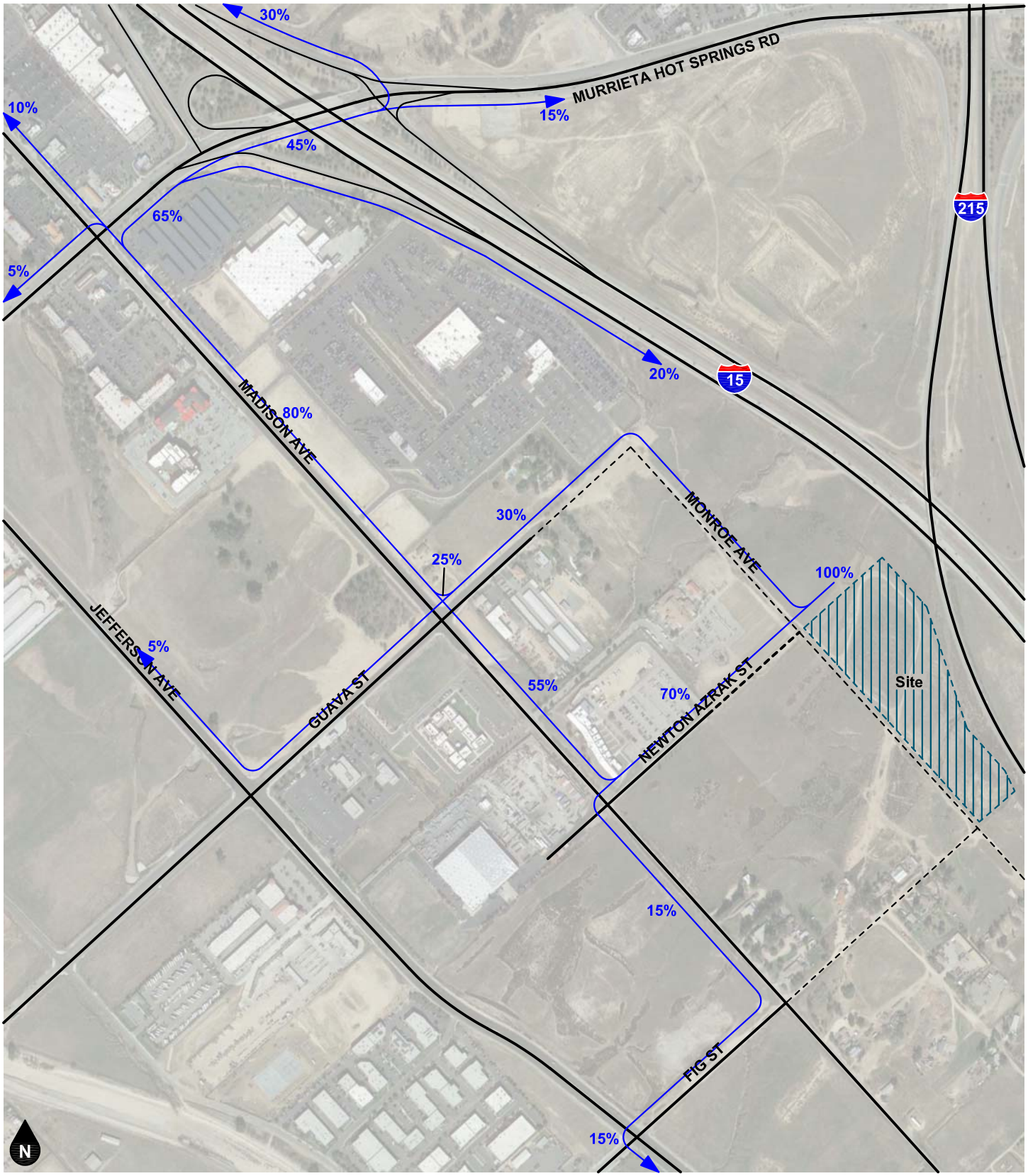
Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			Daily
Land Use	Source[1]	Units[2]	% In	% Out	Rate	% In	% Out	Rate	Rate
Hotel	ITE 310	Rooms	59%	41%	0.47	51%	49%	0.60	8.36

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Units[2]	In	Out	Total	In	Out	Total	Daily
Hotel	257	Rooms	71	50	121	79	76	155	2,149

Notes:

1) ITE = Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017; XXX= Land Use Code

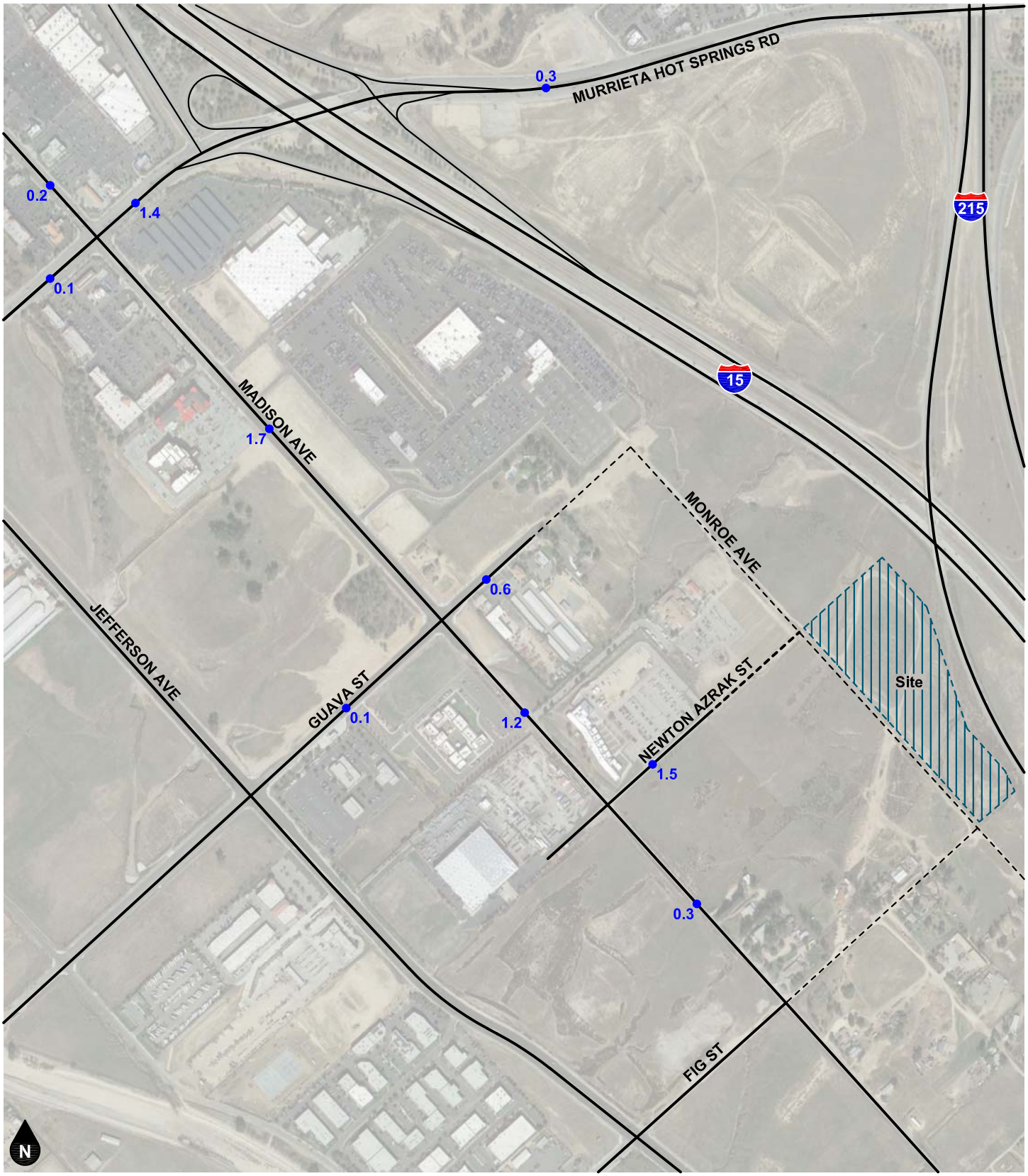
2) RM = Rooms



Legend

10% Percent To/From Project

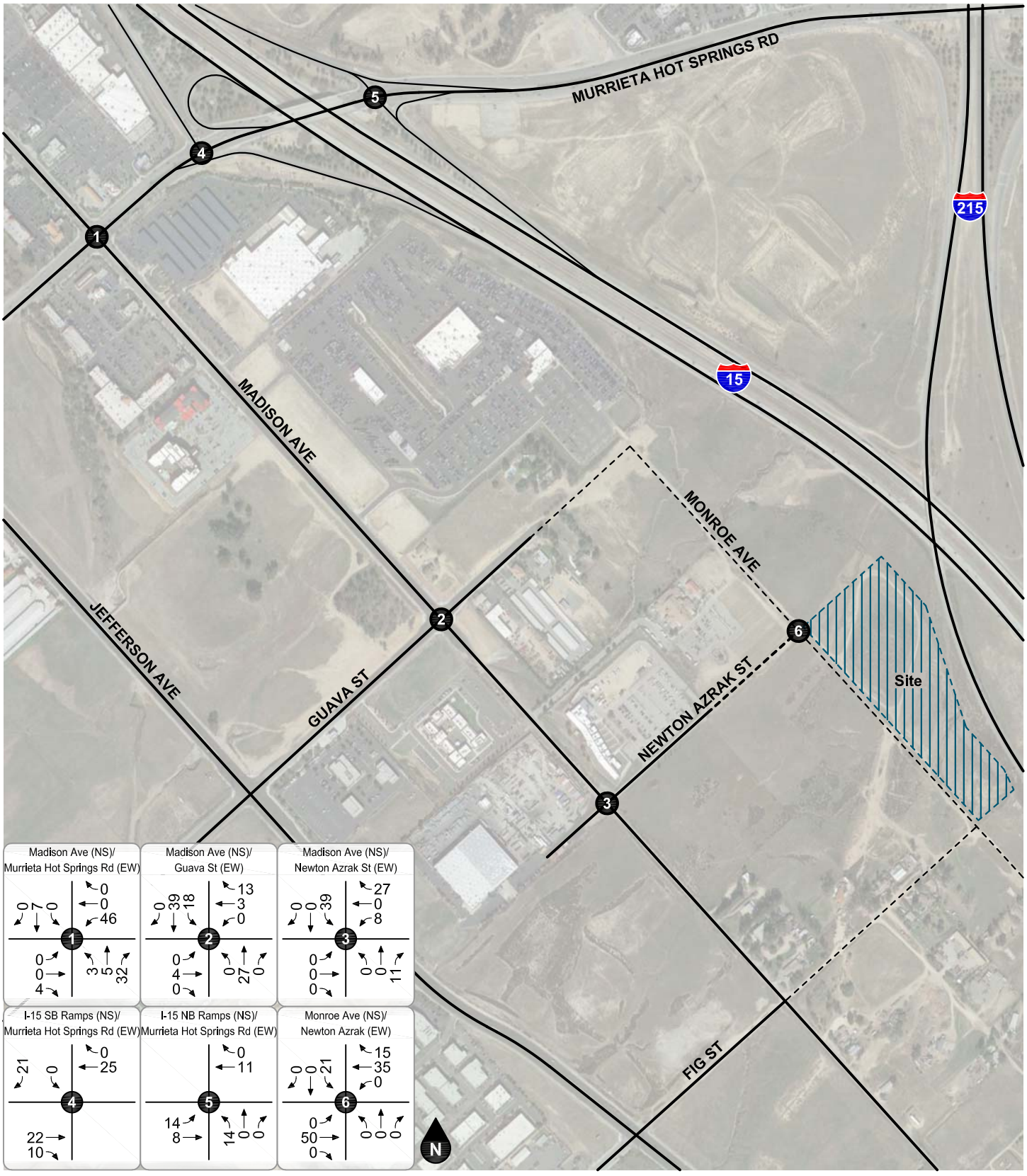
Figure 12
Project Trip Distribution



Legend

●## Vehicles Per Day (1,000's)

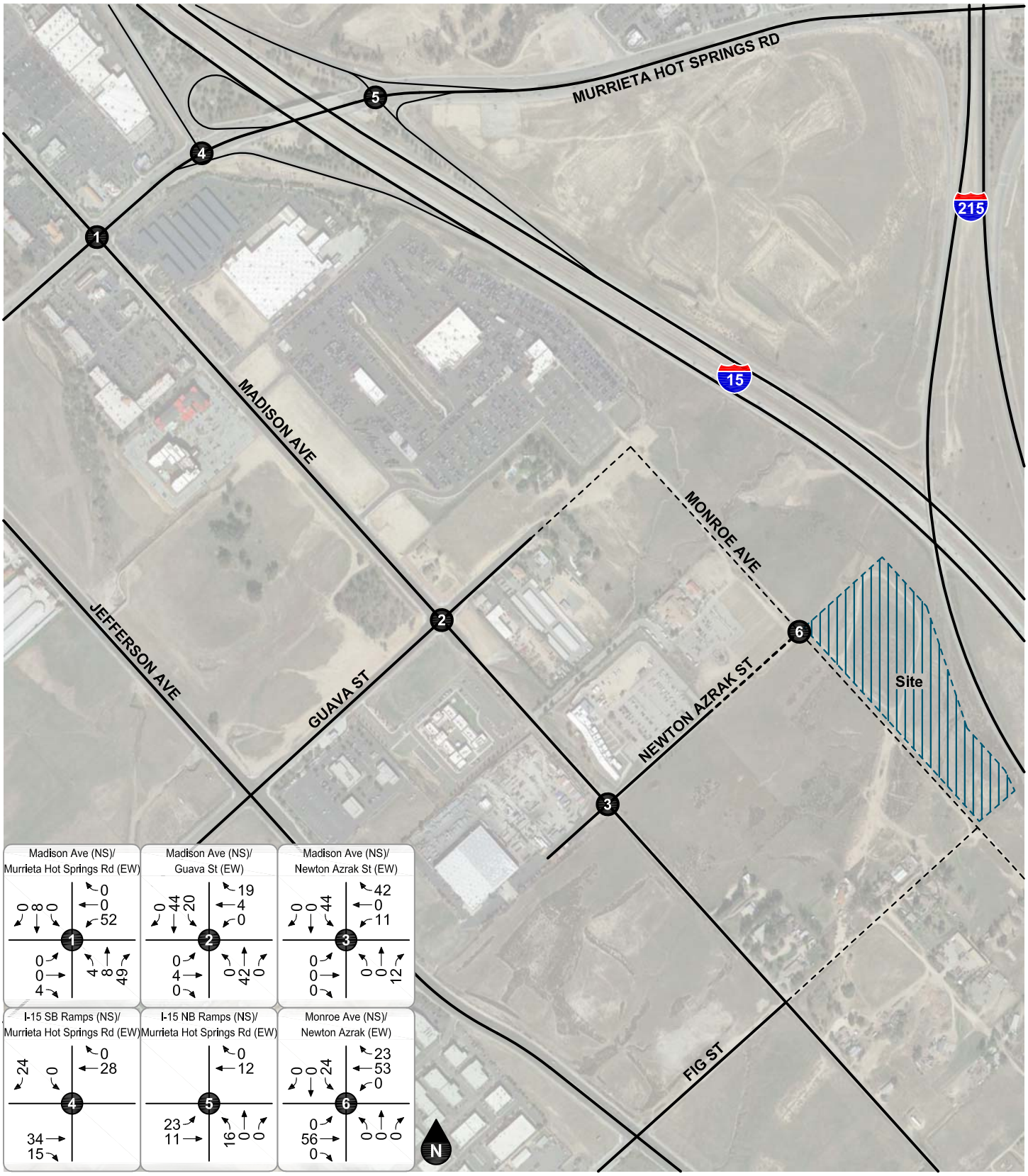
Figure 13
Project Average Daily Traffic Volumes



Legend

(#) Study Intersection

Figure 14
Project AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

Figure 15
Project PM Peak Hour Intersection Turning Movement Volumes

5. FUTURE VOLUME FORECASTS

This section describes how future volume forecasts for each analysis scenario were developed. Forecast study area volumes are illustrated on figures contained in this section.

OTHER DEVELOPMENT

To account for trips generated by future development, trips generated by approved other development projects in the City of Murrieta were added to the study area. Table 4 shows the trip generation summary for other development projects. Figure 16 shows the other development location map.

Figure 17 shows the forecast average daily traffic volumes for the other development. Figure 18 and Figure 19 show the forecast AM and PM peak hour intersection turning movement volumes for trips generated by other developments.

AMBIENT GROWTH

To account for ambient growth on roadways, existing traffic volumes were increased by a growth rate of one percent (2%) per year over a two year period for Project Completion (Year 2021) conditions. This equates to a total growth factor of approximately 1.04 for Year 2021 conditions. The ambient growth rate was conservatively applied to all movements at the study intersections.

ANALYSIS SCENARIO VOLUME FORECASTS

Existing Plus Project

Existing Plus Project volume forecasts were derived by adding the project generated trips to Existing volumes. Existing Plus Project average daily traffic volumes are shown on Figure 20. Existing Plus Project AM and PM peak hour intersection turning movement volumes are shown on Figure 21 and Figure 22.

Project Completion (Year 2021)

Project Completion (Year 2021) volume forecasts were derived by combining existing volumes with ambient growth and trips generated by the project. Project Completion (Year 2021) average daily traffic volumes are shown on Figure 23. Project Completion (Year 2021) AM and PM peak hour intersection turning movement volumes are shown on Figure 24 and Figure 25.

Project Completion (Year 2021) Plus Cumulative

Project Completion (Year 2021) Plus Cumulative volume forecasts were derived by adding the other development trips to Project Completion (Year 2021) volumes. Project Completion (Year 2021) Plus Cumulative average daily traffic volumes are shown on Figure 26. Project Completion (Year 2021) Plus Cumulative AM and PM peak hour intersection turning movement volumes are shown on Figure 27 and Figure 28.

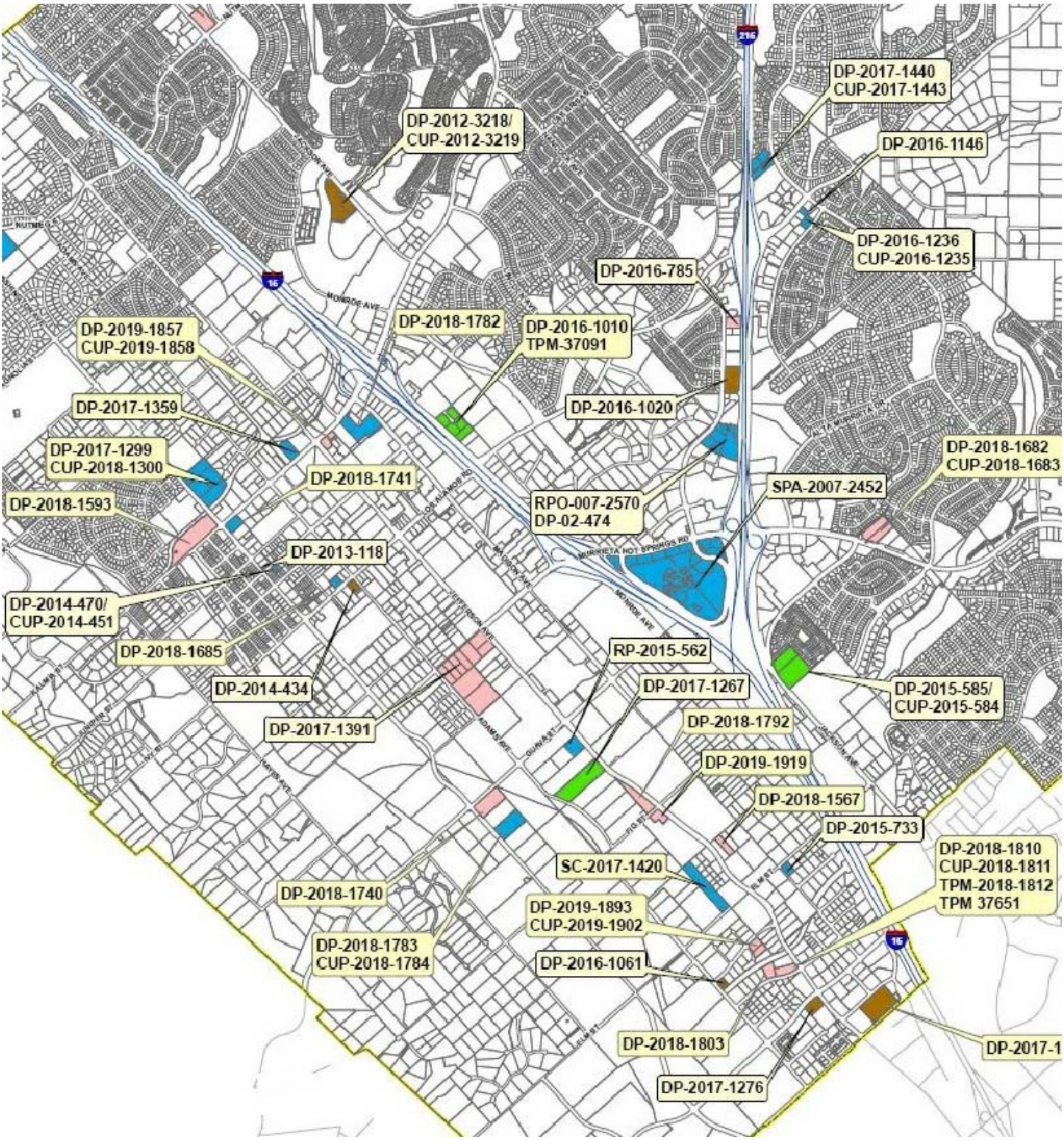
Table 4
Other Development Trip Generation

Traffic Analysis Zone (TAZ)	Project ID	Project Name	Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
						In	Out	Total	In	Out	Total	
1	DP-2017-1299	Able	Storage Facility	191.898	TSF	12	8	20	15	17	32	290
	DP-2017-1359	Fresnius	Medical Office	13.100	TSF	28	8	36	13	33	46	456
	DP-2017-1397	Jefferson & Ivy	Apartments	333	DU	33	137	170	133	73	206	2,214
	PP-2019-1857	Fast Five Car Wash	Self Service Car Wash	4.957	TSF	18	18	36	41	41	81	900
	DP-2018-1741	Downtown Marketplace	Commercial and Office	51.455	TSF	30	18	48	94	102	196	2,056
	DP-2018-1685	The Insurance Store	Office	2.000	TSF	2	0	2	0	2	2	20
	Subtotal					123	189	312	296	268	563	5,936
2	DP-2014-490	Los Alamos Community	Apartments	542	DU	54	222	276	217	119	336	3,604
3	DP-2016-785	Sial Medical Plaza	Medical Office	20.000	TSF	38	10	48	20	51	71	723
	DP-02-474	Corporate Crossroads[3]	Office	273.112	TSF	136	22	158	25	132	157	1,330
	Subtotal					174	32	206	45	183	228	2,053
4	DP-2017-1391	Murrieta Gateway	Phase 1									
			Business Park	15.000	TSF	18	3	21	5	14	19	187
			Hotel	150	RM	47	33	80	46	44	90	1,226
			Gas Station	16	FP	96	93	189	113	109	222	2,445
			Pass-By Reduction (25%)			-24	-23	-47	-28	-28	-56	-611
			Phases 1-3									
			Business Park	51.463	TSF	61	11	72	17	48	65	642
			Industrial Park	265.150	TSF	178	39	217	47	178	225	1,811
	Subtotal					376	156	532	200	365	565	5,700
5	DP-2017-1267	Cap Rock	Steel Fabrication/Manufacturing	39.000	TSF	19	6	25	8	18	26	153
	DP-2015-562	Murrieta Creek Business Park	Office	41.015	TSF	41	7	48	8	39	47	400
	Subtotal					60	13	73	16	57	73	553
6	DP-2018-1567	Larchmont Industrial	Industrial	22.000	TSF	14	2	16	2	12	14	109
7	SC-2017-1420	Elm Self Storage	Storage Facility	83.600	TSF	5	3	8	7	8	15	126
8	DP-2015-733	Elm Street Industrial	Industrial	15.265	TSF	9	1	10	1	8	9	76
9	DP-2018-1792	Mar Vista Business Park	Business Park	37.783	TSF	9	6	15	7	8	15	470
	DP-2019-1919	Gas Station-Fig and Jefferson	Convenience Store with Gas Station	6	FP	62	62	124	69	69	138	1,935
	Subtotal					71	68	139	76	77	153	2,405
10	DP-2018-1803	Industrial Building	Light Industrial	26.909	TSF	17	2	19	2	15	17	133
	DP-2018-1810	Eastman Mart	Convenience Store with Gas Station	6	FP	62	62	124	69	69	138	1,935
			Office	6.60	TSF	7	1	8	1	7	8	64
	Subtotal					86	65	151	72	91	163	2,132
11	DP-2018-1782	Raising Canes	Fast-Food Restaurant with Drive-Thru	2.796	TSF	57	53	110	47	44	91	736
TOTAL OTHER DEVELOPMENT TRIPS						**1,029**	**804**	**1,833**	**979**	**1,232**	**2,210**	**23,430**

Notes:
(1) TSF = Thousand Square Feet; RM = Rooms

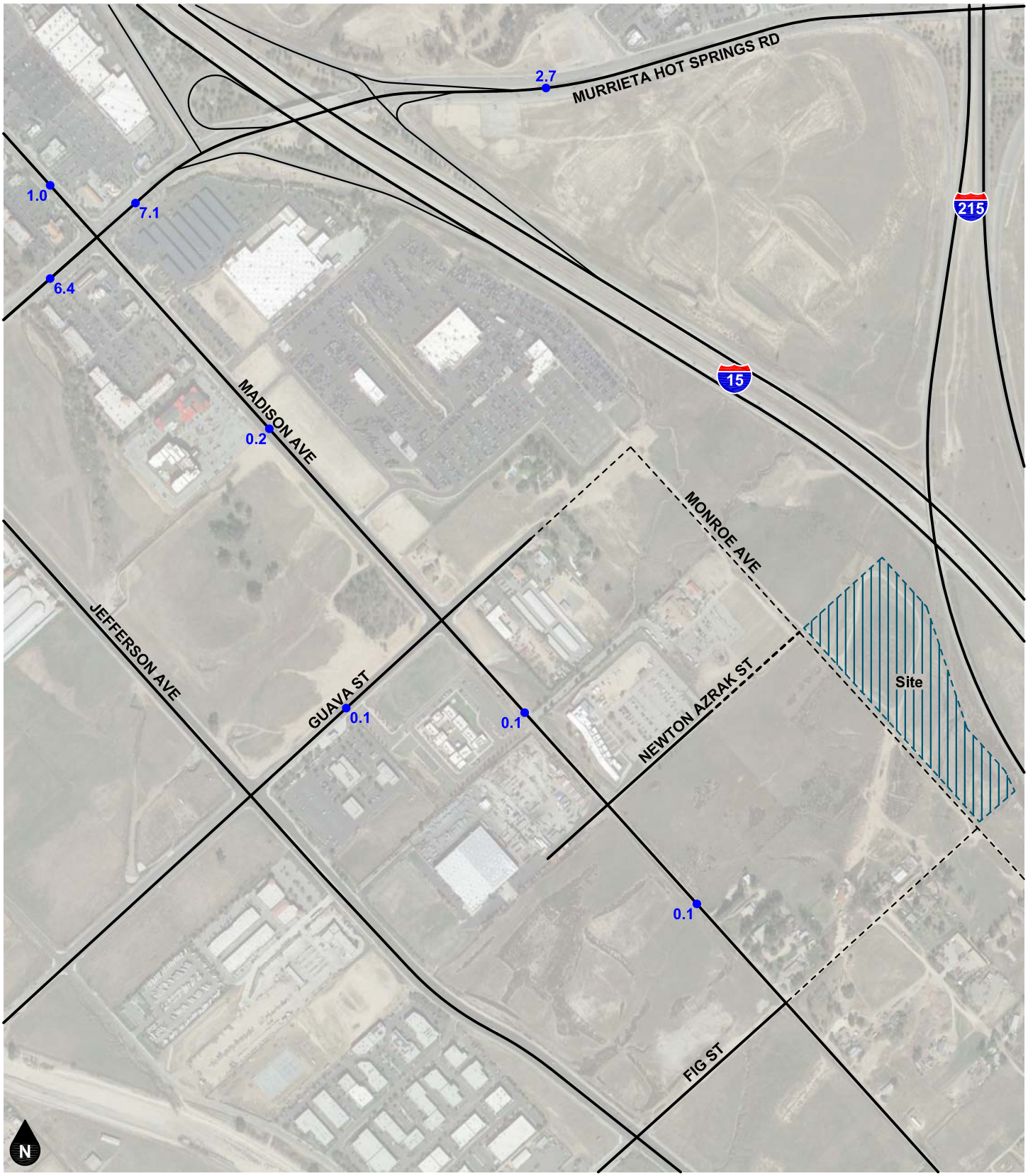
(2) Source: Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017, Land Use Categories 110, 140, 151, 710, 720, 770, 820, 853, 934, and 943.
Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region , San Diego Association of Governments, April 2002
Jefferson & Ivy Traffic Impact Analysis , prepared by Trames Solutions, Inc., December 19, 2017
Scoping Agreement for Sial Medical Office Building provided by City of Murrieta staff
Murrieta Gateway Project Traffic Impact Analysis , prepared by Linscott, Law, & Greenspan, Engineers, May 9, 2017
Scoping Agreement for BMW of Murrieta provided by City of Murrieta staff

(3) Two of the four buildings are built and operational. Half of the square footage has been assumed to still be active.



SOURCE: CITY OF MURRIETA, MAY 2019

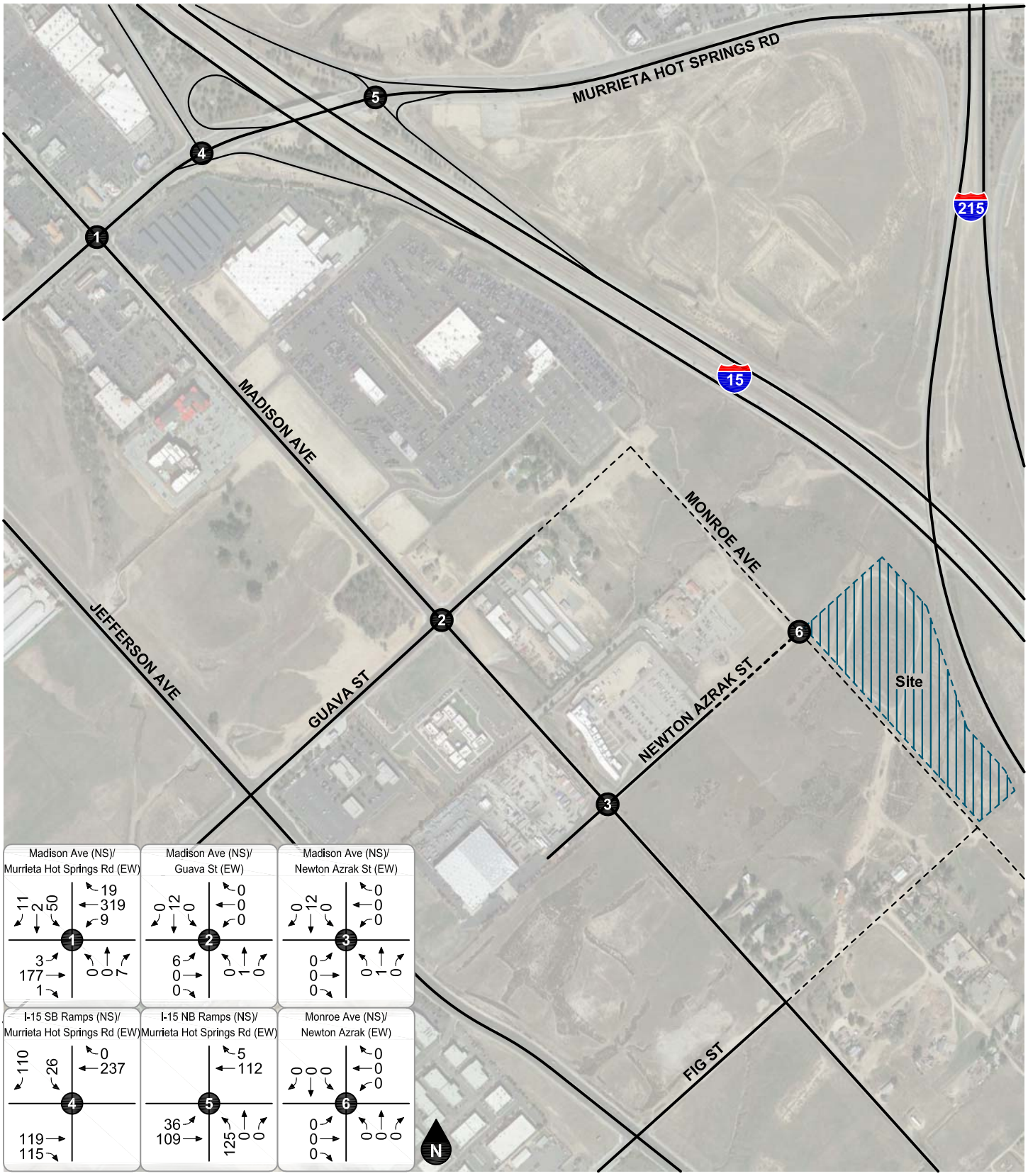
Figure 16
Other Development Location Map



Legend

●## Vehicles Per Day (1,000's)

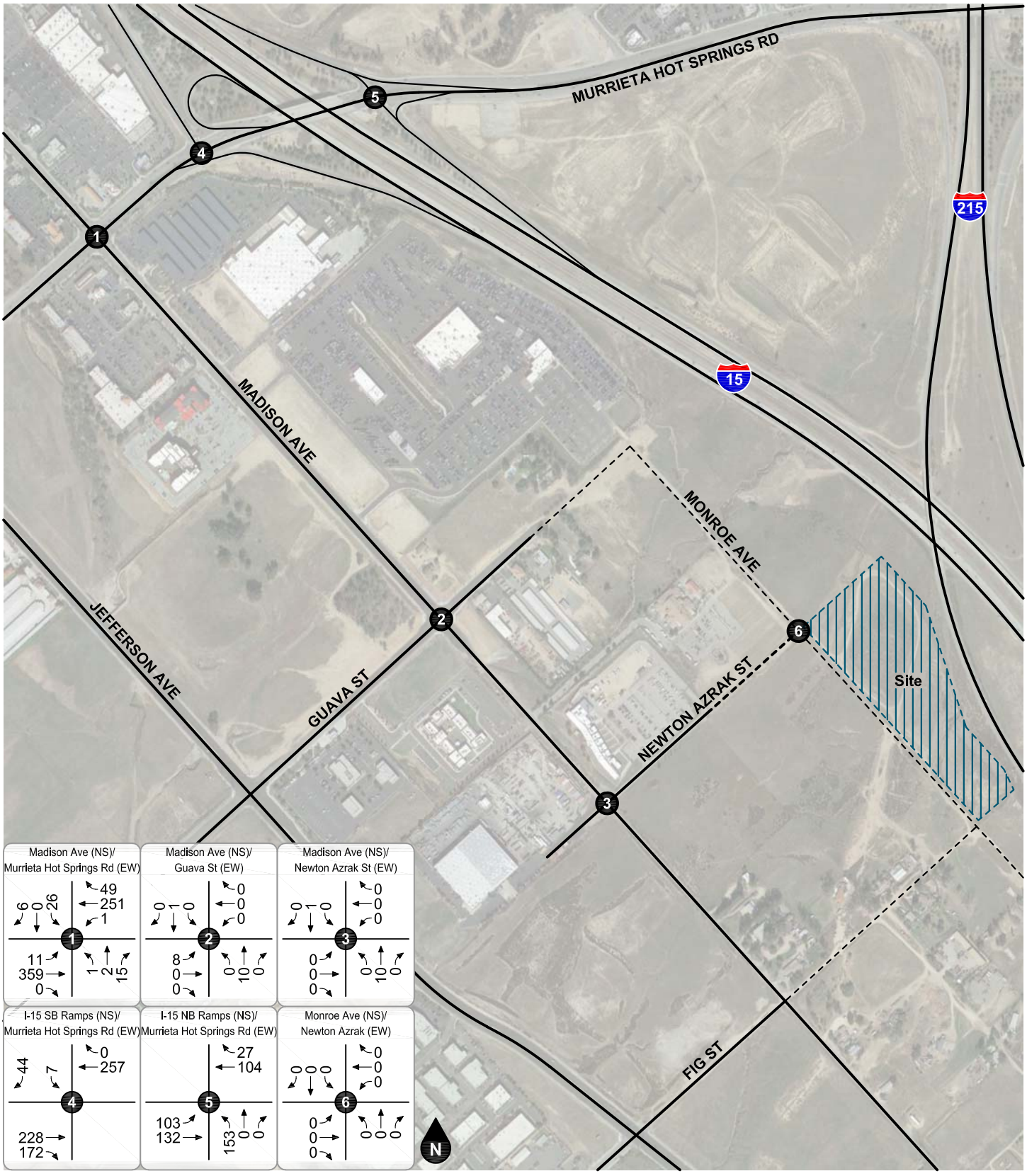
Figure 17
Other Development Average Daily Traffic Volumes



Legend

(#) Study Intersection

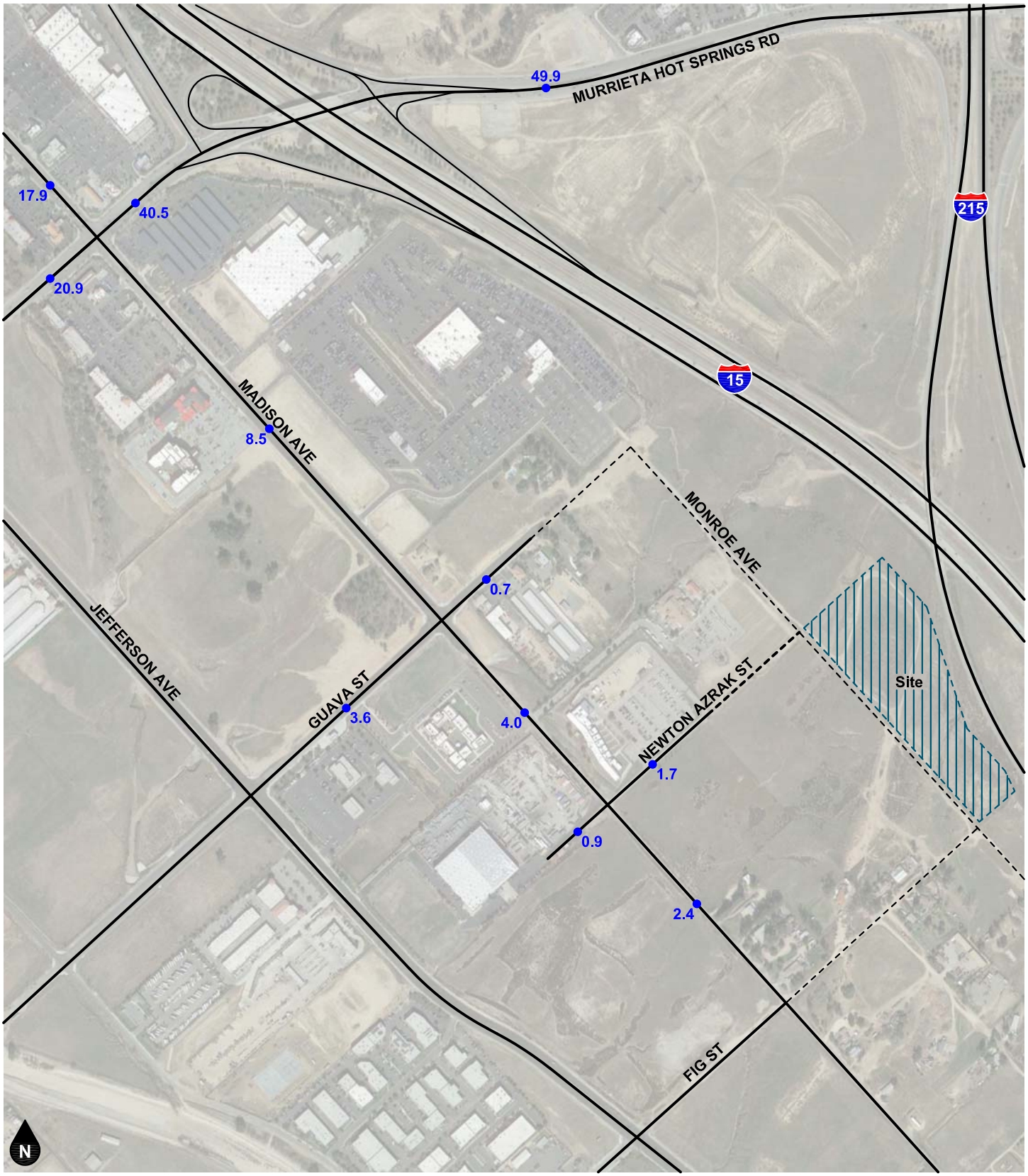
Figure 18
Other Development
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

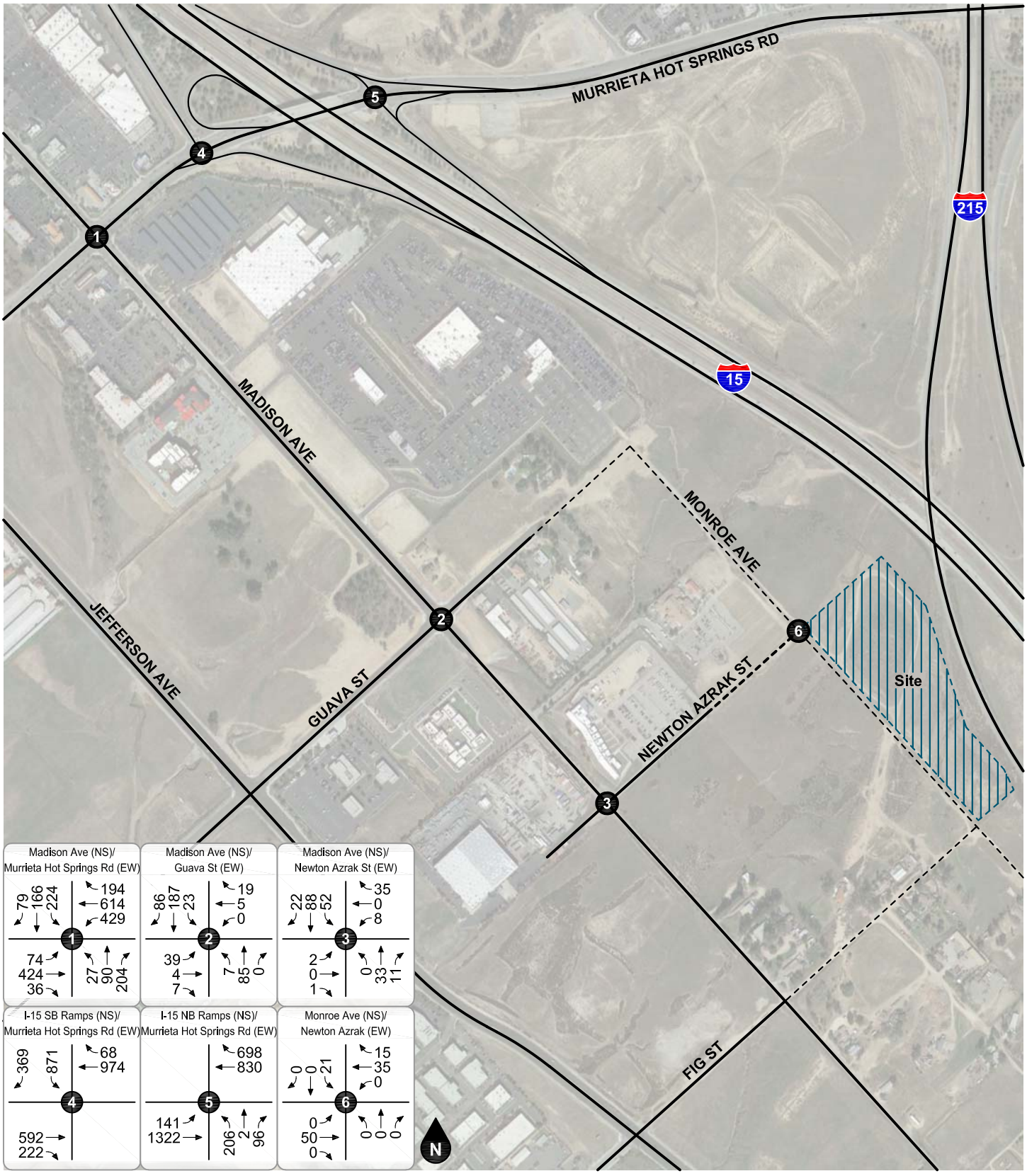
Figure 19
Other Development
PM Peak Hour Intersection Turning Movement Volumes



Legend

●## Vehicles Per Day (1,000's)

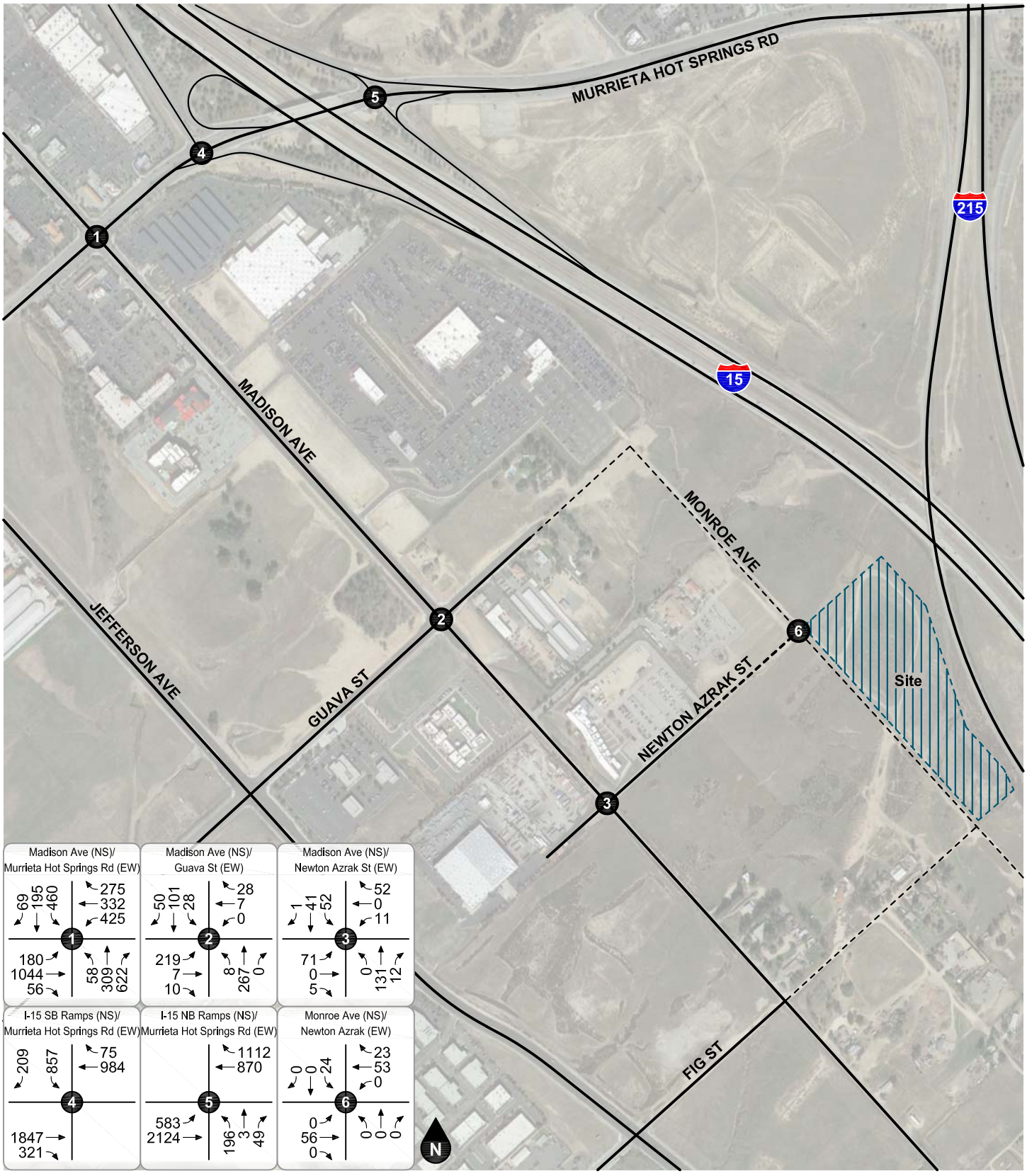
Figure 20
Existing Plus Project Average Daily Traffic Volumes



Legend

(#) Study Intersection

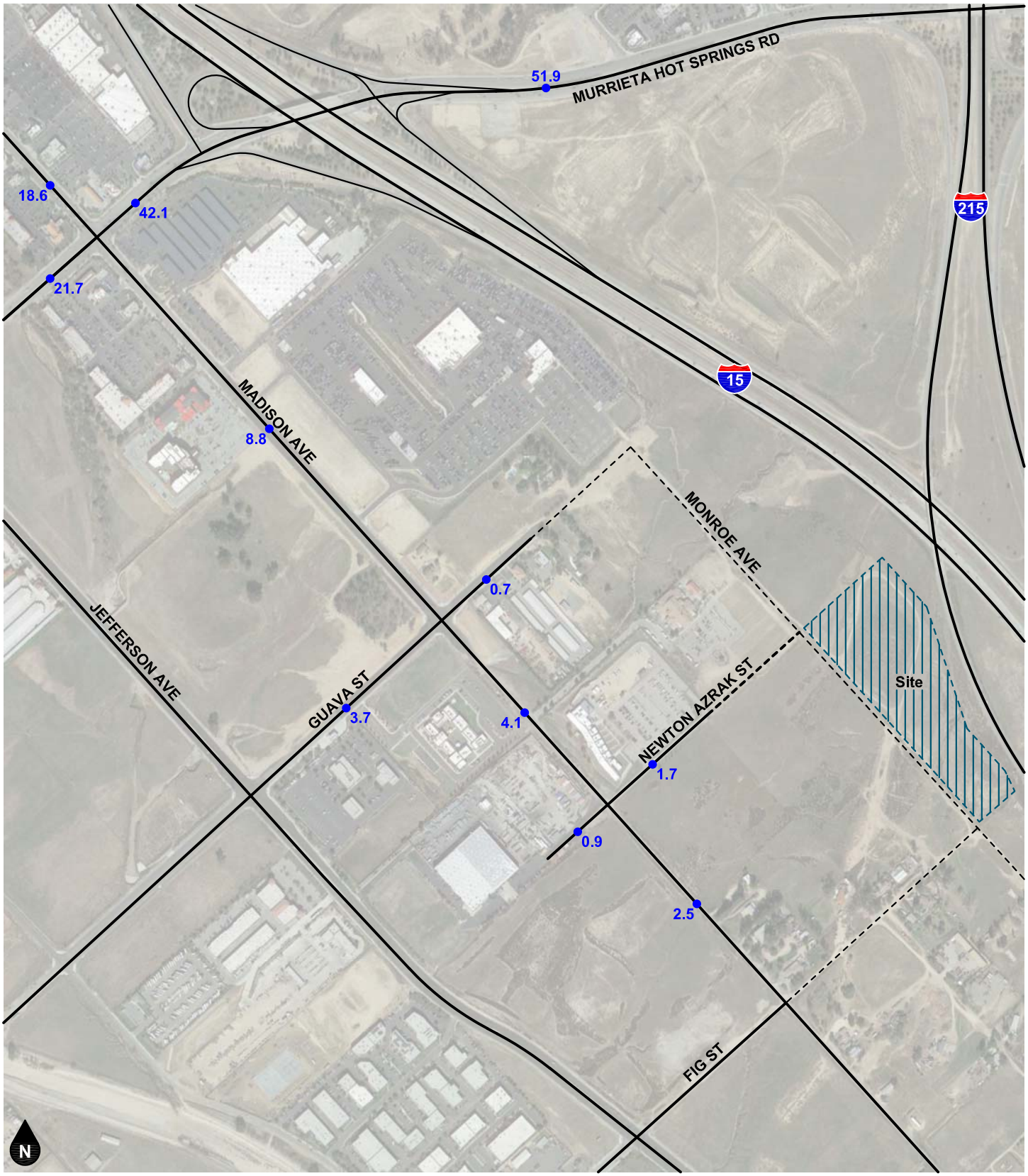
Figure 21
Existing Plus Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

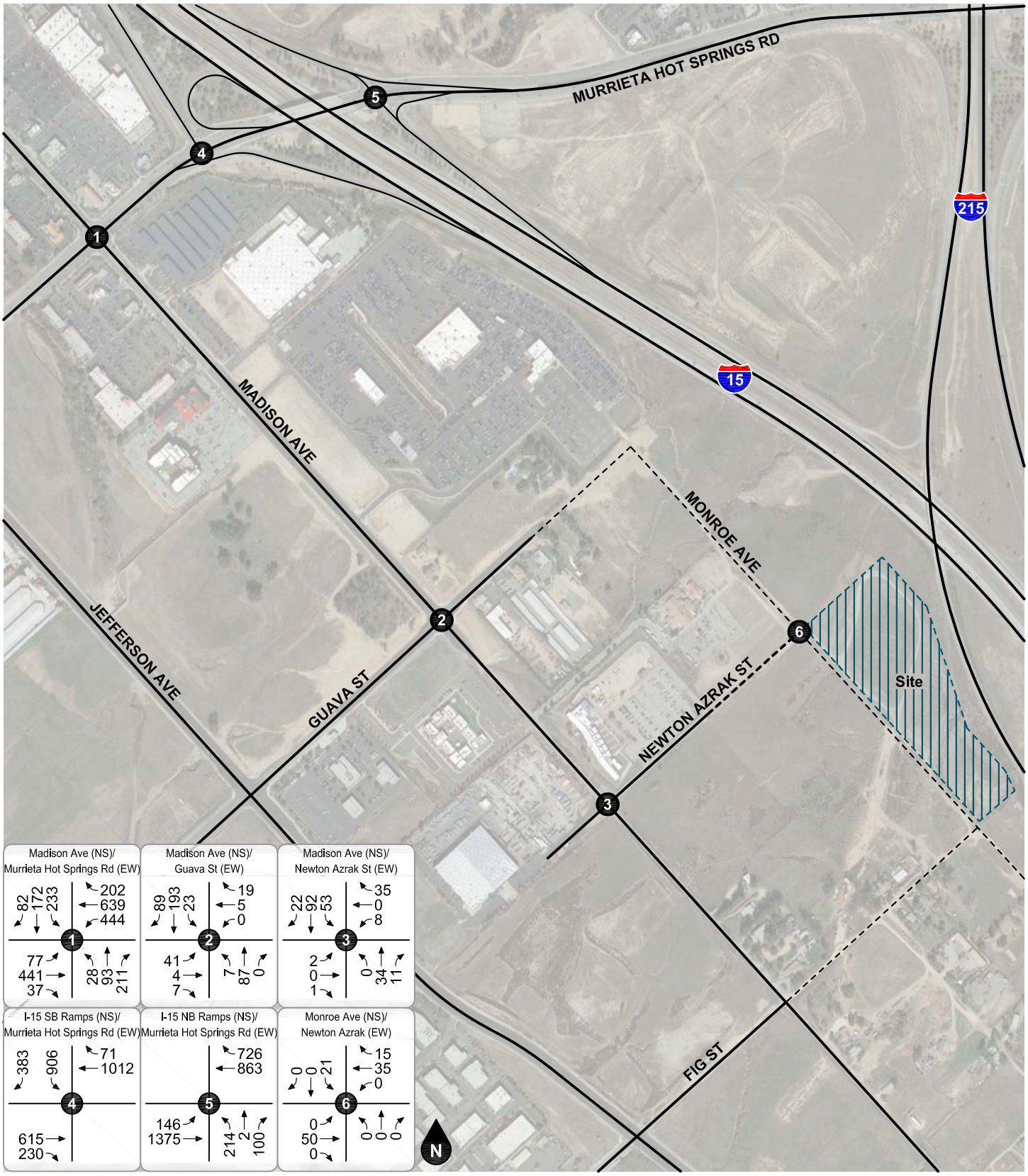
Figure 22
Existing Plus Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

●## Vehicles Per Day (1,000's)

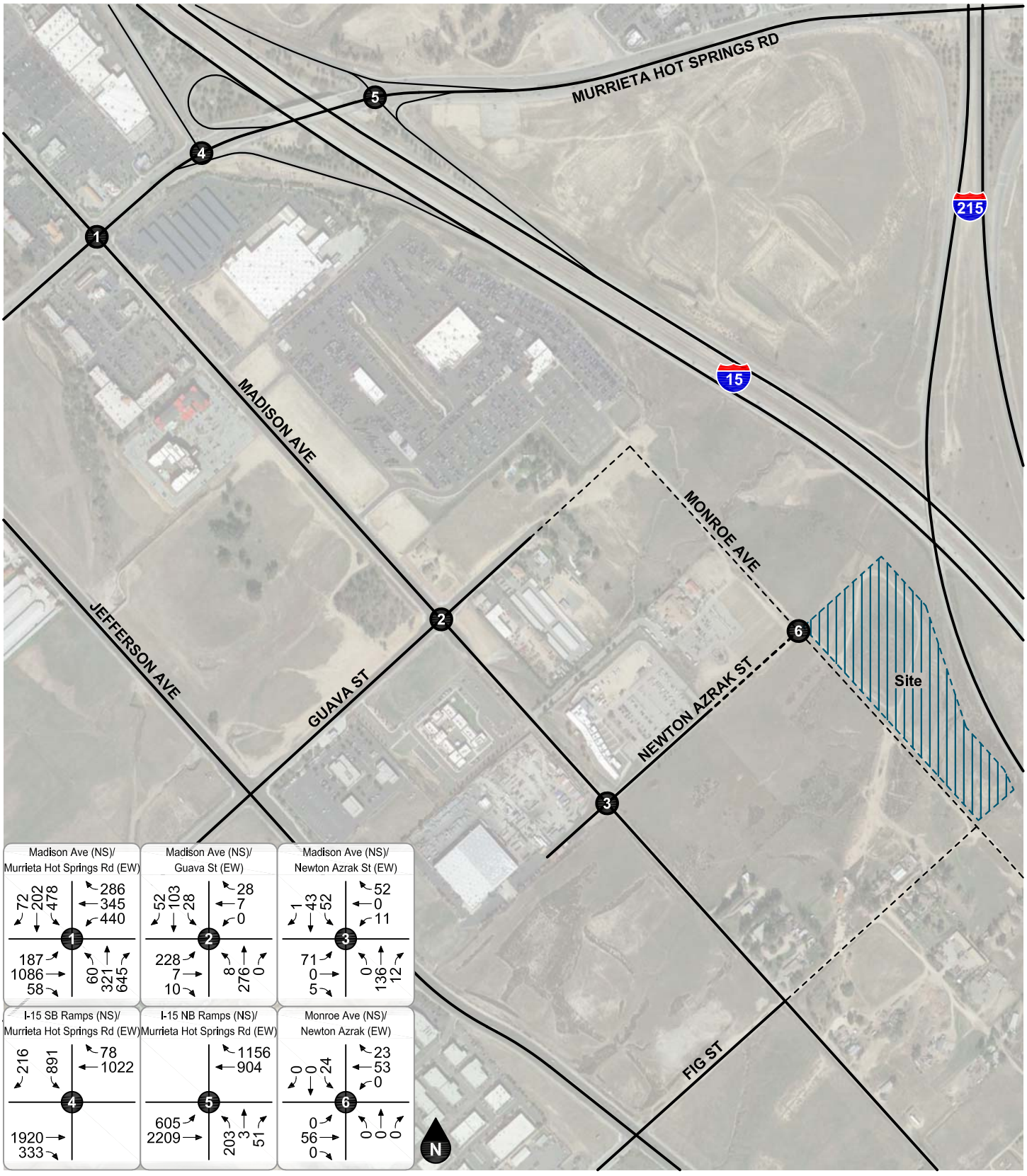
Figure 23
Project Completion (Year 2021) Average Daily Traffic Volumes



Legend

(#) Study Intersection

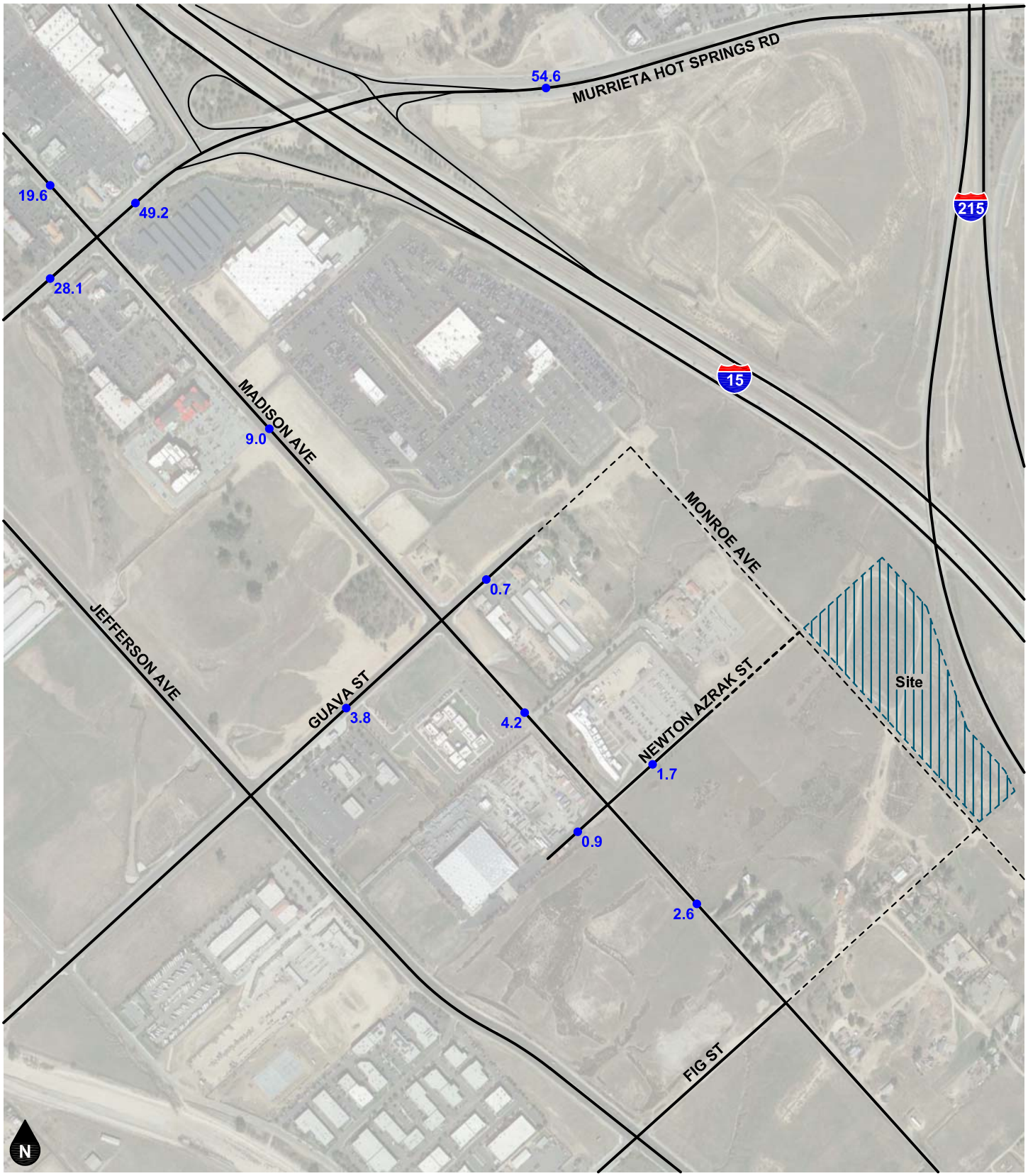
Figure 24
Project Completion (Year 2021)
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

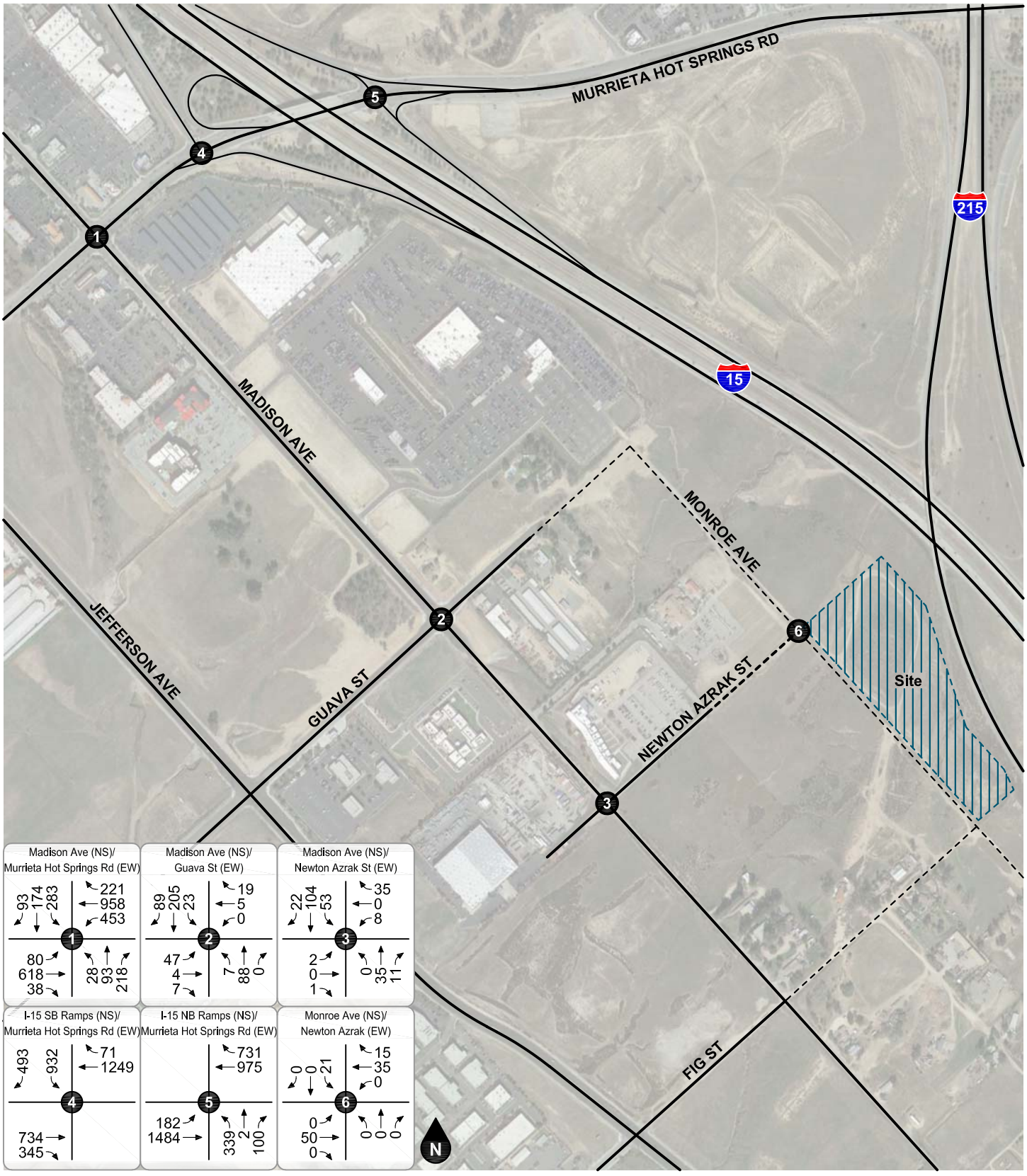
Figure 25
Project Completion (Year 2021)
PM Peak Hour Intersection Turning Movement Volumes



Legend

●## Vehicles Per Day (1,000's)

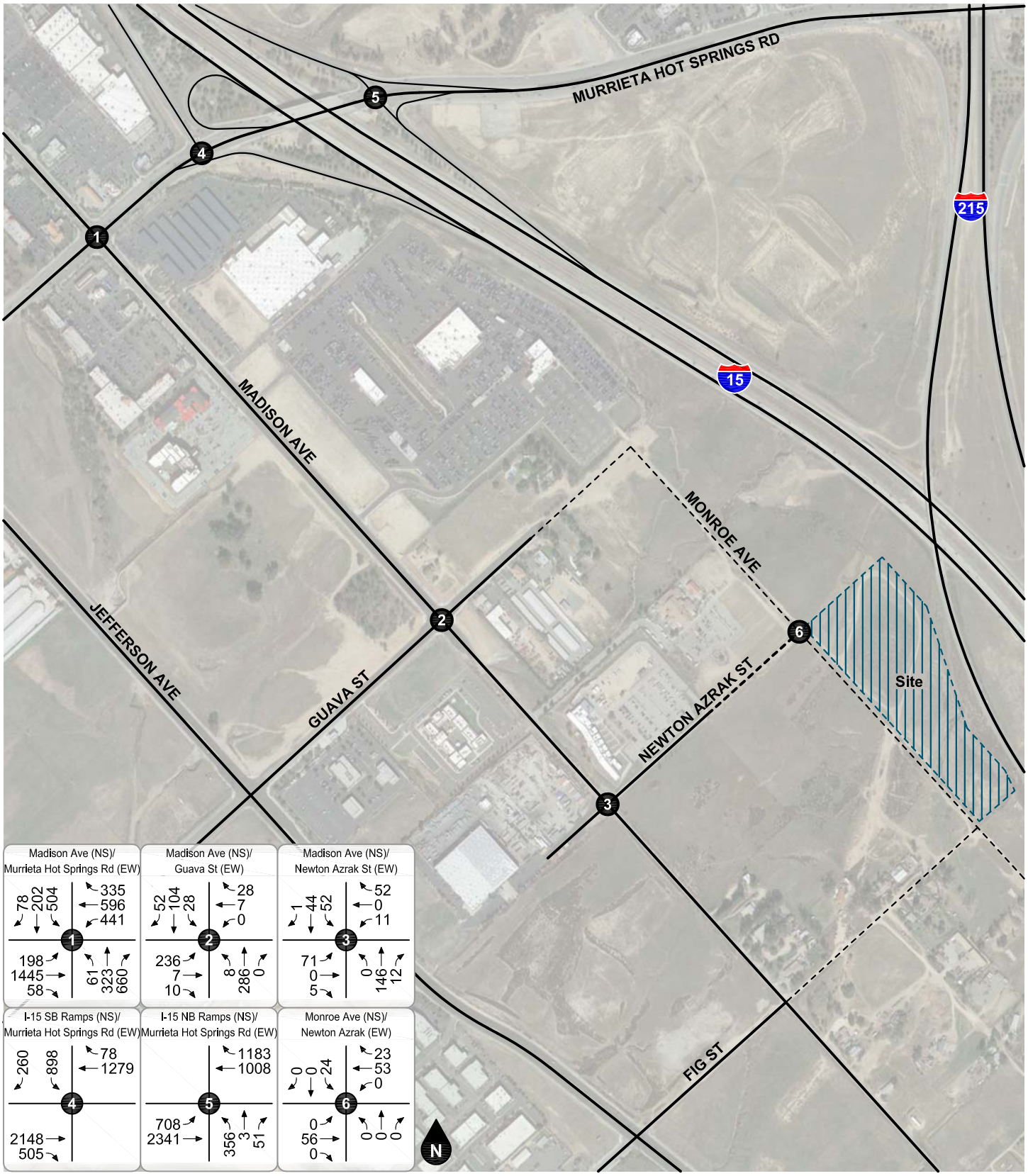
Figure 26
Project Completion (Year 2021) Plus Cumulative Average Daily Traffic Volumes



Legend

(#) Study Intersection

Figure 27
Project Completion (Year 2021) Plus Cumulative
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

Figure 28
Project Completion (Year 2021) Plus Cumulative
PM Peak Hour Intersection Turning Movement Volumes

6. FUTURE OPERATIONAL ANALYSIS

Detailed intersection Level of Service calculation worksheets for each of the following analysis scenarios are provided in Appendix D.

EXISTING PLUS PROJECT

Intersection Levels of Service

The delay and Levels of Service for Existing Plus Project conditions are shown in Table 5. As shown in Table 5, the study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Existing Plus Project conditions. Therefore, the proposed project is forecast to result in no significant impacts at the study intersections for Existing Plus Project conditions.

Roadway Segment Analysis

The study roadway segment capacity analysis is shown in Table 6. As shown in Table 6, the study roadway segments are forecast to operate within acceptable Levels of Service (C or better) for Existing Plus Project conditions. Therefore, the proposed project is forecast to result in no significant impacts at the study roadway segments for Existing Plus Project conditions.

PROJECT COMPLETION (YEAR 2021)

Intersection Levels of Service

The delay and Levels of Service for Project Completion (Year 2021) conditions are shown in Table 7. As shown in Table 7, the study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Project Completion (Year 2021) conditions. Therefore, the proposed project is forecast to result in no significant impacts at the study intersections for Project Completion (Year 2021) conditions.

Roadway Segment Analysis

The study roadway segment capacity analysis is shown in Table 8. As shown in Table 8, the study roadway segments are forecast to operate within acceptable Levels of Service (C or better) for Project Completion (Year 2021) conditions. Therefore, the proposed project is forecast to result in no significant impacts at the study roadway segments for Project Completion (Year 2021) conditions.

PROJECT COMPLETION (YEAR 2021) PLUS CUMULATIVE

Intersection Levels of Service

The delay and Levels of Service for Project Completion (Year 2021) Plus Cumulative conditions are shown in Table 9. As shown in Table 9, the study intersections are forecast to operate within Levels of Service (D or better) during the peak hours for Project Completion (Year 2021) Plus Cumulative conditions, except for the intersection of I-15 Northbound Ramps/Murrieta Hot Springs Road during the PM peak hour, which is forecast to operate at the minimum allowable Level of Service E for freeway interchange intersections. Therefore, the proposed project is forecast to result in no significant impacts at the study intersections for Project Completion (Year 2021) Plus Cumulative conditions.

Roadway Segment Analysis

The study roadway segment capacity analysis is shown in Table 10. As shown in Table 10, the study roadway segments are forecast to operate within acceptable Levels of Service (C or better) for Project Completion (Year 2021) Plus Cumulative conditions. Therefore, the proposed project is forecast to result in no significant impacts at the study roadway segments for Project Completion (Year 2021) Plus Cumulative conditions.

Table 5
Existing Plus Project Intersection Level of Service

ID	Study Intersection	Jurisdiction	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
				Delay[2]	LOS[3]	Delay[2]	LOS[3]
1.	Madison Avenue at Murrieta Hot Springs Road	Murrieta	TS	17.3	B	29.9	C
2.	Madison Avenue at Guava Street	Murrieta	TS	7.9	A	9.7	A
3.	Madison Avenue at Newton Azrak Street	Murrieta	CSS	10.6	B	16.5	C
4.	I-15 SB Ramps at Murrieta Hot Springs Road	Caltrans	TS	9.1	A	15.7	B
5.	I-15 NB Ramps at Murrieta Hot Springs Road	Caltrans	TS	4.8	A	18.5	B
6.	Monroe Avenue at Newton Azrak Street/Project Access (EW)	Murrieta	CSS	9.6	A	9.7	A

Notes:

(1) TS = Traffic Signal; CSS = Cross Street Stop

(2) Delay and Level of Service have been calculated using the following analysis software: Vistro, Version 6.00-03. Per the Highway Capacity Manual, overall average intersection delay and Level of Service are shown for intersections with all way stop control. For intersections with cross street stop control, the delay and Level of Service for the worst individual movement (or movements sharing a single lane) are shown.

(3) LOS = Level of Service

Table 6
Existing Plus Project Roadway Segment Capacity Analysis

Roadway	Segment		Murrieta Roadway Standards[1]			Existing Plus Project Conditions					
	From	To	Classification	Lanes	Capacity	Lanes	Capacity[2]	ADT[3]	V/C[4]	Capacity Threshold	LOS[5]
Madison Avenue	Murrieta Hot Springs Road	Guava Street	**Major**	4	34,100	4	34,100	8,500	0.25	Acceptable	A
	Guava Street	Newton Azrak Street	Major	4	34,100	2	13,000	4,000	0.31	Acceptable	A
Guava Street	Madison Avenue	East of Madison Avenue	Secondary	4	25,900	2	13,000	700	0.05	Acceptable	A

Notes:

(1) The City of Murrieta roadway maximum capacity at Level of Service "E" (City of Murrieta General Plan 2035). **Bold** denotes roadway is currently built at its ultimate cross-section width.

(2) Maximum capacity at Level of Service "E" based on existing number of lanes. Ultimate standard capacity is only assumed if the roadway is constructed at its ultimate cross-section width, including design improvement features (lane width, shoulder width, bike lanes or medians).

(3) ADT = Average Daily Traffic

(4) V/C = Volume to Capacity Ratio.

(5) LOS = Level of Service

Table 7
Project Completion (Year 2021) Intersection Level of Service

ID	Study Intersection	Jurisdiction	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
				Delay[2]	LOS[3]	Delay[2]	LOS[3]
1.	Madison Avenue at Murrieta Hot Springs Road	Murrieta	TS	17.6	B	32.0	C
2.	Madison Avenue at Guava Street	Murrieta	TS	8.0	A	9.9	A
3.	Madison Avenue at Newton Azrak Street	Murrieta	CSS	10.7	B	16.8	C
4.	I-15 SB Ramps at Murrieta Hot Springs Road	Caltrans	TS	9.6	A	19.5	B
5.	I-15 NB Ramps at Murrieta Hot Springs Road	Caltrans	TS	4.8	A	23.4	C
6.	Monroe Avenue at Newton Azrak Street/Project Access (EW)	Murrieta	CSS	9.6	A	9.7	A

Notes:

(1) TS = Traffic Signal; CSS = Cross Street Stop

(2) Delay and Level of Service have been calculated using the following analysis software: Vistro, Version 6.00-03. Per the Highway Capacity Manual, overall average intersection delay and Level of Service are shown for intersections with all way stop control. For intersections with cross street stop control, the delay and Level of Service for the worst individual movement (or movements sharing a single lane) are shown.

(3) LOS = Level of Service

Table 8
Project Completion (Year 2021) Roadway Segment Capacity Analysis

Roadway	Segment		Murrieta Roadway Standards[1]			Project Completion					
	From	To	Classification	Lanes	Capacity	Lanes	Capacity[2]	ADT[3]	V/C[4]	Capacity Threshold	LOS[5]
Madison Avenue	Murrieta Hot Springs Road	Guava Street	**Major**	4	34,100	4	34,100	8,800	0.26	Acceptable	A
	Guava Street	Newton Azrak Street	Major	4	34,100	2	13,000	4,100	0.32	Acceptable	A
Guava Street	Madison Avenue	East of Madison Avenue	Secondary	4	25,900	2	13,000	700	0.05	Acceptable	A

Notes:

(1) The City of Murrieta roadway maximum capacity at Level of Service "E" (City of Murrieta General Plan 2035). **Bold** denotes roadway is currently built at its ultimate cross-section width.

(2) Maximum capacity at Level of Service "E" based on existing number of lanes. Ultimate standard capacity is only assumed if the roadway is constructed at its ultimate cross-section width, including design improvement features (lane width, shoulder width, bike lanes or medians).

(3) ADT = Average Daily Traffic

(4) V/C = Volume to Capacity Ratio.

(5) LOS = Level of Service

Table 9
Project Completion (Year 2021) Plus Cumulative Intersection Level of Service

ID	Study Intersection	Jurisdiction	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
				Delay[2]	LOS[3]	Delay[2]	LOS[3]
1.	Madison Avenue at Murrieta Hot Springs Road	Murrieta	TS	18.9	B	39.1	D
2.	Madison Avenue at Guava Street	Murrieta	TS	8.3	A	10.0	B
3.	Madison Avenue at Newton Azrak Street	Murrieta	CSS	10.8	B	17.3	C
4.	I-15 SB Ramps at Murrieta Hot Springs Road	Caltrans	TS	12.6	B	27.9	C
5.	I-15 NB Ramps at Murrieta Hot Springs Road	Caltrans	TS	6.2	A	59.0	E
6.	Monroe Avenue at Newton Azrak Street/Project Access (EW)	Murrieta	CSS	9.6	A	9.7	A

Notes:

(1) TS = Traffic Signal; CSS = Cross Street Stop

(2) Delay and Level of Service have been calculated using the following analysis software: Vistro, Version 6.00-03. Per the Highway Capacity Manual, overall average intersection delay and Level of Service are shown for intersections with all way stop control. For intersections with cross street stop control, the delay and Level of Service for the worst individual movement (or movements sharing a single lane) are shown.

(3) LOS = Level of Service

Table 10
Project Completion (Year 2021) Plus Cumulative Roadway Segment Capacity Analysis

Roadway	Segment		Murrieta Roadway Standards[1]			Project Completion Plus Cumulative					
	From	To	Classification	Lanes	Capacity	Lanes	Capacity[2]	ADT[3]	V/C[4]	Capacity Threshold	LOS[5]
Madison Avenue	Murrieta Hot Springs Road	Guava Street	**Major**	4	34,100	4	34,100	9,000	0.26	Acceptable	A
	Guava Street	Newton Azrak Street	Major	4	34,100	2	13,000	4,200	0.32	Acceptable	A
Guava Street	Madison Avenue	East of Madison Avenue	Secondary	4	25,900	2	13,000	700	0.05	Acceptable	A

Notes:

(1) The City of Murrieta roadway maximum capacity at Level of Service "E" (City of Murrieta General Plan 2035). **Bold** denotes roadway is currently built at its ultimate cross-section width.

(2) Maximum capacity at Level of Service "E" based on existing number of lanes. Ultimate standard capacity is only assumed if the roadway is constructed at its ultimate cross-section width, including design improvement features (lane width, shoulder width, bike lanes or medians).

(3) ADT = Average Daily Traffic

(4) V/C = Volume to Capacity Ratio.

(5) LOS = Level of Service

7. OTHER CONSIDERATIONS

VEHICLES MILES TRAVELED (VMT)

Senate Bill 743 mandates that California Environmental Quality Act (CEQA) guidelines be amended to provide an alternative to Level of Service for evaluating transportation impacts. The amended CEQA guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) for transportation impact evaluation. Generally speaking, the intent of this legislation is to shift the focus from the impact drivers experience on the roadway network to the impact of driving motor vehicles itself. Currently, agencies may opt-in to applying the updated CEQA guidelines for VMT as the primary metric for transportation impact analysis; however, implementation is required State-wide by July 1, 2020. Several jurisdictions are currently in the process of developing updated procedures, methodologies, and thresholds for VMT analysis; however, very few have fully implemented the new metric and many agencies are looking to early adopters before determining how best to implement the new requirements. The City of Murrieta has yet to adopt updated guidelines for VMT analysis; therefore, VMT analysis is not included in this report nor is the proposed project required to conduct VMT analysis unless the environmental review process extends beyond the July 1, 2020 deadline.

GENERAL PLAN AMENDMENT

The proposed development is requesting a General Plan Amendment to modify Monroe Avenue from Guava Street to Fig Street from a Major to an Industrial Collector on the City of Murrieta General Plan Circulation Element.

Monroe Avenue from Guava Street to Fig Street is forecast to carry 700 average daily trips for Project Completion (Year 2021) Plus Cumulative conditions. According to the City of Murrieta General Plan (Adopted July 2011, Exhibit 5-6), the segment of Monroe Avenue between Guava Street and Fig Street is forecast to carry between 1,200 and 1,900 average daily trips for General Plan 2035 conditions.

The City of Murrieta General Plan Circulation Element does not provide daily roadway capacity values for an Industrial Collector; however, the proposed two lane Industrial Collector would have a similar daily capacity (maximum Level of Service E) as a two-lane Collector at 13,000 vehicles per day. As such, this segment of Monroe Avenue is forecast to result to result in a maximum volume-to-capacity ratio of 0.15 (Level of Service A) if modified to a two-lane Industrial Collector. Therefore, the proposed General Plan Amendment to modify Monroe Avenue from Guava Street to Fig Street from a Major to an Industrial Collector is forecast to result in no significant impacts.

8. CONCLUSIONS

PROJECT DESIGN FEATURES

This analysis assumes the proposed project shall construct the project access driveway at Monroe Avenue with the following lane configurations in accordance with applicable standards to the satisfaction of the City of Murrieta Department of Public Works:

- **Monroe Avenue at Newton Azrak Street/Project Access (EW) - #6**
  - Westbound: Shared left/through/right lane with stop control

The second project access south of Newton Azrak Street is proposed to be constructed with a left turn lane and right turn lane. For purposes of this analysis, all project trips are assumed to enter/exit the project site via the Newton Azrak Street/ Monroe Avenue intersection (#6), resulting in a conservative analysis of the project impact at this intersection. Since Monroe Avenue adjacent to the project site has nominal existing traffic, the second project access point south of Newton Azrak Street is presumed to operate at acceptable Levels of Service.

Newton Azrak Street will be extended from its current eastern terminus to Monroe Avenue, Monroe Avenue will be constructed from the south project driveway to Guava Street, and Guava Street will be extended from its current eastern terminus to Monroe Avenue. Project site access is proposed via two full access driveways at Monroe Avenue, including one at the eastern leg of the Newton Azrak Street and Monroe Avenue intersection to be newly constructed. These improvements shall be constructed in accordance with the design approval of the City of Murrieta Public Works Department.

MITIGATION MEASURES

No off-site mitigation measure improvements were identified since the study intersections and roadway segments are projected to operate at acceptable Levels of Service for the scenarios analyzed.

GENERAL RECOMMENDATIONS

All roadway design, traffic signing and striping, and traffic control improvements relating to the proposed project should be constructed in accordance with applicable engineering standards and to the satisfaction of the City of Murrieta Public Works Department. Monroe Avenue from Guava Street to Fig Street modified from Major to an Industrial Collector.

Site-adjacent roadways should be constructed or repaired at their ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise required by the City of Murrieta Public Works Department.

On-site traffic signing and striping plans should be submitted for City of Murrieta approval in conjunction with detailed construction plans for the project.

Off-street parking should be provided to meet City of Murrieta Municipal Code requirements.

The final grading, landscaping, and street improvement plans should demonstrate that sight distance standards are met in accordance with applicable City of Murrieta/California Department of Transportation sight distance standards.

As is the case for any roadway design, the City of Murrieta should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

APPENDICES

Appendix A Glossary
Appendix B Scoping Agreement
Appendix C Volume Count Worksheets
Appendix D Level of Service Worksheets

APPENDIX A

GLOSSARY

GLOSSARY OF TERMS

ACRONYMS

AC	Acres
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
LOS	Level of Service
TSF	Thousand Square Feet
V/C	Volume/Capacity
VMT	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A point of constriction along a roadway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CONTROL DELAY: The component of delay, typically expressed in seconds per vehicle, resulting from the type of traffic control at an intersection. Control delay is measured by comparison with the uncontrolled condition; it includes delay incurred by slowing down, stopping/waiting, and speeding up.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CORNER SIGHT DISTANCE: The minimum sight distance required by the driver of a vehicle to cross or enter the lanes of the major roadway without requiring approaching traffic travelling at a given speed to radically alter their speed or trajectory. Corner sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 36 inches above the pavement in the center of the nearest approach lane.

CYCLE LENGTH: The time period in seconds required for a traffic signal to complete one full cycle of indications.

CUL-DE-SAC: A local street open at one end only and with special provisions for turning around.

DAILY CAPACITY: A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

PASSENGER CAR EQUIVALENT (PCE): A metric used to assess the impact of larger vehicles, such as trucks, recreational vehicles, and buses, by converting the traffic volume of larger vehicles to an equivalent number of passenger cars.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

QUEUE: The number of vehicles waiting at a service area such as a traffic signal, stop sign, or access gate.

QUEUE LENGTH: The length of vehicle queue, typically expressed in feet, waiting at a service area such as a traffic signal, stop sign, or access gate.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SHARED/RECIPROCAL PARKING AGREEMENT: A written binding document executed between property owners to provide a designated number of off-street parking stalls within a designated area to be available for specified businesses or land uses.

SIGHT DISTANCE: The continuous length of roadway visible to a driver or roadway user.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STACKING DISTANCE: The length of area available behind a service area, such as a traffic signal or gate, for vehicle queueing to occur.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through an intersection.

STOPPING SIGHT DISTANCE: The minimum distance required by the driver of a vehicle on the major roadway travelling at a given speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 6 inches above the pavement.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination (i.e., each trip has two trip-ends). A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

TURNING RADIUS: The circular arc formed by the smallest turning path radius of the front outside tire of a vehicle, such as that performed by a U-turn maneuver. This is based on the length and width of the wheel base as well as the steering mechanism of the vehicle.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

SCOPING AGREEMENT

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Murrieta Engineering Department requirements for traffic impact analysis of the following project. The analysis must follow the City of Murrieta Traffic Impact Analysis Preparation Guide dated **October 2013.**

Case No. (Required for submittal) _____
Related Cases -
SP No. _____
EIR No. _____
GPA No. _____
CZ No. _____
Project Name: **Hotel Murrieta**
Project Address: **Between Monroe Avenue and I-15/I-215 interchange north of Fig Street**
Project Description: **257 Room Hotel**

	Consultant	Developer
Name:	**GANDDINI GROUP, INC.**	**HOTEL MURRIETA, LLC**
Address:	**550 Parkcenter Drive, Suite 202**	**35411 Paseo Viento**
	Santa Ana, CA 82705	**Capistrano Beach, CA 92624**
Telephone:	**(714) 795-3100 x 104**	**(949) 661-7292**

A. Trip Generation Source: **ITE Trip Generation Manual, 10th Edition, 2017**

Current GP Land Use **Office and Research Park** Proposed Land Use **No Change**
Current Zoning **Office Research Park** Proposed Zoning **No Change**

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	**0**	**0**	**0**	**71**	**50**	**121**
PM Trips	**0**	**0**	**0**	**79**	**76**	**155**

Internal Trip Allowance Yes [No] (___% Trip Discount)
Pass-By Trip Allowance Yes [No] (___% Trip Discount)

B. Trip Geographic Distribution: N___% S___% E___% W___%
(See attached exhibit for detailed assignment)

C. Background Traffic

Project Build-out Year **2021** Annual Ambient Growth Rate: **2** %
Phase Year(s) _____
Other area projects to be analyzed: **See Attached, with supplementation provided by the City**
Model/Forecast methodology _____

D. **Study intersections:** (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

1. Madison Avenue (NS) at Murrieta Hot Springs Road (EW)
2. Madison Avenue (NS) at Guava Street (EW)
3. Madison Avenue (NS) at Newton Azrak Street (EW)
4. I-15 Freeway SB Ramps (NS) at Murrieta Hot Springs Road (EW)
5. I-15 Freeway NB Ramps (NS) at Murrieta Hot Springs Road (EW)
6. Monroe Avenue (NS) at Newton Azrak Street/Project Access (EW)
7. Monroe Avenue (NS) at Project Access (EW)

E. **Study Roadway Segments**

Madison Avenue between Murrieta Hot Springs Road and Guava Street
Madison Avenue between Guava Street and Newton Azrak
Guava Street east of Madison Avenue

F. **Site Plan** (See Figure 2.)

G. **Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline)**
(To be filled out by Engineering Department)

H. **Existing Conditions**

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.
Date of counts New, when schools are in session

Recommended by:

Bryan Crawford, Senior Transportation Planner — **July 22, 2019**
Consultant's Representative — Date

Scoping Agreement Submitted on **July 11, 2019**

Revised on July 22, 2019

Approved Scoping Agreement:

Arda Eclesiopton — 7/25/19
City of Murrieta Engineering Department — Date

#18-0074

Table 1
Project Trip Generation

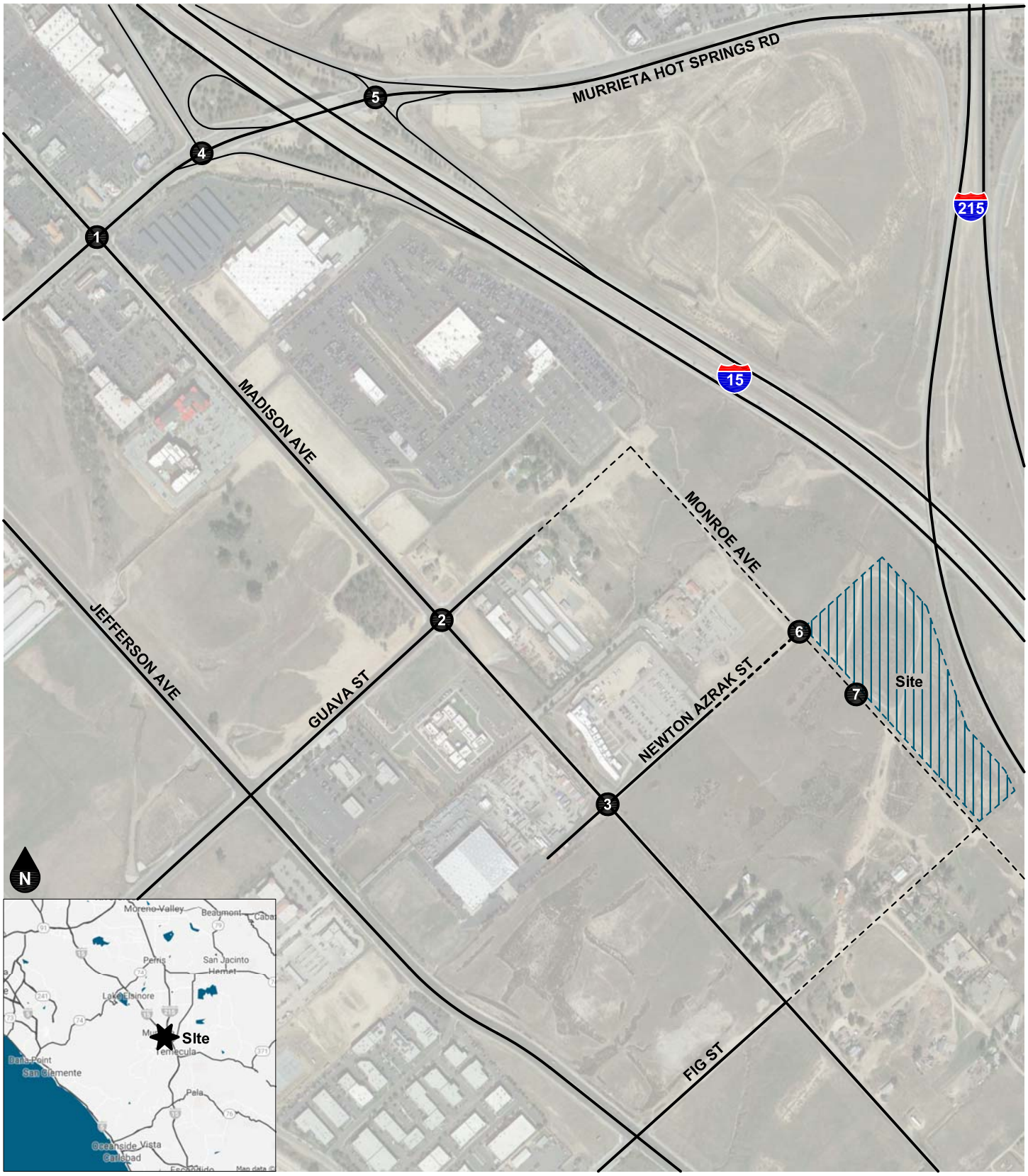
Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			Daily
Land Use	Source[1]	Units[2]	% In	% Out	Rate	% In	% Out	Rate	Rate
Hotel	ITE 310	RM	59%	41%	0.47	51%	49%	0.60	8.36

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Units[2]	In	Out	Total	In	Out	Total	Daily
Hotel	257	RM	71	50	121	79	76	155	2,149

Notes:

(1) ITE = Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017; ### = Land Use Code

(2) RM = Rooms



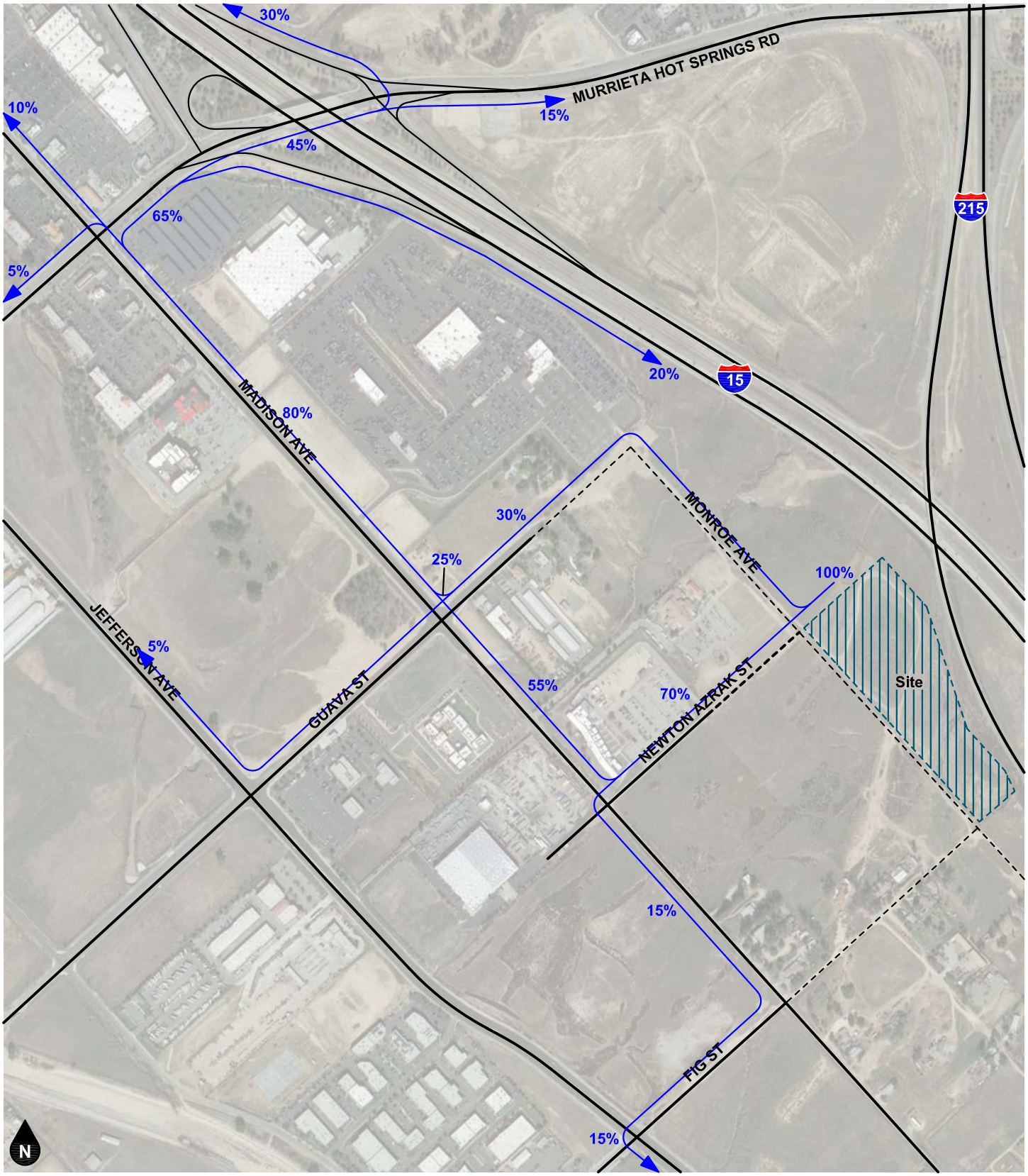
Legend

(#) Study Intersection

Figure 1
Project Location Map



Figure 2
Site Plan



Legend

10% Percent To/From Project

Figure 3
Project Trip Distribution

Table 4

Other Development Trip Generation

Traffic Analysis Zone	Project ID	Project Name	Land Use	Quantity	Units[2]	Trips Generated[1]						
						Morning Peak Hour			Evening Peak Hour			
						Inbound	Outbound	Total	Inbound	Outbound	Total	Daily
1	DP-2014-434	Adams/Ivy Office Building	Office	18.990	TSF	19	3	22	3	18	21	185
	DP-2017-1299	Able	Storage Facility	191.898	TSF	12	8	20	15	17	32	290
	DP-2017-1359	Fresnius	Medical Office	13.100	TSF	28	8	36	13	33	46	456
	DP-2017-1397	Jefferson & Ivy	Apartments	333	DU	33	137	170	133	73	206	2,214
	DP-2018-1618	Quick Quack Car Wash	Self Service Car Wash	3.600	TSF	18	18	36	41	41	81	900
			Subtotal			110	174	284	205	182	386	4,045
2	DP-2014-490	Los Alamos Community	Apartments	542	DU	54	222	276	217	119	336	3,604
3	DP-2016-785	Sial Medical Plaza	Medical Office	20.000	TSF	38	10	48	20	51	71	723
4	DP-2017-1391	Murrieta Gateway	Phase 1									
			Business Park	15.000	TSF	18	3	21	5	14	19	187
			Hotel	150	RM	47	33	80	46	44	90	1,226
			Gas Station	16	FP	96	93	189	113	109	222	2,445
			Pass-By Reduction (25%)			-24	-23	-47	-28	-28	-56	-611
			Phases 1-3									
			Business Park	51.463	TSF	61	11	72	17	48	65	642
			Industrial Park	265.150	TSF	178	39	217	47	178	225	1,811
			Subtotal			376	156	532	200	365	565	5,700
5	DP-2017-1267	Cap Rock	Steel Fabrication/Manufacturing	39.000	TSF	19	6	25	8	18	26	153
6	DP-2018-1567	Larchmont Industrial	Industrial	22.000	TSF	14	2	16	2	12	14	109
7	SC-2017-1420	Elm Self Storage	Storage Facility	83.600	TSF	5	3	8	7	8	15	126
8	DP-2015-733	Elm Street Industrial	Industrial	15.265	TSF	9	1	10	1	8	9	76
9	DP-2016-1061	Corning Place Warehouse	Warehouse	11.400	TSF	1	0	1	1	2	3	20
	DP-2017-1276		Auto Repair (4-Bay)	7.276	TSF	11	6	17	11	12	23	146
			Fast-Food Restaurant w/ Drive-Thru	1.053	TSF	22	21	43	18	17	35	496
			Retail	4.300	TSF	3	2	5	8	9	17	162
	DP-2017-1328	BMW of Murrieta	New Car Sales	56.456	TSF	81	27	108	59	89	148	1,824
			Subtotal			118	56	174	97	129	226	2,648
Total						743	630	1,373	757	892	1,648	17,184

[1] Source: Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017, Land Use Categories 110, 140, 150, 151, 710, 720, 820, 848, 934, and 943.

Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region , San Diego Association of Governments, April 2002

Jefferson & Ivy Traffic Impact Analysis, prepared by Trames Solutions, Inc., December 19, 2017

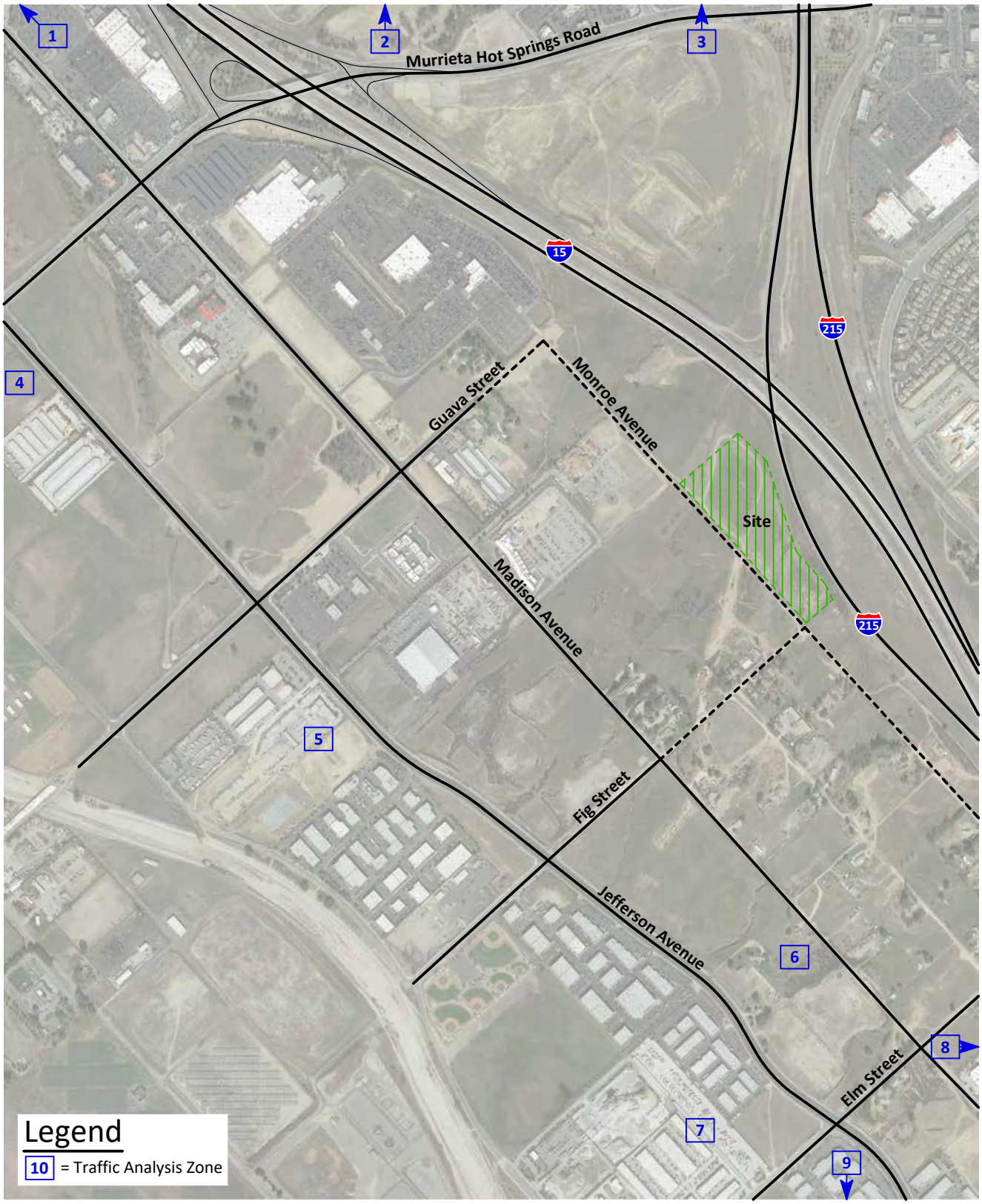
Scoping Agreement for Sial Medical Office Building provided by City of Murrieta staff

Murrieta Gateway Project Traffic Impact Analysis , prepared by Linscott, Law, & Greenspan, Engineers, May 9, 2017

Scoping Agreement for BMW of Murrieta provided by City of Murrieta staff

[2] TSF = Thousand Square Feet; DU = Dwelling Units; RM = Rooms; FP = Fueling Positions

Figure 21
Other Development Traffic Analysis Zone Location Map



KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE

JN 7433

APPENDIX C

VOLUME COUNT WORKSHEETS

Tuesday, August 20, 2019 Location: Murrieta PROJECT: SC2312

ADT1 Madison north of Guava. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	67		5					12:00	80		64				
0:15	43		0					12:15	64		67				
0:30	2		0					12:30	67		63				
0:45	0	112	3	8			120	12:45	60	271	79	273			544
1:00	0		3					13:00	71		64				
1:15	2		5					13:15	56		62				
1:30	2		6					13:30	77		73				
1:45	0	4	4	18			22	13:45	63	267	56	255			522
2:00	6		4					14:00	122		64				
2:15	0		2					14:15	71		57				
2:30	0		0					14:30	83		75				
2:45	0	6	0	6			12	14:45	73	349	70	266			615
3:00	0		9					15:00	90		33				
3:15	2		0					15:15	63		40				
3:30	4		5					15:30	114		22				
3:45	0	6	0	14			20	15:45	77	344	42	137			481
4:00	6		11					16:00	126		31				
4:15	0		25					16:15	94		29				
4:30	0		65					16:30	159		30				
4:45	8	14	93	194			208	16:45	79	458	26	116			574
5:00	6		10					17:00	103		30				
5:15	7		18					17:15	95		33				
5:30	10		19					17:30	105		32				
5:45	4	27	56	103			130	17:45	71	374	22	117			491
6:00	10		33					18:00	83		19				
6:15	9		45					18:15	54		37				
6:30	14		40					18:30	50		35				
6:45	23	56	89	207			263	18:45	30	217	27	118			335
7:00	21		35					19:00	84		34				
7:15	24		59					19:15	19		29				
7:30	23		63					19:30	25		29				
7:45	38	106	66	223			329	19:45	30	158	51	143			301
8:00	23		52					20:00	32		23				
8:15	25		47					20:15	20		21				
8:30	33		30					20:30	30		32				
8:45	35	116	52	181			297	20:45	23	105	9	85			190
9:00	56		54					21:00	29		10				
9:15	39		46					21:15	15		18				
9:30	38		51					21:30	23		11				
9:45	37	170	48	199			369	21:45	16	83	12	51			134
10:00	55		51					22:00	11		10				
10:15	39		49					22:15	9		2				
10:30	39		43					22:30	21		2				
10:45	36	169	35	178			347	22:45	7	48	16	30			78
11:00	51		38					23:00	9		6				
11:15	44		62					23:15	10		5				
11:30	51		41					23:30	3		4				
11:45	43	189	65	206			395	23:45	7	29	7	22			51
Total Vol.		975		1537			**2512**			2703		1613			**4316**

Daily Totals

NB	SB	EB	WB	Combined
3678	3150			**6828**

	AM			PM		
Split %	38.8%	61.2%	**36.8%**	62.6%	37.4%	**63.2%**
Peak Hour	11:45	11:45	**11:45**	16:00	12:45	**14:00**
Volume	254	259	**513**	458	278	**615**
P.H.F.	0.79	0.97	**0.89**	0.85	0.88	**0.83**

cs@aimtd.com Tell. 714 253 7888

Tuesday, August 20, 2019 Location: Murrieta PROJECT: SC2312

ADT2 Madison south of Guava. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
0:00	0		0					12:00	33		32				
0:15	0		0					12:15	27		21				
0:30	0		0					12:30	27		21				
0:45	0	0	0	0				12:45	24	111	38	112			223
1:00	0		0					13:00	28		24				
1:15	0		0					13:15	16		21				
1:30	0		0					13:30	23		30				
1:45	0	0	2	2			2	13:45	22	89	26	101			190
2:00	0		2					14:00	26		22				
2:15	0		0					14:15	29		16				
2:30	0		0					14:30	42		16				
2:45	0	0	0	2			2	14:45	39	136	18	72			208
3:00	0		4					15:00	30		8				
3:15	0		0					15:15	21		12				
3:30	4		0					15:30	66		11				
3:45	0	4	0	4			8	15:45	25	142	23	54			196
4:00	4		7					16:00	59		18				
4:15	0		13					16:15	42		20				
4:30	0		32					16:30	101		15				
4:45	5	9	40	92			101	16:45	32	234	15	68			302
5:00	4		7					17:00	44		15				
5:15	4		7					17:15	47		18				
5:30	5		14					17:30	50		10				
5:45	2	15	27	55			70	17:45	32	173	10	53			226
6:00	5		14					18:00	20		6				
6:15	4		21					18:15	16		13				
6:30	12		26					18:30	14		12				
6:45	17	38	42	103			141	18:45	12	62	14	45			107
7:00	11		24					19:00	11		14				
7:15	16		37					19:15	5		9				
7:30	11		42					19:30	7		8				
7:45	19	57	38	141			198	19:45	9	32	8	39			71
8:00	18		40					20:00	10		11				
8:15	11		26					20:15	12		8				
8:30	19		24					20:30	9		16				
8:45	26	74	35	125			199	20:45	8	39	6	41			80
9:00	15		16					21:00	6		4				
9:15	14		20					21:15	11		8				
9:30	17		21					21:30	7		8				
9:45	9	55	16	73			128	21:45	5	29	15	35			64
10:00	25		23					22:00	2		4				
10:15	12		18					22:15	5		0				
10:30	18		13					22:30	12		0				
10:45	11	66	15	69			135	22:45	0	19	0	4			23
11:00	21		15					23:00	6		0				
11:15	21		22					23:15	3		0				
11:30	14		16					23:30	0		0				
11:45	21	77	23	76			153	23:45	0	9	0	0			9
Total Vol.		395		742			**1137**			1075		624			**1699**

Daily Totals

NB	SB	EB	WB	Combined
1470	1366			**2836**

	AM			PM		
Split %	34.7%	65.3%	**40.1%**	63.3%	36.7%	**59.9%**
Peak Hour	11:45	7:15	**7:15**	16:00	12:45	**15:45**
Volume	108	157	**221**	234	113	**303**
P.H.F.	0.82	0.93	**0.95**	0.75	0.74	**0.65**

cs@aimtd.com Tell. 714 253 7888

Tuesday, August 20, 2019 Location: Murrieta PROJECT: SC2312

ADT3 Guava east of Madison. **Prepared by AimTD tel. 714 253 7888**

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
0:00			0		0			12:00			0		0		
0:15			0		0			12:15			0		0		
0:30			0		0			12:30			2		0		
0:45			0	0	0	0		12:45			2	4	0	0	4
1:00			0		0			13:00			0		0		
1:15			0		0			13:15			0		2		
1:30			0		0			13:30			0		0		
1:45			0	0	0	0		13:45			0	0	0	2	2
2:00			0		0			14:00			3		3		
2:15			0		0			14:15			0		0		
2:30			0		0			14:30			0		0		
2:45			0	0	0	0		14:45			0	3	0	3	6
3:00			0		0			15:00			0		0		
3:15			0		0			15:15			0		0		
3:30			0		0			15:30			0		0		
3:45			0	0	0	0		15:45			0	0	0	0	
4:00			0		0			16:00			0		2		
4:15			0		0			16:15			2		1		
4:30			0		0			16:30			4		3		
4:45			0	0	0	0		16:45			5	11	4	10	21
5:00			0		0			17:00			1		3		
5:15			0		0			17:15			1		2		
5:30			0		0			17:30			0		1		
5:45			0	0	0	0		17:45			0	2	1	7	9
6:00			0		0			18:00			0		0		
6:15			0		0			18:15			0		0		
6:30			0		2			18:30			0		0		
6:45			0	0	0	2	2	18:45			2	2	0	0	2
7:00			4		1			19:00			0		0		
7:15			1		3			19:15			0		0		
7:30			1		2			19:30			0		0		
7:45			1	7	1	7	14	19:45			0	0	0	0	
8:00			2		1			20:00			0		0		
8:15			2		1			20:15			0		3		
8:30			2		1			20:30			0		4		
8:45			0	6	1	4	10	20:45			0	0	0	7	7
9:00			5		2			21:00			0		0		
9:15			0		3			21:15			0		0		
9:30			0		0			21:30			0		0		
9:45			0	5	0	5	10	21:45			0	0	0	0	
10:00			0		0			22:00			0		0		
10:15			0		0			22:15			0		0		
10:30			0		0			22:30			0		0		
10:45			0	0	0	0		22:45			0	0	0	0	
11:00			0		0			23:00			0		0		
11:15			0		0			23:15			0		0		
11:30			0		0			23:30			0		0		
11:45			0	0	0	0		23:45			0	0	0	0	
Total Vol.			18		18	**36**					22		29		**51**

Daily Totals

NB	SB	EB	WB	Combined
		40	47	**87**

	AM			PM		
Split %	50.0%	50.0%	**41.4%**	43.1%	56.9%	**58.6%**
Peak Hour	8:15	7:00	**7:00**	16:15	16:30	**16:15**
Volume	9	7	**14**	12	12	**23**
P.H.F.	0.45	0.58	**0.70**	0.60	0.75	**0.64**

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INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

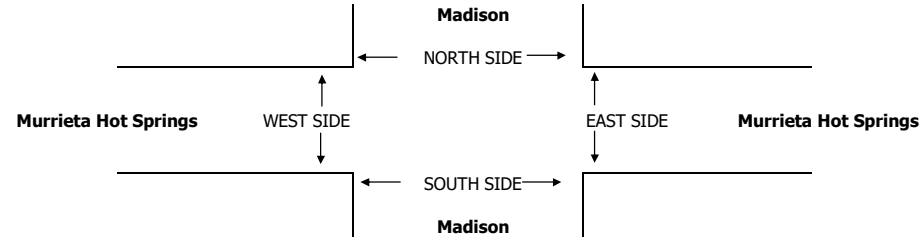
DATE:	LOCATION:	Murrieta	PROJECT #:	SC2312
Tue, Aug 20, 19	NORTH & SOUTH:	Madison	LOCATION #:	1
	EAST & WEST:	Murrieta Hot Springs	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

Add U-Turns to Left Turns

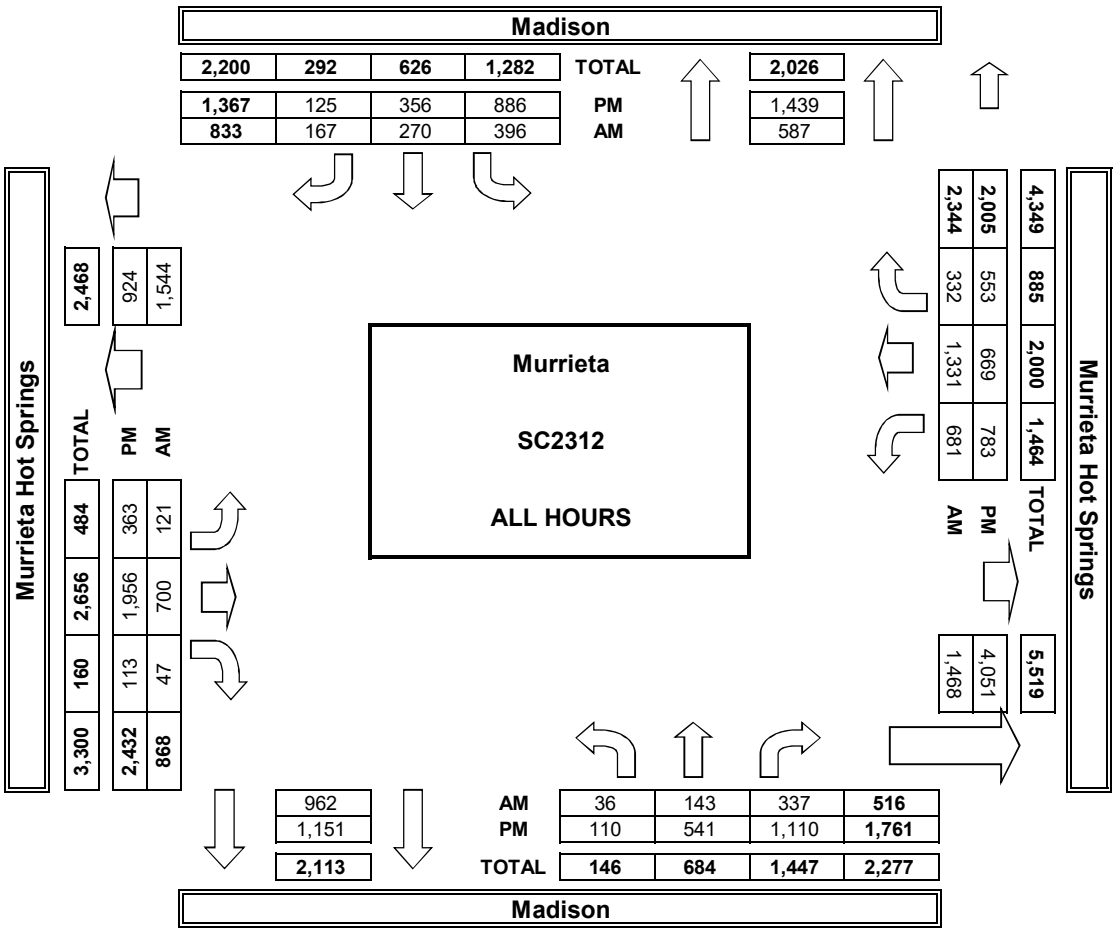
		NORTHBOUND (Madison)			SOUTHBOUND (Madison)			EASTBOUND (Murrieta Hot Springs)			WESTBOUND (Murrieta Hot Springs)				U-TURNS				
	LANES:	NL 2	NT 1.5	NR 1.5	SL 2	ST 2	SR 0	EL 2	ET 4	ER 0	WL 2	WT 3	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	3	17	40	37	25	17	12	50	4	55	129	33	422	0	0	0	2	2
	7:15 AM	1	14	42	46	17	19	4	62	3	80	173	40	501	0	1	0	4	5
	7:30 AM	3	12	35	45	34	32	19	86	5	79	185	30	565	0	0	5	2	7
	7:45 AM	5	15	48	44	35	20	12	78	3	84	230	35	609	0	0	1	5	6
	8:00 AM	5	16	35	64	45	22	19	80	4	86	132	40	548	0	0	1	3	4
	8:15 AM	7	15	36	46	35	24	19	101	7	78	156	55	579	0	0	2	2	4
	8:30 AM	7	23	52	62	38	24	22	113	8	98	148	40	635	0	0	1	8	9
	8:45 AM	5	31	49	52	41	9	14	130	13	121	178	59	702	0	0	0	10	10
	VOLUMES	36	143	337	396	270	167	121	700	47	681	1,331	332	4,561	0	1	10	36	47
	APPROACH %	7%	28%	65%	48%	32%	20%	14%	81%	5%	29%	57%	14%						
	APP/DEPART	516	/	587	833	/	962	868	/	1,468	2,344	/	1,544	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	24	85	172	224	159	79	74	424	32	383	614	194	2,464					
	APPROACH %	9%	30%	61%	48%	34%	17%	14%	80%	6%	32%	52%	16%						
	PEAK HR FACTOR		0.826			0.882			0.844			0.832		0.877					
	APP/DEPART	281	/	349	462	/	551	530	/	843	1,191	/	721	0					
PM	4:00 PM	19	64	165	115	35	15	32	213	16	90	90	82	936	0	0	2	15	17
	4:15 PM	8	71	132	102	45	20	55	222	12	119	85	70	941	0	0	2	18	20
	4:30 PM	17	77	156	127	35	13	38	244	14	80	101	71	973	0	0	2	7	9
	4:45 PM	10	81	143	118	48	21	51	226	13	108	80	79	978	0	1	2	12	15
	5:00 PM	18	57	138	105	53	15	45	295	11	89	81	81	988	0	0	3	10	13
	5:15 PM	9	86	136	110	51	20	46	279	14	96	70	44	961	0	1	5	13	19
	5:30 PM	12	53	125	108	48	14	42	251	18	87	87	66	911	0	0	1	11	12
	5:45 PM	17	52	115	101	41	7	54	226	15	114	75	60	877	0	0	3	15	18
	VOLUMES	110	541	1,110	886	356	125	363	1,956	113	783	669	553	7,565	0	2	20	101	123
	APPROACH %	6%	31%	63%	65%	26%	9%	15%	80%	5%	39%	33%	28%						
	APP/DEPART	1,761	/	1,439	1,367	/	1,151	2,432	/	4,051	2,005	/	924	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	54	301	573	460	187	69	180	1,044	52	373	332	275	3,900					
	APPROACH %	6%	32%	62%	64%	26%	10%	14%	82%	4%	38%	34%	28%						
	PEAK HR FACTOR		0.928			0.957			0.909			0.918		0.987					
	APP/DEPART	928	/	746	716	/	570	1,276	/	2,117	980	/	467	0					

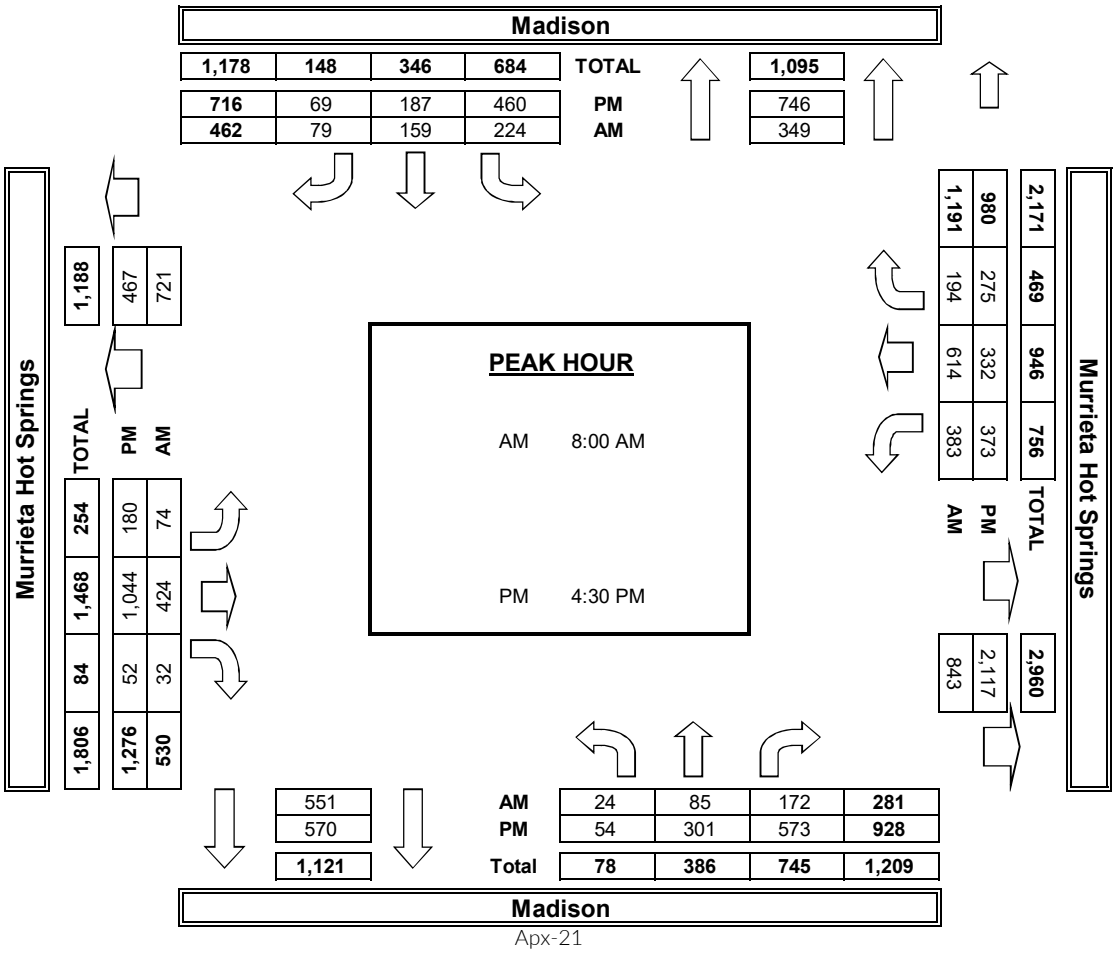


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR			8:00 AM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR			4:30 PM			0	0	0	0	0					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

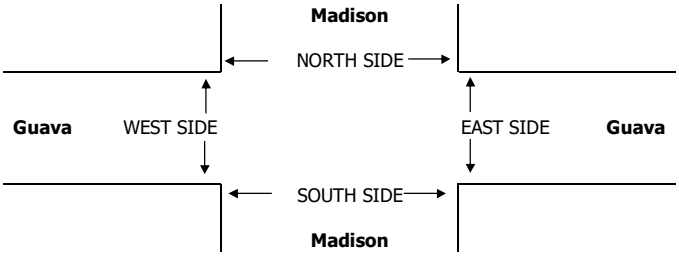
DATE:				
Tue, Aug 20, 19	LOCATION:	Murrieta	PROJECT #:	SC2312
	NORTH & SOUTH:	Madison	LOCATION #:	4
	EAST & WEST:	Guava	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

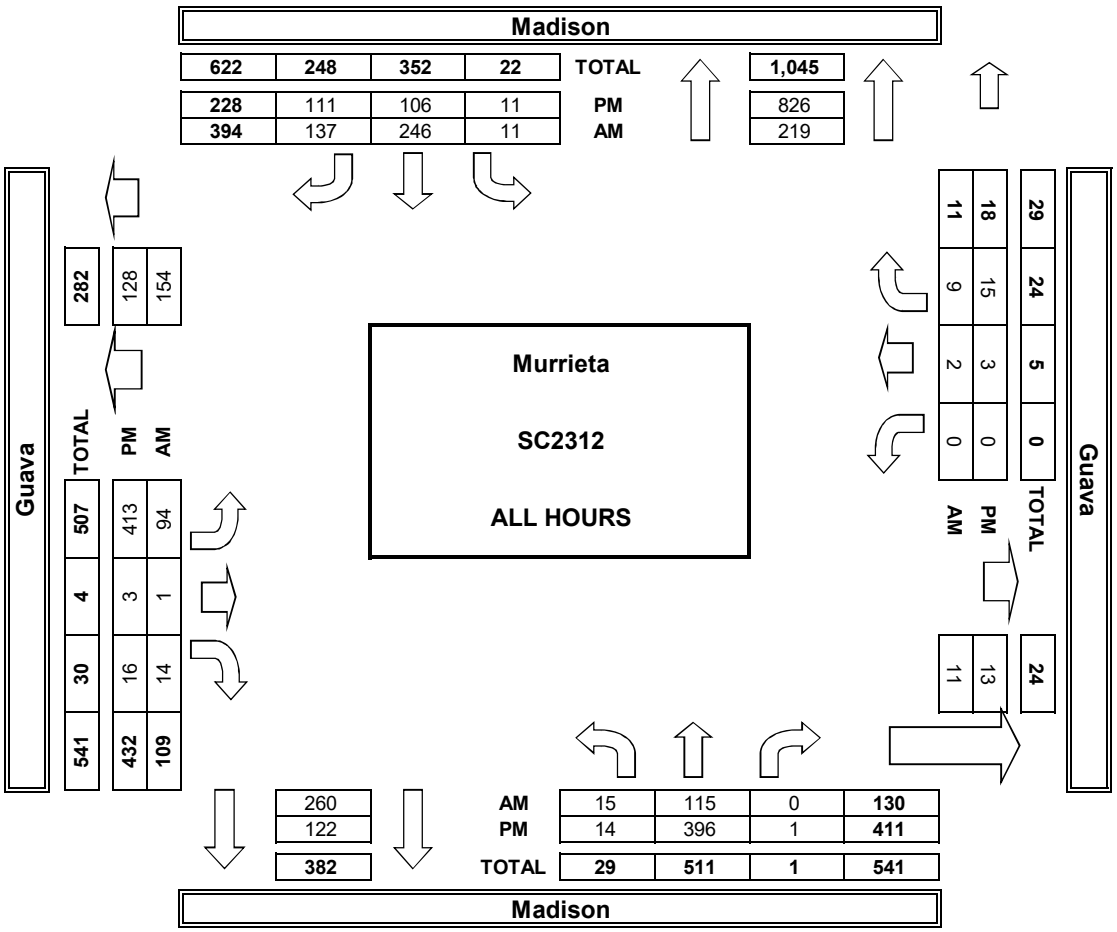
		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND Guava			WESTBOUND Guava				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	2	9	0	4	19	9	9	0	1	0	0	1	54	0	1	0	0	1
	7:15 AM	3	12	0	2	42	16	6	0	0	0	1	4	86	0	0	0	0	0
	7:30 AM	1	14	0	0	38	25	9	0	2	0	0	0	89	0	0	0	0	0
	7:45 AM	1	18	0	1	35	29	19	0	0	0	0	1	104	0	0	0	0	0
	8:00 AM	2	14	0	2	33	16	5	0	5	0	1	1	79	0	0	0	0	0
	8:15 AM	1	10	0	1	27	17	14	0	2	0	0	0	72	0	0	0	0	0
	8:30 AM	2	15	0	1	18	9	17	1	3	0	0	1	67	0	0	0	0	0
	8:45 AM	3	23	0	0	34	16	15	0	1	0	0	1	93	0	0	0	0	0
	VOLUMES	15	115	0	11	246	137	94	1	14	0	2	9	644	0	1	0	0	1
	APPROACH %	12%	88%	0%	3%	62%	35%	86%	1%	13%	0%	18%	82%						
	APP/DEPART	130	/	219	394	/	260	109	/	11	11	/	154	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	7	58	0	5	148	86	39	0	7	0	2	6	358					
	APPROACH %	11%	89%	0%	2%	62%	36%	85%	0%	15%	0%	25%	75%						
	PEAK HR FACTOR		0.855			0.919			0.605			0.400		0.861					
	APP/DEPART	65	/	103	239	/	155	46	/	5	8	/	95	0					
PM	4:00 PM	1	57	0	0	17	14	71	0	1	0	2	1	164	0	0	0	0	0
	4:15 PM	4	40	0	2	17	13	41	0	4	0	0	1	122	0	0	0	0	0
	4:30 PM	1	101	0	3	13	12	59	1	1	0	0	3	194	0	0	0	0	0
	4:45 PM	2	27	0	3	10	11	48	2	4	0	1	4	112	0	1	0	0	1
	5:00 PM	0	43	1	1	14	14	56	0	2	0	0	2	133	0	0	0	0	0
	5:15 PM	0	46	0	2	15	15	45	0	2	0	0	2	127	0	1	0	0	1
	5:30 PM	2	51	0	0	11	20	58	0	1	0	0	1	144	0	0	0	0	0
	5:45 PM	4	31	0	0	9	12	35	0	1	0	0	1	93	0	0	0	0	0
	VOLUMES	14	396	1	11	106	111	413	3	16	0	3	15	1,089	0	2	0	0	2
	APPROACH %	3%	96%	0%	5%	46%	49%	96%	1%	4%	0%	17%	83%						
	APP/DEPART	411	/	826	228	/	122	432	/	13	18	/	128	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	8	225	0	8	57	50	219	3	10	0	3	9	592					
	APPROACH %	3%	97%	0%	7%	50%	43%	94%	1%	4%	0%	25%	75%						
	PEAK HR FACTOR		0.571			0.898			0.806			0.600		0.763					
	APP/DEPART	233	/	454	115	/	67	232	/	10	12	/	61	0					

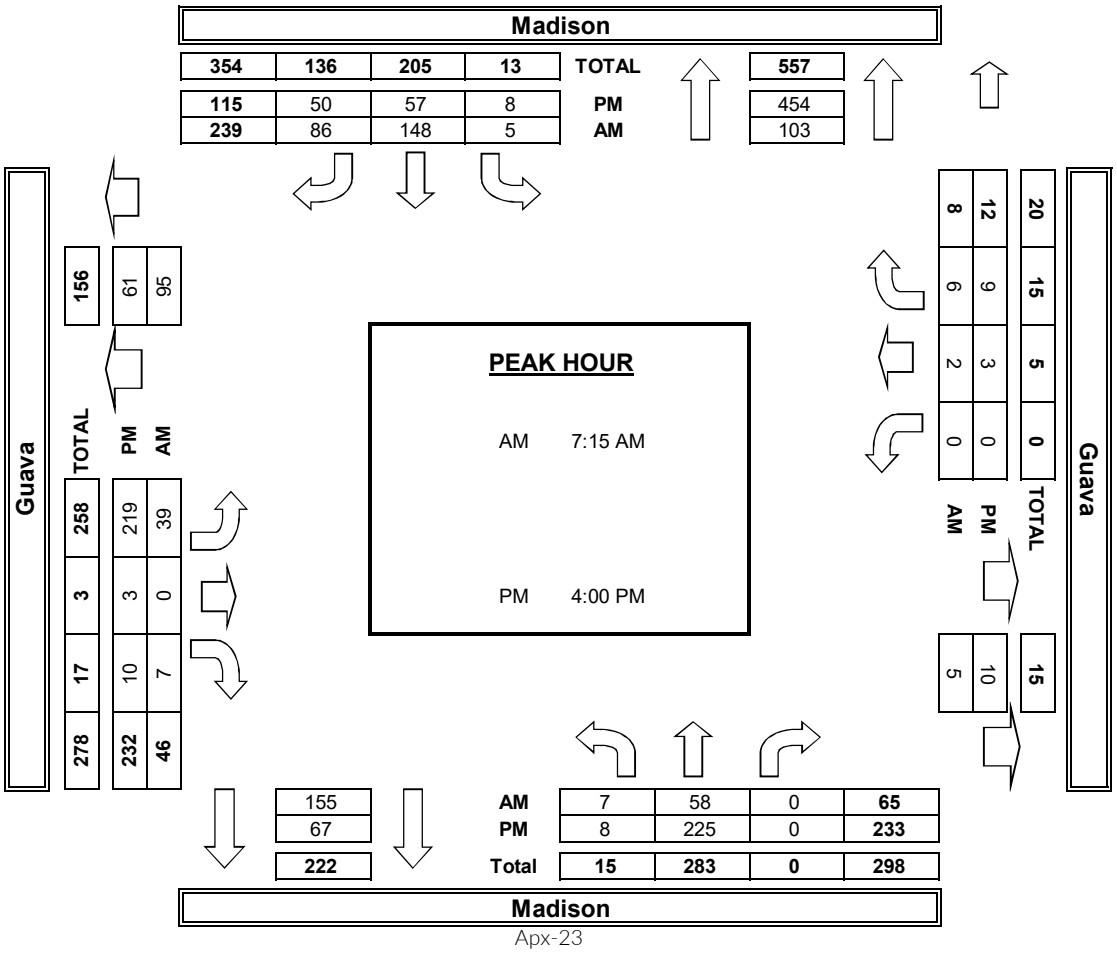


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:15 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:00 PM					0	0	0	0	0					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

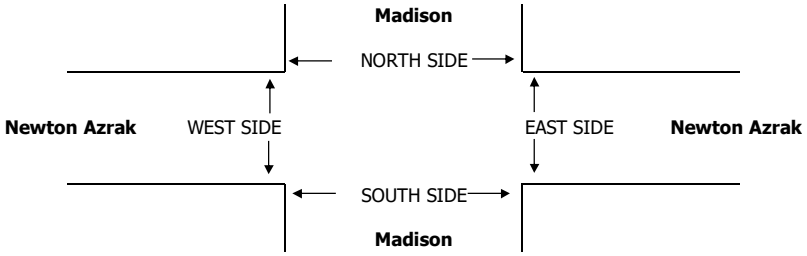
DATE:	LOCATION:	Murrieta	PROJECT #:	SC2312
Tue, Aug 20, 19	NORTH & SOUTH:	Madison	LOCATION #:	5
	EAST & WEST:	Newton Azrak	CONTROL:	STOP E/W

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

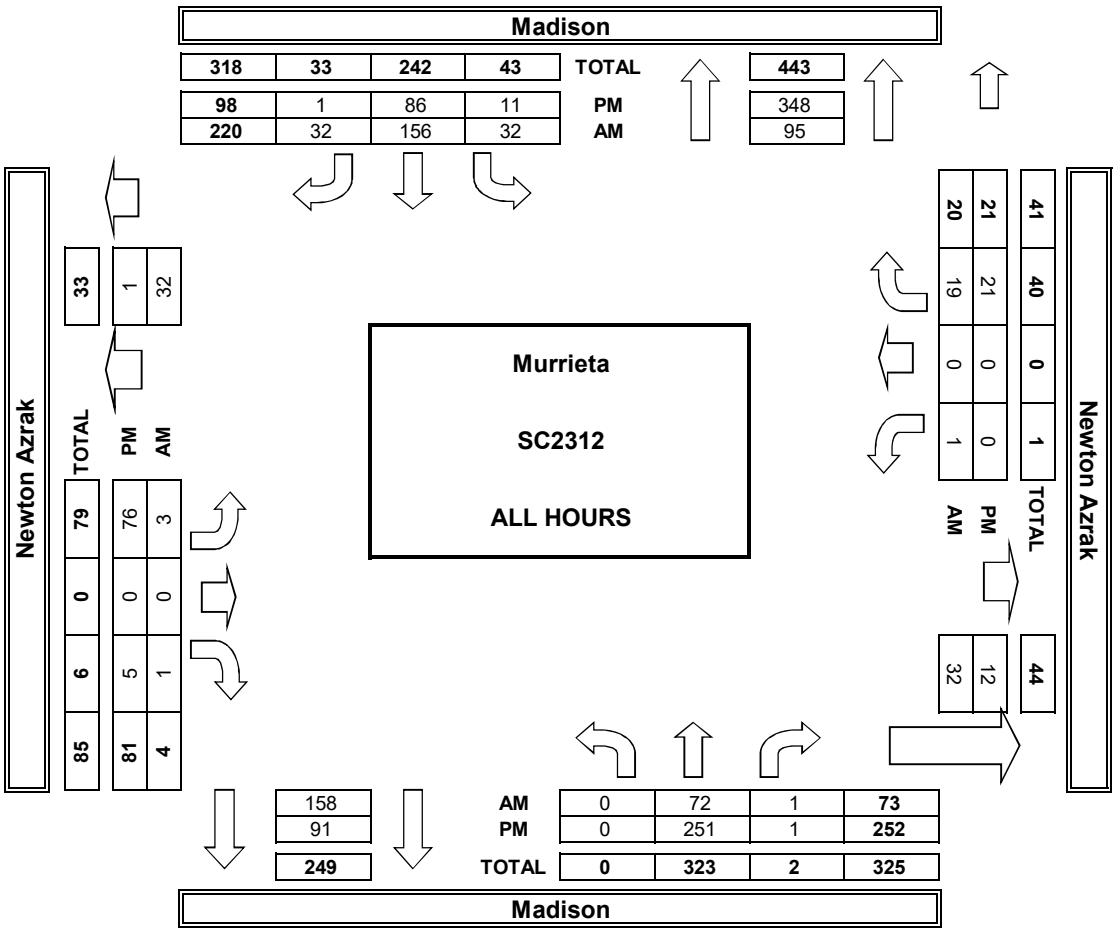
		NORTHBOUND Madison			SOUTHBOUND Madison			EASTBOUND Newton Azrak			WESTBOUND Newton Azrak				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	9	0	0	21	9	0	0	0	0	0	1	40	0	0	0	0	0
	7:15 AM	0	10	0	0	23	10	0	0	0	0	0	2	45	0	0	0	0	0
	7:30 AM	0	7	0	3	23	5	2	0	0	0	0	1	41	0	0	0	0	0
	7:45 AM	0	9	0	1	24	5	0	0	1	0	0	1	41	0	0	0	0	0
	8:00 AM	0	7	0	9	18	2	0	0	0	0	0	4	40	0	0	0	0	0
	8:15 AM	0	7	0	5	16	0	0	0	0	0	0	0	28	0	0	0	0	0
	8:30 AM	0	12	1	7	10	0	1	0	0	0	0	3	34	0	0	0	0	0
	8:45 AM	0	11	0	7	21	1	0	0	0	1	0	7	48	0	1	0	0	1
	VOLUMES	0	72	1	32	156	32	3	0	1	1	0	19	317	0	1	0	0	1
	APPROACH %	0%	99%	1%	15%	71%	15%	75%	0%	25%	5%	0%	95%						
	APP/DEPART	73	/	95	220	/	158	4	/	32	20	/	32	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	33	0	13	88	22	2	0	1	0	0	8	167					
	APPROACH %	0%	100%	0%	11%	72%	18%	67%	0%	33%	0%	0%	100%						
	PEAK HR FACTOR		0.825			0.932			0.375			0.500		0.928					
	APP/DEPART	33	/	43	123	/	89	3	/	13	8	/	22	0					
PM	4:00 PM	0	43	0	2	10	0	1	0	1	0	0	3	60	0	0	0	0	0
	4:15 PM	0	35	0	3	13	1	4	0	1	0	0	3	60	0	0	0	0	0
	4:30 PM	0	32	0	2	11	0	59	0	3	0	0	3	110	0	0	0	0	0
	4:45 PM	0	21	0	1	7	0	7	0	0	0	0	1	37	0	0	0	0	0
	5:00 PM	0	37	0	1	13	0	1	0	0	0	0	1	53	0	0	0	0	0
	5:15 PM	0	40	0	1	14	0	1	0	0	0	0	2	58	0	0	0	0	0
	5:30 PM	0	27	1	0	10	0	3	0	0	0	0	4	45	0	0	0	0	0
	5:45 PM	0	16	0	1	8	0	0	0	0	0	0	4	29	0	0	0	0	0
	VOLUMES	0	251	1	11	86	1	76	0	5	0	0	21	452	0	0	0	0	0
	APPROACH %	0%	100%	0%	11%	88%	1%	94%	0%	6%	0%	0%	100%						
	APP/DEPART	252	/	348	98	/	91	81	/	12	21	/	1	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	131	0	8	41	1	71	0	5	0	0	10	267					
	APPROACH %	0%	100%	0%	16%	82%	2%	93%	0%	7%	0%	0%	100%						
	PEAK HR FACTOR		0.762			0.735			0.306			0.833		0.607					
	APP/DEPART	131	/	212	50	/	46	76	/	8	10	/	1	0					

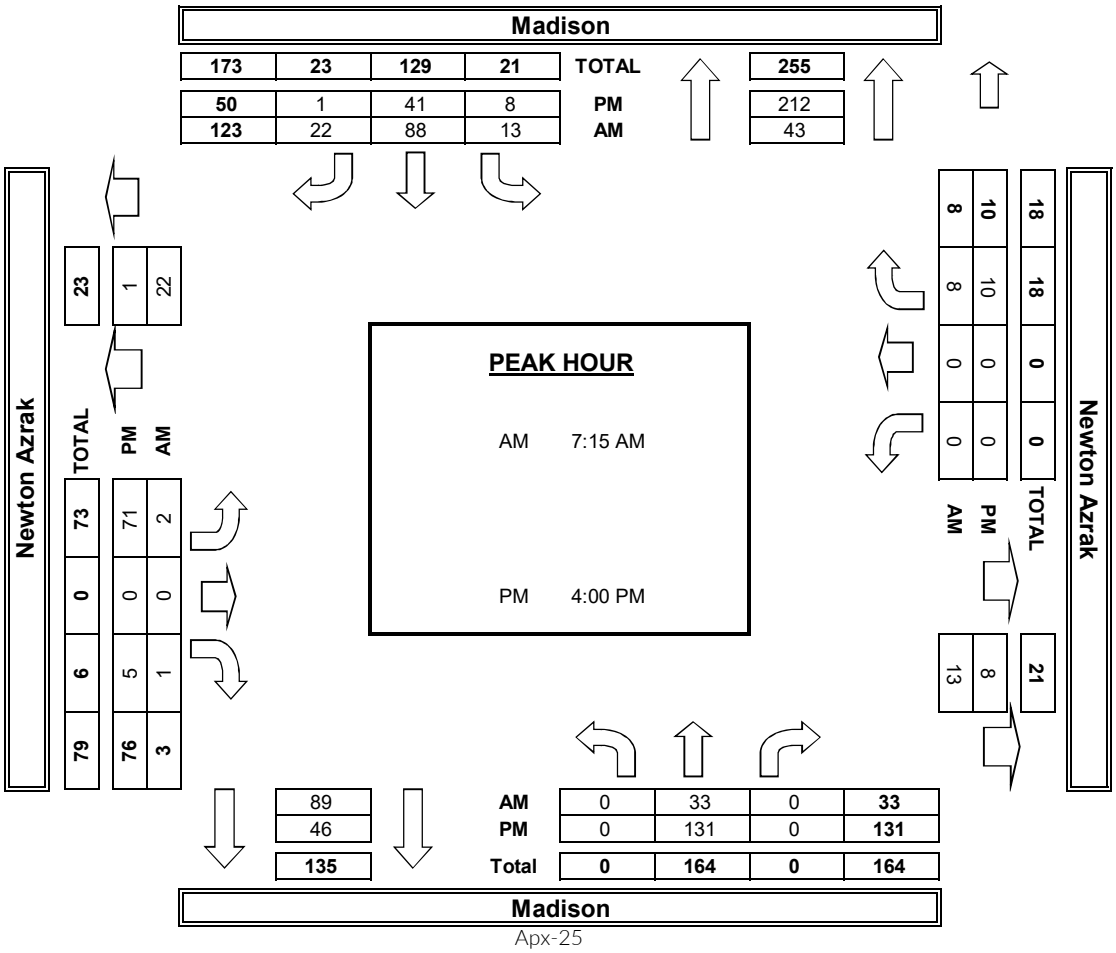


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:15 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:00 PM					0	0	0	0	0					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Aug 20, 19

LOCATION: Murrieta
NORTH & SOUTH: I-15 SB Ramps
EAST & WEST: Murrieta Hot Springs

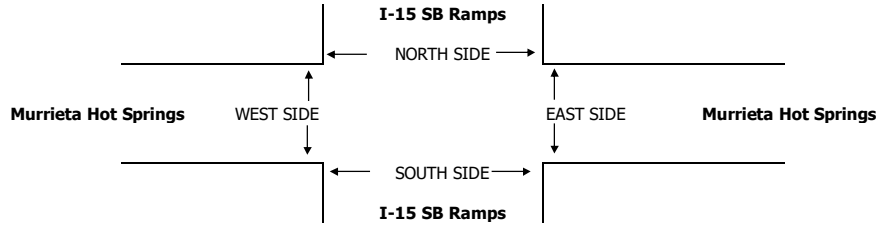
PROJECT #: SC2312
LOCATION #: 2
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — N / W / E / S

Add U-Turns to Left Turns

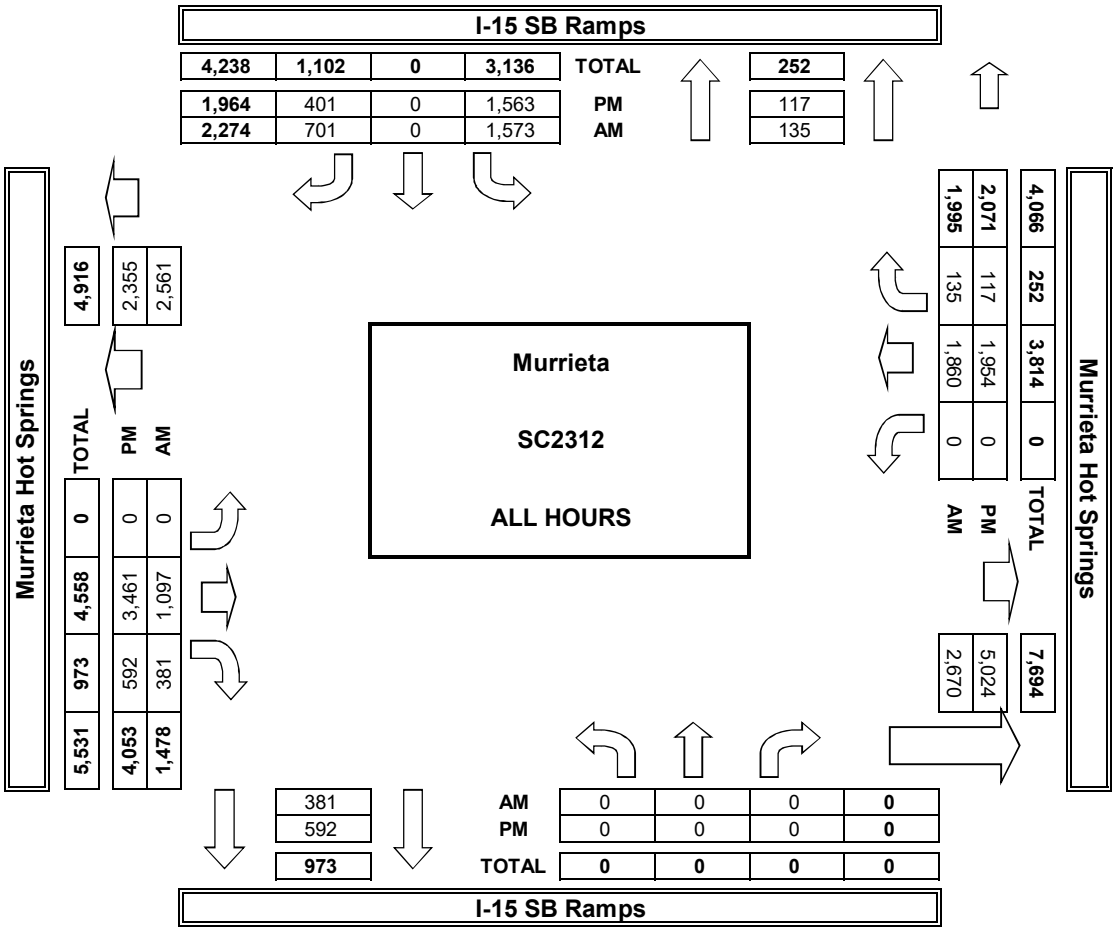
		NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Murrieta Hot Springs			WESTBOUND Murrieta Hot Springs				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1.5	ST X	SR 1.5	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	126	0	50	0	103	23	0	178	10	490	0	0	0	0	0
	7:15 AM	0	0	0	157	0	110	0	126	42	0	221	13	669	0	0	0	0	0
	7:30 AM	0	0	0	238	0	92	0	128	37	0	212	17	724	0	0	0	0	0
	7:45 AM	0	0	0	266	0	106	0	135	44	0	279	21	851	0	0	0	0	0
	8:00 AM	0	0	0	218	0	78	0	123	50	0	202	14	685	0	0	0	0	0
	8:15 AM	0	0	0	183	0	90	0	145	48	0	243	14	723	0	0	0	0	0
	8:30 AM	0	0	0	204	0	74	0	167	70	0	225	19	759	0	0	0	0	0
	8:45 AM	0	0	0	181	0	101	0	170	67	0	300	27	846	0	0	0	0	0
	VOLUMES	0	0	0	1,573	0	701	0	1,097	381	0	1,860	135	5,747	0	0	0	0	0
	APPROACH %	0%	0%	0%	69%	0%	31%	0%	74%	26%	0%	93%	7%						
	APP/DEPART	0	/	135	2,274	/	381	1,478	/	2,670	1,995	/	2,561	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	0	0	871	0	348	0	570	212	0	949	68	3,018					
	APPROACH %	0%	0%	0%	71%	0%	29%	0%	73%	27%	0%	93%	7%						
	PEAK HR FACTOR		0.000			0.819			0.825			0.848		0.887					
	APP/DEPART	0	/	68	1,219	/	212	782	/	1,441	1,017	/	1,297	0					
PM	4:00 PM	0	0	0	164	0	55	0	437	71	0	248	10	985	0	0	0	0	0
	4:15 PM	0	0	0	176	0	69	0	404	70	0	253	14	986	0	0	0	0	0
	4:30 PM	0	0	0	213	0	43	0	433	101	0	250	20	1,060	0	0	0	0	0
	4:45 PM	0	0	0	223	0	53	0	429	69	0	265	22	1,061	0	0	0	0	0
	5:00 PM	0	0	0	215	0	40	0	470	80	0	245	21	1,071	0	0	0	0	0
	5:15 PM	0	0	0	206	0	49	0	481	56	0	196	12	1,000	0	0	0	0	0
	5:30 PM	0	0	0	185	0	43	0	419	76	0	245	10	978	0	0	0	0	0
	5:45 PM	0	0	0	181	0	49	0	388	69	0	252	8	947	0	0	0	0	0
	VOLUMES	0	0	0	1,563	0	401	0	3,461	592	0	1,954	117	8,088	0	0	0	0	0
	APPROACH %	0%	0%	0%	80%	0%	20%	0%	85%	15%	0%	94%	6%						
	APP/DEPART	0	/	117	1,964	/	592	4,053	/	5,024	2,071	/	2,355	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	857	0	185	0	1,813	306	0	956	75	4,192					
	APPROACH %	0%	0%	0%	82%	0%	18%	0%	86%	14%	0%	93%	7%						
	PEAK HR FACTOR		0.000			0.944			0.963			0.898		0.979					
	APP/DEPART	0	/	75	1,042	/	306	2,119	/	2,670	1,031	/	1,141	0					

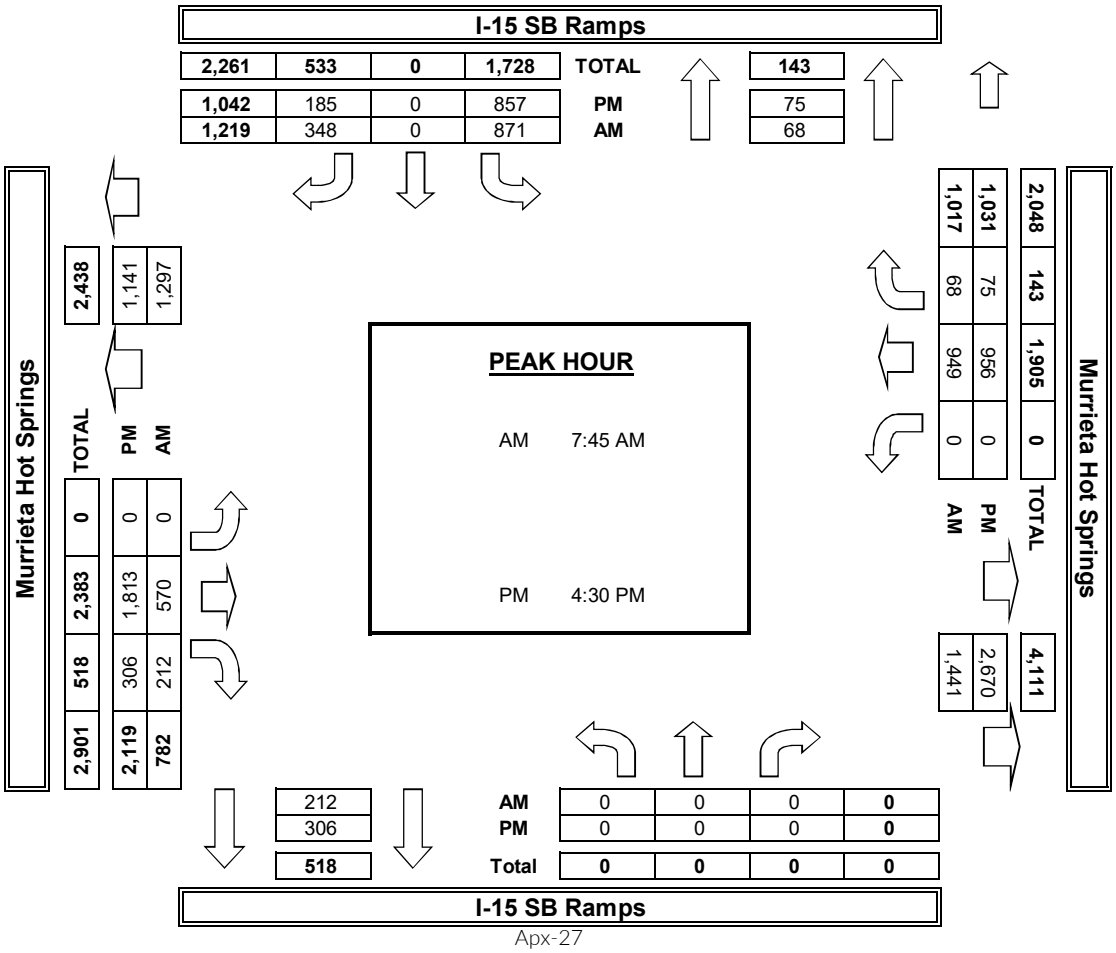


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR			7:45 AM			0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR			4:30 PM			0	0	0	0	0					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

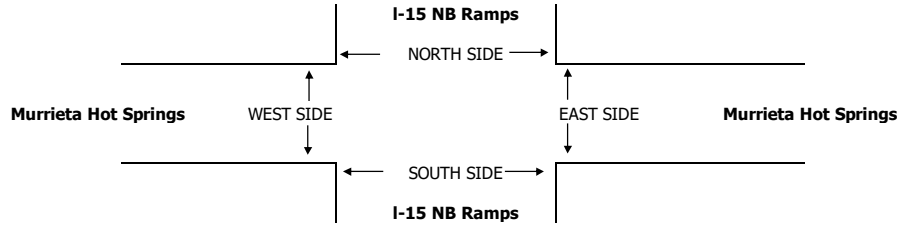
DATE:	LOCATION:	Murrieta	PROJECT #:	SC2312
Tue, Aug 20, 19	NORTH & SOUTH:	I-15 NB Ramps	LOCATION #:	3
	EAST & WEST:	Murrieta Hot Springs	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

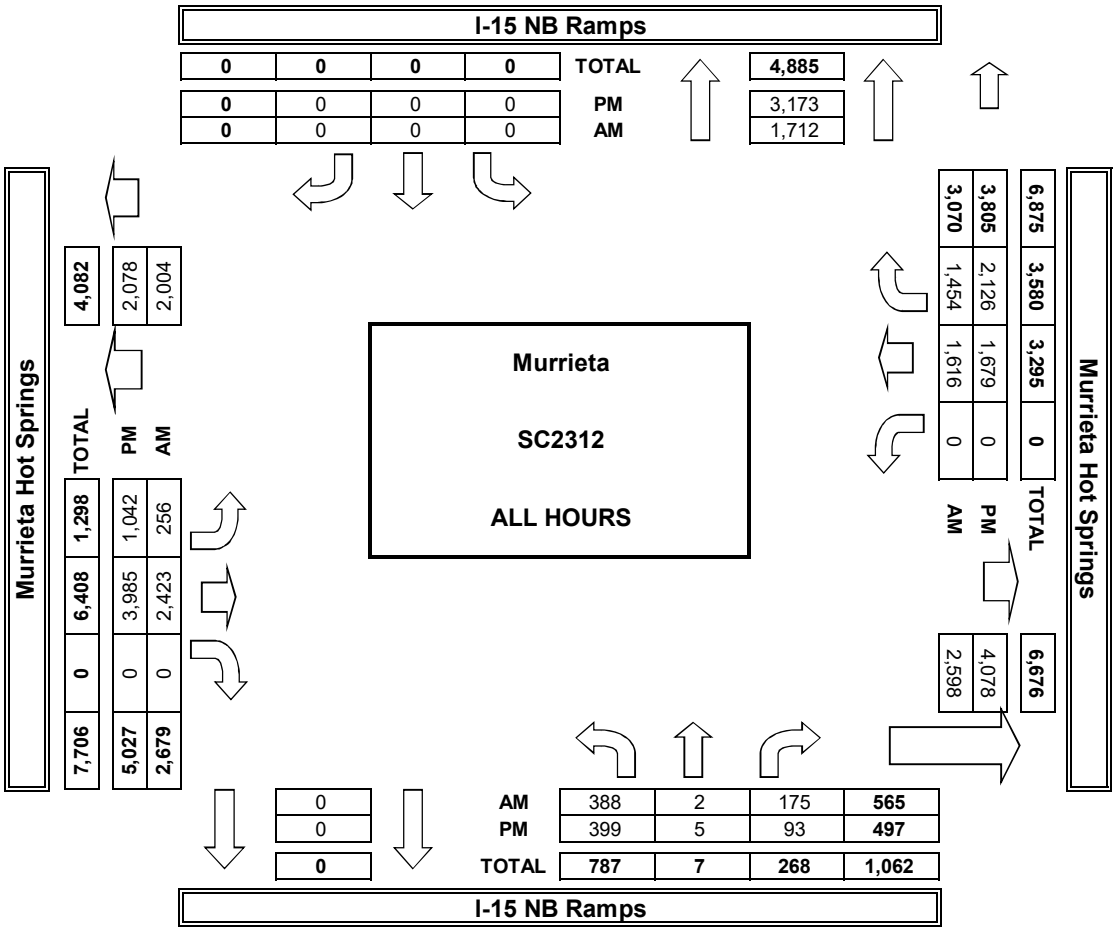
☑ Add U-Turns to Left Turns

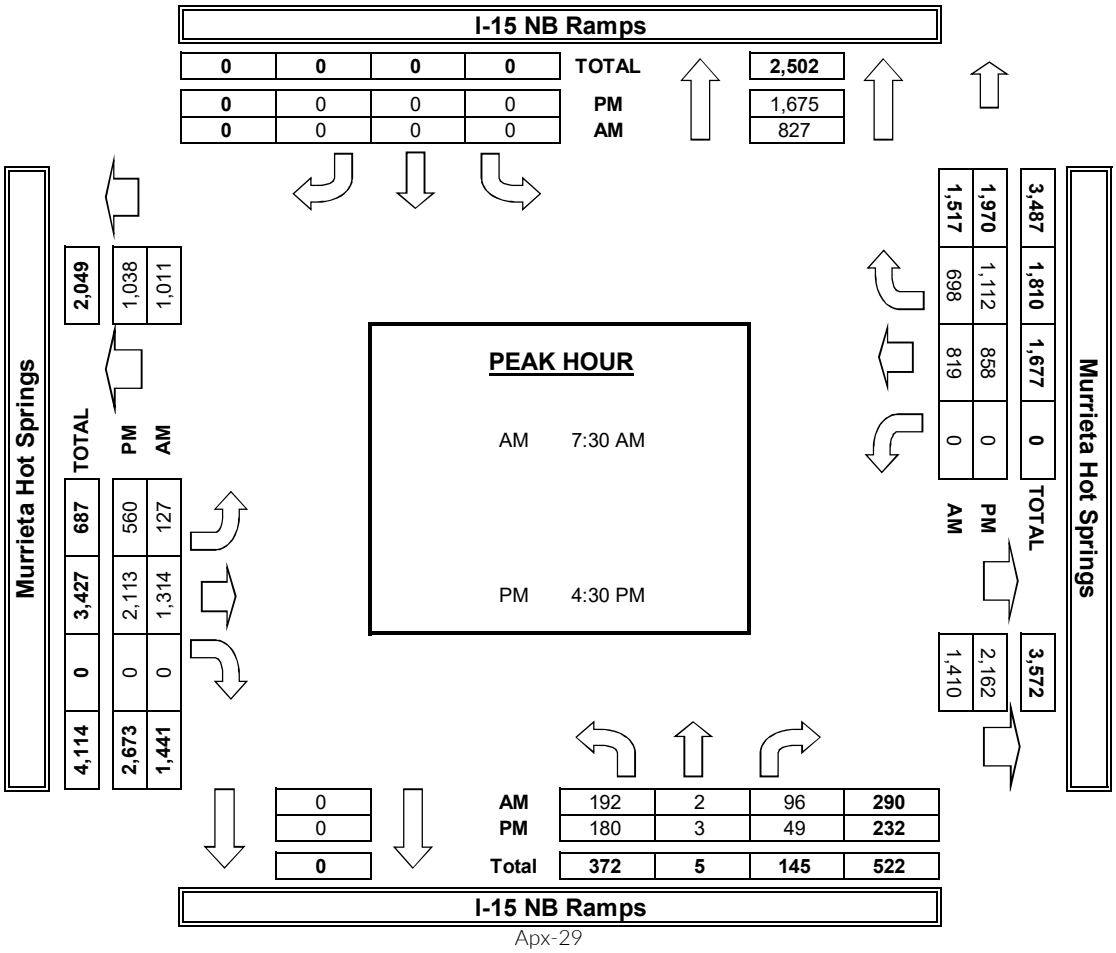
		NORTHBOUND (I-15 NB Ramps)			SOUTHBOUND (I-15 NB Ramps)			EASTBOUND (Murrieta Hot Springs)			WESTBOUND (Murrieta Hot Springs)				U-TURNS				
	LANES:	NL 1.5	NT 0.5	NR 1	SL X	ST X	SR X	EL 1	ET 3	ER X	WL X	WT 3	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	29	0	17	0	0	0	20	209	0	0	159	203	637	0	0	0	0	0
	7:15 AM	43	0	16	0	0	0	22	261	0	0	191	216	749	0	0	0	0	0
	7:30 AM	47	0	26	0	0	0	27	339	0	0	182	196	817	0	0	0	0	0
	7:45 AM	49	1	21	0	0	0	40	366	0	0	251	184	912	0	0	0	0	0
	8:00 AM	51	0	27	0	0	0	26	315	0	0	174	138	731	0	0	0	0	0
	8:15 AM	45	1	22	0	0	0	34	294	0	0	212	180	788	0	0	0	0	0
	8:30 AM	64	0	22	0	0	0	38	333	0	0	180	155	792	0	0	0	0	0
	8:45 AM	60	0	24	0	0	0	49	306	0	0	267	182	888	0	0	0	0	0
	VOLUMES	388	2	175	0	0	0	256	2,423	0	0	1,616	1,454	6,314	0	0	0	0	0
	APPROACH %	69%	0%	31%	0%	0%	0%	10%	90%	0%	0%	53%	47%						
	APP/DEPART	565	/	1,712	0	/	0	2,679	/	2,598	3,070	/	2,004	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	192	2	96	0	0	0	127	1,314	0	0	819	698	3,248					
	APPROACH %	66%	1%	33%	0%	0%	0%	9%	91%	0%	0%	54%	46%						
	PEAK HR FACTOR		0.929			0.000			0.887			0.872		0.890					
	APP/DEPART	290	/	827	0	/	0	1,441	/	1,410	1,517	/	1,011	0					
PM	4:00 PM	58	1	8	0	0	0	107	494	0	0	200	238	1,106	0	0	0	0	0
	4:15 PM	56	0	13	0	0	0	131	449	0	0	211	257	1,117	0	0	0	0	0
	4:30 PM	45	1	16	0	0	0	137	509	0	0	225	263	1,196	0	0	0	0	0
	4:45 PM	50	1	14	0	0	0	127	525	0	0	237	275	1,229	0	0	0	0	0
	5:00 PM	51	0	11	0	0	0	139	546	0	0	215	312	1,274	0	0	0	0	0
	5:15 PM	34	1	8	0	0	0	157	533	0	0	181	262	1,176	0	0	0	0	0
	5:30 PM	60	1	10	0	0	0	133	471	0	0	195	256	1,126	0	0	0	0	0
	5:45 PM	45	0	13	0	0	0	111	458	0	0	215	263	1,105	0	0	0	0	0
	VOLUMES	399	5	93	0	0	0	1,042	3,985	0	0	1,679	2,126	9,329	0	0	0	0	0
	APPROACH %	80%	1%	19%	0%	0%	0%	21%	79%	0%	0%	44%	56%						
	APP/DEPART	497	/	3,173	0	/	0	5,027	/	4,078	3,805	/	2,078	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	180	3	49	0	0	0	560	2,113	0	0	858	1,112	4,875					
	APPROACH %	78%	1%	21%	0%	0%	0%	21%	79%	0%	0%	44%	56%						
	PEAK HR FACTOR		0.892			0.000			0.968			0.935		0.957					
	APP/DEPART	232	/	1,675	0	/	0	2,673	/	2,162	1,970	/	1,038	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	AM BEGIN PEAK HR	7:30 AM					0	0	0	0	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PM BEGIN PEAK HR	4:30 PM					0	0	0	0	0					

AimTD LLC
TURNING MOVEMENT COUNTS





APPENDIX D

LEVEL OF SERVICE WORKSHEETS

EXISTING

Hotel Murrieta

Vistro File: C:\...\AME.vistro
Report File: C:\...\AME.pdf

Scenario 1 Existing AM Peak Hour
8/30/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	NB Left	0.523	17.1	B
2	Madison Ave (NS) at Guava St (EW)	Signalized	HCM 6th Edition	NB Left	0.378	7.7	A
3	Madison Ave (NS) at Newton Azrak St (EW)	Two-way stop	HCM 6th Edition	EB Left	0.003	9.6	A
4	I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	WB Thru	0.755	9.0	A
5	I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	NB Left	0.502	4.7	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: Madison Ave (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	24	85	172	224	159	79	74	424	32	383	614	194
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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]	24	85	172	224	159	79	74	424	32	383	614	194
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
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]	7	24	49	64	45	23	21	121	9	109	175	55
Total Analysis Volume [veh/h]	27	97	196	255	181	90	84	483	36	437	700	221
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	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
Split [s]	11	23	0	28	40	0	23	27	0	42	46	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	45	45	45	45	45	45	45	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	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	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	2.00
g_i, Effective Green Time [s]	2	7	7	7	7	12	12	5	7	7	9	11	11
g / C, Green / Cycle	0.05	0.15	0.15	0.15	0.15	0.25	0.25	0.10	0.15	0.15	0.19	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.01	0.05	0.06	0.06	0.07	0.08	0.08	0.02	0.08	0.08	0.13	0.14	0.14
s, saturation flow rate [veh/h]	3459	1870	1589	1589	3459	1870	1665	3459	5094	1787	3459	5094	1589
c, Capacity [veh/h]	160	283	240	240	516	475	423	356	789	277	667	1247	389
d1, Uniform Delay [s]	20.84	17.27	17.45	17.45	17.76	13.68	13.71	18.75	17.54	17.58	16.95	15.02	15.05
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	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	1.00
d2, Incremental Delay [s]	0.49	0.72	1.11	1.11	0.73	0.35	0.40	0.34	0.46	1.37	1.10	0.40	1.30
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	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	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	1.00

Lane Group Results

X, volume / capacity	0.17	0.34	0.41	0.41	0.49	0.30	0.31	0.24	0.48	0.49	0.66	0.56	0.57
d, Delay for Lane Group [s/veh]	21.33	17.99	18.56	18.56	18.50	14.03	14.11	19.09	18.01	18.94	18.05	15.42	16.36
Lane Group LOS	C	B	B	B	B	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.14	0.85	0.89	0.89	1.13	1.04	0.96	0.38	1.10	1.25	1.92	1.84	1.84
50th-Percentile Queue Length [ft/ln]	3.38	21.34	22.20	22.20	28.23	26.04	23.92	9.47	27.51	31.35	48.11	45.93	46.02
95th-Percentile Queue Length [veh/ln]	0.24	1.54	1.60	1.60	2.03	1.87	1.72	0.68	1.98	2.26	3.46	3.31	3.31
95th-Percentile Queue Length [ft/ln]	6.08	38.42	39.97	39.97	50.81	46.87	43.06	17.04	49.52	56.43	86.60	82.68	82.84

Movement, Approach, & Intersection Results

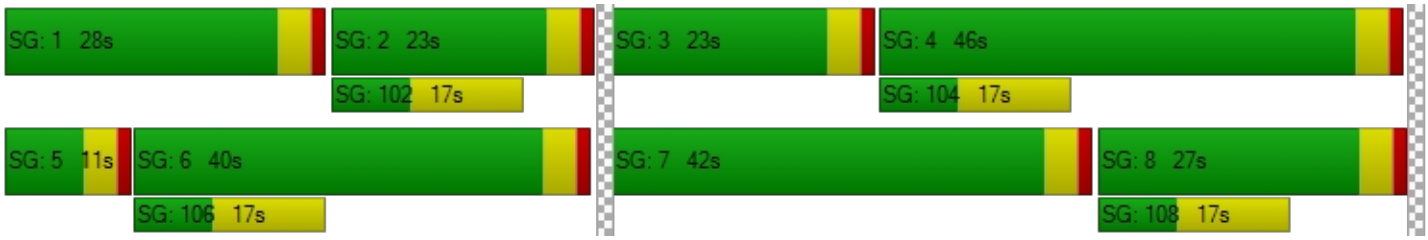
d_M, Delay for Movement [s/veh]	21.33	17.99	18.56	18.50	14.05	14.11	19.09	18.20	18.94	18.05	15.42	16.36
Movement LOS	C	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	18.62			16.22			18.37			16.42		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.05											
Intersection LOS	B											
Intersection V/C	0.523											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.858	2.617	3.017	3.204
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]	317	600	383	700
d_b, Bicycle Delay [s]	42.50	29.40	39.20	25.35
l_b,int, Bicycle LOS Score for Intersection	1.824	1.994	1.808	2.307
Bicycle LOS	A	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 2: Madison Ave (NS) at Guava St (EW)

Control Type:	Signalized	Delay (sec / veh):	7.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.378

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	7	58	0	5	148	86	39	0	7	0	2	6
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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]	7	58	0	5	148	86	39	0	7	0	2	6
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
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]	2	17	0	1	43	25	11	0	2	0	1	2
Total Analysis Volume [veh/h]	8	67	0	6	172	100	45	0	8	0	2	7
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	30	0	120	120	0	120	120	0	120	120	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
Split [s]	11	0	0	11	21	0	67	77	0	11	21	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

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	R	L	C	R	L	C	R
C, Cycle Length [s]	25	25	25	25	25	25	25	25	25	25	25	25
L, Total Lost Time per Cycle [s]	4.00	0.00	0.00	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	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	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]	0	0	0	10	6	6	2	2	2	0	0	0
g / C, Green / Cycle	0.02	0.00	0.00	0.42	0.24	0.24	0.08	0.10	0.10	0.00	0.02	0.02
(v / s)_i Volume / Saturation Flow Rate	0.00	0.02	0.02	0.00	0.09	0.06	0.03	0.00	0.01	0.00	0.00	0.00
s, saturation flow rate [veh/h]	1781	1870	1870	1334	1870	1589	1334	1870	1589	1334	1870	1589
c, Capacity [veh/h]	31	0	0	764	456	387	304	186	158	289	36	31
d1, Uniform Delay [s]	12.15	0.00	0.00	5.20	7.90	7.65	12.47	0.00	10.22	0.00	12.06	12.10
k, delay calibration	0.11	0.50	0.50	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]	4.25	0.00	0.00	0.00	0.52	0.35	0.22	0.00	0.13	0.00	0.62	3.63
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	0.26	10000.0	10000.0	0.01	0.38	0.26	0.15	0.00	0.05	0.00	0.05	0.23
d, Delay for Lane Group [s/veh]	16.40	0.00	0.00	5.20	8.41	8.00	12.70	0.00	10.35	0.00	12.68	15.73
Lane Group LOS	B	F	F	A	A	A	B	A	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	0.00	0.00	0.01	0.51	0.29	0.20	0.00	0.03	0.00	0.01	0.06
50th-Percentile Queue Length [ft/ln]	1.70	0.00	0.00	0.26	12.74	7.19	5.07	0.00	0.82	0.00	0.35	1.46
95th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.02	0.92	0.52	0.36	0.00	0.06	0.00	0.03	0.11
95th-Percentile Queue Length [ft/ln]	3.07	0.00	0.00	0.46	22.93	12.95	9.12	0.00	1.47	0.00	0.63	2.64

Movement, Approach, & Intersection Results

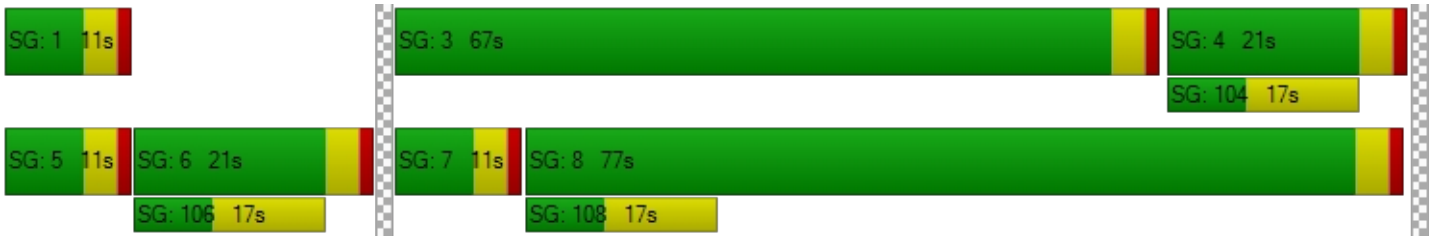
d_M, Delay for Movement [s/veh]	16.40	0.00	0.00	5.20	8.41	8.00	12.70	0.00	10.35	0.00	12.68	15.73
Movement LOS	B	A	A	A	A	A	B	A	B	A	B	B
d_A, Approach Delay [s/veh]	1.75			8.20			12.34			15.06		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.71											
Intersection LOS	A											
Intersection V/C	0.378											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.207	2.852	2.185	2.157
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	283	1217	283
d_b, Bicycle Delay [s]	60.00	44.20	9.20	44.20
l_b,int, Bicycle LOS Score for Intersection	1.621	2.018	1.647	1.574
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Madison Ave (NS) at Newton Azrak St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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	33	0	13	88	22	2	0	1	0	0	8
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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	33	0	13	88	22	2	0	1	0	0	8
Peak Hour Factor	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280
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	9	0	4	24	6	1	0	0	0	0	2
Total Analysis Volume [veh/h]	0	36	0	14	95	24	2	0	1	0	0	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.45	0.00	0.00	7.31	0.00	0.00	9.63	10.05	8.82	9.62	10.14	8.50
Movement LOS	A	A	A	A	A	A	A	B	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.02	0.02	0.02	0.01	0.01	0.01	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.62	0.62	0.62	0.27	0.27	0.27	0.66	0.66	0.66
d_A, Approach Delay [s/veh]	0.00			0.77			9.36			8.50		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.14											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	871	0	348	0	570	212	0	949	68
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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	0	0	871	0	348	0	570	212	0	949	68
Peak Hour Factor	0.9280	0.9280	0.9280	0.8870	0.9280	0.8870	0.9280	0.8870	0.8870	0.9280	0.8870	0.8870
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	245	0	98	0	161	0	0	267	0
Total Analysis Volume [veh/h]	0	0	0	982	0	392	0	643	0	0	1070	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	1	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	120	0	0	0	120	0	0	120	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	67	0	0	0	53	0	0	53	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	10	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		34	34	34	34	34	34	34
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	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
g_i, Effective Green Time [s]		14	14	14	12	12	12	12
g / C, Green / Cycle		0.41	0.41	0.41	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate		0.28	0.28	0.25	0.13	0.00	0.21	0.00
s, saturation flow rate [veh/h]		1781	1781	1589	5094	1589	5094	1589
c, Capacity [veh/h]		730	730	651	1800	562	1800	562
d1, Uniform Delay [s]		8.12	8.12	7.81	8.08	0.00	8.94	0.00
k, delay calibration		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
d2, Incremental Delay [s]		1.09	1.09	0.90	0.12	0.00	0.32	0.00
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		0.67	0.67	0.60	0.36	0.00	0.59	0.00
d, Delay for Lane Group [s/veh]		9.21	9.21	8.70	8.20	0.00	9.26	0.00
Lane Group LOS		A	A	A	A	A	A	A
Critical Lane Group		Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		2.01	2.01	1.53	0.80	0.00	1.48	0.00
50th-Percentile Queue Length [ft/ln]		50.20	50.20	38.37	19.91	0.00	37.04	0.00
95th-Percentile Queue Length [veh/ln]		3.61	3.61	2.76	1.43	0.00	2.67	0.00
95th-Percentile Queue Length [ft/ln]		90.37	90.37	69.06	35.83	0.00	66.67	0.00

Movement, Approach, & Intersection Results

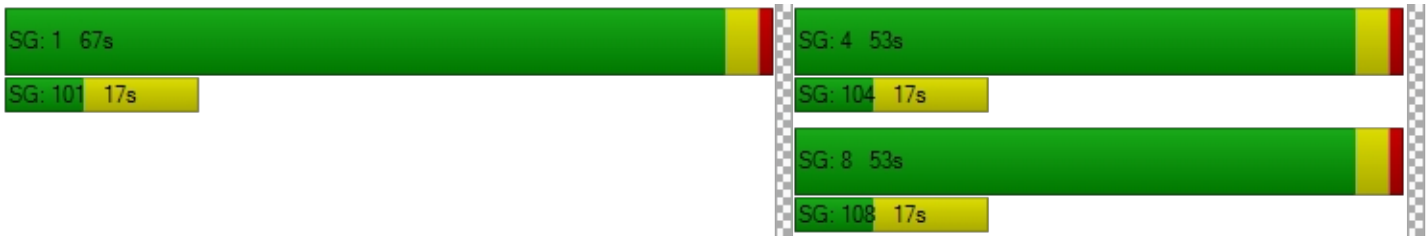
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.21	0.00	8.70	0.00	8.20	0.00	0.00	9.26	0.00
Movement LOS				A		A		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			9.06			8.20			9.26		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	8.95											
Intersection LOS	A											
Intersection V/C	0.755											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	1.437	2.480	3.185	3.068
Crosswalk LOS	A	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]	0	0	817	817
d_b, Bicycle Delay [s]	60.00	60.00	21.00	21.00
l_b,int, Bicycle LOS Score for Intersection	4.132	6.400	1.913	2.148
Bicycle LOS	D	F	A	B

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	4.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.502

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	192	2	96	0	0	0	127	1314	0	0	819	698
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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]	192	2	96	0	0	0	127	1314	0	0	819	698
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	52	1	0	0	0	0	34	355	0	0	221	0
Total Analysis Volume [veh/h]	208	2	0	0	0	0	137	1421	0	0	885	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	34	0	0	0	0	0	86	0	0	86	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
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
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

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	R
C, Cycle Length [s]	37	37	37		37	37	37	37
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	0.00		2.00	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
g_i, Effective Green Time [s]	6	6	6		23	23	23	23
g / C, Green / Cycle	0.17	0.17	0.17		0.61	0.61	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.00		0.22	0.28	0.17	0.00
s, saturation flow rate [veh/h]	1781	1783	1589		628	5094	5094	1589
c, Capacity [veh/h]	298	298	266		491	3133	3133	978
d1, Uniform Delay [s]	13.55	13.55	0.00		6.58	3.78	3.30	0.00
k, delay calibration	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
d2, Incremental Delay [s]	0.71	0.71	0.00		0.31	0.10	0.05	0.00
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	0.35	0.35	0.00		0.28	0.45	0.28	0.00
d, Delay for Lane Group [s/veh]	14.25	14.25	0.00		6.89	3.88	3.35	0.00
Lane Group LOS	B	B	A		A	A	A	A
Critical Lane Group	Yes	No	No		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.69	0.69	0.00		0.48	0.72	0.39	0.00
50th-Percentile Queue Length [ft/ln]	17.13	17.14	0.00		12.10	18.02	9.74	0.00
95th-Percentile Queue Length [veh/ln]	1.23	1.23	0.00		0.87	1.30	0.70	0.00
95th-Percentile Queue Length [ft/ln]	30.83	30.85	0.00		21.78	32.44	17.54	0.00

Movement, Approach, & Intersection Results

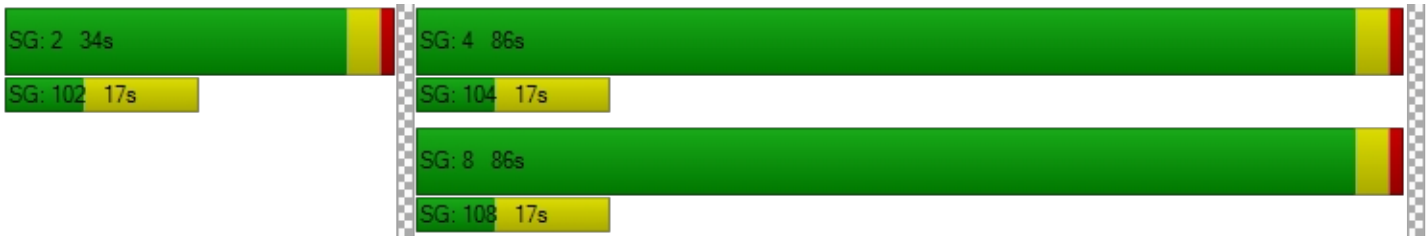
d_M, Delay for Movement [s/veh]	14.25	14.25	0.00	0.00	0.00	0.00	6.89	3.88	0.00	0.00	3.35	0.00
Movement LOS	B	B	A				A	A			A	A
d_A, Approach Delay [s/veh]	14.25			0.00			4.15			3.35		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	4.68											
Intersection LOS	A											
Intersection V/C	0.502											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.022	1.768	3.062	2.929
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	0	1367	1367
d_b, Bicycle Delay [s]	33.75	60.00	6.02	6.02
l_b,int, Bicycle LOS Score for Intersection	1.906	4.132	2.417	2.046
Bicycle LOS	A	D	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Hotel Murrieta

Vistro File: C:\...\PME.vistro
Report File: C:\...\PME.pdf

Scenario 1 Existing PM Peak Hour
8/30/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	EB Left	0.752	27.6	C
2	Madison Ave (NS) at Guava St (EW)	Signalized	HCM 6th Edition	NB Left	0.568	8.3	A
3	Madison Ave (NS) at Newton Azrak St (EW)	Two-way stop	HCM 6th Edition	EB Left	0.187	12.1	B
4	I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	SB Left	0.717	14.5	B
5	I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	NB Left	1.091	14.7	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: Madison Ave (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	27.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	54	301	573	460	187	69	180	1044	52	373	332	275
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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]	54	301	573	460	187	69	180	1044	52	373	332	275
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
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]	14	76	145	117	47	17	46	264	13	94	84	70
Total Analysis Volume [veh/h]	55	305	581	466	189	70	182	1058	53	378	336	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	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
Split [s]	14	36	0	28	50	0	21	33	0	23	35	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	73	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	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	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	2.00
g_i, Effective Green Time [s]	5	17	17	17	13	25	25	7	16	16	11	20	20
g / C, Green / Cycle	0.06	0.23	0.23	0.23	0.18	0.34	0.34	0.09	0.22	0.22	0.15	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.18	0.18	0.13	0.07	0.07	0.05	0.16	0.16	0.11	0.07	0.18
s, saturation flow rate [veh/h]	3459	1870	1589	1589	3459	1870	1700	3459	5094	1812	3459	5094	1589
c, Capacity [veh/h]	224	437	371	371	609	645	587	322	1145	407	512	1425	445
d1, Uniform Delay [s]	32.68	25.80	26.42	26.42	28.84	17.00	17.01	31.92	26.33	26.35	29.95	20.42	23.13
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	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	1.00
d2, Incremental Delay [s]	0.57	2.03	3.63	3.63	2.04	0.16	0.18	1.56	0.85	2.39	2.10	0.08	1.46
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	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	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	1.00

Lane Group Results

X, volume / capacity	0.25	0.70	0.78	0.78	0.77	0.21	0.21	0.57	0.72	0.72	0.74	0.24	0.63
d, Delay for Lane Group [s/veh]	33.25	27.83	30.06	30.06	30.89	17.16	17.19	33.49	27.18	28.73	32.06	20.50	24.59
Lane Group LOS	C	C	C	C	C	B	B	C	C	C	C	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.47	4.89	4.90	4.90	3.92	1.55	1.42	1.57	4.29	4.77	3.22	1.43	4.17
50th-Percentile Queue Length [ft/ln]	11.73	122.1	122.4	122.4	97.89	38.86	35.62	39.17	107.18	119.19	80.48	35.63	104.27
95th-Percentile Queue Length [veh/ln]	0.84	8.51	8.53	8.53	7.05	2.80	2.56	2.82	7.68	8.35	5.79	2.57	7.51
95th-Percentile Queue Length [ft/ln]	21.12	212.7	213.2	213.2	176.20	69.94	64.12	70.50	192.07	208.72	144.87	64.13	187.69

Movement, Approach, & Intersection Results

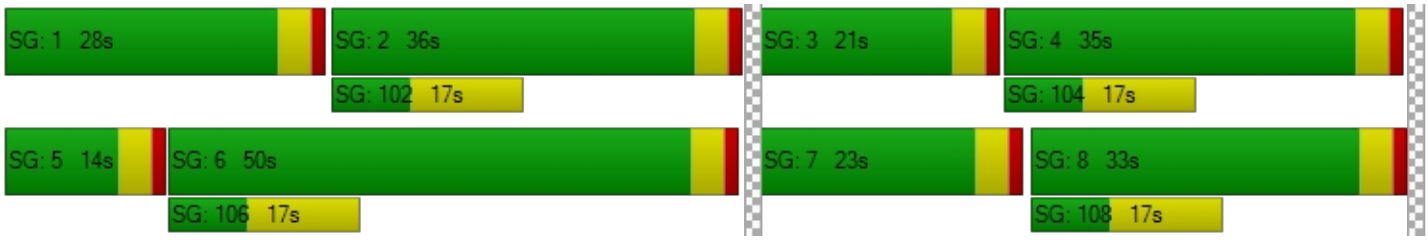
d_M, Delay for Movement [s/veh]	33.25	27.83	30.06	30.89	17.17	17.19	33.49	27.53	28.73	32.06	20.50	24.59
Movement LOS	C	C	C	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	29.52			25.99			28.42			26.05		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.64											
Intersection LOS	C											
Intersection V/C	0.752											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.929	2.709	3.053	3.282
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]	533	767	483	517
d_b, Bicycle Delay [s]	32.27	22.82	34.50	33.00
l_b,int, Bicycle LOS Score for Intersection	2.336	2.158	2.093	2.106
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 2: Madison Ave (NS) at Guava St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.568

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	8	225	0	8	57	50	219	3	10	0	3	9
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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]	8	225	0	8	57	50	219	3	10	0	3	9
Peak Hour Factor	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630
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	74	0	3	19	16	72	1	3	0	1	3
Total Analysis Volume [veh/h]	10	295	0	10	75	66	287	4	13	0	4	12
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	30	0	120	120	0	120	120	0	120	120	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
Split [s]	11	22	0	21	32	0	39	66	0	11	38	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

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	R	L	C	R	L	C	R
C, Cycle Length [s]	37	37	37	37	37	37	37	37	37	37	37	37
L, Total Lost Time per Cycle [s]	4.00	0.00	0.00	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	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	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]	1	0	0	10	5	5	14	15	15	0	1	1
g / C, Green / Cycle	0.02	0.00	0.00	0.27	0.15	0.15	0.37	0.40	0.40	0.00	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.08	0.01	0.04	0.04	0.26	0.00	0.01	0.00	0.00	0.01
s, saturation flow rate [veh/h]	1781	1870	1870	1084	1870	1589	1084	1870	1589	1084	1870	1589
c, Capacity [veh/h]	33	0	0	434	272	231	534	745	633	197	53	45
d1, Uniform Delay [s]	17.70	0.00	0.00	11.25	13.90	13.92	11.81	6.63	6.67	0.00	17.27	17.37
k, delay calibration	0.11	0.50	0.50	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]	5.15	0.00	0.00	0.02	0.55	0.67	0.84	0.00	0.01	0.00	0.59	3.06
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	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	0.31	10000.0	10000.0	0.02	0.28	0.29	0.54	0.01	0.02	0.00	0.08	0.26
d, Delay for Lane Group [s/veh]	22.85	0.00	0.00	11.27	14.44	14.59	12.65	6.63	6.68	0.00	17.86	20.43
Lane Group LOS	C	F	F	B	B	B	B	A	A	A	B	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.12	0.00	0.00	0.05	0.49	0.44	1.73	0.01	0.04	0.00	0.04	0.12
50th-Percentile Queue Length [ft/ln]	2.95	0.00	0.00	1.34	12.35	11.06	43.29	0.34	1.11	0.00	0.92	3.07
95th-Percentile Queue Length [veh/ln]	0.21	0.00	0.00	0.10	0.89	0.80	3.12	0.02	0.08	0.00	0.07	0.22
95th-Percentile Queue Length [ft/ln]	5.31	0.00	0.00	2.41	22.23	19.90	77.93	0.61	2.00	0.00	1.65	5.53

Movement, Approach, & Intersection Results

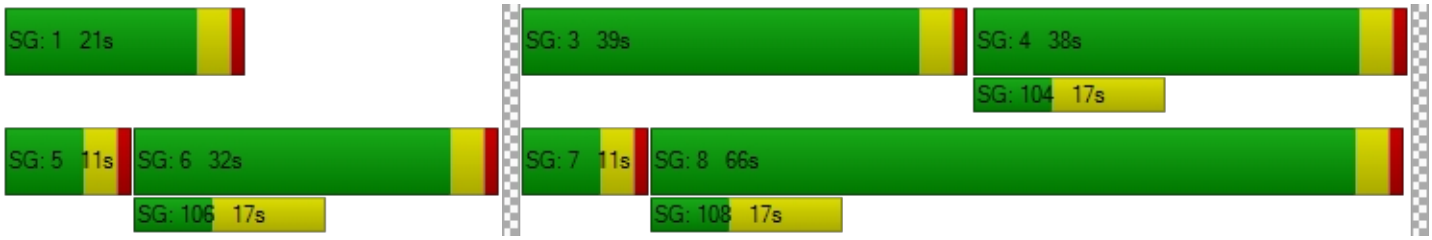
d_M, Delay for Movement [s/veh]	22.85	0.00	0.00	11.27	14.44	14.59	12.65	6.63	6.68	0.00	17.86	20.43
Movement LOS	C	A	A	B	B	B	B	A	A	A	B	C
d_A, Approach Delay [s/veh]	0.75			14.30			12.32			19.79		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	8.31											
Intersection LOS	A											
Intersection V/C	0.568											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.241	3.238	2.238	2.166
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	467	1033	567
d_b, Bicycle Delay [s]	60.00	35.27	14.02	30.82
l_b,int, Bicycle LOS Score for Intersection	1.811	1.809	2.061	1.586
Bicycle LOS	A	A	B	A

Sequence

Ring 1	1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Madison Ave (NS) at Newton Azrak St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.187

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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	131	0	8	41	1	71	0	5	0	0	10
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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	131	0	8	41	1	71	0	5	0	0	10
Peak Hour Factor	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070
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	54	0	3	17	0	29	0	2	0	0	4
Total Analysis Volume [veh/h]	0	216	0	13	68	2	117	0	8	0	0	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.01	0.00	0.00	0.19	0.00	0.01	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	7.68	0.00	0.00	12.13	12.39	9.98	10.79	11.12	9.46
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.02	0.02	0.02	0.72	0.72	0.72	0.06	0.06	0.06
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.45	0.45	0.45	18.02	18.02	18.02	1.48	1.48	1.48
d_A, Approach Delay [s/veh]	0.00			1.20			11.99			9.46		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	3.98											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	857	0	185	0	1813	306	0	956	75
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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	0	0	857	0	185	0	1813	306	0	956	75
Peak Hour Factor	0.9280	0.9280	0.9280	0.9790	0.9280	0.9790	0.9280	0.9790	0.9790	0.9280	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	219	0	47	0	463	0	0	244	0
Total Analysis Volume [veh/h]	0	0	0	875	0	189	0	1852	0	0	977	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	1	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	120	0	0	0	120	0	0	120	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	72	0	0	0	48	0	0	48	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	10	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		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
l1_p, Permitted Start-Up Lost Time [s]		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
g_i, Effective Green Time [s]		23	23	23	48	48	48	48
g / C, Green / Cycle		0.29	0.29	0.29	0.61	0.61	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate		0.25	0.25	0.12	0.36	0.00	0.19	0.00
s, saturation flow rate [veh/h]		1781	1781	1589	5094	1589	5094	1589
c, Capacity [veh/h]		523	523	466	3088	964	3088	964
d1, Uniform Delay [s]		26.40	26.40	22.61	9.72	0.00	7.65	0.00
k, delay calibration		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
d2, Incremental Delay [s]		3.64	3.64	0.57	0.19	0.00	0.06	0.00
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		0.84	0.84	0.41	0.60	0.00	0.32	0.00
d, Delay for Lane Group [s/veh]		30.05	30.05	23.17	9.91	0.00	7.71	0.00
Lane Group LOS		C	C	C	A	A	A	A
Critical Lane Group		No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		7.92	7.92	2.81	5.70	0.00	2.36	0.00
50th-Percentile Queue Length [ft/ln]		198.10	198.10	70.21	142.55	0.00	59.07	0.00
95th-Percentile Queue Length [veh/ln]		12.54	12.54	5.06	9.62	0.00	4.25	0.00
95th-Percentile Queue Length [ft/ln]		313.51	313.51	126.38	240.45	0.00	106.33	0.00

Movement, Approach, & Intersection Results

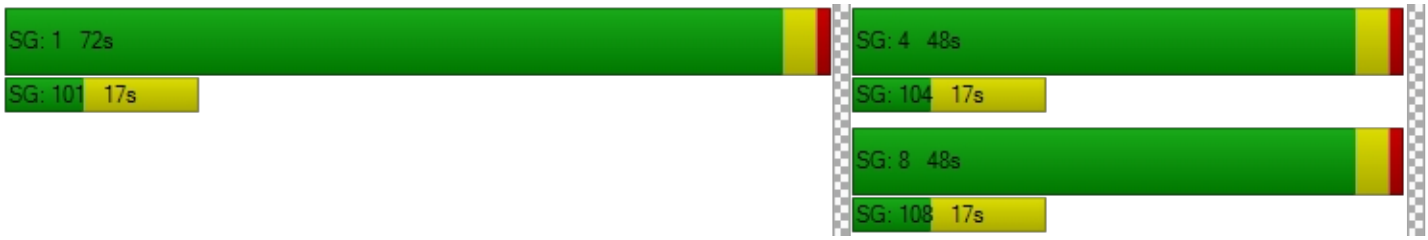
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	30.05	0.00	23.17	0.00	9.91	0.00	0.00	7.71	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			28.82			9.91			7.71		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	14.53											
Intersection LOS	B											
Intersection V/C	0.717											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	1.437	2.404	3.274	3.191
Crosswalk LOS	A	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]	0	0	733	733
d_b, Bicycle Delay [s]	60.00	60.00	24.07	24.07
l_b,int, Bicycle LOS Score for Intersection	4.132	5.888	2.578	2.097
Bicycle LOS	D	F	B	B

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.091

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	180	3	49	0	0	0	560	2113	0	0	858	1112
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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]	180	3	49	0	0	0	560	2113	0	0	858	1112
Peak Hour Factor	0.9570	0.9570	0.9570	0.9250	0.9250	0.9250	0.9570	0.9570	0.9250	0.9250	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	47	1	0	0	0	0	146	552	0	0	224	0
Total Analysis Volume [veh/h]	188	3	0	0	0	0	585	2208	0	0	897	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	0	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
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
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

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	R
C, Cycle Length [s]	138	138	138		138	138	138	138
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	0.00		2.00	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
g_i, Effective Green Time [s]	10	10	10		120	120	120	120
g / C, Green / Cycle	0.07	0.07	0.07		0.87	0.87	0.87	0.87
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.00		0.94	0.43	0.18	0.00
s, saturation flow rate [veh/h]	1781	1784	1589		621	5094	5094	1589
c, Capacity [veh/h]	126	127	113		566	4436	4436	1384
d1, Uniform Delay [s]	62.82	62.82	0.00		17.16	2.03	1.39	0.00
k, delay calibration	0.11	0.11	0.11		0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.77	8.74	0.00		46.96	0.09	0.02	0.00
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	0.75	0.75	0.00		1.03	0.50	0.20	0.00
d, Delay for Lane Group [s/veh]	71.60	71.57	0.00		64.12	2.11	1.42	0.00
Lane Group LOS	E	E	A		F	A	A	A
Critical Lane Group	Yes	No	No		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	3.60	3.61	0.00		27.39	2.69	0.75	0.00
50th-Percentile Queue Length [ft/ln]	90.08	90.15	0.00		684.65	67.17	18.74	0.00
95th-Percentile Queue Length [veh/ln]	6.49	6.49	0.00		37.14	4.84	1.35	0.00
95th-Percentile Queue Length [ft/ln]	162.15	162.27	0.00		928.48	120.91	33.74	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.58	71.57	0.00	0.00	0.00	0.00	64.12	2.11	0.00	0.00	1.42	0.00
Movement LOS	E	E	A				F	A			A	A
d_A, Approach Delay [s/veh]	71.58			0.00			15.10			1.42		
Approach LOS	E			A			B			A		
d_I, Intersection Delay [s/veh]	14.72											
Intersection LOS	B											
Intersection V/C	1.091											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.016	2.843	3.212	3.040
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]	283	0	1583	1583
d_b, Bicycle Delay [s]	44.20	60.00	2.60	2.60
l_b,int, Bicycle LOS Score for Intersection	1.875	4.132	3.096	2.053
Bicycle LOS	A	D	C	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



EXISTING PLUS PROJECT

Hotel Murrieta

Vistro File: C:\...\AME.vistro
Report File: C:\...\AMEP.pdf

Scenario 2 Existing Plus Project AM Peak Hour
8/30/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	NB Left	0.559	17.3	B
2	Madison Ave (NS) at Guava St (EW)	Signalized	HCM 6th Edition	NB Left	0.436	7.9	A
3	Madison Ave (NS) at Newton Azrak St (EW)	Two-way stop	HCM 6th Edition	EB Left	0.003	10.6	B
4	I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	SB Left	0.754	9.1	A
5	I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	NB Left	0.499	4.8	A
6	Monroe Ave (NS) at Newton Azrak (EW)	Two-way stop	HCM 6th Edition	EB Thru	0.063	9.6	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: Madison Ave (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.559

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	24	85	172	224	159	79	74	424	32	383	614	194
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	5	32	0	7	0	0	0	4	46	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]	27	90	204	224	166	79	74	424	36	429	614	194
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
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	26	58	64	47	23	21	121	10	122	175	55
Total Analysis Volume [veh/h]	31	103	233	255	189	90	84	483	41	489	700	221
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	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
Split [s]	11	25	0	25	39	0	26	26	0	44	44	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	46	46	46	46	46	46	46	46	46	46	46	46	46
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	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	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	2.00
g_i, Effective Green Time [s]	2	7	7	7	7	11	11	5	7	7	10	12	12
g / C, Green / Cycle	0.05	0.15	0.15	0.15	0.15	0.25	0.25	0.10	0.15	0.15	0.21	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.01	0.06	0.07	0.07	0.07	0.08	0.08	0.02	0.08	0.08	0.14	0.14	0.14
s, saturation flow rate [veh/h]	3459	1870	1589	1589	3459	1870	1671	3459	5094	1777	3459	5094	1589
c, Capacity [veh/h]	176	280	238	238	505	458	409	350	772	269	720	1316	411
d1, Uniform Delay [s]	21.08	17.76	18.11	18.11	18.26	14.35	14.38	19.20	18.07	18.11	16.94	14.79	14.82
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	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	1.00
d2, Incremental Delay [s]	0.47	0.81	1.56	1.56	0.78	0.40	0.46	0.35	0.50	1.51	1.14	0.34	1.10
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	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	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	1.00

Lane Group Results

X, volume / capacity	0.18	0.37	0.49	0.49	0.50	0.32	0.33	0.24	0.50	0.51	0.68	0.53	0.54
d, Delay for Lane Group [s/veh]	21.56	18.57	19.67	19.67	19.04	14.75	14.84	19.55	18.57	19.61	18.08	15.13	15.92
Lane Group LOS	C	B	B	B	B	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.16	0.94	1.11	1.11	1.17	1.13	1.04	0.39	1.15	1.31	2.19	1.84	1.83
50th-Percentile Queue Length [ft/ln]	3.93	23.50	27.87	27.87	29.22	28.22	25.97	9.76	28.83	32.81	54.86	46.03	45.84
95th-Percentile Queue Length [veh/ln]	0.28	1.69	2.01	2.01	2.10	2.03	1.87	0.70	2.08	2.36	3.95	3.31	3.30
95th-Percentile Queue Length [ft/ln]	7.08	42.30	50.17	50.17	52.60	50.80	46.75	17.57	51.89	59.06	98.75	82.85	82.51

Movement, Approach, & Intersection Results

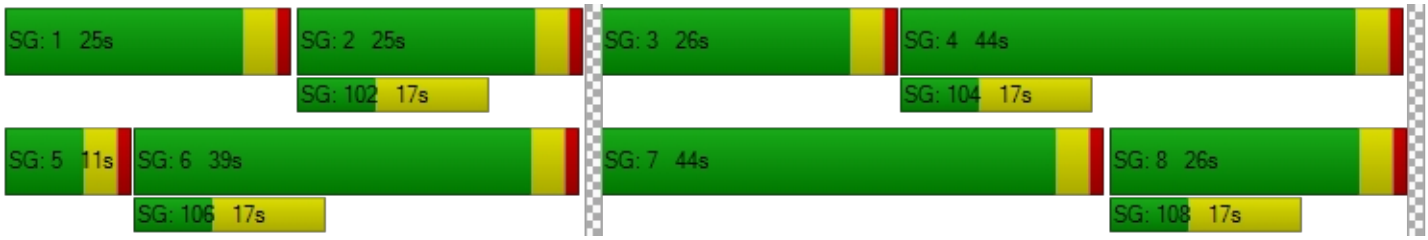
d_M, Delay for Movement [s/veh]	21.56	18.57	19.67	19.04	14.77	14.84	19.55	18.78	19.61	18.08	15.13	15.92
Movement LOS	C	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.52			16.82			18.94			16.28		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.34											
Intersection LOS	B											
Intersection V/C	0.559											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.872	2.620	3.018	3.212
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]	350	583	367	667
d_b, Bicycle Delay [s]	40.84	30.10	40.02	26.67
l_b,int, Bicycle LOS Score for Intersection	1.862	2.000	1.810	2.335
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 2: Madison Ave (NS) at Guava St (EW)

Control Type:	Signalized	Delay (sec / veh):	7.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.436

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	7	58	0	5	148	86	39	0	7	0	2	6
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	0	18	39	0	0	4	0	0	3	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	85	0	23	187	86	39	4	7	0	5	19
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
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]	2	25	0	7	54	25	11	1	2	0	1	6
Total Analysis Volume [veh/h]	8	99	0	27	217	100	45	5	8	0	6	22
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	30	0	120	120	0	120	120	0	120	120	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
Split [s]	11	0	0	13	70	0	18	28	0	11	21	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

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	R	L	C	R	L	C	R
C, Cycle Length [s]	26	26	26	26	26	26	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	4.00	0.00	0.00	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	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	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]	0	0	0	11	6	6	2	3	3	0	1	1
g / C, Green / Cycle	0.02	0.00	0.00	0.41	0.24	0.24	0.08	0.13	0.13	0.00	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.00	0.03	0.03	0.02	0.12	0.06	0.03	0.00	0.01	0.00	0.00	0.01
s, saturation flow rate [veh/h]	1781	1870	1870	1296	1870	1589	1296	1870	1589	1296	1870	1589
c, Capacity [veh/h]	30	0	0	726	457	388	290	245	209	274	98	83
d1, Uniform Delay [s]	12.79	0.00	0.00	5.70	8.51	8.03	13.11	9.97	9.99	0.00	11.86	11.99
k, delay calibration	0.11	0.50	0.50	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]	4.79	0.00	0.00	0.02	0.77	0.35	0.25	0.03	0.07	0.00	0.26	1.66
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	0.27	10000.0	10000.0	0.04	0.48	0.26	0.16	0.02	0.04	0.00	0.06	0.26
d, Delay for Lane Group [s/veh]	17.59	0.00	0.00	5.72	9.28	8.38	13.36	10.00	10.06	0.00	12.12	13.65
Lane Group LOS	B	F	F	A	A	A	B	A	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	0.00	0.00	0.06	0.74	0.32	0.22	0.02	0.03	0.00	0.03	0.13
50th-Percentile Queue Length [ft/ln]	1.84	0.00	0.00	1.38	18.46	7.90	5.52	0.49	0.80	0.00	0.78	3.20
95th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.10	1.33	0.57	0.40	0.04	0.06	0.00	0.06	0.23
95th-Percentile Queue Length [ft/ln]	3.32	0.00	0.00	2.48	33.24	14.23	9.93	0.88	1.44	0.00	1.40	5.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.59	0.00	0.00	5.72	9.28	8.38	13.36	10.00	10.06	0.00	12.12	13.65
Movement LOS	B	A	A	A	A	A	B	A	B	A	B	B
d_A, Approach Delay [s/veh]	1.31			8.74			12.61			13.32		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.92											
Intersection LOS	A											
Intersection V/C	0.436											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.226	2.865	2.187	2.198
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1100	400	283
d_b, Bicycle Delay [s]	60.00	12.15	38.40	44.20
l_b,int, Bicycle LOS Score for Intersection	1.648	2.127	1.655	1.606
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Madison Ave (NS) at Newton Azrak St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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	33	0	13	88	22	2	0	1	0	0	8
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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	39	0	0	0	0	0	8	0	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
Total Hourly Volume [veh/h]	0	33	11	52	88	22	2	0	1	8	0	35
Peak Hour Factor	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280
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	9	3	14	24	6	1	0	0	2	0	9
Total Analysis Volume [veh/h]	0	36	12	56	95	24	2	0	1	9	0	38
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.01	0.00	0.04
d_M, Delay for Movement [s/veh]	7.45	0.00	0.00	7.39	0.00	0.00	10.59	10.88	8.82	10.58	11.11	8.70
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.10	0.10	0.10	0.01	0.01	0.01	0.16	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	2.59	2.59	2.59	0.31	0.31	0.31	3.97	3.97	3.97
d_A, Approach Delay [s/veh]	0.00			2.37			10.00			9.06		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	3.19											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.754

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	871	0	348	0	570	212	0	949	68
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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	21	0	22	10	0	25	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	0	0	871	0	369	0	592	222	0	974	68
Peak Hour Factor	0.9280	0.9280	0.9280	0.8870	0.9280	0.8870	0.9280	0.8870	0.8870	0.9280	0.8870	0.8870
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	245	0	104	0	167	0	0	275	0
Total Analysis Volume [veh/h]	0	0	0	982	0	416	0	667	0	0	1098	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	1	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	120	0	0	0	120	0	0	120	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	67	0	0	0	53	0	0	53	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	10	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		34	34	34	34	34	34	34
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	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
g_i, Effective Green Time [s]		14	14	14	12	12	12	12
g / C, Green / Cycle		0.41	0.41	0.41	0.36	0.36	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate		0.28	0.28	0.26	0.13	0.00	0.22	0.00
s, saturation flow rate [veh/h]		1781	1781	1589	5094	1589	5094	1589
c, Capacity [veh/h]		729	729	650	1830	571	1830	571
d1, Uniform Delay [s]		8.32	8.32	8.17	8.16	0.00	9.04	0.00
k, delay calibration		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
d2, Incremental Delay [s]		1.09	1.09	1.05	0.12	0.00	0.32	0.00
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		0.67	0.67	0.64	0.36	0.00	0.60	0.00
d, Delay for Lane Group [s/veh]		9.42	9.42	9.22	8.28	0.00	9.36	0.00
Lane Group LOS		A	A	A	A	A	A	A
Critical Lane Group		Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		2.10	2.10	1.75	0.85	0.00	1.57	0.00
50th-Percentile Queue Length [ft/ln]		52.47	52.47	43.77	21.28	0.00	39.22	0.00
95th-Percentile Queue Length [veh/ln]		3.78	3.78	3.15	1.53	0.00	2.82	0.00
95th-Percentile Queue Length [ft/ln]		94.44	94.44	78.79	38.30	0.00	70.59	0.00

Movement, Approach, & Intersection Results

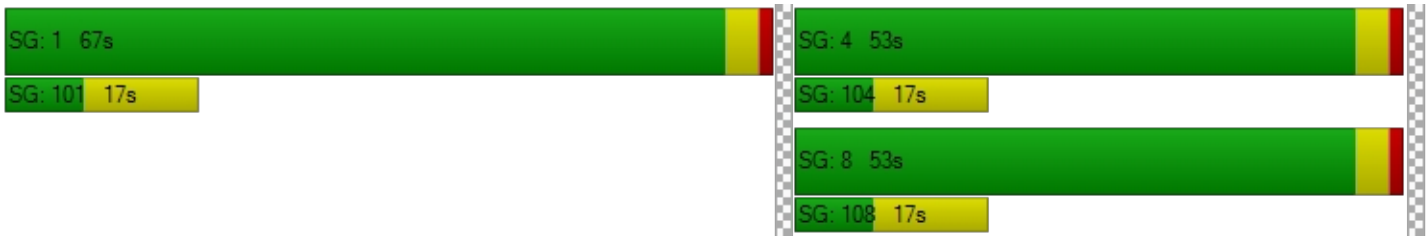
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.42	0.00	9.22	0.00	8.28	0.00	0.00	9.36	0.00
Movement LOS				A		A		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			9.36			8.28			9.36		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	9.13											
Intersection LOS	A											
Intersection V/C	0.754											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	1.437	2.486	3.193	3.074
Crosswalk LOS	A	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]	0	0	817	817
d_b, Bicycle Delay [s]	60.00	60.00	21.00	21.00
l_b,int, Bicycle LOS Score for Intersection	4.132	6.439	1.926	2.164
Bicycle LOS	D	F	A	B

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	4.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	192	2	96	0	0	0	127	1314	0	0	819	698
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	0	0	0	0	14	8	0	0	11	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]	206	2	96	0	0	0	141	1322	0	0	830	698
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	56	1	0	0	0	0	38	357	0	0	224	0
Total Analysis Volume [veh/h]	223	2	0	0	0	0	152	1429	0	0	897	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	25	0	0	0	0	0	95	0	0	95	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
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
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

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	R
C, Cycle Length [s]	39	39	39		39	39	39	39
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	0.00		2.00	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
g_i, Effective Green Time [s]	6	6	6		24	24	24	24
g / C, Green / Cycle	0.16	0.16	0.16		0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.00		0.24	0.28	0.18	0.00
s, saturation flow rate [veh/h]	1781	1782	1589		621	5094	5094	1589
c, Capacity [veh/h]	294	294	262		487	3196	3196	997
d1, Uniform Delay [s]	14.33	14.33	0.00		6.82	3.72	3.24	0.00
k, delay calibration	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
d2, Incremental Delay [s]	0.82	0.82	0.00		0.36	0.10	0.05	0.00
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	0.38	0.38	0.00		0.31	0.45	0.28	0.00
d, Delay for Lane Group [s/veh]	15.15	15.15	0.00		7.18	3.81	3.29	0.00
Lane Group LOS	B	B	A		A	A	A	A
Critical Lane Group	Yes	No	No		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.80	0.80	0.00		0.58	0.76	0.41	0.00
50th-Percentile Queue Length [ft/ln]	19.90	19.91	0.00		14.55	19.00	10.37	0.00
95th-Percentile Queue Length [veh/ln]	1.43	1.43	0.00		1.05	1.37	0.75	0.00
95th-Percentile Queue Length [ft/ln]	35.82	35.84	0.00		26.20	34.21	18.66	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.15	15.15	0.00	0.00	0.00	0.00	7.18	3.81	0.00	0.00	3.29	0.00
Movement LOS	B	B	A				A	A			A	A
d_A, Approach Delay [s/veh]	15.15			0.00			4.14			3.29		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	4.77											
Intersection LOS	A											
Intersection V/C	0.499											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.027	1.804	3.068	2.932
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	350	0	1517	1517
d_b, Bicycle Delay [s]	40.84	60.00	3.50	3.50
l_b,int, Bicycle LOS Score for Intersection	1.931	4.132	2.429	2.053
Bicycle LOS	A	D	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Monroe Ave (NS) at Newton Azrak (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.063

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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	21	0	0	0	50	0	0	35	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
Total Hourly Volume [veh/h]	0	0	0	21	0	0	0	50	0	0	35	15
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	6	0	0	0	13	0	0	9	4
Total Analysis Volume [veh/h]	0	0	0	22	0	0	0	53	0	0	37	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.01	0.00	0.00	0.00	0.06	0.00	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	7.25	0.00	0.00	9.44	9.60	8.61	9.40	9.56	8.57
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	0.04	0.04	0.04	0.20	0.20	0.20	0.19	0.19	0.19
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.98	0.98	0.98	5.06	5.06	5.06	4.69	4.69	4.69
d_A, Approach Delay [s/veh]	2.41			7.25			9.60			9.26		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	9.05											
Intersection LOS	A											

Hotel Murrieta

Vistro File: C:\...\PME.vistro
Report File: C:\...\PMEP.pdf

Scenario 2 Existing Plus Project PM Peak Hour
8/30/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	EB Left	0.775	29.9	C
2	Madison Ave (NS) at Guava St (EW)	Signalized	HCM 6th Edition	NB Left	0.615	9.7	A
3	Madison Ave (NS) at Newton Azrak St (EW)	Two-way stop	HCM 6th Edition	EB Left	0.273	16.5	C
4	I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	SB Left	0.713	15.7	B
5	I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	EB Left	1.151	18.5	B
6	Monroe Ave (NS) at Newton Azrak (EW)	Two-way stop	HCM 6th Edition	WB Thru	0.068	9.7	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: Madison Ave (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	54	301	573	460	187	69	180	1044	52	373	332	275
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	8	49	0	8	0	0	0	4	52	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]	58	309	622	460	195	69	180	1044	56	425	332	275
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
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]	15	78	158	117	49	17	46	264	14	108	84	70
Total Analysis Volume [veh/h]	59	313	630	466	198	70	182	1058	57	431	336	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	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
Split [s]	14	37	0	27	50	0	23	31	0	25	33	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	80	80	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	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	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	2.00
g_i, Effective Green Time [s]	5	20	20	20	14	28	28	7	18	18	13	24	24
g / C, Green / Cycle	0.06	0.25	0.25	0.25	0.17	0.35	0.35	0.09	0.22	0.22	0.16	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.20	0.20	0.13	0.07	0.08	0.05	0.16	0.16	0.12	0.07	0.18
s, saturation flow rate [veh/h]	3459	1870	1589	1589	3459	1870	1706	3459	5094	1808	3459	5094	1589
c, Capacity [veh/h]	222	460	391	391	597	662	604	298	1122	398	559	1506	470
d1, Uniform Delay [s]	35.64	27.33	28.37	28.37	31.65	18.03	18.04	35.27	29.00	29.02	32.13	21.24	24.07
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	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	1.00
d2, Incremental Delay [s]	0.63	1.78	3.96	3.96	2.27	0.16	0.17	2.04	0.94	2.66	2.30	0.07	1.20
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	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	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	1.00

Lane Group Results

X, volume / capacity	0.27	0.68	0.81	0.81	0.78	0.21	0.21	0.61	0.73	0.74	0.77	0.22	0.59
d, Delay for Lane Group [s/veh]	36.27	29.11	32.34	32.34	33.93	18.19	18.21	37.30	29.95	31.68	34.43	21.32	25.27
Lane Group LOS	D	C	C	C	C	B	B	D	C	C	C	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.56	5.43	5.87	5.87	4.35	1.76	1.62	1.75	4.81	5.33	4.05	1.54	4.47
50th-Percentile Queue Length [ft/ln]	13.89	135.7	146.6	146.6	108.83	43.94	40.38	43.83	120.16	133.23	101.15	38.45	111.70
95th-Percentile Queue Length [veh/ln]	1.00	9.25	9.84	9.84	7.77	3.16	2.91	3.16	8.40	9.12	7.28	2.77	7.93
95th-Percentile Queue Length [ft/ln]	25.01	231.3	246.0	246.0	194.37	79.10	72.68	78.90	210.04	227.88	182.07	69.21	198.37

Movement, Approach, & Intersection Results

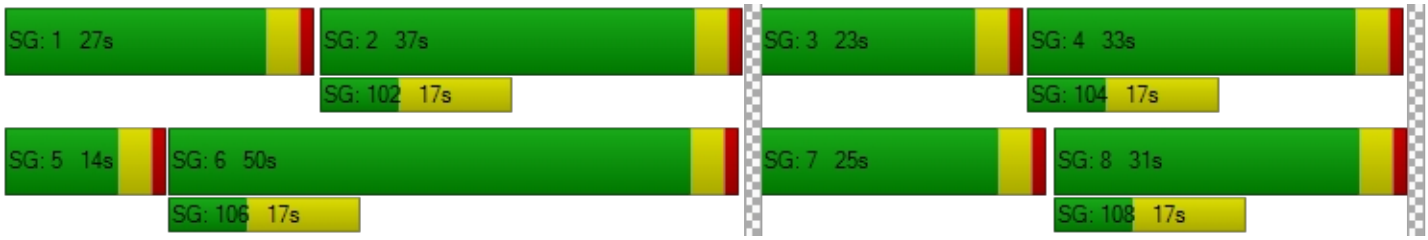
d_M, Delay for Movement [s/veh]	36.27	29.11	32.34	33.93	18.20	18.21	37.30	30.33	31.68	34.43	21.32	25.27
Movement LOS	D	C	C	C	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	31.56			28.19			31.37			27.77		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.92											
Intersection LOS	C											
Intersection V/C	0.775											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.945	2.712	3.054	3.292
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]	550	767	450	483
d_b, Bicycle Delay [s]	31.54	22.82	36.04	34.50
l_b,int, Bicycle LOS Score for Intersection	2.386	2.165	2.095	2.135
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 2: Madison Ave (NS) at Guava St (EW)

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.615

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	8	225	0	8	57	50	219	3	10	0	3	9
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	42	0	20	44	0	0	4	0	0	4	19
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]	8	267	0	28	101	50	219	7	10	0	7	28
Peak Hour Factor	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630
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	87	0	9	33	16	72	2	3	0	2	9
Total Analysis Volume [veh/h]	10	350	0	37	132	66	287	9	13	0	9	37
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	30	0	120	120	0	120	120	0	120	120	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
Split [s]	11	0	0	11	34	0	54	64	0	11	21	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

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	R	L	C	R	L	C	R
C, Cycle Length [s]	42	42	42	42	42	42	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]	4.00	0.00	0.00	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	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	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]	1	0	0	11	6	6	16	18	18	0	3	3
g / C, Green / Cycle	0.02	0.00	0.00	0.27	0.15	0.15	0.38	0.44	0.44	0.00	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.01	0.09	0.09	0.04	0.07	0.04	0.28	0.00	0.01	0.00	0.00	0.02
s, saturation flow rate [veh/h]	1781	1870	1870	1031	1870	1589	1031	1870	1589	1031	1870	1589
c, Capacity [veh/h]	32	0	0	399	283	241	505	830	706	174	129	110
d1, Uniform Delay [s]	20.07	0.00	0.00	13.13	16.05	15.56	13.20	6.43	6.45	0.00	18.04	18.38
k, delay calibration	0.11	0.50	0.50	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]	5.24	0.00	0.00	0.10	1.19	0.61	1.01	0.01	0.01	0.00	0.23	1.79
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	0.31	10000.0	10000.0	0.09	0.47	0.27	0.57	0.01	0.02	0.00	0.07	0.34
d, Delay for Lane Group [s/veh]	25.32	0.00	0.00	13.23	17.24	16.17	14.21	6.44	6.46	0.00	18.26	20.17
Lane Group LOS	C	F	F	B	B	B	B	A	A	A	B	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.13	0.00	0.00	0.25	1.07	0.52	2.10	0.03	0.05	0.00	0.08	0.35
50th-Percentile Queue Length [ft/ln]	3.30	0.00	0.00	6.16	26.85	12.90	52.50	0.82	1.20	0.00	1.98	8.80
95th-Percentile Queue Length [veh/ln]	0.24	0.00	0.00	0.44	1.93	0.93	3.78	0.06	0.09	0.00	0.14	0.63
95th-Percentile Queue Length [ft/ln]	5.94	0.00	0.00	11.08	48.33	23.22	94.49	1.48	2.16	0.00	3.56	15.84

Movement, Approach, & Intersection Results

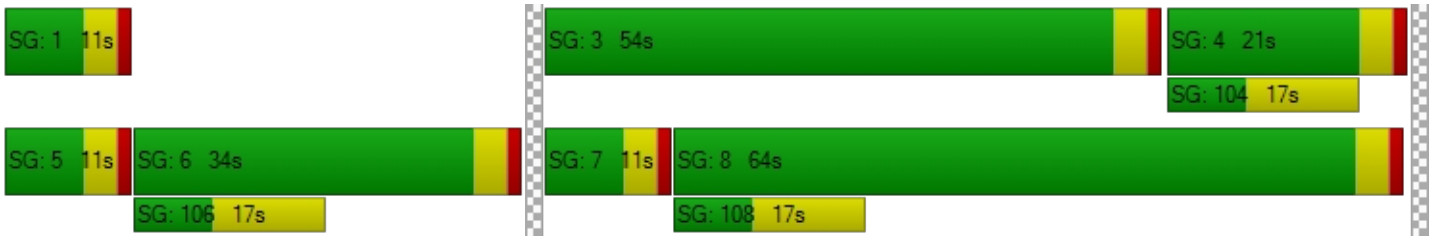
d_M, Delay for Movement [s/veh]	25.32	0.00	0.00	13.23	17.24	16.17	14.21	6.44	6.46	0.00	18.26	20.17
Movement LOS	C	A	A	B	B	B	B	A	A	A	B	C
d_A, Approach Delay [s/veh]	0.70			16.31			13.66			19.80		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	9.70											
Intersection LOS	A											
Intersection V/C	0.615											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.268	3.258	2.241	2.220
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	500	1000	283
d_b, Bicycle Delay [s]	60.00	33.75	15.00	44.20
l_b,int, Bicycle LOS Score for Intersection	1.857	1.947	2.069	1.636
Bicycle LOS	A	A	B	A

Sequence

Ring 1	1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Madison Ave (NS) at Newton Azrak St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.273

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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	131	0	8	41	1	71	0	5	0	0	10
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	12	44	0	0	0	0	0	11	0	42
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	131	12	52	41	1	71	0	5	11	0	52
Peak Hour Factor	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070
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	54	5	21	17	0	29	0	2	5	0	21
Total Analysis Volume [veh/h]	0	216	20	86	68	2	117	0	8	18	0	86
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.06	0.00	0.00	0.27	0.00	0.01	0.04	0.00	0.11
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	7.89	0.00	0.00	16.51	16.05	11.74	13.39	13.66	10.26
Movement LOS	A	A	A	A	A	A	C	C	B	B	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.12	0.12	0.12	1.14	1.14	1.14	0.50	0.50	0.50
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	3.05	3.05	3.05	28.44	28.44	28.44	12.49	12.49	12.49
d_A, Approach Delay [s/veh]	0.00			4.35			16.20			10.80		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	6.16											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th 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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	857	0	185	0	1813	306	0	956	75
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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	24	0	34	15	0	28	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	0	0	857	0	209	0	1847	321	0	984	75
Peak Hour Factor	0.9280	0.9280	0.9280	0.9790	0.9280	0.9790	0.9280	0.9790	0.9790	0.9280	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	219	0	53	0	472	0	0	251	0
Total Analysis Volume [veh/h]	0	0	0	875	0	213	0	1887	0	0	1005	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	1	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	120	0	0	0	120	0	0	120	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	71	0	0	0	49	0	0	49	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	10	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		88	88	88	88	88	88	88
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	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
g_i, Effective Green Time [s]		25	25	25	55	55	55	55
g / C, Green / Cycle		0.29	0.29	0.29	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate		0.25	0.25	0.13	0.37	0.00	0.20	0.00
s, saturation flow rate [veh/h]		1781	1781	1589	5094	1589	5094	1589
c, Capacity [veh/h]		516	516	460	3157	985	3157	985
d1, Uniform Delay [s]		29.52	29.52	25.72	10.13	0.00	7.94	0.00
k, delay calibration		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
d2, Incremental Delay [s]		3.99	3.99	0.73	0.18	0.00	0.06	0.00
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		0.85	0.85	0.46	0.60	0.00	0.32	0.00
d, Delay for Lane Group [s/veh]		33.51	33.51	26.44	10.31	0.00	8.00	0.00
Lane Group LOS		C	C	C	B	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		8.98	8.98	3.66	6.46	0.00	2.69	0.00
50th-Percentile Queue Length [ft/ln]		224.60	224.60	91.51	161.59	0.00	67.36	0.00
95th-Percentile Queue Length [veh/ln]		13.90	13.90	6.59	10.63	0.00	4.85	0.00
95th-Percentile Queue Length [ft/ln]		347.49	347.49	164.72	265.82	0.00	121.24	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	33.51	0.00	26.44	0.00	10.31	0.00	0.00	8.00	0.00
Movement LOS				C		C		B	A		A	A
d_A, Approach Delay [s/veh]	0.00			32.13			10.31			8.00		
Approach LOS	A			C			B			A		
d_I, Intersection Delay [s/veh]	15.69											
Intersection LOS	B											
Intersection V/C	0.713											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	1.437	2.410	3.283	3.198
Crosswalk LOS	A	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]	0	0	750	750
d_b, Bicycle Delay [s]	60.00	60.00	23.44	23.44
l_b,int, Bicycle LOS Score for Intersection	4.132	5.928	2.597	2.112
Bicycle LOS	D	F	B	B

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.151

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	180	3	49	0	0	0	560	2113	0	0	858	1112
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	0	0	0	0	0	23	11	0	0	12	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]	196	3	49	0	0	0	583	2124	0	0	870	1112
Peak Hour Factor	0.9570	0.9570	0.9570	0.9250	0.9250	0.9250	0.9570	0.9570	0.9250	0.9250	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	51	1	0	0	0	0	152	555	0	0	227	0
Total Analysis Volume [veh/h]	205	3	0	0	0	0	609	2219	0	0	909	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	0	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
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
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

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	R
C, Cycle Length [s]	138	138	138		138	138	138	138
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	0.00		2.00	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
g_i, Effective Green Time [s]	10	10	10		120	120	120	120
g / C, Green / Cycle	0.08	0.08	0.08		0.87	0.87	0.87	0.87
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.00		0.99	0.44	0.18	0.00
s, saturation flow rate [veh/h]	1781	1783	1589		614	5094	5094	1589
c, Capacity [veh/h]	135	135	121		556	4413	4413	1377
d1, Uniform Delay [s]	62.81	62.81	0.00		17.69	2.19	1.51	0.00
k, delay calibration	0.11	0.11	0.11		0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.84	8.81	0.00		66.82	0.09	0.02	0.00
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	0.77	0.77	0.00		1.10	0.50	0.21	0.00
d, Delay for Lane Group [s/veh]	71.65	71.62	0.00		84.51	2.28	1.53	0.00
Lane Group LOS	E	E	A		F	A	A	A
Critical Lane Group	Yes	No	No		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	3.94	3.94	0.00		30.10	2.98	0.84	0.00
50th-Percentile Queue Length [ft/ln]	98.46	98.53	0.00		752.45	74.40	20.91	0.00
95th-Percentile Queue Length [veh/ln]	7.09	7.09	0.00		42.46	5.36	1.51	0.00
95th-Percentile Queue Length [ft/ln]	177.24	177.36	0.00		1061.62	133.92	37.64	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.64	71.62	0.00	0.00	0.00	0.00	84.51	2.28	0.00	0.00	1.53	0.00
Movement LOS	E	E	A				F	A			A	A
d_A, Approach Delay [s/veh]	71.64			0.00			19.99			1.53		
Approach LOS	E			A			B			A		
d_I, Intersection Delay [s/veh]	18.46											
Intersection LOS	B											
Intersection V/C	1.151											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.022	2.900	3.220	3.043
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]	283	0	1583	1583
d_b, Bicycle Delay [s]	44.20	60.00	2.60	2.60
l_b,int, Bicycle LOS Score for Intersection	1.903	4.132	3.115	2.060
Bicycle LOS	A	D	C	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Monroe Ave (NS) at Newton Azrak (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.068

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth 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
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	24	0	0	0	56	0	0	53	23
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	24	0	0	0	56	0	0	53	23
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	6	0	0	0	15	0	0	14	6
Total Analysis Volume [veh/h]	0	0	0	25	0	0	0	59	0	0	56	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.02	0.00	0.00	0.00	0.07	0.00	0.00	0.07	0.02
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	7.25	0.00	0.00	9.72	9.68	8.65	9.64	9.74	8.72
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	0.05	0.05	0.05	0.23	0.23	0.23	0.29	0.29	0.29
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.13	1.13	1.13	5.74	5.74	5.74	7.37	7.37	7.37
d_A, Approach Delay [s/veh]	2.41			7.25			9.68			9.43		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	9.19											
Intersection LOS	A											

PROJECT COMPLETION (YEAR 2021)

Hotel Murrieta

Vistro File: C:\...\AME.vistro
Report File: C:\...\AMPC.pdf

Scenario 3 Project Completion (Year 2021) AM Peak Hour
8/30/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	NB Left	0.578	17.6	B
2	Madison Ave (NS) at Guava St (EW)	Signalized	HCM 6th Edition	NB Left	0.449	8.0	A
3	Madison Ave (NS) at Newton Azrak St (EW)	Two-way stop	HCM 6th Edition	EB Left	0.003	10.7	B
4	I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	SB Left	0.761	9.6	A
5	I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	NB Left	0.503	4.8	A
6	Monroe Ave (NS) at Newton Azrak (EW)	Two-way stop	HCM 6th Edition	EB Thru	0.063	9.6	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: Madison Ave (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.578

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	24	85	172	224	159	79	74	424	32	383	614	194
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	5	32	0	7	0	0	0	4	46	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]	28	93	211	233	172	82	77	441	37	444	639	202
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
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	27	60	66	49	23	22	126	11	127	182	58
Total Analysis Volume [veh/h]	32	106	241	266	196	94	88	503	42	506	729	230
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	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
Split [s]	11	25	0	25	39	0	26	26	0	44	44	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	47	47	47	47	47	47	47	47	47	47	47	47	47
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	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	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	2.00
g_i, Effective Green Time [s]	2	7	7	7	7	11	11	5	7	7	10	12	12
g / C, Green / Cycle	0.05	0.15	0.15	0.15	0.15	0.24	0.24	0.10	0.15	0.15	0.21	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.01	0.06	0.08	0.08	0.08	0.08	0.08	0.03	0.08	0.08	0.15	0.14	0.14
s, saturation flow rate [veh/h]	3459	1870	1589	1589	3459	1870	1670	3459	5094	1778	3459	5094	1589
c, Capacity [veh/h]	181	278	236	236	504	452	404	358	768	268	739	1329	415
d1, Uniform Delay [s]	21.24	18.01	18.38	18.38	18.53	14.66	14.69	19.32	18.34	18.38	16.97	14.94	14.96
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	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	1.00
d2, Incremental Delay [s]	0.46	0.86	1.71	1.71	0.86	0.43	0.50	0.35	0.55	1.66	1.13	0.35	1.16
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	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	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	1.00

Lane Group Results

X, volume / capacity	0.18	0.38	0.51	0.51	0.53	0.34	0.34	0.25	0.52	0.53	0.68	0.55	0.55
d, Delay for Lane Group [s/veh]	21.70	18.87	20.09	20.09	19.39	15.09	15.19	19.67	18.90	20.03	18.10	15.29	16.13
Lane Group LOS	C	B	C	C	B	B	B	B	B	C	B	B	B
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.16	0.98	1.18	1.18	1.24	1.20	1.10	0.41	1.22	1.39	2.29	1.95	1.94
50th-Percentile Queue Length [ft/ln]	4.09	24.59	29.40	29.40	31.04	30.03	27.56	10.32	30.54	34.81	57.22	48.70	48.48
95th-Percentile Queue Length [veh/ln]	0.29	1.77	2.12	2.12	2.23	2.16	1.98	0.74	2.20	2.51	4.12	3.51	3.49
95th-Percentile Queue Length [ft/ln]	7.37	44.26	52.92	52.92	55.87	54.06	49.61	18.57	54.98	62.65	102.99	87.65	87.27

Movement, Approach, & Intersection Results

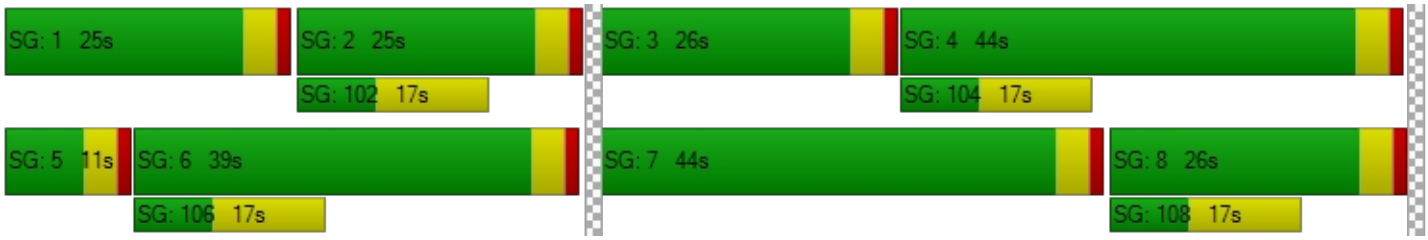
d_M, Delay for Movement [s/veh]	21.70	18.87	20.09	19.39	15.11	15.19	19.67	19.13	20.03	18.10	15.29	16.13
Movement LOS	C	B	C	B	B	B	B	B	C	B	B	B
d_A, Approach Delay [s/veh]	19.89			17.17			19.26			16.39		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.57											
Intersection LOS	B											
Intersection V/C	0.578											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.876	2.626	3.024	3.222
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]	350	583	367	667
d_b, Bicycle Delay [s]	40.84	30.10	40.02	26.67
l_b,int, Bicycle LOS Score for Intersection	1.872	2.018	1.821	2.365
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 2: Madison Ave (NS) at Guava St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.449

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	7	58	0	5	148	86	39	0	7	0	2	6
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	27	0	18	39	0	0	4	0	0	3	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	87	0	23	193	89	41	4	7	0	5	19
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
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]	2	25	0	7	56	26	12	1	2	0	1	6
Total Analysis Volume [veh/h]	8	101	0	27	224	103	48	5	8	0	6	22
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	30	0	120	120	0	120	120	0	120	120	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
Split [s]	11	0	0	13	69	0	19	29	0	11	21	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

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	R	L	C	R	L	C	R
C, Cycle Length [s]	26	26	26	26	26	26	26	26	26	26	26	26
L, Total Lost Time per Cycle [s]	4.00	0.00	0.00	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	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	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]	0	0	0	11	6	6	2	3	3	0	1	1
g / C, Green / Cycle	0.02	0.00	0.00	0.41	0.24	0.24	0.08	0.13	0.13	0.00	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.00	0.03	0.03	0.02	0.12	0.06	0.04	0.00	0.01	0.00	0.00	0.01
s, saturation flow rate [veh/h]	1781	1870	1870	1293	1870	1589	1293	1870	1589	1293	1870	1589
c, Capacity [veh/h]	28	0	0	718	456	388	288	248	211	274	96	81
d1, Uniform Delay [s]	12.82	0.00	0.00	5.80	8.55	8.05	13.13	9.94	9.97	0.00	11.90	12.03
k, delay calibration	0.11	0.50	0.50	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]	5.26	0.00	0.00	0.02	0.82	0.36	0.27	0.03	0.07	0.00	0.27	1.76
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	0.28	10000.0	10000.0	0.04	0.49	0.27	0.17	0.02	0.04	0.00	0.06	0.27
d, Delay for Lane Group [s/veh]	18.07	0.00	0.00	5.82	9.37	8.41	13.40	9.97	10.04	0.00	12.17	13.79
Lane Group LOS	B	F	F	A	A	A	B	A	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.06	0.77	0.33	0.24	0.02	0.03	0.00	0.03	0.13
50th-Percentile Queue Length [ft/ln]	1.90	0.00	0.00	1.42	19.32	8.21	5.94	0.49	0.80	0.00	0.79	3.25
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.10	1.39	0.59	0.43	0.04	0.06	0.00	0.06	0.23
95th-Percentile Queue Length [ft/ln]	3.42	0.00	0.00	2.55	34.77	14.78	10.68	0.88	1.44	0.00	1.42	5.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.07	0.00	0.00	5.82	9.37	8.41	13.40	9.97	10.04	0.00	12.17	13.79
Movement LOS	B	A	A	A	A	A	B	A	B	A	B	B
d_A, Approach Delay [s/veh]	1.33			8.82			12.68			13.44		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	8.00											
Intersection LOS	A											
Intersection V/C	0.449											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.228	2.871	2.188	2.198
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1083	417	283
d_b, Bicycle Delay [s]	60.00	12.60	37.60	44.20
l_b,int, Bicycle LOS Score for Intersection	1.650	2.144	1.660	1.606
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Madison Ave (NS) at Newton Azrak St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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	33	0	13	88	22	2	0	1	0	0	8
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.00	1.04	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.04	1.00	1.04
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	39	0	0	0	0	0	8	0	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
Total Hourly Volume [veh/h]	0	34	11	53	92	22	2	0	1	8	0	35
Peak Hour Factor	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280
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	9	3	14	25	6	1	0	0	2	0	9
Total Analysis Volume [veh/h]	0	37	12	57	99	24	2	0	1	9	0	38
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.01	0.00	0.04
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	7.40	0.00	0.00	10.65	10.94	8.84	10.64	11.17	8.71
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.11	0.11	0.11	0.01	0.01	0.01	0.16	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	2.64	2.64	2.64	0.32	0.32	0.32	3.99	3.99	3.99
d_A, Approach Delay [s/veh]	0.00			2.34			10.05			9.08		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	3.15											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 4: I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.761

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	871	0	348	0	570	212	0	949	68
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.04	1.00	1.04	1.04
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	21	0	22	10	0	25	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	0	0	906	0	383	0	615	230	0	1012	71
Peak Hour Factor	0.9280	0.9280	0.9280	0.8870	0.9280	0.8870	0.9280	0.8870	0.8870	0.9280	0.8870	0.8870
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	255	0	108	0	173	0	0	285	0
Total Analysis Volume [veh/h]	0	0	0	1021	0	432	0	693	0	0	1141	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	1	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	120	0	0	0	120	0	0	120	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	67	0	0	0	53	0	0	53	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	10	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		36	36	36	36	36	36	36
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	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
g_i, Effective Green Time [s]		15	15	15	13	13	13	13
g / C, Green / Cycle		0.42	0.42	0.42	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate		0.29	0.29	0.27	0.14	0.00	0.22	0.00
s, saturation flow rate [veh/h]		1781	1781	1589	5094	1589	5094	1589
c, Capacity [veh/h]		741	741	661	1861	581	1861	581
d1, Uniform Delay [s]		8.75	8.75	8.57	8.53	0.00	9.50	0.00
k, delay calibration		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
d2, Incremental Delay [s]		1.15	1.15	1.10	0.12	0.00	0.33	0.00
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		0.69	0.69	0.65	0.37	0.00	0.61	0.00
d, Delay for Lane Group [s/veh]		9.90	9.90	9.67	8.65	0.00	9.83	0.00
Lane Group LOS		A	A	A	A	A	A	A
Critical Lane Group		Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		2.41	2.41	2.00	0.97	0.00	1.79	0.00
50th-Percentile Queue Length [ft/ln]		60.22	60.22	50.06	24.23	0.00	44.86	0.00
95th-Percentile Queue Length [veh/ln]		4.34	4.34	3.60	1.74	0.00	3.23	0.00
95th-Percentile Queue Length [ft/ln]		108.40	108.40	90.10	43.61	0.00	80.75	0.00

Movement, Approach, & Intersection Results

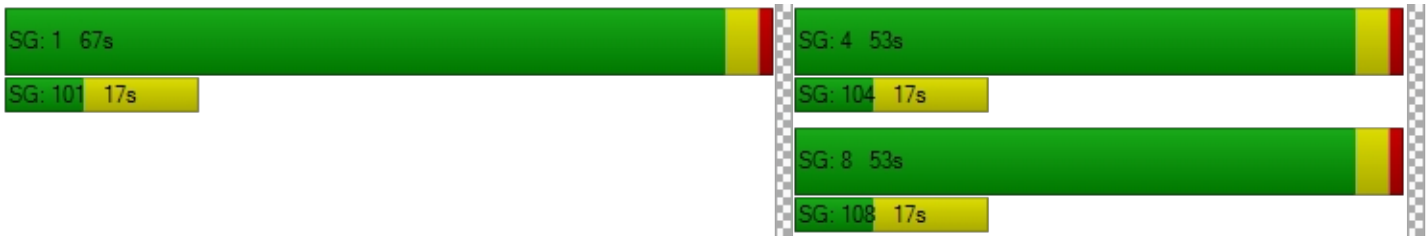
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	9.90	0.00	9.67	0.00	8.65	0.00	0.00	9.83	0.00
Movement LOS				A		A		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			9.83			8.65			9.83		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	9.58											
Intersection LOS	A											
Intersection V/C	0.761											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	1.437	2.499	3.201	3.087
Crosswalk LOS	A	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]	0	0	817	817
d_b, Bicycle Delay [s]	60.00	60.00	21.00	21.00
l_b,int, Bicycle LOS Score for Intersection	4.132	6.530	1.941	2.187
Bicycle LOS	D	F	A	B

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	4.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	192	2	96	0	0	0	127	1314	0	0	819	698
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.00	1.00	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	0	0	0	0	14	8	0	0	11	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]	214	2	100	0	0	0	146	1375	0	0	863	726
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	58	1	0	0	0	0	39	372	0	0	233	0
Total Analysis Volume [veh/h]	231	2	0	0	0	0	158	1486	0	0	933	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	25	0	0	0	0	0	95	0	0	95	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
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
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

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	R
C, Cycle Length [s]	41	41	41		41	41	41	41
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	0.00		2.00	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
g_i, Effective Green Time [s]	7	7	7		27	27	27	27
g / C, Green / Cycle	0.16	0.16	0.16		0.65	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.07	0.07	0.00		0.26	0.29	0.18	0.00
s, saturation flow rate [veh/h]	1781	1782	1589		600	5094	5094	1589
c, Capacity [veh/h]	281	281	251		480	3302	3302	1030
d1, Uniform Delay [s]	15.65	15.65	0.00		6.76	3.60	3.12	0.00
k, delay calibration	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
d2, Incremental Delay [s]	0.98	0.98	0.00		0.40	0.10	0.05	0.00
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	0.41	0.41	0.00		0.33	0.45	0.28	0.00
d, Delay for Lane Group [s/veh]	16.63	16.63	0.00		7.16	3.70	3.17	0.00
Lane Group LOS	B	B	A		A	A	A	A
Critical Lane Group	Yes	No	No		No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.92	0.92	0.00		0.64	0.83	0.45	0.00
50th-Percentile Queue Length [ft/ln]	23.03	23.05	0.00		16.06	20.76	11.26	0.00
95th-Percentile Queue Length [veh/ln]	1.66	1.66	0.00		1.16	1.49	0.81	0.00
95th-Percentile Queue Length [ft/ln]	41.46	41.48	0.00		28.91	37.37	20.26	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.63	16.63	0.00	0.00	0.00	0.00	7.16	3.70	0.00	0.00	3.17	0.00
Movement LOS	B	B	A				A	A			A	A
d_A, Approach Delay [s/veh]	16.63			0.00			4.03			3.17		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	4.79											
Intersection LOS	A											
Intersection V/C	0.503											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.030	1.818	3.081	2.945
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	350	0	1517	1517
d_b, Bicycle Delay [s]	40.84	60.00	3.50	3.50
l_b,int, Bicycle LOS Score for Intersection	1.944	4.132	2.464	2.073
Bicycle LOS	A	D	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Monroe Ave (NS) at Newton Azrak (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.063

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
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	21	0	0	0	50	0	0	35	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
Total Hourly Volume [veh/h]	0	0	0	21	0	0	0	50	0	0	35	15
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	6	0	0	0	13	0	0	9	4
Total Analysis Volume [veh/h]	0	0	0	22	0	0	0	53	0	0	37	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.01	0.00	0.00	0.00	0.06	0.00	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	7.25	0.00	0.00	9.44	9.60	8.61	9.40	9.56	8.57
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	0.04	0.04	0.04	0.20	0.20	0.20	0.19	0.19	0.19
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.98	0.98	0.98	5.06	5.06	5.06	4.69	4.69	4.69
d_A, Approach Delay [s/veh]	2.41			7.25			9.60			9.26		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	9.05											
Intersection LOS	A											

Hotel Murrieta

Vistro File: C:\...\PME.vistro
Report File: C:\...\PMPC.pdf

Scenario 3 Project Completion (Year 2021) PM Peak Hour
8/30/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	EB Left	0.790	32.0	C
2	Madison Ave (NS) at Guava St (EW)	Signalized	HCM 6th Edition	NB Left	0.630	9.9	A
3	Madison Ave (NS) at Newton Azrak St (EW)	Two-way stop	HCM 6th Edition	EB Left	0.278	16.8	C
4	I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	SB Left	0.716	19.5	B
5	I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	EB Left	1.232	23.4	C
6	Monroe Ave (NS) at Newton Azrak (EW)	Two-way stop	HCM 6th Edition	WB Thru	0.068	9.7	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: Madison Ave (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.790

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	54	301	573	460	187	69	180	1044	52	373	332	275
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	8	49	0	8	0	0	0	4	52	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]	60	321	645	478	202	72	187	1086	58	440	345	286
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
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]	15	81	163	121	51	18	47	275	15	111	87	72
Total Analysis Volume [veh/h]	61	325	653	484	205	73	189	1100	59	446	350	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	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
Split [s]	14	37	0	27	50	0	23	31	0	25	33	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	86	86	86	86	86	86	86	86	86	86	86	86	86
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	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	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	2.00
g_i, Effective Green Time [s]	5	21	21	21	15	31	31	7	19	19	14	26	26
g / C, Green / Cycle	0.06	0.25	0.25	0.25	0.18	0.36	0.36	0.08	0.22	0.22	0.16	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.21	0.21	0.14	0.08	0.08	0.05	0.17	0.17	0.13	0.07	0.18
s, saturation flow rate [veh/h]	3459	1870	1589	1589	3459	1870	1705	3459	5094	1808	3459	5094	1589
c, Capacity [veh/h]	217	468	398	398	607	679	619	284	1141	405	566	1556	486
d1, Uniform Delay [s]	38.42	29.21	30.37	30.37	33.95	18.88	18.88	38.28	31.07	31.09	34.49	22.24	25.34
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	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	1.00
d2, Incremental Delay [s]	0.70	1.86	4.23	4.23	2.45	0.16	0.17	2.67	1.01	2.83	2.49	0.07	1.18
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	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	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	1.00

Lane Group Results

X, volume / capacity	0.28	0.69	0.82	0.82	0.80	0.21	0.21	0.67	0.75	0.75	0.79	0.22	0.60
d, Delay for Lane Group [s/veh]	39.12	31.06	34.60	34.60	36.40	19.03	19.05	40.95	32.08	33.92	36.98	22.32	26.52
Lane Group LOS	D	C	C	C	D	B	B	D	C	C	D	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.62	6.13	6.62	6.62	4.92	1.96	1.80	2.00	5.44	6.02	4.56	1.72	5.00
50th-Percentile Queue Length [ft/ln]	15.61	153.2	165.4	165.4	123.01	49.05	44.98	50.05	136.12	150.60	113.92	43.03	125.08
95th-Percentile Queue Length [veh/ln]	1.12	10.19	10.84	10.84	8.56	3.53	3.24	3.60	9.27	10.05	8.06	3.10	8.67
95th-Percentile Queue Length [ft/ln]	28.10	254.7	270.9	270.9	213.95	88.29	80.97	90.09	231.79	251.24	201.44	77.45	216.78

Movement, Approach, & Intersection Results

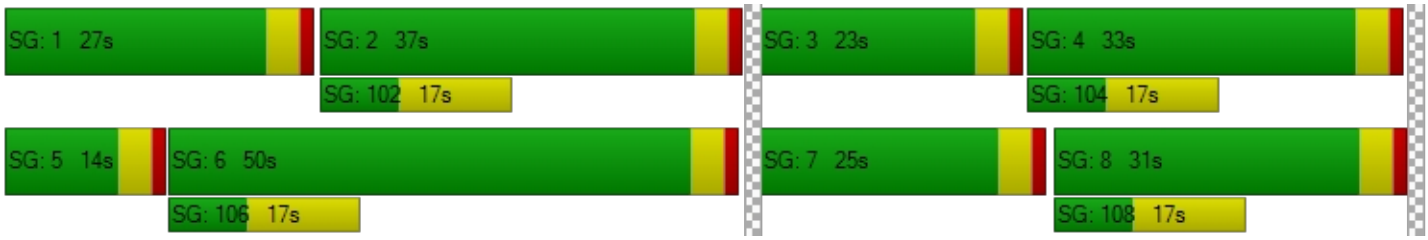
d_M, Delay for Movement [s/veh]	39.12	31.06	34.60	36.40	19.04	19.05	40.95	32.49	33.92	36.98	22.32	26.52
Movement LOS	D	C	C	D	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	33.76			30.07			33.74			29.46		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	31.99											
Intersection LOS	C											
Intersection V/C	0.790											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.952	2.721	3.061	3.304
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]	550	767	450	483
d_b, Bicycle Delay [s]	31.54	22.82	36.04	34.50
l_b,int, Bicycle LOS Score for Intersection	2.417	2.188	2.116	2.157
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 2: Madison Ave (NS) at Guava St (EW)

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	8	225	0	8	57	50	219	3	10	0	3	9
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	42	0	20	44	0	0	4	0	0	4	19
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]	8	276	0	28	103	52	228	7	10	0	7	28
Peak Hour Factor	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630
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	90	0	9	34	17	75	2	3	0	2	9
Total Analysis Volume [veh/h]	10	362	0	37	135	68	299	9	13	0	9	37
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	30	0	120	120	0	120	120	0	120	120	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
Split [s]	19	0	0	11	26	0	54	64	0	11	21	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

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	R	L	C	R	L	C	R
C, Cycle Length [s]	43	43	43	43	43	43	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	4.00	0.00	0.00	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	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	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]	1	0	0	11	6	6	17	20	20	0	3	3
g / C, Green / Cycle	0.02	0.00	0.00	0.26	0.15	0.15	0.39	0.46	0.46	0.00	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.10	0.04	0.07	0.04	0.29	0.00	0.01	0.00	0.00	0.02
s, saturation flow rate [veh/h]	1781	1870	1870	1019	1870	1589	1019	1870	1589	1019	1870	1589
c, Capacity [veh/h]	32	0	0	387	279	237	512	856	728	169	128	109
d1, Uniform Delay [s]	20.68	0.00	0.00	13.66	16.65	16.14	13.27	6.30	6.32	0.00	18.60	18.95
k, delay calibration	0.11	0.50	0.50	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]	5.27	0.00	0.00	0.11	1.31	0.66	1.06	0.00	0.01	0.00	0.23	1.83
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	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	0.31	10000.0	10000.0	0.10	0.48	0.29	0.58	0.01	0.02	0.00	0.07	0.34
d, Delay for Lane Group [s/veh]	25.95	0.00	0.00	13.76	17.96	16.80	14.32	6.31	6.33	0.00	18.83	20.78
Lane Group LOS	C	F	F	B	B	B	B	A	A	A	B	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.26	1.15	0.56	2.26	0.03	0.05	0.00	0.08	0.37
50th-Percentile Queue Length [ft/ln]	3.39	0.00	0.00	6.48	28.81	13.92	56.41	0.83	1.21	0.00	2.05	9.13
95th-Percentile Queue Length [veh/ln]	0.24	0.00	0.00	0.47	2.07	1.00	4.06	0.06	0.09	0.00	0.15	0.66
95th-Percentile Queue Length [ft/ln]	6.11	0.00	0.00	11.66	51.86	25.05	101.54	1.49	2.18	0.00	3.70	16.43

Movement, Approach, & Intersection Results

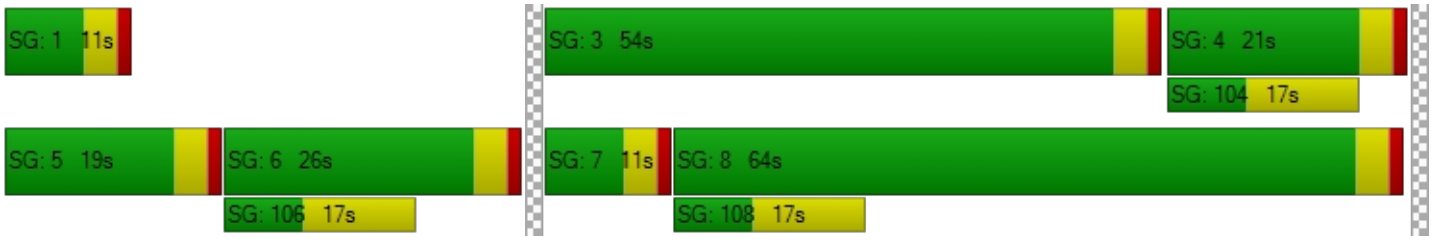
d_M, Delay for Movement [s/veh]	25.95	0.00	0.00	13.76	17.96	16.80	14.32	6.31	6.33	0.00	18.83	20.78
Movement LOS	C	A	A	B	B	B	B	A	A	A	B	C
d_A, Approach Delay [s/veh]	0.70			16.98			13.78			20.40		
Approach LOS	A			B			B			C		
d_I, Intersection Delay [s/veh]	9.90											
Intersection LOS	A											
Intersection V/C	0.630											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.272	3.279	2.244	2.220
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	367	1000	283
d_b, Bicycle Delay [s]	60.00	40.02	15.00	44.20
l_b,int, Bicycle LOS Score for Intersection	1.867	1.956	2.089	1.636
Bicycle LOS	A	A	B	A

Sequence

Ring 1	1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Madison Ave (NS) at Newton Azrak St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.278

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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	131	0	8	41	1	71	0	5	0	0	10
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.00	1.04	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.04	1.00	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	12	44	0	0	0	0	0	11	0	42
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	136	12	52	43	1	71	0	5	11	0	52
Peak Hour Factor	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070
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	56	5	21	18	0	29	0	2	5	0	21
Total Analysis Volume [veh/h]	0	224	20	86	71	2	117	0	8	18	0	86
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.07	0.00	0.00	0.28	0.00	0.01	0.04	0.00	0.11
d_M, Delay for Movement [s/veh]	7.36	0.00	0.00	7.91	0.00	0.00	16.80	16.30	11.89	13.54	13.80	10.32
Movement LOS	A	A	A	A	A	A	C	C	B	B	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.12	0.12	0.12	1.17	1.17	1.17	0.51	0.51	0.51
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	3.07	3.07	3.07	29.13	29.13	29.13	12.66	12.66	12.66
d_A, Approach Delay [s/veh]	0.00			4.28			16.49			10.88		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	6.13											
Intersection LOS	C											

Intersection Level Of Service Report

Intersection 4: I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.716

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	857	0	185	0	1813	306	0	956	75
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.04	1.00	1.04	1.04
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	24	0	34	15	0	28	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	0	0	891	0	216	0	1920	333	0	1022	78
Peak Hour Factor	0.9280	0.9280	0.9280	0.9790	0.9280	0.9790	0.9280	0.9790	0.9790	0.9280	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	228	0	55	0	490	0	0	261	0
Total Analysis Volume [veh/h]	0	0	0	910	0	221	0	1961	0	0	1044	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	1	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	120	0	0	0	120	0	0	120	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	69	0	0	0	51	0	0	51	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	10	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		113	113	113	113	113	113	113
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	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
g_i, Effective Green Time [s]		33	33	33	72	72	72	72
g / C, Green / Cycle		0.29	0.29	0.29	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate		0.26	0.26	0.14	0.38	0.00	0.20	0.00
s, saturation flow rate [veh/h]		1781	1781	1589	5094	1589	5094	1589
c, Capacity [veh/h]		517	517	461	3256	1016	3256	1016
d1, Uniform Delay [s]		38.35	38.35	33.16	12.00	0.00	9.28	0.00
k, delay calibration		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
d2, Incremental Delay [s]		5.05	5.05	0.77	0.18	0.00	0.06	0.00
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		0.88	0.88	0.48	0.60	0.00	0.32	0.00
d, Delay for Lane Group [s/veh]		43.40	43.40	33.94	12.18	0.00	9.34	0.00
Lane Group LOS		D	D	C	B	A	A	A
Critical Lane Group		Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		12.61	12.61	5.09	9.04	0.00	3.72	0.00
50th-Percentile Queue Length [ft/ln]		315.18	315.18	127.24	226.12	0.00	92.99	0.00
95th-Percentile Queue Length [veh/ln]		18.43	18.43	8.79	13.98	0.00	6.70	0.00
95th-Percentile Queue Length [ft/ln]		460.75	460.75	219.73	349.43	0.00	167.38	0.00

Movement, Approach, & Intersection Results

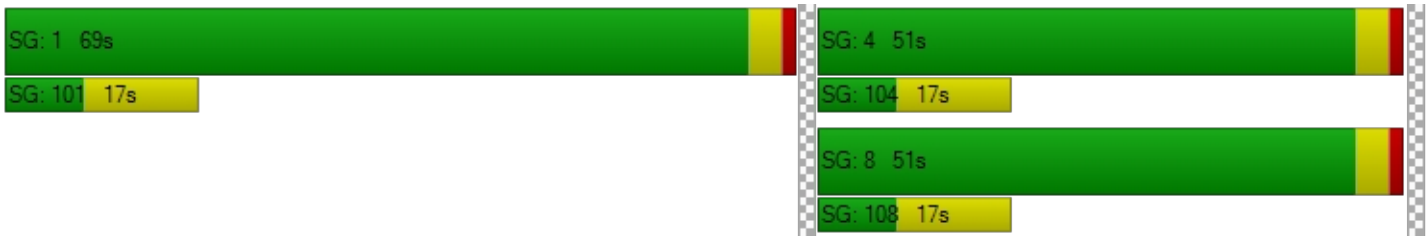
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	43.40	0.00	33.94	0.00	12.18	0.00	0.00	9.34	0.00
Movement LOS				D		C		B	A		A	A
d_A, Approach Delay [s/veh]	0.00			41.55			12.18			9.34		
Approach LOS	A			D			B			A		
d_I, Intersection Delay [s/veh]	19.50											
Intersection LOS	B											
Intersection V/C	0.716											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	1.437	2.421	3.295	3.216
Crosswalk LOS	A	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]	0	0	783	783
d_b, Bicycle Delay [s]	60.00	60.00	22.20	22.20
l_b,int, Bicycle LOS Score for Intersection	4.132	5.999	2.638	2.134
Bicycle LOS	D	F	B	B

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	23.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.232

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	180	3	49	0	0	0	560	2113	0	0	858	1112
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.00	1.00	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	0	0	0	0	0	23	11	0	0	12	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]	203	3	51	0	0	0	605	2209	0	0	904	1156
Peak Hour Factor	0.9570	0.9570	0.9570	0.9250	0.9250	0.9250	0.9570	0.9570	0.9250	0.9250	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	53	1	0	0	0	0	158	577	0	0	236	0
Total Analysis Volume [veh/h]	212	3	0	0	0	0	632	2308	0	0	945	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	0	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
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
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

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	R
C, Cycle Length [s]	139	139	139		139	139	139	139
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	0.00		2.00	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
g_i, Effective Green Time [s]	11	11	11		120	120	120	120
g / C, Green / Cycle	0.08	0.08	0.08		0.86	0.86	0.86	0.86
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.00		1.07	0.45	0.19	0.00
s, saturation flow rate [veh/h]	1781	1783	1589		593	5094	5094	1589
c, Capacity [veh/h]	139	139	124		537	4404	4404	1374
d1, Uniform Delay [s]	62.80	62.80	0.00		18.14	2.33	1.56	0.00
k, delay calibration	0.11	0.11	0.11		0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.86	8.84	0.00		97.89	0.10	0.02	0.00
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	0.77	0.77	0.00		1.18	0.52	0.21	0.00
d, Delay for Lane Group [s/veh]	71.67	71.64	0.00		116.03	2.43	1.59	0.00
Lane Group LOS	E	E	A		F	A	A	A
Critical Lane Group	Yes	No	No		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	4.08	4.08	0.00		33.74	3.31	0.91	0.00
50th-Percentile Queue Length [ft/ln]	101.94	102.01	0.00		843.57	82.81	22.74	0.00
95th-Percentile Queue Length [veh/ln]	7.34	7.34	0.00		49.75	5.96	1.64	0.00
95th-Percentile Queue Length [ft/ln]	183.49	183.61	0.00		1243.87	149.06	40.93	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.66	71.64	0.00	0.00	0.00	0.00	116.03	2.43	0.00	0.00	1.59	0.00
Movement LOS	E	E	A				F	A			A	A
d_A, Approach Delay [s/veh]	71.65			0.00			26.85			1.59		
Approach LOS	E			A			C			A		
d_I, Intersection Delay [s/veh]	23.38											
Intersection LOS	C											
Intersection V/C	1.232											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.024	2.955	3.239	3.061
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]	283	0	1583	1583
d_b, Bicycle Delay [s]	44.20	60.00	2.60	2.60
l_b,int, Bicycle LOS Score for Intersection	1.914	4.132	3.177	2.079
Bicycle LOS	A	D	C	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Monroe Ave (NS) at Newton Azrak (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.068

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
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	24	0	0	0	56	0	0	53	23
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	24	0	0	0	56	0	0	53	23
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	6	0	0	0	15	0	0	14	6
Total Analysis Volume [veh/h]	0	0	0	25	0	0	0	59	0	0	56	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.02	0.00	0.00	0.00	0.07	0.00	0.00	0.07	0.02
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	7.25	0.00	0.00	9.72	9.68	8.65	9.64	9.74	8.72
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	0.05	0.05	0.05	0.23	0.23	0.23	0.29	0.29	0.29
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.13	1.13	1.13	5.74	5.74	5.74	7.37	7.37	7.37
d_A, Approach Delay [s/veh]	2.41			7.25			9.68			9.43		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	9.19											
Intersection LOS	A											

PROJECT COMPLETION (YEAR 2021) PLUS CUMULATIVE

Hotel Murrieta

Vistro File: C:\...\AME.vistro

Scenario 4 Project Completion (Year 2021) Plus Cumulative AM Peak Hour

Report File: C:\...\AMPC+C.pdf

8/30/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	NB Left	0.618	18.9	B
2	Madison Ave (NS) at Guava St (EW)	Signalized	HCM 6th Edition	NB Left	0.471	8.3	A
3	Madison Ave (NS) at Newton Azrak St (EW)	Two-way stop	HCM 6th Edition	EB Left	0.003	10.8	B
4	I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	SB Right	0.800	12.6	B
5	I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	NB Left	0.601	6.2	A
6	Monroe Ave (NS) at Newton Azrak (EW)	Two-way stop	HCM 6th Edition	EB Thru	0.063	9.6	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: Madison Ave (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	24	85	172	224	159	79	74	424	32	383	614	194
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	5	39	50	9	11	3	177	5	55	319	19
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]	28	93	218	283	174	93	80	618	38	453	958	221
Peak Hour Factor	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770	0.8770
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	27	62	81	50	27	23	176	11	129	273	63
Total Analysis Volume [veh/h]	32	106	249	323	198	106	91	705	43	517	1092	252
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	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
Split [s]	11	23	0	27	39	0	15	30	0	40	55	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	53	53	53	53	53	53	53	53	53	53	53	53	53
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	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	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	2.00
g_i, Effective Green Time [s]	3	7	7	7	8	12	12	5	11	11	11	17	17
g / C, Green / Cycle	0.05	0.13	0.13	0.13	0.14	0.23	0.23	0.10	0.21	0.21	0.21	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.01	0.06	0.08	0.08	0.09	0.09	0.09	0.03	0.11	0.11	0.15	0.21	0.16
s, saturation flow rate [veh/h]	3459	1870	1589	1589	3459	1870	1655	3459	5094	1801	3459	5094	1589
c, Capacity [veh/h]	174	247	210	210	499	422	374	340	1082	382	723	1645	513
d1, Uniform Delay [s]	24.08	21.13	21.62	21.62	21.37	17.34	17.36	22.08	18.40	18.43	19.47	15.44	14.42
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	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	1.00
d2, Incremental Delay [s]	0.50	1.18	2.66	2.66	1.42	0.56	0.65	0.42	0.37	1.08	1.34	0.47	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	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	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	1.00

Lane Group Results

X, volume / capacity	0.18	0.43	0.59	0.59	0.65	0.38	0.38	0.27	0.51	0.52	0.72	0.66	0.49
d, Delay for Lane Group [s/veh]	24.58	22.31	24.29	24.29	22.78	17.90	18.01	22.50	18.77	19.51	20.81	15.91	15.14
Lane Group LOS	C	C	C	C	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.19	1.19	1.48	1.48	1.82	1.55	1.40	0.50	1.82	2.03	2.78	3.34	2.21
50th-Percentile Queue Length [ft/ln]	4.76	29.65	37.09	37.09	45.48	38.69	35.00	12.56	45.51	50.78	69.59	83.39	55.35
95th-Percentile Queue Length [veh/ln]	0.34	2.13	2.67	2.67	3.27	2.79	2.52	0.90	3.28	3.66	5.01	6.00	3.99
95th-Percentile Queue Length [ft/ln]	8.57	53.36	66.76	66.76	81.87	69.64	62.99	22.61	81.92	91.40	125.26	150.11	99.64

Movement, Approach, & Intersection Results

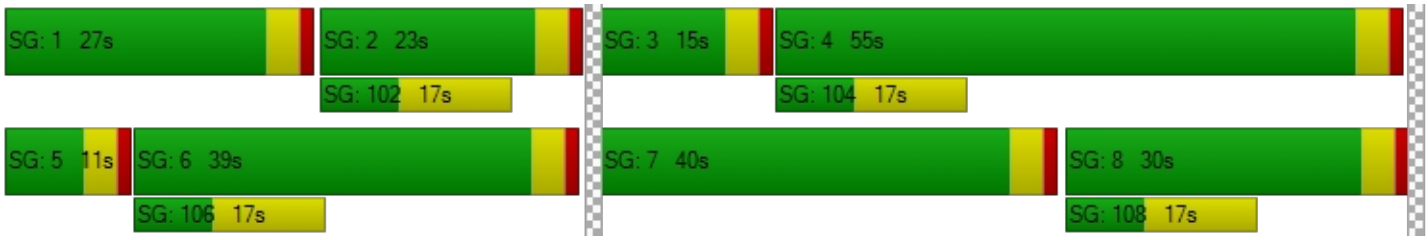
d_M, Delay for Movement [s/veh]	24.58	22.31	24.29	22.78	17.92	18.01	22.50	18.93	19.51	20.81	15.91	15.14
Movement LOS	C	C	C	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	23.77			20.44			19.35			17.16		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.90											
Intersection LOS	B											
Intersection V/C	0.618											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.879	2.641	3.087	3.286
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]	317	583	433	850
d_b, Bicycle Delay [s]	42.50	30.10	36.82	19.84
l_b,int, Bicycle LOS Score for Intersection	1.879	2.077	1.906	2.583
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 2: Madison Ave (NS) at Guava St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	7	58	0	5	148	86	39	0	7	0	2	6
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	0	18	51	0	6	4	0	0	3	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
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	88	0	23	205	89	47	4	7	0	5	19
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
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]	2	26	0	7	60	26	14	1	2	0	1	6
Total Analysis Volume [veh/h]	8	102	0	27	238	103	55	5	8	0	6	22
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	30	0	120	120	0	120	120	0	120	120	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
Split [s]	11	0	0	12	68	0	20	30	0	11	21	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

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	R	L	C	R	L	C	R
C, Cycle Length [s]	27	27	27	27	27	27	27	27	27	27	27	27
L, Total Lost Time per Cycle [s]	4.00	0.00	0.00	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	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	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]	0	0	0	11	6	6	2	4	4	0	1	1
g / C, Green / Cycle	0.02	0.00	0.00	0.41	0.24	0.24	0.09	0.14	0.14	0.00	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.00	0.03	0.03	0.02	0.13	0.06	0.04	0.00	0.01	0.00	0.00	0.01
s, saturation flow rate [veh/h]	1781	1870	1870	1292	1870	1589	1292	1870	1589	1292	1870	1589
c, Capacity [veh/h]	28	0	0	712	456	387	298	265	226	270	96	81
d1, Uniform Delay [s]	13.01	0.00	0.00	5.91	8.77	8.18	13.21	9.87	9.90	0.00	12.08	12.21
k, delay calibration	0.11	0.50	0.50	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]	5.25	0.00	0.00	0.02	0.93	0.36	0.29	0.03	0.06	0.00	0.27	1.76
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	0.28	10000.0	10000.0	0.04	0.52	0.27	0.18	0.02	0.04	0.00	0.06	0.27
d, Delay for Lane Group [s/veh]	18.26	0.00	0.00	5.93	9.70	8.54	13.51	9.90	9.96	0.00	12.35	13.97
Lane Group LOS	B	F	F	A	A	A	B	A	A	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.08	0.00	0.00	0.06	0.86	0.34	0.27	0.02	0.03	0.00	0.03	0.13
50th-Percentile Queue Length [ft/ln]	1.92	0.00	0.00	1.47	21.44	8.45	6.87	0.49	0.80	0.00	0.80	3.30
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.11	1.54	0.61	0.49	0.04	0.06	0.00	0.06	0.24
95th-Percentile Queue Length [ft/ln]	3.46	0.00	0.00	2.65	38.58	15.20	12.36	0.88	1.44	0.00	1.45	5.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.26	0.00	0.00	5.93	9.70	8.54	13.51	9.90	9.96	0.00	12.35	13.97
Movement LOS	B	A	A	A	A	A	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	1.33			9.10			12.83			13.62		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	8.27											
Intersection LOS	A											
Intersection V/C	0.471											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.232	2.884	2.190	2.198
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1067	433	283
d_b, Bicycle Delay [s]	60.00	13.07	36.82	44.20
l_b,int, Bicycle LOS Score for Intersection	1.650	2.167	1.672	1.606
Bicycle LOS	A	B	A	A

Sequence

Ring 1	1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Madison Ave (NS) at Newton Azrak St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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	33	0	13	88	22	2	0	1	0	0	8
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.00	1.04	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.04	1.00	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	11	39	12	0	0	0	0	8	0	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
Total Hourly Volume [veh/h]	0	35	11	53	104	22	2	0	1	8	0	35
Peak Hour Factor	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280
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	9	3	14	28	6	1	0	0	2	0	9
Total Analysis Volume [veh/h]	0	38	12	57	112	24	2	0	1	9	0	38
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.01	0.00	0.04
d_M, Delay for Movement [s/veh]	7.49	0.00	0.00	7.40	0.00	0.00	10.77	11.05	8.91	10.76	11.28	8.72
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.11	0.11	0.11	0.01	0.01	0.01	0.16	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	2.64	2.64	2.64	0.32	0.32	0.32	4.02	4.02	4.02
d_A, Approach Delay [s/veh]	0.00			2.19			10.15			9.11		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	3.00											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 4: I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.800

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	871	0	348	0	570	212	0	949	68
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.04	1.00	1.04	1.04
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	26	0	131	0	141	125	0	262	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	0	0	932	0	493	0	734	345	0	1249	71
Peak Hour Factor	0.9280	0.9280	0.9280	0.8870	0.9280	0.8870	0.9280	0.8870	0.8870	0.9280	0.8870	0.8870
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	263	0	139	0	207	0	0	352	0
Total Analysis Volume [veh/h]	0	0	0	1051	0	556	0	828	0	0	1408	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	1	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	120	0	0	0	120	0	0	120	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	65	0	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	10	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		51	51	51	51	51	51	51
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	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
g_i, Effective Green Time [s]		22	22	22	21	21	21	21
g / C, Green / Cycle		0.43	0.43	0.43	0.41	0.41	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate		0.30	0.30	0.34	0.16	0.00	0.28	0.00
s, saturation flow rate [veh/h]		1781	1773	1589	5094	1589	5094	1589
c, Capacity [veh/h]		771	767	688	2099	655	2099	655
d1, Uniform Delay [s]		11.86	11.89	12.51	10.64	0.00	12.31	0.00
k, delay calibration		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
d2, Incremental Delay [s]		1.14	1.16	1.95	0.12	0.00	0.38	0.00
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		0.70	0.70	0.78	0.39	0.00	0.67	0.00
d, Delay for Lane Group [s/veh]		13.00	13.05	14.46	10.76	0.00	12.69	0.00
Lane Group LOS		B	B	B	B	A	B	A
Critical Lane Group		No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		4.24	4.25	4.59	1.84	0.00	3.65	0.00
50th-Percentile Queue Length [ft/ln]		106.04	106.32	114.72	45.99	0.00	91.18	0.00
95th-Percentile Queue Length [veh/ln]		7.62	7.64	8.10	3.31	0.00	6.57	0.00
95th-Percentile Queue Length [ft/ln]		190.48	190.88	202.54	82.78	0.00	164.13	0.00

Movement, Approach, & Intersection Results

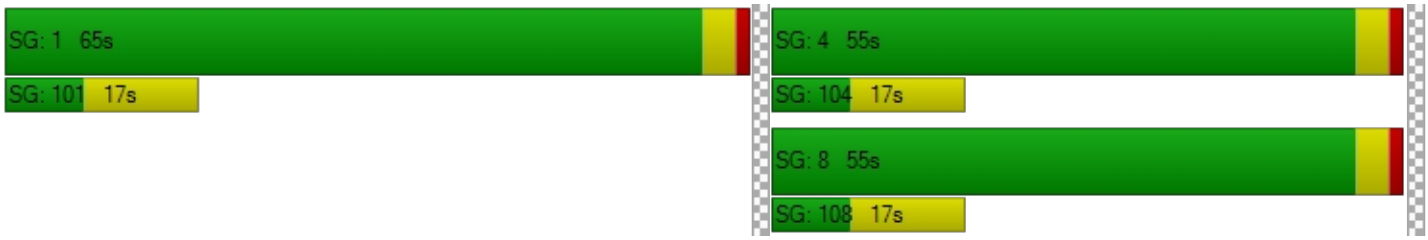
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	13.03	0.00	14.41	0.00	10.76	0.00	0.00	12.69	0.00
Movement LOS				B		B		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			13.51			10.76			12.69		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.62											
Intersection LOS	B											
Intersection V/C	0.800											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	1.437	2.537	3.252	3.140
Crosswalk LOS	A	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]	0	0	850	850
d_b, Bicycle Delay [s]	60.00	60.00	19.84	19.84
l_b,int, Bicycle LOS Score for Intersection	4.132	6.784	2.015	2.334
Bicycle LOS	D	F	B	B

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	6.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.601

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	192	2	96	0	0	0	127	1314	0	0	819	698
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.00	1.00	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	139	0	0	0	0	0	50	117	0	0	123	5
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]	339	2	100	0	0	0	182	1484	0	0	975	731
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
Other Adjustment Factor	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	92	1	0	0	0	0	49	401	0	0	264	0
Total Analysis Volume [veh/h]	366	2	0	0	0	0	197	1604	0	0	1054	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	21	0	0	0	0	0	99	0	0	99	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
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
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

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	R
C, Cycle Length [s]	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
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		2.00	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
g_i, Effective Green Time [s]	8	8	8		39	39	39	39
g / C, Green / Cycle	0.15	0.15	0.15		0.71	0.71	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.10	0.10	0.00		0.37	0.31	0.21	0.00
s, saturation flow rate [veh/h]	1781	1782	1589		535	5094	5094	1589
c, Capacity [veh/h]	263	263	234		445	3609	3609	1126
d1, Uniform Delay [s]	22.51	22.51	0.00		7.43	3.44	2.97	0.00
k, delay calibration	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
d2, Incremental Delay [s]	3.38	3.38	0.00		0.69	0.09	0.04	0.00
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	0.70	0.70	0.00		0.44	0.44	0.29	0.00
d, Delay for Lane Group [s/veh]	25.90	25.89	0.00		8.12	3.53	3.02	0.00
Lane Group LOS	C	C	A		A	A	A	A
Critical Lane Group	Yes	No	No		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.35	2.35	0.00		1.17	1.30	0.74	0.00
50th-Percentile Queue Length [ft/ln]	58.84	58.86	0.00		29.20	32.45	18.38	0.00
95th-Percentile Queue Length [veh/ln]	4.24	4.24	0.00		2.10	2.34	1.32	0.00
95th-Percentile Queue Length [ft/ln]	105.91	105.96	0.00		52.57	58.42	33.09	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.90	25.89	0.00	0.00	0.00	0.00	8.12	3.53	0.00	0.00	3.02	0.00
Movement LOS	C	C	A				A	A			A	A
d_A, Approach Delay [s/veh]	25.90			0.00			4.03			3.02		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	6.20											
Intersection LOS	A											
Intersection V/C	0.601											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.074	1.911	3.132	2.978
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	283	0	1583	1583
d_b, Bicycle Delay [s]	44.20	60.00	2.60	2.60
l_b,int, Bicycle LOS Score for Intersection	2.167	4.132	2.550	2.139
Bicycle LOS	B	D	B	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Monroe Ave (NS) at Newton Azrak (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.063

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
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	21	0	0	0	50	0	0	35	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
Total Hourly Volume [veh/h]	0	0	0	21	0	0	0	50	0	0	35	15
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	6	0	0	0	13	0	0	9	4
Total Analysis Volume [veh/h]	0	0	0	22	0	0	0	53	0	0	37	16
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.01	0.00	0.00	0.00	0.06	0.00	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	7.25	0.00	0.00	9.44	9.60	8.61	9.40	9.56	8.57
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	0.04	0.04	0.04	0.20	0.20	0.20	0.19	0.19	0.19
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.98	0.98	0.98	5.06	5.06	5.06	4.69	4.69	4.69
d_A, Approach Delay [s/veh]	2.41			7.25			9.60			9.26		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	9.05											
Intersection LOS	A											

Hotel Murrieta

Vistro File: C:\...\PME.vistro

Scenario 4 Project Completion (Year 2021) Plus Cumulative PM Peak Hour

Report File: C:\...\PMPC +C.pdf

8/30/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Madison Ave (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	EB Left	0.828	39.1	D
2	Madison Ave (NS) at Guava St (EW)	Signalized	HCM 6th Edition	NB Left	0.643	10.0	B
3	Madison Ave (NS) at Newton Azrak St (EW)	Two-way stop	HCM 6th Edition	EB Left	0.286	17.3	C
4	I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	SB Left	0.739	27.9	C
5	I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)	Signalized	HCM 6th Edition	EB Left	1.620	59.0	E
6	Monroe Ave (NS) at Newton Azrak (EW)	Two-way stop	HCM 6th Edition	WB Thru	0.068	9.7	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: Madison Ave (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	39.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.828

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	54	301	573	460	187	69	180	1044	52	373	332	275
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	10	64	26	8	6	11	359	4	53	251	49
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]	61	323	660	504	202	78	198	1445	58	441	596	335
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
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]	15	82	167	128	51	20	50	366	15	112	151	85
Total Analysis Volume [veh/h]	62	327	669	511	205	79	201	1464	59	447	604	339
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	120	0	120	120	0	120	120	0	120	120	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
Split [s]	14	35	0	26	47	0	24	36	0	23	35	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110	110
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	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	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	2.00
g_i, Effective Green Time [s]	6	27	27	27	19	40	40	9	30	30	17	39	39
g / C, Green / Cycle	0.05	0.25	0.25	0.25	0.18	0.37	0.37	0.08	0.28	0.28	0.16	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.21	0.21	0.15	0.08	0.08	0.06	0.22	0.22	0.13	0.12	0.21
s, saturation flow rate [veh/h]	3459	1870	1589	1589	3459	1870	1695	3459	5094	1823	3459	5094	1589
c, Capacity [veh/h]	187	460	391	391	609	687	623	278	1408	504	541	1795	560
d1, Uniform Delay [s]	50.06	37.88	39.59	39.59	43.79	23.88	23.88	49.35	36.91	36.91	44.93	26.16	29.31
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	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	1.00
d2, Incremental Delay [s]	1.02	2.05	5.46	5.46	3.21	0.16	0.17	3.56	1.07	2.94	3.30	0.11	1.06
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	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	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	1.00

Lane Group Results

X, volume / capacity	0.33	0.71	0.86	0.86	0.84	0.22	0.22	0.72	0.80	0.80	0.83	0.34	0.61
d, Delay for Lane Group [s/veh]	51.09	39.93	45.04	45.04	47.00	24.03	24.06	52.91	37.98	39.85	48.23	26.27	30.37
Lane Group LOS	D	D	D	D	D	C	C	D	D	D	D	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.85	8.23	9.11	9.11	6.94	2.68	2.44	2.82	9.33	10.28	6.11	3.87	7.43
50th-Percentile Queue Length [ft/ln]	21.14	205.7	227.7	227.7	173.45	66.99	61.01	70.53	233.34	257.12	152.74	96.75	185.78
95th-Percentile Queue Length [veh/ln]	1.52	12.94	14.06	14.06	11.26	4.82	4.39	5.08	14.34	15.54	10.16	6.97	11.90
95th-Percentile Queue Length [ft/ln]	38.06	323.4	351.5	351.5	281.44	120.59	109.82	126.95	358.60	388.61	254.08	174.16	297.54

Movement, Approach, & Intersection Results

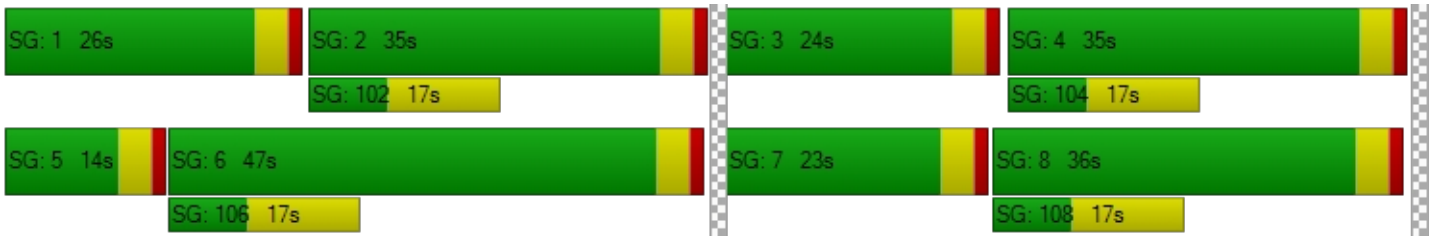
d_M, Delay for Movement [s/veh]	51.09	39.93	45.04	47.00	24.04	24.06	52.91	38.42	39.85	48.23	26.27	30.37
Movement LOS	D	D	D	D	C	C	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	43.82			38.80			40.16			34.33		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	39.09											
Intersection LOS	D											
Intersection V/C	0.828											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.955	2.737	3.130	3.374
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]	517	717	533	517
d_b, Bicycle Delay [s]	33.00	24.70	32.27	33.00
l_b,int, Bicycle LOS Score for Intersection	2.432	2.215	2.271	2.324
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 2: Madison Ave (NS) at Guava St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.643

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
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]	8	225	0	8	57	50	219	3	10	0	3	9
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	52	0	20	45	0	8	4	0	0	4	19
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]	8	286	0	28	104	52	236	7	10	0	7	28
Peak Hour Factor	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630	0.7630
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	94	0	9	34	17	77	2	3	0	2	9
Total Analysis Volume [veh/h]	10	375	0	37	136	68	309	9	13	0	9	37
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
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	120	30	0	120	120	0	120	120	0	120	120	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
Split [s]	19	0	0	11	26	0	54	64	0	11	21	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
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	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
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	
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
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

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	R	L	C	R	L	C	R
C, Cycle Length [s]	44	44	44	44	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	4.00	0.00	0.00	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	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	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]	1	0	0	11	6	6	18	21	21	0	3	3
g / C, Green / Cycle	0.02	0.00	0.00	0.26	0.15	0.15	0.40	0.47	0.47	0.00	0.07	0.07
(v / s)_i Volume / Saturation Flow Rate	0.01	0.10	0.10	0.04	0.07	0.04	0.31	0.00	0.01	0.00	0.00	0.02
s, saturation flow rate [veh/h]	1781	1870	1870	1007	1870	1589	1007	1870	1589	1007	1870	1589
c, Capacity [veh/h]	32	0	0	376	273	232	520	881	749	164	127	108
d1, Uniform Delay [s]	21.27	0.00	0.00	14.22	17.25	16.71	13.22	6.17	6.19	0.00	19.14	19.51
k, delay calibration	0.11	0.50	0.50	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]	5.27	0.00	0.00	0.11	1.40	0.69	1.09	0.00	0.01	0.00	0.23	1.85
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	0.31	10000.0	10000.0	0.10	0.50	0.29	0.59	0.01	0.02	0.00	0.07	0.34
d, Delay for Lane Group [s/veh]	26.54	0.00	0.00	14.33	18.66	17.41	14.31	6.17	6.20	0.00	19.38	21.36
Lane Group LOS	C	F	F	B	B	B	B	A	A	A	B	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.27	1.21	0.58	2.39	0.03	0.05	0.00	0.08	0.38
50th-Percentile Queue Length [ft/ln]	3.47	0.00	0.00	6.77	30.26	14.48	59.63	0.83	1.22	0.00	2.12	9.42
95th-Percentile Queue Length [veh/ln]	0.25	0.00	0.00	0.49	2.18	1.04	4.29	0.06	0.09	0.00	0.15	0.68
95th-Percentile Queue Length [ft/ln]	6.25	0.00	0.00	12.19	54.46	26.07	107.33	1.50	2.19	0.00	3.82	16.96

Movement, Approach, & Intersection Results

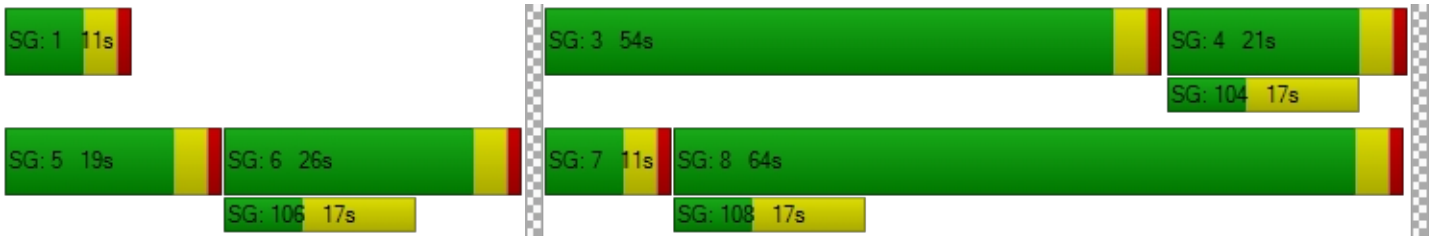
d_M, Delay for Movement [s/veh]	26.54	0.00	0.00	14.33	18.66	17.41	14.31	6.17	6.20	0.00	19.38	21.36
Movement LOS	C	A	A	B	B	B	B	A	A	A	B	C
d_A, Approach Delay [s/veh]	0.69			17.64			13.77			20.97		
Approach LOS	A			B			B			C		
d_I, Intersection Delay [s/veh]	10.01											
Intersection LOS	B											
Intersection V/C	0.643											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.275	3.296	2.247	2.220
Crosswalk LOS	B	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	367	1000	283
d_b, Bicycle Delay [s]	60.00	40.02	15.00	44.20
l_b,int, Bicycle LOS Score for Intersection	1.877	1.957	2.106	1.636
Bicycle LOS	A	A	B	A

Sequence

Ring 1	1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Madison Ave (NS) at Newton Azrak St (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.286

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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	131	0	8	41	1	71	0	5	0	0	10
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.00	1.04	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.04	1.00	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	12	44	1	0	0	0	0	11	0	42
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	146	12	52	44	1	71	0	5	11	0	52
Peak Hour Factor	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070	0.6070
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	60	5	21	18	0	29	0	2	5	0	21
Total Analysis Volume [veh/h]	0	241	20	86	72	2	117	0	8	18	0	86
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.07	0.00	0.00	0.29	0.00	0.01	0.04	0.00	0.11
d_M, Delay for Movement [s/veh]	7.36	0.00	0.00	7.96	0.00	0.00	17.31	16.74	12.14	13.81	14.04	10.47
Movement LOS	A	A	A	A	A	A	C	C	B	B	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.12	0.12	0.12	1.21	1.21	1.21	0.52	0.52	0.52
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	3.11	3.11	3.11	30.32	30.32	30.32	13.01	13.01	13.01
d_A, Approach Delay [s/veh]	0.00			4.28			16.98			11.05		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	6.09											
Intersection LOS	C											

Intersection Level Of Service Report

Intersection 4: I-15 SB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.739

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present					No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	857	0	185	0	1813	306	0	956	75
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.00	1.00	1.00	1.04	1.00	1.04	1.00	1.04	1.04	1.00	1.04	1.04
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	7	0	68	0	262	187	0	285	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	0	0	898	0	260	0	2148	505	0	1279	78
Peak Hour Factor	0.9280	0.9280	0.9280	0.9790	0.9280	0.9790	0.9280	0.9790	0.9790	0.9280	0.9790	0.9790
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	0	0	0	229	0	66	0	549	0	0	327	0
Total Analysis Volume [veh/h]	0	0	0	917	0	266	0	2194	0	0	1306	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	1	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	7	0	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	120	0	0	0	120	0	0	120	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	46	0	0	0	74	0	0	74	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	10	0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
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
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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	C	R	C	R	C	R
C, Cycle Length [s]		176	176	176	176	176	176	176
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	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
g_i, Effective Green Time [s]		49	49	49	118	118	118	118
g / C, Green / Cycle		0.28	0.28	0.28	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate		0.26	0.26	0.17	0.43	0.00	0.26	0.00
s, saturation flow rate [veh/h]		1781	1781	1589	5094	1589	5094	1589
c, Capacity [veh/h]		500	500	446	3432	1071	3432	1071
d1, Uniform Delay [s]		61.22	61.22	54.60	16.41	0.00	12.57	0.00
k, delay calibration		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
d2, Incremental Delay [s]		7.24	7.24	1.28	0.20	0.00	0.07	0.00
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		0.92	0.92	0.60	0.64	0.00	0.38	0.00
d, Delay for Lane Group [s/veh]		68.46	68.46	55.87	16.61	0.00	12.63	0.00
Lane Group LOS		E	E	E	B	A	B	A
Critical Lane Group		Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		20.90	20.90	10.45	16.78	0.00	7.64	0.00
50th-Percentile Queue Length [ft/ln]		522.46	522.46	261.27	419.52	0.00	191.01	0.00
95th-Percentile Queue Length [veh/ln]		28.40	28.40	15.75	23.50	0.00	12.17	0.00
95th-Percentile Queue Length [ft/ln]		709.90	709.90	393.82	587.47	0.00	304.33	0.00

Movement, Approach, & Intersection Results

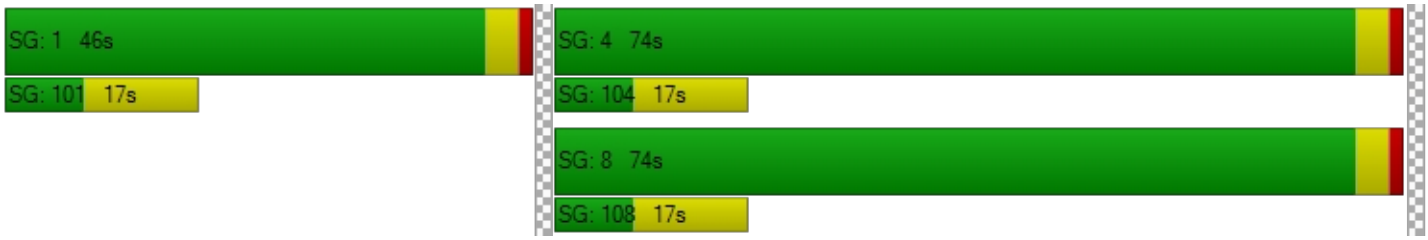
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	68.46	0.00	55.87	0.00	16.61	0.00	0.00	12.63	0.00
Movement LOS				E		E		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			65.63			16.61			12.63		
Approach LOS	A			E			B			B		
d_I, Intersection Delay [s/veh]	27.89											
Intersection LOS	C											
Intersection V/C	0.739											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	1.437	2.433	3.347	3.278
Crosswalk LOS	A	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]	0	0	1167	1167
d_b, Bicycle Delay [s]	60.00	60.00	10.42	10.42
l_b,int, Bicycle LOS Score for Intersection	4.132	6.084	2.766	2.278
Bicycle LOS	D	F	C	B

Sequence

Ring 1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 5: I-15 NB Ramps (NS) at Murrieta Hot Springs Rd (EW)

Control Type:	Signalized	Delay (sec / veh):	59.0
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.620

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	180	3	49	0	0	0	560	2113	0	0	858	1112
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	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.00	1.00	1.04	1.04
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	169	0	0	0	0	0	126	143	0	0	116	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]	356	3	51	0	0	0	708	2341	0	0	1008	1183
Peak Hour Factor	0.9570	0.9570	0.9570	0.9250	0.9250	0.9250	0.9570	0.9570	0.9250	0.9250	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000
Total 15-Minute Volume [veh/h]	93	1	0	0	0	0	185	612	0	0	263	0
Total Analysis Volume [veh/h]	372	3	0	0	0	0	740	2446	0	0	1053	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]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	0	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	0	0	0	7	0	0	7	0
Maximum Green [s]	0	120	0	0	0	0	0	120	0	0	120	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	22	0	0	0	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	10	0	0	10	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
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
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

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	R
C, Cycle Length [s]	146	146	146		146	146	146	146
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	0.00		2.00	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
g_i, Effective Green Time [s]	18	18	18		120	120	120	120
g / C, Green / Cycle	0.12	0.12	0.12		0.82	0.82	0.82	0.82
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.00		1.38	0.48	0.21	0.00
s, saturation flow rate [veh/h]	1781	1782	1589		536	5094	5094	1589
c, Capacity [veh/h]	218	218	195		457	4190	4190	1308
d1, Uniform Delay [s]	62.71	62.71	0.00		23.43	4.41	2.89	0.00
k, delay calibration	0.11	0.11	0.11		0.50	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.47	9.46	0.00		288.65	0.13	0.03	0.00
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	0.86	0.86	0.00		1.62	0.58	0.25	0.00
d, Delay for Lane Group [s/veh]	72.17	72.16	0.00		312.08	4.54	2.92	0.00
Lane Group LOS	E	E	A		F	A	A	A
Critical Lane Group	Yes	No	No		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	7.41	7.42	0.00		53.83	6.80	1.92	0.00
50th-Percentile Queue Length [ft/ln]	185.35	185.47	0.00		1345.82	170.11	47.93	0.00
95th-Percentile Queue Length [veh/ln]	11.88	11.89	0.00		90.08	11.08	3.45	0.00
95th-Percentile Queue Length [ft/ln]	296.99	297.15	0.00		2252.12	277.05	86.28	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.17	72.16	0.00	0.00	0.00	0.00	312.08	4.54	0.00	0.00	2.92	0.00
Movement LOS	E	E	A				F	A			A	A
d_A, Approach Delay [s/veh]	72.17			0.00			75.97			2.92		
Approach LOS	E			A			E			A		
d_I, Intersection Delay [s/veh]	58.99											
Intersection LOS	E											
Intersection V/C	1.620											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.076	3.214	3.301	3.095
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]	300	0	1567	1567
d_b, Bicycle Delay [s]	43.35	60.00	2.82	2.82
l_b,int, Bicycle LOS Score for Intersection	2.178	4.132	3.312	2.139
Bicycle LOS	B	D	C	B

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Monroe Ave (NS) at Newton Azrak (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.068

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
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	24	0	0	0	56	0	0	53	23
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	24	0	0	0	56	0	0	53	23
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	6	0	0	0	15	0	0	14	6
Total Analysis Volume [veh/h]	0	0	0	25	0	0	0	59	0	0	56	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.02	0.00	0.00	0.00	0.07	0.00	0.00	0.07	0.02
d_M, Delay for Movement [s/veh]	7.22	0.00	0.00	7.25	0.00	0.00	9.72	9.68	8.65	9.64	9.74	8.72
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	0.05	0.05	0.05	0.23	0.23	0.23	0.29	0.29	0.29
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.13	1.13	1.13	5.74	5.74	5.74	7.37	7.37	7.37
d_A, Approach Delay [s/veh]	2.41			7.25			9.68			9.43		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	9.19											
Intersection LOS	A											



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